Agenda

for

152nd OCC Meeting

Date: 17.12.2018
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Agenda for 152nd OCC Meeting to be held on 17th December, 2018 at Floatel, Kolkata

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.

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**

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.
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-March 19 Balimela-Feb 2019 U.Indravati-*	*22.35 Cr.*	2.235 Cr	Placed work order for Balimela.

				Jan 19 Burla-Nov 2018, Chiplima Dec 2018			
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 would be completed by October 2018.
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	09-08-17	25.36 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.

		Despatch Centre, Sikkim			
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 different 400kV Substation within the state of West Bengal for reactive power management of the Grid	12-03-18	78.75 Cr.	Proposal recommended by Appraisal 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.

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.

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.

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 longterm 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.

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.

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.

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 Cband 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.

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.

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 / 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.

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.

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.

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 given below:

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	

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.

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.

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.

Item No. B.15: Additional agenda

PART C: ITEMS FOR UPDATE

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

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

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

OPTCL may update.

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.

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,*	*Dikchu, Dansenergy, Teesta-III*
3.	SPS in CESC system	*CESC*	*Nil*
4.	SPS at Chuzachen	*Chuzachen*	*Nil*

Members may update.

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

The latest status along with proposed logic as follows:

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 25.11.16	F <49.9 AND deviation > 12 % or 150 MW
2	DVC	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 17.06.2016	
3	Bihar	F <49.7 AND deviation	Recieved	F <49.9 AND deviation > 12 % or

		> 12 % or 150 MW	quotation from Chemtrol.	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.

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.

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.

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.

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

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

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-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.

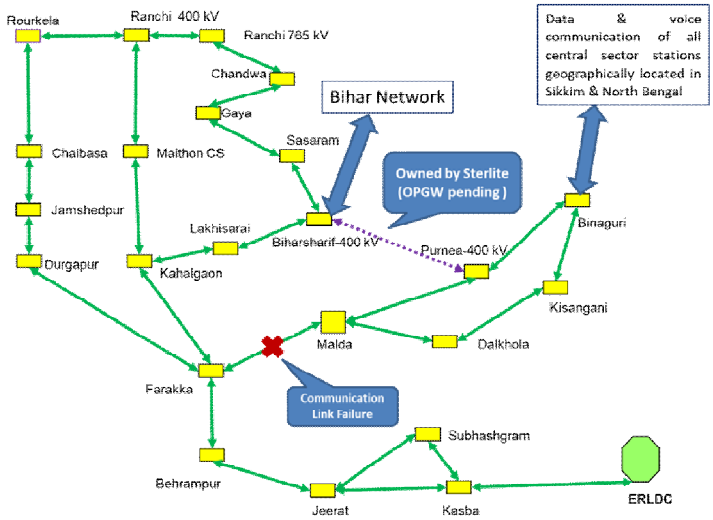
WBSETCL may update.

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.

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.

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.

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.

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.

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.

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

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	4750	--	200	--	4550	--	Nov-18
2	JUSNL	1164	--	60	--	1104	--	Feb-19
3	DVC	1318	3480	61	48	1257	3432	Mar-19
4	OPTCL	1835	--	82	--	1753	--	Nov-18
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.

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.

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 Sep 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	
4	U. Indarvati	3rdweek ofJune 2018	*Planned in Oct,2018.*	2ndweek of February2019	

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		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.

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.

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.

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.

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.

WBPDCL 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 Systemhave 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.

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.

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.

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

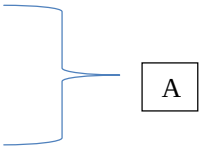
1. 400KV Main bus I (DMTCL): – 5.01.2019 to 12.01.2019 .
2. 400KV Main bus II (DMTCL): – 14.01.2019 to21.01.2019.
3. 400KV Main bus I (DMTCL) & 400KV Main bus II (DMTCL) – 21.01.2019 to 23.01.2019

Alipurduar Transmission Limited may explain. Members may approve.

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.



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.

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.

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.

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				
03.	400 KV RANGPO-DIKCHU.				

Members may discuss.

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.

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.	26.12.18	01.01.19	OCB	FOR RECONFIGURATION OF EXISTING CIRCUITS.
02.	400 KV TEESTA-3-DIKCHU.				
03.	400 KV RANGPO-DIKCHU.				

Members may discuss.

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.

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.

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.

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	Reason(s)	Outage
					(MW)		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.

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.

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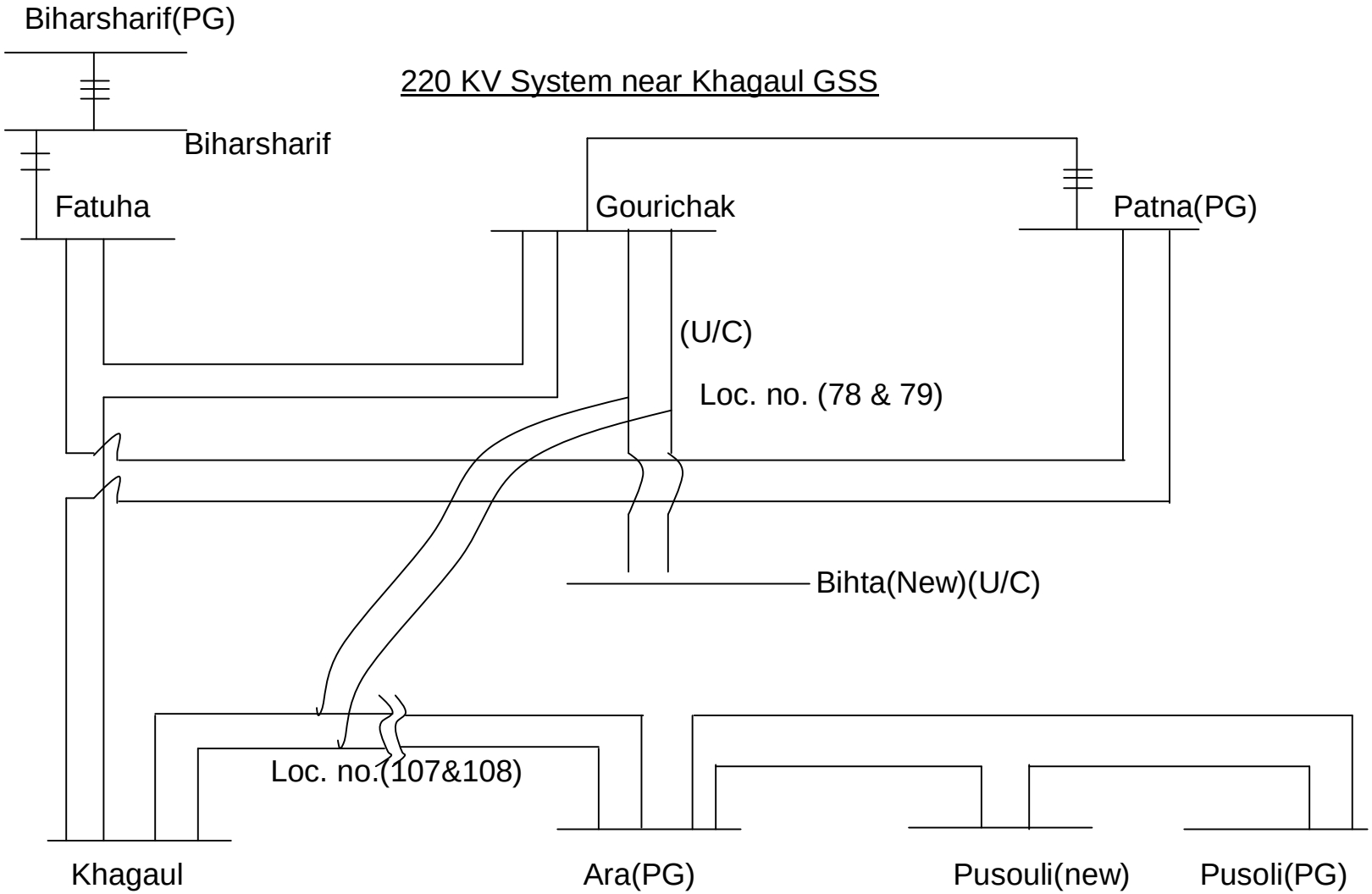
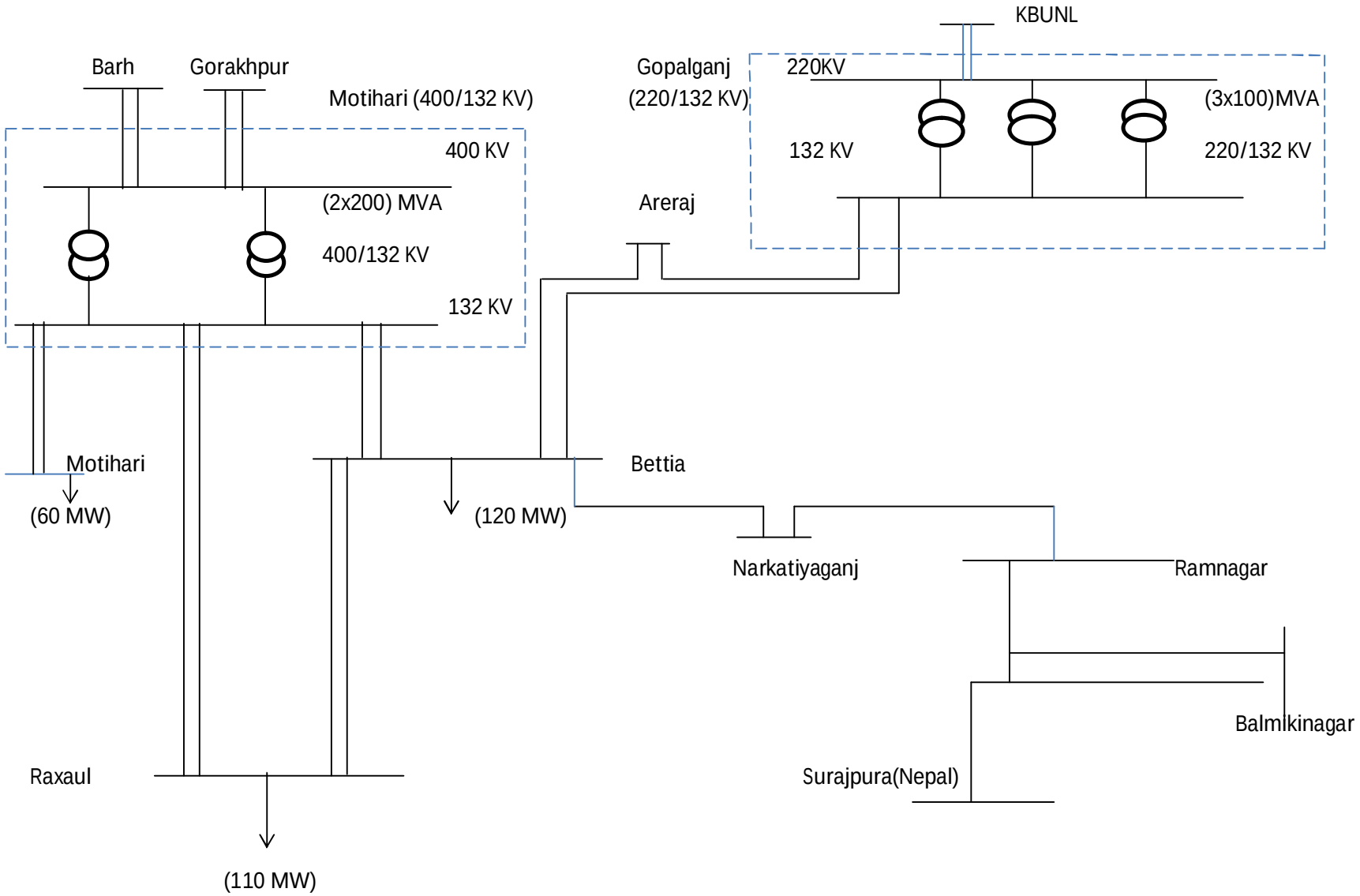


1. S/D required for 220 KV Fatuha-Khagaul (D/C) line [except LILO portion to Gaurichak & Patna(PG)]
2. 220 KV Ara(PG)-Khagaul line will be split at loc no. 107 & 108 and will be connected with 220 KV Gourichak-Bihata(new) (D/C) (U/C) transmission line(at loc. no. 78 & 79).

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)

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	3800	2189
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	625	338
		- Central Sector	2898	1684
	iii)	SURPLUS(+)/DEFICIT(-)	-277	-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	5146	2866
		- Central Sector	292	163
		Long term Bi-lateral (Export)	1454	1082
	iii)	SURPLUS(+)/DEFICIT(-)	1184	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)	5534	2955
	ii)	CESC's DRAWAL	0	0
	iii)	TOTAL WBSEDCL's DEMAND	5534	2955
	iv)	NET POWER AVAILABILITY- Own Source	3375	2094
		- Import from DPL	120	0
		- Central Sector	2165	972
	v)	SURPLUS(+)/DEFICIT(-)	125	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	670	497
		FROM HEL	250	262
		FROM CPL/PCBL	0	0
		Import Requirement	520	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	7217	3795
	ii)	NET POWER AVAILABILITY- Own Source	4408	2778
		- Central Sector+Others	2935	1234
	iii)	SURPLUS(+)/DEFICIT(-)	125	216
7		**SIKKIM**		
	i)	NET MAX DEMAND	90	38
	ii)	NET POWER AVAILABILITY- Own Source	1	0
		- Central Sector+Others	129	58
	iii)	SURPLUS(+)/DEFICIT(-)	39	20
8		**EASTERN REGION** **At 1.03 AS DIVERSITY FACTOR**		
	i)	**NET MAX DEMAND**	18687	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)**	21658	11898
	iii)	**PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)**	1513	-119

KOLKATA

TRANSMISSION ELEMENTS OUTAGE PROPOSED 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-MUZ LINE	
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 KVBIHARSARIF-MUZAFFARPUR LINE	
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 REMAIN OUT OF SERVICE DURING THE	
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 Shut down period HVDC	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 Shut down period HVDC	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 remail out of Service	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 Shut down period HVDC Sasaram	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 (without load) for 24 hrs due to first	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. 3) Changing of flashed glass insulators in tower	**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 EXTENSION UNDER ERSS-21	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 &	
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 &	
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-	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 Line	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 leakage in R-Ph reactor	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 Polumer at variou crossing spans	**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 equipments remain Charge through	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	10:00hrs	19.12.2018	14:00 hrs	**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	

Outages proposed in other RPCs requiring ERPC approval

Sl No	outages proposed in	Name of Requesting Agency	Name of Elements	From	Time	To	Time	Basis	Reason	Remarks
1	WRPC	WRTS-I	765kV D'JAIGARH-JHARSUGUDA I	4-Jan-19	09:30	4-Jan-19	11:30	Daily	For LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
2	WRPC	WRTS-I	765kV D'JAIGARH-JHARSUGUDA II	4-Jan-19	11:45	4-Jan-19	13:30	Daily	For LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
3	WRPC	WRTS-I	765kV D'JAIGARH-JHARSUGUDA III	4-Jan-19	15:05	4-Jan-19	17:00	Daily	For LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
4	WRPC	WRTS-I	765kV D'JAIGARH-JHARSUGUDA IV	4-Jan-19	17:05	4-Jan-19	18:30	Daily	For LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
5	WRPC	WRTS-I	400KV RANCHI-SIPAT I	7-Jan-19	08:00	9-Jan-19	18:00	Daily	INSTALLATION OF GLASS/LONG ROD INSULATORS AT POWER LINE/RAILWAY/ROAD CROSSINGS BY BILASPUR TLM & OTHER CKT A/R IN N/A MODE REQUIRED.	
6	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI I	7-Jan-19	09:00	9-Jan-19	19:00	Daily	Replacement of Broken Insulators at Loc.No. 12,677 (More than 03 insulators are broken per string), Open spacer cum damper rectification on various locations, Installation of missing EVD, Jumper nut bolts, Installation of grading ring on polymer insulators, etc. Non auto mode required for Ranchi - Dharamjaygarh # 2 for same duration.	
7	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI I	7-Jan-19	10:00	7-Jan-19	11:00	Daily	For Tie LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
8	WRPC	WRTS-I	765kV D'JAIGARH- JHARSUGUDA I	7-Jan-19	10:00	7-Jan-19	11:00	Daily	For Tie LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
9	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI II	7-Jan-19	15:00	7-Jan-19	16:00	Daily	For Tie LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
10	WRPC	WRTS-I	765kV D'JAIGARH- JHARSUGUDA II	7-Jan-19	15:00	7-Jan-19	16:00	Daily	For Tie LBB testing, line Outage along with line reactors outage required for testing LBB at Korba.	
11	WRPC	WRTS-I	765kV D'JAIGARH- JHARSUGUDA IV	8-Jan-19	10:00	8-Jan-19	11:00	Daily	For Tie LBB testing, line Outage along with line reactors & ICT-2 outage required for testing LBB at Korba.	
12	WRPC	WRTS-I	400KV RANCHI-SIPAT II	10-Jan-19	08:00	12-Jan-19	18:00	Daily	INSTALLATION OF GLASS/LONG ROD INSULATORS AT POWER LINE/RAILWAY/ROAD CROSSINGS BY BILASPUR TLM & OTHER CKT A/R IN N/A MODE REQUIRED.	

13	WRPC	WRTS-2	Sipat-Ranchi-1 Line at Sipat End	14-Jan-19	08:00	16-Jan-19	18:00	Continuous	For PM	
14	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI II	16-Jan-19	09:00	17-Jan-19	18:00	Continous	To facilitate Gantry & Equipment erection of under construction 765KV Bus Reactor bank#3 at Dharamjaigarh PS.	
15	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI I	22-Jan-19	09:30	22-Jan-19	11:30	Daily	LBB testing, Line & Line along with SLR outage required at Korba	
16	WRPC	WRTS-I	765kV D'JAIGARH-RANCHI II	22-Jan-19	11:45	22-Jan-19	13:30	Daily	LBB testing, Line & SLR outage required at Korba	
17	WRPC	WRTS-I	765kV D'JAIGARH-JHARSUGUDA III	23-Jan-19	15:05	23-Jan-19	17:00	Daily	Tie LBB testing, Line & along with SLR outage required at Korba	
18	NRPC	POWERGRID	GAYA-ER (765KV)-BALIA (765KV)	28-Jan-19	08:00	2019-01-31	18:00	DAILY	For balance strengthening of Suspension Towers (Delta configuration)	
19	NRPC	POWERGRID	ALLAHABAD (400KV)-SASARAM-ER (400KV)	18-Dec-18	08:00	19-Dec-18	18:00	DAILY	Insulator cleaning	
20	NRPC	POWERGRID	GAYA-ER (765KV)-VARANASI (765KV)1	19-Dec-18	08:00	19-Dec-18	18:00	DAILY	Insulator cleaning	
21	NRPC	POWERGRID	GAYA-ER (765KV)-VARANASI (765KV)2	20-Dec-18	08:00	20-Dec-18	18:00	DAILY	Insulator cleaning	
22	NRPC	POWERGRID	SASARAM-ER (400KV)-VARANASI (400KV)	20-Dec-18	08:00	21-Dec-18	18:00	DAILY	insulator cleaning	
23	NRPC	POWERGRID	ALLAHABAD (400KV)-SASARAM-ER (400KV)	8-Jan-19	08:00	8-Jan-19	18:00	DAILY	TESTING OF LBB RELAY FOR 408 TIE BAY	
24	NRPC	POWERGRID	FATEHPUR-PG (765 KV)-SASARAM-ER (765KV)	14-Jan-19	08:00	21-Jan-19	18:00	DAILY	For balance strengthening of Suspension Towers 537 nos (Delta configuration) .	
25		Powergrid	Agra-BNC-Alipurdaur testing	Test schedule attached here with.						
Approved shutdown dates by other RPC for shutdown proposal by ERPC										
1	ERPC	ER-II/Odisha /Jeypore	400 kV Jeypore-Indravati S/C Line	12-Dec-18	08:00	13-Dec-18	18:00	Daily	For testin New A/R relayof Jeypore - Indravati Line & For PID defect insulator replacement work	TTC/ATC of ER-SR and Import of SR may be reduced by 300 MW during shut down period
2	ERPC	ER-II/Odisha /Jeypore	400 kV Jeypore-Bolangir Line	15-Dec-18	08:00	15-Dec-18	18:00	Daily	For attending shutdown nature defects	TTC/ATC of ER-SR and Import of SR may be reduced by 300 MW

3	ERPC	ER-II/Odisha /Jeypore	765KV Angul-Srikakulam line-1	22-Dec-18	07:00	22-Dec-18	18:00	ODB	AMP work of line.	After (N-1) of Angul-Srikakkulam other circuit 700MW TTC curtailmnet in SR import.
4	ERPC	ER-II/Odisha /Jeypore	765KV Angul-Srikakulam line-2	23-Jan-19	07:00	23-Jan-19	18:00	ODB	AMP work of line.	After (N-1) of Angul-Srikakkulam other circuit 700MW TTC curtailmnet in SR import.

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: