Agenda

for

161st OCC Meeting

Date: 20.09.2019
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Agenda for 161st OCC Meeting to be held on 20th September, 2019 at Barh STPS, NTPC

Item no. 1: Confirmation of minutes of 160th OCC meeting of ERPC held on 09.08.2019

The minutes of 160th OCC meeting were uploaded in ERPC website and circulated vide letter dated 29.08.2019 to all the constituents.

Members may confirm the minutes.

PART A : ER GRID PERFORMANCE

Item no. A1: ER Grid performance during August, 2019

The average consumption of Eastern Region for August- 2019 was 464 Mu. Eastern Region energy consumption reached a monthly maximum of 506 Mu on 22th August - 2019. Total Export schedule of Eastern region for August – 2019 was 438 Mu, whereas actual export was 365 Mu.

ERLDC may present the performance of Eastern Regional Grid covering the followings:

1. **Frequency profile**
2. **Over drawal/under injection by ER Entities**
3. **Performance of Hydro Power Stations during peak hours**
4. **Performance of ISGS during RRAS**
5. **Reactive Power performance of Generators**
6. **Restricted Governor /Free Governor Mode Operation of generators in ER**

Member may discuss.

Item no. A2: Effect of cyclone FANI on Odisha system

In 159th OCC, Odishawas advised to give a presentation in next OCC Meeting on effect of FANI cyclone on transmission and distribution system in Odisha along with the restoration status.

Odisha agreed to give the presentation in next OCC Meeting.

Odisha may give a presentation.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: Operationalization of 400 kV Durgapur Bus Splitting Scheme

In 41st ERPC Meeting held on 27th August 2019 it was decided that:

i. The split bus scheme of Durgapur PG shall be put in operation.
ii. DVC shall approach Standing Committee for necessary approval for shifting of 3rd ICT to some other location.

Regarding operationalization of 3rd ICT at Durgapur, it was decided by ERPC that the 3rd ICT shall be kept in standby mode (charged from one end) for a period of fifteen(15) days. ERLDC, West Bengal & DVC shall present their observations in the next OCC meeting scheduled to be held on 20.09.2019 wherein OCC forum shall decide the next course of action. However, during the intervening period, on real time basis, if the necessity arises for the safety, security & stability of the grid, ERLDC shall take action in operationalizing the 3rd ICT.

Accordingly, ERLDC commenced the split bus operation at Durgapur PG with 3rd 315 MVA, 400/220kV ICT in standby mode.

Thereafter, ERLDC vide latter dated 10th September 2019 and mail dated 11th September 2019 informed that in view of sustained high loading on other 400/220kV ICTs at Durgapur PG, 3rd 315 MVA, 400/220kV ICT at Durgapur PG was taken into service.

ERLDC may place the details. Members may decide.

Item No. B.2: 400 kV Split Bus operation of 400 kV Kahalgaon Substation --ERLDC

In the 158th OCC meeting, Bus split operation of 400 kV Kahalgaon substation has been discussed. NTPC has informed that the 400 kV Bus split is ready for operationalization in all aspects. NTPC and PGCIL have informed that the group setting for revised protection setting has been implemented w.r.t. Bus split arrangement at remote ends. OCC decided to monitor the power flows after putting the Durgapur bus splitting in service and further decision on putting the Kahalgaon bus splitting scheme in operation would be reviewed in next OCC Meeting.

The Durgapur Bus split trial has been demonstrated in 159th and 160th OCC meeting and results and power flow was presented to the members. It was observed that there is no constraint on the 400 kV network during normal bus split operation of Durgapur substation.

With these experiences of 400 kV Durgapur Bus split, it is desired that 400 kV Kahalgaon Bus split may be operationalized.

Members may discuss.

Item No. B.3: Implementation of 400 kV Rangpo-Binaguri SPS Scheme for Contingent Measures --ERLDC

400 kV Rangpo-Kishanganj and 400 kV Teesta3-Kishanganj circuit from TVTPL have shown poor availability due to multiple forced outage over the last few months. Under such condition 400 kV Rangpo-Bingauri D/C with power flow limitation of 1700 MW had been used for evacuation of Sikkim Hydro complex. The old SPS on these lines in the mean time was used for 400kV Rangpo-Kishanganj line (with a different logic)to avoid loading of one Rangpo-Binaguri line beyond its thermal limit in the event of outage of the other circuit of Teesta III – Kisanganj. Last month during contingency of 400 kV Rangpo-Kishanganj and 400 kV Teesta3-Kishanganj Power from 400kV Rangpo towards Binaguri was evacuated in split-bus mode due to unavailability of old SPS at Rangpo. Subsequently, as a precautionary measure, to operate the system under contingency of 400 kV Rangpo-Kishanganj and 400 kV Teesta3-Kishanganj, SPS

for Rangpo-Binguri line has been re-wired with bus coupled at Rangpo to evacuate 1700 MW power. The SPS will remain disabled in case the 400 kV Rangpo-Kishanganj S/C, 400 kV Teesta3-Kishanganj S/C and 400 kV Rangpo-Bingauri D/C are in service. The SPS will be enabled under contingency of both circuits of TVTPL.

TUL vide letter dated 21st August 2019 informed that there was huge loss of hydro generation because of power flow restriction at 850 MW in each circuit of 400kV Rangpo-Binaguri D/C line during the shutdown of 400 kV Teesta3-Kishanganj S/C and Dikchu-Kishanganj section.

TUL requested enhance the power flow limit to 1100 MW in each circuit of 400kV Rangpo-Binaguri D/C line. Copy of the letter is encloased at **Annexure-B3**.

ERLDC and TUL may explain. Members may decide.

Item No. B.4: Outage of important transmission lines

In 160th OCC, Powergrid informed that 400 kV Kishenganj-Patna D/C lines would be restored by end of December 2019.

ENCIL informed that they were planning for the permanent restoration of the line using special high-performance conductor (HPC with ACCC conductor) between tower AP46/9A and AP47/1. 400 kV Purnea-Biharshariff D/c would be restored by end of November 2019.

Members may update.

Item No. B.5: Strengthening of Tower Near to River to Avoid Frequent Tower Collapse -- ERLDC

Frequent Tower Collapse have been observed in the Eastern Region due to change in river course of Gandak and Kosi river. This has endangered the reliability of power supply to Bihar as well as to the region as a whole. It has been observed that the towers which have collapsed during most of the tower collapse events due to change in river course are not of pile type foundation recommended for river basin areas.

Report of the standing committee of experts on failure of EHV transmission line towers (October 2016 – march 2018) Recommends the following for such transmission lines:

Pile type foundation may be considered for towers in flood prone area based on soil investigation report and latest high flood data. In case of damage of foundation of towers, the foundation design is required to be examined. The material test report of failed towers should be examined to ascertain the quality of the material. Providing proper revetment & use of geo-synthetic material in foundation, concrete encasing & painting of stub in water logging areas etc. may also be considered, wherever required.

In view of the above, all transmission licensees whose lines are prone to flooding may immediately take above remedial action as suggested by the committee. It is suggested to have all the towers in the flood-prone zone on pile foundation along with nearby tower should be provided with revetment to avoid soil erosion.

Members may discuss.

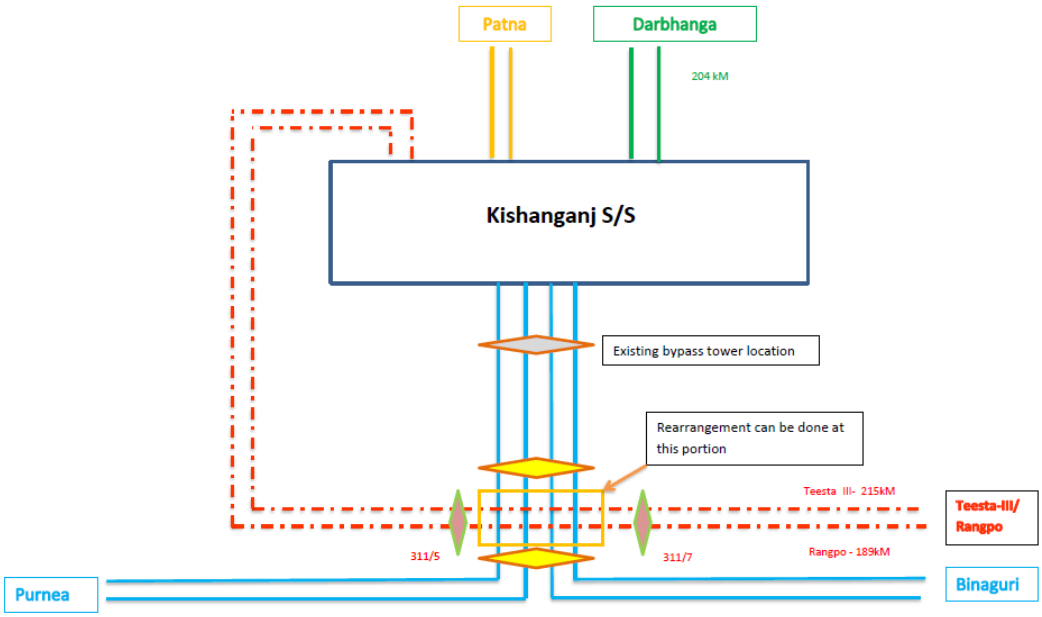
Item No. B.6: Bypassing arrangement of 400 kV Kishanganj S/S due to recent flood in North Bihar area—ERLDC

Due to heavy rain in North Bengal and North Bihar for last 2 weeks, flood like situation has arisen in different districts like Kishanganj, East Champaran, Madhubani, Sitamari, Supaul, Araria of Bihar and North Dinajpur of W. Bengal. On 13/07/19 it was gathered that water had accumulated in 400/220kV Kishanganj GIS substation & its adjacent areas had risen to alarming levels.

Earlier during 2017, Kishanganj(PG) S/Stn had to be completely shut down for a couple of days, on account of water-logging. To avoid such type of situation in future, after discussion in different OCC meetings, temporary arrangement was made to keep the major outgoing/incoming lines in service by making bypass arrangement outside of the Kisanganj S/s. Accordingly arrangement for reconfiguring 400kV Binaguri-Kishanganj D/C & 400 KV Purnea-Kishanganj D/C at Kishanganj S/S as 400 kV Binaguri –Purnea – III & IV was planned & commissioned by cross jumpering above two lines at the LILO portion during March-2018.Subsequently, 400kV Teesta_III-Kishanganj& 400 KV Rangpo-Kishanganj were commissioned on 04/01/2019 & 11/02/2019 respectively and with their commissioning, restriction on generation by the hydro station in Sikkim was withdrawn. At present, 2300MW of Sikkim hydro generation is being evacuated through Kishanganj and Binaguri S/S. Bypassing arrangement of these lines were not envisaged during that period due to non-commissioning of these lines during that period.

In the event of recurrence of a similar emergency flood like situation, for facilitating evacuation of bulk hydro generation of Sikkim it is necessary to explore some methodology to interconnect 400kV Teesta – III – Kishanganj&Rangpo –Kishanganj lines, with other lines of adjacent S/Stns . A new re-configuration scheme needs to be explored instead of the existing Kisanganj S/S bypass scheme In the event of recurrence of a similar emergency.

For finalizing the above scheme an emergency meeting was held at ERLDC with concerned Transmission licenses on 16-07-2019. Transmission licensees viz. TPTL, ATL, ER-II (PGCIL) are present in the meeting and ER-I (PGCIL), NLDC participated the meeting through VC.



In 159th OCC, Powergrid informed that since 400kV Teesta III-Rangpo lines crossing the LILO portion of 400kV Purna-Kishangaj-Binaguri line perpendicularly with vertical line configuration, it is not possible to make the bypass arrangement.

OCC opined that site visit with the concerned transmission licensees is required to find out a plan for bypass arrangement.

In 160th OCC, OCC advised Teesta III representative present in the meeting to coordinate with TPTL and Powerlinks to do the detail survey of 400kVTeesta III-Rangpo line and 400kV Purna-Kishangaj-Binaguri line and submit the line crossing details to ERLDC.

Members may discuss.

Item No. B.7: Cancellation/termination of Power Purchase Agreements with NTPC and its subsidiaries—Sikkim

Sikkim vide letter dated 6th September 2019 informed that chances of reallocation to other beneficiaries is very rare and till such time the state has to bear the fixed cost which shall be in excess of rupees 100 Crores annually. Sikkim decided to terminate/cancel the Power Purchase Agreements of thermal power. Copy of the Sikkim letter is enclosed at **Annexure-B7**.

Members may note.

Item No. B.8: Implementation of Automatic Generation Control in Eastern Region--ERLDC

In compliance to CERC's direction in order dated 06/12/2017 in petition no 79/RC/2017, AGC was commissioned in NTPC Barh on 01st August 2019 and operationalized since 23rd August, 2019.

Vide order dated 28th August 2019, CERC in Petition No.: 319/RC/2018 directed that all the ISGS stations whose tariff is determined or adopted by CERC shall be AGC-enabled and the ancillary services including secondary control through AGC be implemented as per the following direction:

I. All thermal ISGS stations with installed capacity of 200 MW and above and all hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC are directed to install equipment at the unit control rooms for transferring the required data for AGC as per the requirement to be notified by NLDC. NLDC shall notify the said requirements within one month of this order.
II. All such ISGS stations whose tariff is determined or adopted by CERC shall have communication from the nearest wide band node to the RTU in the unit control room.
III. The Central Transmission Utility (CTU) is directed to have communication availability from NLDC/ RLDCs to the nearest wide band node/ switchyard for the generating stations in a redundant and alternate path ensuring route diversity and dual communication.
IV. The NLDC is also directed to commission the required communication infrastructure.
V. The expenditure as a result of compliance of the above directions may be claimed as per relevant regulations or provisions of the PPA.
VI. The NLDC is directed to monitor implementation of the above directions so that all the ISGS stations whose tariff is determined or adopted by CERC are AGC-enabled within six months of this order.
VII. The framework regarding compensation for AGC support and deviation charges as stipulated in the Commission's Order in Petition no. 79/RC/2017 dated 06.12.2017 shall apply to the five pilot projects as also to other ISGS as and when they are AGC enabled. This arrangement shall remain in place till the relevant regulations inter alia on compensation for AGC services are framed by the Commission.
VIII. NLDC/RLDCs are allowed to operate the AGC system for enabling the signals to the power plants at the earliest.
IX. All new thermal ISGS stations with installed capacity of 200 MW and above and hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC shall mandatorily have the capability to provide AGC support.

Member may discuss

Item No. B.9: Clarification regarding load flow direction in 400 KV JP_GZW_FSC to 400 KV JP_GZW_HVDC Bus vis-a-vis loading PoC chargesof these lines to Odisha --GRIDCO

As per the PoC data uploaded by NLDC, although the direction of power flow shows from 400 KV JP_GZW_FSC Bus to 400 KV JP_GZW_HVDC bus for both the Circuits; significant portion of the cost of the said Lines has been allocated to Odisha in various quarters. Gridco has studied the load flow for four quarters of FY 2017-18 for the aforesaid lines & the comprehensive report regarding flow direction, quantum & allocated cost from 2017-18 Q1 to 2017-18 Q4 is mentioned below from which it is evident that although the load flow direction has always been towards Southern Region from Eastern Region for 2017-18, Odisha has been allocated significant portions of the transmission charge of these two lines. Such gross incongruity is against the CERC Regulation for sharing of Transmission charges as far as PoC calculation methodology is concerned. Such calculation has burdened the Odisha consumer with additional Transmission charge allocation to the tune of 15.89 Cr (i.e. 80% of the line cost) during 2017-18.Load flow study for the other quarters are also being carried out.

Direction &Quantum of flow in JeyporeGajuwakaHVDC line :

CKT-1 :Jeypore FSC to Gajuwaka HVDC ckt -1 : JP_GZW_FSC1-JP_GZW_HVDC:1

CKT-2 :Jeypore FSC to Gajuwaka HVDC ckt -2 : JP_GZW_FSC1-JP_GZW_HVDC:2

Period	CKT	Flow	Cost allocation (in %)	Cost allocation (inRs. Cr)
17-18 Q1	CKT-1	329.6 MW	71%	2.035
	Ckt-2	329.6 MW	71%	2.035
17-18 Q2	CKT-1	329.6 MW	82%	2.434
	Ckt-2	329.6 MW	82%	2.434
17-18 Q3	CKT-1	329.6 MW	85%	1.737
	Ckt-2	329.6 MW	85%	1.737
17-18 Q4	CKT-1	329.6 MW	85%	1.737
	Ckt-2	329.6 MW	85%	1.737

Total Burdern for FY 2017-18 = 15.89 Cr

GRIDCO may explain. Members may discuss.

Item No. B.10: Auxiliary power consumption by Powergrid Substations--GRIDCO

As per decision of Special meeting on this issue held at ERPC on 10.07.2018, drawal of auxiliary power through tertiary winding by Powergrid substations shall be treated as drawal by Powergrid from the DISCOM (s). For this, Powergrid shall approach the concerned DISCOM(s) and shall complete all the necessary formalities to become a consumer of the concerned DISCOM.

Powergrid is not becoming the consumer of DISCOM Utility as a result of which, GRIDCO/DISCOM(s) are unable to realize the revenue from Powergrid , where as GRIDCO is paying for the said quantum of energy consumed by Powergrid since October, 2017.

This issue has already been discussed in the monthly Power System Operational Co- ordination Committee (PSOC) meeting convened by SLDC, Odisha several times. Powergrid did not attend these meetings. DISCOMs stated that that they are not receiving proper response from the Powergrid to regularize the consumer issue.

Powergrid may explain.

Item No. B.11: Modification of 132 kV lines at Kahalgaon(BSEB) and Lalmatia—ERLDC

It has been observed that the configuration of 132 kV Khahlagaon(BSEB) to lalmaitia has been changed as 132 kV Sabour – Lalmatia with transfer bus arrangement at Kahalgaon(BSEB) without intimating ERLDC.

132 kV Kahlagaon (BSEB) – Lalmatia is an interstate tie line between Bihar and Jharkhand. Necessary commercial SEM has been installed at suitable location. Interstate line configuration change needs prior consent from ERLDC, ERPC and Jharkhand.

SLDC, Bihar may please deliberate.

Item No. B.12: Data for preparation Load Generation Balance Report (LGBR) of ER for the year 2020-21

As per the IEGC, RPC Secretariat is responsible for finalization of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the annual outage plan for the respective region

To facilitate the preparation of LGBR of Eastern Region by ERPC Secretariat within the schedule period, the following data/information for the year **2020-21** in respect of the constituents/utilities of Eastern Region is urgently required:

i) The unit wise and station wise monthly energy generation proposed from existing units during 2020-21 (thermal/hydro/RES).
ii) Annual maintenance programme for each of the generating units (thermal and hydro both).
iii) Generating units under R&M / long outage indicating date of outage and reasons of outage and expected date of return (thermal and hydro both).
iv) Partial and forced outage figures (in %) of generating units for the last 3 years.
v) Month wise peak demand (MW) – restricted and unrestricted peak demand.
vi) Month wise off-peak demand (MW).
vii) Month wise energy requirement (in MU).
viii) Month wise & source wise power (both MU & MW) purchase and/or sale plan.
ix) Schedule of commissioning of new generating units during 2020-21 and unit-wise monthly generation programme (in MU).
x) Allocation of power from new generating units.
xi) Month wise and annual planned outage of transmission system (Transmission lines 220kV and above / ICTs / Reactors/ other elements.

Information may please also be submitted in the form of soft copy through email (mail ID: **mserpc-power@nic.in / erpcjha@yahoo.co.in**).

Members may furnish the above data.

Item No. B.13: Submission of state tie-line wise daily energy exchange (in mu) for preparation of Daily Power Supply Position.--ERLDC

ERLDC prepares the daily Power Supply Position (PSP) of Eastern Region during night hour for the previous day based on the actual energy data provided by ISGS, IPP, Transmission Licensees and SLDCs(for state drawl and intra state generation). To facilitate the data submission & data collection for preparation of daily PSP, POSOCO has developed an online portal and shared the credentials with all the stakeholders. The online reporting portal of ERLDC was operationalized on 7th September 2018, in which the following are being furnished by 02:00hrs by:

1. ISGS/IPPs: – Plant wise generation (mu)
2. SLDCs: – Net exchange of the state (mu) through the state tie line
   - Plant wise generation of the state (mu)
   - CPP wise net injection (mu)
3. Transmission licence: Energy transferred through IR & Transnational lines (mu)

During finalization of the PSP report, night shift operators of ERLDC verify the energy data submitted by the stake holders with respective energy data recorded by ERLDC SCADA as a process of data validation. It is being observed, the energy data submitted by the SLDCs for state drawl at times differs significantly from the state drawl obtained from SCADA data. Under such situation, it is very difficult for the night shift operator to identify the source or reason of mismatch between SCADA data and data furnished by states unless tie-line wise breakup of energy exchange is available.

In view of above, to make the data validation process robust and ensure accuracy of the daily PSP report, it is necessary for all the states and transmission licensees to submit following details during night hour in addition to existing data provided by them

1. All SLDCs to provide state tie-line wise break up of actual state energy exchange in Mu
2. Transmission licensee control centers (Powergrid ER-I & ER-II, DMTCL) to provide state interconnection point ICT/line wise break up of actual energy exchange in Mu

Necessary provision in WEB reporting software shall be made available to SLDCs and Transmission licensees to fill the drawl/injection energy data as mentioned above in the reporting portal w.e.f. 15th October, 2019.

ERLDC may explain.

Item No. B.14: Status of projects funded under PSDF schemes

In the PSDF review meeting, it was advised to RPCs to monitor the status of all the projects funded by PSDF. Therefore, constituents are requested to update the status of projects which are being funded by PSDF in the desired format.

A. Projects approved:

SN	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	PSDF grant approved (in Rs.)	Amount drawn till date (inRs.)	Latest status
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14	April 2018 Extended till March 2019	108.6 Cr	37 Cr.	Project has been completed. Final value of the project is 51.22 Cr.
2		Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17	March 2020	70.13	63.12 Cr	Order has been placed . Work is in progress.
3		Installation of switchable reactor at 400kV & shunt capacitors at 33kV	22-05-17	November 2019	43.37	11.69 Cr	Order had been placed and work is in progress.
4		Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid			71.74 Cr		
5		Project for establishment of reliable communication and data acquisition at different substation at WBSETCL.			31.19 Cr		
6	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station	*10.04.17*	*March 2018*	1.39 Cr	1.25 Cr	*The islanding scheme had been implemented and in operation wef**15.11.2018***
7		Upgradation of Protection and		April 2020	23.48	2.348 Cr	Bid opened and order has

		SAS					been placed. Work started.
8	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	11.05.15	31.03.19	162.5 Cr.	37.79 Cr	90% work has been completed. Total expenditure may not exceed 68 Cr.
9		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.17		25.61 Cr.	2.56 Cr	Agreement signed on 03.01.2018. Tender has been floated.
10		Installation of 125 MVAR Bus Reactor along with construction of associated bay each at 400kV Grid S/S of Mendhasal, Meramundali& New Duburi for VAR control &stabilisation of system voltage	27.07.18		27.23 Cr	2.72 Cr	Tender has been floated.
11	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		*U.Kolab, Balimela, U.Indravati, Burla, Chiplima March 2019*	*22.35 Cr.*	2.235 Cr	Placed the work order.
12	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/15	31.07.2018	64.02 crore	56.04 crore	90% of work has been completed. The work would be completed by Dec 2019.
13		Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016	31st March 2019	18.88 crore	Nil	Work awarded for all GSS. Work had been completed for 27 substations
14		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.	02.01.17	31st March 2018	49.22 Cr.		75% work completed for seven no. GSS as part of R & M work. Revised DPR is to be submitted for rest 5 no. GSS.
15	JUSNL	Renovation and up-gradation of protection system	*September 2017*	*15 Months*	*138.13 crores*	*39.02 Cr*	LOA placed to Siemens on 28th Sep 2018.
16	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation	02.01.17	01.06.2019	25.96 Cr	2.596 Crore on 01.06.2017	Work awarded for 28.07 Cr. Work would be completed by May 2019.
17		Renovation and upgradation of control & protection system including replacement of substation equipment at Parulia, Durgapur, Kalyaneshwari, Jamshedpur, Giridih, Barjora, Burnpur, Dhanbad and Burdwan Substation of DVC	27.11.17	24 Months from the date of release of fund.	140.5 Cr.	1st installment of 14.05 Cr. received on 21.12.2017	Work awarded for 77.97 Cr.
18	POWERGRID	Installation of STATCOM in ER		June 2018	*160.28 Cr*	*16.028 Cr*	Work is in progress, expected to complete by June 2018. STATCOM at Rourkela has been commissioned.
19	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16	Project is alive from 30th October 2017	20 Cr.	4.94 Cr. + 9.88 Cr.	1) Protection Database Project has been declared 'Go live' w.e.f. 31.10.17. 2) Pending training on PDMS at Sikkim and 3rd training on PSCT has been also completed at ERPC Kolkata.
20a	ERPC	Training for Power System Engineers	*27.07.18*		0.61 Cr.	Nil	Approved
20b		Training on Power market trading at NORD POOL Academy for Power System Engineers of	*27.07.18*		5.46 Cr.	Nil	

		Eastern Regional Constituents					

B. Projects under process of approval:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	Sikkim	Renovation &Upgradation of Protection System of Energy and Power Department, Sikkim.	09-08-17	68.95 Cr	The proposal requires third party protection audit. Issue was discussed in the Monitoring Group meeting in Siliguri on 8.6.2018. Sikkim was asked to coordinate with ERPC.
2		Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim	09-08-17	25.36 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
3	JUSNL	Reliable Communication & Data Acquisition System upto 132kV Substations.	23-08-17	102.31 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
4	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	3.26 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
5		Protection upgradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir&Paradeep).	12-03-18	41.1 Cr.	Scheme examined by TSEG on 20.03.2018. Inputs sought from the entity are awaited.
6	WBSETCL	Implementation of Integated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal	22-12-17	25.96 Cr	Proposal recommended for approval of Appraisal committee
7	BSPTCL	Implementation of Schedulling, Accounting, Metering and settlement of Transcation in Electricity (SAMAST)in SLDC Bihar.	27-02-18	93.76 Cr.	Scheme examined by TSEG on 20.03.2018 & 31.05.2018. Further inputs furnished by BSPTCL on 1.8.2018. Shall be examined in the next meeting of TESG.

Respective constituents may update the status.

Item No. B.15: Modification/Extension of time period for complete implementation of AMR 4th Phase---Powergrid

Against LOA ref no: - ER-II/KOL/CS/I-1947/P-2014/1148 Dated: 28-12-2018, a LOA placed to M/S. TCS for implementation of 4th Phase AMR. This includes integration of 200 New SEM, including 25 new Location. Data transfer through OPGW from 40 Locations & SCADA data integration.

As per original LOA, the completion schedule of the package was 27-October-2019. In subject contract new DCU also envisaged as 25 new locations are there in LOA. Since inception of the AMR implementation, the DCU taken as imported item (Earlier: VIOLA/Finland, afterwards taken over by ABB). However, recently ABB has confirmed end of life of the subject product (DCU), which creates a problem for the supply items and subsequent completion of the package. Although the other items like Optical fiber connectivity & SCADA data integration is under implementation, but due to non-availability of new DCU, further integration of new SEM & DCU has not been started yet.

Alternatively, after many testing, one vendor found who has technically complied all the requirements of existing system and can replace ABB make DCU technically. Right now M/S. TCS is on the verge of placing further PO the sub-vendor for supply of new DCU. As such, the process will take some more time and as indicated earlier the completion period as defined in

LOA (October-19) is not possible practically. The vendor has already integrated recently with GENUS make SEM in other utility and performance is found satisfactory.

In view of above, the completion schedule of the 4th phase implementation of MAR may be extended upto 31-03-2020.

Members may discuss please.

Item No. B.16: Replacement of defective Porcelain Insulators with Polymer Insulators-- Powergrid

A. 400kV D/C Malda-Purnea line:

- 400kV D/C Malda-Purnea TL is part of original 400kV D/C Malda-Bongaigaon TL commissioned in the year 1992.
- The mother portion of 400kV D/C Malda-Purnea TL is already around 27 years in service.
- From last 3(Three) years, it has been observed that tripping & A/R have drastically increased in the line and in maximum cases Insulator De-capping have been reported mostly during winter season & monsoon.
- In order to assess the condition of Insulators, PID Testing was carried out & it has been found that more than 50% disc in a particular string are defective at most of the locations.
- Similar situation we were facing in 400kV D/C Binaguri-Purnea TL(Mother line 400kV D/C Malda-Bongaigaon TL) where upon replacing the Porcelain Insulators with Polymer Insulators in the mother line, this year there is NIL A/R and Tripping.
- We are planning to replace the Porcelain Insulators with Polymer Insulators in 400kV D/C Malda-Purnea TL in the old portion of the line(excluding Purnea LILO) for which we require S/D of 400kV Malda-Purnea TL in month of November-19 as per following tentative schedule:

Sl No.	Name of TL	From	To	Remarks
1	400 kV Malda-Purnea Ckt-1	01.11.2019	14.11.2019	Ckt wise S/d shall be taken on alternate days
2	400 kV Malda-Purnea Ckt-2	15.11.2019	30.11.2019	

The details of Insulator strings to be replaced in the line are as per the following:-

Name of TL	Location No.	120kN	160kN
400kV D/C Malda-Purnea TL(ExclLILo) (102 KM)	1140-870	1302 strings	1296 Strings

B. 400kV D/C Andal-Jamshedpur

- 400kV D/C Andal-Jamshedpur TL is one of the important link connected with DVC Andal plant.
- It has been observed that tripping & A/R incidents are quite high in this line creating disturbance in the DVC's Andal Plant generation evacuation paths well due to repeated tripping occurrence equipment's at both ends are getting stressed out.
- In order to assess the condition of Insulators, PID Testing was carried out & it has been found that more than 50% disc in a particular string are defective at most of the locations.
- We have been able to replace 50% of defective porcelain Insulators last year and already this year it has been observed that tripping & A/R has got reduced.

- As such, in order to further minimize the tripping,we are planning to replace the Porcelain Insulators with Polymer Insulators in 400kV D/C Andal-Jamshedpur TL for which we require S/D of 400kV D/C Andal-Jamshedpur TL in month of November-19 as per following tentative schedule:

Sl No.	Name of TL	From	To	Remarks
1	400 kV Andal-Jamshedpur Ckt-1	01.11.2019	14.11.2019	Ckt wise S/d shall be taken on alternate dyas
2	400 kV Andal-Jamshedpur Ckt-2	15.11.2019	30.11.2019	

The details of Insulator strings to be replaced in the line are as per the following:

Name of TL	Location No.	120kN	160kN
400kV D/C Andal-Jamshedpur(157 KM)	16-445	200 strings	1180 Strings

As this is an activity carried out for system improvement, it is requested to consider the outages for above activities as per CERC regulations non-attributable to POWERGRID.

Powergrid may explain. Members may discuss.

Item No. B.17: Rectification of Tower at Loc 24(DC+0) of 132kV Rangit-Kurseong & 132kV Rangit-Rangpo line.--Powergrid

Leg-A of Double Circuit Tower Loc -24 carrying 132kV Rangit-Kurseong TL & 132kV Rangit-Rangpo have got bend due to hill sinking. Due to hill sinking, the centre position of the tower is getting tilted gradually resulting in stress on the connecting conductors on both sides and in the tower Cross Arms. Due to the stress, bend has been noticed in tower leg as well as in cross-arms. In order to attend the defect we require S/D of both the ckts tentatively as per following schedule:

- 132kV Rangit-Kurseong& 132kV Rangit-Rangpo TL from 15.10.2019 to 17.10.2019 from 08:00 Hours to 17:00 Hours on OCB Basis

As this work has to be carried out only due to natural affect, it is requested to consider the outages during carrying out above activities as per CERC regulations non-attributable to POWERGRID.

Powergrid may explain. Members may discuss.

Item No. B.18: Flash Report by SLDC in Real Time --ERLDC

In line with IEGC Grid 5.9.4, IEGC 5.9.5 and CEA grid Standard Clause 12.2, SLDC and USER must report the grid event to ERLDC in written report. However, during real time operation the user and SLDC are not furnishing the written flash report to the ERLDC. A list of events from July and Aug-2019 is provided below where utilities have not shared the written information report and thus violating the above regulation by CERC and CEA.

Sr No	GD/ GI	Date	Time	SLDC and USER Affected	Flash report received

1	GD-I	14-07-2019	10:35	Jorethang, Melli (New) and Tashiding	No
2	GI-I	22-07-2019	03:57	Siliguri (PGCIL ERTS-2)	No
3	GI-II	26-07-2019	10:30	Kahalgaon (NTPC)	No
4	GI-II	05-08-2019	10:14	Talcher HVDC, JITPL	POWERGRID, JITPL
5	GI-I	08-08-2019	21:23	CTPS B	DVC (STU)
6	GD-I	13-08-2019	05:53	Sadaipalli	No
7	GD-I	16-08-2019	16:22	EMSS (CESC)	No
8	GD-I	16-08-2019	22:23	Darbhanga (DMTCL, BIHAR SLDC)	No
9	GD-I	18-08-2019	17:24	Dehri (Bihar SLDC)	No
10	GD-I	21-08-2019	00:02	Teesta III & Dikchu	No
11	GD-I	22-08-2019	12:22	Jorethang	No
12	GI-II	29-08-2019	08:08	New Purnea (PGCIL ERTS-1)	No

All Utilities are hereby thus advised that a written report in real-time after the event may kindly be submitted in line with above regulation and ensure proper reporting of events. All USERS and SLDC are advised to circulate the soft copy of the Flash Report (as per attached format) to their respective control rooms and include the same as a part of SOP.

ERLDC may explain. Members may discuss.

Item No. B.19: Transmission Constraint in the 220 kV System in Eastern Region—ERLDC

Constituents	Constraint list	Issues based on ATC/TTC case submission by States	Action Plan by Utilities/SLDC
West Bengal, DVC	220 kV Waria-Bidhan Nagar D/C	N-1 Contingency	
CESC, PGCIL	220 kV Shubhasgram-EMSS D/C	N-1 Contingency	
WBSETCL, PGCIL	220 kV Newtown-Rajarhat D/C	N-1 Contingency	
WBSETCL	220 kV Howrah-New-Chanditala D/C	N-1 Contingency	
DVC, PGCIL	220 kV Durgapur (PG)-Parulia D/C	N-1 Contingency	
Jharkhand, PGCIL	220 kV Hatia-Ranchi D/C	N-1 Contingency	
Bihar	220 kV Mujaffarpur-Hazipur D/C	N-1 Contingency	
Bihar,PGCIL	220 kV Patna-Sipara T/C	N-1 Contingency	
Bihar,PGCIL	220 kV Khagaul-Sipara S/C	Overlaod of 220 kV Khagaul-Sipara	
Bihar	220 kV Bodhgaya-Gaya D/C	N-1 Contingency	
Bihar	220 kV Hazipur-Amnour D/C	N-1 Contingency	

All Utilities may kindly share their short term and long term action plans to handle the aforesaid insecure situations.

ERLDC may explain.

Item No. B.20: Protection System Outage Intimation to ERLDC--ERLDC

Any outage or non-functioning of protective equipment or protection system function has a serious impact on system security and reliability and system operator need to be informed about any such outages. This helps operator in taking decision regarding

1. Taking preventive measures for avoiding any delayed fault clearance and cascade tripping in the system.
2. Transmission element outage coordination
3. Protection coordination

During the recent visit by protection audit team to 220 kV Sipara Substation for auditing the protection systems installed at the substation, it was informed that Bus Bar protection at 220 kV Sipara has been kept out due to mal-operation. However, ERLDC does not have any information regarding this. In addition, it was observed that any bus fault if not cleared will cause tripping of all 400/220 kV Patna ICTs as the Patna-Sipara ckts do not have provision of distance zone-2 forward / zone 4 reverse zone protection features at present. Also, as per Decision taken in 69th PCC meeting of ER, some measures have to be taken in the absence of bus bar protection at substation level. However, these measures are also not implemented at the substation.

The above use case signifies that information for any 220 kV and above protection outage, protection firmware up-gradation and Online relay replacement activity should be included as a part of Outage Procedure to ensure system reliability and security.

ERLDC may explain.

Item No. B.21: Monitoring of Next Six-Month New Element Integration in OCC and Its Update on Monthly Basis --ERLDC

It has been observed that many elements are getting interconnected into the system and beforehand details are not available with the system operator resulting in difficulty in carrying our operational planning activity. In view of this, as a regular agenda all ISTS and ISGS/IPP to update the OCC regarding any new elements at 220 kV and above which will be integrated in next six month with the grid. For State Grid, SLDC will be submitting the details on behalf of its intrastate Generation and transmission system. The format is given below:

Transmission Elements	Agency/ Owner	Scheme (ERSS/ TBCB/ Standing Committee/State	Schedule Completion	Projected Month for Completion	Issue Being Faced

In previous several OCC, Transmission licensees and SLDCs are requested to submit RLDC/RPC following details on monthly basis

- List of transmission element /generators of State and ISTS licensees synchronised in the last month.
- List of transmission element /generators expected to be synchronised during next month or in near future

Some SLDCs are submitting the list of intrastate and interstate line on regular basis, however transmission element /generators expected to be synchronised during next month or in near future is not submitted by any SLSC/Transmission licensee to RLDC/RPC.

ERLDC may explain.

Item No. B.22: Finalization Outage Request and processing timeline--ERLDC

The procedure for timeline regarding submission of outage request till approval of the outage formulated by ERLDC has been circulated and discussed in 156th OCC meeting held at NTPC, Kahalgaon. The same had also been presented in 157th OCC meeting held at ERPC, Kolkata for beneficiary's comments/suggestion. Till date ERLDC did not receive any objection/suggestion from the utilities. Under this circumstance, the procedure mentioned through a flow chart in **Annexure-B22** may be approved and minute unless any modification/suggestion recommended.

In 158th OCC, all the constituents were advised to submit their comments on outage procedure within a week.

OCC decided to finalize the procedure in next OCC Meeting.

Members may decide.

Item No. B.23: Additional agenda

PART C: ITEMS FOR UPDATE

Item no. C.1: Status of UFRs healthiness installed in Eastern Region

UFR Healthiness Certification for the month of August, 2019 has been received from OPTCL,CESC, WBSETCL, DVC, BSPTCL and JUSNL.

Members may note.

UFR Inspection Report of BSPTCL substations on 22.08.2019:

The ERPC UFR inspection group visited 132/33kV Digha, 132/33kV Mithapur and 132/33kV Gaighat substations of BSPTCL for UFR Audit on 22.08.2019. The team physically inspected the feeders which are connected with UFRs at the above sub-stations. The report of the inspection is furnished below:

Sl. No.	Name of the substations	Feeder connected with UFR	Voltage rating	Adopted UFR setting	Tested initiated frequency	UFR make
			(kV)	(Hz)	(Hz)	
1	132/33kV Digha	Pataliputra	33	49.0	49.0	AREVA Micom P127
2		Excise Colony	33	49.2	-	RMS 2H34K2
3		Digha-I	33	48.6	-	RMS 2H34K2
4		Digha-II	33	48.6	-	RMS 2H34K2
5	132/33kV Mithapur	Pesu-IV	33	48.8	48.8	AREVA Micom P142
6		Pesu-V	33	48.8	48.8	AREVA Micom P142
7	132/33kV Gaighat	Saidpur	33	48.6	48.59	SEL-351A
8		City Feeder	33	48.6	48.59	SEL-351A

The above UFR setting were tested with help of Secondary injection Kit owned by BSPTCL. During the inspection, the followings were observed:

Substation	Observation
132/33 kV Digha	For 33 kV Pataliputra feeder, the UFR is provided with direct trip wiring and the relay tripped at desired frequency. **For all other three feeders, The UFR relays were not working as the relays got burned due to some DC fault in substation.**
	33 kV Excise colony feeder consists of emergency loads like supply to Airport & Hospital etc.
132/33 kV Mithapur	The UFRs are provided with direct trip wiring and tripped at desired frequency.
	33 kV Pesu-V feeder was charged on no-load. It was found that the feeder was being used only in case of contingency.
132/33 kV Gaighat	The UFRs are provided with direct trip wiring and tripped at desired frequency

Bihar may explain.

Item no. C.2: Status of Islanding Schemes healthiness installed in Eastern Region

At present, the following islanding schemes are in service:

1. CESC as a whole Islanding Scheme, CESC
2. BkTPS Islanding Scheme, WBPDCL
3. Tata Power Islanding Scheme, Haldia
4. Chandrapura TPS Islanding Scheme, DVC
5. Farakka Islanding Scheme, NTPC
6. Bandel Islanding Scheme, WBPDCL

In 108th OCC meeting, respective constituents agreed to certify that the islanding schemes under their control area are in service on monthly basis.

The healthiness certificate for Islanding Scheme for August, 2019 has been received from CTPS, DVC,NTPC, West Bengal,JUSNL, WBPDCLand CESC.

Members may note.

Item no. C.3: Healthiness of SPS existing in Eastern Region

The Status of healthiness certificate for August, 2019 is given below:

Sl. No.	Name of the SPS	Healthiness certificate received from	Healthiness certificate not received from
1.	*Talcher HVDC*	*NTPC,GMR,*	*JITPL, Powergrid,*
2.	SPS in CESC system	*CESC*	*Nil*

SPS at Chuzachen

Local SPS of has been disabled with charging of 132 KV Chuzachen-Rangpo D/C.

Members may update.

Item no. C.4: Implementation of Automatic Demand Management Scheme (ADMS)-ERLDC

The latest status along with proposed logic as follows:

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 25.11.16	F <49.9 AND deviation > 12 % or 150 MW
2	DVC	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 17.06.2016	
3	Bihar	F <49.7 AND deviation > 12 % or 150 MW	They would place the order to Chemtrol for implementation.	F <49.9 AND deviation > 12 % or 150 MW
4	Jharkhand	1. System Frequency < 49.9 Hz AND deviation > 12 % or 25 MW 2. System Frequency < 49.9 Hz AND deviation > 12 % or 50 MW 3. System Frequency < 49.9 Hz AND deviation > 12 % or 75 MW	9 Months Tendering for RTU installation is in progress. Offer received from Chemtrol for implementation.	Condition 1: Block I feeders will be selected for load shedding Condition 2: Block I & II feeders will be selected for load shedding Condition 3: Block I, II & III feeders will be selected for load shedding

5	Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. DISCOM over-drawl > (40 MW)	10 Months Sent for PSDF approval.	Logic 2 and 3 is AND or OR, in case it is AND then ADMS may not operated when discom are in schedule but GRIDCO is overdrawing due to less generation at state embedded generators
6.	Sikkim			Sikkim informed that they have submitted a proposal to PSDF Committee for installation of OPGW cables which is under approval stage. Sikkim added that ADMS scheme would be implemented after installation of OPGW.

In 142nd OCC, it was opined that uniform logic should be implemented for all the states. OCC decided to review the logic of ADMS after implementation of the scheme by all the states.

In 40th TCC, ERLDC informed that in SCADA O&M Meeting held on 6th March 2019, Chemtrol has agreed to implement ADMS in Bihar and Jharkhand system without any additional charges. However necessary consent for making payment of Rs 4 lakhs(excluding GST) for remaining period of maintenance contract shall be given before implementing the same.

In the TCC Meeting, both Bihar and Jharkhand gave consent for making necessary payment.

In 159th OCC, JUSNL informed that testing of ADMS had been completed and the ADMS would be kept in service in 1st week of August 2019.

In 160th OCC, BSPTCL informed that installation of ADMS had been completed and the testing would be done by 15th August 2019.

Members may update.

Item no. C.5: Shut down plan of 400 KV Rangpo-Binaguri for Reconductoring work-- Powergrid

Under ERSS-XX, reconductoring work of 400 KV Rangpo-Binaguri-D/C from existing twin moose to Twin HTLS has been approved with scheduled completion target of May-2020. Previously, there are only Rangpo-Binaguri-D/C connectivity was present for transferring power from Sikkim to rest of the grid, accordingly, the S/D for reconductoring work was kept on hold till commissioning of 400 KV Rangpo-Kishanganj& 400 KV Teesta-3-Kishanganj circuit.

After commissioning of above links by M/S. TVPTL, both 400 KV Rangpo-Binaguri S/D was allowed but with a condition that, in case of any breakdown of available links, any one circuit required to be brought back within 24 Hours of intimation.

As all aware that Rangpo-Binaguri, line corridor is completely passing through hilly terrain (Almost 70% of the line) & mostly populated by angle towers. Height of the towers in the peaks also make the task double difficult as approach and carrying of T&P's are itself a gigantic task. Although the work commenced on 19.03.2019 after getting approval of S/D till 25.04.2019, but as the returning conditions are there, work cannot be speed up as in every span, respective gangs used to complete one after another circuit and moving for next span.

However, due to certain issues of generation back down, the double circuit S/D was asked to return and finally both the circuit again charged on 26.05.2019. Merely two month period of S/D was allowed in which due to condition of return of S/D the work could not take pace as envisaged.

After that numerous communications made from ER-II end for further S/D but citing system security & constraints the S/D deferred continuously. In this regard a letter from ED/ER-II dated 17.05.19 also given to POSOCO (Enclosed).It may be noted that, the work is very tedious and

time taking activity as most of the work will be carried out at Hills. Again, entire work will take 10-12 months and allowing a small window in lean period will not serve the purpose.

As such again, the S/D for reconductoringis placed as below, for completion of scheduled scope:

SL NO	Name of Element	From	To	Nature	Remarks
01.	400 KV Rangpo-Binaguri-Circuit-I	01.09.2019	30.07.2020	OCB	Other Rangpo-Binaguri Circuit will be charged.
02.	400 KV Rangpo-Binaguri-Circuit-II.	01.11.2019	30.05.2020	OCB	Both the Rangpo-Binaguri D/C will be under shut down.

In continuation, it may be noted, that during S/D of circuits of Rangpo-Binaguri, SPS will be implemented at Rangpo end for maintaining safe operating limits, in case of any eventuality. S/D for both circuits asked in lean period only.

In 159th OCC, it was informed that the issue was discussed in shutdown meeting held on 18th July 2019 wherein it was opined that one circuit of 400 KV Rangpo-BinaguriD/C line could be allowed from September/October 2019 depending on the hydro generation availability in Sikkim.

In 160th OCC, ERLDC informed that it was not possible to give shutdown of one circuit of 400 KV Rangpo-BinaguriD/C line during September 2019 in view of full hydro generation in Sikkim.

OCC decided to review the shutdown proposal in next OCC Meeting.

Members may discuss.

Item no. C.6: Unavailability of Video Conference facility at Sikkim SLDC--Sikkim

Sikkim vide mail dated 15th May 2019 informed that their Video Conference unit was having problem of HDMI port since last two years and it was not attended by M/s Chemtrols until January 2019. After that they took entire VC unit for repair.

Sikkim added that they raised the issue in last SCADA meeting wherein M/s Chemtrol assured to get it repaired by 30.04.2019 but the same is not yet returned.

In 158th OCC, It was informed that the issue was discussed in SCADA meeting wherein Chemtrol was agreed to repair the VC and requested Sikkim to clear the pending dues.

OCC advised Sikkim to clear the dues and send a copy to ERPC and ERLDC. OCC decided to take up the issue with Chemtrol in monthly SCADA meeting.

In 159th OCC, Sikkim informed that they had cleared the dues.

In 160th OCC, it was informed that the issue was discussed in SCADA meeting wherein Chemtrol was agreed to repair the VC in August 2019.

Members may update.

Item no. C.7: Review of the PSS Tuning of Generators in Eastern Region --ERLDC

On 31st January 2019, PSS Tuning Meeting was held at ERPC. All generating utilities were advised to complete the PSS tuning of their plant at earliest for improvement of damping in the grid during transients. In addition, the tuning reports have also to be submitted to ERLDC/ERPC for their validation.

In line with this ERLDC has communicated to following utilities in view of the recent oscillation observed during various events:

Generating Power Plant	Remarks	Status of Action Plan to be informed to OCC
All Units of DVC Generating Plant	Oscillation Observed at DSTPS on 24th April 2019 and other Oscillation events in the past.	DVC need to Give consolidated Plan. They have informed that it will be done during overhauling which will take a lot of time. **ERLDC View :In compliance to IEGC and CEA regulation, It is desired that for the Units which are planned for AOH in next six month will be done during AOH and for the rest units also the PSS tuning to be taken up with the vendor and to be completed in six months itself.**
Sikkim Hydro Complex (Teesta3, Teesta 5, Chujachen, Dikchu, Tashiding, Jorethang)	In view of Oscillation during the 16th April 2019 events and changes in Network configuration in Sikkim hydro Complex with augmentation of lines	Teesta3: Oct 2019. Other Plants yet to send their details. **ERLDC View: In view of Power swings and oscillation, all units are advised to go through PSS tuning in next three months.**
MPL Plant	Due to Change in Network configuration dur to bus splitting at Maithon.	MPL Unit-2: 14th June-2019 in the AOH. MPL Unit-1: Planned in the AOH on Nov-2019.
APNRL Plant	Oscillation with Low Damping during transient and switching observed at the plant.	APNRL has intimated that they will undergo tuning during AOH. **ERLDC View: It is observed that oscillation is severe at APNRL and they do not have any AOH in 2019-20 as per LGBR. So, APNRL is advised to comply with IEGC and CEA regulation on PSS tuning within next 3 months.**
Farakka NTPC Power Plant	With Augmentation of new lines and changes in network configuration with upcoming bus split at Kahalgaon.	NTPC has not yet submitted the details. **ERLDC View: They have informed that they will do during AOH however compliance of IEGC and CEA regulation must be ensured atearliest and PSS tuning of All Units must be completed within next 3 months.**
NPJC/BRBCL/KBUNL NTPC Power Plant	The new units have been commissioned however there are no details on the PSS tuning activity in line with Indian Electricity Grid Code and CEA Grid Connectivity Standards	BRBCL has submitted PSS tuning details only for Unit 2. For other units' details to be submitted by NTPC.

Members may update.

Item no. C.8: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

PGCIL has already commissioned the 2x315MVA 400/220kV Bolangir S/s by LILOing of 400kV Meramandali-Jeypore S/C line and 400/220 kV Keonjhar S/s with an objective of supplying power from ER grid to its adjoining areas in Odisha.

In lastOCC, OPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x315MVA 400/220kV Bolangir S/s**	
a.	LILO of one circuit of Sadeipalli-Kesinga220 kV D/C line at Bolangir S/S	*Only 7 towers left (Severe ROW problem).**By Mar,2020.***
2.	**400/220kV Pandiabil Grid S/s:**	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	***By Mar,2020.***
3.	**400/220 kV Keonjhar S/S**	
a	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By June 2020

OPTCL may update.

Item no. C.9: 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj&Dhanbad

In lastOCC, JUSNL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**Daltonganj 400/220/132kV S/s:**	
a.	Daltonganj(POWERGRID)–Latehar220kVD/c	By Dec, 2019.
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	The line expected to be completed by May, 2018 but – Garhwa 220kV is expected to be completed by Sep 2019.
c	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Tendering is in progress. Expected to be completed by October 2019
2	**Chaibasa400/220kVS/s**	
A	Chaibasa(POWERGRID)–Noamundi220kVD/c	Not yet started
3	**Dhanbad400/220kVS/s**	
A	LILO of Govindpur–Jainamore/TTPS 220kVD/c at Dhanbad	ROW issues.Target date April 2020.

JUSNL may update.

Item no. C.10: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVASubashgram& 2x500 MVA Rajarhatsub-stations

In lastOCC, *WBSETCL updated the latest status as follows:*

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	ROW problem, August 2020
b.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	The line is charged from Rajathat and Jeerat. The line would be chargedfrom Barasat end after completion of rest of the work by September 2020.
2	**Subashgram400/220kVS/s**	
a	Subashgram–Baraipur220kVD/cline	January 2020,80% of work has been completed. The line up to the cable is charged from Subashgram end on antitheft.

WBSETCL may update.

Item no. C.11: Update on status of telemetry

CERC vide order dated 28.02.2016 on Petition No. 007/SN/2014 directed NLDC and respective RLDCs to update the status of telemetry every month at their respective websites and take up the issue of persistent non-availability of data from Generating Stations/substations at RPC meetings for appropriate action.

Major issues are given below:

i. Regarding frequent intermittent of real time SCADA data from Talcher STPS Stage 1 & 2, NTPC agreed to provide additional ports by November 2019.
ii. Alternate path for Malda–Farakka OPGW link

In 159th OCC, ERLDC informed that PMU data available at ERLDC is intermittent due to communication issues and PMU data reporting from PDCs at SLDCs is also intermittent.

ERLDC opined that alternate OPGW link is required for reliable communication.

OCC advised Powergrid to take the necessary action to resolve the issue.

Agenda submitted by ERLDC is enclosed at **Annexure-C11**.

Non-Availability of SCADA data from Subarnarekha Hydro Power Station (one of the Black Start Capable station in Jharkhand)

Members may update.

Item no. C.12: Transfer capability determination by the states

In order to ensure, safe and secure operation of the grid, the states should carry out the power system study for operational planning and power transfer capability through their respective transmission links with the rest of the grid.

It was decided in the NPC meeting that to begin with, power system study for assessment of operational limits / power transfer capability for each state will be done by the concerned RLDC in association with concerned SLDC. Monthly TTC /ATC will be uploaded by the SLDCs at their respective websites and also communicated to concerned RLDC & NLDC subsequently.

Latest status of State ATC/TTC declared by states for the month of December-2019

Sl No	State/Utility	TTC import(MW)		RM(MW)		ATC (Import) MW		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	5300	--	100	--	5200	--	Oct-19
2	JUSNL	1024	--	28	--	996	--	Dec-19
3	DVC	1194	3125	62	49	1132	3076	Dec-19
4	OPTCL	1434	--	83	--	2351	--	Dec-19
5	WBSETCL	3732	--	400	--	3332	--	Oct-19
6	Sikkim	295	--	2.5	--	292.5	--	Dec-19

As per the "Detailed Procedure for Relieving Congestion in Real Time Operation" Following has also been mandated for monitoring of Congestion in Real Time :

1. *SLDCs/ RLDCs/ NLDC shall have a display available in their web-sites showing TTC, TRM, ATC declared in advance alongwith Real time power flow in the corridor for which TTC has been declared shall be displayed alongside for comparison. The voltage of the important nodes in the grid downstream/ upstream of the corridor shall also be displayed.* Presently the display available for RLDC/NLDC for real time monitoring is :http://wbs.nldc.in:82/Web_TTC_ATC.aspx.As all SLDCs of Eastern region are now declaring ATC/TTC, so, now it would be desired to have the display for Eastern region where states ATC/TTC calculated will be monitored with actual. In order to, harmonise the process a detailed view of ATC/TTC links is given below which ERLDC can utilize for web based monitoring.

SLDC	**ATC/TTC Weblink**
DVC	http://application.dvc.gov.in:8080/CLD/atcttcmenu.jsp
West Bengal	http://www.wbsldc.in/atc-ttc
Bihar	http://www.bsptcl.in/ViewATCTTCWeb.aspx?GL=12&PL=10
Orissa	Dynamic Link for each month (Static Location for All months ATC/TTC to be kept for easy access)
Jharkhand	Web Link to be prepared by SLDC
Sikkim	Web Link to be prepared by SLDC

In addition , Each SLDC shall also show the same on their website for real time monitoring. Sample display for NLDC is given below.

Updated at : **29-07-2019 16:01:15**

S.No.	CORRIDOR / CONTROL AREA	TTC	ATC	ACTUAL FLOW (MW)
Import				
1	NR	17950	17150	12431
2	ER			-3218
3	NER	1150	1105	0
4	SR	10500	9750	3305
5	WR			-12714
6	Punjab	7000	6400	6206
7	DD&DNH	1300	1300	1111
8	S3 (Kerala)	2900	2810	2514
Export				
1	NR	4500	3800	-12431
2	ER			3218
3	NER	2695	2650	-482
4	SR	999999	999999	-3305
5	WR			12714
6	W3	999999	999999	12377

Fig : NLDC display for Real Time congestion

2. *State Load Despatch Centre (SLDC) shall assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) on its inter-State transmission corridor considering the meshed intra State corridors for exchange (import/ export) of power with inter-State Transmission System (ISTS). The details of anticipated transmission constraints in the intra State system shall also be indicated separately.*Present Status of Mentioning about qassuptionaand LGBR used for ATC/TTC calculation based on the available online information are as follows**:**

SLDC	**ATC/TTC Review**
DVC	Contsraint and Load/gen Assumption needs to be mentioned
West Bengal	Contsraint and Load/gen Assumption needs to be mentioned

Orissa	No Issue, as ATC/TTC, Constraint and assumption are mentioned properly for both import as well as export TTC.
Bihar	Contsraint and Load/gen Assumption needs to be mentioned
Jharkhand	Contsraint and Load/gen Assumption needs to be mentioned
Sikkim	Contsraint and Load/gen Assumption needs to be mentioned

ERLDC may explain. Members may update.

Item no. C.13: Mock Black start exercises in Eastern Region – ERLDC

Mock black start date for financial year 2019-20 is as follows:

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2019	Done on 19th July 2019	Last Week of January 2020	
2	Maithon	1st week of June 2019		1st Week of February 2020	
3	Rengali	2nd week of June 2019	Done on 27th June 2019	Last week of November 2020	
4	U. Indarvati	3rd week ofJune 2019	July 2019	2nd week of February 2020	
5	Subarnarekha	1st week of October 2019	20th August 2019	1st week of January 2020	
6	Balimela	3rd week of October 2019	Done on 17th July 2019	1st week of March 2020	
7	Teesta-V	2nd week of May 2019	During winter	Last week of February 2020	
8	Chuzachen	Last Week of Dec 2019		Last week of February 2020	
9	Burla	Last Week of June 2019	July 2019	Last week of February 2020	
10	TLDP-III	1st Week of June 2019		2nd Week of January 2020	
11	TLDP-IV	Last Week of June 2019		1st Week of February 2020	
12	Teesta-III	Last Week of Oct 2019		First Week of March 2020	
13	Jorthang	First Week of May 2019		First Week of Feb 2020	
14	Tasheding	2nd Week of May 2019		2nd Week of Feb 2020	
15	Dikchu	Sep 2019		3rd Week of Feb 2020	

Members may update.

Item no. C.14: Summary of Status Update on Previous agenda items in OCC

OCC	Agenda	Decision	Status Update
152	**Item No. B3: Installation of PMUs for observation of the dynamic performance of STATCOMs**	Powergrid informed that M/s GE had agreed to supply and install of 4 no's PMUs for 4 STATCOMs in the Eastern Region within the quantity variation clause under the existing URTDSM Project.	In 159th OCC Meeting Powergrid informed thatthe work would be completed by 15th August 2019.

			PMU at Raurkela has been commissioned in Aug 2019. Status of PMUs installation at other PMU may kindly be apprised.
155	**C.22: Collection of modeling data from Renewable as well as conventional energy generators: ERLDC**	OCC advised all the constituents to submit the details of renewable power plants of 5 MW and above.	157th OCC advised all the SLDCs to submit the details to ERPC and ERLDC. Format along with an explanation for collection of Wind and Solar Data has been shared by ERLDC to all SLDC. **Bihar/ West Bengal and Orissa are having Solar Plant with more than 5 MW capacity. However, details have not yet been received in terms of modeling data.**
156	**Low frequency Oscillation at MTDC BNC-ALP-Agra**	OCC Advised ERTS-2 to submit the analysis report to ERLDC/ERPC	159th OCC Powergrid informed that the issue was referred to ABB, Sweden. The report is yet to be received from ABB. **PGCIL may update on Report submission to OCC. In the present scenario of High Hydro, the stability of HVDC and its controller is of major importance.**
156	**Item no. C.20: Updated Black Start and Restoration procedure of State--ERLDC**	Bihar, Jharkhand, DVC, West Bengal and Orissa have submitted the updated restoration procedure.	Restoration procedure form Sikkim is yet to be received. Mail has been given by ERLDC to SLDC for early submission.
156	**Item No. B.12: Status of Auto-Reclosure on Lines from Tala and Chukha Hydro Power Plant (Bhutan)**	DGPC informed that an Expert Committee was constituted to enable the autorecloser for transmission lines connected to Tala and Chuka hydro stations. The Committee had recommended for implementation of the autorecloser at Tala and Chuka. DGPC added that they are planning to implement the autorecloser scheme for the transmission lines connected at Chuka by May 2019. Based on	In 159th OCC meeting DGPC informed that they are implementing autorecloser at Tala also. The A/R isimplemented at Binaguri end and there have been various cases where successful A/R has occurred at Binaguri but due to no A/R attempt Tala has a blackout in June 2019. In addition, in month of Aug also many times 400 kV lines successfully reclosed

		the experience gained, they would implement the autorecloser scheme for the transmission lines connected at Tala.	from Binaguri end. The experience on 220 kVChukha-Birpara in the form of successful A/R has been observed on 25th June 2019. DGPC has informed that after the deliberation in their group, they would be implementing the A/R at Tala by the end on August 2019. **DGPC may kindly appraise the status of A/R on lines from Tala and Malbase.**
160 OCC	**Bypassing arrangement of LILO of 400kV Lines at Angul**	Powergrid informed that bypass arrangement would be completed by end of August 2019. OPTCL informed that 2nd circuit of 400kV Meramundali-Mendhasal line would be commissioned by end of August 2019.	

PART D:: OPERATIONAL PLANNING

Item no. D.1: Anticipated power supply position during October 19

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of October19 were prepared by ERPC Secretariat on the basis ofLGBR for 2019-20 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is at **Annexure-D.1**.

Members may confirm.

Item no. D.2: Shutdown proposal of transmission lines and generating units for the month of October 19

Generator shutdown for October 19:

System	Station	Unit	Capacity (MW)	Period		No. of Days
				From	To	
DVC	Mezia TPS	2	210	29.10.19	03.12.19	3
ODISHA	Talcher TPS	6	110	09.10.19	28.10.19	20
WBPDCL	Kolaghat TPS	2	210	01.08.19	31.03.20	31

ERLDC may place the list transmission line shutdowndiscussed on 16th September 2019 through VC.

Members may confirm.

Item no. D.3: Prolonged outage of Power System elements in Eastern Region

(i) Thermal Generating units:

S.No	Station	Location	Owner	Unit No	Capacity	Reason(s)	Outage	
					(MW)		Date	Time
1	BRBCL	BIHAR	BRBCL	1	250	ANNUAL OVERHAULING	11-Aug-19	02:29
2	KOLAGHAT	WEST BENGAL	WBPDCL	1	210	POLLUTION CONTROL PROBLEM	10-May-18	23:05
3	KOLAGHAT	WEST BENGAL	WBPDCL	3	210	POLLUTION CONTROL PROBLEM	23-Feb-17	11:51
4	CTPS	JHARKHAND	DVC	3	130	TURBINE BLADE DAMAGE	30-Jul-17	00:00
5	DSTPS	WEST BENGAL	DVC	1	500	ANNUAL OVERHAUL	26-Aug-19	00:17
6	STERLITE	ODISHA	GRIDCO	4	600	CAPITAL OVERHAULING	31-Jul-19	23:22
7	MEJIA	WEST BENGAL	DVC	4	210	*BOILER LICENSE RENEWAL*	6-Sep-19	22:58

8	JITPL	ODISHA	JITPL	1	600	PA Fan Duct leakage	7-Jul-19	02:30
9	TALCHER	ODISHA	NTPC	1	500	COAL SHORTAGE	7-Sep-19	22:46
10	SAGARDIGHI	WEST BENGAL	WBPDCL	1	300	*COAL SHORTAGE*	20-Aug-19	23:59
11	BAKRESWAR	WEST BENGAL	WBPDCL	2	210	COAL SHORTAGE	7-Sep-19	09:16
12	DPL	WEST BENGAL	WBPDCL	7	300	*COAL SHORTAGE*	1-Aug-19	00:10
13	BANDEL	WEST BENGAL	WBPDCL	5	210	TURBINE VIBRATION	22-Jul-19	05:27
14	*WARIA TPS*	*WEST BENGAL*	*DVC*	*4*	*210*	*FLAME FAILURE*	9-Sep-19	22:14
15	TTPS	ODISHA	GRIDCO	5	110	*WET COAL/ COAL SHORTAGE*	11-Sep-19	19:32
16	GMR	ODISHA	GRIDCO	3	350	*COAL SHORTAGE*	27-Aug-19	11:20
17	KOLAGHAT	WEST BENGAL	WBPDCL	5	210	*COAL SHORTAGE*	11-Sep-19	00:13
18	MTPS STG I	BIHAR	BSPHCL	1	110	*TURBINE BEARING PROBLEM*	4-Sep-19	00:11

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

(ii) Hydro Generating units:

Sl. No.	Station	Unit No.	Capacity (MW)	Reason (s) of outage	Outage date	Expected Revival Date
1	Balimela	Unit- 1	60	Renovation & Modernization work (Planned)	05-08-2016	30-09-2019
		Unit- 2	60	Renovation & modernization work (Planned).	20-11-2017	30-09-2019
2	Burla	Unit-1	49.5	Turbine & Generator coupling cover water leakage (Forced)	14-03-2018	31-12-2019
		Unit-5	37.5	Renovation. Modernization & up rating work (Planned)	25-10-2016	09-12-2019

		Unit-6	37.5	Renovation, Modernization & up rating work (Planned)	16-10-2016	07-11-2019
3	Chiplima	Unit-3	24	Renovation & Modernization work (Planned)	15-10-2015	15-06-2019
4	Rengali	Unit-2	50	Capital Maintenance (Planned)	12-12-2018	30-07-2019
6	Upper Kolab	Unit-4	80	Capital Maintenance (Planned)	01-02-2019	31-07-2019

It is seen that about 688 MW hydro capacities in Odisha is under forced outage / planned outagein the period of peak monsoon and therefore not available for providing the much needed peaking support during evening peak. SLDC / OHPC may please indicate restoration plan of the units.

(iii) Transmission elements

SL NO	Transmission Element / ICT	Agency	Outage From	Reasons for Outage
			DATE	
1	220 KV BALIMELA - U' SILERU	OPTCL / APSEB	10-03-2018	LINE ANTITHEFT CHARGED FROM UPPER SILERU ON 17-04-18
2	400 KV IBEUL JHARSUGUDA D/C	IBEUL	29-04-2018	TOWER COLLAPSE AT LOC 44,45
3	400KV NEW PURNEA-BIHARSARIFF(PG)-D/C	ENICL	10-08-2018	TOWER COLLAPSE AT LOC 47/0
4	400 KV PATNA KISHANGANJ- I	POWERGRID	01-09-2018	TOWER COLLAPSE AT LOC 129. PILING DAMAGED
5	400 KV PATNA KISHANGANJ- II	POWERGRID	06-07-2019	EMERGENCY HAND TRIPPED DUE TO FRUSTUM OF LOCATION NO: 129A/0 (A LEG) HAS BEEN EXPOSED ON SOIL EROSION.
6	220 KV PANDIABILI - SAMANGARA D/C	OPTCL	03-05-2019	49 NOS OF TOWER COLLAPSED.AS REPORTED BY SLDC OPTCL, 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.
7	765KV JHARSUGUDA-RAIPUR-I	POWERGRID	26-08-2019	OPENED ON OVER VOLTAGE AT JHARSUGUDA
8	765KV ANGUL-JHARSUGUDA IV	POWERGRID	08-09-2019	OPENED ON OVER VOLTAGE AT JHARSUGUDA
9	400/132 KV, ICT II (200 MVA) AT KAHALGAON	NTPC	02-08-2019	Y PHASE BUSHING BURSTED
10	132 KV LALMATIA KAHALGAON(NTPC)	JSEB/NTPC	02-08-2019	TO RESTRICT LOADING ON 220/132 KAHALGAON ICT 1

11	132KV KhSTPP-SABOUR-SC	BSPHCL	03-08-2019	TO RESTRICT LOADING ON 220/132 KAHALGAON ICT 1
12	400 KV MOTIHARI(DMTCL)-GORAKHPUR-I	POWERGRID/DMTCL	13-08-2019	LINE SWITHED OFF DUE TO ANTICIPATED TOWER COLLAPSE AT LOC 27/0(132) DUE TO CHANGE OF COURSE OF GANDAK RIVER.TOWER COLLAPSED REPORTED AT LOC 27/0(132) ON 15/08/19 AT 07:00 HRS.
13	400 KV MOTIHARI(DMTCL)-GORAKHPUR-II	POWERGRID/DMTCL	13-08-2019	LINE SWITHED OFF DUE TO ANTICIPATED TOWER COLLAPSE AT LOC 27/0(132) DUE TO CHANGE OF COURSE OF GANDAK RIVER.TOWER COLLAPSED REPORTED AT LOC 27/0(132) ON 15/08/19 AT 07:00 HRS.
14	400 KV BARH-MOTIHARI(DMTCL) -I	POWERGRID/DMTCL	04-09-2019	TOWER COLLAPSE AT LOCATION 26/0
15	400 KV BARH-MOTIHARI(DMTCL) -II	POWERGRID/DMTCL	04-09-2019	TOWER COLLAPSE AT LOCATION 26/0

(Reported as per Clause 5.2(e) of IEGC)

** Transmission licensees whose line were out due to tower collapse/ bend, may please update the detail restoration plan and as on date work progress status in OCC.

Also Monthly progress report to be submitted to ERLDC/ERPC till restoration of the element.

Members may update.

PART E::ITEMS FOR INFORMATION

The following agenda items are placed for information and necessary compliance:

Item No. E.1: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

The activity of the preparation of Crisis Management Plan for countering the cyber attacks and its implementation including the Mock Drills, audits etc. is being monitored by CEA regularly in line with crisis management plant of Ministry of Power. Power Utilities (including generation, transmission & distribution utilities) of eastern region are to furnish regularly the updated status to on the same to Chief Engineer, Distribution Planning & Development Division, CEA.

In 142nd OCC, ERLDC informed that, in line with Enquiry Committee Recommendation, cyber security audit is being conducted on regular basis for SCADA system installed at ERLDC and SLDC as well but cyber security audit for telecom infrastructure installed in Eastern Region is not being carried out.

OCC advised all the constituents to conduct the cyber security audit on telecom infrastructure installed in Eastern Region. It is further advised that compliance / mitigation of the points observed during the audit should also be completed for improvement of the telecom infrastructure in ER.

In 37th TCC meeting, it was decided that a workshop would be conducted by CEA at ERPC for further benefit of ER Constituents.

In 144th OCC, ERLDC informed that they have already conducted a workshop with the help of NPTI, Durgapur on 21st March 2018.

A workshop on cyber security was conducted by CEA at ERPC, Kolkataon 09-05-2018.

As suggested by CEA, a format would be circulated among ER constituents for furnishing the information of the their respective systems for discussion in OCC Meeting. The format is enclosed at **Annexure-E1**.

OCC advised all the constituents to submit the information to ERPC as per Annexure-E1.

Item No. E.2: Submission of data in MERIT Order portal--CEA

CEA vide mail dated 9th July 2019 informed that the MERIT Order portal had been launched on 23rd June, 2017 by Honourable Minister of Power. One of the most important advantages of "Merit" Portal is Transparent information dissemination pertaining to marginal variable cost and source wise purchase of electricity and indication of supply side reliability, adequacy, and cost of power procurement.

However, it has been observed that many of the states are not filling the data regularly and sometimes the data filled varies widely from the data available on the respective RLDCs daily reports.

It is requested that the states may be advised to fill the data regularly and check that correct data is filled on the MERIT Portal.

In 159th OCC, all the SLDCs were advised to fill the correct data in MERIT portal on regular basis.

Item No. E.3: Status of 1st Third Party Protection Audit:

The compliance status of 1st Third Party Protection Audit observations is as follows:

Name of Constituents	Total Observations	Complied	% of Compliance
Powergrid	54	46	85.19
NTPC	16	14	87.50
NHPC	1	1	100.00
DVC	40	26	65.00
WB	68	49	72.06
Odisha	59	42	71.19
JUSNL	34	25	73.53
BSPTCL	16	5	31.25
IPP (GMR, Sterlite and MPL)	5	5	100.00

** Pending observations of Powergridare related to PLCC problems at other end.*

The substation wise status of compliance are available at ERPC website (Observations include PLCC rectification/activation which needs a comprehensive plan).

In 118th OCC, all the constituents were advised to comply the pending observations at the earliest. All the STUs informed that most of the observations are related to funding from PSDF. DPRs have been submitted to PSDF committee.

Item No. E.4: Commissioning of new transmission elements in Eastern Region

The details of new units/transmission elements commissioned in the month of August-2019 based on the inputs received from beneficiaries

Monthly commissioning List of Tansmission element and generators: August 2019					
SL NO	**Element Name**	**Owner**	**Charging Date**	**Charging Time**	**Remarks**
1	220 KV Keonjhar-Keonjhar II	OPTCL	03-08-2019	13:49	
2	220 KV Patna khagaulckt 2	BGCL	08-08-2019	16:05	
3	220 KV Patna khagaulckt 3	BGCL	08-08-2019	16:09	
4	500MVA ICT II at Rajarhat	PGCIL	15-08-2019	18:28	
5	MangdhechuUint-I (180MW)	MHPA	28-06-2019	12:30	Information received on 31.08.2019
6	MangdhechuUint-II (180MW)	MHPA	08-07-2019	12:30	
7	MangdhechuUint-IV (180MW)	MHPA	14-08-2019	12:30	
8	132kV Goghat-Arambag	WBSETCL	27-08-2019	15:11	

Item No. E.5: UFR operation during the month of August'19

System frequency touched a maximum of 50.32 Hz at09:34hrs of 15/08/19and a minimum of 49.55 Hz at 09:19hrs of 20/08/19. Hence, no report of operation of UFR has been received from any of the constituents.

****

Annexure-B3

CIN: U31200DL2005SGC133875

Fax: +91-11-46529744
Email: info@teestaurja.com

TEESTA URJA LIMITED

(A Government of Sikkim Enterprise)

TUL/PS&R/0001/2019-20/001 Dated 21st August 2019

The Member Secretary
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge, Kolkata -700 033

Sub: 1200 MW Teesta III HE Project, Sikkim – **Evacuation arrangement reg.**

Dear Sir,

We would like to draw your kind attention to the evacuation constraints being witnessed by the hydro generating stations in Sikkim leading to water spillage in the event of shut down of Teesta III - Kishanganj Section and Dikchu - Kishanganj Section of 400 kV D/C Teesta III – Kishanganj Line.

2. At present, during such shutdown, the load in each circuit of 400 kV D/C Rangpo – Binaguri Line is restricted to 850 MW. This capacity of twin moose conductor has been arrived, considering ambient temperature of 45 deg C and maximum conductor temperature to 75 deg C. However, during most of the time, ambient temperature remains below 40 deg C. Further, these lines are designed considering conductor temperature of 85 deg C.

3. In order to minimize loss of hydro generation, during such emergent conditions, it is desired to evacuate maximum possible power through the existing circuits of 400 kV D/C Rangpo – Binaguri Line to avoid spillage of water.

4. Accordingly, as an emergent measure, duly considering the line conditions and existing ambient temperatures, Eastern Regional Load Despatch Centre (ERLDC), in consultation with Powergrid Corporation of India Ltd (PGCIL), may allow evacuation of power up to 1100 MW per circuit from 400 kV D/C Rangpo – Binaguri Line. Similarly, power up to 2200 MW may be considered for evacuation on each circuit i.e. Teesta III - Kishanganj and Dikchu - Kishanganj Sections, in the event of tripping/ constraints on 400 kV D/C Rangpo – Binaguri Line.

5. In view of the foregoing, the proposal is submitted for kind consideration with a request to convene a meeting between ERPC, PGCIL, ERLDC, TPTL and the concerned generators to discuss the procedure for increasing the ampacity of 400 kV D/C Rangpo – Binaguri Line and Teesta III - Kishanganj and Dikchu - Kishanganj Sections of 400 kV D/C Teesta III – Kishanganj Line to the maximum as an emergent measure on case to case basis considering the ambient temperature.

Yours sincerely
For **Teesta Urja Ltd.**

(Yogendra Kumar)
President (O&M)

Copy to:

1. **The Chairman, Central Electricity Authority,** Sewa Bhawan, R K Puram, Sector-I, New Delhi-110066
2. **The Chief Engineer, Power System (Power System Engg & Tech Dev.),** Sewa Bhawan, R K Puram, Sector-I, New Delhi-110066
3. **The Executive Director, ER II, Powergrid Corporation of India Ltd.,** Action Area 1C, New Town, Kolkata - 700156
4. **The Executive Director, Eastern Regional Load Despatch Centre,** 14, Golf Club Road, Tollygunge, Kolkata -700 033

Annexure-B7

Telex : 0264202 POWER IN
Fax : 03592 222927

Phones : 202244
PBX : 222908
222916
222028

GOVERNMENT OF SIKKIM
ENERGY AND POWER DEPARTMENT

No. 30/GOS/E&P/TRD/2018-19/9 Dated 6/9/2019.

PD & back
11/9/19
SE (Hydro) Pl. discuss.
14/9/19
G. Rao (EE)
14/9/19

To,
The Member Secretary
Eastern Region Power Committee (ERPC) Secretariat
14 Golf Club Road, Tollygunge,
Kolkata, 700033, West Bengal

Kind attention of Shri J. Bandyopadhya

SUB : **Cancellation/Termination of Power purchase Agreements with NTPC & its subsidiaries**

Sir,

As a continuation to the issue raised by Energy & Power Department, GOS on the above subject at the 41st TCC/ERPC meeting held at Kochi on 26th & 27th of August 2019, the photocopy of the correspondence made by the State Government to the Ministry of Power, GOI and NTPC are being forwarded to your office so that the matter could also be pursued by the Regional Power Committee to enable Sikkim to terminate/Cancel the Power Purchase Agreements whose details are as under :-

1. For the following power projects MOP, GOI has directed Sikkim to surrender the allocation and will allocate the same to other beneficiaries as and when their requisition is received
   a. Kantee Bijlee Utpadan Nigam STPP b. Nabinagar STPP c. Daripalli-I STPP
   d. BAHR-I STPP e. North Karanpura STPP
   (Total allocation is 73.76 MW)

2. For the following thermal power projects NTPC has agreed to take fresh consent from Sikkim

Telex : 0264202 POWER IN
Fax : 03592 222927

Phones : 202
PBX : 222
222
222

GOVERNMENT OF SIKKIM
ENERGY AND POWER DEPARTMENT

No. ..... *Dated* .....*20*..

a. Daripalli-II STPP, b. Gajmara-I STPP, c. Gajmara-II STPP & d. Katwa STPP e. Talcher STPP

As seen in the past, chances of reallocation to other beneficiaries is very slim and till such times, the State has to bear the fixed cost which shall be in excess of Rs 100 Crores annually. Sikkim as of now is power exporting State with no additional thermal power requirement. Also, the State having limited financial resources, the burden of annual out flow of Rs 100 Crores or more cannot be borne by the State.

In circumstances as these, It is requested once again that the matter may be taken by the committee so that all above Power Purchase Agreements are terminated/cancelled immediately without any financial implication to the State.

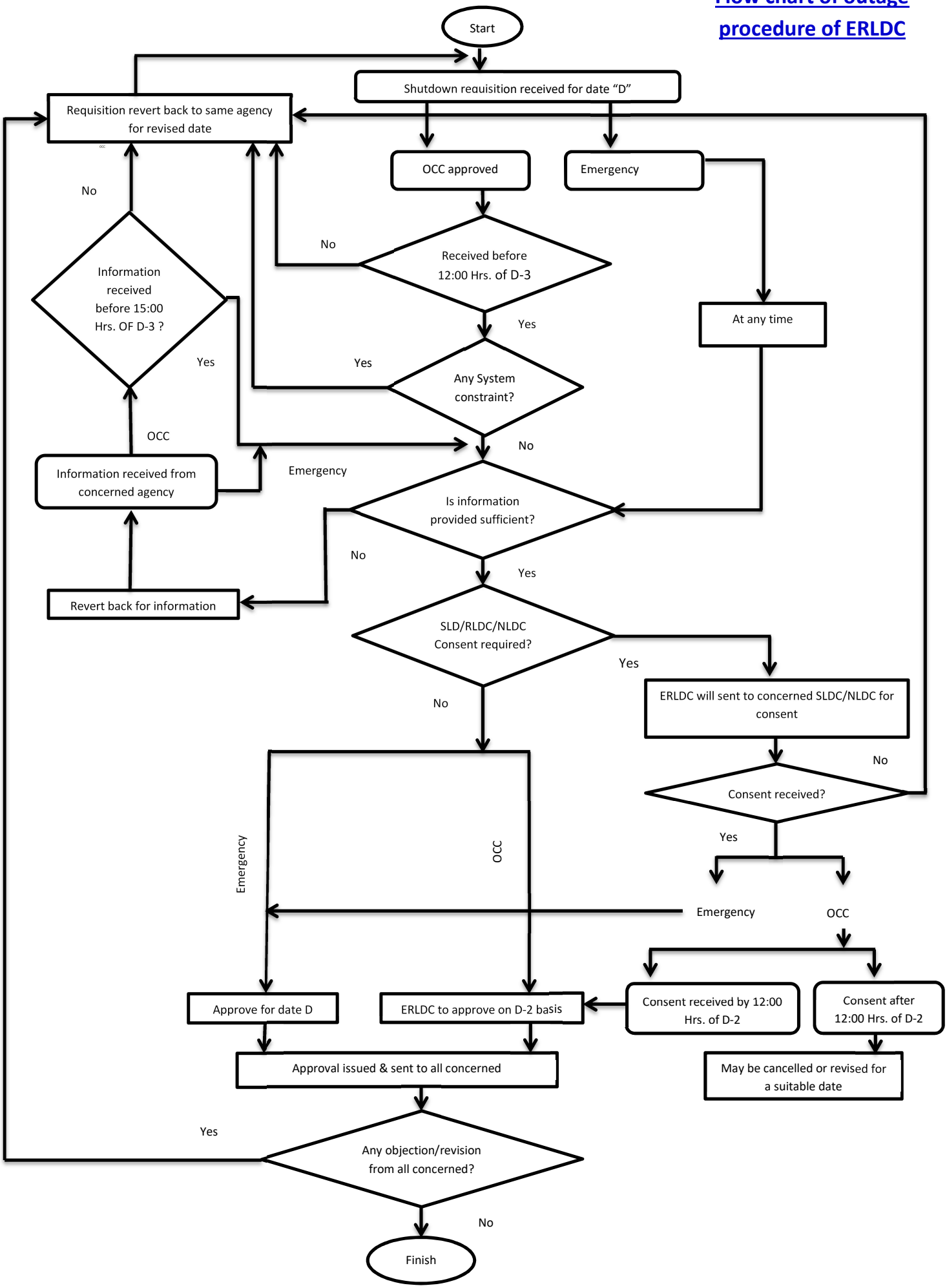
Yours Faithfully

(P.M.Sharma)
Chief Engineer (L/R)
Energy & Power Department

Encl : Photocopy of Correspondence

Annexure-B22

Flow chart of outage procedure of ERLDC



ERLDC Shutdown approval process flow and time line-reg.

With the ever increase in transmission elements, the Grid is getting more secure and reliable. Still, outage of one element may affect severely to adjacent control area depending on system condition that area. Hence, planning and co-ordination between different control areas is absolute necessary. It has been seen that, due to lack of mutual consent/communication between two control area/license, outage of transmission elements are getting delayed or denied due to which monetary loss occurred as well as condition of that particular element worsen. ERLDC wants to draw the attention on the following points which are seen in Eastern constituents/license.

1. There is a shortage of designated outage coordinators in ER constituents /license. Sometimes proper communication is not possible with them.
2. E-mails are not reaching to them in time which is sent from ERLDC (particularly in GRIDCO case). Most of the time mails are seen when ERLDC inform them verbally.
3. It also leads to delayed consent thereby delaying the shutdown.
4. There is no substitute for the absence of outage co-ordination. Sometimes SLDC control room person are coordinating shutdown which is not a good practice. Progress tracking of any outage will be lost once shift change occurred.
5. Planned outages are being sent on holidays also which is very difficult to process.
6. We have seen that, in absence of competent authority (SLDC Hawarh and SLDC Patna for example), OCC approved shutdowns are also get cancelled.

To tackle all the above following suggestions may be considered:

1. Every Transmission license, generators and SLDCs must have dedicated outage co-coordinators and the contact information of all such co-coordinators shall be shared with all.
2. In absence of the designated outage co-coordinator, suitable substitute should be provided and the same shall be intimated to all.
3. All the indenting agencies are requested to communicate with their counterpart outage co-coordinator for smooth and speedy consent if it require.
4. Getting consent timely is very important. All the agencies, whose consent is required for a particular outage, are requested to adhere the time line given by ERLDC fails to which the outage will be cancelled or delayed accordingly.
5. All the agencies are requested to submit holiday list in their control area or any other contingencies well in advance to all.
6. All the agencies must provide their official as well as personal E-mail of their outage coordinators to ERLDC and ensure that checking of the both email are being done simultaneously.

SCADA Item No. 1: Prolonged outage of SCADA data of 400 KV Sagardighi Generating Station at ERLDC

400kV Sagardighi Generating station is not reporting to WB SLDC and hence real time SCADA data is not available at ERLDC as well since **12/08/19.** The matter has been raised on several occasions and letters have been sent to WBSETCL on several times. Non availability of real time SCADA from such an important generating station is adversely affecting real time and post-dispatch grid operation.WBSETCL must take necessary action towards restoration of Sagardighi data telemetry expeditiously.

WBSETCL may update.

SCADA Item no. 2: Update on status of telemetry

CERC vide order dated 28.02.2016 on Petition No. 007/SN/2014 directed NLDC and respective RLDCs to update the status of telemetry every month at their respective websites and take up the issue of persistent non-availability of data from Generating Stations/substations at RPC meetings for appropriate action.

Major issues are given below:

1. Prolonged outage of Talcher HVDC
2. Unavailability of 34 nos of PMU data in URTDSM project.
3. Regarding frequent intermittentcy of real time SCADA data from Talcher STPS Stage 1 & 2, NTPC agreed to provide additional ports by March 2019.

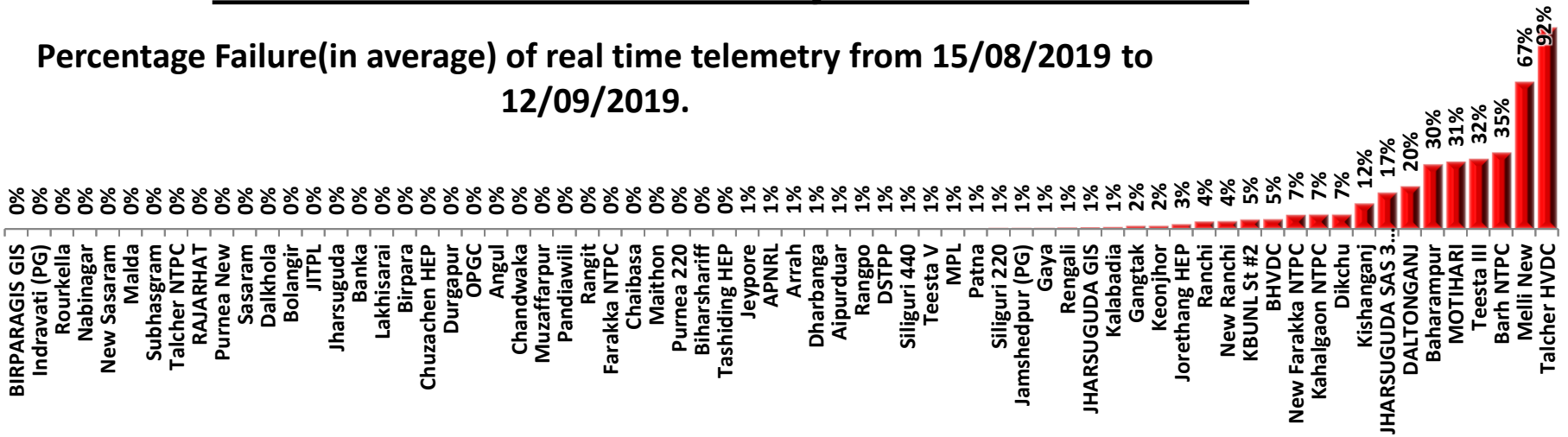
Brief presentation on SCADA and URTDSM data availability is attached in annexure – I

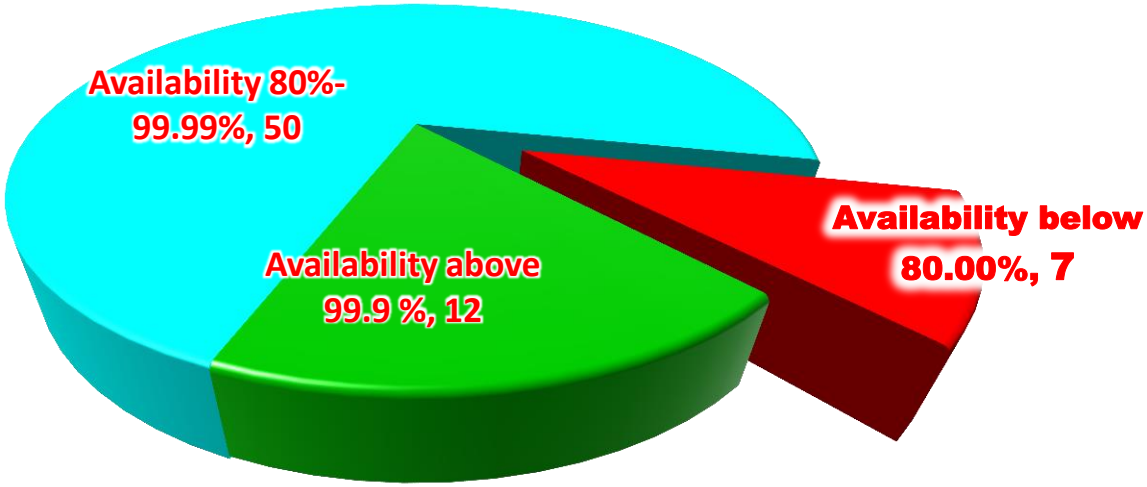
Members may update

SCADA data availability:-Central Sector

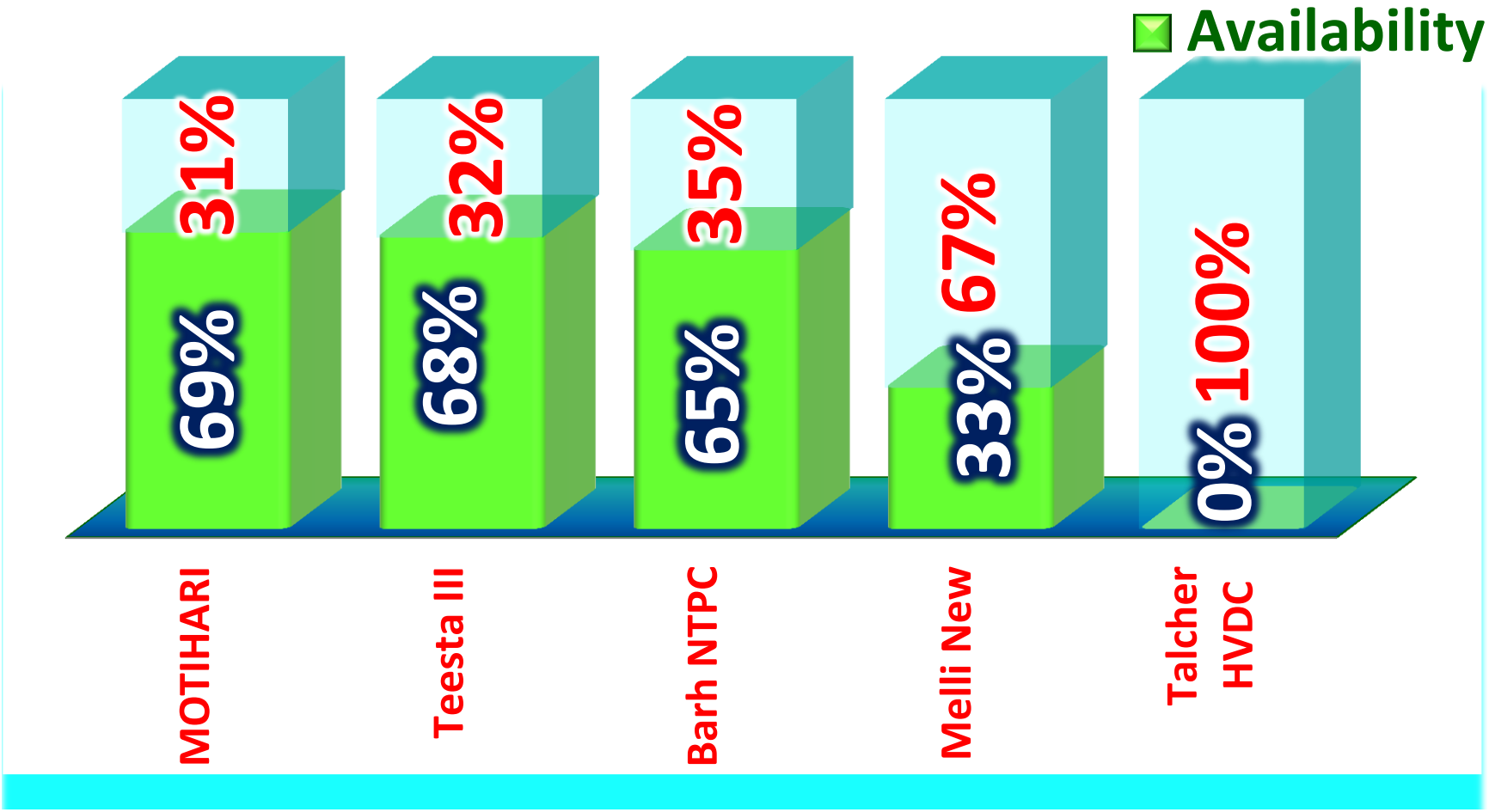
Annexure-1

Percentage Failure(in average) of real time telemetry from 15/08/2019 to 12/09/2019.





Major Concerns



Prolonged Outage of Data Telemetry

- Real time SCADA data of 400kV **Sagardighi** Generating station is not reporting to ERLDC since **12/08/19.**

- Real time SCADA data of 400kV **Talcher HVDC** is not reporting to ERLDC since **19/08/19**.

URTDSM Telemetry Summery

– Central Sector:

Prolonged outage of 12 Nos of PMUs.

- Chandwa(2 Nos)
- Maithon (3 Nos)
- Malda (2 Nos)
- Talcher STPS (5 Nos)

Integration of 15 PMUs are pending :

- Kahalgaon STPS (5 Nos),
- Sterlite (3 Nos),
- Patratu TPS (3 Nos),
- Tenughat TPS (2 Nos),
- JITPL (2 Nos).

URTDSM Telemetry Summery

-**State Sector**:

 # Prolonged outage of 07 Nos of PMUs

- Bakreswar (WB) – 4 Nos PMU
- Mejia B (DV) – 2 Nos PMU
- Koderma TPS(DV) – 1 Nos PMU

Non availability of SCADA data above 220 kV Level

WBSETCL

- Following 220 kV station data not available:

  - TLDP 4 220kV : Communication link failure.
  - Dharampur 220kV : Communication link issue.
  - Egra 220 : Communication link issue.
  - Bantala 220kV : Communication link issue.
  - Alipurduar 220kV: Communication link yet to be established (February 2018).
  - Rishra 220kV

Non availability of SCADA data above 220 kV Level &132kV Station having tie lines

- **BIHAR**
  - Barauni TPS 220kV
  - Motipur 220 KV
- **Odisha**
  - Narsingpur 220kV.
  - Nalco 220kV : Most of CB and Isolator data are not available
  - Jindal Steel and Power Limited (JSPL) 400kV: Most of CB and Isolator data are not available
- **JHARKHAND**
  - Hatia New 220.
  - Jamtara 132kV
  - Garwa 132kV
  - Deoghar 132kV
  - Kendposi 132 kV

Annexure-D.1

Anticipated Power Supply Position for the month of
Oct-19

SL.NO		PARTICULARS	PEAK DEMAND MW	ENERGY MU
1		**BIHAR**		
	i)	NET MAX DEMAND	5300	2850
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	427	348
		- Central Sector	4609	2485
	iii)	SURPLUS(+)/DEFICIT(-)	-264	-16
2		**JHARKHAND**		
	i)	NET MAX DEMAND	1390	810
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	386	179
		- Central Sector	969	552
	iii)	SURPLUS(+)/DEFICIT(-)	-35	-79
3		**DVC**		
	i)	NET MAX DEMAND (OWN)	2900	1875
	ii)	NET POWER AVAILABILITY- Own Source	5544	3071
		- Central Sector	529	301
		Long term Bi-lateral (Export)	1241	923
	iii)	SURPLUS(+)/DEFICIT(-)	1932	574
4		**ODISHA**		
	i)	NET MAX DEMAND	5250	3285
	ii)	NET POWER AVAILABILITY- Own Source	3736	1834
		- Central Sector	1683	908
	iii)	SURPLUS(+)/DEFICIT(-)	168	-544
5		**WEST BENGAL**		
5.1		**WBSEDCL**		
	i)	NET MAX DEMAND (OWN)	7080	3481
	ii)	CESC's DRAWAL	83	62
	iii)	TOTAL WBSEDCL's DEMAND	7163	3543
	iv)	NET POWER AVAILABILITY- Own Source	4679	2031
		- Import from DPL	185	0
		- Central Sector	2619	1594
	v)	SURPLUS(+)/DEFICIT(-)	320	82
	vi)	EXPORT (TO B'DESH & SIKKIM)	110	-49
5.2		**DPL**		
	i)	NET MAX DEMAND	280	200
	ii)	NET POWER AVAILABILITY	465	225
	iii)	SURPLUS(+)/DEFICIT(-)	185	25
5.3		**CESC**		
	i)	NET MAX DEMAND	2030	985
	ii)	NET POWER AVAILABILITY - OWN SOURCE	750	499
		FROM HEL	540	368
		Import Requirement	740	118
	iii)	TOTAL AVAILABILITY	2030	985
	iv)	SURPLUS(+)/DEFICIT(-)	0	0
6		**WEST BENGAL (WBSEDCL+DPL+CESC)** **(excluding DVC's supply to WBSEDCL's command area)**		
	i)	NET MAX DEMAND	9390	4666
	ii)	NET POWER AVAILABILITY- Own Source	5894	2755
		- Central Sector+Others	3899	1962
	iii)	SURPLUS(+)/DEFICIT(-)	403	51
7		**SIKKIM**		
	i)	NET MAX DEMAND	105	48
	ii)	NET POWER AVAILABILITY- Own Source	8	3
		- Central Sector+Others	179	102
	iii)	SURPLUS(+)/DEFICIT(-)	82	57
8		**EASTERN REGION** **At 1.03 AS DIVERSITY FACTOR**		
	i)	**NET MAX DEMAND**	23626	13534
		Long term Bi-lateral by DVC	1241	923
		EXPORT BY WBSEDCL	110	-49
	ii)	**NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)**	27863	14501
	iii)	**PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)**	2885	92

Quarterly Preparedness Monitoring -AGENDA

(Status as on :)

S.No.	State	Sector (G/T/D)	Utilities	Status of CISO Nomination	Critical Infra Identified	Crisis management Plan Prepared	Status of CS mock drill	Status of Training/ Workshops organized/ participated by utility	Action taken on CERT-In/NCIIPC Advisories
1	Tamilnadu	T	TANGEDCO	Yes/No	Yes/No	Yes/No	Done on ____		