Minutes

of

152nd OCC Meeting

Date: 27.12.2018

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 152nd OCC Meeting held on 17th December, 2018 at Floatel, Kolkata

List of participants is at **Annexure-A.**

Item no. 1: Confirmation of minutes of 151st OCC meeting of ERPC held on 27.11.2018

The minutes of 151st OCC meeting were uploaded in ERPC website and circulated vide letter dated 10.12.2018 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 151st OCC meeting.

PART A : ER GRID PERFORMANCE

Item no. A1: ER Grid performance during November, 2018

The average consumption of Eastern Region for November- 2018 was 371 Mu. Eastern Regionenergy consumption reached an all-time high of 409Mu on 5th November - 2018. Total Export schedule of Eastern region for November - 2018 was 2092.6 Mu, whereas actual export was1787.4Mu. The under export of Eastern Region was mainly due to over drawl of DVC, West Bengal and Odisha.

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

1. **Frequency profile**
2. **Over drawal/under injection by ER Entities:**

Over drawl figure of West Bengal and Odisha from 01-12-2018 to 10-12-2018 are shown below:

Dates	DVC			Odisha			West Bengal		
	Net SCH	Drawal	UI	Net SCH	Drawal	UI	Net SCH	Drawal	UI
01-12-2018	-29.48	-28.27	1.21	37.56	40.46	2.9	20.55	21.65	1.1
02-12-2018	-29.35	-26.81	2.54	37.33	40.69	3.36	16.78	16.12	-0.66
03-12-2018	-17.88	-16.69	1.19	35.85	33.99	-1.86	15.64	15.66	0.02
04-12-2018	-19.42	-16.7	2.72	27.38	29.62	2.24	17.37	18.45	1.08
05-12-2018	-19.31	-18.55	0.76	26.83	30.34	3.51	20.22	20.6	0.38
06-12-2018	-20.16	-21.8	-1.64	26.36	28.2	1.84	22.95	23.2	0.25
07-12-2018	-20	-20.5	-0.5	26.68	29.1	2.42	24.39	25.4	1.01
08-12-2018	-19.07	-17.82	1.25	26.8	29.47	2.67	23.72	23.82	0.1

It may be seen that for the month of the December till date,

- West Bengalover drawl was in the range of .5 to 1MU on daily basis while maximum over drawl touched 1.1 MU on 01-12-18 and 339 MW maximum on 01-12-18.

- Odishaover drawl was in the range of 1 to 3MUwhile maximum over drawl touched 3.51MU on 05-12-18 and 395MW maximum on 05-12-18.
- DVC over drawl was in the range of 1 to 2.54MUwhile maximum over drawl touched 2.72MU on 04-12-18 and 310MW maximumon 04-12-18.

There is little improvement of load generation management observed in west Bengal and DVC but Odisha is still overdrawing in to the tune of 2 to 3 mu on daily basis. However, this reduction in quantum of overdrawl occurred may be due to natural reduction of demand during winter season.

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**

Deliberation in the meeting

ERLDC presented the performance of the Eastern Regional Grid during November 2018. Presentation is enclosed at ***Annexure- A1****. ERLDC informed that Jharkhand demand was 40 MW higher than the Summer peak.*

Jharkhand informed that they had recently added some load at Pakur and Rajmahal. Earlier,due to network constraint, Jharkhand could not meet approx 40 MW load during summer peak.

ERLDC highlighted that GMR has been continuously under generating w.r.t. their schedule from last three months.

MS, ERPC informed that such generation pattern against schedule could be construed as gaming and is a gross violation of grid discipline and if the trend continues in future, ERLDC would file petition before CERC to highlight the issue.

OCC advised GMR to adhere to the regulation.

ERLDC added that Farakka, NTPC had under generated in November 2018.

NTPC informed that they could not meet the schedule due to coal issues. NTPC added that the coal issues had been resolved and assured to follow the schedule.

ERLDC presented a detailed analysis of the drawal pattern of the Eastern Regional constituents during November, 2018 and December, 2018(till date). It emerged from the presentation that Odisha, West Bengal and DVC had overdrawn from the Grid for significant times during November, 2018 and December, 2018.However, compared to the earlier months, the quantum of overdrawal has shown downward trends.

DVC, West Bengal and Odisha informed that they could not avoid overdrawal from grid due to low availability arising out of coal shortage and outage of some generating units. They assured to adhere to the drawal schedule in future.

ED, ERLDC informed that new DSM regulation would be implemented w.e.f. 1st January 2019 wherein huge penalties would be imposed in the event of continuous overdrawal from Grid.

Member Secretary, ERPC advised DVC, Odisha and West Bengal to meticulously plan their generation availability to meet their respective system loads and strictly maintain the drawal within the schedule. Failure to adhere to the schedule would have huge commercial implication on utilities as per the new DSM regulation.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: 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	108.6 Cr	37 Cr.	100 % Supply and Erection is Completed. Compilation of final bills is in progress.
2		Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17	25 months from date of release of 1st instalment	70.13	21.03 Cr	Order has been placed . Work is in progress.
3		Installation of switchable reactor at 400kV & shunt capacitors at 33kV	22-05-17	19 months from date of release of 1st instalment	43.37	6.59 Cr	Order has been placed and work is in progress.
4	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station	*10.04.17*	*March 2018*	1.39 Cr	1.25 Cr	*The implementation would be completed by July 2018.*
5		Upgradation of Protection and SAS		April 2020	23.48	2.348 Cr	Bid opened and order has been placed. Work started.
6	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	10.05.15	30.11.18	162.5 Cr.	37.79 Cr	Total contract awarded for Rs. 51.35 Cr
7		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.17		25.61 Cr.		Agreement signed on 03.01.2018
8		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		
9	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 work order.
10	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	85% of work has been completed. Contract awarded for Rs.71.37 Cr till date. The work has been completed.
11		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.
12		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.

13	JUSNL	Renovation and up-gradation of protection system	*September 2017*	*15 Months*	*138.13 crores*		LOA placed on 28th Sep 2018.
14	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.
15		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 6.45 Cr. Price bid opened for West Bengal portion and technical bid opened for Jharkhand portion.
16	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.
17	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.
18a	ERPC	Training for Power System Engineers	*27.07.18*		0.61 Cr.	Nil	Approved
18b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents	*27.07.18*		5.46 Cr.	Nil	

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 by Appraisal committee as communicated on 16.11.2018.
7		Installation of Bus Reactors at	12-03-18	78.75 Cr.	Proposal recommended by Appraisal

		different 400kV Substation within the state of West Bengal for reactive power management of the Grid			committee as communicated on 16.11.2018.
8		Project for establishment of reliable communication and data acquisition at different substation at WBSETCL.	10-05-18	80.39 Cr.	Proposal recommended by Appraisal committee as communicated on 16.11.2018.
9	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.

Deliberation in the meeting

Members updated the latest status as mentioned in above table.

Item No. B.2: Requirement of 132kV bay at 400/220/132kV Baripada S/s---OPTCL

OPTCL informed that at present two no. of 132 kV Bays are available at Kuchei. The Kuchei-Rairangpur 132 kV S/C line is LILO at Bangiripushi. The loads of connected substation are as follows:
Bangiriposi-8 MW, Rairangpur-28 MW, Karanjia-21 MW, Dhenkikote-10 MW.
Thus the 132 kV S/C line is loaded 67 MW. In case of outage at Joda the Polasponga load which is around 40 MW is catered through this line breaching the thermal limit of the line.

OPTCL requested for a new 132 kV Bay at Kuchei for 132KV Kuchei- Bangiripushi line to limit the line loading as well as to meet the n-1 contingency.

In 151st OCC, OPTCL was advised to give a presentation in next OCC Meeting for detailed discussion.

OCC advised Powergrid to check the feasibility of providing 132kV bay at 400/220/132kV Baripada S/s.

OPTCL may present.

Deliberation in the meeting

*OPTCL explained the requirement of 132kV bay at 400/220/132kV Baripada S/s with a detailed presentation. The presentation is enclosed at **Annexure-B2**. OPTCL requested for a new 132 kV Bay at Baripada for 132KV Kuchei- Bangiripushi line to limit the line loading as well as to meet the n-1 contingency. OPTCL informed that sufficient space is available at 400/220/132kV Baripada S/s for construction of two 132kV bays.*

Powergrid informed that space is available but it is allotted for construction of bays for new 220/132kV Transformer.

OCC advised OPTCL and Powergrid to visit the site and place the details in next OCC Meeting.

Item No. B.3: Utilisation of part portion of 220 KV Arah (PG) - Khagaul (D/C) line for feeding power from GSS Gaurichak to GSS Khagaul during reconductoring of 220 KV Fatuha - Khagaul (D/C) line (except LILO portion to Gaurichak & Patna (PG) --BSPTCL

BSPTCL informed that 220 KV D/C Fatuha - Khagaul transmission line has become very old and due to this reconductoring of this line is planned. During shutdown period 220/132 KV Fatuha & Gaurichak GSS will remain disconnected from 220/132/33 KV Gaurichak & 400/220 KV Patna (PG) stations.

Since aforesaid grids Fatuha & Khagaul supply power to Patna town & in order to make system reliable, it has been planned to split the 220 KV Ara PG) - Khagaul D/C transmission line at loc no. 107 & 108 and connect this line with 220 KV Gaurichak-Bihta (New) (D/C) transmission line (U/C) (at loc. No. 78 & 79) to allow power of Gaurichak to flow to Khagaul GSS. SLD is enclosed at **Annexure-B3**.

So, it is requested to allow for connectivity of 220 KV Ara (PG)-Khagaul (D/C) line from loc no. 107 & 108 with 220 KV Gaurichak-Bihta (New) (D/C) transmission line (U/C) (at loc. No. 78 & 79). Remaining portion of line from Ara (PG) to tower location next to loc. No. 107 & 108 will remain charge for anti-theft purpose.

BSPTCL may explain.

Deliberation in the meeting

BSPTCL informed that the interim arrangement is required during reconductoring work for 30 days.

Powergrid informed that new 500 MVA ICT at Patna would be in service by end of December 2018.

OCC in principle agreed to the interim arrangement for reconductoring work of 220 KV Fatuha - Khagaul (D/C) line.

OCC opined that the interim arrangement may not be required for reconductoring work of 220 KV Fatuha-Gourichak-Khagaul section.

OCC advised Bihar to plan the shutdown accordingly and submit to ERLDC.

Item No. B.4: Load Trimming Scheme on 400/132 kV Motihari ICTs.

400/132 kV Motihari substation is having a two ICTs each with 200 MVA capacity. It has been observed that due to higher load catering of Bihar along with Nepal, the ICTs are running without N-1 reliability. On 22nd August 2018 at 14:59 Hrs, the ICTs combined load increased to 280 MW and one ICT got tripped on mal-operation of OSR relay due to moisture ingress. This led to overloading of other ICT, which tripped in overcurrent protection. This led to the loss of 280 MW of Bihar and Nepal.

Such unreliable operation of ICTs due to higher load is not desirable and following action point may be desired:

1. Implementation of Load Trimming Scheme (LTS) on Motihari ICTs.
2. BSPTCL Long term plan to ensure the meeting such high demand in the areas.
3. Prevention of Tripping of Motihari ICT on OSR relay mis-operation during moisture ingress in rainy season.
4. Capacity augmentation for long term measures may be planned.

In 149th OCC, it was informed that one more ICT of 315 MVA had been planned in 13thPlan which would be commissioned by May 2020.

OCC advised Bihar to plan a load-trimming scheme till the availability of 3rd ICT.

In 39th TCC, BSPTCL requested Powergrid to expedite the installation of 3rd ICT at Motihari S/s. BSPTCL would draw up a plan for load trimming at Motihari to take care of the eventualities arising out of tripping of any of the existing two ICTs. The plan will be finalized within a month and the same will be shared with ERPC and ERLDC.

BSPTCL informed that Motihari grid have a capacity of (2X200) MVA, 400/132 KV GSS here and power evacuation from this station taken place by following three 132KV double circuit lines as detailed below (SLD enclosed at **Annexure-B4**):-

Sl. N.	Name of tie line	GSS getting power with Maximum load	Remarks
1.	132KV Motihari (400/132 KV)-Motihari	Motihari-60 MW	
2.	132KV Motihari (400/132 KV)-Bettia	Bettia-50 MW Narkatiyaganj Ramnagar BHPC, Balmikinagar Surajpura, (Nepal)-70 MW Total-120 MW	Bettia will have two source from Motihari (400/132 KV) and Gopalganj
3.	132KV Motihari (400/132 KV)-Raxaul	Raxaul-40 MW Parwanipur (Nepal)-70 MW Total-110 MW	.
	Total Load	290 MW	

A scheme to be formulated to open the 132 KV Motihari (400/132 KV)-Bettia (D/C) line and 132 KV Bettia-Raxaul (D/C) line to trip/open at Bettia end. Once one no. 200 MVA Power transformer tripped at Motihari (400/132 KV) station. By this way Motihari (400/132 KV) station will have only 170 MW load (i.e load of one 200 MVA power transformer).

BSPTCL may explain.

Deliberation in the meeting

BSPTCL explained the load trimming scheme.

OCC advised BSPTCL to trip radial loads instead of tripping 132kV lines. OCC also advised to ensure reliable communication for transferring trip signal to respective CBs for successful operation of load shedding scheme.

OCC advised BSPTCL to revise the scheme accordingly and submit the details to ERPC and ERLDC.

Item No. B.5: Opening of lightly loaded lines during severe high voltage in West Bengal System-WBSETCL

As night lean hour demand in West Bengal in winter reduces to very low (less than 35% of maximum summer peak toad), severe high voltage persists in almost all 400kv sub- stns. of WBSETCL and PGCIL in West Bengal due to over penetration of 400kV network Though

strengthening of 400kv transmission network ended up with redundant capacity and essential for reliable system operation during high loading in summer, there is huge operational impact in terms of voltage incursion and excessive reactive power injection into CTU grid. A number of state sector generator goes under long shutdown for overhauling during winter and total capability of reactive power absorption by state generators reduces. It is observed that following lines carries negligible load (below 100 MW) throughout the day and at times no load flows in this season:

Sl. No.	Name of feeder	R.L. (KM)	Remarks
1.	400kv Kharagpur-Chaibasa #1&2	162	One line may be switched off
2.	400kv Kharagpur-Baripada S/C	135	
3.	400kv SgTPP-Parulia #1&2	128	One line may be switched off
4.	400kv SgTPP-Baharampur#1&2	26	
5.	400kv NewPPSP-NewRanchi	113	One line may be switched off
6.	400kv PPSP-BidhanNagar#1&2	185	One line may be switched off
7.	400kv NewPPSP-Arambag#1&2	207	One line may be switched off
8.	400kv KTPP-Kharagpur #1&2	81 & 98	One line may be switched off
9.	400kv Kharagpur-NewChanditala #1&2	139	One line may be switched off
10.	400kv Farakka-Gokarna #1&2	117	
11.	400kv Arambag-BidhanNagar S/C	127	Switching off reduces reactive injection
12.	220kv Alipurduar(PG)-Alipurduar #1&2	6.4	

So one of lightly loaded parallel feeders and 400kv Arambag-BidhanNagar S/C (reduces reactive Injection towards Parulia S/S) may be switched off to cope up problem of high voltage and high injection of reactive power by STU network as system security iro 400kv network does not suffer at all under present scenario.

WBSETCL may explain.

Deliberation in the meeting

ERLDC informed that present they are opening four lines. Opening of more lines would reduce the reliability of transmission network during contingencies. ERLDC suggested that SLDC, West Bengal should ensure sufficient VAR absorption by their generators during high voltage.

WBPDCL informed that, at present, two units are running at Sagardighi and due to heating issues of rotor, the generators could absorb 50 MVAR/unit only.

ERLDC informed that they would take appropriate decision based on the real time grid condition.

Item No. B.6: Proposal of 125 MVAR Bus Reactor at 400 kV Sagardighi and Arambag Substation for controlling High Voltage scenario--ERLDC

It has been observed that voltage of Sagardighi and Arambag substation are remaining high (Outside IEGC band) during the night hours even after taking steps like reactive power absorption, opening of 400 kV transmission lines and tap optimization. In view of controlling the high voltage scenario in the system, which can adversely affect the life of the equipment at the substation, there is a need of adequate reactive compensation to keep the voltage within operational band. Further, the alarming high voltage can also result in tripping of 400/220 kV ICTs on over flux causing major disturbance, so it is desirable to have shunt compensation devices in the system to avoid such incident.

In view of the above, it is proposed to add 125 MVAR Bus Reactor at Sagardighi and Arambaag substation to ensure adequate reactive compensation during off peak hours and maintaining the system reliability and security.

Members may discuss.

Deliberation in the meeting

WBSETCL informed that 125 MVAR bus reactor at 400kV Arambag would be commissioned by March 2019.

ERLDC suggested that since generating stations are not absorbing the VAR as per their capability curve, bus reactors should be planned at generating stations also to control the high voltage. OCC advised to place the proposal in the Standing Committee.

Item No. B.7: Closing of 765/400 kV Diameter after opening of Lines/Units on Prolonged Outage/Forced Outage --ERLDC

One and Half Breaker Scheme bus arrangement at 765 and 400 kV level substation provides optimum reliability and security when the all diameters are kept closed. This ensures that all elements will remain in service even in case of tripping of one of the bus. Therefore, it is desirable that the diameters are to be kept closed until unless there is human safety involved. This is a standard practice across all India for one and half breaker scheme based substation. It has been observed that utilities are keeping the diameter incomplete when the lines/units are under planned/forced outage, which results in loss of elements during bus outage/tripping.

One case was observed on 07-12-18 at New PPSP substation. 400 kV NEW PPSP-New Ranchi Circuit 2 was kept out from 06-12-18 for controlling high voltage during the night hours. However, after the line outage (tripping of Main and Tie Cb and opening of Line side isolator), its bays (main and Tie CBs) were not closed to complete the diameter. On the next day 400 kV Bus 1 shutdown was taken by the New PPSP substation and during this they tripped all the 400 kV Main Bays Breakers. As the new PPSP-New Ranchi 1 was connected via only 400 kV Bus 1 as its main bus 2 side CB and Tie CB were out because of 400 kV New-PPSP-New Ranchi 2 circuit outage causing its unwanted tripping. This tripping was undesirable as operators at substation and SLDC should have seen the same prior to allowing of the outage of 400 kV Bus 1.

In view of the above, the modalities for keeping the diameter closed in one and half breaker scheme based bus bar arrangement during line/units/elements outage for ensuring reliability and security of the grid are to be decided.

Members may decide.

Deliberation in the meeting

ERLDC explained that, as per the operating norms, diameter should be closed in one and half breaker scheme based on bus bar arrangement during line/units/elements outage for ensuring reliability and security of the grid.

OCC advised all the constituents to follow the operating procedure to avoid unwanted tripping of the healthy elements.

Item No. B.8: Advancement of Completion of 400 kV D/C Nabinagar II- Patna (Quad) Line--Powergrid

The scheduled date of completion is June 2019. However, this line is proposed to be completed early i.e. by March'2019.

In this regard, it is to be stated that the 400 kV D/C Nabinagar II- Gaya (Quad) line is already completed and the generating agency is availing Start-up power on the same.

The completion of **400 kV D/C Nabinagar II- Patna (Quad) T/L** shall provide a complete loop (i.e. Gaya- Nabinagar & Nabinagar- Patna) thereby providing an alternate path, which shall be beneficial for the Power System. As and when generating units are commissioned, the transmission system for the power evacuation shall be available.

Members may discuss.

Deliberation in the meeting

OCC appreciated Powergrid for early commissioning of 400 kV D/C Nabinagar II- Patna (Quad) transmission line and agreed for commissioning of the line in March 2019.

Item No. B.9: Use of Polymer Insulators in the transmission lines--CEA

CEA vide letter dated 28th November 2018 informed that many representations have been received in CEA as well as VIP references from Ministry of Power from various manufacturers and associations highlighting the issue of use indiscriminate use of polymer insulators which are mostly imported from China leading to closure of indigenous porcelain manufacturing industry. To resolve the issue, a meeting was held in CEA on 25.5.2018 with various stakeholders to deliberate on the issue.

PGCIL vide letter no . C/CTU/E/02/TBCB dated 24.10.2018, indicated that on the directions of RPC's, only polymer type insulators are being used in the new transmission lines of PGCIL traversing through states in Northern and eastern Regions. Moreover, PGCIL is replacing the porcelain insulators with polymer insulators in the existing transmission lines of the region . PGCIL has categorically mentioned that the same has been done in accordance with the decision taken in the meetings with Regional Power Committees.

It is to mention that CEA has issued the Regulations and there are specific provisions regarding use of porcelain (disc type *I* long rod) and polymer insulators . Regulation Clause No. 89(1)(f)(i) of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 201 0, may be referred in this regard.

It may be clarified whether decision of use of polymer insulation in place of porcelain insulator was taken for some particular lines or locations. Considering the sensitiveness of issue, the same may also be discussed in respective RPC meetings and a balanced approach may be adopted for all future lines.

Members may discuss.

Deliberation in the meeting

Powergrid informed that they are following the "Regulation Clause No. 89(1)(f)(i) of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010".

After detailed deliberation, OCC decided the following:

- *Powergrid should submit the details of the progress made towards insulator replacement work and quantity of polymer insulators received till date*
- *Powergrid should submit the details of order placed for the polymer insulators, which are scheduled to be delivered in near future*
- *The issue would be placed in TCC/ERPC Meeting for detailed discussion*
- *Powergrid should not place any fresh order for polymer insulators till further decision by TCC/ERPC*

Item No. B.10: Enhancement of NOC to the extent not utilized by other generators while utilizing 400 kV D/C Rangpo – Siliguri Line –---TeestaUrja Ltd.

TUL vide mail dated 19th November 2018 informed that

"It was decided in the meeting held at ERPC on 21.06.2017 and under the CERC Order dated 22.06.2017 in Petition No. 114/MP/2017 that evacuation quantum of Teesta III HEP could be enhanced if there is margin available in the transmission corridor due to less generation/ back down/ shutdown by any of the other generators utilizing 400 kV D/C Rangpo – Siliguri Line.

It is observed that since 01.11.2018, the line is loaded to a maximum of 1318 MW from 00.00 to 17:00 hrs.; 1586 MW from 17.00 hrs. to 21.00 hrs. and 1440 from 21.00 hrs. to 24.00 hrs.

It is therefore, requested to consider enhancement of the NOC of TUL by the left over capacity of the 400 kV D/C Rangpo – Siliguri line as below:

(a) 100 MW from 17.00 hrs to 21.00 hrs; and

(b) 200 MW from 00.00 hrs to 17.00 hrs and 21.00 hrs.24.00 hrs."

In 151st OCC, ERLDC presented the generation pattern of Chujachen, Dikchu, Jorethang and Tashiding HEP for the month of November – 2018. From the plots, it emerged that only Jorethang and Tashiding HEP were scheduling one machine during the day for the whole November month and Chujachen and Dikchu HEP were scheduling two machines during peak hours for some days during November-2018 month. In view of this, OCC decided that margin, if any, created in 400kV Rangpo-Binaguri D/C might be utilized as follows:

- *Teesta-3 NOC may be enhanced by 100 MW from 17.00 hrs to 21.00 hrs and 200 MW from 00.00 hrs to 17.00 hrs and 21.00 hrs to 24.00 hrs.*
- *In case Jorethang and/or Tashiding HEP want to inject power equivalent to two machines schedule for the day ahead (D+1) then these stations have to intimate ERLDC of such plan by 10:00 AM of 'D' day so as to enable revise the additional NOC quantum released to Teesta – III.*
- *In case ERLDC does not receive any information from Jorethang and Tashiding HEP by 10:00 AM, scheduling of previous day would be considered as final.*
- *During planned outage of Teesta – V, 168 MW additional margins would be issued to Teesta –III for the planned maintenance period of Teesta – V as informed by NHPC. In case of any revision in plan for maintenance period or plan for early restoration of the unit after the maintenance, Teesta –V has to intimate ERLDC in advance (at least one day in advance, before 10:00 Hrs) so that Teesta – III NOC can be revised accordingly.*

OCC opined that Teesta-V HEP generation should not bein any way affected while following the above procedure. OCC advised Teesta-3 to coordinate with Teesta-V to ensure water availability to Teesta-V HEP to meet their schedule.

The decision of OCC shall be communicated to all concerned by ERLDC.

Members may update.

Deliberation in the meeting

It was clarified by ERLDC that whenever the margin is available, ERLDC is giving NOC to Teesta-III for utilization of the available margin. However, on many occasions, Teesta-III had not been utilizing the margin to the full extent.

Item No. B.11: Review of Cyber Security Works/Activities- CEA

CEA vide letter informed that Secretary (Power) is going to review the cyber security related works /activities being carried out in Power Sector. In this regard, it is requested to provide the State wise status on following action points pertaining to cyber security at the earliest:

1. Appointment of organization-wise Chief Information Security Officers and its status
2. Identification of organization-wise Critical Infrastructure and its status
3. Preparation of organization-wise Crisis Management Plan and its status
4. Status of Cyber Security Mock Drill activity in coordination with CERT-In
5. Status of Training / Workshops on Cyber Security organized / participated by power sector entities
6. Status of action taken on CERT-In / NCIIPC advisories

In 148th OCC, all the constituents were advised to send the latest status to mserpc-power@nic.in within a week.

The same has been received from WBSETCL and OPTCL only.

Members may comply.

Deliberation in the meeting

The details had been received from DVC, WBSETCL, Bihar and OPTCL only.

OCC advised all the other constituents to send the information to mserpc-power@nic.in at the earliest.

Item No. B.12: Status of Emergency Restoration system (ERS) of respective Transmission Licencees

CEA vide mail dated 28-09-2018 has requested to provide Status of Emergency Restoration system (ERS) of respective Transmission Licencees in respective Regions as per the format.

OCC advised all the transmission licensees to submit the requisite information as per the format in the form of soft copy through email (mail ID: mserpc-power@nic.in).

Till date, the details have been received from WBSETCL and OPTCL only.

Transmission Licencees may submit the details as per the format.

Deliberation in the meeting

Till date, the details have been received from WBSETCL, OPTCL and JUSNL as follows:

State-wise Emergency Restoration system				
Transmission Licensee	**Requirement of Total no of ERS in State**	**Number of ERS available in state**	**No of ERS to Be Procured**	**Remark if Any .**
WBSETCL	10	10	Nil	-
OPTCL	84	54	30	
JUSNL	13	8	5	

OCC advised all the other transmission licensees to submit the requisite information as per the format in the form of soft copy through email (mail ID: mserpc-power@nic.in) within 7 days.

Item No. B.13: Submission of static data for preparation of a report on coal fired stations in the country--ERLDC

One internal committee has been formed by POSOCO to prepare a report on coal fired stations in the country, which will be submitted to the FOLD &FOR, at a later stage. Similar reports have already been prepared by POSOCO for hydro, gas and RES plants, which has been widely appreciated in different forums like FOLD & FOR.

To prepare this report, some static data (commercial, technical, environmental & general) in proper format for all coal fired stations (ISGS, IPP and State Generators) of capacity >= 200 MW need to be submitted to ERLDC so that the compilation and subsequent analysis of data of thermal generators on an all India basis could be made within stipulated time period.

The format for data submission was intimated to all generators and state SLDCs via email. Till date only GMR, Adhunik, MPL and Sagardighi have submitted their static data.

ISGS (NTPC), IPP and State Generators of Eastern Region are requested to kindly accord high priority for submitting the static data to ERLDC in erldcso@posoco.in for preparation of the report within stipulated period.

Nodal coordinators for this Process from ERLDC are:

1. Shri Biswajit Mondal, Sr. Engineer, Mob No: 9903329271
2. Shri Chandan Mallick, Sr. Engineer, Mob No: 9007059660

All Thermal Generators may comply.

Deliberation in the meeting

ERLDC updated the following generating stations have not submitted static data for preparation of report on coal firing stations:

1. *IB thermal stage -1*
2. *TTPS (Odisha)*
3. *Talcher STPP*
4. *Santaldih TPP*
5. *Budge-Budge TPP*
6. *Tenughat TPP*

OCC advised above thermal generators to submit the relevant information to ERLDC at the earliest.

Item No. B.14: Issues related to Integration of PMUs at NTPC Kaniha—Powergrid

Under URTDSM Projects 10nos of feeders are to be integrated at NTPC Kaniha with the PMU. Out of 10 feeders 7 feeders are already integrated except digital points. Out 3 feeders two feeders(400KV Talcher-Rengali Ckt#2 and 400KV Talcher-Meramundali ckt#1) are integrated with the PMU installed under Pilot projects by ERLDC. So NTPC did not permit to integrate those feeders with the PMU installed under URTDSM Project. The vendor has already visited the site NTPC Kaniha 3 times for integration of the feeders. Hence, necessary guidance may be issued regarding the left-out feeder for integration with the PMU.

In 151st OCC, NTPC informed that two feeders were already connected to PMU under the pilot project implemented by ERLDC. Additional connectivity with PMU which is being installed under URTDSM project might increase the burden on CT. NTPC requested to consider any one PMU.

Powergrid informed that more than one PMU could be connected simultaneously and it would not increase burden on CT. They are following the same procedure at rest of the substations in ER.

After detailed deliberation, NTPC agreed to verify and send the confirmation mail to Powergrid to complete rest of the work.

Powergrid and NTPC may update.

Deliberation in the meeting

NTPC informed that Powergrid could complete rest of the work.

OCC advised Powergrid and NTPC to mutually coordinate and complete rest of the work.

Item No. B.15: Additional agenda

1. Auto reclose study / Implementation committee members, to visit Birpara & new Binaguri Substations & TLDP-III, TLDP-IV, Testa-V Hydro station—BPSO/NLDC, Bhutan

In the several OCC meetings, 400kV and 220kv lines emanating from the Hydro Power Stations and connecting to Indian periphery were asked to implement Auto Reclose Scheme. Very recently, a committee is formed to study the auto reclosing scheme to be implemented in Bhutan. Hence before implementing the scheme, a team wants to visit the above substations in January, 2019 and want to study the following information where Auto reclose features is implemented:

1.Type of Auto reclose enabled in their feeders (Single-shot/ Multi-shot)
1. Relay make /models used for feeder protections at generator/ substation end and auto reclose feature is implemented therein.
2. Technical information on any considerations made for enabling/ disabling other protection schemes available in the plant, in order to successfully enable auto reclose features in the feeder.
3. The settings with regard to relay coordination if considered with other protection schemes such as LBB, pole discrepancy, -ve phase sequence etc.
4. whether made for synch check functions prior to auto reclose.
5. made for breaker duty cycle, associated to the feeder with enabled auto reclosing.
6. The actual auto-reclose settings as adopted for enabling the feature.
7. Any other miscellaneous as adopted in the scheme for successful auto reclosing of the feeder
8. Reliability history of the scheme after their enabling, as experienced by plant/ substation in the past. Were the auto reclosing scheme successful in most of the 1-L-G transient faults events.
9. Were there any record of Transient study carried out prior to enabling of auto reclosing scheme in your plant?

Deliberation in the meeting

OCC observed that Bhutan is a valued partner of India and exports surplus hydro power India. It is synchronously connected with the Indian grid. For the safety, security and integrity of the entire grid, Bhutan needs to implement the auto reclosing scheme.

OCC underlined the need to extend necessary assistance to Bhutan towards this. OCC advised NHPC and Powergrid to make the necessary arrangements for the visit, subject to fulfillment of formalities, if any, for this visit.

OCC advised BPSO/NLDC, Bhutan to pursue with concerned authorities of NHPC and Powergrid.

2. Shut Down of 132 KV Sonenagar - Rihand circuit-II trandmission line in between location no. 01 to 120 (up-to Bihar border).

BSPTCL informed that 132 KV Sonenagar-Rihand ckt-I reconductoring of Bihar portion is completed. Now 132 KV Sonenagar-Rihand ckt-II reconductoring has to be taken up in between location no. 01 to 120 & for this shutdown is requested for 25 days is required for circuit-II with effect from 20.12.2018.

During shut down period, power will be supplied to Jharkhand grids:- Japla & Garwah as per the arrangement enclosed at **Annexure-B15.2** and also mentioned below:

- This double circuit Line both circuits will be shorted at loc. No. 01 & 120. Power from circuit-II bays at Sonenagar grid will flow from circuit-II at location no. 1 to circuit-I. Again power from ckt I will flow to ckt-II by jumpering at loc. No. 120.
- Circuit-I will remain charged upto Rihand end by circuit-II power.
- Opening of jumper of ckt-II at loc. No. 1 & 120 as well as shorting of ckt-II at above two locations will be made at the beginning of shutdown on 1st day w.e.f. 9:00 to 16:00 hrs.
- During this period no power will be supplied from Sonenagar(old). This power during this period may be arranged from Rihand(UP, NR) end.
- Circuit-I will remain off from Sonenagar GSS.

Necessary consent may be allowed for the aforesaid shutdown.

Deliberation in the meeting

BSPTCL explained the interim arrangement and informed that the interim arrangement is required for 30 days till completion of reconductoring work.

OCC agreed to the above proposal with the following modifications:

- *Jumpers of 132 KV Sonenagar-Rihand ckt-I at loc. No.1 & 120 are also to be opened to avoid any "T connection" with the unutilized portion of 132 KV Sonenagar-Rihand ckt-I.*
- *Unutilized portion of 132 KV Sonenagar-Rihand ckt-I may be kept on anti theft charging from both ends i.e. from Sonenagar and Rihand ends.*

PART C: ITEMS FOR UPDATE

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

UFR Healthiness Certification for the month of November, 2018 has been received from CESC, WBSETCL, DVC, BSPTCL and JUSNL.

OPTCL informed that all UFRs healthy except Sargipalli feeder which would be replaced by 15th November 2018.

OPTCL may update.

Deliberation in the meeting

OPTCL informed that they had replaced the UFR relay of Sargipalli feeder.

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 November, 2018 has been received from CTPS, DVC,NTPC, West Bengal, JUSNL, WBPDCL and CESC.

Members may note.

Deliberation in the meeting

Members noted.

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

The Status of healthiness certificate for November, 2018 is given below:

Sl. No.	Name of the SPS	Healthiness certificate received from	Healthiness certificate not received from
1.	*Talcher HVDC*	*NTPC, Powergrid, GMR,*	*JITPL*
2.	*Rangpo*	*Chuzachen, Powergrid, Teesta-III*	*Dikchu, Dansenergy,*
3.	SPS in CESC system	*CESC*	*Nil*
4.	SPS at Chuzachen	*Chuzachen*	*Nil*

Members may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

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	Recieved quotation from Chemtrol.	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. Implemented by December 2018	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.

During the Month of November 18, ADMS criteria got satisfied for following cases:

A. West Bengal

Sl No	Date & Time	West Bengal O/D (MW)	Frequency (Hz)	ADMS Optd (Y/N)	Relief (MW)
1	12-11-18 07:36	176	49.68		

B. Orisaa

Sl No	Date and Time	Orissa O/D (MW)	Frequency (Hz)
1	12-11-18 07:36	184	49.68

Members may update.

Deliberation in the meeting

WBSETCL informed that, they would submit the details to ERPC and ERLDC within a week.

Bihar informed that they would place the order to Chemtrol for implementation of ADMS.

Item no. C.5: Status of Installation of STATCOM in Eastern Region

In the 15th meeting of SCM it was agreed to install STATCOM in combination with mechanically switched Reactors (MSR) and Capacitors (MSC) and co-ordinated control mechanism of MSCs and MSRs at Ranchi, Rourkela, Jeypore and Kishanganj substations in Eastern Region.

The matter was again discussed in the 28th ERPC/TCC meeting held on 12th -13th September, 2014 at Goa, wherein, it was decided that POWERGRID may go ahead with implementation of the STATCOM project in Eastern Region with debt – equity ratio of 70:30 funding. The debt part should be refunded through PSDF and Equity Component (30%) to be funded by POWERGRID to be recovered through regulated tariff mechanism. CTU should initiate the process of availing fund from PSDF.

Powergrid updated the latest status as follows:

Sl No	Location /Sub-Station of POWERGRID in ER	STATCOM - Dynamic Shunt Controller (MVAr)	Mechanically Switched Compensation Sl. (MVAr)		Latest status
			Reactor (MSR)	Capacitor (MSC)	
1	Rourkela	±300	2x125		*In service from March 2018.*
2	Kishanganj	±200	2x125		*70% civil work completed. 30% switchyard equipment supplied. Expected to complete by December 2018*
3	Ranchi(New)	±300	2x125		*Commissioned on 12th July 2018*
4	Jeypore	±200	2x125	2x125	*Commissioned on 30th June 2018*

Powergrid may update.

Deliberation in the meeting

Powergrid informed that STATCOM at Kishanganj would be in service by January 2019.

Item no. C.6: 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 March,2019.***
2.	**400/220kV Pandiabil Grid S/s:**	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	***By March,2019.***
3.	**400/220 kV Keonjhar S/S**	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By end of Dec, 2018.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019. The work is yet to be started.

OPTCL may update.

Deliberation in the meeting

OPTCL updated the status as mentioned in above table.

Item no. C.7: 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 April, 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 Dec 2018.
C	Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132kV D/c	The line charged as per original configuration on 26th July 2018.
D	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 November 2018.

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as mentioned in above table.

Item no. C.8: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Subashgram& 2x500 MVA Rajarhat sub-stations

In last OCC, *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-3 (WBSETCL) 220 kV D/C line	Matching, ROW problem
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	ROW problem, December 2019
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	ROW problem, February 2019
2	**Subashgram400/220kVS/s**	
a	Subashgram–Baraipur220kVD/cline	June 2019, 75% of work has been completed.

WBSETCL may update.

Deliberation in the meeting

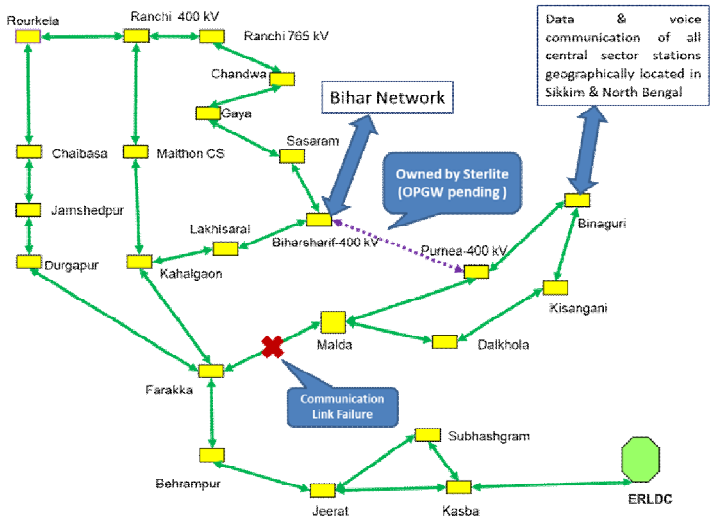
WBSETCL updated the status as mentioned in above table.

Item no. C.9: 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. Non-availability of real time SCADA data from New Farakka STPS (1 x 500 MW) to ERLDC
ii. Frequent intermittent of real time SCADA data from Talcher STPS Stage 1 & 2 (6 x 500 MW) to ERLDC: same gateway is being used at Talcher end for reporting SCADA data to SRLDC & ERLDC as well through switch. Broadcasting has been observed and data hampered at both RLDCs. It is suggested to provide two separate ports for reporting of SCADA data to ERLDC Main CC & Backup CC also.
iii. Alternate path for Malda–Farakka OPGW link



ERLDC may present. Members may update.

Deliberation in the meeting

*ERLDC presented the latest status which is enclosed at **Annexure-C10**.*

ERLDC informed that New Farakka SAS started reporting to ERLDC since 30th November 2018 however Unit 6 (Stage #3), LV side MW and MVAr data was not getting updated at ERLDC.

NTPC agreed to take appropriate action to restore LV side data of Unit 6.

Regarding frequent intermittent of real time SCADA data from Talcher STPS Stage 1 & 2, NTPC agreed to provide additional ports by March 2019.

*Powergrid gave a detailed presentation on alternate path for Malda–Farakka OPGW link. Presentation is enclosed at **Annexure-C10A**.*

OCC advised Powergrid to submit the tentative cost estimation for implementation of the scheme to ERPC and ERLDC within 15 days.

DVC informed that data availability of Tisco would be resolved within 10 days.

OCC advised all the constituents to take necessary action to ensure data availability to ERLDC.

Item no. C.10: Non submission of SEM data to ERLDC from Gelephu and Malbase S/S in Bhutan--ERLDC

Malbase end meter data of 220 KV Malbase-Birpara(PG) and 400 KV Malbae-Binaguri(PG) D/C Line is not being received by ERLDC since last 2 months. Malbase informed ERLDC that due to non-working of DCD they are not sending the data to ERLDC.

In 38th CCM, it was emphasized that these two locations are very crucial and requested PGCIL to resolve the matter at the earliest by adjusting DCDs from any of the other locations which remained unutilized. It was also advised to PGCIL to collect the unutilized DCD from Teesta –III (TUL) and to hand over to Malbase.

In 151st OCC, Powergrid informed that they had handed over DCD, cable and supporting software to BPC on 14th November 2018.

BPC vide mail dated 13th December 2018 informed that the new DCD meter was issued to Malbase substation on 14.11.2018 by PGCIL. But it is of different make (SANDS) and substation people are not familiar using the new DCD meter. They could download the readings from the SEM but the files could not be transferred from DCD to PC. Therefore, BPC requested to depute an official from PGCIL to guide our substation people on the usage of the new DCD meter for one time.

Regarding Gelephu, BPC informed the downloading cable is defective and needs replacement.

PGCIL/Bhutan may please respond.

Deliberation in the meeting

Powergrid informed that they would arrange the demonstration of downloading meter data using DCD and the cable within a week.

OCC advised BPC to send the updated status after week to ERPC Secretariat.

Item no. C.11: Replacement of Non-functioning/Defective Meter--ERLDC

i) Talcher Solar NTPC

03 Nos of defective L&T meter (NP-7626-A, NP-7630-A & NP-5968-A) installed at 11 KV Feeder at Talcher Solar is defective since Last One and Half month and due to that, SEM data of aforesaid meters at Talcher Solar is not being received by ERLDC. At present Talcher Solar generation is being computed with Standby Meters without any Back Up meter data. The matter was informed to PGCIL Odhisa Project for Replacement of those 03 nos of meter at Talcher Solar immediately. However the meters are yet to be replaced.

PGCIL may please update the replacement status.

Deliberation in the meeting

It was informed the meter had been replaced.

ii) NTPC Barh ICT-3

As per Information received from NTPC Barh, Meter NP-7482-A installed at HV side of 400/132 ICT-3 is defective since 21.11.18. Subsequently it was requested to Powergrid for replacement of the ICT meter. Till now ERLDC has neither received information of meter replacement nor getting meter data of ICT-3 Meter.

PGCIL/NTPC may please respond.

Deliberation in the meeting

It was informed the meter had been replaced.

iii) Ranchi New(PG)

Meter no NP-7402-A installed at Ranchi New(PG) end of 400 KV Ranchi(PG) Line is not being received by ERLDC since more than last 3 month due to non-functioning of the meter. The above issue was raised in 38th CCM and 39th TCC/ERPC Meeting. In 38th CCM Powergrid informed that the meter would be replaced by the 20th October, 2018.

Powergid may please update the status.

Deliberation in the meeting

It was informed the meter has been replaced.

iv) Non submission of Meter data from Ara and Kishanganj BSPHCL

Ara(BSPTCL) end meter data of 132 KV Ara(PG) Line and Kishanganj(BSPTCL) end of 132 KV Purnea(PG) Line is not being received by ERLDC due to AMR related Issue. The data of aforesaid meter was earlier reporting to AMR and data was taken by ERLDC from AMR. Recently due to AMR problem at Ara and Kishanganj, BSPTCL was requested to send the data of meter from above 02 locations by downloading at their end till restoration of AMR.

BSPHCL may please respond.

Deliberation in the meeting

It was informed Modem at Arrah was defective.

OCC advised BSPTCL to download the meter data using DCD and submit to ERLDC till restoration of AMR.

Item no. C.12: Bay swapping of feeders/reactors position of POWERGRID S/S in ER--ERLDC

The following is noticed while validating the SLD at ERLDC:-

S No	Name of the S/S	Observation	SCADA Database & Display Modified	EMS Database Modified (Y/N)
1	Angul 765/400 kV	i. Bays of Jharsguda 3 & 4 was swapped several times. Presently, Jharsuguda-3 and Jharsuguda-4 bays are swapped.	Pending	Pending
2	Jeypore 400 kV	i. Bay number swapped in Bolangir and Gazuwaka Line. ii. Bay of Bolangir and Gazuwaka connected to different bus.	SCADA database updated, Display Modified	Pending
3	Keonjhar 400 kV	No Discrepancy Observed	N. A.	N. A.
4	Rourkela 400 kV	i. Bay number swapped in Jharsuguda-3 and Jharsuguda-4. ii. Jharsuguda-4 and associated B/R connected to wrong Bus. iii. ICT-3 not shown in S/S SLD. iv. L/R rating to be written in SCADA. v. Bay number to be corrected for whole SCADA SLD. vi. B/R & ICT number not written in S/S SLD.	Pending	Pending
5	Indravati 400 kV	i. Bay Number needs to changed for Jaypore and Rengali line. ii. Rengali line reactor is switchable one.	SCADA database updated, Display Modified	Pending
6	Jharsuguda 765/400 kV	i. Multiple discrepancies observed mostly due to bay swapping(Angul line 3 & 4), change of names etc.	Display Modified	N. A.
7	Bolangir 400 kV	i. No bay number shown in SCADA SLD. ii. Rating of Angul L/R to be written in SCADA SLD.	Pending	Pending
8	Baripada 400 kV	i. Bay number needs to change for 125 MVAR reactor 1 and ICT3. ii. Line reactor of Duburi is switchable for which CB has to be added in SCADA and EMS database.	SCADA database updated, Display Modified	Pending
9	Rengali 400 kV	i. Bay number needs to be changed for ICT-1 ,&2	Display Modified	N. A.

It has been observed several times that in some of the POWERGRID stations, bay swapping of feeders/reactors observed & due to such bay swapping, it is severely affecting the decisions taken by real time shift operator. The fault analysis in post-dispatch scenario would also be affected due to wrong SOE (sequence of event). This matter was just mentioned in the 22nd SCADA O&M meeting held at ERLDC, Kolkata on 30th October 2018 wherein ERLDC informed that a committee has been formed by competent authority to validate all the SLDs of POWERGRID stations with ERLDC SCADA display.

In 151st OCC, OCC advised Powergrid to inform ERLDC first before doing any bay swapping and also advised to validate the SLD with ERLDC SCADA display.

Member may deliberate

Deliberation in the meeting

ERLDC informed that Powergrid had validated the SLD for 70 substations and validation of rest of the substations is in progress.

Item no. C.13: 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 March -2019

Sl No	State/Utility	TTC import(MW)		RM(MW)		ATC (Import) MW		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL							Nov-18
2	JUSNL	1164	--	60	--	1104	--	Feb-19
3	DVC	1318	3480	61	49	1257	3432	Mar-19
4	OPTCL	2259	--	90	--	2169	--	Apr-19
5	WBSETCL	4140	--	300	--	3840	--	Dec-18
6	Sikkim	--	--	--	--	--	--	

Once again, it may kindly be notes that the SLDC has to calculate ATC/TTC and show the same on their website in line with approved “Detailed Procedure for Relieving Congestion in Real Time Operation” as per the CERC (Measures to relieve congestion in real time operation) Regulations, 2009 regulation.

Members may update.

Deliberation in the meeting

WBSETCL agreed to submit the details to ERLDC within a week.

OCC advised Sikkim to compute ATC and TTC for their state and submit the details on monthly basis. Sikkim agreed.

Item no. C.14: Replacement of GPRS communication with Optical Fiber for AMR

In ER, 80% meters are connected through Automated Meter Reading (AMR). At present the communication system used for data transfer from each location is GPRS. It has been observed that many locations are not communicating with AMR system due to poor/no GPRS signal. Many substations have their own optical fiber which is also used for the LAN network of respective stations. TCS has successfully connected 02 locations (Subhasgram-PG and Binaguri-PG) in ER-II with PGCIL intranet and these two locations are smoothly reporting to AMR system after connecting with PGCIL LAN. The proposed network will not only provide better communication but alsoreduce the cost of GSM.

In 150th OCC, POWERGRID informed that the replacement of GPRS communication of the Remaining 34 locations would be completed by December 2018.

POWERGRID may please update the progress.

Deliberation in the meeting

Powergrid informed that optical fiber for AMR had been implemented at 18 locations and rest of the locations would be completed by January 2019.

Item no. C.15: Mock Black start exercises in Eastern Region – ERLDC

Tentative Schedule for mock black start exercise for FY 2018-19 is given below:

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2018	*Completed on 8th June,2018*	Last Week of January2019	*In Dec 2018*
2	Maithon	1stweek of June 2018	*Completed on 6th June,2018*	1stWeek of February2019	
3	Rengali	2ndweek of June 2018	*Done on 18thAugust,2018.*	Last week of November 2018	Jan 19
4	U. Indarvati	3rdweek ofJune 2018	*Planned in Oct,2018.*	2ndweek of February2019	*In Dec 2018*
5	Subarnarekha	1stweek of October 2018	*Done on 10th August,2018.*	1stweek of January2019	
6	Balimela	3rdweek of October 2018		1stweek of March 2019	
7	Teesta-V	2ndweek of Nov 2018	Done on 3rd May 2018	Last week of February2019	
8	Chuzachen	Last Week of May2018	In May 2018	2nd week of January2019	
9	Burla	Last Week of June 2018	*Completed on 7th June,2018*	Last week of February2019	
10	TLDP-III	1st Week of June 2018	After Monsoon	2ndWeek of January2019	
11	TLDP-IV	Last Week of June 2018	After Monsoon	1st Week of February2019	
12	Teesta-III	Last week of Oct 2018	Done on 30th Nov 2018	First Week of March 2019	
13	Jorthang	First Week of May 2018		First Week of Feb 2019	
14	Tasheding	2nd Week of May 2018		2nd Week of Feb 2019	

15	Dikchu	3rd Week of May 2018		3rd Week of Feb 2019	

Schedule for demonstration of black start exercise as follows:

i. Balimela HEP of OHPC:21st December 2018 in presence of ERPC and ERLDC engineers.
ii. Maithon HEP of DVC: January 2019
iii. Teesta-V of NHPC: February 2019.

Members may update.

Deliberation in the meeting

OCC advised DVC to plan the black start exercise on next day of 154th OCC Meeting scheduled to be held at Mejia TPS tentatively on 21st February, 2019.

Item no. C.16: Irregularity of data punching to web based PSP portal--ERLDC

ERLDC has successfully migrated to web based PSP reporting system since 9th September 2018 in which constituents have access to furnish their respective daily energy consumption/generation through web based portal using their own user ids. The report generated based on such punched data, is used by MOP, CEA, NLDC and other various organizations. The success of preparation and publication of error free Web PSP report in time is totally dependent on the active cooperation ofall the constituents filling the data during night hours. As per the recent practice for report preparation, data filled within 04:00 Hrs are considered for report preparation. In case data is not filled by the user for a particular field within 04:00 Hrs during night then SCADA data for that field is used for report preparation.

Some observations regarding submission of data in Web PSP are follows:

1. Users viz: Adhunik (APNRL), KBUNL. DMTCL, BRBCL, Tashiding, Barh and FSTPP are not filling data in Web PSP regularly.
2. Regular mismatch of 4 to 6 mu in 765kV Dharamjaigarh-Jharsuguda-Q/D energy data as declared by RTAMC ER – II and SCADA data of same link is observed. Same also verified from SEM data.

In this regard all the users are requested to kindly attach due seriousness to fill their own data in Web PSP portal by 04:00 Hrs. Powergrid RTAMC ER – II is requested to check the data of 765kV Dharamajaigarh-Jharsuguda-Q/Dbefore publishing during night hour.

In 151st OCC, Powergrid RTAMC ER – II agreed to look into the matter of 765 kV Dharamjaigarh-Jharsuguda-Q/D energy data; however till date energy data submitted by ER-II RTAMC during night hour differ from SCADA and SEM energy data.

Odisha and West Bengal are requested to elaborate the mythology followed for submission of CPP net energy data.

Members may please note and comply.

Deliberation in the meeting

Members noted.

Item no. C.17: Submission of Thermal Loading of Transmission line and associated terminal equipment by ISTS licensee

In line with the MoM of 4th NRCE Meeting dt.03-11-14 and "Operational Guidelines for determination Of TTC, ATC and TRM for the Short-Term Horizon (0-3 Months)" published by NRCE dt.20-02-15, thermal limit for transmission line has to be used for calculation of ATC/TTC. However, the thermal loading of transmission line depend on the Maximum Conductor Temperature, End equipment thermal rating. This has to be submitted by the Owner of the equipment. Further, the equipment owner also has to confirm that relay setting has been aligned so that the line can be operated up to its thermal limit. In the absence of complete details, ERLDC is utilising the data from the CEA Planning Criteria for thermal rating as given below :

Conductor Type	Ampacity per conductor(A)*	Thermal loading limit of line (MVA)
765 kV Quad ACSR_Bersimis	732	3880
765 kV HexaACSR_Zebra	560	4452
400 kV Twin ACSR_Moose	631	874
400 kV Quad ACSR_Moose	631	1749
400 kV Quad ACSR_Bersimis	732	2029
400 kV Triple Snowbird	630	1309
400 kV Twin ACSR_Lapwing	773	1071
220 kV Single AAAC_Zebra	557	212
220 kV Single ACSR_Zebra	560	213
220 kV Twin ACSR_Moose	631	481
132 kV Single ACSR_Zebra	560	128
132 kV Single ACSR_Panther	366	84

*Ambient and Maximum conductor temperature are taken as 45°C and 75°C respectively.
Apart from above specifically mentioned in CEA transmission planning criteria following loading limit is considered for HTLS line while calculating ATC/TTC

Conductor Type	Ampacity per conductor(A)*	Thermal loading limit of line (MVA)
400 kV Twin HTLS	1262	1750
220 kV Single HTLS	1020	390
132 kV Single HTLS	732	168

In view of this, it is desired that all ISTS Licensee and STU(for 400 kV and important 220 kV lines) may kindly submit the following details to ERLDC for utilisation in ATC/TTC calculation:

a) Transmission line wise Ampacity and Thermal loading along with Maximum Conductor Temperature and conductor type.
b) End Equipment Rating and
c) Confirmation whether the relay setting has been adopted in line with the thermal rating of the line
d) Any constraint during thermal loading of line

OCC advised all the ISTS licensees and STUs to submit the relevant data to ERLDC and ERPC.

Members may note and comply.

Deliberation in the meeting

ERLDC informed they received the details only from DVC.

OCC advised all the other ISTS licensees and STUs to submit the relevant data to ERLDC and ERPC.

Item no. C.18: FLEXIBILITY IN GENERATION & SCHEDULING OF THERMAL POWER STATIONS TO REDUCE EMISSIONS-MOP, GOI ORDER

CEA vide letter dated 18th July 2018 informed that a committee has been constituted in CEA under Chief Engineer (TPRM) to develop a road map to enable flexible operation of thermal power stations for smooth integration of intermittent RES generation.

CEA requested for plant performance data as per the format enclosed at **Annexure-C18**. CEA requested to submit the hard copy and softcopy (in excel) to cetrmcea@yahoo.com.

OCC advised all the Generators to submit the plant performance data as per the format to CEA.

Members may note and comply.

Deliberation in the meeting

OCC advised all the Generators to submit the plant performance data as per the format to CEA.

Item no. C.19: Auto-Reclosure on Lines from PPSP Generating station.

It has been observed that, no transmissionlines from 400 kV PPSP Plant are having the auto-reclosure facility in enabled condition. Further, the auto-reclosure facilities are also not enabled at remote end substation.

Element Name	Tripping Date	Tripping Time	Type of Fault
400KV PPSP-BIDHANNAGAR-I	05-08-16	21:43	R Phase to E/F
400KV PPSP-NEW PPSP-2	25-02-18	12:58	R Phase to E/F
400KV PPSP-BIDHANNAGAR-II	11-03-18	23:45	Y phase to E/F
400KV PPSP-BIDHANNAGAR-II	30-04-18	8:21	Y phase to E/F
400KV PPSP-BIDHANNAGAR-II	10-05-18	6:15	B phase to E/F
400KV PPSP-BIDHANNAGAR-II	20-05-18	16:39	R Phase to E/F
400KV PPSP-BIDHANNAGAR-I	01-06-18	11:37	Y phase to E/F
400KV PPSP-BIDHANNAGAR-II	08-06-18	2:32	B phase to E/F
400KV PPSP-BIDHANNAGAR-II	08-06-18	23:50	Y phase to E/F
400KV PPSP-BIDHANNAGAR-II	12-06-18	14:34	R Phase to E/F

Non-Implementation of Auto-reclosure results in the non-compliance of CEA Technical Standard for Construction of Electrical Plants and Electric Lines 43.4.C.

WBSEDCL may kindly update on the status of healthiness and enabling of the auto-reclosure on the transmission lines from PPSP Power plant. It may kindly be noted that, most of the power plant (Thermal/Hydro/Gas) in the Indian Power System have no issue in enabling single-phase auto-reclosure for the line emanating from their plant. This has indeed increased their reliability during bad weather conditions during which transient fault occur on the lines.

The agenda could not be discussed in 70th& 71st PCC meetings as WBSEDCL representative was not present in the meeting.

In 151st OCC, WBSEDCL agreed to explore and place the details in next OCC Meeting.

Members may discuss.

Deliberation in the meeting

WBSETCL informed that part of the line around 3.6 km is of cable. Hence, auto-reclose feature is difficult to be implemented for this line.

PART D:: OPERATIONAL PLANNING

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

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of January 19 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16 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.

Deliberation in the meeting

Modified anticipated power supply position for the month of January 2019 after incorporating constituents' observations is given at **Annexure-D.1***.*

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

In 151st OCC, it was observed that constituents had not submitting the shutdown requisition within stipulated time as a result ERLDC had been facing difficulty in properly analyzing the shutdown.

OCC decided the following procedure for submission of transmission elements outage requisition:

1. ***Shutdown of Intra Regional Lines*** *- Transmission licensee/SLDCs/Transmission Asset owners shall apply shutdown of their respective Intra Regional Lines for the next month to ERLDC strictly by* ***8th*** *of every Month. Based on this, ERLDC shall prepare the list which would be placed in OCC Agenda. Any shutdown requisition received after 8th of the month would not be normally considered for discussion in the OCC meeting unless it is considered to be an emergency requirement.*
2. ***Shutdown of Inter Regional Lines*** *- Transmission licensee/ SLDCs/Transmission Asset owners shall send their shutdown requisition of Inter Regional Lines for the next month directly to NLDC strictly by* ***5th*** *of every month with a copy to respective RLDCs.*

Members may finalize the Shutdown proposals of transmission lines andgenerating stations for the month of January 19.

Shutdown proposals of generating stations:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
WBPDCL	Kolaghat TPS	5	210	01.01.19	10.01.19	10	Boiler License
CESC	TITAGARH	1	60	04.01.19	18.01.19	15	Not Specified
	SOUTHERN	1	67.5	01.01.19	04.01.19	4	Not Specified
		2	67.5	05.01.19	19.01.19	15	Not Specified
HEL	HALDIA	2	300	17.01.19	31.01.19	15	Not Specified
IPP	APNRL	2	270	17.01.19	10.02.19	25	Not Specified

Annual maintenance of Dikchu HEP Units:

i. Unit-2 from 18-12-2018 to 10-01-2019
ii. Unit-1 from 20-01-2019 to 15-02-2019

Annual maintenance of Teesta-V HEP Units:

i. Unit-1 from 03-01-2019 to 23-01-2019

ii. Unit-3 from 18-12-2018 to 01-01-2019

The list transmission line shutdown is given at **Annexure-D2**.

Members may confirm.

Deliberation in the meeting

Approved Shutdown proposals of generating stations:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
WBPDCL	Kolaghat TPS	5	210	11.12.18	11.02.19	60	ESP R & M
CESC	TITAGARH	1	60	04.01.19	18.01.19	15	Not Specified
	SOUTHERN	2	67.5	13.12.18	27.12.18	15	Not Specified
HEL	HALDIA	2	300	01.01.19	15.01.19	15	Not Specified

OCC approved the line shutdown as per the list given in **Annexure-D.2.**

1. Shutdown of 400kV Main Bus Darbhanga-- Alipurduar Transmission Limited

Alipurduar Transmission Limited vide mail dated 5th December 2018 informed that the M/S TBEA Zonfa (China) has informed that due to change in Govt regulations , they would not receive the visa in the month of December 2018 , hence they are proposing the revised schedule as per the below dates for the connection of Main Bus -1 & Main Bus 2

1. 400KV Main bus I (DMTCL): – 5.01.2019 to 12.01.2019 .
2. 400KV Main bus II (DMTCL): – 14.01.2019 to21.01.2019.
3. 400KV Main bus I (DMTCL) & 400KV Main bus II (DMTCL) – 21.01.2019 to 23.01.2019

Alipurduar Transmission Limited may explain. Members may approve.

Deliberation in the meeting

BSPTCL informed that they had allowed the shutdown in December 2018 but Alipurduar Transmission Limited could not avail the shutdown.

OCC advised BSPTCL to allow the shutdown in this winter season.

BSPTCL agreed to give the shutdown in January 2019 after discussing with Alipurduar Transmission Limited.

2. Stepwise completion of 400 KV Rajarhat-Purnea-D/C along with associated transmission element. -Powergrid

Under ERSS-V, originally approved elements are as per followings:-

1. 400 KV Rajarhat-Farakka- 309 KM, Tripple Snowbird.
2. 400 KV Rajarhat-Gokarna- 230 KM, Tripple Snowbird.
3. 400 KV Farakka-Purnea- 171 KM, Tripple Snowbird.
4. 400 KV Gokarna-Purnea- 251 KM, Tripple Snowbird.

A

However, due to severe ROW problem at Rajarhat section around North 24 Paragana & subsequent problem at Ganga River (Jharkhand Section) modified scheme for interim arrangement approved on ER/SCM on 2017 as: **400 KV Farakka-Gokarna-D/C.**

Now, the elements are ready & followings are stepwise completion plan for achieving actual elements as mentioned in "A".

Initially, Purnea section will be charged and afterwards Rajarhat portion will be connected. Tentatively by 15/01/19, Purnea connectivity, with Farakka & Gokarna will be completed. i.e.

400 KV Farakka-Gokarna-I will be returned as **400 KV Gokarna-Purnea.**
400 KV Farakka-Gokarna-II will be returned as **400 KV Farakka-Purnea.**

After returning of above elements, & after completion of balance activity by ER-II (Subjected to clearance of ROW), remaining connectivity with Rajarhat will be restored, i.e.

400 KV Rajarhat-Gokarna&**400 KV Rajarhat-Farakka** will be charged, expected by **31/01/19**.

Members may discuss & approve.

Deliberation in the meeting

Powergrid appraised the house with detailed presentation. Presentation is enclosed at ***Annexure-D2.2.***

OCC approved the shutdown as per the list enclosed at ***Annexure-D2****.*

3. Stepwise completion of Rajarhat GIS Sub-station-Powergrid

400/220 KV Rajarhat S/S is on the verge of completion and different elements connected with the sub-station will be charged tentatively as follows:

400 KV system will be charged by LILO of existing 400 KV Subhasgram-Jeerat at Rajarhat, i.e. modified elements will be:-

1. 400 KV Subhasgram-Rajarhat- 35 KM, Twin Moose.
2. 400 KV Jeerat-Rajarhat-30 KM, Twin Moose.

Above charging is expected by 07/01/2019.

After charging of the LILO, following elements will be charged as follows:

1. 400/220/33 KV 315 MVA ICT-I: By 10/01/19.
2. 80 MVAR Switchable L/R of Gokarna- By 10/01/19.
3. 80 MVAR Switchable L/R of Farakka- By 31/01/19.
4. 220 KV GIS By 12/01/19. (07/09 Bays will be charged, remaining 02 Line Bays By 31/01/19.

Members may discuss & approve.

Deliberation in the meeting

OCC approved the shutdown as per the list enclosed at ***Annexure-D2****.*

4. Reconductoring of 400 KV Maithon-Maithon-RB-D/C under ERSS-XVII-B. - Powergrid

Under above mentioned strengthening scheme, existing Twin Moose conductor of 400 KV Maithon-Maithon RB-D/C to be replaced by Twin HTLS, along with bay upgradation at both sides (From 2000 A to 3150 A). All necessary material already received at site & for carrying out the

work, S/D of both the circuit sought for 45 Days on continuous basis. Both circuit S/D is required to speed up the progress (Minimizing ROW issues). S/D required for the above works are as follows:

SL NO	ELEMENT DESCRIPTION	FROM DATE	TO DATE	NATURE	REMARKS
01.	400 KV MAITHON-MAITHON-RB-D/C.	26.12.18	09.02.19	OCB	FOR RECONDUCTORING OF EXISTING CIRCUITS.

As the reconductoring is under approved scheme, the S/D for this purpose may kindly be treated under deemed availability category.

Members may discuss.

Deliberation in the meeting

OCC agreed to allow shutdown for one circuit at a time.

Powergrid requested for shutdown of both circuits simultaneously as reconductoring work in a single circuit would raise safety and severe ROW issues.

OCC advised Powergrid to start the reconductoring work in a single circuit first. In case they face any problem subsequently, they are free to avail the shutdown of both the circuits.

*OCC approved the shutdown as per the list enclosed at **Annexure-D2**.*

It was decided that the deemed availability of the above shut down would be accepted subject to prudence check by Member Secretary, ERPC.

5. Commissioning of 1st 500 MVA ICT at Malda S/S in Place of existing 315 MVA ICT-3. –Powergrid

Under ERSS-XVII, both the 400/220 KV, ICT's (2X315 MVA) at Malda S/S are to be replaced by 500 MVA ICT's. In first phase, 315 MVA ICT-3 is planned for replacement by 500 MVA.

Presently Malda 315 MVA ICT mainly caters load to local 132 KV demand (By 132 KV Malda-Malda-D/C) & also to 220 KV Dalkhola-Malda D/C. During S/D of one number 315 MVA ICT, to minimize the loading pattern it is proposed to kept off both the Malda-Dalkhola-D/C connectivity & meeting demand of Dalkhola (WB) from Kishanganj 500 MVA ICT. S/D requirement are as follows:

SL NO	ELEMENT DESCRIPTION	FROM DATE	TO DATE	NATURE	REMARKS
01.	400/220 KV, 315 MVA ICT-3 at Malda.	02.01.19	17.02.19	OCB	FOR REPLACEMENT OF 315 MVA ICT-3 BY 500 MVA.
02.	220 KV Malda-Dalkhola-D/C				

Members may discuss.

Deliberation in the meeting

*OCC approved the shutdown as per the list enclosed at **Annexure-D2**.*

6. Modification of existing Fire Fighting system & additional strengthening for accommodating NIFS system for 400/220/33 KV, 315 MVA ICT-I at Alipurduar SS. – Powergrid

During operation of HVDC station & considering recent development in Equipment protection, it is felt that existing Fire Fighting system (HVW) can be strengthen by means of additional piping for better temperature sensing & accommodating NIFS system. For carrying out the work S/D is required for continuous 05 Days. S/D are as follows:

SL NO	ELEMENT DESCRIPTION	FROM DATE	TO DATE	NATURE	REMARKS
01.	400/220 KV, 315 MVA ICT-1 at Alipurduar.	27.01.19	31.01.19	OCB	FOR MODIFICATION OF EXISTING FF SYSTEM.

As the activity taken towards improvement of the system reliability and contingency measurement, the S/D period may be considered as deemed available as per standard CERC guideline.

Members may discuss.

Deliberation in the meeting

*OCC approved the shutdown as per the list enclosed at **Annexure-D2**.*

It was decided that the deemed availability of the above shut down would be accepted subject to prudence check by Member Secretary, ERPC.

7. Reconfiguration of existing 400 KV Teesta-3-Rangpo-Dikchu-Kishanganj: - Powergrid

Existing configuration for Teesta-3 & Dikchu evacuation is as follows:

1. 400 KV Teesta-3-Rangpo: 45 KM.
2. 400 KV Teesta-3-Dikchu: 14 KM.
3. 400 KV Rangpo-Dikchu- 32 KM.

Considering connectivity of upcoming 400 KV Kishanganj the circuit configurations will be as follows:

Existing 400 KV Teesta-3- Rangpo will be charged as following:

400 KV Teesta-3-Kishanganj (215 KM, Quad Moose).
400 KV Rangpo-Kishanganj (189 KM, 11 KM HTLS + 178 KM Quad Moose).

Remaining elements will be same as earlier.

There are work related to reconfiguration of circuits at LILO tower near Rangpo & as well as Testing co-ordination/Data regarding charging of elements. Considering all above activities following S/D's are proposed:

SL NO	ELEMENT DESCRIPTION	FROM DATE	TO DATE	NATURE	REMARKS
01.	400 KV TEESTA-3-RANGPO.				
02.	400 KV TEESTA-3-				

	DIKCHU.				
03.	400 KV RANGPO-DIKCHU.	26.12.18	01.01.19	OCB	FOR RECONFIGURATION OF EXISTING CIRCUITS.

Members may discuss.

Deliberation in the meeting

Powergrid and TPTL explained the work involved in changing the configuration and requirement of shutdown with detailed presentation. Presentation is enclosed at ***Annexure-D2.7****.*

TPTL informed that they needed shutdown of 400 KV TEESTA-3-RANGPO line for three days tentatively from 22nd December 2018 to 24th December 2018 on continuous basis to complete construction work of 400kV Teesta 3-Kishanganj line. Thereafter they would charge 400kV Teesta 3-Kishanganj line for one day on trail basis. TPTL added that they needed shutdown of 400 KV RANGPO-DIKCHU line for nine days on daily basis.

ERLDC informed that submission of first time charging documents to ERLDC by TPTL is a pre-requisite to avail the shutdown.

Powergrid informed that they would test the PLCC and communication of 400kV Teesta 3-Kishanganj line after completion of the construction work.

Powergrid added that they need shutdown of 400 KV RANGPO-DIKCHU line for two days on continuous basis to bring 400kV Rangpo-Kishanganj line into service.

OCC agreed to allow shutdown of 400 KV RANGPO-DIKCHU line for two days on continuous basis only after 400kV Teesta 3-Kishanganj line was in service so that hydro power evacuation of Sikkim HEPs would not get effected.

OCC approved the shutdown as per the list enclosed at ***Annexure-D2****.*

8. Shut down of 400 KV Rangpo-Teesta-III & 220 KV Rangpo-New Melli-I line for rectification of GIB by Hyosung. -Powergrid

400/220/132 KV Rangpo S/S is a GIS S/S constitute of separate voltage levels in different GIS Building. Every voltage level consists of inside GIB & outside GIB. Complete GIS system is supplied by M/S. Hyosung, South Korea.

In recent past it is observed that, SF6 gas leakages developed in outside GIB of different feeders. Time and again the Gas is being replenished on SOS basis to avoid, unwanted tripping of connected feeders. However recent trend shows rise in SF6 gas leakage, specifically for 02 feeders, namely, 400 KV Teesta-III and 220 KV New Melli-I.

As attending leakage in GIB, required special skill, M/S. Hyosung has been called upon for identification and providing necessary solutions for the same. After thorough investigation, M/S. Hyosung provided detailed rectification procedure involving replacement of GIB section also. However to carry out the rectification a standard procedure to be followed involving, Draining of SF6 gas for particular section and following drying up procedure & replacement. In total to complete the activity for both the feeders as per Hyosung, followings are the requirement of S/D:

1. 400 KV Rangpo-Teesta-III: For 05 Days on Continuous basis.
2. 220 KV New Melli-I: For 03 Days on Continuous basis.

As total team will come from Korea itself, we need to provide them exact S/D dates for arranging documentation formalities. S/D request is already forwarded to RLDC for consideration.

Outage of the above elements may kindly be treated as deemed available as per provisions of regulations.

Members may discuss.

Deliberation in the meeting

*OCC approved the shutdown as per the list enclosed at **Annexure-D2**.*

9. Upgradation of existing Auto Reclose Relays in different feeders of ER-I (From Static to IEC-61850 Compliant Numerical Relays): -Powergrid

In different feeders of POWERGRID ER-I, existing A/R relay are of Conventional static type in nature. Mostly all the relays are found in feeders commissioned before 2010 are having such type of Relays. In recent past OEM of such relays (VARM of ALSTOM/GE & REXA/RAAM of ABB) declared end of life of the products. As such there will be no support available if the relays require any maintenance. Again this static type relays are non-communicable and remotely untraceable due to limitation of communications. Considering above and to make the system more reliable, ER-I has planned for phase wise replacement of existing static type A/R relays by numerical A/R relays.

The respective transmission line are identified and planned for replacement in the month of January-April'2019. Details of S/D requisitions for different transmission line in the month of Jan-Feb'19 is attached as Anx-I. Balance Transmission Lines at different S/S will be taken in coming months as per availability of relays. As S/D of the elements taken for system improvement as well as increasing the reliability of the system, outage of the elements taken on account of A/R relay replacement may kindly be considered as deemed available as per the provisions of the regulation.

Members may kindly discuss and accord approval.

Deliberation in the meeting

OCC opined that Autoreclose relays could be replaced on-line without line shutdown and advised Powergrid to replace the relays on-line with an intimation to ERLDC.

10. Replacement of bulged Multi Circuit Tower at Loc. No. 80 carrying total four circuit i.e. 400kV D/C Kodema-Gaya and 400kV D/C Maithon-Gaya: -Powergrid

In our routine patrolling, the location no. 80 (Multi circuit tower carrying total four circuit i.e. 400kV D/C Kodema-Gaya and 400kV D/C Maithon-Gaya) was observed to bulged follows the summer cyclone in the month of May / June 2018.

It is proposed to replace the bulged tower and bring back the line in normal service. The above lines shall be under shut-down to carry out such replacement as deployment of taking the lines on ERS may not be feasible as the terrain is hilly and situated in forest. Presently a constant vigil is kept on the tower location and is provided with guyed wire in all the directions.

It may also be kindly noted that the said location pertains in forest and also naxal prone area. The replacement of deformed / bulged tower has been planned from 3rd to 25th Januray' 2019 for which shutdown requisition has already been proposed. Since this tower has been deformed due to severe cyclone, the replacement period of the subject tower may be considered as force majeure condition for the purpose of calculation of availability.

Members may kindly discuss and accord approval.

Deliberation in the meeting

Powergrid gave a detailed presentation on the issue and requested to consider the shutdown period as force majeure condition for the purpose of calculation of availability. Presentation is enclosed at ***Annexure-D2.10****.*

OCC decided to constitute a committee with members from transmission utility to verify and assess the time required for rectification. The committee would submit the report to Member Secretary, ERPC for further decision on availability.

OCC approved the shutdown as per the list enclosed at ***Annexure-D2****.*

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		Expected Revival Date
					(MW)		Date	Time	
1	BARAUNI	BIHAR	BSPHCL	6	105		17-Mar-12	13:15	NO DEFINITE PROGRAM
2	KOLAGHAT	WEST BENGAL	WBPDCL	1	210	POLLUTION CONTROL PROBLEM	10-May-18	23:05	NO DEFINITE PROGRAM
3	KOLAGHAT	WEST BENGAL	WBPDCL	3	210	POLLUTION CONTROL PROBLEM	23-Feb-17	11:51	NO DEFINITE PROGRAM
4	CTPS	JHARKHAND	DVC	3	130	TURBINE BLADE DAMAGE	30-Jul-17	00:00	NO DEFINITE PROGRAM
5	JITPL	ODISHA	JITPL	2	600	COAL SHORTAGE	26-Jun-18	00:03	SUBJECT TO COAL AVAILABILITY
6	RAGHUNATHPUR	WEST BENGAL	DVC	1	600	LUBE OIL PUMP LEAKAGE	6-Dec-18	06:02	20-Dec-18
7	MEJIA	WEST BENGAL	DVC	8	500	COAL SHORTAGE	3-Dec-18	00:05	SUBJECT TO COAL AVAILABILITY
8	MEJIA	WEST BENGAL	DVC	4	210	COAL SHORTAGE	2-Nov-18	22:05	SUBJECT TO COAL AVAILABILITY
9	VEDANTA	ODISHA	GRIDCO	2	600	TURBINE BEARING VIBRATION	23-Nov-18	00:45	15-Dec-18
10	KODERMA	JHARKHAND	DVC	2	500	TURBINE VIBRATION	29-Nov-18	13:33	12-Dec-18
11	TENUGHAT	JHARKHAND	JUVNL	2	210	COAL SHORTAGE	8-Dec-18	01:00	SUBJECT TO COAL AVAILABILITY
12	DPL	WEST BENGAL	WBPDCL	8	250	COAL SHORTAGE	5-Dec-18	04:53	SUBJECT TO COAL AVAILABILITY
13	SAGARDIGHI	WEST BENGAL	WBPDCL	4	500	COAL SHORTAGE	7-Nov-18	21:30	SUBJECT TO COAL AVAILABILITY
14	SAGARDIGHI	WEST BENGAL	WBPDCL	3	500	COAL SHORTAGE	5-Dec-18	00:05	SUBJECT TO COAL AVAILABILITY

(ii) Hydro Generating units:

S.No	Station	Location	Owner	Unit No	Capacity (MW)	Reason(s)	Outage Date
1	BURLA	ODISHA	OHPC	1	37.5	R & M WORK	25.10.16
2	BURLA	ODISHA	OHPC	2	37.5	R & M WORK	16.10.15
3	BURLA	ODISHA	OHPC	4	37.5	Annual Maintainance	25.10.18
4	BURLA	ODISHA	OHPC	6	37.5	R & M WORK	16.10.15
5	BALIMELA	ODISHA	OHPC	1	60	R & M WORK	05.08.16
6	BALIMELA	ODISHA	OHPC	2	60	R & M WORK	20.11.17
7	BALIMELA	ODISHA	OHPC	5	60	Annual Maintainance	12.10.17
8	U.KOLAB	ODISHA	OHPC	2	80	Repair of MIV & Draft tube gate leakage	28.05.17
9	UPPER KOLAB	ODISHA	OHPC	3	80	Problem in Bypass valve of BF valve	
10	CHIPLIMA	ODISHA	OHPC	1	24	FLOOD CONTROL	21.07.18
11	RENGALI	ODISHA	OHPC	1	50	Annual Maintainance	31.10.18
12	INDRAVATI	ODISHA	OHPC	4	150	Shear pin failure	

It is therefore seen that about 714 MW hydro capacity in Odisha is under forced outage / planned outage 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 DATE	Outage TIME (HRS)	Reasons for Outage
1	220 KV BALIMELA - U' SILERU	OPTCL / APSEB	10-03-18	22:45	LINE ANTITHEFT CHARGED FROM UPPER SILERU ON 17-04-18
2	400 KV IBEUL- JHARSAGUDA D/C	IBEUL	29-04-18	17:30	TOWER COLLAPSE AT LOC 44,45
3	400KV NEW PURNEA-BIHARSARIFF(PG)-D/C	ENICL	10-08-18	10:28	TOWER COLLAPSE AT LOC 47/0
4	400 KV PATNA -KISHANGANJ D/C	POWERGRID	01-09-2018	00:32	TOWER COLLAPSE AT LOC 129. PILING DAMAGED
5	SASARAM HVDC	POWERGRID	26-11-2018	13:26	INTER ZONE PROTECTION OF NORTHERN CONVERTOR TRANSFORMER
6	400 KV KAHALGAON - BANKA II	POWERGRID	26-11-2018	09:45	NEW BUSBAR COMMISIONING AT KAHALGAON
7	220 KV CHUKAHA-BIRPARA-II	CHUKHA	12-11-2018	09:40	REPLACEMENT OF C&R PANELS AT CHUKHA END

(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.

Deliberation in the meeting

Members noted.

PART E::ITEMS FOR INFORMATION

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

Item No. E.1: Restricted Governor /Free Governor Mode Operation of generators in ER

CERC vide their letter dated 05-06-2017 desired to know the present status of RGMO/FGMO response of all eligible thermal and hydro units. Accordingly ERLDC vide letter no.ERLDC/SS/FGMO/2017 dated 07-06-17 requested all concerned power stations and SLDCs to provide updated status of FGMO/ RGMO of units under their control.

The latest status of the RGMO/FGMO of ER generators is enclosed in **Annexure-E1**.

Generators may update.

Item No. E.2: 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-E2**.

OCC advised all the constituents to submit the information to ERPC as per Annexure-E2.

Item No. E.3: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

In 84th OCC meeting all constituents were requested to interact with BIS with intimation to ERPC and get certified as per CEA direction.

As per the information received from the constituents the following generators certified with IS 18001:

- All NTPC stations in Eastern Region
- Teesta, NHPC

- All OHPC generating units
- All CESC generating units
- All units of WBPDCL
- DGPC units

Item No. E.4: Status of Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipment.

The status of DR/EL and GPS as updated in previous OCCs is enclosed at **Annexure-E.4**.

Constituents are also requested to furnish their list of new DR/EL which are not included in the list.

TeestaUrja Limited vide letter dated 8th September 2017 informed that Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipments are available at Teesta III HEP.

Item No. E.5: Status of Emergency Restoration System (ERS Towers) for Eastern Region constituents

CEA vide letter dated 21.07.2017 requested to send the status of state-wise availability of ERS towers and requirement of ERS towers.

In 136th OCC, MS, ERPC informed that CEA vide letter dated 21.07.2017 has sought the latest status on ERS. Therefore, OCC advised all constituents to send the updated status to ERPC secretariat vide mail (mserpc-power@nic.in).

Latest status is enclosed at **Annexure- E.5**.

In 138th OCC, WBSETCL informed that they are having total 10 ERS towers, 5 at Arambagh and 5 at Gokharno.

In 139th OCC, JUSNL informed that they are having eight 220/132kV ERS towers at following locations:

- Hatia – 3 nos
- Ranchi – 2 nos
- Dumka – 3 nos

Item No. E.6: 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.

Members may comply.

Item No. E.7: DATA FOR GEOSPATIAL ENERGY PORTAL OF NEETI AAYOG--CEA

NITI Aayog is developing a user friendly GIS based Energy Map of India, which would provide true locations of all energy resources in India including power plants, coal and oil reserves, transmission lines etc.

CEA sought the information of name, voltage level, capacity, longitude and latitude of 33kV and 66 kV substations and lines.

The information may be shared with CEA vide email: cedpd-cea@gov.in.

Members may comply.

Item No. E.8: Providing relevant data by Power Utilities I Stations in National Power Portal.

CEA vide letter dated 26th June 2018 informed that National Power Portal (NPP) (URL: npp.gov.in), has been launched by Hon'ble Minister of Power on 14th November, 2017. NPP is modified and more user-friendly data portal than the existing Information Management System (IMS) in CEA. Reports prepared from NPP are of vital importance for Power Sector data analytics in order to frame policies, regulations , future road-map for Power Sector etc. at Central as well as at State level. Accordingly, all power utilities have been issued user ID and password, either organisation-wise or station-wise, based on their request , for providing their data on NPP.

NPP has replaced IMS since 1st June, 2018. A Circular (which is available in Circular Section of CEA Website, i.e. cea.nic.in) has been issued by CEA to all power utilities/stations on 14.06.2018 for providing their data online in NPP only.

In this regard, letters/mails have been issued to Utilities to provide their data online through NPP. A letter dated 20.06.2018 was also issued to all SLDC, requesting them to direct the power utilities I stations under their purview for providing data on NPP.

Any issue/problem faced by utilities may kindly be communicated to itcea@nic.in, npp.support@gov.in, ceopm-cea@gov.in and if required, IT Division, CEA may be contacted on 011-26732368 or 011-26732303

CEA requested to pursue the power utilities *I* stations under their purview for providing data on NPP. Further, a workshop/presentation may be arranged if required in each region in which IT Division, CEA will provide a brief demonstration regarding data entering process and report generation into NPP.

Item No. E.9: Checklist for submission of updated data for Protection Database

The network data in Protection Database needs to be updated on regular basis on account of commissioning of new elements in the CTU as well as STU networks. Accordingly, a checklist has been prepared which is enclosed in **Annexure-E9**.

All the constituents are requested to submit the checklist on monthly bases in every OCC/PCC meetings.

In 139th OCC, all the constituents were advised to submit the data to ERPC vide mail (mserpc-power@nic.in) as per the checklist for last three months.

OCC advised all the constituents to submit the data to ERPC vide mail (mserpc-power@nic.in) as per the checklist for last three months.

Item No. E.10: Commissioning of new transmission elements in Eastern Region

The details of new units/transmission elements commissioned in the month of November - 2018 based on information furnished by the constituents are depicted below:

Monthly commissioning List of Tansmission element and generators: November 2018					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	765kV Jharsuguda-Dharamjaigarh-IV	PFCIL	01-11-2018	20:10	
2	400kV Lapanga - MeramundaliCkt I	OPTCL	02-11-2018	12:53	
3	400kV Bus II at Lapanga	OPTCL	02-11-2018	12:53	
4	400kV Bus I at Lapanga	OPTCL	02-11-2018	14:27	
5	400KV Lapanga - MeramundaliCkt II	OPTCL	02-11-2018	14:27	
6	315MVA ICT-II at Daltonganj	PGCIL	03-11-2018	11:36	No load charging was done on 02/11/18 at 21:53
7	125MVAR Bus reactor -II at Lakhisarai	PGCIL	03-11-2018	13:40	
8	400kV Lapanga-Vedanta-I	OPTCL	05-11-2018	17:28	
9	400kV Lapanga-IB_St_II (OPGC) Ckt- II	OPTCL	05-11-2018	20:32	Antitheft
10	400kV Lapanga-Vedanta-II	OPTCL	05-11-2018	19:42	
11	315MVA ICT-I at Lapanga	OPTCL	09-11-2018	12:59	
12	400kV IB St-II (OPGC) - Lapanga-I	OPTCL	09-11-2018	15:51	Extended for anti-theft on 03-11-2018, 11:36
13	IB St-II (OPGC) GT#3	OPGC	13-11-2018	17:50	Back charge
14	765kV Jharsuguda-Angul-3	PGCIL	28-11-2018	20:54	
15	765kV Jharsuguda-Angul-4	PGCIL	28-11-2018	23:58	
16	132 KV Rosera-Hasanpur Sugar mill T/L	BSPTCL	29-11-2018	16:45	
17	220KV Bihta - 1& 2 bay@GSSGaurichak	BSPTCL	05-12-2018	15:22/15:23	

Item No. E.11: UFR operation during the month of November'18

System frequency touched a maximum of 50.25 Hz at 22:00Hrs of 22/11/18 and a minimum of 49.7 Hz at 07:35Hrs of 12/11/18. Hence, no report of operation of UFR has been received from any of the constituents.

Item No. E.12: Non-compliance of directions issued by SLDC

Vide clause no 5.5.1.(c)(h) of IEGC, non-compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal are to be reported to ERLDC for incorporating the same in weekly report to be prepared and published by ERLDC.

All SLDCs are to inform ERLDC the instances of non–compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal, within two days after the day of operation.

No report from any constituent has yet received. Hence, ERLDC would be considering 'Nil' report for all constituents for November18.

Item No. E.13: Grid incidences during the month of November, 2018

Sr No	GD/ GI	Date	Time	S/S involved	Summary	Load loss (MW)	Gen loss (MW)
1	GD-I	14-11-2018	16:31	Dikchu	At 16:30 hrs, 400 kV Teesta III – Dikchu S/C tripped from Teesta III end along with 400/132 kV ICT at Dikchu resulting tripping of all running units at Dikchu due to loss of evacuation path. As per DR received, ICT tripped in E/F (132 kV side current: IA = 387 A, IB = 316 A, IC = 525 A, IN = 171 A). At the same time, 400 kV Teesta III – Dikchu S/C tripped from Teesta III end due to operation of cable directional O/C protection (IB = 1.695 kA, IN = 1.6 kA).	0	90
2	GI-II	24-11-2018	02:05	Kahalgaon	At 02:05 Hrs, 400 KV Bus#1 tripped due to operation of Breaker Failure Relay (BFR) of Main Bay of GT#1, leading to outage of Unit#1 (210 MW). At the same time, U#7 also tripped as it was synchronized through bus#1 only.	0	700
3	GD-I	25-11-2018	16:31	BRBCL	At 16:31 hrs bus II at BRBCL tripped on bus bar protecton due to mal-operaton of bus bar differential relay. At the same time tie CB between ICT I & GT I tripped on operation of master trip signal due to logic error from Bus bar relay of Bus II, which again led to erroneous LBB retrip signal to main CB no. 401 connected to GT I leading to tripping of unit 1 generating 230 MW and ICT I. At same time, main bay 400 kV Sasaram BRBCL - I at BRBCL tripped on logic error and DT was sent to Sasaram end.	0	230
4	GI-II	27-11-2018	13:26	Sasaram	On 27th Nov 2018, at 13:26 Hrs 400 kV Sasaram-Allahabad & 400 kV Sasaram-Varanasi tripped due to Y-B phase fault. At the same time HVDC Sasaram also got blocked due to operation of inter-zone protection of Northern converter transformer as reported by ERLDC.	0	0

5	GD-I	29-11-2018	07:23	TTPS	At 07:23 Hrs, 220 KV Bus II tripped alongwith 2*110 MW U#5,U#6, 160 MVA 220/132 KV ICT I, ICT II, 220 KV TTPS-TSTPP S/C, 220 KV TTPS-Joda D/C, 220 KV TTPS-Rengali S/C, 220 KV TTPS-Meramundali II.	0	200

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Annexure-A

Participants in 152nd OCC Meeting of ERPC

Venue: Floatel, Kolkata Time: 10:30 hrs Date: 17.12.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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17	T. G. Rao	EE, ERPC	9547891353	eseb_cea@yahoo.com	
18	D. K. Bauri	EE (Comml.) ERPC	9883617236	ee-op.erpc@gov.in	
19	S. P. RATH	Sr. Mgr. (E) TEESTA-V PS NHPC Ltd	8170005662	shaktirathnhpc@gmail.com	
20	P. K. Mondal	CE, SLDC WBSETCL	9433491830	ce.wbsldc@gmail.com	

"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

Participants in 152nd OCC Meeting of ERPC

Venue: Floatel, Kolkata   Time: 10:30 hrs   Date: 17.12.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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36	Biswajit Mondal	Dy Manager ERLDC, POSOCO	9903329221	biswajitmondal@posoco.in	[signature]
37	Ashish Lamichaney	Assistant Engineer, E&P Dept. Sikkim	9615878284	alamichaney@gmail.com	[signature]
38	M. PRASAD	HEAD, PMD, O&M, DGPC	+975-17610621	m.prasad1900@drukgreen.bt	[signature]
39	A.P. Sharma	Head/operation Division/CHP/DGPC	+975 17790535	a.sharma232@drukgreen.bt	[signature]
40	Sishu Adhikari	Head/OD/THP	17287652	s.adhikari8523@drukgreen.bt	[signature]

"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

Participants in 152nd OCC Meeting of ERPC

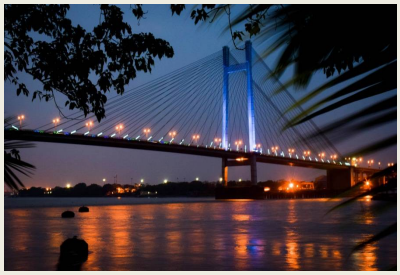
Venue: Floatel, Kolkata | Time: 10:30 hrs | Date: 17.12.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
41	Ugyen Tshering	BPSO/NLDC Bhutan	17613039	Ugyentshering17@bpcbt	
42	Dechen Dorji	Head OS & BHP/DGPC	17729983	d.dorji133@drukgr een.bt	
43	SAURABH KR.	Dy. Manager BRBCH	7081092410	Saurabh.kumar01@ntpc.co.in	
44	Ugyen Tshering	Head, OS KHP	17610624	U.tshering240@Drukgreen.bt	
45	S. K. SAHU	DGM/Odisha Projects, PGCIL	9078883643	SKSahu@powergridindia.com	
46	S K HAZRA	GM/RTAMC/ER-2 POWERGRID	9433041809	Skhazra@powergridindia.com	
47	P. GHOSH	Manager/AM II	9434748263	partha.ghosh@powergridindia.com	
48	MITHUN CHOWDHURY	DY.MGR/ POWERGRID/ERH	9431815651	MITHUN@POWERGRIDINDIA.com	
49	S. KONAR	DGM(SO)	9436335370	konar_s@posoco.in	
50	R. K. Pandey	SM/SLDC JUSNL	9934138298	k.rajesh.p@gmail.com	
51	Tushar Ranjan	Manager/SLDC/ JUSNL	9326374226	Ranjtushar@gmail.com	
52	RAJDEEP BHATTACHARJEE	R.E. BSPHCL KOLKATA	9830380689	rekolbsphcl@gmail.com	
53	S. J. LAHIRI	GM(Engg) POWERGRID	9434742011	sjlahiri@Powergridindia.com	
54	Byplab Chatterjee	GH(OPS) MPL	9204857100	bapbab.chatterjee@tatapower.com	
55	P. P Jena	AEE, ERPC	9776195991	ppjena-erpc@gov.in	
56	P. K. DE	Asstt. Secretary ERPC	9831[illegible]0142	pkderpc@gmail.com	
57	B. D. KUMAR	DGM(Teesta stge-III)	9800940836	devendra.b@Teestaurja.com	
58	A. Chandran	T.P.T.L	9800002710	amit2685@gmail.com	
59					
60					

"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

Power System Operation Corporation Ltd.

152nd OCC Meeting



At ERPC, Kolkata

17th December, 2018

ER Grid Performances

ERLDC POSOCO

Highlights for the month of Nov-18

Frequency Profile

Average Freq:- 49.97 Hz

Avg FVI: - 0.043

Lowest FVI:- 0.021

Max- 50.25Hz on 22nd Nov' 18

Min- 49.70 Hz on 12th Nov'18

79.89% of the time freq was with in IEGC Band

Peak Demand

ER: 20754 MW on 06th Nov 2018 at 19:17 hrs

% Growth in Average Demand Met w.r.t. last year: 9.01%

BSPHCL : 4516 MW ; ON 01/11/18
JUVNL: 1195 MW; ON 10/11/18
DVC: 2988 MW; ON 16/11/18
GRIDCO: 4884 MW; ON 08/11/18
WB: 7700 MW; ON 05/11/18
SIKKIM: 108 MW; ON 21/11/18

Energy met

Max. 422 MU on 05th Nov *2018*

%Growth w.r.t. last year on Max energy 16.55%

Avg. 381 MU in Nov *2018*

%Growth w.r.t. last year on Avg. energy : 9.7%

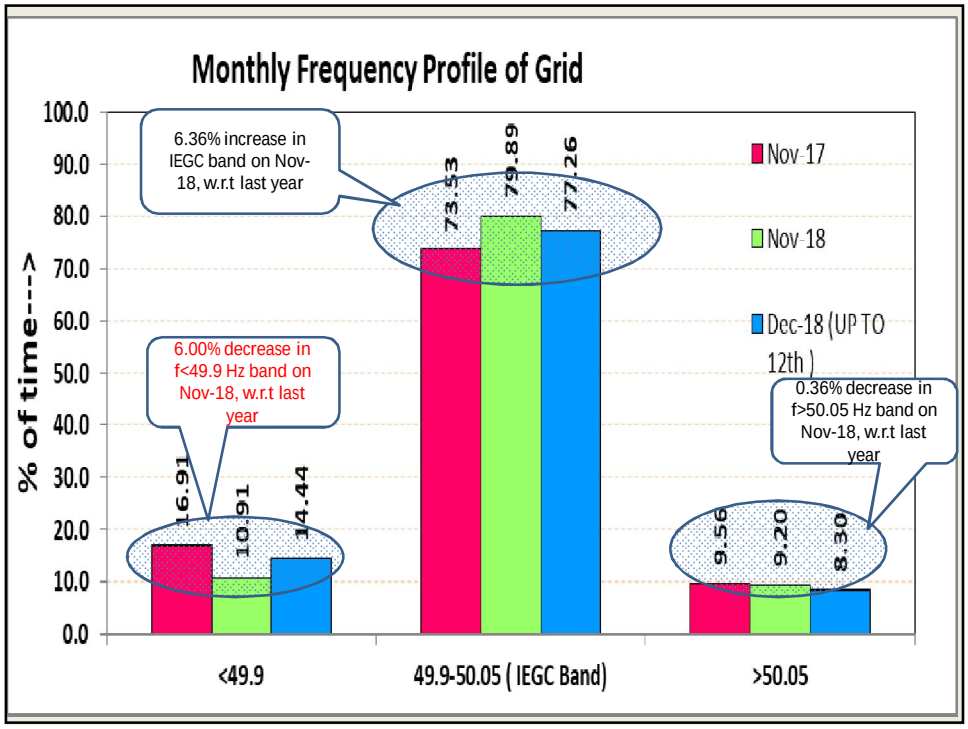
New Element

Generating Units-NIL

Open Access

STOA transactions approved -208 nos.

Energy Approved- 707.12 MUs



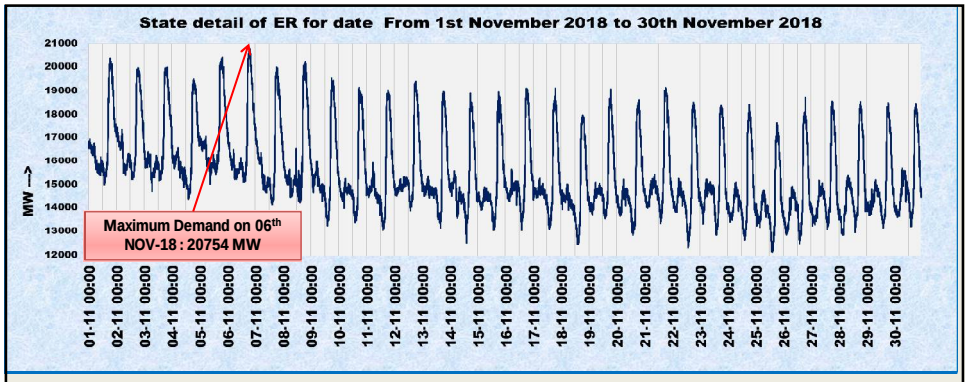
New Element addition during the month:

Sl No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	765kV Jharsuguda-Dharamjaigarh-IV	PGCIL	01-11-2018	20:10	
2	400kV Lapanga - Meramundali Ckt I	OPTCL	02-11-2018	12:53	
3	400KV Lapanga - Meramundali Ckt II	OPTCL	02-11-2018	14:27	
4	315MVA ICT-II at Daltonganj	PGCIL	03-11-2018	11:36	
5	125MVAR Bus reactor -II at Lakhisarai	PGCIL	03-11-2018	13:40	
6	400kV Lapanga-Vedanta-I	OPTCL	05-11-2018	17:28	
7	400kV Lapanga-Vedanta-II	OPTCL	05-11-2018	19:42	
8	400kV Lapanga-IB St II (OPGC) Ckt- II	OPTCL	05-11-2018	20:32	
9	315MVA ICT-I at Lapanga	OPTCL	09-11-2018	12:59	
10	400kV IB St-II (OPGC) - Lapanga-I	OPTCL	09-11-2018	15:51	
11	765kV Jharsuguda-Angul-III	PGCIL	28-11-2018	20:54	
12	765kV Jharsuguda-Angul-IV	PGCIL	28-11-2018	23:58	

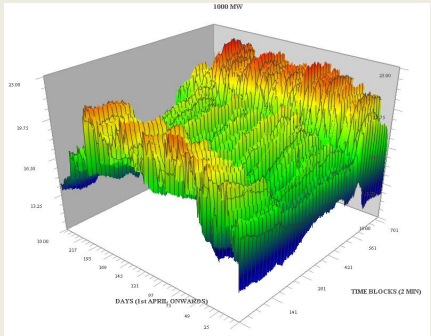
So Far Highest Demand					
Constitute	Demand (in MW)	Date	Time	Dmd met (MW) on 06th Nov'18 (max dmd met day)	
				MW	Time
Bihar	5011	12-July-18	0:05	4356	18:56
DVC	3536	12-July-18	8:55	2977	18:43
Jharkhand	1319	19-May-18	21:02	1137	18:43
Odisha	5558	23-Aug-18	20:21	4760	19:26
W. Bengal	8896	18-June-18	19:51	7358	18:10
Sikkim	117	28-Oct-16	19:22	85	07:32
ER	23030	03-Oct-18	20:43	20754	19:17

So Far Highest Energy Consumption			
Constitute	Energy consumption (in MUs)	Date	Energy met on 06th Nov'18 (max dmd met day)
Bihar	104.0	02-Oct-18	77.2
DVC	75.8	12-July-18	63.2
Jharkhand	27.8	19-May-18	23.4
Odisha	123.5	02-Oct-18	95.7
West Bengal	192.6	05-Oct-18	137.0
Sikkim	2.1	07-Dec-17	1.4
ER	499.8	18-Aug-18	405

3D VIEW OF ER DEMAND PATTERN (APR-18 to NOV-18)

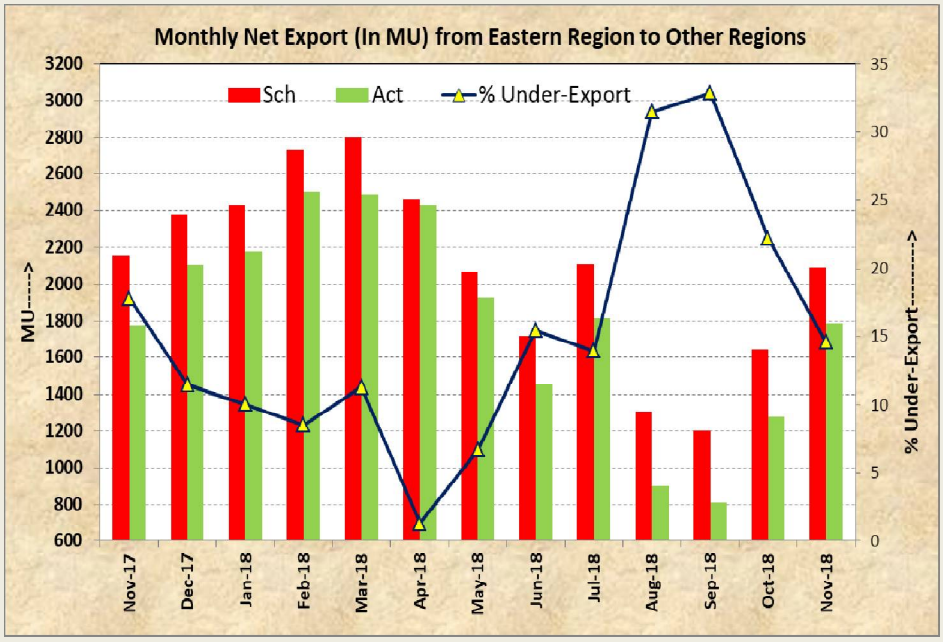


EASTERN REGION DEMAND
3D CURVES (APRIL-NOV'18)

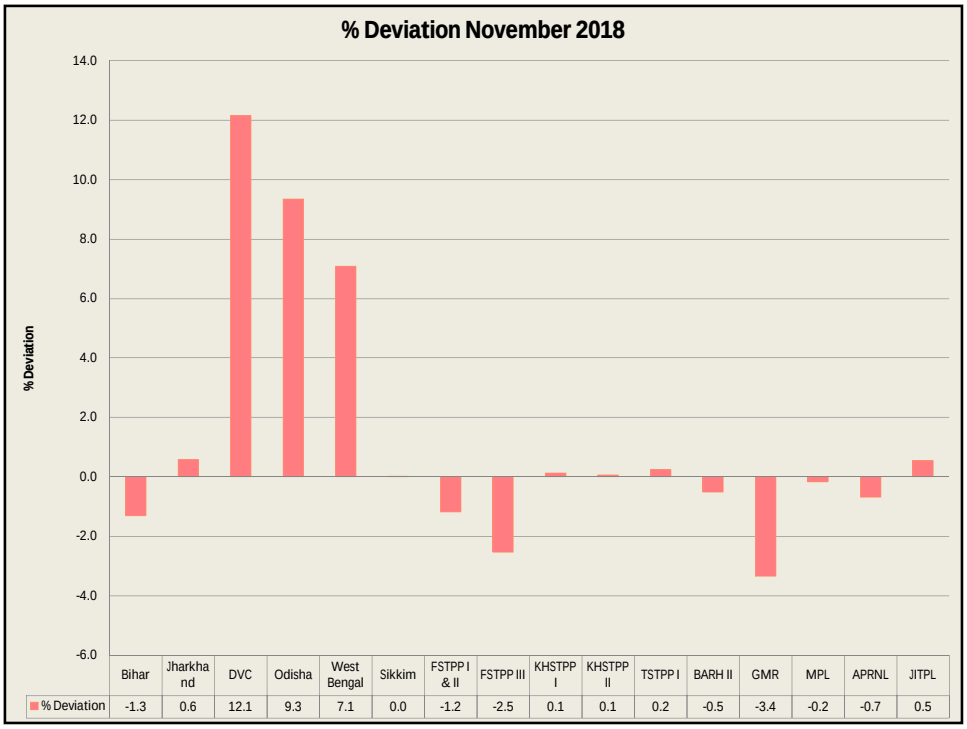


Over Drawl / Under Injection by ER Entities

Non-compliance of direction issued by SLDC



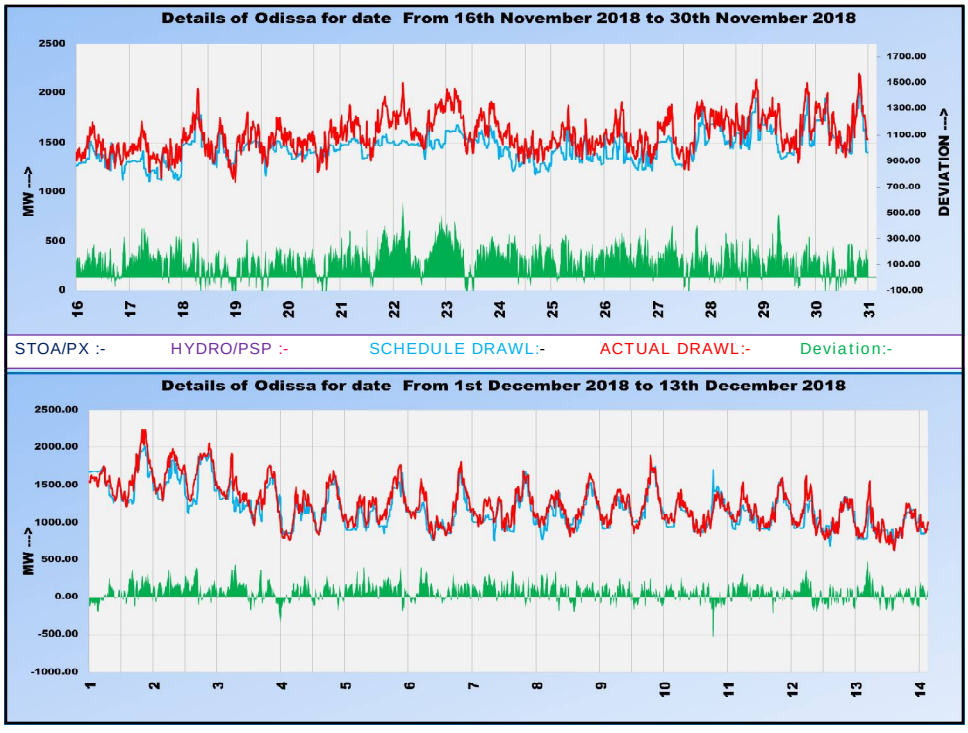
Actual Export schedule for Nov-18 was 2093 Mu, whereas actual export was 1787 Mu
Total Under export was 305 **Mu** for the month.

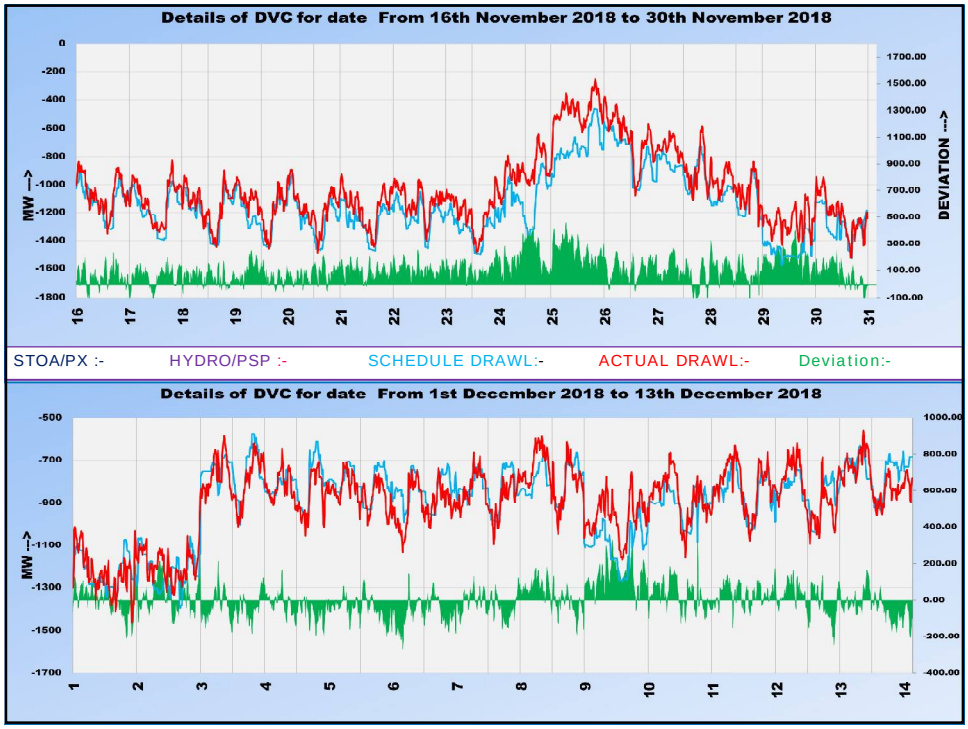


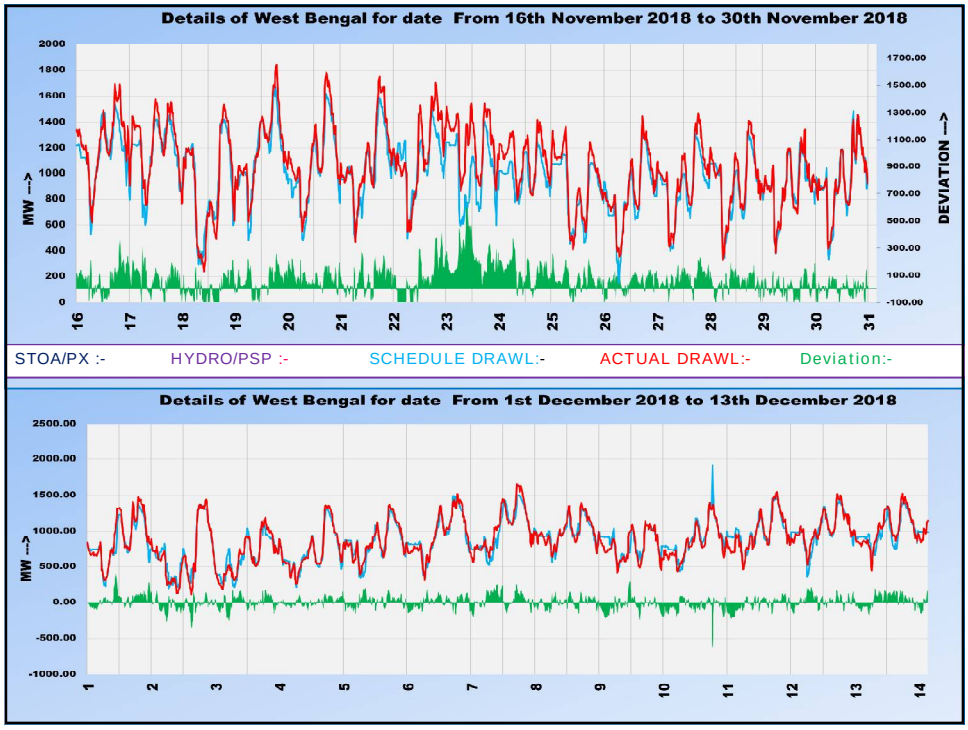
	Bihar	Jharkhand	DVC	Odisha	West Bengal	Sikkim	FSTPP I & II	FSTPP III	KHSTPP I	KHSTPP II	TSTPP I	BARH II	GMR	MPL	APRNL	JITPL
% Deviation	-1.3	0.6	12.1	9.3	7.1	0.0	-1.2	-2.5	0.1	0.1	0.2	-0.5	-3.4	-0.2	-0.7	0.5

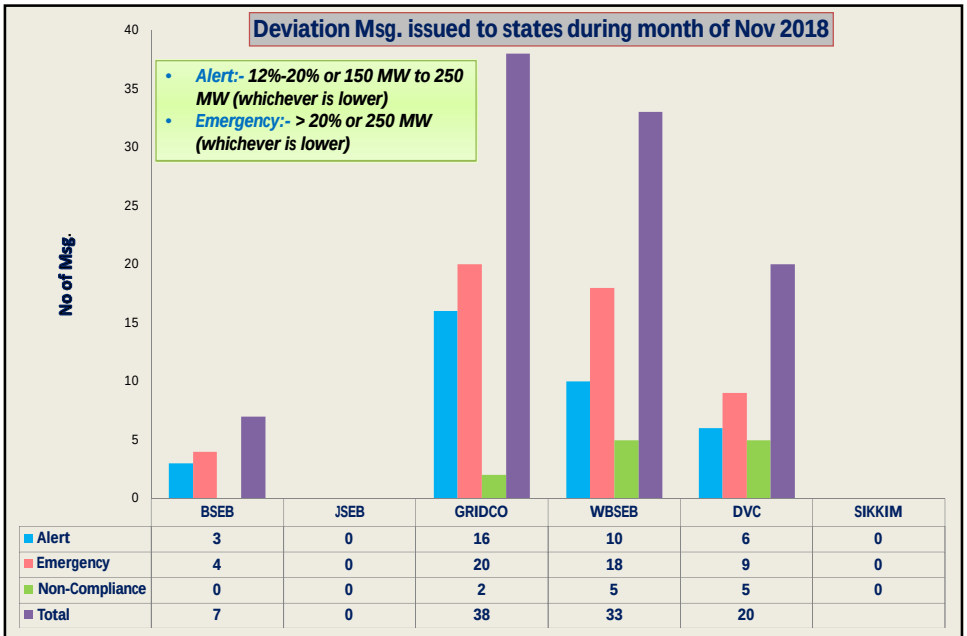
November - 2018 Schedule Vs Actual Drawl

	Schedule (Mu)	Actual (Mu)	OD	Daily Avg Deviation(Mu)	% Deviation
Bihar	2133	2106	-28	-0.9	-1.3
Jharkhand	454	457	3	0.1	0.6
DVC	-700	-615	85	2.7	12.1
Odisha	1087	1188	102	3.3	9.3
West Bengal	780	835	55	1.8	7.1
Sikkim	44	44	0	0.0	0.0
FSTPP I & II	1008	996	-12	-0.4	-1.2
FSTPP III	233	227	-6	-0.2	-2.5
KHSTPP I	458	459	1	0.0	0.1
KHSTPP II	878	878	1	0.0	0.1
TSTPP I	537	538	1	0.0	0.2
BARH II	803	799	-4	-0.1	-0.5
GMR	363	351	-12	-0.4	-3.4
MPL	563	562	-1	0.0	-0.2
APRNL	250	248	-2	-0.1	-0.7



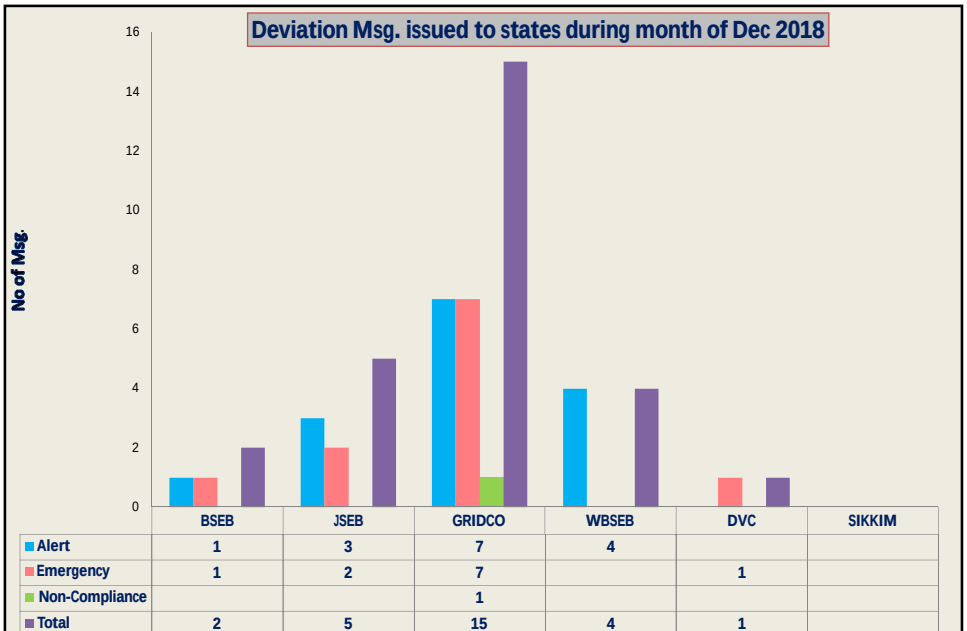

Details of DVC for date From 16th November 2018 to 30th November 2018
MW -->
DEVIATION -->
STOA/PX :-
HYDRO/PSP :-
SCHEDULE DRAWL:-
ACTUAL DRAWL:-
Deviation:-
Details of DVC for date From 1st December 2018 to 13th December 2018
MW -->
DEVIATION -->
STOA/PX :-
HYDRO/PSP :-
SCHEDULE DRAWL:-
ACTUAL DRAWL:-
Deviation:-


Details of West Bengal for date From 16th November 2018 to 30th November 2018
MW -->
DEVIATION -->
STOA/PX :-
HYDRO/PSP :-
SCHEDULE DRAWL:-
ACTUAL DRAWL:-
Deviation:-
Details of West Bengal for date From 1st December 2018 to 13th December 2018
MW -->



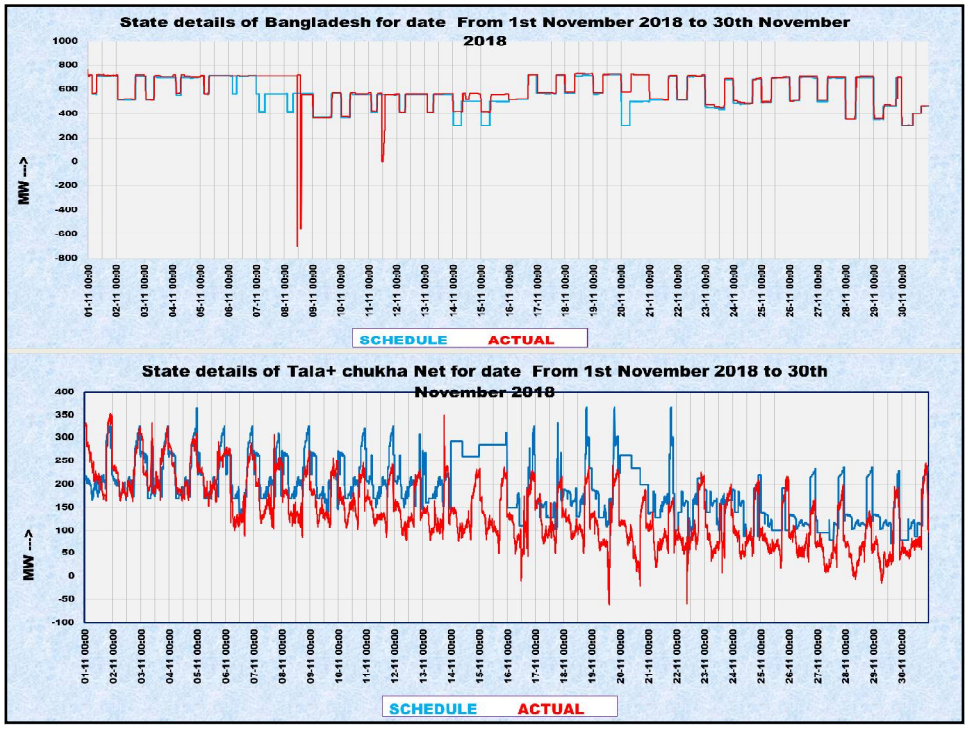
	BSEB	JSEB	GRIDCO	WBSEB	DVC	SIKKIM
Alert	3	0	16	10	6	0
Emergency	4	0	20	18	9	0
Non-Compliance	0	0	2	5	5	0
Total	7	0	38	33	20	

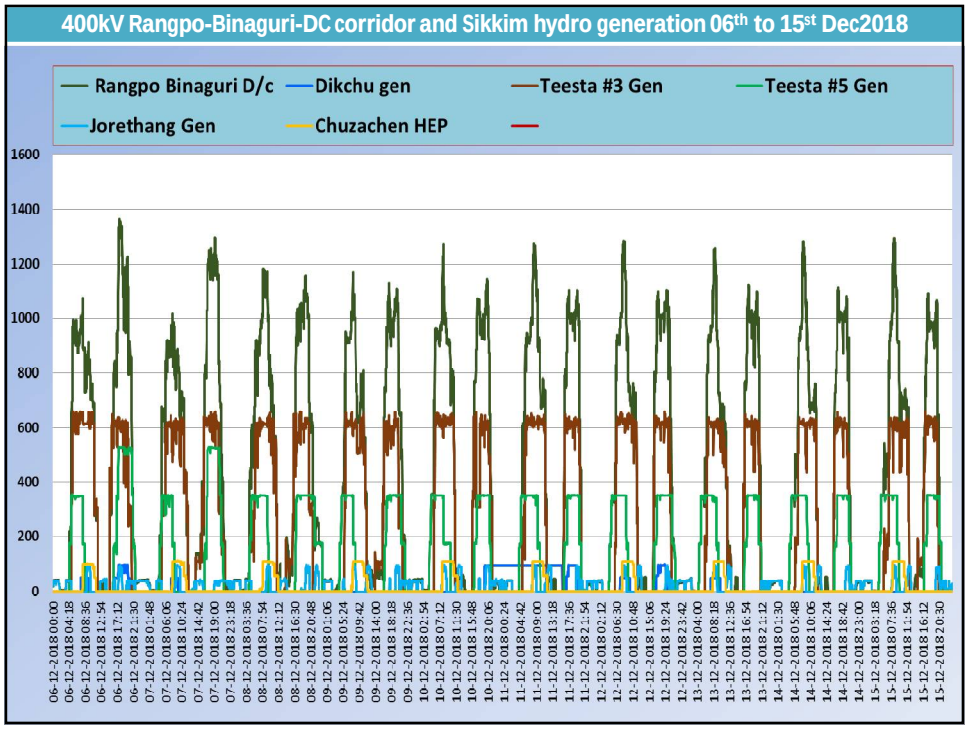
Total Number of Deviation violation and zero crossing violation messages issued during November -2018 :- 150
Deviation Violation Messages :- 98 & Zero Crossing Violation :- 52



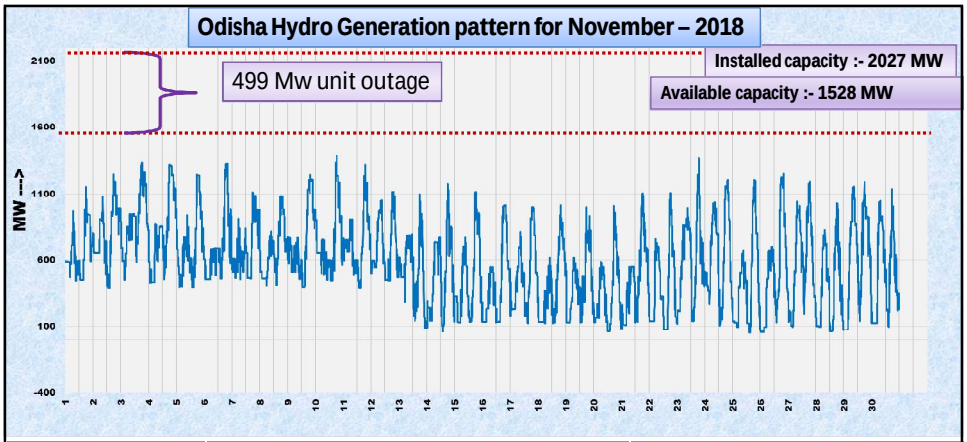
	BSEB	JSEB	GRIDCO	WBSEB	DVC	SIKKIM
Alert	1	3	7	4		
Emergency	1	2	7		1	
Non-Compliance			1			
Total	2	5	15	4	1	

Total Number of Deviation violation and zero crossing violation messages issued during December -2018 (upto 13/11/18) :- 47
Deviation Violation Messages :- 28 & Zero Crossing Violation :- 16

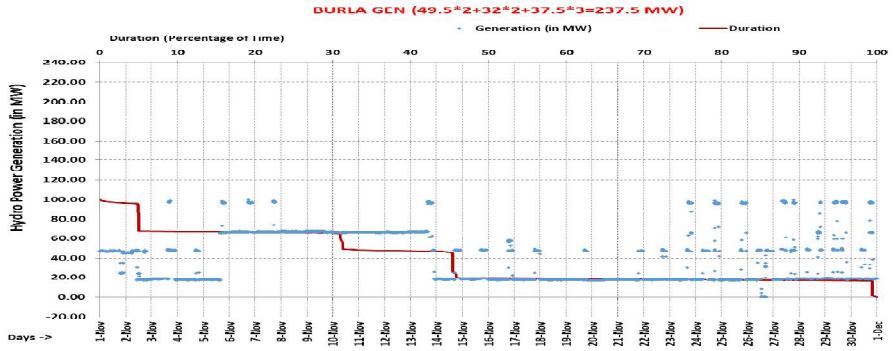

State details of Bangladesh for date From 1st November 2018 to 30th November 2018
MW -->
SCHEDULE
ACTUAL
State details of Tala+ chukha Net for date From 1st November 2018 to 30th November 2018
MW -->
SCHEDULE
ACTUAL

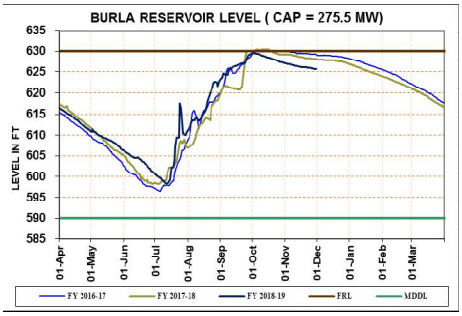

400kV Rangpo-Binaguri-DC corridor and Sikkim hydro generation 06th to 15st Dec2018
Rangpo Binaguri D/c
Dikchu gen
Teesta #3 Gen
Teesta #5 Gen
Jorethang Gen
Chuzachen HEP

State Hydro Generators Performance

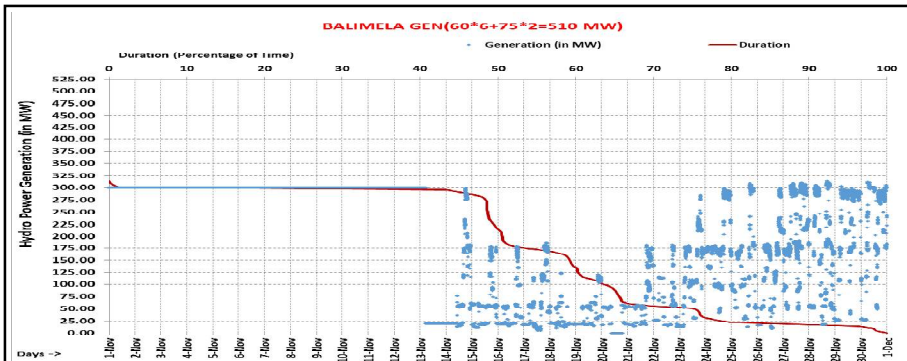


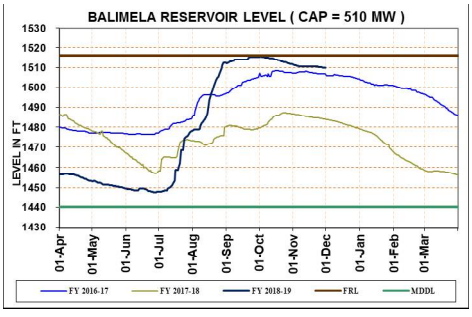
	Long Outage	Forced Outage
Burla	75 : U-5(37.5 mw), U-6(37.5 mw)	90: U-1(49.5 mw), U-2(49.5 mw)
Chipilima	24 :U-3 (24mW)	
Balimela	180 : U-1(60 mw) U-2(60Mw) U-5 (60mW)	
Rengali	50: U1(50 Mw)	
Up Kolab	80 : U-2(80 Mw)	
	409	90



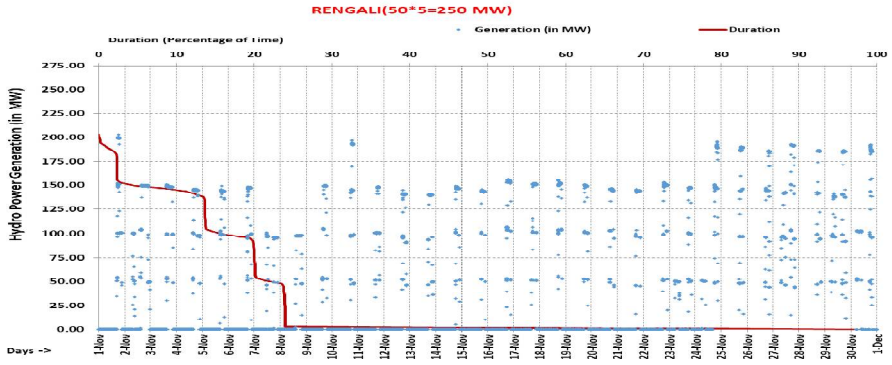


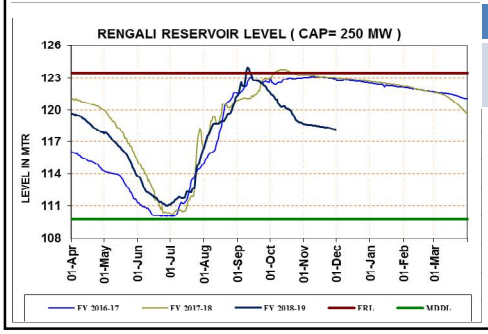
Unit No	Date of Outage	Reason
U - 1	19.11.17(19:00)	Gen. UGB oil temp high
U - 4		Annual Maint.
U - 5	25.10.2016	R & M Work
U - 6	16.10.2015	R & M Work



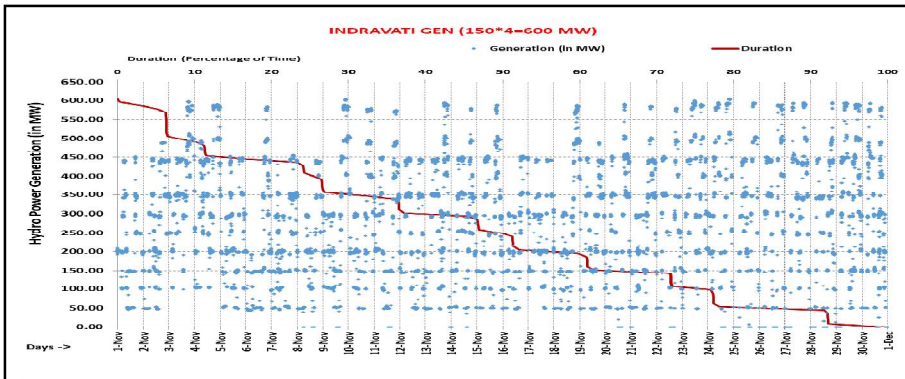


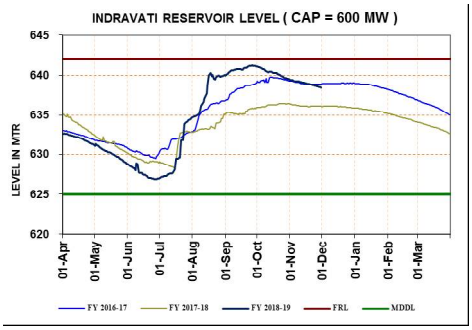
Unit No	Date of Outage	Reason
U – 1(60 MW)	05.08.16	R & M Work
U – 5 (60 MW)	12.10.17(17:30)	Vibration problem
U – 2(60 MW)	20.11.17	R & M Work





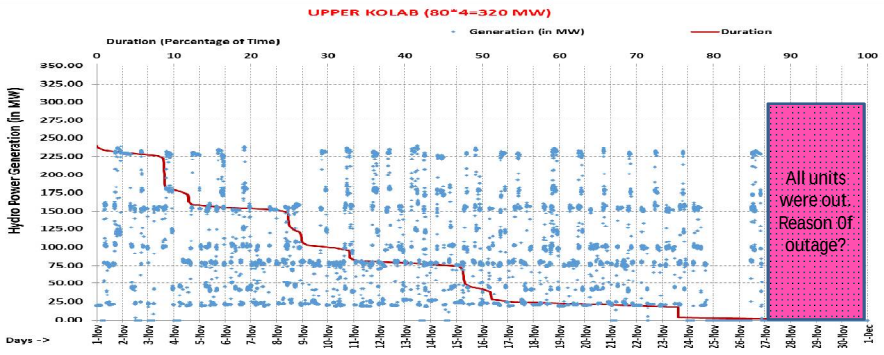
Unit No	Date of Outage	Reason
U – 1(60 MW)	30.11.2018	Annual Maintenance

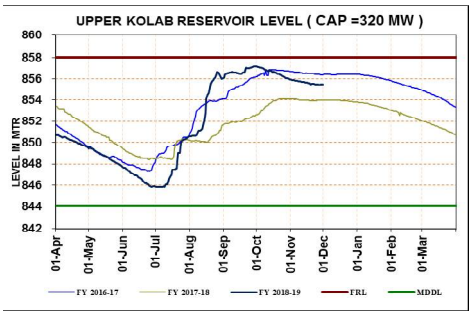




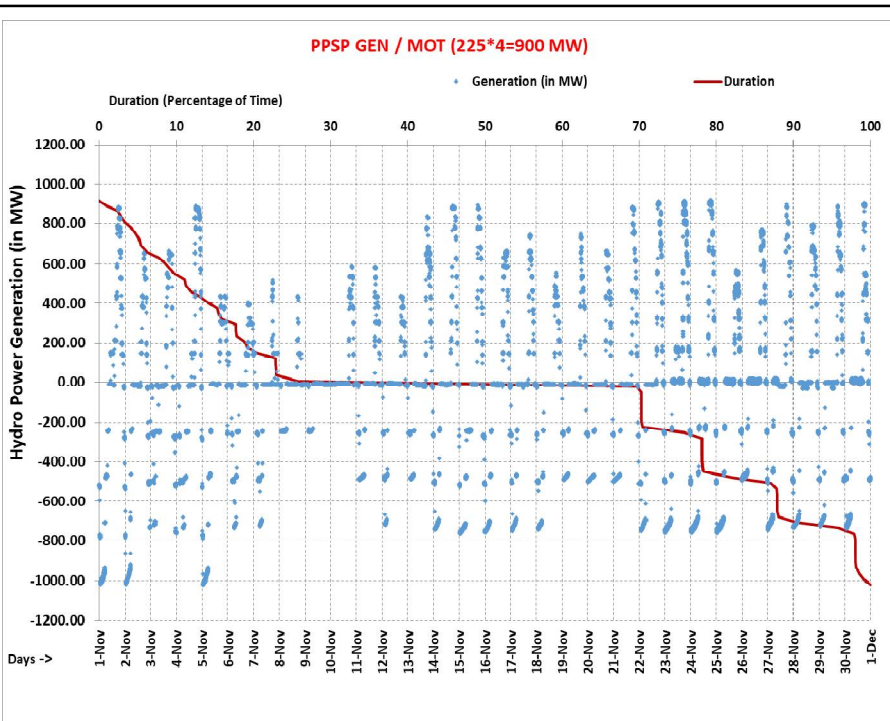
Unit No	Date of Outage	Reason
U - 3	01.07.2018	Water Leakage in Penstock
U - 4	01.07.2018	Annual Maint

U-4 restored on 23/08/2018





Unit No	Date of Outage	Reason
U – 2(80 MW)	28.05.2017	Repair of MIV & Draft Tube Gate leakage



Allotment of one no. of 132 kV Bay at Kuchei (Baripada) of Powergrid

FEEDERS EMANATING FROM EXISTING 400/220/132KV KUCHEI SUB-STATION

1. Kuchei-Bhograi-Jaleswar 132 kV line
2. Kuchei-Jaleswar 132 kV line
3. Kuchei-Baripada 132 kV line
4. Kuchei-Bangiriposi-Rairangpur-Karanjia-Dhenkikote 132 kV line

SPACE FOR 2 NOS. BAY AVAILABLE AT KUCHEI

POWER FLOW SCENERIO IN KUCHEI

The loads of feeding substations of OPTCL are

Bangiriposi	16 MW	Bhograi	15 MW
Rairangpur	28 MW	Karanjia	21 MW
Dhenkikote	10 MW	Jaleswar	38 MW
Baripada	46 MW		

Thus the Kuchei Auto i.e. 2x 160 MVA is loaded around 174MW during peak load.

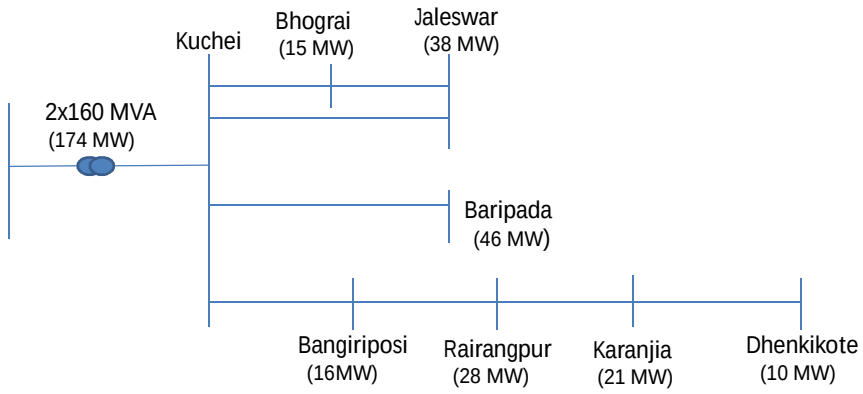
NEED OF THE PROPOSAL

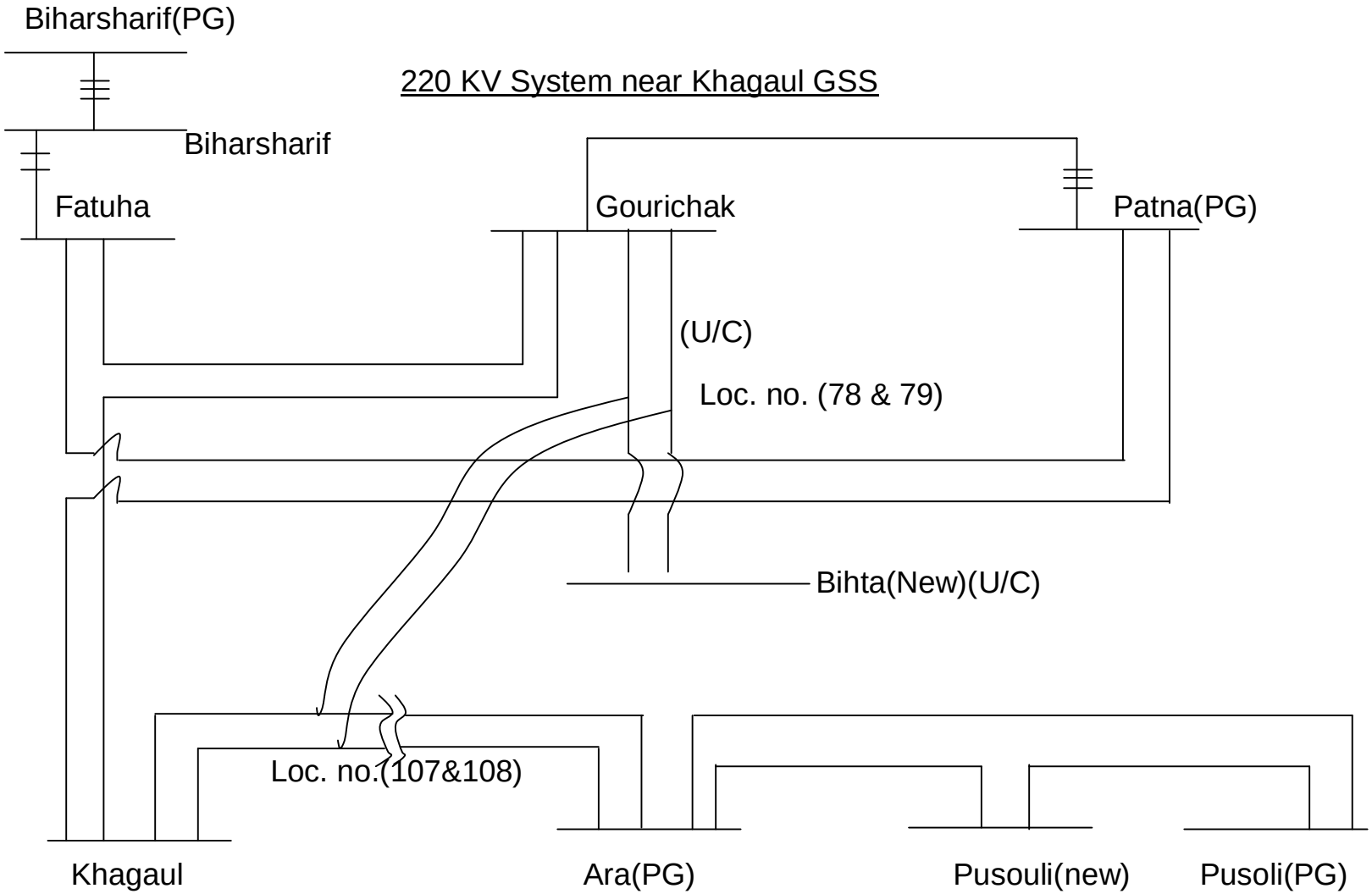
The Kuchei-Bangiriposi-Rairangpur-Karanjia-Dhenkikote 132 kV line is loaded around 75MW during Peak

In case of outage at Joda the Polasponga load of around 40 MW is catered through this line breaching the thermal limit of the line

To meet the above a 132 kV Bay at Kuchei. Needed for 132kV Kuchei-Bangiriposi Line

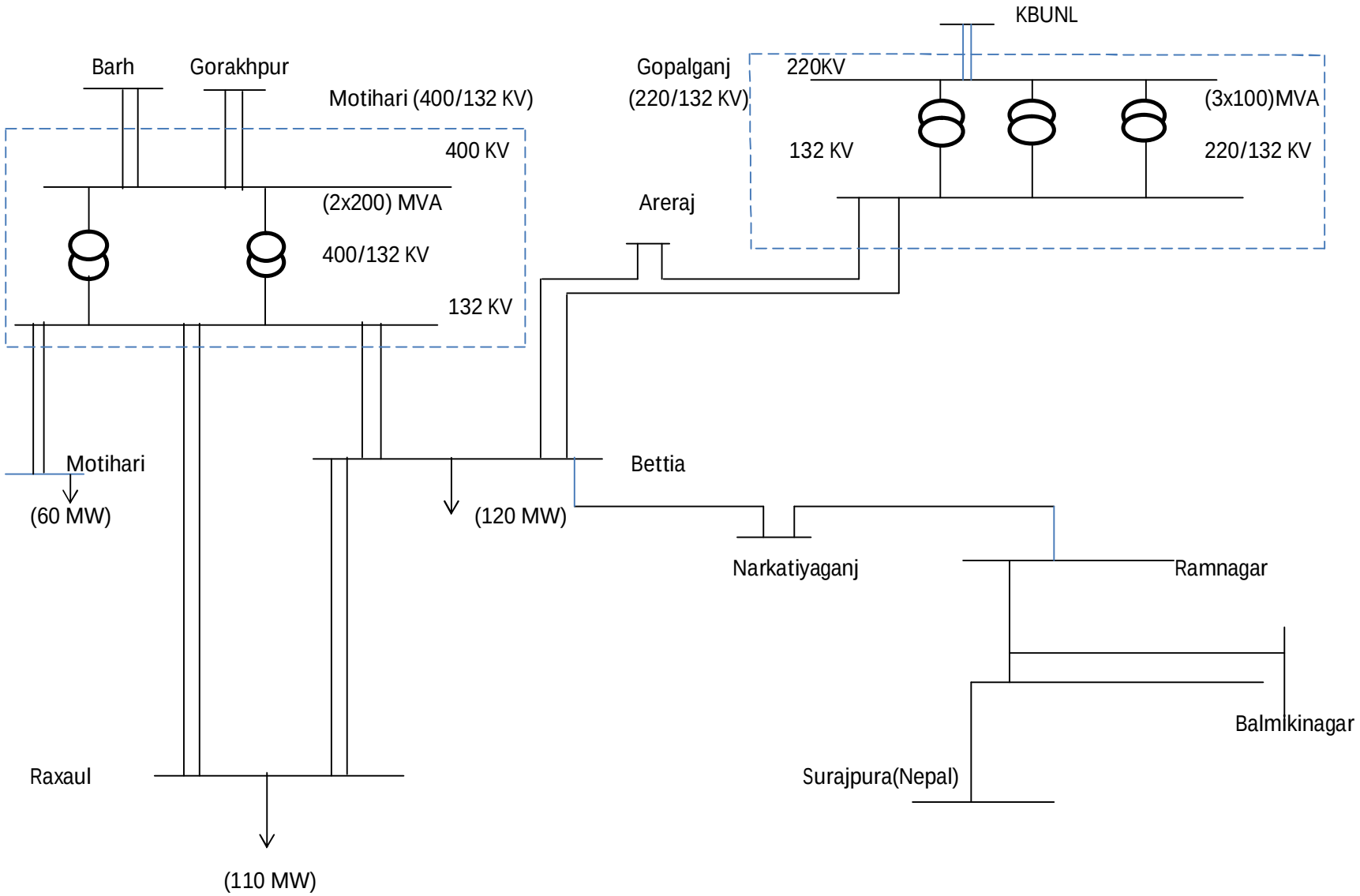
SINGLE LINE DIAGRAM OF KUCHEI COMMAND NETWORK



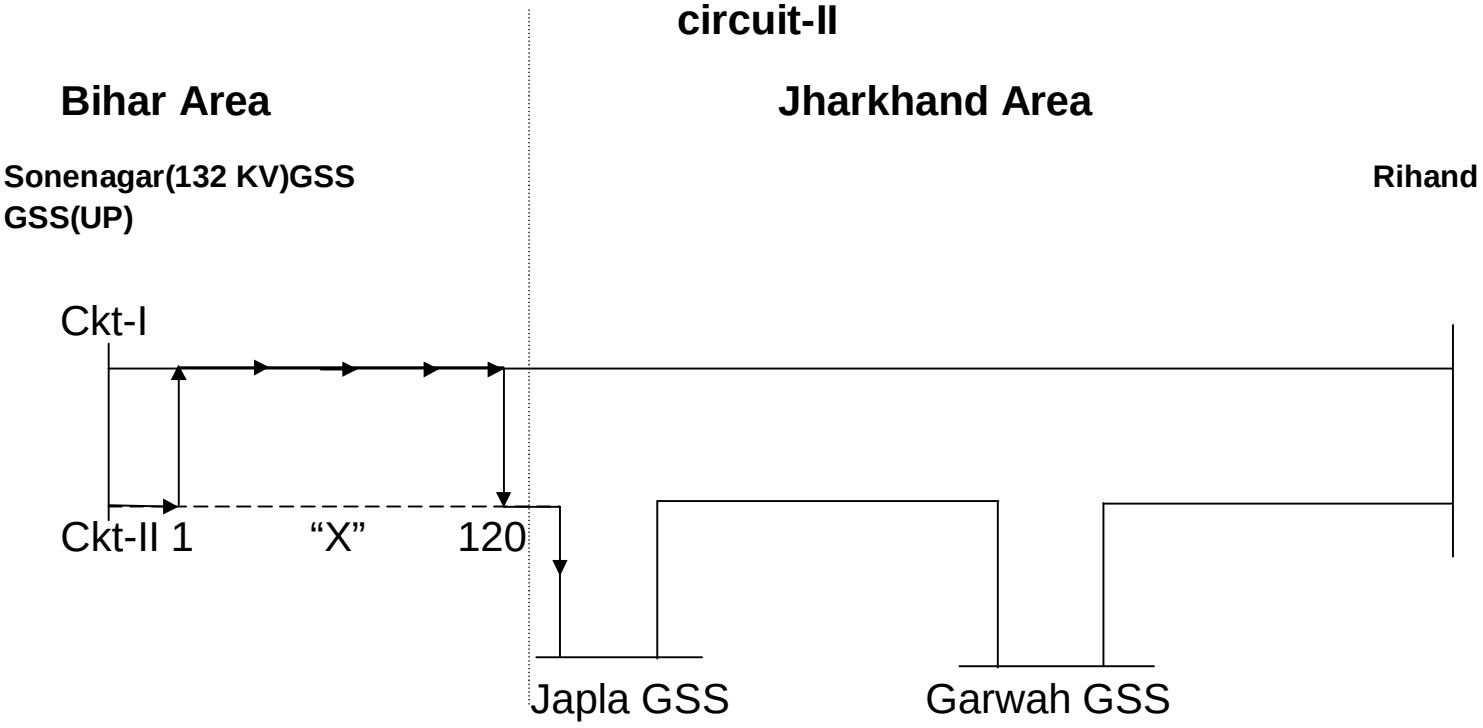


1. S/D required for 220 KV Fatuha-Khagaul (D/C) line [except LILO portion to Gaurichak & Patna(PG)]
2. 220 KV Ara(PG)-Khagaul line will be split at loc no. 107 & 108 and will be connected with 220 KV Gourichak-Bihata(new) (D/C) (U/C) transmission line(at loc. no. 78 & 79).

Annexure-B4


KBUNL
Barh
Gorakhpur
Motihari (400/132 KV)
400 KV
(2x200) MVA
400/132 KV
132 KV
Gopalganj
(220/132 KV)
220KV
(3x100)MVA
132 KV
220/132 KV
Areraj
Motihari
(60 MW)
Bettia
(120 MW)
Narkatiyaganj
Ramnagar
Balmikinagar
Surajpura(Nepal)
Raxaul
(110 MW)

Line Diagram for arrangement of shutdown of 132KV Sonenagar-Rihand circuit-II



Note: - 1. Circuit-II- "X" portion for which shutdown is requested.

2. Jumpers of circuit-II at loc. No. 1 & 120 will be opened to provide shutdown of portion "X".

3. Shorting of ckt I and ckt II at loc. No. 1 & 120 to feed power to Japla & Garwah from ckt II bay of Sonenagar(old) grid via ckt I.

4. Action at sl. No. 2 & 3 will be done on simultaneously on 1st day w.e.f. 9:00 to 16:00 hrs. During this period no power will be supplied from Sonenagar(old). This power during this period may be arranged from Rihand end.

Talcher STPS related matter

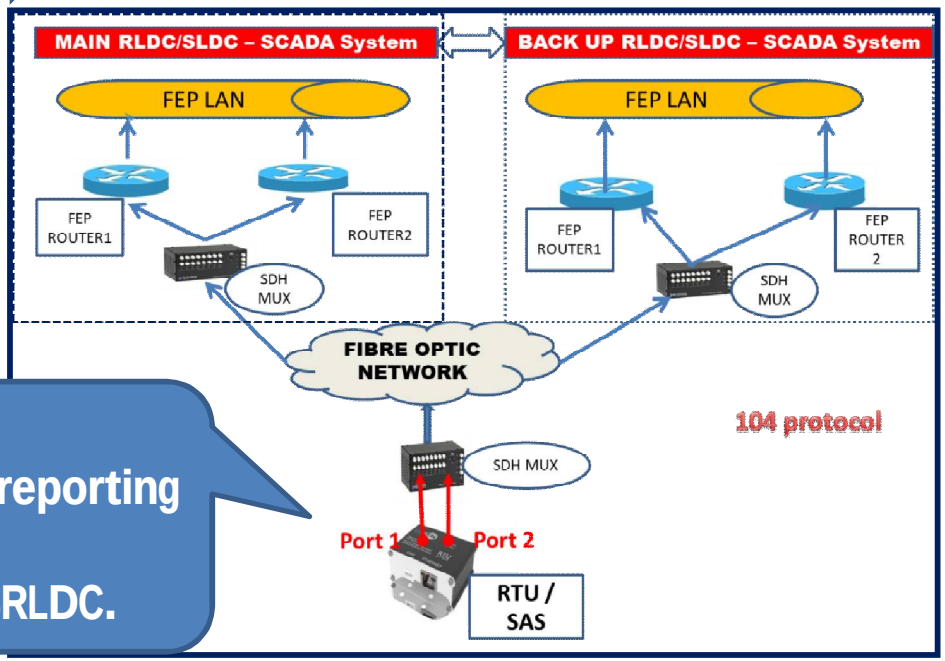
1. Non availability of elementary SCADA data

Sl No.	Feeder Name	Measurement
1	400kv Rourkela -1	MVAr
2	400/11 kV Station transformer #3	MVAr
3	400/11 kV Station transformer #4	MVAr
4	400kvV Bus Sectionalizer of Bus 2 of stage 1 and Bus 2 of stage 2	MW & MVAr
5	GT - 6 (UNIT-6)	MVAr

These elements are not updating due to transducer failure at Talcher STPS site.

2. Frequent failure of Talcher SCADA data

Talcher STPS real time SCADA data to ERLDC is inconsistent. Same port is being used at Talcher end for reporting SCADA data to SRLDC & ERLDC as well through switch. Broadcasting has been observed and data hampered at both RLDCs.



Resolution:

1. **Port 1 & Port 2 should be dedicated for reporting to ERLDC Main CC and ERLDC Back up CC**
2. **Separate port for reporting of SCADA to SRLDC.**

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.
  - Dalkhola 220kV : Communication link issue.
  - Bantala 220kV : Communication link issue.
  - Alipurduar 220kV: Communication link yet to be established.

Non availability of SCADA data above 220 kV Level

- **BIHAR**
  - Kishanganj 220kV : (Integrated on 4th December 2018)
  - Sonenagar 220kV : (Communication link not healthy)
- **Odisha**
  - Narsingpur 220kV Station commissioned on 24-08-2018. SCADA data yet to be integrated at Odissa SLDC end.
  - Nalco 220kV : Most of CB and Isolator data are not available
  - Jindal Steel and Power Limited (JSPL): Most of CB and Isolator data are not available
- **JHARKHAND**
  - Hatia New 220 : RTU not reporting to SLDC.
  - Dumka 220 : RTU not yet integrated at Jharkhand SLDC.
- **DVC**
  - TISCO 400kV : Not reporting to DVC SLDC/ERLDC since 14-07-2018.

Failure of Real time telemetry from North Bengal and Sikkim to ERLDC

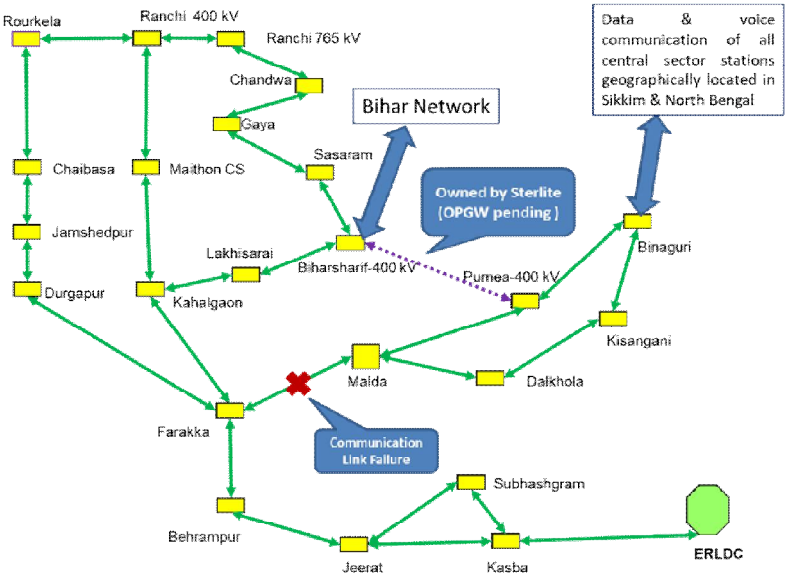
141st OCC: Event was reported by ERLDC.

142nd OCC: M/s East North Interconnection company Limited (ENICL) informed that OPGW is already available in the line but laying of approach cable inside the POWERGRID sub stations & termination at both end to communication Mux.

Matter was discussed in 143rd, 144th , 145th ,146th , 147th ,149th & 150th OCC:

Pending work to be done by ENICL: Laying of approach cable inside the POWERGRID sub stations & termination at both end to communication Mux.

Event



06th December 2017 17:26Hrs : ***Loss of data and voice communication with ERLDC and 17 nos of stations located in North Bengal and Sikkim area for 16 Hrs 23 minutes.***

ENICL & POWERGRID may update.

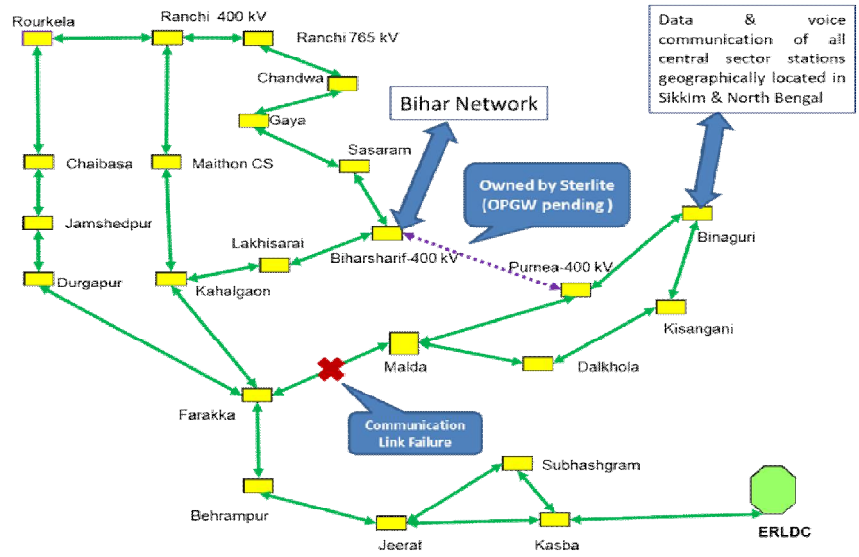
Annexure-C10A

"Alternate Route for Malda- Farakka OPGW Link"

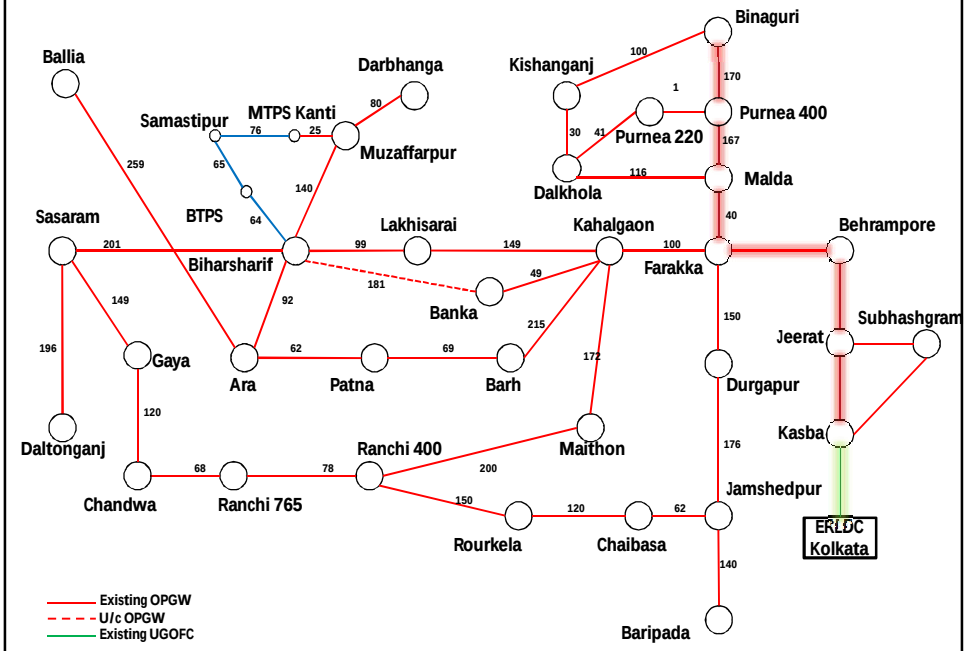
(OCC Agenda tem No. C.9 iii.)

Presentation by-
POWERGRID/ERTS-I

Criticality of Malda- Farakka OPGW Connectivity



SLD of Existing OPGW Connectivity of ER Stations



Existing OPGW Connectivity of ER : Issue of alternate TRANS-GANGA OPGW Connectivity

- At present, there are four (04) trans-Ganga T/L in ER:
  a. **400 kV D/C Malda- Farakka T/L (PG).**
  b. **400 kV D/C Muzaffarpur- Biharsharif T/L (PG).**
  c. **400 kV D/C Purnea- Biharsharif T/L (ENICL).**
  d. **400 kV D/C Kishenganj- Patna T/L (PG).**

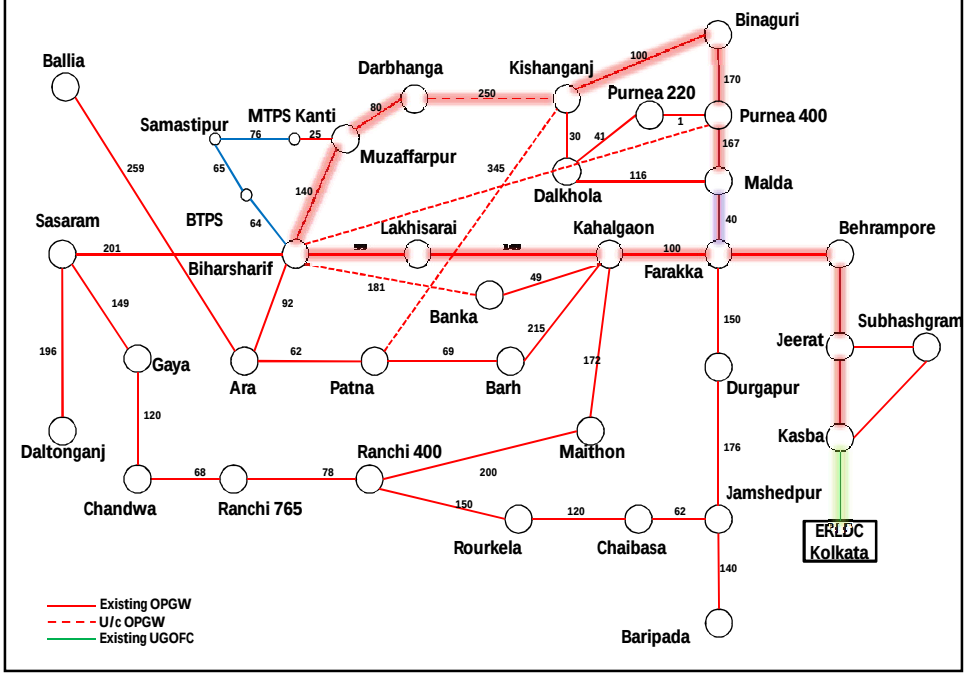
- Out of the above, only Malda- Farakka & Muzaffarpur-Biharsharif has an existing OPGW connectivity.

- Purnea- Biharsharif T/L of ENICL is having OPGW installed on it, however the same is yet to be terminated at both Biharsharif & Purnea end by ENICL.

Existing OPGW Connectivity of ER : Issue of alternate TRANS-GANGA OPGW Connectivity (contd..)

- Presently Purnea- Biharsharif T/L (ENICL) is under breakdown. However, the restoration of said T/L will not enable provisioning of alternate route to Malda- Farakka, as the termination of OPGW at both Biharsharif & Purnea end is yet to be done by ENICL.
- Kishenganj- Patna T/L of (PG) is not having OPGW as of now, however, OPGW is proposed to be implemented in the said line under Fiber Expansion Package (Additional Requirement) with target completion by Oct'20.
- The issue of alternate route for Malda- Farakka T/L was raised by ERLDC in 20th SCADA O&M Meeting held on 30th Oct'18 and subsequent TCC/ERPC held on 16-17th Nov'18.

SLD of Upcoming OPGW Connectivity of ERTS-I Stations



Existing OPGW Connectivity of ER : Issue of alternate TRANS-GANGA OPGW Connectivity (contd..)

- 400 kV D/C Kishenganj- Darbhanga T/L is being constructed by M/s KPTL between Kishenganj (PG) & Darbhanga (DMTCL). The said line is having provision for OPGW connectivity and the said T/L is likely to be commissioned by KPTL by Jan'19.

- Further, there is an existing OPGW connectivity over 400 kV D/C Darbhanga- Muzaffarpur T/L of DMTCL, which may facilitate connectivity of Kishenganj to Muzaffarpur (PG), through Darbhanga (DMTCL), thus providing alternate path for Malda- Farakka.

Existing OPGW Connectivity of ER : Alternate TRANS-GANGA OPGW Connectivity (Contd..)

Provisioning of alternate path for Malda- Farakka OPGW link:

- OPGW connectivity between Kishenganj (PG) and Darbhanga (DMTCL) shall be provisioned by M/s KPTL.

- Six (06) nos. Fibers between the two sub-stations shall be spared by KPTL for ULDC Communication purpose.

- Six (06) nos. Fibers shall be spared by M/s DMTCL between Darbhanga (DMTCL) & Muzaffarpur (PG) for ULDC Communication purpose.

- POWERGRID shall Install/ Upgrade the Communication Equipments at Kishenganj, Darbhanga (DMPTCL) and Muzaffarpur for commissioning the back-up path.

Existing OPGW Connectivity of ER : Alternate TRANS-GANGA OPGW Connectivity

Provisioning of alternate path for Malda- Farakka OPGW link:

- The commissioning of above communication link between Kishenganj (PG) and Muzaffarpur (PG) via Darbhanga (DMTCL) thus shall provide alternate path for Malda- Farakka through Kishenganj- Darbhanga- Muzaffarpur- Biharsharif- Kahalgaon- Farakka.

- Further, the commissioning of Patna- Kishenganj OPGW link shall facilitate second alternate path for Malda- Farakka OPGW connectivity.

Existing OPGW Connectivity of ER : Alternate TRANS-GANGA OPGW Connectivity

- As evident from above, there are two possible alternate OPGW route for Malda- Farakka OPGW link :
  - **a) Kishenganj- Darbhanga- Muzaffarpur:** Likely provisioning time- Four (04) months.
  - **b) Kishenganj- Patna:** Completion time- Oct'2020 (as per LOA Schedule).

- For provisioning of Route "a", Infrastructure support such as Power Supply (48 V DC), Space for Communication Equipment Erection, PTW etc. shall be in scope of respective Constituent Utility.

Existing OPGW Connectivity of ER : Alternate TRANS-GANGA OPGW Connectivity

- Alternately, POWERGRID may arrange one bandwidth connectivity between Binaguri/ Kishenganj and Farakka through POWERTEL/ 3rd Party Bandwidth Leasing, bypassing Malda-Farakka OPGW link.

- The tentative completion time for the same shall be Three (03) months i.e. March 2019.

S.No.	Name of Utility	Location	Name of Station	Unit No.	Capacity (MW)	COD Date (DD/MM/YYYY)	Boiler Make	Turbine Make	Mills Type	Coal Source (s)	Grade of Coal	ECR (Rs./kWh)	Average PLF of last one year	Average Heat Rate (kcal/kWh)	Average APC (%)	Minimum Load (MW) capability	Minimum Load (%) capability	Maximum Ramp Rate (MW/min) capability
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Annexure-D.1

Anticipated Power Supply Position for the month of
Jan-19

SL.NO		PARTICULARS	PEAK DEMAND MW	ENERGY MU
1		**BIHAR**		
	i)	NET MAX DEMAND	4000	2189
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	625	338
		- Central Sector	2898	1684
	iii)	SURPLUS(+)/DEFICIT(-)	-477	-167
2		**JHARKHAND**		
	i)	NET MAX DEMAND	1240	800
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	341	167
		- Central Sector	778	428
	iii)	SURPLUS(+)/DEFICIT(-)	-121	-205
3		**DVC**		
	i)	NET MAX DEMAND (OWN)	2800	1765
	ii)	NET POWER AVAILABILITY- Own Source	4500	2866
		- Central Sector	292	163
		Long term Bi-lateral (Export)	1454	1082
	iii)	SURPLUS(+)/DEFICIT(-)	538	181
4		**ODISHA**		
	i)	NET MAX DEMAND	4100	2344
	ii)	NET POWER AVAILABILITY- Own Source	2919	1513
		- Central Sector	1187	670
	iii)	SURPLUS(+)/DEFICIT(-)	6	-161
5		**WEST BENGAL**		
5.1		**WBSEDCL**		
	i)	NET MAX DEMAND (OWN)	4408	2955
	ii)	CESC's DRAWAL	0	0
	iii)	TOTAL WBSEDCL's DEMAND	4408	2955
	iv)	NET POWER AVAILABILITY- Own Source	3375	2094
		- Import from DPL	120	0
		- Central Sector	2165	972
	v)	SURPLUS(+)/DEFICIT(-)	1251	111
	vi)	EXPORT (TO B'DESH & SIKKIM)	5	4
5.2		**DPL**		
	i)	NET MAX DEMAND	243	160
	ii)	NET POWER AVAILABILITY	363	187
	iii)	SURPLUS(+)/DEFICIT(-)	120	27
5.3		**CESC**		
	i)	NET MAX DEMAND	1440	680
	ii)	NET POWER AVAILABILITY - OWN SOURCE	700	497
		FROM HEL	270	262
		FROM CPL/PCBL	45	0
		Import Requirement	425	0
	iii)	TOTAL AVAILABILITY	1440	759
	iv)	SURPLUS(+)/DEFICIT(-)	0	79
6		**WEST BENGAL (WBSEDCL+DPL+CESC)** **(excluding DVC's supply to WBSEDCL's command area)**		
	i)	NET MAX DEMAND	6091	3795
	ii)	NET POWER AVAILABILITY- Own Source	4438	2778
		- Central Sector+Others	2905	1234
	iii)	SURPLUS(+)/DEFICIT(-)	1251	216
7		**SIKKIM**		
	i)	NET MAX DEMAND	100	38
	ii)	NET POWER AVAILABILITY- Own Source	1	0
		- Central Sector+Others	129	58
	iii)	SURPLUS(+)/DEFICIT(-)	30	20
8		**EASTERN REGION** **At 1.03 AS DIVERSITY FACTOR**		
	i)	**NET MAX DEMAND**	17797	10931
		Long term Bi-lateral by DVC	1454	1082
		EXPORT BY WBSEDCL	5	4
	ii)	**NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)**	21012	11898
	iii)	**PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)**	1756	-119

Annexure-D2

KOLKATA

TRANSMISSION ELEMENTS OUTAGE APPROVED IN 152TH OCC MEETING OF ERPC

		FROM		TO					
SL. No	**NAME OF THE ELEMENTS**	**DATE**	**TIME**	**DATE**	**TIME**	**REMARKS**	**S.D availed BY**	**Reason**	**SUBJECT TO CONSENT FROM AGENCY**
1	**132 KV Sonenagar-Rihand - II**	**01-01-2019**	**09:00**	**26-01-2019**	**18:00**	**OCB**	**BSPTCL**	**RECONDUCTORING**	**NLDC**
2	400KV Maithon-Right Bank #II	01-01-2019	08:00	15/01/19	18:00	OCB	Powergrid, ER-II	Re conductoring work	
3	220KV D/C Birpara - Siliguri	02-01-2019	09:00	03-01-2019	17:00	ODB	ER2	**Stringing activity of 400KV D/C Quad Alipurduar - Siliguri Transmission Line**	
4	A/R 400kV Sundargarh-Raigarh Ckt#1	02/01/19	08:00	11/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	**NLDC**
5	400 ARMB-BKTPP	02-01-2019	07:00	02-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
6	KTPP: 315 MVA IBT #1	02-01-2019	07:00	02-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
7	JRT: 400 KV M-BUS 2	02-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
8	400 ARMB-BKTPP	02-01-2019	07:00	02-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
9	KTPP: 315 MVA IBT #1	02-01-2019	07:00	02-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
10	400kV BUS 1 of Jamshedpur S/s	02-01-2019	09:30	02-01-2019	17:30	ODB	POWERGRID ER1	AMP WORK	JSEB
11	400 Bus -I AT PATNA	02-01-2019	09:00	03-12-2018	17:30	ODB	POWERGRID ER1	For Nabi Nagar bay const & AMP	BSEB
12	400 KV MAIN BAY OF B/R-II(404) AT NEW RANCHI	02-01-2019	09:00	02-01-2019	17:00	ODB	POWERGRID ER1	AMP	
13	3*110MVAR 765kV Bus Reactor Bay@Pusauli	02-01-2019	08:00	02-01-2019	18:00	ODB	POWERGRID ER1	AMP work	NO REACTOR SHUTDWON DURING WINTER
14	400 KV SASARAM - NABINAGAR - I	02-01-2019	09:00	02-01-2019	18:00	ODB	POWERGRID ER1	FOR INSULATOR WASHING	BSEB
15	220KV HATIA-2 MAIN BAY (201) AT RANCHI	02-01-2019	10:00	02-01-2019	17:00	ODB	POWERGRID ER1	AMP.Line remain Charge through TBC	
16	200 MVA ICT-1 AT LAKHISARAI	02-01-2019	09:00	03-01-2019	17:00	ODB	POWERGRID ER-I	Checking of Air Cell	BSEB
17	765 /400 kV ICT-I at Gaya ss	02-01-2019	09:00	02-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
18	400 KV PATNA BALIA 1	02-01-2019	09:00	02-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
19	315 MVA ICT#1 at Subhasgram S/s	02-01-2019	09:00	02-01-2019	15:00	ODB	Powergrid, ER-II	Retrofitting of Numerical REF Relay	WB
20	400 KV Bus -1 at Binaguri	02-01-2019	08:00	08-01-2019	18:00	ODB	Powergrid, ER-II	SS03 construction works, 400 KV Busbar relay Replacement	
21	220 KV Siliguri Kishanganj ckt 1	02-01-2019	08:00	05/01/19	18:00	ODB	Powergrid, ER-II	Retrofitting of Numerical AR Relay as per 149 OCC agenda	
22	132kV BUS-1 Shutdown at Rangpo	02-01-2019	**09:00**	12-01-2019	**17:00**	**OCB**	Powergrid, ER-II	For Bus extension to new Chuzachen bays (Construction works)	SIKKIM
23	ICT-1/Mejia-2 Tie Bay (423) at Maithan	02-01-2019	09:00	03-01-2019	18:00	OCB	Powergrid, ER-II	For replacement of WSI CT of Y&B Phase	
24	400 KV BUS-I at Durgapur	02-01-2019	09:00	02-01-2019	**17:00**	ODB	Powergrid, ER-II	Bus bar relay testing	
25	400 KV Durgapur Jamshedpur-1 Line	02-01-2019	09:00	02/01/19	**17:00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-I	
26	400 ARMB- DGP	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
27	KTPP: 315 MVA IBT #2	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
28	KGPR: 400 KV TBC	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
29	KGPR: 80 MVAR BUS REC	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
30	400 ARMB- DGP	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
31	KTPP: 315 MVA IBT #2	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
32	KGPR: 400 KV TBC	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
33	KGPR: 80 MVAR BUS REC	03-01-2019	07:00	03-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
34	765 KV DMG L/R-II BAY (715R) AT NEW RANCHI	03-01-2019	09:00	03-01-2019	17:00	ODB	POWERGRID ER1	AMP	NLDC
35	DALTONGANJ - SASARAM LINE-2	03-01-2019	10:30	03-01-2019	17:30	ODB	POWERGRID ER1	Dismantling of Bushing of 63 MVAR Line Reactor	

36	400 KV SASARAM - NABINAGAR - I	03-01-2019	00:00	03-01-2019	18:00	ODB	POWERGRID ER1	FOR INSULATOR WASHING	BSEB
37	TIE BAY OF 400KV RKL-2 & MTN RB-2 (411 BAY) AT RANCHI	03-01-2019	10:00	03-01-2019	17:00	ODB	POWERGRID ER1	AMP.Line remain Charge through Main Bay	
38	50MVAR Bus Reactor-I AT BIHARSHARIF	03-01-2019	10:00	03-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	NO REACTOR SHUTDWON DURING WINTER
39	765 /400 kV ICT-II at Gaya ss	03-01-2019	09:00	03-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
40	400kV Maithon-Gaya-1 line	03-01-2019	09:00	25-01-2019	18:00	OCB	POWERGRID ER-I	destringing,erection & re-stringing of multickt tower loc80	
41	400kV Maithon-Gaya-2 line	03-01-2019	09:00	25-01-2019	18:00	OCB	POWERGRID ER-I	destringing,erection & re-stringing of multickt tower loc80	
42	400kV Koderma-Gaya-1 line	03-01-2019	09:00	25-01-2019	18:00	OCB	POWERGRID ER-I	destringing,erection & re-stringing of multickt tower loc80	
43	400kV Koderma-Gaya-2 line	03-01-2019	09:00	25-01-2019	18:00	OCB	POWERGRID ER-I	destringing,erection & re-stringing of multickt tower loc80	
44	400 KV PATNA BALIA 2	03-01-2019	09:00	03-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
45	400 KV Farakka- Sagardighi-I line	03-01-2019	09:00	03-01-2019	18:00	ODB	Powergrid, ER-II	TL AMP	WB
46	400 KV Farakka- Kahalgaon-I line	03-01-2019	09:00	03-01-2019	18:00	ODB	Powergrid, ER-II	For bay stability between bay-22 (Main Bay of 400 KV Farakka- Kahalgaon-I) & bay-23 under ERSS -XV	
47	315 MVA ICT#2 at Subhasgram S/s	03-01-2019	09:00	03-01-2019	15:00	ODB	Powergrid, ER-II	Retrofitting of Numerical REF Relay	WB
48	220KV DLK-MLD # I	03-01-2019	**08:00**	03/01/19	**17:00**	**ODB**	Powergrid, ER-II	Retrofitting of A/R relay	
49	400 KV BUS-II at Durgapur	03-01-2019	09:00	03-01-2019	**17/00**	ODB	Powergrid, ER-II	Bus bar relay testing	
50	400 Kv Durgapur Sagardighi-II Line	03-01-2019	09:00	03-01-2019	**17/00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-II	WB
51	400kV Rengali - Baripada (Loc.1 to Loc.602)	04-01-2019	07:00	07-01-2019	17:00	ODB	OPTCL	AMP	
52	ARMB: 315 MVA ICT#1	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
53	400 KTPP-KGP #2	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
54	KGPR: 315 MVA TR#1	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
55	BKTPP: 400 BUS REC	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
56	ARMB: 315 MVA ICT#1	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
57	400 KTPP-KGP #2	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
58	KGPR: 315 MVA TR#1	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
59	BKTPP: 400 BUS REC	04-01-2019	07:00	04-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
60	400kV BUS 2 of Jamshedpur S/s	04-01-2019	09:30	04-01-2019	17:30	ODB	POWERGRID ER1	AMP WORK	JSEB
61	400 Bus -II AT PATNA	04-01-2019	09:00	05-01-2019	17:30	ODB	POWERGRID ER1	AMP	BSEB
62	PPSP L/R-I (NON SWITCHABLE LINE REACTOR) AT NEW RANCHI	04-01-2019	09:00	04-01-2019	17:00	ODB	POWERGRID ER1	AMP. LINE S/D REQUIRED FOR 10 MINS DURING S/D AND CHARGING OF L/R	NO REACTOR SHUTDWON DURING WINTER
63	330MVAR 765kV Bus-Reactor at Pusauli	04-01-2019	08:00	04-01-2019	18:00	ODB	POWERGRID ER1	AMP work	NO REACTOR SHUTDWON DURING WINTER
64	Varanasi-1 Tie Bay no.-441 AT BIHARSHARIF	04-01-2019	10:00	04-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	
65	412 BAY(MAIN BAY OF 80 MVAr BR-1) AT CHAIBASA	04-01-2019	09:30	04-01-2019	17:30	ODB	POWERGRID ER-I	AMP work	
66	765 /400 kV ICT-III at Gaya ss	04-01-2019	09:00	04-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
67	400KV PRN-1_GKP-1 TIE BAY AT MUZAFFAPUR	04-01-2019	09:30	04-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	
68	400 KV SASARAM-ALLAHABAD	04-01-2019	09:00	05-01-2019	18:00	ODB	POWERGRID ER-I	Washing of polluted insulator strings	NLDC
69	765 kV GAYA VARANASI 1	04-01-2019	09:00	24-01-2019	18:00	OCB	POWERGRID ER-I	Balance tower strengthening works	NLDC
70	50 MVAR Line Reactor at Subhasgram S/s	04-01-2019	09:00	04/01/19	15:00	ODB	Powergrid, ER-II	Retrofitting of Numerical REF Relay	NO REACTOR SHUTDWON DURING WINTER
71	50 MVA ICT-I 132/66 KV at Gangtok	04-01-2019	**09:00**	04-01-2019	**18:00**	**ODB**	Powergrid, ER-II	For DCRM and AnnualAMp Works	SIKKIM
72	400KV Rangpo Teesta 3	04-01-2019	**08:00**	08-01-2019	**17:00**	**OCB**	Powergrid, ER-II	For rectification of SF6 gas leakage repair work, & Line AMP work	
73	400\220kV 315 MVAICT -3 at Rangpo	04-01-2019	**08:00**	08/01/19	**17:00**	**OCB**	Powergrid, ER-II	For rectification of SF6 gas leakage repair work	
74	400 KV BUS-III at Durgapur	04-01-2019	09:00	04/01/19	**17/00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-III	
75	400 KV Durgapur Mithon-I Line	04-01-2019	09:00	04-01-2019	**17/00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-III and line jumper rectification	

76	400 KTPP-KGP #2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
77	ARMB: 315 MVA ICT#2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
78	KGPR: 315 MVA TR#2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
79	BKTPP: 400 BUS REC	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
80	400 HEL-SUBGRM#1	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
81	HEL: 400 M/B #1	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
82	400 KTPP-KGP #2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
83	ARMB: 315 MVA ICT#2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
84	KGPR: 315 MVA TR#2	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
85	BKTPP: 400 BUS REC	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
86	400 HEL-SUBGRM#1	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
87	HEL: 400 M/B #1	05-01-2019	07:00	05-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
88	220kV Bus-I@Pusauli	05-01-2019	09:00	05-01-2019	17:00	ODB	POWERGRID ER1	For CVT Replacement Work	BSEB
89	220kV Pusauli-Ara	05-01-2019	13:00	05-01-2019	18:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BSEB
90	765 KV Bay no -711 (Tie Bay of Gaya-VNS Ckt-I Line & Future)	05-01-2019	09:00	06-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
91	400KV PRN-2_GKP-2 TIE BAY AT MUZAFFARPUR	05-01-2019	09:30	05-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	
92	220kV Pusauli-Sahupuri	05-01-2019	09:00	05-01-2019	18:00	ODB	POWERGRID ER-I	Isolator Misalignment Problem and Relay retrofitting works	NLDC
93	400 KV MAIN BUS-I at Subhasgram and 400 KV Sagardighi Line	05-01-2019	09:00	05-01-2019	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
94	400 KV MAIN BUS-I at Subhasgram and 400 KV Subhasgram Jeerat Line	05-01-2019	13:00	05-01-2019	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
95	220KV DLK-KNG # II	05-01-2019	**08:00**	05-01-2019	**14:00**	**ODB**	Powergrid, ER-II	Retrofitting of A/R relay	
96	Maithan Mejia-3 Line	05-01-2019	09:00	06-01-2019	18:00	ODB	Powergrid, ER-II	For replacement of 400kV CT of Main Bay and Line Bay	DVC
97	400 KV BUS-IV at Durgapur	05-01-2019	09:00	05-01-2019	**17:00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-IV	
98	400 KV Durgapur Mithon-II Line	05-01-2019	09:00	05/01/19	**17:00**	ODB	Powergrid, ER-II	Main CB LBB relay testing with Bus-IV	
99	400 ARMB-KTPP	06-01-2019	07:00	06-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
100	400 HEL-SUBGRM#1	06-01-2019	07:00	06-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
101	JRT: 400 KV M-BUS 1	06-01-2019	07:00	09-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
102	400 ARMB-KTPP	06-01-2019	07:00	06-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
103	400 HEL-SUBGRM#1	06-01-2019	07:00	06-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
104	400KV BIHARSARIF-MUZAFFARPUR CKT 1	06-01-2019	08:00	06-01-2019	17:30	ODB	POWERGRID ER1	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV BSF-	
105	400 KV MAIN BUS-I at Subhasgram and 400 KV Subhasgram Haldia-1 Line	06-01-2019	09:00	06/01/19	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
106	400 KV MAIN BUS-I at Subhasgram and 400 KV Subhasgram Haldia-2 Line	06-01-2019	13:00	06-01-2019	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
107	50 MVA ICT-II 132/66KV at Gangtok	06-01-2019	**09:00**	06/01/19	**18:00**	**ODB**	Powergrid, ER-II	For DCRM and AnnualAMp Works	SIKKIM
108	400KV Meramundali-Mendhasal line	07-01-2019	07:00	07-01-2019	17:00	ODB	OPTCL	AMP	
109	400KV D/C Tala - Binnaguri (New Siliguri) T/L 2	07-01-2019	09:00	08-01-2019	17:00	ODB	ER2	**Stringing activity of 400KV D/C Quad Alipurduar - Siliguri Transmission Line**	
110	ARMB: 315 MVA ICT#3	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
111	400 KGPR: NCHND #2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
112	KGPR: 400 KV B/C & M/B-2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
113	BKTPP: 400 M/B #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
114	DGPR: 50 MVAR BUS REC	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	**NO REACTOR SHUTDWON DURING WINTER**
115	220 KV DGPR - WAR #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	**DVC**

116	400 HEL-SUBGRM#2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
117	HEL: 400 M/B #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
118	ARMB: 315 MVA ICT#3	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
119	400 KGPR: NCHND #2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
120	KGPR: 400 KV B/C & M/B-2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
121	BKTPP: 400 M/B #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
122	DGPR: 50 MVAR BUS REC	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
123	220 KV DGPR - WAR #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
124	400 HEL-SUBGRM#2	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
125	HEL: 400 M/B #1	07-01-2019	07:00	07-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
126	400KV BIHARSARIF-MUZAFFARPUR CKT 2	07-01-2019	08:00	07-01-2019	17:30	ODB	POWERGRID ER1	Fixing of Insulation sleeves on Power line Xing point of 400KV PATNA KISHGANJ LINE WITH 400	
127	Patna Barh -I 418 Main bay at Patna	07-01-2019	09:30	07-01-2019	17:30	ODB	POWERGRID ER1	AMP	
128	80 MVAR Bus reactor at patna	07-01-2019	09:30	08-01-2019	17:30	ODB	POWERGRID ER1	construction activities for SS03 bay for construction of AC kiosk	NO REACTOR SHUTDWON DURING WINTER
129	400 KV BUS-II WITH STATCOM AT NEW RANCHI	07-01-2019	09:00	08-01-2019	17:00	ODB	POWERGRID ER1	BUS AMP & CONSTN. WORK RELATED TO FOURTH COUPLING TRANSFORMER. STATCOM WILL	
130	MAIN BAY OF400kV SLG-1(401) AT NEW PURNEA	07-01-2019	10:00	07-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
131	220kV Main Bus-II @ Pusauli	07-01-2019	08:00	07-01-2019	20:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BSEB
132	400kV 500MVA ICT-II	07-01-2019	08:00	07-01-2019	13:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BSEB
133	220kV Pusauli-Dehri	07-01-2019	13:00	07-01-2019	18:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BSEB
134	132 KV Banka CKT-1 (Bay-103) at Banka	07-01-2019	10:00	07-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
135	315MVA ICT-I AT RANCHI	07-01-2019	10:00	09-01-2019	17:00	OCB	POWERGRID ER1	OVERHAULING OF OLTC	JSEB
136	765 KV Bay no -714 (Tie Bay of Gaya-VNS Ckt-II Line & Future)	07-01-2019	09:00	07-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
137	400 KV SASARAM-VARANASI	07-01-2019	09:00	08-01-2019	18:00	ODB	POWERGRID ER-I	Washing of polluted insulator strings	NLDC
138	400 KV MAIN BUS-II at Subhasgram and 315 MVA ICT-I	07-01-2019	09:00	07-01-2019	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
139	401 KV MAIN BUS-II at Subhasgram and 315 MVA ICT-II	07-01-2019	13:00	07/01/19	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
140	220 KV Siliguri Kishanganj ckt 2	07-01-2019	08:00	09-01-2019	18:00	ODB	Powergrid, ER-II	Retrofitting of Numerical AR Relay as per 149 OCC agenda	
141	132KV Birpara- WBSETCL feeder -I	07-01-2019	08:00	07-01-2019	17:30	ODB	Powergrid, ER-II	Bay AMP work of GIS Bay for manufacturing Warranty Period	WB
142	500MVA ICT #1 at Maithan	07-01-2019	07:00	08/01/19	18:00	ODB	Powergrid, ER-II	On load testing of CSD.	DVC
143	BKTPP: 400 M/B #1	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
144	DGPR: 50 MVAR BUS REC	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	NO REACTOR SHUTDWON DURING WINTER
145	220 KV DGPR - WAR #2	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	DVC
146	400 ARMB-NPPSP #1	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
147	KGPR: 315 MVA TR#3	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
148	400 HEL-SUBGRM#2	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
149	400 KV KTPP-NEW CHANDITALA #	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
150	BKTPP: 400 M/B #1	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
151	DGPR: 50 MVAR BUS REC	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
152	220 KV DGPR - WAR #2	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
153	400 ARMB-NPPSP #1	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
154	KGPR: 315 MVA TR#3	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	

155	400 HEL-SUBGRM#2	08-01-2019	07:00	08-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
156	400kV JAMSHEDPUR -TATA line	08-01-2019	09:30	08-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF BROKEN INSULATORS DAMAGED BY MISCREANTS	DVC
157	Patna Barh -II 415 Main bay at patna	08-01-2019	09:00	08-01-2019	17:30	ODB	POWERGRID ER1	AMP	
158	220 kv BUS COUPLER AT ARA	08-01-2019	10:00	08-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	
159	220 KV DALKHOLA-1 LINE AND ASSOCIATED BAY EQUIPMENTS AT PURNEA	08-01-2019	10:00	08-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	
160	220kV Pusauli-Nadokhar	08-01-2019	09:00	08-01-2019	09:00	ODB	POWERGRID ER1	For CVT Replacement Work	BSEB
161	400kV East Side Bus-I@Pusauli	08-01-2019	08:00	08-01-2019	18:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
162	132 KV Banka CKT-2 (Bay-105) at Banka	08-01-2019	10:00	08-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
163	50Mvar Varanasi-I Line Reactor at Biharsharif	08-01-2019	10:00	08-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	NO REACTOR SHUTDWON DURING WINTER
164	220 KV CHAIBASA - CHAIBASAI (JUSNL) LINE-I	08-01-2019	10:00	08-01-2019	17:00	ODB	POWERGRID ER-I	AMP work	JSEB
165	400 kV Chaibasa - Kharagpur - I	08-01-2019	10:00	08-01-2019	17:00	ODB	POWERGRID ER-I	FOR CHECKING OF AUTO RECLOSE SCHEME AT CHAIBASA	WB
166	765 KV BUS-I at Gaya S/S	08-01-2019	09:00	08-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
167	400KV MUZ-GKP CKT-1	08-01-2019	09:30	08-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	NLDC
168	400 KV D/C Patna—Balia I & II	08-01-2019	09:00	09-01-2019	18:00	ODB	POWERGRID ER-I	Power Line Crossing of 400kV Patna Nabinagar D/C line.	NLDC
169	400KV Bus 2A at Alipurduar	08-01-2019	08:00	08-01-2019	18:00	ODB	Powergrid, ER-II	Testing of LBB & Bus-Bar Differential Relay	
170	400KV BERHAMPORE-SAGARDIGHI-1 MAIN BAY	08-01-2019	09:00	08-01-2019	18:00	ODB	Powergrid, ER-II	BAY AMP	
171	400 KV Farakka- Kahalgaon-III line	08-01-2019	09:00	08/01/19	18:00	ODB	Powergrid, ER-II	For Jumper coonnection and Bay stability between Bay- 34 & 35 after upgradation of bay-34 under ERSS-XV projects.	
172	400 KV MAIN BUS-II at Subhasgram and 315 MVA ICT-III	08-01-2019	09:00	08-01-2019	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
173	400 KV MAIN BUS-II at Subhasgram and 315 MVA ICT-IV	08-01-2019	13:00	08-01-2019	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
174	220KV DLK-PRN # I	08-01-2019	**08:00**	08-01-2019	**17:00**	**ODB**	Powergrid, ER-II	S/D required for Dropper Changing Work(Bus side)	
175	132KV Gangtok-Rangpo Line	08-01-2019	**09:00**	08-12-2018	**12:00**	**ODB**	Powergrid, ER-II	For AnnualAMp Works & DCRM	SIKKIM
176	400KV Maithon-Durgapur#I	08-01-2019	09:00	09-01-2019	18:00	ODB	Powergrid, ER-II	Construction work under ERSS-XVII	
177	400 KV Durgapur Farakka-I	08-01-2019	09:00	08-01-2019	**17:00**	ODB	Powergrid, ER-II	Tie CB (411) LBB relay test	
178	400 Kv Durgapur Sagardighi-II Line	08-01-2019	09:00	08-01-2019	**17:00**	ODB	Powergrid, ER-II	Tie CB (411) LBB relay test	WB
179	400 ARMB-DGPR	09-01-2019	07:00	09-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
180	400 ARMB-DGPR	09-01-2019	07:00	09-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
181	400 KV JAMSHEDPUR-BARIPADA	09-01-2019	09:00	09-01-2019	17:00	ODB	POWERGRID ER1	FOR REPLACEMENT OF BROKEN INSULATORS DAMAGED BY MISCREANTS	
182	220KV ICT1 main bay at patna	09-01-2019	09:30	09-01-2019	17:30	ODB	POWERGRID ER1	AMP	
183	765 KV B/R-I AT NEW RANCHI	09-01-2019	09:00	10-01-2019	17:00	ODB	POWERGRID ER1	AMP	NO REACTOR SHUTDWON DURING WINTER
184	132 KV ARA-DUMRAON	09-01-2019	10:00	09-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
185	REACTOR BAY OF Farakka (422R) AT NEW PURNEA	09-01-2019	10:00	09-01-2019	18:00	ODB	POWERGRID ER1	CSD commissioning	
186	400 KV D/C Farakka - Gokarna Ckt-I & II	09-01-2019	08:00	10-01-2019	18:00	OCB	POWERGRID ER1	for termination with Farakka & Gokarna line of 400KV D/C Rajarhat-Purnea Line (Bihar Section)	WB
187	400kV East Side Bus-II@Pusauli	09-01-2019	08:00	09-01-2019	18:00	ODB	POWERGRID ER1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
188	132 KV Sabour CKT-1 (Bay-106) at Banka	09-01-2019	10:00	09-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
189	Varanasi-I Main Bay No.-440 AT BIHARSHARIF	09-01-2019	10:00	09-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	
190	400 kV Chaibasa - Kharagpur - II	09-01-2019	10:00	09-01-2019	17:00	ODB	POWERGRID ER-I	FOR CHECKING OF AUTO RECLOSE SCHEME AT CHAIBASA	WB
191	765 KV BUS-II at Gaya S/S	09-01-2019	09:00	09-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 765/400 kV ICT- IV under GE package	NLDC
192	400KV MUZ-GKP CKT-2	09-01-2019	09:30	09-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	NLDC
193	400 KV BUS-I of NTPC Farakka	09-01-2019	09:00	09-01-2019	18:00	ODB	Powergrid, ER-II	For disconnecting BUS isolator of bay no-22 from BUS-I (For augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	
194	400 KV MAIN BUS-II at Subhasgram and 500 MVA ICT-V	09-01-2019	09:00	09/01/19	15:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB

195	400 KV Bus -2 at Binaguri	09-01-2019	08:00	15-01-2019	18:00	ODB	Powergrid, ER-II	SS03 construction works, 400 KV Busbar relay Replacement	
196	132KV Birpara- WBSETCL feeder -II	09-01-2019	08:00	09-01-2019	17:30	ODB	Powergrid, ER-II	Bay AMP work of GIS Bay for manufacturing Warranty Period	WB
197	220KV BUS-1 at Rangpo	09-01-2019	**08:00**	11/01/19	**17:00**	**OCB**	Powergrid, ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates) & insulator changing work	
198	220KV Rangpo NEW MELLI line 205	09-01-2019	**08:00**	13-01-2019	**17:00**	**OCB**	Powergrid, ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates) & insulator changing work	
199	400 ARMB - NPPSP #2	10-01-2019	07:00	10-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
200	BKTPP: 400 KV M/B #2	10-01-2019	07:00	10-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
201	400 ARMB - NPPSP #2	10-01-2019	07:00	10-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
202	BKTPP: 400 KV M/B #2	10-01-2019	07:00	10-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
203	JEERAT: 400KV BUS TRANSFER BAY	10-01-2019	07:00	10-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
204	220KV Fatuha main bay at Patna	10-01-2019	09:30	10-01-2019	17:30	ODB	POWERGRID ER1	AMP	
205	220 KV ARA-SASARAM	10-01-2019	10:00	10-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
206	REACTOR BAY OF Gokarna (419R) AT NEW PURNEA	10-01-2019	10:00	10-01-2019	18:00	ODB	POWERGRID ER1	CSD commissioning	
207	220 KV DALKHOLA-2 LINE AND ASSOCIATED BAY EQUIPMENTS AT PURNEA	10-01-2019	10:00	10-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	
208	132 KV sabour CKT-2 (Bay-1074) at Banka	10-01-2019	10:00	10-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
209	400KV Ranchi- Maithan RB-II AT RANCHI	10-01-2019	09:30	10-01-2019	17:00	ODB	POWERGRID ER1	REPLACEMENT OF INSULATORS DAMAGED BY MISCREANTS	
210	BSF-Koderma-I main Bay no.-434 AT BIHARSHAIF	10-01-2019	10:00	10-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	
211	220 KV CHAIBASA - CHAIBASAI (JUSNL) LINE-II	10-01-2019	10:00	10-01-2019	17:00	ODB	POWERGRID ER-I	AMP work	JSEB
212	200 MVA ICT-2 AT LAKHISARAI	10-01-2019	09:00	13-01-2019	17:00	ODB	POWERGRID ER-I	Fire wall Construction, Checking of Aircel of ICT-2	BSEB
213	400 /220 kV ICT-I at Gaya ss	10-01-2019	09:00	10-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 400/220 kV ICT- III under Techno package	BSEB
214	400kV North Side Bus-I@Pusauli	10-01-2019	09:00	10-01-2019	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
215	400 KV Farakka- Kahalgaon-I line	10-01-2019	09:00	10-01-2019	18:00	ODB	Powergrid, ER-II	For disconnecting bay-22 (Main Bay of 400 KV Farakka-Kahalgaon-I) from line side for augmentation of Isolator & CT from 2000A to 3150 A rating under ERSS-XV projects &	
216	Main bay of 400 KV Farakka- Kahalgaon-I (Bay- 22)	10-01-2019	09:00	30/01/19	18:00	ODB	Powergrid, ER-II	Bay-22 will be taken into shutdown for bay upgradation work under ERSS-XV. 400 KV Farakka- Kahalgaon-I will be charged through tie bay.	
217	220 KV MAIN BUS-I at Subhasgram and 220 KV WBSETCL Newtown Line	10-01-2019	09:00	10-01-2019	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
218	220 KV MAIN BUS-II at Subhasgram and 220 KV WBSETCL KLC Bantala Line	10-01-2019	13:00	10-01-2019	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
219	132 KV siliguri Melli	10-01-2019	09:00	11-01-2019	18:00	ODB	Powergrid, ER-II	3-ph A/R implementation	SIKKIM
220	220KV DLK-DLK# II	10-01-2019	**08:00**	10/01/19	**14:00**	**ODB**	Powergrid, ER-II	S/D required for E/S Alignment & CB Testing	
221	132 KV Gangtok-Chuzachen Line	10-01-2019	**09:00**	10-12-2018	**12:00**	**ODB**	Powergrid, ER-II	For AnnualAMp Works & DCRM	SIKKIM
222	400 KV Durgapur Farakka-II	10-01-2019	09:00	10/01/19	**17:00**	ODB	Powergrid, ER-II	Tie CB (414) LBB relay test and For Insulator replacement work at various tower location identified in PID test.	
223	400 KV Durgapur Mithon-I	10-01-2019	09:00	10-01-2019	**17:00**	ODB	Powergrid, ER-II	Tie CB (414) LBB relay test and For Insulator replacement work at various tower location identified in PID test.	
224	132KV Karanjia DC LILO line(Loc No-1 to Loc No-88)	11-01-2019	07:00	11-01-2019	17:00	ODB	OPTCL	AMP	
225	400 kV Jeypore-Gazuwaka I S/C Line	11/01/19	08:00	11/01/19	18:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	**NLDC**
226	BKTPP: 400 KV M/B #2	11-01-2019	07:00	11-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
227	BKTPP: 400 KV M/B #2	11-01-2019	07:00	11-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
228	JEERAT: 400KV BUS COUPLER BAY	11-01-2019	07:00	11-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
229	400KV PATNA - BARH CKT 1	11-01-2019	08:00	11-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	
230	220 kv ICT 2 main bay at patna	11-01-2019	09:30	11-01-2019	17:30	ODB	POWERGRID ER1	AMP	
231	765 KV B/R-II AT NEW RANCHI	11-01-2019	09:00	12-01-2019	17:00	ODB	POWERGRID ER1	AMP	NO REACTOR SHUTDWON DURING WINTER
232	220 KV ARA- NADOKHAR	11-01-2019	10:00	11-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
233	500 MVA ICT-2 AT NEW PURNEA	11-01-2019	10:00	11-01-2019	18:00	ODB	POWERGRID ER1	ICT AMP	BSEB

234	50Mvar Varanasi-2 Line Reactor at Bihasharif	11-01-2019	10:00	11-01-2019	18:00	ODB	POWERGRID ER-I	AMP WORK	NO REACTOR SHUTDWON DURING WINTER
235	400 /220 kV ICT-II at Gaya ss	11-01-2019	09:00	11-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 400/220 kV ICT- III under Techno package	BSEB
236	220KV MUZAFFARPUR-MTPS CKT-1	11-01-2019	09:30	11-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	BSEB
237	400 KV D/C Biharsharif-Varanasi I & II	11-01-2019	09:00	12-01-2019	18:00	ODB	POWERGRID ER-I	Power Line Crossing of 400kV Patna Nabinagar D/C line.	NLDC
238	400kV North Side Bus-II@Pusauli	11-01-2019	09:00	11-01-2019	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
239	80MVAR BUS REACTOR at Baharampore	11-01-2019	09:00	11/01/19	18:00	ODB	Powergrid, ER-II	CSD fine tunning work under ERSS-XV (after relocation of reactor)	NO REACTOR SHUTDWON DURING WINTER
240	400 KV Farakka- Gokarna- I	11-01-2019	09:00	12-01-2019	18:00	ODB	Powergrid, ER-II	For Event Logger commissioning at Farakka and preparatory work related to commissioning of Farakka-Purnea under ERSS V	WB
241	220 KV MAIN BUS-I at Subhasgram and 220 KV CESC-1 Line	11-01-2019	09:00	11/01/19	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
242	220 KV MAIN BUS-II at Subhasgram and 220 KV CESC-2 Line	11-01-2019	13:00	11-01-2019	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
243	132 KV Rangit-Kurseung Line	11-01-2019	09:00	11-01-2019	16:00	ODB	Powergrid, ER-II	For conductor damage between no Loc 61 and 62	WB
244	400 KV Bus #1 at Maithan	11-01-2019	09:00	11-01-2019	18:00	ODB	Powergrid, ER-II	To change the bus isolator of 400KV Mejia#2 Line	
245	132KV main Bus at Malda	11-01-2019	08:00	11-01-2019	15:00	ODB	Powergrid, ER-II	Main Bus CVT replacement	WB
246	400kV Rengali - Baripada (Loc.604 to Loc.663)	12-01-2019	07:00	12-01-2019	17:00	ODB	OPTCL	AMP	
247	400kV Sundargarh-Raigarh Ckt#1	12/01/19	08:00	14/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
248	400 kV Jeypore-Gazuwaka II S/C Line	12/01/19	08:00	12/01/19	18:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	NLDC
249	ARMB: 400 KV M/B #1	12-01-2019	07:00	12-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
250	ARMB: 400 KV M/B #1	12-01-2019	07:00	12-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
251	JEERAT: 400KV 100MVAR BUS-REACTOR	12-01-2019	07:00	12-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
252	400kV JAMSHEDPUR -Mejia line of Jamshedpur S/s	12-01-2019	09:30	12-01-2018	17:30	ODB	POWERGRID ER1	AMP WORK	DVC
253	400 KV PATNA - BARH CKT 2	12-01-2019	08:00	12-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	
254	220 kV khagaul main bay at Patna	12-01-2019	09:30	12-01-2019	17:30	ODB	POWERGRID ER1	AMP	
255	DALTONGANJ - SASARAM LINE-2	12-01-2019	11:30	12-01-2019	17:30	ODB	POWERGRID ER1	Erection of Bushing of 50 MVAR Line Reactor	
256	160 MVA ICT#1 AT PURNEA	12-01-2019	10:00	12-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	BSEB
257	206 BAY (MAIN BAY OF ICT-II) AT CHAIBASA	12-01-2019	10:00	12-01-2019	17:00	ODB	POWERGRID ER-I	AMP work	
258	220KV MUZAFFARPUR-MTPS CKT-2	12-01-2019	09:30	12-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	BSEB
259	HVDC along with AC Bypass	12-01-2019	09:00	12-01-2019	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
260	220 KV MAIN BUS-II at Subhasgram and 220 KV WBSETCL Subhasgram Ckt#1 Line	12-01-2019	09:00	12-01-2019	13:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
261	220 KV MAIN BUS-I at Subhasgram and 220 KV WBSETCL Subhasgram Ckt#2 Line	12-01-2019	13:00	12/01/19	17:00	ODB	Powergrid, ER-II	Testing of Bus Bar Protection and LBB Relay	WB
262	220 KV ICT-II at Siliguri	12-01-2019	10/00	12-01-2019	17/00	ODB	Powergrid, ER-II	Modification of Fire fighting system and additional strengthening for accomodating NIFS system.	WB
263	400 KV MALDA-NPRN D/C	12-01-2019	08:00	13-01-2019	17:00	ODB	Powergrid, ER-II	S/D required for rectification of OPGW Peak Bend .each ckt in alternative day	After restoraton of 400kV New Purnea-Biharsariff-DC
264	400\220kV 315 MVA ICT-2 at Rangpo	12-01-2019	08:00	15-01-2019	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work,	
265	132KV Rangpo-Gangtok line	12-01-2019	09:00	12-01-2019	18:00	ODB	Powergrid, ER-II	Line A/R implementation	SIKKIM
266	132kV Pusauli-Dehri	13-01-2019	09:00	13-01-2019	18:00	Transfer Bus at Dehri shall	POWERGRID ER1	To attend Isolator Problem .	BSEB
267	400KV BIHARSHARIF - SASARAM CKT -I	13-01-2019	08:00	19-01-2019	18:00	OCB	POWERGRID ER-I	Realignment works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line. **Note :- During**	NLDC
268	400KV BIHARSHARIF - SASARAM CKT -II	13-01-2019	08:00	19-01-2019	18:00	OCB	POWERGRID ER-I	Realignment works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line. **Note :- During**	NLDC
269	400KV BIHARSARIF - SASARAM D/C LINE	13-01-2019	09:00	14-01-2019	18:00	ODB	POWERGRID ER-I	Power line crossing of Nabinagar-Patna line. Note :- During Shut down period HVDC Sasaram will	NLDC
270	400KV BIHARSARIF - SASARAM D/C LINE	13-01-2019	09:00	19-01-2019	18:00	OCB	POWERGRID ER-I	Realignment works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line. Note :- During	NLDC
271	400 KV PATNA BALIA 3	13-01-2019	09:00	13-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
272	400 KV Subhasgram Jeerat Line.	13-01-2019	09:00	17-01-2019	17:00	ODB	Powergrid, ER-II	A/R Relay retrofitting at Jeerat end	WB

273	132KV Rangpo-Chuzachen line	13-01-2019	09:00	13-01-2019	18:00	ODB	Powergrid, ER-II	Line A/R implementation	SIKKIM
274	400KV Bus #3 at Maithan	13-01-2019	09:00	13-01-2019	18:00	ODB	Powergrid, ER-II	To change the bus isolator of 400KV RTPS Line	
275	400 DRGP-PPSP#2	14-01-2019	07:00	14-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
276	400 DRGP-PPSP#2	14-01-2019	07:00	14-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
277	Tie bay of ICT 1 & BR 1 (411 Bay) of Jamshedpur S/s	14-01-2019	09:30	14-01-2019	12:30	ODB	POWERGRID ER1	CT tan delta to be carried out	
278	132kV Pusauli-Karmanasha	14-01-2019	09:00	14-01-2019	18:00	Transfer Bus at Karmnash	POWERGRID ER1	To attend Isolator Problem .	BSEB
279	400 KV PATNA BALIA 4	14-01-2019	09:00	15-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of porcelain insulator by polymer insulators.	NLDC
280	765/400kV, 1500MVA, ICT for regular changeover in 06 month	14-01-2019	09:00	16-01-2019	18:00	OCB	POWERGRID ER-I	02 days for stability test and changing of Delta connection in LV side and 01 day for idle charging	NLDC
281	400 KV Farakka- Gokarna- II	14-01-2019	09:00	15-01-2019	18:00	ODB	Powergrid, ER-II	For Event Logger commissioning at Farakka and preparatory work related to commissioning of Farakka-Purnea under ERSS V	WB
282	132 KV siliguri kurseong	14-01-2019	09:00	15/01/19	18:00	ODB	Powergrid, ER-II	3-ph A/R implementation	WB
283	400KV Binaguri Kishanganj Ckt-1	14-01-2019	10:00	14-01-2019	16:00	ODB	Powergrid, ER-II	Auto reclosure relay retrofitting	
284	132kV BUS-2 Shutdown at Rangpo	14-01-2019	09:00	24/01/19	17:00	OCB	Powergrid, ER-II	For Bus extension to new Chuzachen bays (Construction works)	SIKKIM
285	418 bay(ICT-II main Bay) at Durgapur	14-01-2019	09:00	16-01-2019	17/00	OCB	Powergrid, ER-II	CB interrupter Chamber replace	
286	400KV ANDAL-JAMSHEDPUR-I & II	14-01-2019	11:00	14-01-2019	14:00	ODB	Powergrid, ER-II	Rectification of Open Earthwire section in Ckt-1 between Location 49-50.	DVC
287	400kV Sundargarh-Raigarh Ckt#2&4	15/01/19	07:00	25/01/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	1) Lara Railway Diversion work 2) OPGC Line diversion work.	NLDC
288	400 DRGP-PPSP#2	15-01-2019	07:00	15-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
289	400 ARMB- BKTPP	15-01-2019	07:00	15-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
290	400 DRGP-PPSP#2	15-01-2019	07:00	15-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
291	400 ARMB- BKTPP	15-01-2019	07:00	15-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
292	400KV PATNA - BALIA CKT 1	15-01-2019	08:00	15-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	NLDC
293	220kv Sipara 1main bay at Patna	15-01-2019	09:30	15-01-2019	17:30	ODB	POWERGRID ER1	AMP	
294	Patna Barh line 1	15-01-2019	09:30	31-01-2019	17:30	OCB	POWERGRID ER1	Construction activities for commissioning of switchable reactor	
295	160 MVA ICT#2 AT PURNEA	15-01-2019	10:00	15-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	BSEB
296	400kV Varanasi Main Bay (East Side) at Pusauli	15-01-2019	09:00	19-01-2019	18:00	ODB	POWERGRID ER1	AMP work	
297	400KV RNC-RNC-III MAIN BAY (433) AT RANCHI	15-01-2019	10:00	15-01-2019	17:00	ODB	POWERGRID ER1	AMP.Line remain Charge through Tie Bay	
298	400 KV 125 MVAR BR-I	15-01-2019	09:00	15-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , CT erection work for 765/400 kV ICT- IV under GE package	NO REACTOR SHUTDWON DURING WINTER
299	765 KV GAYA BALIA	15-01-2019	09:00	16-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
300	765 kV New Ranchi - Dharamjaygarh CKT-II	15-01-2019	09:00	19-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of broken Glass insulators by miscreants	NLDC
301	400KV BERHAMPORE-FARAKKA-1	15-01-2019	09:00	16-01-2019	18:00	ODB	Powergrid, ER-II	For balance protection scheme checking of bay-23 (Tie bay of 400 KV Fkk- Bhp-II and 400 KV Fkk- Khg-I) with respect with bay-24 by NTPC UNDER ERSS-XV.	
302	400KV Binaguri Kishanganj Ckt-2	15-01-2019	10:00	15/01/19	16:00	ODB	Powergrid, ER-II	Auto reclosure relay retrofitting	
303	50MVA ICT-IV at Malda	15-01-2019	08:00	15/01/19	17:00	ODB	Powergrid, ER-II	For construction work under ERSS-XX	WB
304	400 DGPR- PPSP#1	16-01-2019	07:00	16-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
305	400 KV Binaguri Bongaigaon Ckt-1	16-01-2019	09:00	16-01-2019	18:00	ODB	Powergrid, ER-II	Line AMP works	NLDC
306	220 KV S/C Birpara-Malbase Feeder	16-01-2019	08:00	17-01-2019	17:30	ODB	Powergrid, ER-II	Placement of New A/H at all Tension Tower	NLDC
307	400 KV TSTPS- Rengali-1 (400 KV Bay – 8 & 9)	16-01-2019	08:00	18-01-2019	18:00	OCB	TSTPP	Isolator no 889A arm change & 989L isolator arm change and AMP JOB	
308	KTPP, 315MVA IBT-1	16-01-2019	07:00	16-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
309	400 DGPR- PPSP#1	16-01-2019	07:00	16-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
310	Main bay of ICT 3 (428 Bay) of Jamshedpur S/s	16-01-2019	09:30	16-01-2019	12:30	ODB	POWERGRID ER1	CT tan delta to be carried out	
311	400KV PATNA - BALIA CKT 2	16-01-2019	08:00	16-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	NLDC
312	220Kv Sipara 2 main bay at Patna	16-01-2019	09:30	16-01-2019	17:30	ODB	POWERGRID ER1	AMP	

313	765KV B/R-II MAIN BAY (707) AT NEW RANCHI	16-01-2019	09:00	16-01-2019	17:00	ODB	POWERGRID ER1	AMP	
314	400/220kV 315 MVA ICT-1 AT DALTONGANJ	16-01-2019	12:30	16-01-2019	17:30	ODB	POWERGRID ER1	400/220kV, 315 MVA, ICT-1 CSD (Main & Tie) On load commissioning work.	JSEB
315	132 KV ARA-ARA	16-01-2019	10:00	16-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
316	MAIN BAY OF MUZ-II (409) AT NEW PURNEA	16-01-2019	10:00	16-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
317	400/220kV 500MVA ICT-I AT PUSAULI	16-01-2019	09:00	19-01-2019	18:00	OCB	POWERGRID ER1	Shifting of transformer for Transformer Retrofitting Work	BSEB
318	400KV RNC-RNC-IV MAIN BAY (436) AT RANCHI	16-01-2019	10:00	16-01-2019	17:00	ODB	POWERGRID ER1	AMP.Line remain Charge through Tie Bay	
319	315 ICT 1 AT CHAIBASA	16-01-2019	10:00	16-01-2019	17:00	ODB	POWERGRID ER-I	AMP work	JSEB
320	400 kV Bay No. 401 (Main Bay of 400 kV LKR-BSF Line -1) AT LAKHISARAI	16-01-2019	10:00	16-01-2019	14:00	ODB	POWERGRID ER-I	Main Bay of 400 kV LKR-BSF Line -1	
321	132 KV D/C Gaya-Sonenagar line I & II.	16-01-2019	09:00	17-01-2019	17:00	ODB	POWERGRID ER-I	Power line crossing of Nabinagar-Patna line	BSEB
322	400 KV 125 MVAR BR-II	16-01-2019	09:00	16-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , CT erection work for 765/400 kV ICT- IV under GE package	NO REACTOR SHUTDWON DURING WINTER
323	400 KV BUS-2	16-01-2019	09:30	18-01-2019	17:30	ODB	MUZAFFARPUR	AMP WORK	
324	400KV BUS-1at Motihari	16-01-2019	09:00	17-01-2019	18:00	OCB	MUZAFFARPUR TBCB (SITAMADHI)	TBCB CONSTRUCTION WORK. MEASURMENT OF CONDUCTOR LENGTH OF END CAP OF BUS FOR EXTENSION UNDER ERSS-21	BSEB
325	765 KV SASARAM - FATEHPUR	16-01-2019	09:00	18-01-2019	18:00	ODB	POWERGRID ER-I	Washing of polluted insulator strings & Polymer anchoring work in sub-station	NLDC
326	400KV Bus 1A at Alipurduar	16-01-2019	08:00	16-01-2019	18:00	ODB	Powergrid, ER-II	Testing of LBB & Bus-Bar Differential Relay	
327	400 KV Binaguri Bongaigaon Ckt-1	16-01-2019	09:00	16-01-2019	18:00	ODB	Powergrid, ER-II	Line AMP works	NLDC
328	220 KV S/C Birpara-Malbase Feeder	16-01-2019	08:00	17-01-2019	17:30	ODB	Powergrid, ER-II	Placement of New A/H at all Tension Tower	NLDC
329	66 KV Gangtok-Tadong Line	16-01-2019	**09:00**	16-01-2019	**12:00**	**ODB**	Powergrid, ER-II	For AnnualAMp Works	SIKKIM
330	220\132 Kv 100 MVA ICT-2 at Rangpo	16-01-2019	**08:00**	19/01/19	**17:00**	**OCB**	Powergrid, ER-II	For rectification of SF6 gas leakage repair work, & Scheduled AMP	
331	400KV Maithon-Right Bank #I	16-01-2019	08:00	31-01-2019	18:00	OCB	Powergrid, ER-II	Re conductoring work	
332	400KV ANDAL-JAMSHEDPUR-I & II	16-01-2019	09:00	25-01-2019	17:00	ODB	Powergrid, ER-II	Replacement of balance porcelin insulator.S/d of each circuit in alternative day is required.	DVC
333	400 DGPR- PPSP#1	17-01-2019	07:00	17-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
334	KTPP: 400 B/C	17-01-2019	07:00	17-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
335	400 KV Binaguri Bongaigaon Ckt-2	17-01-2019	09:00	17-01-2019	18:00	ODB	Powergrid, ER-II	Line AMP works	**NLDC**
336	400 DGPR- PPSP#1	17-01-2019	07:00	17-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
337	KTPP: 400 B/C	17-01-2019	07:00	17-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
338	400KV PATNA - BALIA CKT 3	17-01-2019	08:00	17-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	NLDC
339	220KV Bus coupler at patna	17-01-2019	09:30	17-01-2019	17:30	ODB	POWERGRID ER1	AMP	BSEB
340	1500 MVA ICT-I AT NEW RANCHI	17-01-2019	09:00	18-01-2019	17:00	ODB	POWERGRID ER1	AMP	NLDC
341	400/220kV 315 MVA ICT-2 AT DALTONGANJ	17-01-2019	13:30	17-01-2019	17:30	ODB	POWERGRID ER1	400/220kV, 315 MVA, ICT-2 CSD (Main & Tie) On load commissioning work.	JSEB
342	220 KV ARA-KHAGAUL 1	17-01-2019	10:00	17-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
343	160 MVA ICT#3 AT PURNEA	17-01-2019	10:00	17-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	BSEB
344	ICT-I 220KV Side Bay (205) AT RANCHI	17-01-2019	10:00	17-01-2019	17:00	ODB	POWERGRID ER1	AMP.Line remain Charge through TBC	
345	400 KV GAYA-NABINAGAR -1 line	17-01-2019	09:00	17-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , CT erection work for 765/400 kV ICT- IV under GE package	
346	765 KV GAYA VARANASI 1	17-01-2019	09:00	17-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
347	400KV BERHAMPORE-FARAKKA-2	17-01-2019	09:00	18-01-2019	18:00	ODB	Powergrid, ER-II	Bay stability between Bay- 34 & 33 after upgradation of bay-34 under ERSS-XV projects.	
348	400 KV Binaguri Bongaigaon Ckt-2	17-01-2019	09:00	17-01-2019	18:00	ODB	Powergrid, ER-II	Line AMP works	NLDC
349	132KV Rangpo Melli	17-01-2019	**09:00**	21/01/19	**18:00**	**ODB**	Powergrid, ER-II	Insulator changing works	SIKKIM
350	132kV Bus Sectionalizer-2 at Rangpo	17-01-2019	**09:00**	17-01-2019	**18:00**	**ODB**	Powergrid, ER-II	Scheduled AMP	
351	220KV D/C BIRPARA -Chukha D/C	18-01-2019	08:00	19/01/19	17:30	ODB	Powergrid, ER-II	Placement of New A/H at all Tension Tower	**NLDC**
352	ARMB: 400 M/B #2	18-01-2019	07:00	18-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	

353	KTPP, 315MVA IBT-2	18-01-2019	07:00	18-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
354	KTPP: 400 B/C	18-01-2019	07:00	18-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
355	Tie bay of APNRL-2 (422 Bay) of Jamshedpur S/s	18-01-2019	09:30	18-01-2019	17:30	ODB	POWERGRID ER1	AMP WORK	
356	400KV PATNA - BALIA CKT 4	18-01-2019	08:00	18-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	NLDC
357	400KV ICT 1 412 main bay at Patna	18-01-2019	09:30	18-01-2019	17:30	ODB	POWERGRID ER1	AMP	
358	BAY NO. 407(SASARAM LINE-1) AT DALTONGANJ	18-01-2019	14:30	18-01-2019	17:30	ODB	POWERGRID ER1	AMP	
359	220 KV ARA-KHAGAUL 2	18-01-2019	10:00	18-01-2019	17:00	On Daily Basis	POWERGRID ER1	AMP	BSEB
360	REACTOR BAY OF MUZ-II (409R) AT NEW PURNEA	18-01-2019	10:00	18-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
361	132 KV Sultanganj CKT-1 (Bay-109)at Banka	18-01-2019	10:00	18-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
362	400KV Ranchi- Maithan RB-I	18-01-2019	09:30	18-01-2019	17:00	ODB	POWERGRID ER1	Change over flash insulator	
363	400 kV Bay No. 402 (Tie Bay of 400 kV LKR-BSF-1 & 200 MVA ICT-1) AT LAKHISARAI	18-01-2019	10:00	18-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Tie Bay of 400 kV LKR-BSF-1 & 200 MVA ICT-1	
364	400 KV GAYA-NABINAGAR -2 line	18-01-2019	09:00	18-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , CT erection work for 765/400 kV ICT- IV under GE package	
365	132KV BUS-1 at motihari	18-01-2019	09:00	19-01-2019	18:00	OCB	MUZAFFARPUR TBCB (SITAMADHI)	TBCB CONSTRUCTION WORK. MEASURMENT OF CONDUCTOR LENGTH OF END CAP OF BUS FOR	BSEB
366	765 KV GAYA VARANASI 2	18-01-2019	09:00	18-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreant	NLDC
367	400 KV Subhasgram Sagardighi Line.	18-01-2019	09:00	22-01-2019	17:00	ODB	Powergrid, ER-II	A/R Relay retrofitting at Subhasgrami end	WB
368	400 KV Binaguri Purnea Ckt-1	18-01-2019	08:00	24/01/19	18:00	ODB	Powergrid, ER-II	CLR insulator replacement work	
369	220KV D/C BIRPARA -Chukha D/C	18-01-2019	08:00	19/01/19	17:30	ODB	Powergrid, ER-II	Placement of New A/H at all Tension Tower	NLDC
370	66 KV Gangtok-Bulbulay Line	18-01-2019	**09:00**	18/01/19	**12:00**	**ODB**	Powergrid, ER-II	For AnnualAMp Works	SIKKIM
371	201 bay (220 KV Side of ICT-I) at Durgapur	18-01-2019	09:00	18-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
372	220KV Katapalli-PGCIL-Sadeipalli Ckt-2	19-01-2019	07:00	19-01-2019	17:00	ODB	OPTCL	AMP	
373	ARMB: 400 M/B #2	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
374	400 DGPR-PARULIA#2	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
375	KTPP: 400 B/C	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
376	KTPP: 400 B/C	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
377	400 DGPR-PARULIA#2	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
378	KTPP: 400 B/C	19-01-2019	07:00	19-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
379	400KV PATNA - BALIA CKT 4	19-01-2019	08:00	19-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	NLDC
380	400KV 80 MVAR Bus reactor 410 main bay at Patna	19-01-2019	09:30	19-01-2019	17:30	ODB	POWERGRID ER1	AMP	
381	BAY NO. 408(ICT-1 TIE BAY) AT DALTONGANJ	19-01-2019	15:30	19-01-2019	17:30	ODB	POWERGRID ER1	AMP	
382	220 KV NPRN-PRN #1 LINE AND ASSOCIATED BAY EQUIPMENTS AT PURNEA	19-01-2019	10:00	19-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	
383	132 KV Sultanganj CKT-2 (Bay-110)at Banka	19-01-2019	10:00	19-01-2019	13:00	ODB	POWERGRID ER1	AMP Work	
384	ICT-II 220KV Side Bay (209) AT RANCHI	19-01-2019	10:00	19-01-2019	17:00	ODB	POWERGRID ER1	AMP.ICT-II remain Charge through TBC	
385	400 kV New Ranchi-Ranchi CKT-3.	19-01-2019	09:00	19-01-2019	18:00	ODB	POWERGRID ER1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	
386	401 kV New Ranchi-Ranchi CKT-4.	19-01-2019	09:00	19-01-2019	18:00	ODB	POWERGRID ER1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	
387	132 KV D/C Sone nagar –Aurangabad Lne I &II & under construction 132 KV D/C Barun-Aurangabad line I & II	19-01-2019	09:00	20-01-2019	17:00	ODB	POWERGRID ER-I	Power line crossing of Nabinagar-Patna line	BSEB
388	132KV bus coupler-1 112 Bay at Rangpo	19-01-2019	**09:00**	19-01-2019	**18:00**	**ODB**	Powergrid, ER-II	Scheduled AMP	
389	205 bay (220 Kv Bus Section bay) at Durgapur	19-01-2019	09:00	19-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
390	Meramundali 400/220KV ICT-I for conditioning monitoring test of Tfr,eqpt. & Maintenance work.	20-01-2019	07:00	21-01-2019	17:00	ODB	OPTCL	AMP	
391	400 KV Binaguri Tala -IV Line	20-01-2019	10:00	20-01-2019	18:00	ODB	Powergrid, ER-II	Insulator replacement at loc-118 and Replacement of Porceline insulator by CLR	**NLDC**
392	400/220kV 315MVA ICT-II AT PUSAULI	20-01-2019	00:00	24-02-2019	18:00	OCB	POWERGRID ER1	For Transformer Retrofitting Work	BSEB

393	400 KV BUS I AT KISHANGANJ	20-01-2019	10:00	24-01-2019	20:00	OCB	POWERGRID ER-I	BAY EXTN work (400 KV BUS EXTN under TBCB Project).BAY EXTN work for Kishanganj-Darbhanga	BSEB
394	400 KV BIHARSHARIF-VARANASI 1	20-01-2019	09:00	28-01-2019	18:00	OCB	POWERGRID ER-I	Realignment works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line.	NLDC
395	400 kV BIHARSHARIF-VARANASI 2	20-01-2019	09:00	28-01-2019	18:00	OCB	POWERGRID ER-I	Realignment works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line.	NLDC
396	400 KV Tala -IV Line alongwith Reactor at Binaguri	20-01-2019	10:00	20-01-2019	18:00	ODB	Powergrid, ER-II	Line reactor AMP works. Insulator replacement at loc-118 and Replacement of Porceline insulator by CLR Polumer at variou crossing spans	NO REACTOR SHUTDWON DURING WINTER
397	66 KV Gangtok-LLHP Line	20-01-2019	09:00	20-01-2019	12:00	ODB	Powergrid, ER-II	For AnnualAMp Works	SIKKIM
398	400\220kV 315 MVAICT -1 at Rangpo	20-01-2019	08:00	24-01-2019	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work,	
399	132KV bus coupler-2 107 Bay at Rangpo	20-01-2019	09:00	20/01/19	18:00	ODB	Powergrid, ER-II	Scheduled AMP	
400	765KV Angul-Srikakulam line-1	21/01/19	07:00	22/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	NLDC
401	765KV Angul-Srikakulam line-1	21/01/19	07:00	22/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	NLDC
402	400 DGPR-PARULIA #1	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
403	KTPP: 400 BUS TIE	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
404	ARMB: 50 MVA BUS REC	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
405	400 KV TSTPS- Rourkela # 1(400 KV Bay – 5,6)	21-01-2019	08:00	25-01-2019	18:00	OCB	TSTPP	Line Reactor 400KV bushing replacement-1 no,Insulator string replacement in gantry, AMP	
406	400 DGPR-PARULIA #1	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
407	KTPP: 400 BUS TIE	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
408	ARMB: 50 MVA BUS REC	21-01-2019	07:00	21-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
409	411 tie bay of 80 MVAR Bus reactor and ICT 2 at patna	21-01-2019	09:30	21-01-2019	17:30	ODB	POWERGRID ER1	AMP	
410	400 KV TIE BAY OF RNC LINE-4 & 1500 MVA ICT-I AT NEW RANCHI	21-01-2019	09:00	21-01-2019	17:00	ODB	POWERGRID ER1	AMP	
411	BAY NO. 409(ICT-1 BAY) AT DALTONGANJ	21-01-2019	16:30	21-01-2019	17:30	ODB	POWERGRID ER1	AMP	
412	220 KV NPRN-PRN #2 LINE AND ASSOCIATED BAY EQUIPMENTS PURNEA	21-01-2019	10:00	21-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	
413	315MVA ICT-II AT RANCHI	21-01-2019	10:00	23-01-2019	17:00	OCB	POWERGRID ER1	OVERHAULING OF OLTC	JSEB
414	400 kV Bay No. 403 (Main Bay of 200 MVA ICT-1) AT LAKHISARAI	21-01-2019	10:00	21-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Main Bay of 200 MVA ICT-1	
415	400 KV BUS-I at Gaya S/S	21-01-2019	09:00	21-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 400/220 kV ICT- III under Techno package	BSEB
416	315 MVA ICT-1 AT MUZAFFARPUR	21-01-2019	09:30	23-01-2019	17:30	OCB	MUZAFFARPUR	OLTC OVERHAULING WORK	BSEB
417	765 kV New Ranchi - Dharamjaygarh CKT-I	21-01-2019	09:00	22-01-2019	18:00	ODB	POWERGRID ER-I	For replacement of insulators damaged by miscreants	NLDC
418	22OKV BIRPARA-SLG FDR-I (ONE)	21-01-2019	08:00	22-01-2019	17:30	ODB	Powergrid, ER-II	A/H replacement of various Suspension towers	
419	132kV Bus Sectionalizer-1 109 Bay at Rangpo	21-01-2019	09:00	21-01-2019	18:00	ODB	Powergrid, ER-II	Scheduled AMP	
420	400KV Maithon-Jamshedpur line.	21-01-2019	09:00	22/01/19	18:/00	ODB	Powergrid, ER-II	To replaced Punctured disc Insulator	
421	220KV Bus-I(with BC CB) at Malda	21-01-2019	08:00	21-01-2019	17:00	ODB	Powergrid, ER-II	Rectification and Maintanance to attend Hotspot in Bus and DCRM in CB	WB
422	204 bay (220 Kv DVC-II bay) at Durgapur	21-01-2019	09:00	21-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
423	400 HEL-SUBGRM#1	22-01-2019	07:00	22-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
424	KTPP: 400 BUS TIE	22-01-2019	07:00	22-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
425	400 HEL-SUBGRM#1	22-01-2019	07:00	22-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
426	KTPP: 400 BUS TIE	22-01-2019	07:00	22-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
427	Tie bay of maithon -Chaibasa 1 (408 Bay) of Jamshedpur S/s	22-01-2019	09:30	22-01-2019	17:30	ODB	POWERGRID ER1	AMP WORK	
428	125 MVAR Bus reactor at Patna	22-01-2019	09:30	22-01-2019	17:30	ODB	POWERGRID ER1	AMP	NO REACTOR SHUTDWON DURING WINTER
429	765 KV TIE BAY OF 1500 MVA ICT-I &FUTURE AT NEW RANCHI	22-01-2019	09:00	22-01-2019	17:00	ODB	POWERGRID ER1	AMP	NLDC
430	MAIN BAY OF MUZ-I (412) AT NEW PURNEA	22-01-2019	10:00	22-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
431	400 KV BUS-II at Gaya S/S	22-01-2019	09:00	26-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , CT erection work for 765/400 kV ICT- IV under GE package	BSEB

432	400 KV BIHARSHARIF-VARANASI 1	22-01-2019	09:00	23-01-2019	18:00	ODB	POWERGRID ER-I	Washing of polluted insulator strings	NLDC
433	400 KV Mejia#3- RTPS Tie bay (411) at Maithan	22-01-2019	09:00	22/01/19	18:00	OCB	Powergrid, ER-II	For replacement of CT	
434	209 bay (220 Kv Side of ICT-II) at Durgapur	22-01-2019	09:00	22-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
435	765KV Angul-Srikakulam line-2	23/01/19	07:00	24/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	**NLDC**
436	765KV Angul-Srikakulam line-2	23/01/19	07:00	24/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	**NLDC**
437	400 HEL-SUBGRM#1	23-01-2019	07:00	23-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
438	400 HEL-SUBGRM#1	23-01-2019	07:00	23-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
439	400KV ICT3 at patna	23-01-2019	08:00	23-01-2019	17:30	ODB	POWERGRID ER1	AMP	BSEB
440	220 KV MAIN BUS #1 AT PURNEA	23-01-2019	10:00	23-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	BSEB
441	400 kV Bay No. 404 (Main Bay of 400 kV LKR-BSF Line -2) AT LAKHISARAI	23-01-2019	10:00	23-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Main Bay of 400 kV LKR-BSF Line -2	
442	22OKV BIRPARA-SLG FDR-II (TWO)	23-01-2019	08:00	24-01-2019	17:30	ODB	Powergrid, ER-II	A/H replacement of various Suspension towers	
443	220 kV Maithon-Dhanbad 2 line	23-01-2019	09:00	23-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of LINE CVT	DVC
444	400KV Mejia-Jamshedpur line	23-01-2019	09:00	24-01-2019	18:/00	ODB	Powergrid, ER-II	To replaced Punctured disc Insulator	
445	212 bay (220 Kv DVC-I) at Durgapur	23-01-2019	09:00	23-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
446	400 HEL-SUBGRM#2	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
447	DGPR: 315 MVA ICT#1	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
448	ARMB: 400 M/B #1	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
449	400 HEL-SUBGRM#2	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
450	DGPR: 315 MVA ICT#1	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
451	ARMB: 400 M/B #1	24-01-2019	07:00	24-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
452	400KV BARH - KAHALGAON CKT 1	24-01-2019	08:00	24-01-2019	17:30	ODB	POWERGRID ER1	FOR LINE MAINTENANCE WORK	
453	403ICT3 Main Bay at patna	24-01-2019	09:30	24-01-2019	17:30	ODB	POWERGRID ER1	AMP	
454	BAY NO. 410(SASARAM LINE-1) AT DALTONGANJ	24-01-2019	17:30	24-01-2019	17:30	ODB	POWERGRID ER1	AMP	
455	REACTOR BAY OF MUZ-I (412R) AT NEW PURNEA	24-01-2019	10:00	24-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
456	ICT-I MAIN BAY (403) AT RANCHI	24-01-2019	10:00	24-01-2019	17:00	ODB	POWERGRID ER1	AMP.ICT-I CHARGE THROUGH TIE BAY	
457	315 MVA ICT-2 AT MUZAFFARPUR	24-01-2019	09:30	27-01-2019	17:30	OCB	MUZAFFARPUR	OLTC OVERHAULING WORK	BSEB
458	400 kV BIHARSHARIF-VARANASI 2	24-01-2019	09:00	25-01-2019	18:00	ODB	POWERGRID ER-I	Washing of polluted insulator strings	NLDC
459	400KV SAGARDIGHI-FARAKKA-2	24-01-2019	09:00	24-01-2019	18:00	ODB	Powergrid, ER-II	Balance Construction Work of new LILO portion	WB
460	400 KV BS-I (Bus-1 & 3 section CB) at Durgapur	24-01-2019	09:00	24-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
461	765KV Sundargarh-Angul Ckt #2 with LR	25/01/19	09:00	25/01/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take Y-Ph reactor in service in place of spare Reactor after attending oil leakage in Y-Ph Reactor	**NLDC**
462	400 HEL-SUBGRM#2	25-01-2019	07:00	25-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
463	DGPR: 315 MVA ICT#1	25-01-2019	07:00	25-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
464	400 HEL-SUBGRM#2	25-01-2019	07:00	25-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
465	DGPR: 315 MVA ICT#1	25-01-2019	07:00	25-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
466	400KV BARH - KAHALGAON CKT 2	25-01-2019	08:00	25-09-2019	17:30	ODB	POWERGRID ER1	FOR LINE MAINTENANCE WORK	
467	TIE BAY OF400kV SLG-1 & ICT-II(402) AT NEW PURNEA	25-01-2019	10:00	25-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
468	400 KV BUS II AT KISHANGANJ	25-01-2019	10:00	30-01-2019	20:00	OCB	POWERGRID ER-I	BAY EXTN work (400 KV BUS EXTN under TBCB Project).BAY EXTN work for Kishanganj-Darbhanga	BSEB
469	400 kV Bay No. 405 (Tie Bay of 400 kV LKR-BSF-2 & 200 MVA ICT-2) AT LAKHISARAI	25-01-2019	10:00	25-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Tie Bay of 400 kV LKR-BSF-2 & 200 MVA ICT-2	
470	400KV SAGARDIGHI-JEERAT	25-01-2019	09:00	25/01/19	18:00	ODB	Powergrid, ER-II	A/R Relay retrofitting at WBSETCL Jeerat end	WB
471	400 KV Binaguri Purnea Ckt-2	25-01-2019	08:00	31-01-2019	18:00	ODB	Powergrid, ER-II	CLR insulator replacement work	

472	400\220kV 315 MVAICT -4 at Rangpo	25-01-2019	08:00	29-01-2019	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work,	
473	400 KV BS-II (Bus-2 & 4 section CB) at Durgapur	25-01-2019	09:00	25-01-2019	17/00	ODB	Powergrid, ER-II	AMP works	
474	Meramundali 400/220 ICT-II for conditioning monitoring test of Tfr,eqpt. & Maintenance work.	27-01-2019	07:00	28-01-2019	17:00	ODB	OPTCL	AMP	
475	765KV 240 MVAR Bus Reactor-1	27/01/19	09:00	27/01/19	16:00	ODB	ER-II/Odisha/Sundergarh	AMP works and To take spare Reactor in to service in place of R-Ph Reactor for attending oil	NLDC
476	400kV Sundargarh-Raigarh Ckt#3	27/01/19	08:00	27/08/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
477	ARMB: 400 M/B#2	28-01-2019	07:00	28-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
478	DGPR: 315 MVA ICT#2	28-01-2019	07:00	28-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
479	400Kv TALA-NSLG -FEEDER -III	28-01-2019	08:00	29/01/19	17:30	ODB	Powergrid, ER-II	Insulator replacement at loc- 117,163 and Replacement of Porceline insulator by CLR	NLDC
480	ICT-2 TRANSFORMER (400/220KV)	28-01-2019	08:00	30-01-2019	18:00	OCB	TSTPP	Conductor replacement and AMP job	GRIDCO
481	ARMB: 400 M/B#2	28-01-2019	07:00	28-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
482	DGPR: 315 MVA ICT#2	28-01-2019	07:00	28-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
483	400 KV PATNA - BARH CKT 3	28-01-2019	08:00	28-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	
484	406 125 MVAR Bus reactor main Bay at patna	28-01-2019	09:30	28-01-2019	17:30	ODB	POWERGRID ER1	AMP	
485	BAY NO. 411(SASARAM LINE-1 TIE BAY) AT DALTONGANJ	28-01-2019	18:30	28-01-2019	17:30	ODB	POWERGRID ER1	AMP	
486	MAIN BAY OF400kV SLG-II(404) AT NEW PURNEA	28-01-2019	10:00	28-01-2019	18:00	ODB	POWERGRID ER1	BAY AMP	
487	400KV BUS-BAR-I AT RANCHI	28-01-2019	10:00	28-01-2019	17:00	ODB	POWERGRID ER1	Errection & Commisssioning of Jack bus for Tie Bay of Ranchi-New Ranchi-I & II).During All Lines and	JSEB
488	400 kV Bay No. 406 (Main Bay of 200 MVA ICT-2) AT LAKHISARAI	28-01-2019	10:00	28-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Main Bay of 200 MVA ICT-2	
489	220 KV D/C Bodh Gaya- Dehri line. I & II	28-01-2019	09:00	29-01-2019	17:00	ODB	POWERGRID ER-I	Power line crossing of Nabinagar-Patna line	BSEB
490	220 KV BUS-I at Gaya S/S	28-01-2019	09:00	28-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 400/220 kV ICT- III under Techno package	BSEB
491	220KV Bus Coupler Bay (Bay No.204) at Powergrid,Subhasgram	28-01-2019	09:00	31/01/19	17:00	OCB	Powergrid, ER-II	CGL make CB Overhauling	WB
492	400Kv TALA-NSLG -FEEDER -III	28-01-2019	08:00	29/01/19	17:30	ODB	Powergrid, ER-II	Insulator replacement at loc- 117,163 and Replacement of Porceline insulator by CLR Polumer at variou crossing spans	NLDC
493	132kV Chuzachen, 132kV Melli at Rangpo	28-01-2019	08:00	28-01-2019	18:00	ODB	Powergrid, ER-II	For new Chuzachen bays LILO (Construction works)	SIKKIM
494	DGPR: 315 MVA ICT#2	29-01-2019	07:00	29-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
495	DGPR: 315 MVA ICT#2	29-01-2019	07:00	29-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
496	400KV PATNA - BARH CKT 4	29-01-2019	08:00	29-01-2019	17:30	ODB	POWERGRID ER1	FOR REPLACEMENT OF PORCELAIN INSULATORS BY POLYMER	
497	400 KV BUS -I AT NEW RANCHI	29-01-2019	09:30	30-01-2019	17:00	ODB	POWERGRID ER1	AMP	
498	220 KV DALTONGANJ - DALTONGANJ LINE-1	29-01-2019	19:30	29-01-2019	17:30	ODB	POWERGRID ER1	CT Oil Sampling Work	JSEB
499	220 KV MAIN BUS #2 AT PURNEA	29-01-2019	10:00	29-01-2019	17:00	ODB	POWERGRID ER1	AMP WORK	BSEB
500	220 KV BUS-II at Gaya S/S	29-01-2019	09:00	29-01-2019	18:00	ODB	POWERGRID ER-I	for Stringing & Isolator , BPI erection work for 400/220 kV ICT- III under Techno package	BSEB
501	400/220/33kv 315MVA ICT- I at Alipurduar	29-01-2019	08:00	31/01/19	18:00	OCB	Powergrid, ER-II	Modification of Fire fighting system and additional strengthening for accomodating NIFS system.	
502	DGPR: 400 TBC	30-01-2019	07:00	30-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
503	DGPR: 400 TBC	30-01-2019	07:00	30-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
504	220 KV DALTONGANJ - DALTONGANJ LINE-2	30-01-2019	20:30	30-01-2019	17:30	ODB	POWERGRID ER1	CT Oil Sampling Work	JSEB
505	LINE BAY OF 400kV SLG-I(401L) AT NEW PURNEA	30-01-2019	10:00	30-01-2019	18:00	ODB	POWERGRID ER1	BPI ERECTION AT LINE ISOLATOR	
506	400KV BUS-BAR-II AT RANCHI	30-01-2019	10:00	30-01-2019	17:00	ODB	POWERGRID ER1	Fixing of stool on Bus CVT Yph .RNC-NRNC-I & CKT-II OUT OF SERVICE	JSEB
507	400 kV Bay No. 407 (Main Bay of 400 kV LKR-KHG Line -2) AT LAKHISARAI	30-01-2019	10:00	30-01-2019	14:00	ODB	POWERGRID ER-I	AMP of Main Bay of 400 kV LKR-KHG Line -2	
508	400 KV BUS-I of NTPC Farakka	30-01-2019	09:00	30/01/19	18:00	ODB	Powergrid, ER-II	For connecting BUS isolator of bay no-22 to BUS-I (After augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	
509	220 KV Bus 1 with 220KV Siliguri 1 & Sectionalizer1	30-01-2019	10:00	30-01-2019	16:00	ODB	Powergrid, ER-II	Bus bar & LBB testing	WB
510	132 KV Rangit-Kurseung Line	30-01-2019	09:00	30/01/19	16:00	ODB	Powergrid, ER-II	For conductor damage between no Loc 74 and 75	WB
511	125MVAR BUS Reactor-2 at Maithan	30-01-2019	09:00	30-01-2019	18:00	ODB	Powergrid, ER-II	AMP work	NO REACTOR SHUTDWON DURING WINTER

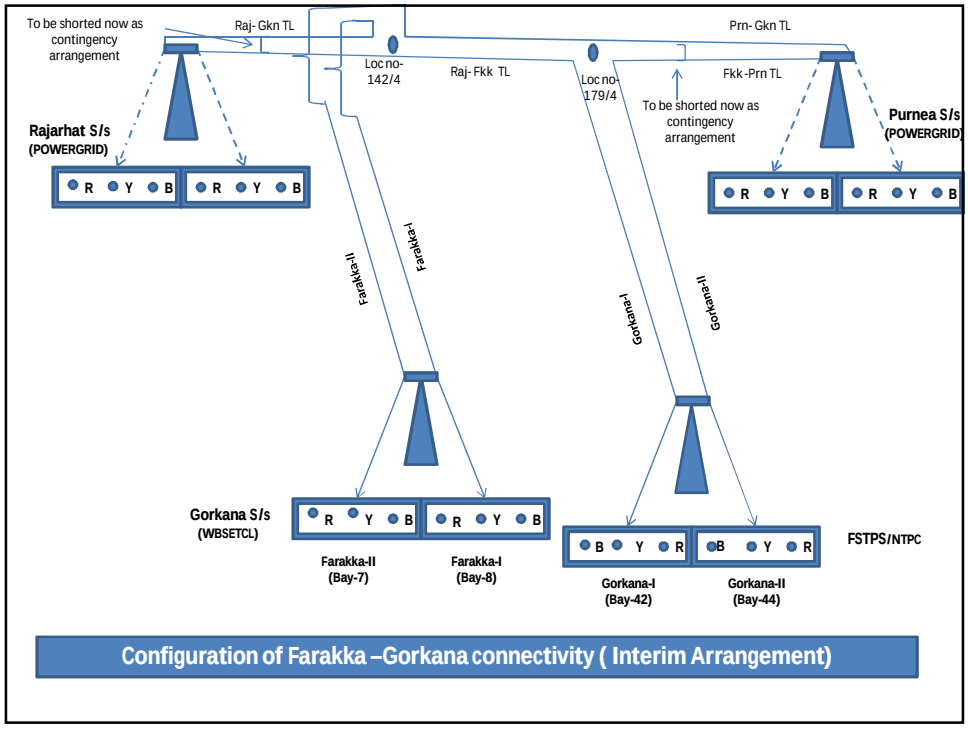
512	DGPR: 400 BUS#A & 315 MVA ICT#1	31-01-2019	07:00	31-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
513	DGPR: 400 BUS#A & 315 MVA ICT#1	31-01-2019	07:00	31-01-2019	15:00	ODB	WBSETCL	WINTER MAINTENANCE	
514	BAY NO. 412(BUS REACTOR BAY) AT DALTONGANJ	31-01-2019	21:30	31-01-2019	17:30	ODB	POWERGRID ER1	AMP	
515	220 KV Bus 1 with 220KV Siliguri 2 & Sectionalizer2	31-01-2019	10:00	31/01/19	16:00	ODB	Powergrid, ER-II	Bus bar & LBB testing	WB
516	**SSM- NBG Line#1(BRBCL)**	19-12-2018	10:00	19-12-2018	14:00	**ODB**	**BRBCL**	Oil samples of following CTs is to be taken for DGA : 411-CT-A *BKRS/CKTS TO BE ISOLATED : CB_411 LINE Will BE IN CHARGED CONDITION THROUGH CB	
517	400 KV Mejia#3- RTPS Tie bay (411) at Maithon S/s	02-01-2019	10:00	02-01-2019	18:00	OCB	Powergrid, ER-II	For replacement of WSI CT 02 nos. Bay shut down no POWER Interruption	
518	400kV Maithon Kahalgaon-2 Main Bay (416) at Maithon S/s	04-01-2019	10:00	04-01-2019	17:00	ODB	Powergrid, ER-II	AMP work, No POWER Interruption	
519	Gaya-2 Main Bay (419) at Maithon S/s	05-01-2019	10:00	05-01-2019	17:00	ODB	Powergrid, ER-II	AMP work, No POWER Interruption	
520	400kV Maithon Durgapur-2 Main Bay (401) at Maithon S/s	06-01-2019	10:00	06-01-2019	17:00	ODB	Powergrid, ER-II	AMP work, No POWER Interruption	
521	400kV MTN RTPS Maith Bay(410) at Maithon S/s	07-01-2019	10:00	07-01-2019	17:00	ODB	Powergrid, ER-II	AMP work, No POWER Interruption	
522	400 KV Bus #2 at Maithon S/s	11-01-2019	09:00	11-01-2019	18:00	ODB	Powergrid, ER-II	To change the bus isolator of 400KV Mejia#2 Line	
523	400KV Bus #3 at Maithon S/s	13-01-2019	09:00	13-01-2019	18:00	ODB	Powergrid, ER-II	To change the bus isolator of 400KV RTPS Line	
524	401- Tala #4 Main bay at Binaguri S/s	28-01-2019	08:00	28-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
525	402- Tie bay of Tala 3&4 at Binaguri S/s	20-12-2018	08:00	22-12-2018	18:00	OCC	Powergrid, ER-II	Replacement of 05 no CT	
526	405- Tie bay of ICT#2 & Tala#2 Main bay at Binaguri S/s	16-01-2019	08:00	16-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
527	406- Tala#2 Main Bay at Binaguri S/s	03-01-2019	08:00	04-01-2019	18:00	OCC	Powergrid, ER-II	Replacement of 03 no CT	
528	414- Tie bay of Rangpo-2 & Bongaigaon 2 Main Bay at Binaguri S/s	05-02-2019	08:00	06-02-2019	18:00	OCC	Powergrid, ER-II	Replacement of 02 no CT	
529	415- Bongaigaon 2 Main Bay at Binaguri S/s	19-01-2019	08:00	19-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
530	416- Kishanganj 1 Main Bay at Binaguri S/s	22-01-2019	08:00	22-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
531	417-Tie bay Kishanganj 1& Bus Reactor 1 Main Bay at Binaguri S/s	24-01-2019	09:00	24-01-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
532	418- Bus Reactor 1 Main Bay at Binaguri S/s	08-01-2019	08:00	09-01-2019	18:00	OCC	Powergrid, ER-II	Replacement of 02 no CT	
533	419- Kishanganj 2 Main Bay at Binaguri S/s	11-01-2019	08:00	12-01-2019	18:00	OCC	Powergrid, ER-II	Replacement of 02 no CT	
534	420- Tie bay of Kishanganj-2 & BR#2 Main Bay at Binaguri S/s	01-02-2019	08:00	01-02-2019	18:00	ODB	Powergrid, ER-II	Replacement of 01 no CT	
535	765kV Line Reactor of Sundargarh Line-1 at Angul	03/01/19	10:00	03/01/19	14:00	ODB	ER-II/Odisha/Angul SS	To take out spare rector & take in R-phase Reactor after attending oil leakage by full gasket replacement by M/s TBEA.	
536	400kV ICT-2 Main Bay (407) at Angul	04/01/19	09:00	04/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
537	400kV Talcher Line Main Bay (409) at Angul	05/01/19	09:00	05/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
538	400kV ICT-3 & Future Line TIE Bay (414) at Angul	07/01/19	09:00	07/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
539	400kV ICT-4 & Future Line TIE Bay (420) at Angul	08/01/19	09:00	08/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
540	400kV JINDAL Line-2 Main Bay (425) at Angul	09/01/19	09:00	09/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
541	765kV, 3*110 MVAR Bus Reactor-2 at Angul	10/01/19	09:00	10/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
542	400kV JINDAL Line-2 & GMR Line- TIE Bay (426) at Angul	11/01/19	09:00	11/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
543	765kV ICT-3 Main Bay (710) at Angul	12/01/19	08:00	12/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
544	765kV ICT-3 & B/R-1 TIE Bay (711) at Angul	14/01/19	08:00	14/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
545	765kV Bus Reactor-1 Main Bay (712) at Angul	15/01/19	08:00	15/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
546	765kV ICT-4 Main Bay (713) at Angul	16/01/19	08:00	16/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
547	765kV, 3*80MVAR Srikakulam Line Reactor-1 at Angul	17/01/19	09:00	17/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
548	765KV Srikakulam Line-1 Main Bay (729) at Angul	18/01/19	08:00	18/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
549	765kV, 3*80MVAR Srikakulam Line Reactor-2 at Angul	19/01/19	09:00	19/01/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
550	417 TIE BAY (ICT II & 63MVAR B/R)	04/01/19	09:00:00	04/01/19	17:00:00	ODB	ER-II/Odisha /Jeypore	AMP of 417 TIE BAY (ICT II & 63MVAR)	
551	3X166.67MVA coupling transformer (STATCOM)	05/01/19	09:00:00	05/01/19	12:00:00	ODB	ER-II/Odisha /Jeypore	For unit change over from Unit-I,III, IV to Unit-I , II & III	

552	418 MAIN BAY (ICT II)	06/01/19	09:00:00	06/01/19	17:00:00	ODB	ER-II/Odisha /Jeypore	For AMP Works of 418 MAIN BAY (ICT II)	
553	400 kV Jeypore-Indravati S/C Line	07/01/19	08:00:00	08/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For testing New A/R relayof Jeypore - Indravati Line & For PID defect insulator replacement work	
554	400 kV Jeypore-Bolangir S/C Line	09/01/19	08:00:00	10/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For attending shutdown nature defects & AMP of Bolangir L/R	
555	400 kV Jeypore-Gazuwaka I S/C Line	11/01/19	08:00:00	11/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	
556	400 kV Jeypore-Gazuwaka II S/C Line	12/01/19	08:00:00	12/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	
557	220KV Jeypore- JEYNAGAR-I Line	13/01/19	08:00:00	13/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-I TBC Isolator) & AMP Works	
558	220KV Jeypore- JEYNAGAR-II Line	14/01/19	08:00:00	14/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-II TBC Isolator) & AMP Works	
559	ICT-I (3x 105 MVA) at Jeypore	15/01/19	08:00:00	15/01/19	18:00:00	ODB	ER-II/Odisha /Jeypore	For changing ICT-I combination form Unit-I,III, IV to Unit-I , II & IV for charging Unit-II & To carry Insulation sleeves work Teritiry side of ICT 1	
560	220 kV Bus -I at Jeypore & 220 kV Bus Coupler CB(202 52)	16/01/19	08:00:00	18/01/19	18:00:00	OCB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	
561	220 kV Bus -II at Jeypore & 220 kV Bus Coupler CB(202 52)	19/01/19	08:00:00	21/01/19	18:00:00	OCB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	
562	413 MAIN BAY (JEYPORE-GAZ II MAIN BAY)	22/01/19	09:00:00	24/01/19	17:00:00	OCB	ER-II/Odisha /Jeypore	Overhauling of 41352 (CB)(JEYPORE-GAZ II MAIN BAY)	
563	400kV BUS II Jeypore	25/01/19	09:30:00	25/01/19	12:30:00	ODB	ER-II/Odisha /Jeypore	Rectification of broken conductor near 400kV BUS II Jeypore&AMP Works & Bus Bar Protection Testing	
564	400kV BUS I Jeypore	27/01/19	09:30:00	27/01/19	12:30:00	ODB	ER-II/Odisha /Jeypore	AMP Works & Bus Bar Protection Testing	
565	220KV Jeypore- JEYNAGAR-I Line	28/01/19	10:00:00	28/01/19	11:00:00	ODB	ER-II/Odisha /Jeypore	For Change over of Jeynagar Line from TBC CB to Jeynagar-I Bay(204 CB) after Isolator Retrofitting works of 204 89C (Jeynagar -I Line Isolator)	
566	220KV Jeypore-JEYNAGAR-II Line	29/01/19	10:00:00	29/01/19	11:00:00	ODB	ER-II/Odisha /Jeypore	For Change over of Jeynagar Line from TBC CB to Jeynagar-II Bay(205 CB) after Isolator Retrofitting works of 205 89C (Jeynagar-II Line Isolator)	
567	50 MVAR Line Reactor	07/01/19	09:00	07/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 50MVAR LR.Power flow will be interrupt for this shutdown .	
568	125 MVAR BR	11/01/19	09:00	11/01/19	13:00	ODB	ER-II/Odisha /Indravati	To Replace Terminal Box of PRD.	
569	400 KV Indravati-Jeypore Main Bay (401)	18/01/19	09:00	18/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 400 KV Indravati-Jeypore Main Bay (401)	
570	ICT-II Main Bay (205)	21/01/19	09:00	21/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of ICT-II Main Bay (205) at OHPC S/Y.	
571	ICT-II Main Bay (403)	21/01/19	09:00	21/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of ICT-II Main Bay (403) at OHPC S/Y.	
572	Bus bar-1	16/01/19	09:00	16/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-1	
573	Bus bar-2	24/01/19	09:00	24/01/19	18:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-2	
574	160 MVA ICT#2	01/01/19	09:00	01/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
575	400 KV 401R keonjhar line Reactor main bay	02/01/19	09:00	02/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works & Reactor Air Cell Replacement Works	
576	400 KV 406 Main Bay of 315 MVA ICT-II	03/01/19	09:00	03/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
577	220KV 203 Bus Coupler Bay	04/01/19	09:00	04/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
578	400 kV 407 main Bay of Baripada-Duburi line	05/01/19	09:00	06/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
579	400 kV 411 Tie Bay of Baripada-Pandiabili & Baripada-TISCO line	07/01/19	09:00	08/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
580	132KV 109 Main Bay of Baripada Line	10/01/19	09:00	10/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
581	400 KV 415 Main bay of 125 MVAR	11/01/19	09:00	11/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
582	160MVA ICT#1	12/01/19	09:00	12/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
583	132KV Bangriposi Line	13/01/19	09:00	13/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement	
584	315MVA ICT #1	14/01/19	09:00	14/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement & AMP	
585	400 KV 413 Main Bay of 500 MVA ICT	15/01/19	09:00	15/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
586	400 kV Bus-1	16/01/19	08:00	17/01/19	18:00	OCB	ER-II/Odisha/BARIPADA S/S	Testing of Bus Bar differential relay & LBB of Main bays	
587	400/220 kV 315 MVA ICT-1	16/01/19	09:00	16/01/19	10:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 403 main bay of 315 MVA ICT-1	
588	400/220 kV 315 MVA ICT-2	16/01/19	11:00	16/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 406 main bay of 315 MVA ICT-2	
589	400 kV Baripada-Pandiabili Line	16/01/19	14:00	16/01/19	15:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 410 main bay of 400 kV Baripada-Pandiabili line	
590	400 kV Baripada-Duburi Line	17/01/19	08:00	17/01/19	09:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 407 Main Bay of 400 kV Baripada-Duburi line	
591	400/220 kV 500 MVA ICT-3	17/01/19	14:00	17/01/19	17:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBBof 413 main bay of 500 MVA ICT-3 & Gas monitor Zone checking of GIS	

592	400 kV 417 Tie Bay of 125 MVAR Bus Reactor-2 & Future Bay	17/01/19	10:00	17/01/19	13:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 418 Main Bay of Future & Tie GIS Bay & Gas monitor Zone checking of GIS	
593	400 kV Bus-2	19/01/19	08:00	20/01/19	18:00	OCB	ER-II/Odisha/BARIPADA S/S	Testing of Bus Bar differential relay of Bus-2 and LBB of main Bays	
594	400 kV Baripada-Keonjhar Line	19/01/19	09:00	19/01/19	10:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 401 main Bay of 400 kV Baripada-Keonjhar line	
595	400 kV Baripada-Kharagpur Line	19/01/19	11:00	19/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 404 Main Bay of 400 kV Baripada-Kharagpur line	
596	400 kV Baripada-TISCO line	19/01/19	14:00	19/01/19	15:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 412 Main Bay of 400 kV Baripada-Kharagpur line	
597	400 kV Baripada-Jamshedpur line	20/01/19	08:00	20/01/19	09:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 409 Main Bay of 400 kV Baripada-Jamshedpur line	
598	125 MVAR Bus Reactor-1	20/01/19	10:00	20/01/19	13:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 415 Main Bay of 400 kV 125 MVAR Bus Reactor-1 & Gas monitor Zone checking of GIS	
599	125 MVAR Bus Reactor-2	20/01/19	14:00	20/01/19	17:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 418 Main Bay of 400 kV 125 MVAR Bus Reactor-2 & Gas monitor Zone checking of GIS	
600	400 kV Baripada-Keonjhar Line & 400/220 kV 315 MVA ICT-1	22/01/19	09:00	22/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 402 tie Bay	
601	400 kV Baripada-Kharagpur Line & 400/220 kV 315 MVA ICT-2	23/01/19	09:00	23/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 405 tie Bay	
602	400 kV Baripada-Jamshedpur Line & 400 kV Baripada-Duburi Line	24/01/19	09:00	24/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 408 tie Bay	
603	400 kV Baripada-TISCO Line & 400 kV Baripada-Pandiabili Line	25/01/19	09:00	25/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 411 tie Bay	
604	125 MVAR Bus Reactor-1 & 400/220 kV 500 MVA ICT-3	26/01/19	09:00	26/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 413 tie Bay	
605	125 MVAR Bus Reactor-2 & 416 GIS Future bay	27/01/19	09:00	27/01/19	12:00	ODB	ER-II/Odisha/BARIPADA S/S	Testing of LBB of 417 tie Bay	
606	400 kV 408 Tie Bay of Baripada-Duburi & Baripada-Jamshedpur line	28/01/19	09:00	29/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
607	400 kV 410 main Bay of Baripada-Pandiabili line	30/01/19	09:00	31/01/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
608	Auto reclose of 400KV Rengali-Idravati Line in non -auto mode	03/01/19	08:00	03/01/19	18:00	ODB	ER-II/Odisha/Balangir	For PID Scaning	
609	80 MVAR BUS REACTOR	04/01/19	09:00	04/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP For 80 MVAR BUS REACTOR.	
610	50 MVAR, Jeypore Line Reactor	07/01/19	09:00	07/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 50 MVAR Jeypore L/R &NGR and AMP for 403R 52 CB	
611	80 MVAR B/R Main BAY(408 BAY)	08/01/19	09:00	08/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 408 52 CB and 408 CT	
612	80 MVAR B/R TIE BAY(408 BAY)	10/01/19	09:00	10/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 40708 52 CB and 40708 CT	
613	400KV,Balangir-Jeypore Line Main BAY(403 BAY)	16/01/19	09:00	18/01/18	18:00	OCB	ER-II/Odisha/Balangir	Pole overhauling of R-PH CB of 403 BAY CB to arrest SF6 gas Leakage.	
614	220KV,Balangir-Kantapali Line BAY (203 BAY)	21/01/19	09:00	21/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 203 52 CB and 203 CT	
615	220KV,Future Line BAY (207 BAY)	23/01/19	09:00	23/01/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 207 52 CB and 207 CT	
616	400KV Balangir- Angul line	29/01/19	08:00	02/02/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of defective insulator by Polymer long Rod Insulator	
617	400KV Balangir-Jeypore line	04/02/19	08:00	04/02/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of defective insulator by Polymer long Rod Insulator	
618	125 MVAR BUS REACTOR-II MAIN BAY (BAY NO.- 425)	03/01/19	09:00	03/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF MAIN BAY (BAY NO.-425)	
619	315 MVA ICT#2 TIE BAY (BAY NO.-414)	04/01/19	09:00	04/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF TIE BAY (BAY NO.-414)	
620	315 MVA ICT#1 & 125 MVAR B/R-I TIE BAY (BAY NO.-423)	08/01/19	09:00	08/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF TIE BAY (BAY NO.-423)	
621	400 KV SUNDERGARH#2 & 400 KV RANCHI#1 TIE BAY (BAY NO.-429)	09/01/19	09:00	09/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF TIE BAY (BAY NO.-429)	
622	125 MVAR BUS REACTOR-II	10/01/19	09:00	10/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF 125 MVAR BUS REACTOR-II	
623	400 KV ROURKELA-SUNDARGARH#3	11/01/19	09:00	11/01/19	09:30	ODB	ER-II/ODISHA/ROURKELA	FOR ISOLATION OF NON-SWITCHABLE L/R	
624	63 MVAR SUNDERGARH#3 L/R	11/01/19	09:00	11/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF 63 MVAR SUNDARGARH#3 LINE REACTOR	
625	400 KV ROURKELA-SUNDARGARH#3	11/01/19	17:30	11/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	FOR TAKING NON-SWITCHABLE LINE REACTOR INTO SERVICE AFTER AMP WORK	
626	315 MVA ICT#2 MAIN BAY (BAY NO.-415)	14/01/19	09:00	14/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF MAIN BAY (BAY NO.- 415)	
627	400KV ROURKELA-CHAIBASA#1 MAIN BAY (BAY NO.- 416)	16/01/19	09:00	16/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF MAIN BAY (BAY NO.- 416)	
628	315 MVA ICT#1 MAIN BAY (BAY NO.-424)	17/01/19	09:00	17/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF MAIN BAY (BAY NO.- 424)	
629	220 KV ICT#2 INCOMER BAY (BAY NO.-208)	18/01/19	09:00	18/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF 220 KV ICT#2 INCOMER BAY (BAY NO.-208)	
630	400 KV BUS-I	21/01/19	09:00	21/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
631	400 KV BUS-II	22/01/19	09:00	22/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	

632	315 MVA ICT#1	23/01/19	09:00	23/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	
633	315 MVA ICT#2	24/01/19	09:00	24/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	
634	125 MVAR BUS REACTOR-I	25/01/19	09:00	25/01/18	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF BUS REACTOR & COMMISSIONING OF CSD IN ITS TIE BAY CB (42352 CB)	
635	220 KV BUS-I	28/01/19	09:00	28/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
636	220 KV BUS-II	29/01/19	09:00	29/01/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
637	220 KV ICT # 1 Main Bay (Bay No-201)	04/01/19	09:00	04/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
638	221 KV ICT # 2 Main Bay (Bay No-202)	09/10/19	09:00	09/10/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
639	220 KV Transfer Bus Coupler Bay (Bay No-203)	10/01/19	09:00	10/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
640	400 KV ICT # 2 Main Bay (Bay No-409)	15/01/19	09:00	15/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
641	400 KV ICT 1 & 2 Tie Bay (Bay No-408)	17/01/19	09:00	17/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
642	400 KV ICT # 1 Main Bay (Bay No-407)	18/01/19	09:00	18/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
643	400 KV Indravati- BR # 2 Tie Bay (Bay No-411)	22/01/19	09:00	22/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
644	401 KV Indravati Line Main Bay (Bay No-412)	24/01/19	09:00	24/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
645	400 KV Bus Reactor # 1 Main Bay (Bay No-410)	25/01/19	09:00	25/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
646	400 KV Keonjhar Main Bay (Bay No-401)	29/01/19	09:00	29/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
647	400 KV, 125 MVAR Bus Reactor # 1	30/01/19	09:00	30/01/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
648	40708 Bus Reactor Tie bay	04/01/19	09.00	04/01/19	18.00	ODB	Keonjhar	AMP activity of Bay	
649	40506 ICT-I Tie bay	07/01/19	09.00	07/01/19	18.00	ODB	Keonjhar	AMP activity of Bay	
650	80 MVAR Bus Reactor	09/01/19	09.00	09/01/19	18.00	ODB	Keonjhar	AMP activity of Bus Reactor	
651	40304 ICT-II Tie bay	11/01/19	09.00	11/01/19	18.00	ODB	Keonjhar	AMP activity of Bay	
652	125 MVAR Bus Reactor	14/01/19	09.00	17/01/19	18.00	OCB	Keonjhar	For replacement of defective rediator of Bus Reactor	
653	400 kV Keonjhar-Baripada LILO Line	04/01/19	09.00	04/01/19	18.00	ODB	Keonjhar	AMP activity of Line & Bays	
654	400 kV Keonjhar-Rengali LILO Line	05/01/19	09.00	05/01/19	18.00	ODB	Keonjhar	AMP activity of Line & Bays	
655	400kV Sundargarh-Raigarh Ckt#1	02/01/19	08:00	11/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	
656	400kV Sundargarh-Raigarh Ckt#1	12/01/19	08:00	14/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	
657	400kV Sundargarh-Raigarh Ckt#2&4	15/01/19	07:00	25/01/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	1) Lara Railway Diversion work 2) OPGC Line diversion work. 3) Changing of flashed glass insulators in tower-443 occurred	
658	400kV Sundargarh-Raigarh Ckt#3	27/01/19	08:00	27/08/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	
659	400kV Sundargarh-Rourkela Ckt#1	28/01/19	08:00	28/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	
660	400kV Sundargarh-Rourkela Ckt#3	12/01/19	08:00	21/01/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	
661	765KV Sundargarh-Angul Ckt #1 with LR	26/12/18	09:00	26/12/18	12:00	ODB	ER-II/Odisha/Sundergarh	To take spare Reactor in to service in place of B-Ph Reactor for attending oil leakage in B-Ph reactor	
662	Main Bay-410 of 400KV Rourkela Line-I	27/12/18	09:00	27/12/18	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
663	Tie Bay-411 of 400KV Rourkela Line-I & Future	28/12/18	09:00	28/12/18	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
664	Main Bay-415 of 400KV Sterlite#1	29/12/18	09:00	29/12/18	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
665	Tie Bay-417 of 400KV Bus Reactor-II & Sterlite#II	31/12/18	09:00	31/12/18	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
666	Main Bay-418 of 400KV Sterlite#II	01/01/19	09:00	01/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
667	765KV Bus-I at Sundargarh	02/01/19	08:00	04/01/19	18:00	OCB	ER-II/Odisha/Sundergarh	Erection of busduct and SF6 to Air bushing of 765KV GIS bus sectionalizer and Stringing of jack bus of 765KV Raipur Ckt-1&2 i.e. Bay 709 & 712 for commissioning of the lines under	
668	765KV Bus-II at Sundargarh	05/01/19	08:00	07/01/19	18:00	OCB	ER-II/Odisha/Sundergarh	Erection of busduct and SF6 to Air bushing of 765KV GIS bus sectionalizer under construction head	
669	Tie Bay-705 of 765KV 240MVAR B/R-II & 765/400KV ICT-II at Sundargarh	07/01/19	09:00	07/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
670	Main Bay-706 of 765/400KV ICT-II at Sundargarh	08/01/19	09:00	08/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
671	Main Bay-707 of 765KV Angul L/R-III at Sundargarh	09/01/19	09:00	09/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	

672	765KV Sundargarh-Angul Ckt #1 with LR	10/01/19	09:00	10/01/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take B-Ph reactor in service in place of spare Reactor after attending oil leakage in B-Ph Reactor	
673	765KV Sundargarh-Angul Ckt #2 with LR	11/01/19	09:00	11/01/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take spare Reactor in to service in place of Y-Ph Reactor for attending oil leakage in Y-Ph reactor	
674	Main Bay-710 of 765KV Angul L/R-IV at Sundargarh	12/01/19	09:00	12/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
675	Tie Bay-711 of 765KV Angul L/R-IV at Sundargarh	14/01/19	09:00	14/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
676	Main Bay-713 of 765KV Angul CKT-II with LR at Sundargarh	15/01/19	09:00	15/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
677	TIE Bay-714 of 765KV Angul CKT-II with LR at Sundargarh	16/01/19	09:00	16/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
678	Main Bay-701 of 765KV 240MVAR B/R-I at Sundargarh	17/01/19	09:00	17/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
679	Tie Bay-702 of 765KV 240MVAR B/R-I & 765/400KV ICT-I at Sundargarh	18/01/19	09:00	18/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
680	Main Bay-703 of 765/400KV ICT-I at Sundargarh	19/01/19	09:00	19/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
681	Main Bay-704 of 765KV 240MVAR B/R-II at Sundargarh	21/01/19	09:00	21/01/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
682	765KV Sundargarh-Angul Ckt #2 with LR	25/01/19	09:00	25/01/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take Y-Ph reactor in service in place of spare Reactor after attending oil leakage in Y-Ph Reactor	
683	765KV 240 MVAR Bus Reactor-1	27/01/19	09:00	27/01/19	16:00	ODB	ER-II/Odisha/Sundergarh	AMP works and To take spare Reactor in to service in place of R-Ph Reactor for attending oil leakage in R-Ph reactor	
684	765KV Angul-Srikakulam line-1	22/12/18	07:00	23/12/18	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line	
685	765KV Angul-Srikakulam line-2	24/12/18	07:00	25/12/18	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line	
686	765KV Angul-Srikakulam line-1	21/01/19	07:00	22/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	
687	765KV Angul-Srikakulam line-2	23/01/19	07:00	24/01/19	18:00	ODB	ER-II/Odisha/Kaniha	AMP work of line-if shutdown is not approved in December	



Configuration of Farakka –Gorkana connectivity (Interim Arrangement)

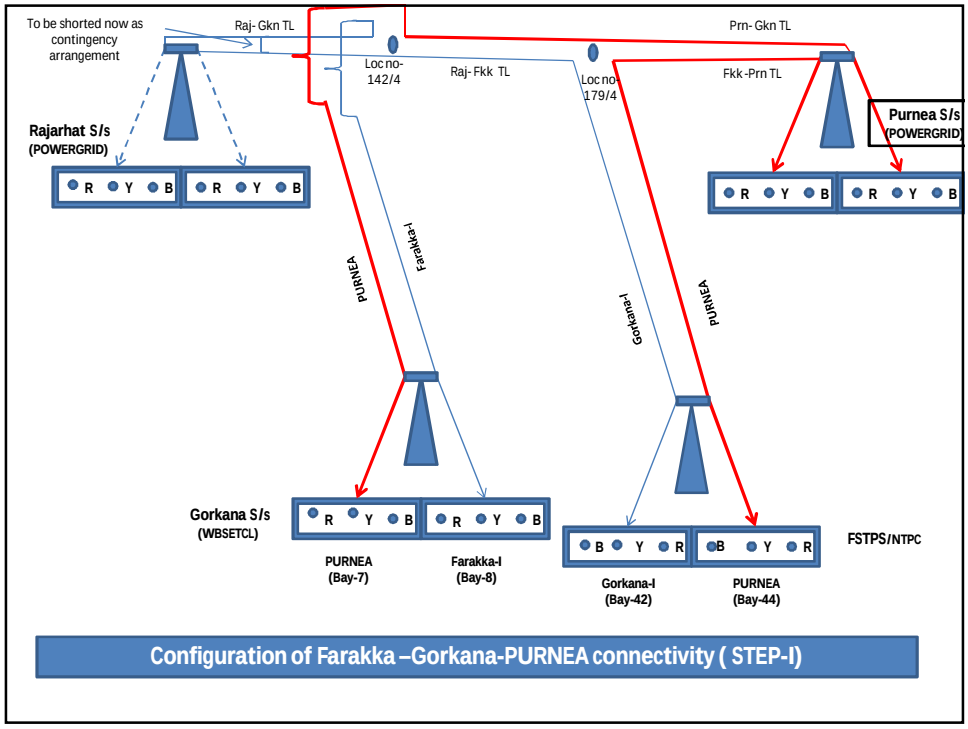
EXISTING

CKT NAME	FKK END	GOK END
FKK-GOK-I	42	08
FKK-GOK-II	44	07

STEP-I

CKT NAME	FKK END	GOK END	PRN END
FKK-PRN	44	NA	XX
FKK-GOK-I	42	08	NA
GOK-PRN	NA	07	XX

1. S/D REQUIRED FOR BOTH 400 KV FARAKKA-GOK-D/C, FOR 02 DAYS (OCB), HOWEVER, AFTER RETURNING THERE WILL BE ONLY ONE CONNECTIVITY BETWEEN FARAKKA-GOKARNA & PURNEA CONNECTIVITY WITH FARAKKA & GOKARNA WILL BE ESTABLISHED.

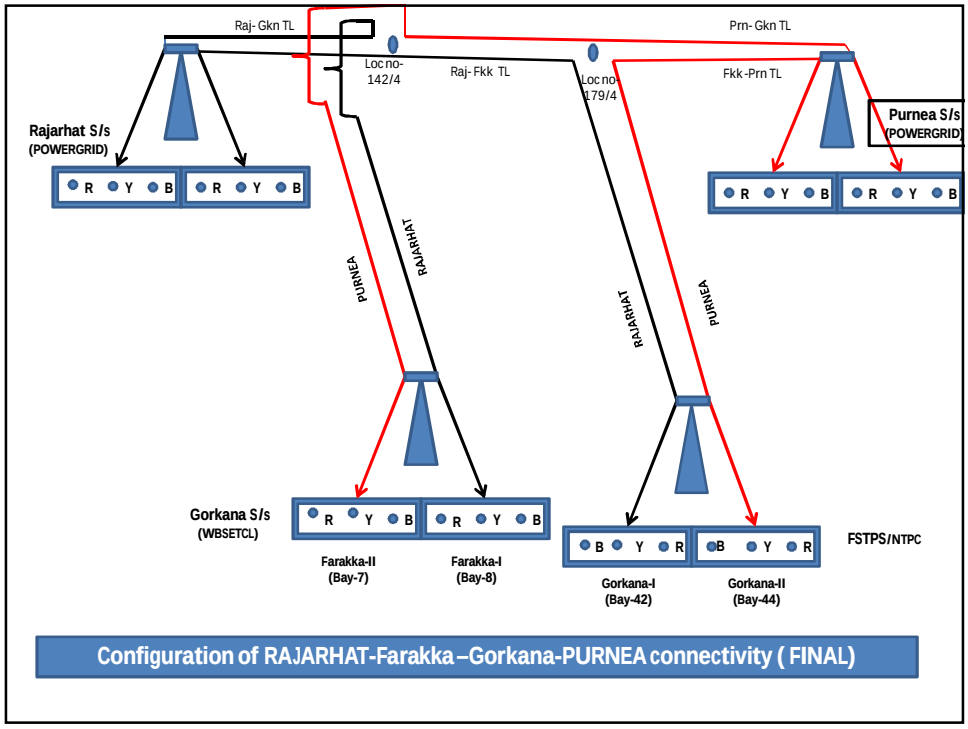


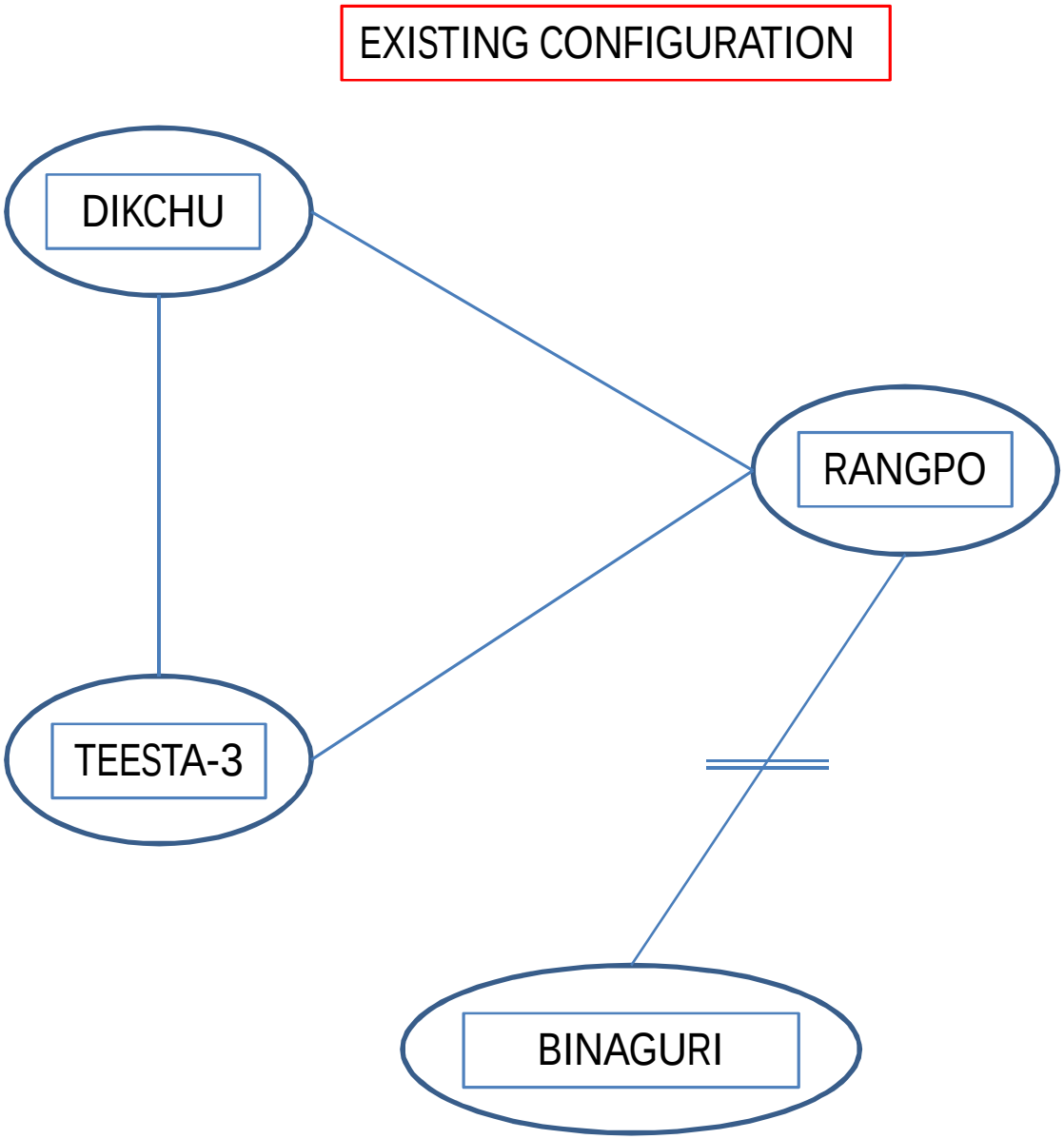
FINAL

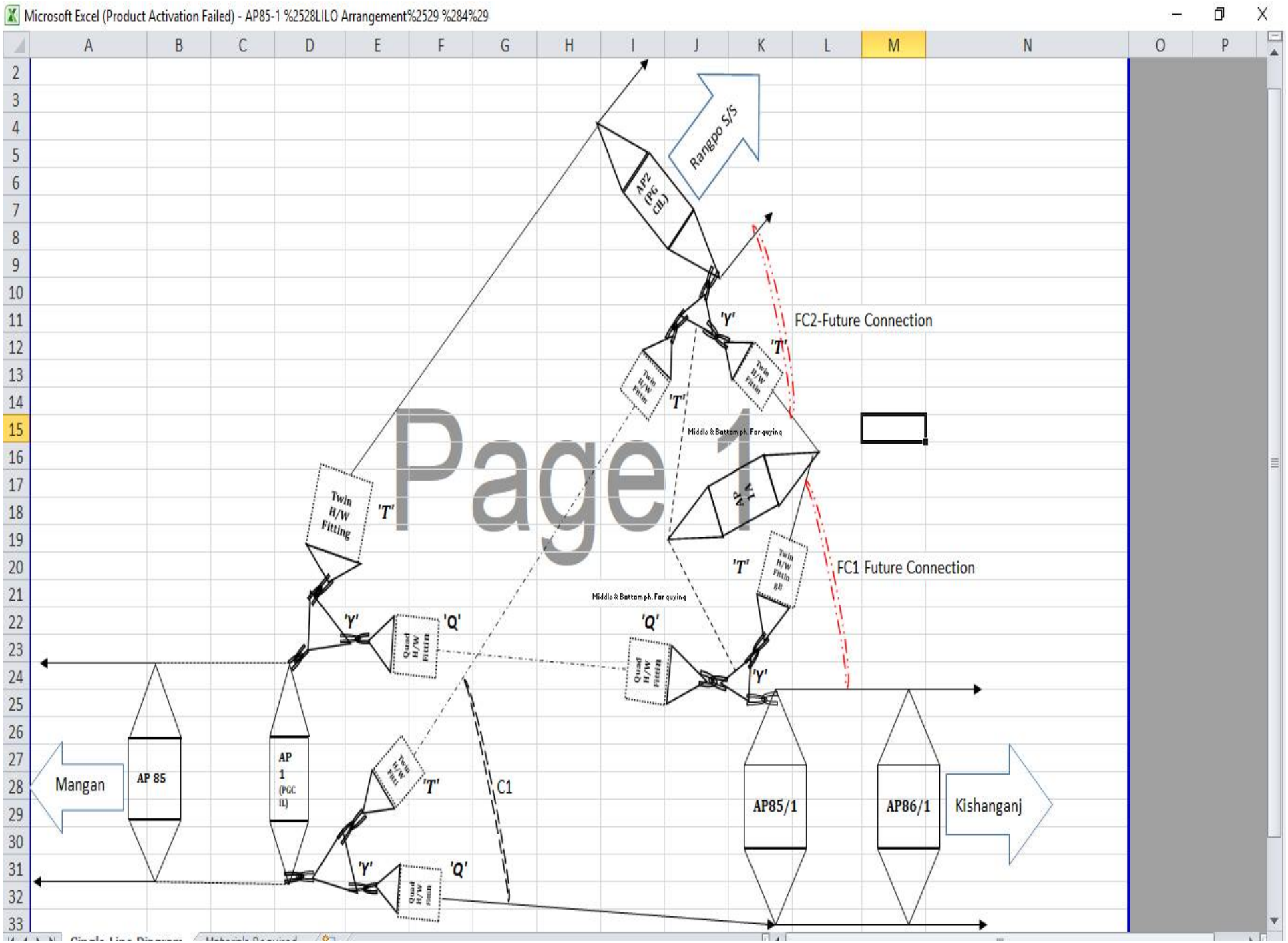
CKT NAME	FKK END	GOK END	PRN END	RAJ END
FKK-PRN	44	--	XX	--
FKK-RAJ	42	--	--	XX
GOK-PRN	--	07	XX	--
GOK-RAJ	--	XX	--	XX

1. S/D REQUIRED FOR BOTH 400 KV FARAKKA-GOK & 400 KV GOK-PRN FOR 02 DAYS (OCB). AFTER RETURNING ENTIRE SCHEME WILL BE COMPLETED.

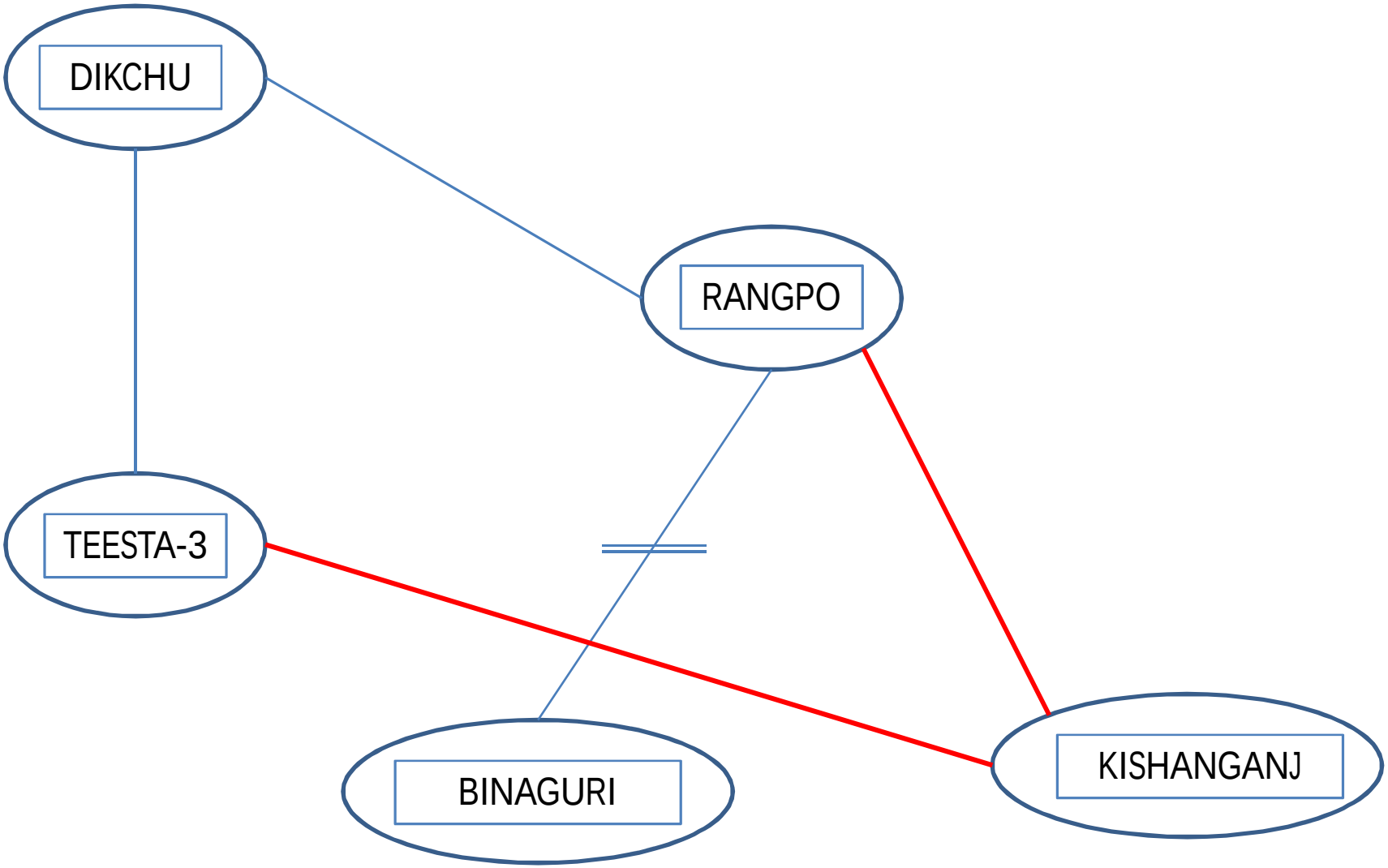
2. S/D REQUIRED FOR BOTH 400 KV SUBHASGRAM-SGTPP & 400 KV SUBHASGRAM-JEERAT FOR 02 DAYS (ODB) FOR POWERLINE CROSSING WORK NEAR RAJARHAT.


Raj- Gkn TL
Prn- Gkn TL
Loc no-142/4
Raj- Fkk TL
Loc no-179/4
Fkk -Prn TL
Rajarhat S/s (POWERGRID)
Purnea S/s (POWERGRID)
R Y B
R Y B
R Y B
R Y B
PURNEA
RAJARHAT
RAJARHAT
PURNEA
Gorkana S/s (WBSETCL)
R Y B
R Y B
B Y R
B Y R
Farakka-II (Bay-7)
Farakka-I (Bay-8)
Gorkana-I (Bay-42)
Gorkana-II (Bay-44)
FSTPS/NTPC
Configuration of RAJARHAT-Farakka –Gorkana-PURNEA connectivity (FINAL)

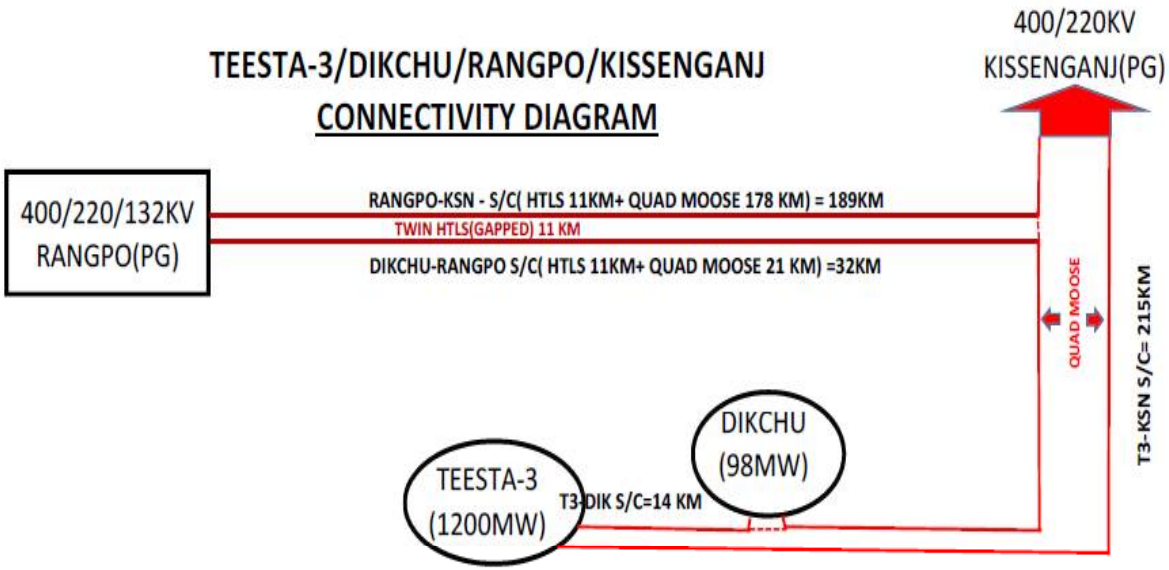

EXISTING CONFIGURATION
DIKCHU
RANGPO
TEESTA-3
BINAGURI


Microsoft Excel (Product Activation Failed) - AP85-1 %2528LILO Arrangement%2529 %284%29
Rangpo S/S
AP2 (PG cil.)
'Y'
'T'
FC2-Future Connection
Twin H/W Fittin
Middle & Bottam ph. For quying
AP 1
Twin H/W Fitting
'T'
'Y'
'Q'
Quad H/W Fittin
FC1 Future Connection
Twin H/W Fittin g
Mangan
AP 85
AP 1 (PGC IL)
C1
AP85/1
AP86/1
Kishanganj
Page 1

RECONFIGURED CONNECTIVITY



TEESTA-3/DIKCHU/RANGPO/KISSENGANJ
CONNECTIVITY DIAGRAM



Replacement of Bulged Multi-Circuit Tower Location No. 80 of 400 kV D/C Koderma- Gaya & 400 kV Maithon- Gaya T/L

Presentation by-

POWERGRID/ERTS-I

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Bulging of tower

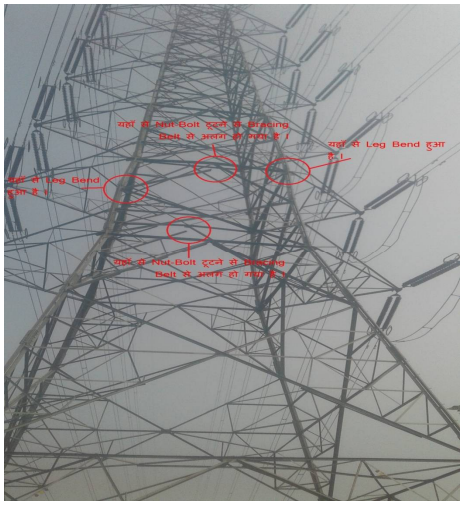
- Bulging of Multi-Circuit tower location no. 80 (MB+0) of 400 kV D/C Koderma- Gaya & 400 D/C Maithon- Gaya was observed during route patrolling in the month of July'18.
- Following the summer cyclone in the month of May/ June 2018, one main leg of the said multi-circuit tower damaged which has subsequently resulted in bulging of the tower.

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya : Bulging of tower (contd..)

The said Multi-Circuit tower is catering 4 nos. 400 kV Circuits (Two each of 400 kV Koderma- Gaya & 400 kV Maithon-Gaya).

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Bulging of tower (contd..)

Bracings of the tower has got separated from the tower belt due to breaking of various nut-bolts, making the tower vulnerable.



Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Bulging of tower (contd..)

- However, the foundation of the said location is intact.
- The said multi-circuit tower is a MB+0 type tower and 85 mtrs (approx.) in height.
- Replacement of the said tower is required to be carried out on Urgent Basis, to avoid any consequential loss due to collapse of the said tower.

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Work Involved

- The replacement work involves following:
  - De-stringing of 4 nos. 400 kV Quad Circuits (2 spans).
  - Dismantling of the entire tower of multi-ckt loc. no. 80. (MB+0 type, 85 mtrs Height, 100 MT weight).
  - Erection of a new MB+0 tower on the same foundation.
  - Re-stringing of 4 nos. 400 kV Quad Circuits (2 spans).

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Work Involved (contd..)

- Requirement:
  - Shutdown of both 400 kV Koderma- Gaya Circuit- 1 & 2 and 400 kV Maithon- Gaya Circuit- 1& 2 on continuous basis for a period of about 25 days.

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Work Involved (contd..)

- Challenges:
  - **Terrain:** The said multi-circuit portion of the 400 kV D/C Koderma- Gaya & 400 kV D/C Maithon- Gaya T/L is located in dense forest with hilly terrain. The restoration work will involve huge head- loading.
  - **Site Access:** The said tower location is also remotely located with minimal road access available. Hence transportation of T&P will be a tough ask. Further, the said area is Naxal affected and will have reduced working hours.

Replacement of Multi- Ckt Tower Loc. 80 of Koderma- Gaya & Maithon- Gaya: Submission

- Plea:
  - As the requirement of the said shutdown of both 400 kV Koderma- Gaya Circuit- 1 & 2 and 400 kV Maithon- Gaya Circuit- 1 & 2 on continuous basis for a period of 25 days, for replacement of the multi- circuit tower location, has arisen due to bulging of the said tower caused by cyclone, the said shutdown period may be considered as force majeure.

Annexure-E1

Details of stations/Units required to operate under RGMO/FGMO as per IEGC							Whether operating under RGMO	indicate in case of status is not available
Name of State	Type	Name of Uitlity	Sector (CS/SS/Private)	Name of Station	Name of Stage/ Unit	Installed capacity (MW)		
JHARKHAND	Thermal	TVNL	SS	Tenughat	1	210	No	Difficulties in implementing RGMO & exemption not
			SS		2	210	No	
	Hydro	JSEB	SS	Subarnrekha	1	65	Yes	
			SS		2	65	Yes	
WEST BENGAL	Termal	WBPDCL	SS	Bandel TPS	1	82.5	No	
			SS		2	82.5	No	
			SS		3	82.5	No	
			SS		4	82.5	No	
			SS		5	210	No	
			SS	Santaldih	5	250	No	Unit#6 could not be implemented because of some technical problem
			SS		6	250	No	
			SS	Kolaghat	1	210	No	Nil
			SS		2	210	No	Nil
			SS		3	210	No	Nil
			SS		4	210	No	Nil
			SS		5	210	No	Nil
			SS		6	210	No	Nil
			SS	Bakreshwar	1	210	Yes	
			SS		2	210	Yes	
			SS		3	210	Yes	
			SS		4	210	Yes	
			SS		5	210	Yes	
			SS	Sagardighi	1	300	No	Without OEM support it is not possible to put in FGMO/RGMO. At present OEM support is not
			SS		2	300	No	
	Hydro		SS	PPSP	1	225	Yes	In 134th OCC WBPDCL informed that the units are in RGMO/FGMO mode
			SS		2	225	Yes	
			SS		3	225	Yes	
			SS		4	225	Yes	
	Thermal	CESC	SS	Budge-Budge	1	250	Yes	
			SS		2	250	Yes	
			SS		3	250	Yes	
			SS	Haldia	1	300	Yes	
			SS		2	300	Yes	
	Thermal	DPL	SS	DPL	7	300	Yes	
Orissa		OPGC	SS	IB TPS	1	210	No	Not adequate response in RGMO
			SS		2	210	No	
	Hydro	OHPC	SS	Burla	1	49.5	No	
			SS		2	49.5	No	
			SS		3	32	No	
			SS		4	32	No	
			SS		5	37.5	No	
			SS		6	37.5	No	
			SS		7	37.5	No	
			SS	Balimela	1	60	No	
			SS		2	60	No	
			SS		3	60	No	
			SS		4	60	No	
			SS		5	60	No	
			SS		6	60	No	
			SS		7	75	No	
			SS		8	75	No	
			SS	Rengali	1	50	No	
			SS		2	50	No	
			SS		3	50	No	
			SS		4	50	No	
			SS		5	50	No	
			SS	Upper Kolab	1	80	No	
			SS		2	80	No	
			SS		3	80	No	
			SS		4	80	No	
			SS	Indravati	1	150	No	
			SS		2	150	No	

			SS	Indravati	3	150	No	
			SS		4	150	No	
			64					
Central Sector	Thermal	DVC	CS	Bokaro-A	1	500	Yes	
			CS	Bokaro-B	3	210	No	Not possible due to non availability of Electro hydraulic governing. The units will be decommissioned shortly.
			CS	CTPS	3	130	No	Not possible due to non availability of Electro hydraulic governing. The units will be decommissioned shortly.
			CS		7	250	Yes	
			CS		8	250	Yes	
			CS	DTPS	4	210	No	Not possible due to non availability of Electro hydraulic governing. The units will be decommissioned shortly.
			CS	Mejia	1	210	No	Not possible due to non availability of Electro
			CS		2	210	No	
			CS		3	210	No	Action has been initiated to put in RGMO, but testing is not yet completed.
			CS		4	210	Yes	
			CS		5	250	Yes	
			CS		6	250	Yes	
			CS	Mejia - B	7	500	Yes	
			CS		8	500	Yes	
			CS	DSTPS	1	500	Yes	
			CS		2	500	Yes	
			CS	KODERMA	1	500	Yes	
			CS		2	500	Yes	
			CS	RTPS	1	600	Yes	
			CS		2	600	Yes	
	Hydro		CS	Panchet	1	40	No	RGMO mode of operation would not be possible for
			CS		2	40	No	
	Thermal	NTPC	CS	Farakka STPP-I	1	200	Yes	
			CS		2	200	Yes	
			CS		3	200	Yes	
			CS	Farakka STPP-II	1	500	Yes	
			CS		2	500	Yes	
			CS	Farakka-U#6		500	Yes	Kept in RGMO mode from April, 2014
			CS	Kahalgoan STPP	1	210	Yes	
			CS		2	210	Yes	
			CS		3	210	Yes	
			CS		4	210	Yes	
			CS		5	500	Yes	
			CS		6	500	Yes	
			CS		7	500	Yes	
			CS	Talcher STPP Stg-I	1	500	Yes	
			CS		2	500	Yes	
			CS	Barh	5	660	Yes	
			CS	Barh	6	660	Yes	
	Hydro	NHPC	CS	Teesta HEP	1	170	Yes	
			CS		2	170	Yes	
			CS		3	170	Yes	
			42					
IPP	Thermal	IPP	PS	Maithon RB TPP	1	525	Yes	
			PS		2	525	Yes	
			PS	Sterlite	1	600	Yes	
			PS		2	600	Yes	
			PS		3	600	Yes	
			PS		4	600	Yes	
			PS	Adhunik Power	1	270	Yes	
			PS		2	270	Yes	
			PS	JLHEP	1	48	No	(RoR project with 3 hours pondage)
			PS		2	48	No	
			PS	Chujachen HEP	1	49.5	No	(RoR project with 3 hours pondage)
			PS		2	49.5	No	
			PS		1	200	No	could be put in RGMO

	Hydro	IPP	PS	Teesta Urja	2	200	No	could be put in RGMO mode but because of transmission evacuation constraint RGMO/FGMO is disabled
			PS		3	200	No	
			PS		4	200	No	
			PS		5	200	No	
			PS		6	200	No	
			PS	Dikchu	1	48	No	(RoR project with 3 hours pondage)
			PS		2	48	No	

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 ____		

Annexure – E.4

AVAILABILITY STATUS OF EVENT LOGGER, DISTURBANCE RECORDER & GPS

Sl. NO	Substation	Protection & Control System						Remarks
		Availability			Time Synchronization			
		EL	DR	GPS	Relay	DR	EL	
1	Subhasgram	Yes	Yes	Yes	Yes	Yes	Yes	
2	Maithon	Yes	Yes	Yes	Yes	Yes	Yes	
3	Durgapur	Yes	Yes	Yes	Yes	Yes	Yes	
4	Malda	Yes	Yes	Yes	Yes	Yes	Yes	
5	Dalkhola	Yes	Yes	Yes	Yes	Yes	Yes	
6	Siliguri	Yes	Yes	Yes	Yes	Yes	Yes	
7	Binaguri	Yes	Yes	Yes	Yes	Yes	Yes	
8	Birpara	Yes	Yes	Yes	Yes	Yes	Yes	
9	Gangtok	Yes	Yes	Yes	Yes	Yes	Yes	
10	Baripada	Yes	Yes	Yes	Yes	Yes	Yes	
11	Rengali	Yes	Yes	Yes	Yes	Yes	No	New EL would be implemented in BCU under NTAMC project by March'2015
12	Indravati (PGCIL)	Yes	Yes	Yes	Yes	Yes	No	EL is old one(model-PERM 200), provision for time synchronisation is not available. New EL would be implemented in BCU under NTAMC project by March'2015
13	Jeypore	Yes	Yes	Yes	Yes	Yes	Yes	EL is old and not working satisfactorily. New EL would be implemented in BCU under NTAMC project by March, 2015
14	Talcher	Yes	Yes	Yes	Yes	Yes	Yes	
15	Rourkela	Yes	Yes	Yes	Yes	Yes	Yes	
16	Bolangir	Yes	Yes	Yes	Yes	Yes	Yes	
17	Patna	Yes	Yes	Yes	Yes	Yes	Yes	
18	Ranchi	Yes	Yes	Yes	Yes	Yes	Yes	
19	Muzaffarpur	Yes	Yes	Yes	Yes	Yes	Yes	
20	Jamshedpur	Yes	Yes	Yes	Yes	Yes	Yes	
21	New Purnea	Yes	Yes	Yes	Yes	Yes	Yes	
22	Gaya	Yes	Yes	Yes	Yes	Yes	Yes	
23	Banka	Yes	Yes	Yes	Yes	Yes	Yes	
24	Biharsariif	Yes	Yes	Yes	Yes	Yes	Yes	
25	Barh	Yes	Yes	Yes	Yes	Yes	Yes	
26	Sagardighi	No	Yes	Yes	Yes	Yes	No	EL is under process of restoration with help from OEM, China
27	Kahalgaon	Yes	Yes	Yes	Yes	Yes	Yes	
28	Farakka	Yes	Yes	No	No	No	No	Time synchronization available for Farakka-Kahalgaon line-III & IV. The same will be implemented in rest of the lines by December, 2014.
29	Meramundali	Defunct	Yes	Yes	Yes	Yes	Yes	
30	Tisco	Yes	Yes	Yes	Yes	Yes	Yes	
31	Bidhannagar	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical

								relays. GPS will be put in service by January, 2015.
32	Indravati (OHPC)	Yes	Faulty	No	No	No	No	Time synchronization will be done by Feb, 2015. ICT-I feeders using DR & EL available in Numerical relays. 400 kV ICT-II feeder is being maintained by PGCIL, Mukhiguda.Status may confirm from PGCIL
33	Kharagpur	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical relays.
34	DSTPS	Yes	Yes	Yes	Yes	Yes	Yes	
35	Sterlite	Yes	Yes	Yes	Yes	Yes	Yes	
36	Mejia 'B'	Yes	Yes	Yes	Yes	Yes	Yes	
37	Mendhasal	Defunct	Yes	Yes	Yes	Yes	No	EL will be restored by March, 2015.
38	Arambagh	No	Yes	Yes	No	No	No	Using DR & EL available in Numerical relays
39	Jeerat	No	Yes	No	No	No	No	Using DR & EL available in Numerical relays. Procurement of new GPS is in progress.
40	Bakreswar	Yes	Yes	Yes	Yes	Yes	Yes	
41	GMR	Yes	Yes	Yes	Yes	Yes	Yes	
42	Maithon RB	Yes	Yes	Yes	Yes	Yes	Yes	
43	Raghunathpur	Yes	Yes	Yes	Yes	Yes	Yes	
44	Kolaghat	Yes	Yes	Yes	Yes	Yes	Yes	
45	Teesta V	Yes	Yes	Yes	Yes	Yes	Yes	
46	Koderma	Yes	Yes	Yes	Yes	Yes	Yes	
47	Sasaram	Yes	Yes	Yes	Yes	Yes	Yes	
48	Rangpo	Yes	Yes	Yes	Yes	Yes	Yes	
49	Adhunik	Yes	Yes	Yes	Yes	Yes	Yes	
50	JITPL	***Yes***	***Yes***	***Yes***	***Yes***	***Yes***	***Yes***	
51	765kV Angul	Yes	Yes	Yes	Yes	Yes	Yes	
52	Chuzachen	Yes	Yes	Yes	No	Yes	Yes	
53	New Ranchi 765kV	Yes	Yes	Yes	Yes	Yes	Yes	
54	Lakhisarai	Yes	Yes	Yes	Yes	Yes	Yes	
55	Chaibasa							
56	765kV Jharsuguda	Yes	Yes	Yes	Yes	Yes	Yes	All are in working condition. However a dedicated DR for 765KV Lines; make TESLA is not working. M/s Siemens has assured to commission the same by 31.01.15
57	Beharampur	Yes	Yes	Yes	Yes	Yes	Yes	
58	Keonjhar	Yes	Yes	Yes	Yes	Yes	Yes	

Eastern Regional Power Committee

The status of ERS towers in Eastern Region as updated in OCC meetings is given below:

1) ERS towers available in Powergrid S/s is as given below:

Sl. No.	Name of S/S	No. of ERS towers available
1	Durgapur, ER-II	1 Set (8 towers)
2	Rourkela, ER-II	3 towers incomplete shape
3	Jamshedpur, ER-I	15 towers (10 nos Tension tower and 5 nos suspension tower)

2) The present status of ERS towers in OPTCL system is as follows:

Sl. No.	Name of S/S	No. of ERS towers available
1	Mancheswar	2 nos, 400 kV ERS towers
2	Mancheswar, Chatrapur & Budhipadar	42 nos, 220 kV ERS towers

- 12 nos. of new 400 kV ERS towers have been recieved.
- Another, 16 nos of 400 kV towers accompanied with 6 sets of T&P are required which is under process

3) The present status of ERS towers in WBSETCL system is as follows:

Sl. No.	Name of S/S	No. of ERS towers available
1	Gokarna	2 sets
2	Arambag	2 sets

4) The present status of ERS towers in BSPTCL system is as follows:

Sl. No.	Type	Quantity	Remarks
1	Tension ERS Tower	12	New
2	Suspension ERS Tower	20	New
3	Old ERS Tower	10	1 no. is defective
Total		**42**	

- As informed in ERS meeting held on 10-11-2014 taken by Member (Power System), CEA; 2 sets (12 tension & 20 suspension) of ERS towers had been procured and currently available in BSPTCL system (as mentioned in above table with remarks “New”).
- Same ERS tower is used in both 220 kV and 132 kV circuits.

5) In 25th ERPC meeting held on 21.09.2014, E R P C concurred to the proposal of procurement of four sets of ERS and it was also informed that, the proposed four sets of ERS will be kept at Sikkim, Siliguri, Ranchi and Gaya and will be used by all constituents of ER during emergencies.

   Powergrid informed that four sets of ERS for Eastern Region will be procured.

5) DVC informed that they are in process of procuring two (2) sets of 400 kV ERS towers.

Checklist for Submission of new transmission elements for updation in Protection Database

NAME OF ORGANISATION:
FOR THE MONTH OF:

SUBSTATION DETAIL:

Sl No	DETAILS OF ELEMENTS	DATA TYPE	Status of Submission (Y/N)	Remarks
1	TRANSMISSION LINE	LINE LENGTH, CONDUCTOR TYPE, VOLTAGE GRADE		
2	POWER TRANSFORMER	NAMEPLATE DETAILS		
3	GENERATOR	TECHNICAL PARAMETERS		
4	CURRENT TRANSFORMER	NAMEPLATE DETAILS		
5	VOLTAGE TRANSFORMER	NAMEPLATE DETAILS		
6	RELAY DATA	MAKE, MODEL and FEEDER NAME		
7	RELAY SETTINGS	NUMERICAL RELAYS: CSV or XML file extracted from Relay ELECTROMECHANICAL RELAYS: SNAPSHOT of RELAY		
8	REACTOR	NAMEPLATE DETAILS		
9	CAPACITOR	NAMEPLATE DETAILS		
9	UPDATED SLD			

SIGNATURE:
NAME OF REPRESENTATIVE:
DESIGNATION:
CONTACT:
E-MAIL ID: