Minutes

of

153rd OCC Meeting

Date: 29.01.2019

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 153rd OCC Meeting held on 21st January, 2019 at ERPC, Kolkata

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

Member Secretary, ERPC chaired the meeting. He welcomed ED, ERLDC and all the other participants to the meeting. He informed that ERPC is organizing a workshop on PoC Mechanism is scheduled on 29th & 30th January 2019 and a special meeting on RGMO & PSS tuning is scheduled on 31st January 2018. He added that a workshop on "Enhancing Managerial Skill" would be held at IMI, Kolkata on 4th February 2019. Notice for the respective workshops had been issued and also available at ERPC website.

He highlighted the major agenda points of the meeting. He informed that 154th OCC Meeting would be held at Mejia TPS, DVC on 21st February 2019. He advised all the members to make it convenient to attend the meeting.

It was informed that NPC has sought an updated status of Implementation of Recommendations of Enquiry Committee in the proforma enclosed at **Annexure-I**. The proforma was also circulated in the meeting and the concerned members were advised submit the updated status by 24th January 2019 by email to **mserpc-power@nic.in**.

Item no. 1: Confirmation of minutes of 152nd OCC meeting of ERPC held on 17.12.2018

The minutes of 152nd OCC meeting were uploaded in ERPC website and circulated vide letter dated 27.12.2018 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 152nd OCC meeting.

PART A : ER GRID PERFORMANCE

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

The average consumption of Eastern Region for December- 2018 was 344.7 Mu. Eastern Region energy consumption for December month was 356.9Mu on 15thDecember - 2018. Total Export schedule of Eastern region for December - 2018 was 2336.63 Mu, whereas actual export was 2092.13Mu.

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

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

Deliberation in the meeting

ERLDC presented the performance of the Eastern Regional Grid during December 2018 and up to 16th January 2019. Presentation is enclosed at ***Annexure- A1****.*

OCC observed that the % of time of frequency remaining within the IEGC has decreased to 70% in January,19 (Upto 16th January) from 77% in December,2018.This trend was contrary to the expectation as amended DSM Regulation has come into force from 01.01.2019. This needs through analysis.

ERLDC informed that ER constituents are following the schedule from 1st January 2019.

ERLDC informed that they are not getting hydro outage data from Odisha.

OCC advised Odisha to send the hydro outage data ERLDC.

ERLDC added that in the month of December 2018, voltage at Jeerat and Subhasgram was higher than nominal value (400 kV) for considerable amount of time. MVAr absorption by nearby units during high voltage condition is satisfactory except by Sagardighi and Kolaghat.

OCC advised WBPDCL to take necessary action to improve the performance.

WBPDCL informed that because of GT tap position, their units were not absorbing the VAR during high voltage.

OCC advised WBPDCL to review GT tap position in coordination with WBSLDC to increase MVAr absorption in high voltage condition by generating units of Sagardighi, Kolaghat.

ERPC presented number violations due to not changing the sign of deviation after every six blocks for first week of January 2019 and the additional charges to be paid are shown as follows:

	01/01	02/01	03/01	04/01	05/01	06/01	Total no. violation	Add Charge due to sign change violation(Rs in lac)
BSPHCL	6	3	5	5	2	4	25	150.86084
JUVNL	10	11	9	13	8	7	58	583.71418
DVC	4	5	5	1	5	5	25	114.57090
GRIDCO	3	0	2	4	2	3	14	47.37925
SIKKIM	15	14	11	3	8	13	64	75.39084
WBSETCL	5	5	3	1	6	3	23	61.14853
HVDC SASARAM	15	15	15	15	15	15	90	16.36779
HVDC ALIPURDAR	15	15	15	15	15	15	90	29.49539

	01/01	02/01	03/01	04/01	05/01	06/01	Total no. violation	Add Charge due to sign change violation(Rs in lac)
BARH	0	0	1	0	0	0	1	0.15904
MTPS-II	1	2	2	3	6	6	20	16.11653
TEESTA	0	0	0	0	0	0	0	0.00000
GMR	0	1	0	0	1	0	2	0.35708
JORETHANG	1	0	1	0	0	0	2	0.05636
NVVN-NEPAL	14	14	14	13	13	14	82	305.65932

All the constituents noted.

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 Extended till March 2019	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 had 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 islanding scheme had been implemented and in operation wef **15.11.2018***
5		Upgradation of Protection and SAS		April 2020	23.48	2.348 Cr	Bid opened and order has been placed. Work started.
6	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	10.05.15	30.11.18	162.5 Cr.	37.79 Cr	Total contract awarded for Rs. 51.35 Cr
7		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.17		25.61 Cr.		Agreement signed on 03.01.2018
8		Installation of 125 MVAR Bus Reactor along with construction of associated bay each at 400kV Grid S/S of Mendhasal, Meramundali& New Duburi for VAR control &stabilisation of system voltage	27.07.18		27.23 Cr		
9	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		*U.Kolab, Balimela, U.Indravati, Burla, Chiplima March 2019*	*22.35 Cr.*	2.235 Cr	Placed work order.
10	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/15	31.07.2018	64.02 crore	56.04 crore	85% of work has been completed. Contract awarded for Rs.71.37 Cr till date. The work would be completed by Feb 2019.
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. 90% supply and 60% of erection had been completed.
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 to Siemens on 28th Sep 2018.

14	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation	02.01.17	01.06.2019	25.96 Cr	2.596 Crore on 01.06.2017	Work awarded for 28.07 Cr. Work would be completed by May 2019.
15		Renovation and upgradation of control & protection system including replacement of substation equipment at Parulia, Durgapur, Kalyaneshwari, Jamshedpur, Giridih, Barjora, Burnpur, Dhanbad and Burdwan Substation of DVC	27.11.17	24 Months from the date of release of fund.	140.5 Cr.	1st installment of 14.05 Cr. received on 21.12.2017	Work awarded for 6.45 Cr. Price bid opened for West Bengal portion and technical bid opened for Jharkhand portion.
16	POWERGRID	Installation of STATCOM in ER		June 2018	*160.28 Cr*	*16.028 Cr*	Work is in progress, expected to complete by June 2018. STATCOM at Rourkela has been commissioned.
17	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16	Project is alive from 30th October 2017	20 Cr.	4.94 Cr. + 9.88 Cr.	1) Protection Database Project has been declared 'Go live' w.e.f. 31.10.17. 2) Pending training on PDMS at Sikkim and 3rd training on PSCT has been also completed at ERPC Kolkata.
18a	ERPC	Training for Power System Engineers	*27.07.18*		0.61 Cr.	Nil	Approved
18b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents	*27.07.18*		5.46 Cr.	Nil	

B. Projects under process of approval:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	Sikkim	Renovation &Upgradation of Protection System of Energy and Power Department, Sikkim.	09-08-17	68.95 Cr	The proposal requires third party protection audit. Issue was discussed in the Monitoring Group meeting in Siliguri on 8.6.2018. Sikkim was asked to coordinate with ERPC.
2		Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim	09-08-17	25.36 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
3	JUSNL	Reliable Communication & Data Acquisition System upto 132kV Substations.	23-08-17	102.31 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
4	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	3.26 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
5		Protection upgradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir&Paradeep).	12-03-18	41.1 Cr.	Scheme examined by TSEG on 20.03.2018. Inputs sought from the entity are awaited.
6	WBSETCL	Implementation of Integated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal	22-12-17	25.96 Cr	Proposal recommended by Appraisal committee as communicated on 16.11.2018.
7		Installation of Bus Reactors at 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.

Deliberation in the meeting

Members updated the latest status as mentioned in above table.

Item No. B.2: Installation of PMUs for observation of the dynamic performance of STATCOMs

In 39th ERPC Meeting, it was decided that,

i. *Power Grid shall immediately place an order on M/s GE for supply and installation of 4 nos. PMUs for 4 STATCOMs in the Eastern Region at an estimated cost of Rs. 40 Lakh.*
ii. *The cost of the above should be included within the quantity variation clause under the URTDSM Project funded from PSDF.*
iii. *Powergrid shall approach the PSDF Appraisal Committee for inclusion of the above under the quantity variation clause under the URTDSM Project.*
iv. *In case PSDF funding for this addition supply and installation is not available, then the cost of PMUs including the installation cost (approx. Rs.40 Lakh) shall be included under the project "Upgradation of SCADA / RTUs / SAS in the Central Sector Stations and strengthening of OPGW network".*

Powergrid may update.

Deliberation in the meeting

Powergrid informed that M/s GE had agreed to supply and install of 4 nos PMUs for 4 STATCOMs in the Eastern Region within the quantity variation clause under the existing URTDSM Project.

Item No. B.3: IMPLEMENTATION OF 4TH PHASE AMR INCLUDING REQUIREMENT OF AMR DATA FOR SCADA DATA COMPARISON

In 39th TCC/ERPC Meeting, it was agreed to implement 4th phase AMR at a cost of Rs 1.75 Cr in place of Rs. 93.56 lakhs approved earlier, considering the added requirement of meters, locations, additional functionality, AMC etc.

ERPC suggested that Power Grid should ensure reliability in data transmission by implementing LAN connectivity through OPGW Network wherever feasible.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the works had been awarded to M/s TCS on 23rd December 2018 at a cost of Rs.1.69 Cr after negotiation.

Powergrid added that the work would be completed by October 2019.

Item No. B.4: Implementation of FGD for Bakreswar units-WBPDCL

WBPDCL informed that earlier they had considered the BKTPS units were SOx compliant with respect to the new emission norms. However, after feasibility study done M/s GE Power they have planned to install wet FGD for all the units of BkTPS.

WBPDCL requested to consider the extension of deadline for implementation of FGD at BkTPS and forward the recommendation to CEA for further communication to MOEF & CC/CPCB.

WBPDCL may explain. Members may decide.

Deliberation in the meeting

WBPDCL informed that they would implement FGD at Bakreswar units by June 2022.

OCC agreed to consider the extension of timeline for compliance of new emission norms and forward the recommendation to CEA for further communication to MOEF & CC/CPCB.

Item No. B.5: Alternate power supply arrangement for Chakradharpur, Goikera, Rajkharswan and Kendposi TSS under JSEB—South Eastern Railways

South Eastern Railways informed that train services are being seriously disturbed due to frequent and prolonged power supply failures at above substations. At present the supply is coming from Chandil S/s of Jharkhand.

JUSNL has recently commissioned 132kV Chaibasa-Manoharpur D/C line. In view of prolonged power supply failures at Chandil substation, SER requested to provide alternate source from Manoharpur to Goilkera and further to Chakradharpur, Rajkharswan and Kendposi to ensure un-interrupted traction power supply.

SER may explain. Members may discuss.

Deliberation in the meeting

After detailed deliberation, OCC observed that the issue could be resolved bilaterally and advised JUSNL and SER to discuss among to resolve the issue.

OCC also advised SER and JUSNL to approach ERPC with complete details, if they could not resolve the issue.

Item No. B.6: Evacuation of Power from OPGC expansion project-modification of network configuration--GRIDCO

Two units of Odisha Power Generation Corporation (OPGC) with 660 MW capacity each are going to be commissioned shortly. Both the generating units are under advanced commissioning stage and most likely attain COD within April-2019. Entire capacity (2 x 660 MW) is meant for the State of Odisha as per the Government of Odisha notification. OPGC & GRIDCO are in the process of executing the PPA for entire capacity. Under such arrangement OPGC Station shall become State embedded unit.

Power evacuation scheme has been proposed with **SPLIT BUS** arrangement at IbTPS (OPGC) switchyard with one unit (Unit # 3) connected to STU system at Lapanga Sub-station through 400 kV D/C line and the other unit (Unit # 4) shall be connected to 765 kV / 400 kV Jharsuguda PG through 400 kV D/C line.

Presently, both transmission systems are already charged under SPLIT BUS condition.

In view of the above, it is felt necessary to operate both units (2 x 660 MW) in **COMMON BUS** mode having connectivity with both STU & CTU system for a reliable, efficient, secured & stable grid.

In the above common bus arrangement as proposed the 400 kV IbTPS-Jharsuguda PG D/C line needs to be declared as the interstate tie lines of Odisha.

OPTCL has conducted the System Study (Short Circuit & Load Flow Analysis) under COMMON BUS mode and found technically suitable within permissible limits.

The Committee may deliberate and finalize the common bus arrangement for evacuation of power from OPGC (2 x 660 MW) new plant.

GRIDCO may explain.

Deliberation in the meeting

OCC advised GRIDCO to submit the proposal to CEA for detailed discussion in Standing Committee.

Item No. B.7: Islanding Scheme of IB-TPS

Special Meeting on Islanding Scheme of IB-TPS held at ERPC, Kolkata on 12th December 2018 at 11:00hrs. Minutes of the meeting are enclosed at **Annexure-B7**. In the meeting, OPTCL and OPGC were advised to present final islanding scheme in the OCC Meeting of January 2019.

OPTCL and OPGC may present the final scheme.

Deliberation in the meeting

*OPTCL and OPGC explained the final islanding scheme with detailed presentation. The presentation is enclosed at **Annexure-B7A**.*

OCC advised OPTCL and OPGC to implement the islanding scheme.

OPTCL and OPGC informed that the islanding scheme would be implemented by June 2019.

Item No. B.8: Crossing of OPTCL transmission line under 400kV DC Baripada-Dubri/Pandiabili(Earlier Baripada-Mendhasal line) without taking approval from POWERGRID--Powergrid

M/s OPTCL has sent a letter ref no:Tech-303-11 date 03.01.2018 regarding approval for passing of 132kV Udala LILO line under 400kV Baripada-Mendhasal D/C between Location 112-113-114 near Manitri Dist Mayurbhanja.

Accordingly, mail was sent to M/s OPTCL on dt 24/04/2018 for clarification before giving consent for stringing of the line. But without further communication M/s OPTCL has constructed the line which pass on both side of TOWER Loc 113.The distance of the Conductor from the Tower is barely 10mtrs.Because of this maintenance activity of the line at the Tower Loc. 113 will be extremely difficult. Therefore, it is requested to M/s OPTCL to take up the matter seriously and divert the line in such a way that there should not be any hindrance to POWERRID during maintenance activity. After getting due approval from POWERGRID, OPTCL is requested to divert the line.

Powergrid may explain. Members may discuss.

Deliberation in the meeting

OCC advised Powergrid to submit the details to OPTCL regarding action needed to be taken by OPTCL with a copy to ERPC.

OPTCL committed that they would allow the shutdown of 132kV Udala LILO line for any Maintenance work to be carried out in 400kV Baripada-Mendhasal D/C by Powergrid.

Item No. B.9: Review of Rangpo SPS scheme after commissioning of 400 KV Teesta III-Kishangaanj line

As per discussion in special meeting held on 14th October, 2016 at ERPC, Kolkata, on installation of SPS at 400kV level at Rangpo S/s for reliable power evacuation through 400kV Rangpo – Siliguri D/c line, one SPS scheme was proposed to facilitate maximum evacuation from the generation projects in Sikkim till the commissioning of the main evacuation line of the Sikkim IPPs viz. Rangpo – Kishangunj 400kV D/c (Quad) line. It was decided to review SPS scheme after commissioning of evacuation link to Kishangunj.

In view of commissioning of 400 KV Teesta III- Kishangunj & 400 KV Rangpo – Kisenganj line Rangpo SPS scheme may be reviewed.

Members may please discuss.

Deliberation in the meeting

ERLDC informed that 400 KV Rangpo – Kishangunj line is not yet commissioned.

Teesta III submitted the revised SPS scheme to be implemented after commissioning of 400 KV Teesta III- Kishangunj & 400 KV Rangpo – Kishangunj line. The proposal is enclosed at ***Annexure-B9****.*

OCC decided that ERPC and ERLDC would study the revised SPS scheme and place their comments in next OCC Meeting.

Item No. B.10: Load Generation Balance Report (LGBR) for the year 2019-20

The draft LGBR has been prepared by ERPC after the detailed discussion with the constituents of Eastern Region in the meeting on finalization of draft Load Generation Balance Report (LGBR) for the year 2019-20, which was held at ERPC, Kolkata on 18.12.2018. Major observations are given below:

1. **The following major thermal units shutdown were deferred from summer months considering strong reservations by a no. of distribution utilities, which have their major share:**

- NTPC Barh STPSU#4(660MW)(01.03.19to 04.05.19)to **01.11.19 to 04.01.20 (65 days** continuous)
- NTPC Barh STPS U#5 (660MW)(01.03.20 to 04.05.20) to **15.01.20 to 19.03.20 (65 days** continuous)
- NTPC FSTPSU#6(500 MW)(01.06.19 to 05.07.19) to **01.11.19 to 05.12.19 (35 days** continuous)
- NTPC TSTPS U#1 (500 MW)(22.07.19 to 25.08.19) to **01.12.19 to 04.01.20(35 days** continuous)
- DVC KodermaU#1(500 MW)(01.04.19 to 06.05.19 to **16.01.20 to19.02.20 (35 days** continuous)
- MPL Unit # 1 (525 MW) (25.05.19 to 07.06.19) to **01.11.19 to 14.11.19 (14 days** continuous)

Besides, the above revised outage programme, some of the NTPC units of Farakka,Kahalgoan STPS and Kolaghat & Santaldih TPS of WBPDCL due to Boiler licence renewal were allowed to shift 10-15 days as per deliberations. The maintenance schedule of thermal generating units in ER during 2019-20 as agreed and finalised in the LGBR meeting is shown in **Annexure-B10.1.**

Thereafter, NTPC has requested for changes in the planned maintenance in LGBR. Letter is enclosed at **Annexure-B10.1A.**

2. ABSTRACT OF SYSTEMWISE UNRESTRICTED PEAK DEMAND (MW) (Refer Annexure- B10.2)

The month wise demand (MW) (unrestricted) of the constituents as projected considering the actual demands is being met during the current months, were analysed and corrected during the meeting. The demand forecast of the constituents and cumulative regional demand based on generation availability and diversity factor were worked out and assessed in the range of 21550 MW to 24820 MW. The regional monthly peak surplus or deficit taking into account of export to neighbour countries worked out to be in the range of600 MW to700 MW. However, Bihar and Jharkand states remained in deficit peak demand on monthly basis due to less generation availability from their own sources.

3 ABSTRACT OF SYSTEMWISE UNRESTRICTED ENERGY REQUIREMENT (MU) (Refer Annexure-10.3)

The expected monthly energy requirement (MU) of the constituents against energy availability indicated that, except Bihar and Jharkand states, most of the constituents would meet the energy requirement and there would be surplus of energy in ER on monthly basis. The energy availability from the new units of NTPC and constituents as indicated have been considered. This would lead to energy surplus in ER. The energy availability would vary in between 13800 to 16700 MU on monthly basis considering monthly scheduled maintenances of generating units.

4 SCHEDULE OF COMMISSIONING OF NEW GENERATING UNITS IN THE CONSTITUENT SYSTEMS

The following units are expected to commission during 2019-20 and their energy availability (MU) have been taken into consideration as agreed by the constituents:

SYSTEM	THERMAL UNITS	CAPACITY(MW)	EXPECTED DATE COD
NTPC	DARLIPALLI # 1	800	01.04.2019
	DARLIPALLI #2	800	01.10.2019
BRBCL	NABINAGAR U#3	250	01.04.2019
ODISHA	IB TPS U# 3	660	01.04.2019
	IB TPS U#4	660	01.04.2019
BIHAR	BARUNI U#8	250	01.07.2019
TOTAL		3420	

The final LGBR of ER would be subsequently prepared and published on receipt of Annual Generation Target from CEA/MOP.

Members may discuss.

Deliberation in the meeting

The beneficiaries of NTPC stations in ER strongly opposed the proposal of NTPC regarding revision of the maintenance schedule for 2019-20 as finalized in the LGBR meeting held on 18.12.2018.

OCC opined that the maintenance schedule of thermal units had been finalized keeping in view of the ER demand profile (Minimum maintenance of thermal units during April-19 to June 19 i.e. high demand period and maximum maintenance of thermal units during November-19 to February-20, during low demand period) as well as ensuring maximum availability of power during April 2019 and May 2019 for Lok Sabha Election-2019.

OCC advised NTPC to adhere to the maintenance schedules as per the decision of LGBR meeting on 18.12.2018.

GM, NTPC Farakka explained that they might not be able to run all the units of Farakka during April 2019 due to shortage of water in view of water sharing with Bagladesh. Therefore, he requested to postpone the maintenance schedule of FSTPS unit#5 from 11.03.2019 to 01.04.2019 so that they could run unit#5 during full water availability in March 2019. He added that all the other units of FSTPS would be in service in April 2019.

Beneficiaries of FSTPS did not agree to postpone the maintenance schedule of FSTPS unit#5 from 11.03.2019 to 01.04.2019 in view of summer peak demand and Lok Sabha Elections-2019.

Beneficiaries advised NTPC to run FSTPS unit#5 during March 2019 and agreed to allow the maintenance of FSTPS unit#5 during April 2019 in case of acute water shortage.

Regarding postponement of maintenance schedule of KBUNL U#4 (195 MW) from 01.03.19 to 01.04.19, Bihar agreed to send their comments to ERPC.

Item No. B.11: 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 152nd OCC, OPTCL explained the requirement of 132kV bay at 400/220/132kV Baripada S/s with a detailed presentation. OPTCL requested for a new 132 kV Bay at Baripada for 132KV Kuchei- Bangiripushi line to limit the line loading as well as to meet the n-1 contingency. OPTCL informed that sufficient space is available at 400/220/132kV Baripada S/s for construction of two 132kV bays.

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

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

OPTCL and Powergrid may update.

Deliberation in the meeting

OPTCL informed that space is available for construction of 132kV bays.

Powergrid informed that allotment of bays would be decided in Standing Committee meeting.

OCC advised OPTCL to submit the proposal to CEA for detailed discussion in Standing Committee.

Item No. B.12: Load Trimming Scheme on 400/132 kV Motihari ICTs.

400/132 kV Motihari substation is having a two ICTs each with 200 MVA capacity. It has been observed that due to higher load catering of Bihar along with Nepal, the ICTs are running without N-1 reliability. On 22nd August 2018 at 14:59 Hrs, the ICTs combined load increased to 280 MW

and one ICT got tripped on mal-operation of OSR relay due to moisture ingress. This led to overloading of other ICT, which tripped in overcurrent protection. This led to the loss of 280 MW of Bihar and Nepal.

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

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

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

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

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

BSPTCL informed that Motihari grid have a capacity of (2X200) MVA, 400/132 KV GSS here and power evacuation from this station taken place by following three 132KV double circuit lines as detailed below (SLD enclosed at **Annexure-B12**):-

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	Bettia will have two source from Motihari (400/132 KV) and Gopalganj
		Total-120 MW	
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).

In 152nd OCC, BSPTCL explained the load trimming scheme.

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

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

BSPTCL may update.

Deliberation in the meeting

BSPTCL agreed to submit the revised scheme to ERPC and ERLDC within a week.

Item No. B.13: Use of Polymer Insulators in the transmission lines--CEA

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

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

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

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

In 152nd OCC, Powergrid informed that they are following the "Regulation Clause No. 89(1)(f)(i) of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010".

After detailed deliberation, OCC decided the following:

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

Reply received from Powergrid Odisha Projects is enclosed at **Annexure-B13**.

Powergrid may update.

Deliberation in the meeting

OCC advised Powergrid ER-I and ER-II to submit the details to ERPC at the earliest.

Item No. B.14: Problems in operating at 55 % Minimum Technical Limit conditions-MPL

Minimum Technical Limit (MTL) of interstate generating stations is guided by Indian Electricity Grid Code (IEGC) following CERC notification in this regard. Moreover, it is the responsibility of ERLDC to ensure applicability of IEGC. As you are aware that there is widespread coal crisis across Eastern India & MPL station is not an exception to this. In view of poor coal quality

(Specific Coal Consumption variation from 0.56 to 0.7) difficulties are being faced in Boiler combustion . At 55 % Technical Minimum level the Boiler flame condition is unstable and & also there are fluctuations in drum level.

MPL is not able to operate to 55% MTL condition as flame intensity and frequency becomes low at pull out value of fireball. The low flame intensity and frequency issues are due to erosion of coal burners, Secondary air dampers erosion and fouling of burner nozzle assemblies These conditions will be addressed in forth coming Annual overhaul in April 2019 and Nov 2019 respectively for unit 2 and 1.

Hereby request to all beneficiaries to co-operate us in this situation and limit out technical minimum operating condition at 61%. With your great co-operation we assure smooth and reliable operation.

MPL may explain. Members may discuss.

Deliberation in the meeting

OCC advised MPL to pursue the issue with beneficiaries for settlement.

ER beneficiaries in the meeting noted the concern of MPL and hoped that beneficiaries of MPL shall extend necessary assistance in this regard as a one time measure for a few months only in this year.

Item No. B.15: Status of Emergency Restoration system (ERS) of respective Transmission Licencees

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

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

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

State-wise Emergency Restoration system				
Transmission Licensee	**Requirement of Total no of ERS in State**	**Number of ERS available in state**	**No of ERS to Be Procured**	**Remark if Any .**
WBSETCL	10	10	Nil	-
OPTCL	84	54	30	
JUSNL	13	8	5	
DVC	400kV – 2 nos	400kV- Nil	400kV – 2nos	
	220kV – 2 nos	220kV – 1 nos	220kV – 1 nos	
	132kV – 10 nos	132kV – 8 nos	132kV – 2 nos	

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

Other Transmission Licencees may submit the details as per the format.

Deliberation in the meeting

DVC updated the status as mentioned in above table.

OCC advised Bihar to submit the details at the earliest.

Item No. B.16: 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 details had been received from DVC, WBSETCL, Bihar and OPTCL only.

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

Members may comply.

Deliberation in the meeting

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

Item No. B.17: 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

In 152nd OCC, ERLDC updated the following generating stations have not submitted static data for preparation of report on coal firing stations:

1. *IB thermal stage -1*

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

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

Members may update.

Deliberation in the meeting

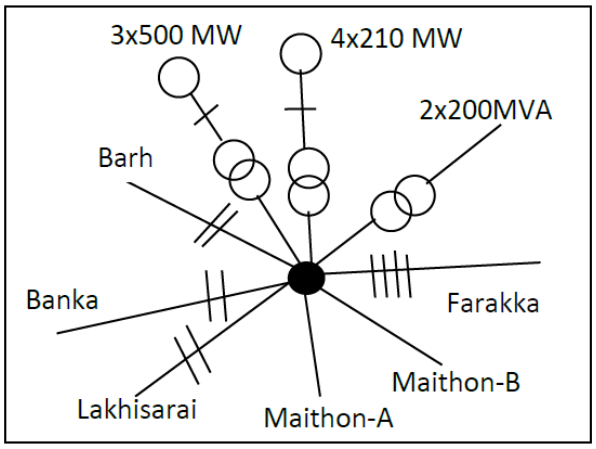
OCC advised the thermal generators to submit the relevant information to ERLDC at the earliest.

Item No. B.18: NTPC Kahalgaon bus splitting--ERLDC

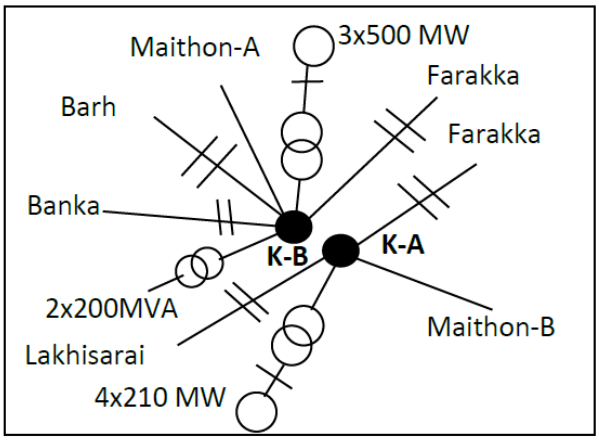
The Bus splitting of 400/132 kV Kahalgaon (NTPC) was discussed and agreed in principle in the 11th Standing Committee meeting of Eastern region held on 20th Sept 2010 and completion of bus splitting is expected during January 2019. The bus splitting scheme is as follows:

Kahalgaon Switchyard

Before Splitting



After Splitting



400kV Kahalagaon-Banka-I line was taken shutdown from 26-11-2018 to facilitate the bay shifting work from Bus-I to Bus-III as per the bus splitting scheme. However to restore the same line on its new bay, 400kV Kahalgaon-Banka-II line shutdown was also takenfrom 03-01-2019 due to some line crossing work which was not mentioned during outage request of 400kV Kahalagaon-Banka-I. Now 400kV Kahalgaon-Banka-II will be restored with Bus – III of Kahalgaon on 16-1-2019. Also Kahalgaon Bus-I was taken shutdown on 09-01-2019 for splitting of bus into two different sections. After splitting, Bus-I was charged at 20:08hrs of 09-01-2019 and Bus III along with 400kV Kahalgaon-Banka-I was charged 02:30hrs of 10-01-2019.

NTPC Kahalgaon is requested to give a detail presentation about the further plan to complete remaining bus splitting work.

Deliberation in the meeting

NTPC gave a detailed presentation on further plan to complete remaining bus splitting work. Details are enclosed at ***Annexure-B18****.*

OCC advised Powergrid to coordinate their shutdown plan accordingly in order to avoid multiple outages.

Item No. B.19: Operation Eastern Regional grid from ERLDC back up control Centre at, NLDC, New Delhi as a part of Disaster Management: ERLDC

As a part of disaster Management preparedness, the control room shift operation of ERLDC is planned to be operated from its back up control Centre at NLDC, New Delhi tentatively on 08th February, 2019 (one shift only). During this process all control room shift operation regular activities viz. real time supervision and monitoring of Eastern Region system, switching/ outage co-ordination of transmission elements, all scheduling activities and preparation of different reports shall be performed from back up ERLDC Control Centre from NRLDC, New Delhi.

The contact numbers of back-up ERLDC would be informed to all ER constituents prior to such exercise.

Members may please note.

Deliberation in the meeting

Members noted.

Item No. B.20: Segregation of Tala and Chukha Energy

Order related to Dagachu scheduling was issued by Honorable CERC on 11th September 2014 via order no 187/MP/2014. As per CERC order, for computing the actual power of Tala and Chukha injected at Indian periphery, the actual injection of Dagachhu power as computed by meters installed on its outgoing lines and furnished by NLDC Bhutan, has to be subtracted from the total power injected at Binaguri (New Siliguri) and Birpara.

The total power of Tala and Chukha so arrived above will be apportioned amongst Tala and Chukha in the ratio of the Tala and Chukha receipt at Indian periphery in the corresponding month of the previous year as per the published figure in the Regional Energy Accounts.

After deriving the components of injection of Tala and Chukha at Indian periphery, the existing methodology of settlement with reference to Tala and Chukha injection shall be followed by ERPC. Accordingly, the above methodology was being used for Tala and Chukha energy segregation.

However it was observed that after adjusting Dagachu Power from the export of net power from Bhutan power at Indian Boundary, Bhutan has net import of India Power in the Month of Feb18 and March 18 and due to the same REA for Bhutan was suspended in Feb18 & Mar18.

In view of above, Due to non-availability of Tala and Chukha receipt at Indian Periphery and suspendered REA in Feb18 & Mar18, Segregation of Tala and Chukha energy at Indian Periphery in Feb19 & March19 will be done as per Feb17 & March17 REA data.

Members may note.

Deliberation in the meeting

ERLDC explained.

Members noted.

Item No. B.21: Updation of Restoration procedure of Eastern Region--ERLDC

In compliance with clause 5.8 (a) and (b) of the present IEGC, The regional Restoration Procedure has to be developed and updated annually by RLDC in consultation with NLDC, all users, STU, SLDC,CTU, RPC Secretariat of the region.

For fulfillment of same , Draft copy of "Black Start and Restoration Procedure" was mailed on 11th Jan 2019 for review and feedback from stake holders. Based on feedback and updated information same will be finalized by 31st Jan 2019.

All regional entities of Eastern Region are therefore requested to furnish their observations (if any) positively by 25-01-19.

Deliberation in the meeting

ERLDC informed that the following major changes have been made in the document:

- *Updated power map and corresponding restoration path and schematic diagram*
- *Updated Traction load details of Eastern Railway.*

ERLDC requested for the following details from the constituents:

- *WBSEDCL may confirm the present status of black start facility at Jaldhaka, Rammam,TCF*
- *List of power stations and S/S having synchronizing facility- All constituents are requested to go through the list and provide missing particular for newly commissioned s/s*
- *All constituents are requested to provide details of CPP with islanding facility(if any) which can be used as start-up power source*
- *Restoration plan for IPP power station : Tashiding and Dikchu may confirm their Black start facility status*
- *Traction map and load details obtained only from Eastern Railway*

OCC advised all the concerned members to submit the details to ERLDC at the earliest.

OCC decided to conduct a workshop on updated Restoration Procedure of Eastern Region. OCC advised ERLDC to give a detailed interactive presentation on the updated restoration procedure in the workshop.

Item No. B.22: Collection of modelling data from Renewable as well as conventional energy generators: ERLDC

As a National Grid operator, POSOCO is continuously working for ensuring reliability and security of the Grid. With penetration of more and more renewable energy source the task is becoming complicated day by day. An accurate dynamic modeling of the National Grid,needs modelling of conventional as well as renewable / distributed generation sources. World Bank has engaged Digsilent as consultant for assisting POSOCO for building dynamic model of the Grid. A guideline for dynamic data collection has been developed in consultation with Digsilent Pacific team.

All the utilities are requested to collect data from the grid scale renewable power plants as well as from conventional power plants under their jurisdiction and submit the same to ERLDC/ERPC as early as possible.

Members may comply.

Deliberation in the meeting

OCC advised all the constituents to submit the details of renewable power plants of 5 MW and above as per the format. The formats would be made available at ERPC website.

Item No. B.23: Additional agenda

1. Sabotage of 400 kV D/C New Ranchi- Chandwa T/L—Powergrid

On 08.01.2019, New Ranchi- Chandwa Ckt-1 tripped at 22:33 hrs on R-N fault. The fault distance was approximately 20 kms from New Ranchi end. Upon patrolling on early morning of 09.01.2019, it was found that miscreants had attempted theft of conductor by cutting the hanger of Ckt-1 bottom phase at loc. No. 46 of said T/L. It was ascertained that the hanger of the bottom conductor was cut by the miscreants on charged line condition and fall of the same had caused the said tripping. The above was also informed to the local Police department.

Power flow in the 400 kV New Ranchi- Chandwa Ckt-1 could be restored on 14.01.2019, 02:39 hrs after restoration of the line. Total outage period of the said line due to the aforementioned sabotage and restoration thereof is 124 Hrs and 6 mins which same may be considered as force majeure, for the purpose of calculation of Availability.

Deliberation in the meeting

Powergrid gave a detailed presentation explaining the sabotage and restoration. Presentation is enclosed at ***Annexure-B23.1****.*

OCC agreed to consider the outage as force majeure but the time period would be decided by the expert Committee.

2. Sabotage of Three (03) Nos. Towers of ±800 kV HVDC Bishwanath Chariyali- Agra T/L--Powergrid

During the routine Patrolling of ± 800 kV HVDC BNC- Agra T/L near Kishenganj area on 14.12.2018, it was noticed that two diagonal stubs and associated Cleat Plates of three nos. towers have been cut by miscreants. The sabotage has been done at location no. 1619 (A+O), 1620 (A+3) and 1621 (A+O).

The condition of all towers are critical and location no. 1621 being the most Vulnerable. For rectification of location no. 1621, shutdown of both the poles of± 800 kV HVDC Bishwanath Chariyali- Agra T/L may be required on continuous basis for 4-5 days, for de-stringing, rectification of Towe r Stub and re-stringing . As the requirement of shutdown of both pole-1 & 2 of ± 800 kV HVDC Bishwanath Chariyali- Agra on continuous basis for a period of about 5 days , for rectification of tower stub/ leg at location no 1621, has arisen due to sabotage of the said tower caused by miscreants , the required shutdown period may be considered as force majeure.

Deliberation in the meeting

Powergrid gave a detailed presentation explaining the sabotage. Presentation is enclosed at ***Annexure-B23.2****.*

It was noted by OCC members that the transmission availability w.r.t. this transmission element is issued by NRPC. Powergrid was advised to approach NRPC in this regard.

3. POLLUTION MAPPING WITH REFERENCE TO TRANSMISSION SYSTEM IN EASTERN REGION--Powergrid

Powergrid informed that CPRI has prepared a draft report based on the samples received from the utilities. Draft report is available at ERPC website in reports section.

All the constituents may go through the draft report.

Deliberation in the meeting

Members noted.

PART C: ITEMS FOR UPDATE

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

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

Members may note.

Deliberation in the meeting

Members noted.

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

Members may note.

Deliberation in the meeting

Members noted.

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

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

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

Members may update.

Deliberation in the meeting

Members noted.

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

The latest status along with proposed logic as follows:

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 25.11.16	F <49.9 AND deviation > 12 % or 150 MW
2	DVC	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 17.06.2016	
3	Bihar	F <49.7 AND deviation > 12 % or 150 MW	They would place the order to Chemtrol for implementation.	F <49.9 AND deviation > 12 % or 150 MW
4	Jharkhand	1. System Frequency < 49.9 Hz AND deviation > 12 % or 25 MW 2. System Frequency < 49.9 Hz AND deviation > 12 % or 50 MW 3. System Frequency < 49.9 Hz AND deviation > 12 % or 75 MW	9 Months Tendering for RTU installation is in progress. Offer received from Chemtrol for implementation.	Condition 1: Block I feeders will be selected for load shedding Condition 2: Block I & II feeders will be selected for load shedding Condition 3: Block I, II & III feeders will be selected for load shedding
5	Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. DISCOM over-drawl > (40 MW)	10 Months Sent for PSDF approval.	Logic 2 and 3 is AND or OR, in case it is AND then ADMS may not operated when discom are in schedule but GRIDCO is overdrawing due to less generation at state embedded generators
6.	Sikkim			Sikkim informed that they have submitted a proposal to PSDF Committee for installation of OPGW cables which is under approval stage. Sikkim added that ADMS scheme would be implemented after installation of OPGW.

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

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	12-12-2018 07:38	251	49.69		
2	12-12-2018 07:39	227	49.69		

Members may update.

Deliberation in the meeting

WBSETCL informed that ADMS had been operated in first case as per the logic and 25 MW load relief had been obtained.

Item no. C.5: 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	One ckt completed, other ckt would be completed within 2 weeks.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019. The work is yet to be started.

OPTCL may update.

Deliberation in the meeting

OPTCL updated the status as mentioned in above table.

Item no. C.6: 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj&Dhanbad

In lastOCC, JUSNL updated the latest status as follows:

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

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as mentioned in above table.

Item no. C.7: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Subashgram& 2x500 MVA Rajarhat sub-stations

In last OCC, *WBSETCL updated the latest status as follows:*

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line	Matching, ROW problem
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	ROW problem, December 2019
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	ROW problem, February 2019
2	**Subashgram400/220kVS/s**	
a	Subashgram–Baraipur220kVD/cline	June 2019, 80% of work has been completed.

WBSETCL may update.

Deliberation in the meeting

WBSETCL updated the status as mentioned in above table.

Item no. C.8: 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 January 2019*
3	Ranchi(New)	±300	2x125		*Commissioned on 12th July 2018*
4	Jeypore	±200	2x125	2x125	*Commissioned on 30th June 2018*

Powergrid may update.

Deliberation in the meeting

Powergrid informed that STATCOM testing was in progress at Kishanganj and it would be in service by February 2019.

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.

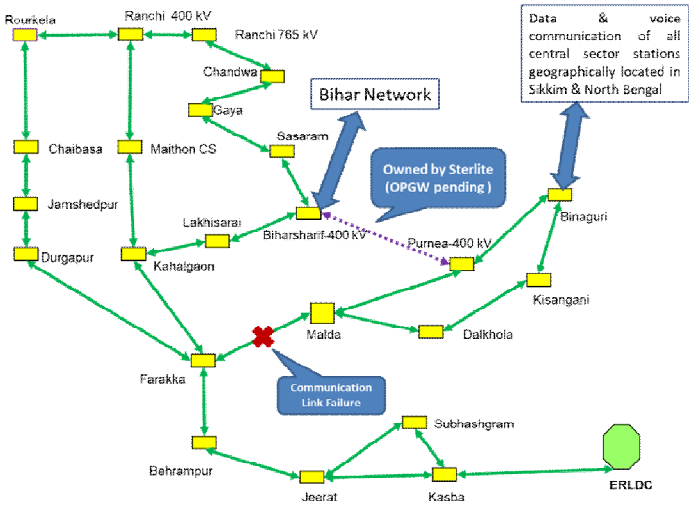
Major issues are given below:

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

*In 152nd OCC, Powergrid gave a detailed presentation on alternate path for Malda–Farakka OPGW link. Presentation is enclosed at **Annexure-C9**.*

Thereafter, Powergrid informed that the tentative cost implication for providing alternate connectivity between Siliguri 220kV and Muzaffarpur S/s with one STM-4 bandwidth connectivity comes to Rs. 26 Lakhs per annum.

Parallelly the Kishanganj-Darbhanga-Muzaffarpur OPGW link shall be provisioned subsequent to commissioning of Kishanganj-Darbhanga line by M/s KPTL.



ERLDC may present. Members may update.

Deliberation in the meeting

*ERLDC presented the latest status which is enclosed at **Annexure-C9A**.*

ERLDC informed that the following data from Talcher STPS was not available at ERLDC:

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

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

Regarding alternate path for Malda–Farakka OPGW link, Powergrid informed that the tentative cost implication for providing alternate connectivity between Siliguri 220kV and Muzaffarpur S/s with one STM-4 bandwidth connectivity comes to Rs. 26 Lakhs per annum. The scheme would be implemented by April 2019, if approved.

After detailed discussion, OCC advised Powergrid to implement alternate OPGW link through 400 kV Kishenganj- Darbhanga-Muzaffarpur lines.

OCC advised Powergrid to coordinate with Kalpatru Power Transmission Ltd. and DMTCL for implementation of the scheme.

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.

In 152nd OCC, Powergrid informed that they would arrange the demonstration of downloading meter data using DCD and the cable within a week.

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

However, the data from Malbase and Gelephu is still not being sent to ERLDC.

PGCIL/Bhutan may please respond.

Deliberation in the meeting

DGPC agreed to communicate the issue to BPC.

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

i) Talcher Solar NTPC

In 152nd OCC, PGCIL informed that all 03 meters at NTPC Talcher Solar have been replaced, Till now neither meter details is sent to ERLDC nor meter data is being sent.

PGCIL/NTPC may please respond.

Deliberation in the meeting

It was informed that the meter would be replaced today.

ii) NTPC Barh ICT-3

In 152nd OCC meeting, PGCIL informed the meter had been replaced by Genus Meter. However the data of Genus Meter is not being sent by NTPC Barh since replacement of meter. At Present newly replaced meter is not connected through AMR.

PGCIL/NTPC may please respond.

Deliberation in the meeting

It was informed the meter had been replaced. NTPC informed that due to non availability of software they could not send the data.

iii) Ranchi New(PG)

In 152nd OCC, PGCIL informed that meter at Ranchi has been replaced, Till now neither meter details is sent to ERLDC nor meter data is being sent.

Powergid may please update the status.

Deliberation in the meeting

It was informed the meter had been replaced. It was informed that due to non availability of software they could not send the data.

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

In 152nd OCC meeting, It was informed that Modem at Arrah was defective. OCC further advised BSPTCL to download the meter data using DCD and submit to ERLDC till restoration of AMR. Till now data is not received at ERLDC end.

BSPHCL may please respond.

Deliberation in the meeting

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

v) **Erroneous data of Energy meter**

Following meters at different substation of PGCIL and BSPTCL is recording erroneous reading since last few weeks. The problem was informed to the respective substation through e mail and telephonically. However the problem of erroneous data of meters is still persisting.

S. No.	Substation	Name of Feeder	Meter S.No	Date of start of problem (Date)	Issues
PGCIL Substations					
1	MALDA	132 KV SIDE OF MALDA 220/132 160 MVA ICT-2	ER-1103-A	03.12.18	Reverse Polarity
2	BIRPARA	132 KV SIDE OF BIRPARA 220/132 160 MVA ICT-1	ER-1041-A	03.12.18	Reverse Polarity
3	BIRPARA	132 KV SIDE OF BIRPARA 220/132 160 MVA ICT-2	NP-5891-A	03.12.18	Reverse Polarity
4	BOLANGIR	220 KV SIDE BOLANGIR 400/220 KV 500 MVA ICT-I	ER-1573-A	03.12.18	Wrong Connection of CT/PT
5	BOLANGIR	220 KV SIDE BOLANGIR 400/220 KV 500 MVA ICT-2	NP-7919-A	03.12.18	Wrong Connection of CT/PT
6	MOTIHARI	132kV SIDE OF 200MVA MOTIHARI(DMTCL) ICT-1	ER-1174-A	03.12.18	Reverse Polarity
7	SASARAM	400 KV SASARAM (PG)-BIHARSHARIFF(PG)-II	NP-6515-A	03.12.18	Wrong Connection of CT/PT
8	RANCHI	400 KV SIDE OF RANCHI ICT-2	NP-5873-A	27.12.18	Wrong

					Connection of CT/PT
9	BARIPADA	400 KV SIDE 500 MVA 400/220 BARIPADA ICT-3	ER-1564-A	26.12.18	Wrong Connection of CT/PT
BSPTCL Substation					
1	BEGUSARAI	220kV Begusarai-Purnea-1	ER-1344-A	19.12.18	Reverse Polarity

PGCIL/BSPTCL may please update the status.

Deliberation in the meeting

It was informed that the meter issues had been resolved at Sasaram, Ranchi and Baripada.

OCC advised all the concerned constituents to take the necessary action to resolve the issues at other locations.

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

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

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

Latest status of State ATC/TTC declared by states for the month of May -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	**1188**	--	60	--	1128	--	April-19
3	DVC	**1195**	3141	62	48	1133	3092	May-19
4	OPTCL	**2296**	--	82	--	2207	--	May-19
5	WBSETCL	**3985**	--	300	--	3685	--	Jan-19
6	Sikkim	--	--	--	--	--	--	

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

Members may update.

Deliberation in the meeting

ERLDC updated latest status as mentioned in above talbe.

OCC advised all the states to compute ATC/TTC figures three months in advance and send to ERLDC.

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

Item no. C.13: 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 152nd OCC, Powergrid informed that optical fiber for AMR had been implemented at 18 locations and rest of the locations would be completed by January 2019.

POWERGRID may please update the progress.

Deliberation in the meeting

Powergrid informed that optical fiber for AMR had been implemented at 30 locations and rest of the locations would be completed by February 2019.

Item no. C.14: Mock Black start exercises in Eastern Region – ERLDC

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

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2018	*Completed on 8th June,2018*	Last Week of January2019	*In Dec 2018*
2	Maithon	1stweek of June 2018	*Completed on 6th June,2018*	1stWeek of February2019	
3	Rengali	2ndweek of June 2018	*Done on 18thAugust,2018.*	Last week of November 2018	Jan 19
4	U. Indarvati	3rdweek ofJune 2018	*Planned in Oct,2018.*	2ndweek of February2019	*In Dec 2018*
5	Subarnarekha	1stweek of October 2018	*Done on 10th August,2018.*	1stweek of January2019	
6	Balimela	3rdweek of October 2018	Done on 21st Dec, 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	Done on 15th Jan 19
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	Done on 10th Jan 2019
11	TLDP-IV	Last Week of June 2018	After Monsoon	1st Week of February2019	
12	Teesta-III	Last week of Oct 2018	Done on 30th Nov 2018	First Week of March 2019	
13	Jorthang	First Week of May 2018		First Week of Feb 2019	

14	Tasheding	2nd Week of May 2018		2nd Week of Feb 2019	
15	Dikchu	3rd Week of May 2018		3rd Week of Feb 2019	

Members may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

Item no. C.15: 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

In 152nd OCC, ERLDC informed they received the details only from DVC.

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

Members may note and comply.

Deliberation in the meeting

ERLDC informed they received the details only from DVC.

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

PART D:: OPERATIONAL PLANNING

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

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of February 19 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is at **Annexure-D.1**.

Members may confirm.

Deliberation in the meeting

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

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

Shutdown proposals of generating stations:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	MTPS	6	250	08.02.19	15.03.19	36	COH
WBPDCL	Sagarighi TPS	4	500	01.02.19	20.02.19	20	Boiler Overhauling
CESC	TITAGARH	2	60	24.02.19	27.02.19	4	Not Specified

The list transmission line shutdown to be discussed on 18th January 2019 through VC is given at **Annexure-D2**.

Members may confirm.

Deliberation in the meeting

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

1. SLDC, West Bengal Agenda

- Emergency shutdown of 400kV elements of STU system or tie-lines has to be allowed by ERLDC control room if immediate witching off the line is required to avoid subsequent hazard.

- Approval of all planned shutdowns by ERLDC outage coordination team may please be issued at least two working days in advance to mobilize the workforce.

Members may discuss.

Deliberation in the meeting

The issue could not be discussed in the meeting.

2. 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

In 152nd OCC, BSPTCL informed that they had allowed the shutdown in December 2018 but Alipurduar Transmission Limited could not avail the shutdown.

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

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

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed they are planning to conduct a separate meeting with Alipurduar Transmission Limited and DMTCL to resolve the issue.

3. Maintenance schedule for 220kV Chhukha-Birpara feeders

The annual/special maintenance schedule for 220kV Chhukha-Birpara feeders was initially proposed from 09.11.2018 starting with Feeder-II. Accordingly feeder was taken under shut down from the said date to carry out the numerical relay retro-fitting works. But till date the works could not be completed due to non availability of service engineer from M/S ABB. The revised shutdown schedule is as below.

220kV Chhukha- Birpara Feeder shut down				
Feeder No.	**Initial Schedule**		**Revised Schedule**	
	Start Date	**End date**	**Start Date**	**End Date**
I	21.11.2018	30.11.2018	25.01.2019	31.01.2019
II	09.11.2018	20.12.2018	09.11.2018	31.01.2019
III	21.12.2018	11.01.2019	01.02.2019	15.02.2019

The above schedule is tentative since the date for arrival of service engineer from M/S ABB is still not confirmed.

Members may approve.

Deliberation in the meeting

OCC approved the shutdown.

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
							Date	Time	
1	BARAUNI	BIHAR	BSPHCL	6	105	R & M WORK	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	BANDEL	WEST BENGAL	WBPDCL	5	210	ANNUAL OVERHAULING	5-Dec-18	10:05	16-Jan-19
6	TALCHER	ODISHA	NTPC	2	500	OVERHAULING	2-Dec-18	13:04	12-Jan-19
7	JITPL	ODISHA	JITPL	2	600	COAL SHORTAGE	26-Jun-18	00:03	SUBJECT TO COAL AVAILABILITY
8	MEJIA	WEST BENGAL	DVC	4	210	COAL SHORTAGE	2-Nov-18	22:05	SUBJECT TO COAL AVAILABILITY
9	KODERMA	Jharkhand	DVC	2	500	CLASS C TRIPPING	3-Jan-19	16:33	16-Jan-19
10	CTPS	JHARKHAND	DVC	7	250	COAL SHORTAGE	18-Dec-18	18:41	SUBJECT TO COAL AVAILABILITY
11	SAGARDIGHI	WEST BENGAL	WBPDCL	3	500	COAL SHORTAGE	5-Dec-18	00:05	SUBJECT TO COAL AVAILABILITY
12	SAGARDIGHI	WEST BENGAL	WBPDCL	2	300	COAL SHORTAGE	24-Dec-18	19:55	SUBJECT TO COAL AVAILABILITY
13	SAGARDIGHI	WEST BENGAL	WBPDCL	1	300	COAL SHORTAGE	6-Jan-19	16:13	SUBJECT TO COAL AVAILABILITY
14	TENUGHAT	JHARKHAND	JUVNL	1	210	COAL SHORTAGE	11-Dec-18	00:11	SUBJECT TO COAL AVAILABILITY
15	KOLAGHAT	WEST BENGAL	WBPDCL	5	210	STATOR EARTH FAULT	30-Dec-18	10:17	16-Jan-19
	Total				4445				

(ii) Hydro Generating units:

S.No	Station	Location	Owner	Unit No	Capacity (MW)	Reason(s)	Outage Date
1	BURLA	ODISHA	OHPC	1	37.5	R & M WORK	25.10.16

2	BURLA	ODISHA	OHPC	2	37.5	R & M WORK	16.10.15
3	BURLA	ODISHA	OHPC	4	37.5	Annual Maintenance	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 Maintenance	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 Maintenance	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 From		Reasons for Outage
			DATE	TIME (HRS)	
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	400 KV KAHALGAON - BANKA II	POWERGRID	03-01-2019	08:54	NEW BUSBAR COMMISIONING AT KAHALGAON
6	400 KV TALA- BINAGURI - II	POWERGRID	07-01-2019	18:53	ANTI THEFT CHARGED FROM BINAGURI END.
7	400 KV TALA BINAGURI - I	POWERGRID	03-01-2019	11:01	TO CONTROL OVER VOLTAGE AT TALA END
8	220 KV CHUKAHA-BIRPARA-II	CHUKHA	12-11-2018	09:40	REPLACEMENT OF C&R PANELS AT CHUKHA END
9	765KV JHARSGUDA ANGUL IV	POWERGRID	01-01-2019	22:48	OPENED DUE TO HIGH VOLTAGE(CKT 1&2 ARE SINGLE CKT TOWER AND 3&4 D/C TOWER)
10	315 MVA ICT 3 AT JEERAT	WBSEB	30-12-2018	08:55	B PH MAIN TANK CAUGHT FIRE
11	220 KV NEW PURNEA BEGUSARAI I	BSPHCL	08-01-2019	12:02	LINE UNDER PATROLLING;B-N .79 KA,66.6 KM FROM NEW PURNEA
12	220 KV NEW PURNEA BEGUSARAI II	BSPHCL	08-01-2019	15:26	SPURIOUS DT RECEIPT AT NEW PURNEA;PLCC CHECKING
13	400 KV NEW RANCHI CHANDWA I	POWERGRID	08-01-2019	22:32	SOTF AT 22:59 15.8 KM,13.8 KA ;B-N

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

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

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

Members may update.

Deliberation in the meeting

Members noted.

PART E::ITEMS FOR INFORMATION

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

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

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

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

Generators may update.

Item No. E.2: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

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

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

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

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

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

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

As suggested by CEA, a format would be circulated among ER constituents for furnishing the information of the their respective systems for discussion in OCC Meeting. The format is enclosed at **Annexure-E2**.

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

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

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

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

- All NTPC stations in Eastern Region
- Teesta, NHPC

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

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

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

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

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

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

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

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

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

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

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

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

Item No. E.6: Status of 1st Third Party Protection Audit:

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

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

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

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

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

Members may comply.

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

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

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

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

Members may comply.

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

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

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

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

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

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

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

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

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

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

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

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

The details of new units/transmission elements commissioned in the month of December- 2018 & January-2019 (up to 11-01-2019) based on the inputs received from beneficiaries

Monthly commissioning List of Tansmission element and generators: December 2018 & January 2019 (upto 11-01-18)					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	765Kv Angul-Jharsuguda III	PGCIL	28-12-2018	20:54	Along with 240MVAR L/R at both end.
2	765Kv Angul-Jharsuguda IV	PGCIL	30-12-2018	23:58	Along with 240MVAR L/R at both end.
3	50MVAR L/R of 400kV Sasaram-B'sariff-I at B'Sariff (non-switchable to switchable)	PGCIL	12-12-2018	13:24	
4	220Kv New Purnea – Begusarai-I	PGCIL	19-12-2018	16:13	
5	GT#4 (270X3 MVA) at IB-St#2 (OPGC)	OPGC	26-12-2018	17:57	
6	220kV Keonjhar(PG)-Keonjhar(OPTCL)-I	OPTCL	01-01-2019	19:15	
7	BRBCL-Nabinagar U#3	BRBCL	01-01-2019	02:43	Test Sync
8	1500MVA ICT 4 (765/400kV) at Gaya	PGCIL	03-01-2019	17:32	
9	400kV Teesta III-Kishanganj	TPTL	04-01-2019	17:07	

OPTCL informed that 3rd ICT at Mendhasal and 2nd circuit from meramundali to Mendhasal 400kV presently charged at 220kV will be charged at 400kV in 1st week of Jan 19 or 1st week of Feb 19.

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

System frequency touched a maximum of 50.25 Hz at 06:01Hrs of 02/12/18 & 06:03hrs of 16-12-18 and a minimum of 49.67 Hz at 09:17 Hrs of 16/12/18 & 07:57hrs 30/12/18. 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 December 18.

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

Sr No	GD/ GI	Date	Time	S/S involved	Summary	Load loss (MW)	Gen loss (MW)
1	GD-I	14-11-2018	16:31	Dikchu	At 16:30 hrs, 400 kV Teesta III – Dikchu S/C tripped from Teesta III end along with 400/132 kV ICT at Dikchu resulting tripping of all running units at Dikchu due to loss of evacuation path. As per DR received, ICT tripped in E/F (132 kV side current: IA = 387 A, IB = 316 A, IC = 525 A, IN = 171 A). At the same time, 400 kV Teesta III – Dikchu S/C tripped from Teesta III end due to operation of cable directional O/C protection (IB = 1.695 kA, IN = 1.6 kA).	0	90
2	GI-II	24-11-2018	02:05	Kahalgaon	At 02:05 Hrs, 400 KV Bus#1 tripped due to operation of Breaker Failure Relay (BFR) of Main Bay of GT#1, leading to outage of Unit#1 (210 MW). At the same time, U#7 also tripped as it was synchronized through bus#1 only.	0	700
3	GD-I	25-11-2018	16:31	BRBCL	At 16:31 hrs bus II at BRBCL tripped on bus bar protecton due to mal-operaton of bus bar differential relay. At the same time tie CB between ICT I & GT I tripped on operation of master trip signal due to logic error from Bus bar relay of Bus II, which again led to erroneous LBB retrip signal to main CB no. 401 connected to GT I leading to tripping of unit 1 generating 230 MW and ICT I. At same time, main bay 400 kV Sasaram BRBCL - I at BRBCL tripped on logic error and DT was sent to Sasaram end.	0	230
4	GI-II	27-11-2018	13:26	Sasaram	On 27th Nov 2018, at 13:26 Hrs 400 kV Sasaram-Allahabad & 400 kV Sasaram-Varanasi tripped due to Y-B phase fault. At the same time HVDC Sasaram also got blocked due to operation of inter-zone protection of Northern converter transformer as reported by ERLDC.	0	0
5	GD-I	29-11-2018	07:23	TTPS	At 07:23 Hrs, 220 KV Bus II tripped alongwith 2*110 MW U#5,U#6, 160 MVA 220/132 KV ICT I, ICT II, 220 KV TTPS-TSTPP S/C, 220 KV TTPS-Joda D/C, 220 KV TTPS-Rengali S/C, 220 KV TTPS-Meramundali II.	0	200

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Annexure-A

Participants in 153rd OCC Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata Time: 10:30 hrs Date: 21.01.2019 (Monday)

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Participants in 153rd OCC Meeting of ERPC

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Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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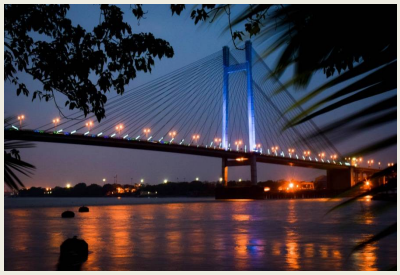
Status of Implemenation in Eastern Region

Recommendation		Fully completed / Partially Completed / Not Completed/Not Applicable							Remarks
No.	Content of recommendation	Bihar (STU/SLDC/State Controlled Generators)	Jharkhand (STU/SLDC/State Controlled Generators)	West Bengal (STU/SLDC/State Controlled Generators)	DVC (STU/SLDC/State Controlled Generators)	Odisha (STU/SLDC/State Controlled Generators)	Sikkim (STU/SLDC/State Controlled Generators)	RLDC/PGCIL/ISGS	
1	**Review of Protection System**								
1.1	Third party protection audit								
1.2	Review of zone-3 philosophy								
1.3	Synchro phasor measurements /PMUs & deploy of SPSs								
1.4	Time synchronization of DRs/ELs/PMUs								
3	**Defense mechanism - f_{min} and df/dt - load shedding schemes**								
4	**Ensuring primary frequency response from generators**								
5	**Revising TTC based on change in system conditions**								
5.2	Real-time security desk caring TTC calculations								
6	**Coordinated outage planning of transmission elements**								
7	**Reactive power planning -**								
9	**Optimum utilization of availability assets**								
9.1	Regulatory provision - absorption of reactive power by generators								
9.2	Audit of HVDC, TCSC, SVA and PSS								
9.3	Functioning of existing PMU and availability of their output to RLDC								
10	**Deployments of WAMS**								

10.1	Synchro phasor based WASM employing PMUs								
10.2	Possible of voltage collapse prediction								
11	**Dynamic security assessment and review of state estimation**								
12	**Implementation of islanding schemes**								
13	**Autonomy to Load Dispatch Centers**								
13.1	Organization of the Load Dispatch Centers reviewed and entrusted to ISO								
13.2	Training and certification of system operators need to be given focused attention								
14	**Development of Intra-state transmission system**								
15	**Network visualization**								
15.2	Fiber optic communication system								
15.3	RTUs and communication equipment should have uninterruptible power supply with proper battery back up								
15.4	Telemetry facilities will be install for all generation station and transmission element without these								
16	**Reduction in Start-up time Generators**								
18	**Strengthening of system study groups in various power sector organization**								
20	**Improved telecom infrastructure for cyber security**								

Power System Operation Corporation Ltd.

153rd OCC Meeting



At ERPC, Kolkata

21st January, 2019

ER Grid Performances

ERLDC POSOCO

Highlights for the month of Dec-18

Frequency Profile

Average Freq:- 49.98 Hz

Avg FVI: - 0.048

Lowest FVI:- 0.029

Max- 50.25Hz on 02nd and 16th Dec' 18

Min- 49.67 Hz on 16th and 30th Dec'18

77.07% of the time freq was with in IEGC Band

Peak Demand

ER: 18598 MW on 31st Dec 2018 at 18:49 hrs

% Growth in Average Demand Met w.r.t. last year: 4.73%

BSPHCL : 4204 MW ; ON 31/12/18

JUVNL: 1253 MW; ON 09/12/18

DVC: 3050 MW; ON 27/12/18

GRIDCO: 4120 MW; ON 25/12/18

WB: 6490 MW; ON 19/12/18

SIKKIM: 108 MW; ON 22/12/18

Energy met

Max. 369 MU on 15th Dec *2018*

%Growth w.r.t. last year on Max energy 1.63%

Avg. 354 MU in Dec *2018*

%Growth w.r.t. last year on Avg. energy : 2.5%

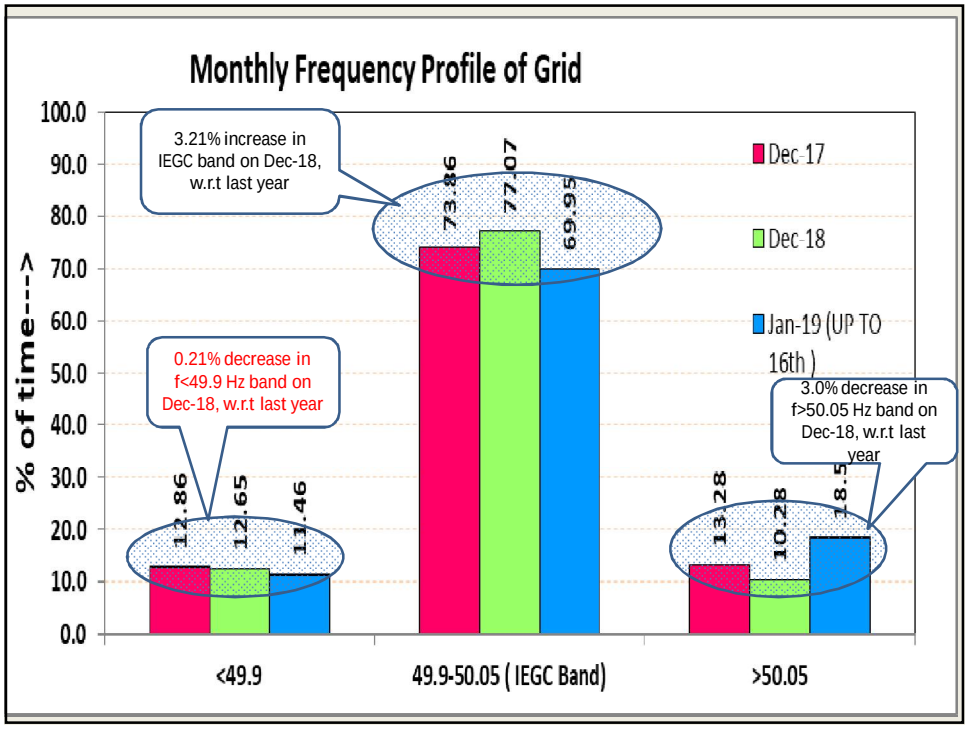
New Element

Generating Units-NIL

Open Access

STOA transactions approved -239 nos.

Energy Approved- 637.06 MUs



Important event

- 400kV Teesta III-Kishanganj-S/C was charged at 17:07hrs of 04/01/2019.
- NTPP (BRBCL) U#3 of 250 MW was synchronised for first time at 02:43hrs of 01/01/2019.
- NSTPP (NPGC) U#1 of 660 MW synchronised for first time at 02:02hrs of 14/01/2019.
- 400 kV Bus – I has been reconfigured as Bus – I and Bus – III (without bus sectionalise breaker)since 10/01/2019 after bus splitting work.

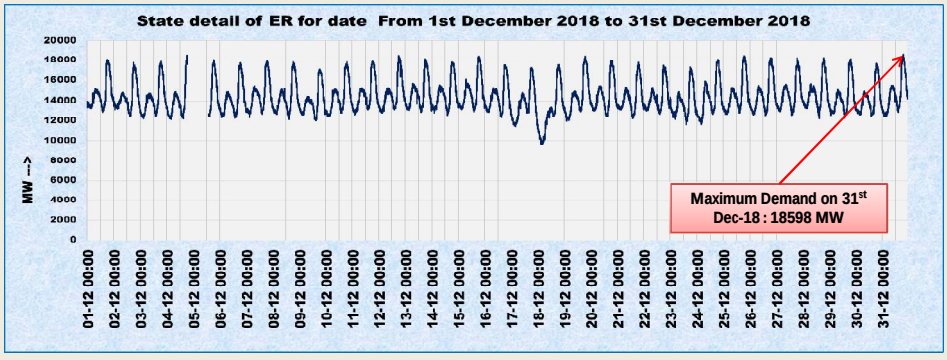
New Element addition during the month:

Monthly commissioning List of Tansmission element and generators: December 2018					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	50MVAR L/R of 400kV Sasaram-B'sariff-I at B'Sariff (non-switachable to switchable)	PGCIL	12-12-2018	13:24	
2	220Kv New_Purnea-Begusarai-I	PGCIL	19-12-2018	16:13	
3	GT#4 (270X3 MVA) at IB-St#2 (OPGC)	OPGC	26-12-2018	17:57	
4	220kV Keonjhar(PG)-Keonjhar(OPTCL)-I	OPTCL	01-01-2019	19:15	

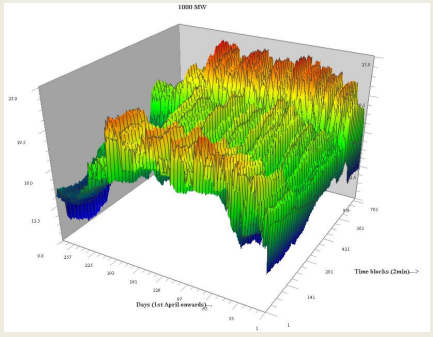
So Far Highest Demand					
Constitute	Demand (in MW)	Date	Time	Dmd met (MW) on 31st Dec'18 (max dmd met day)	
				MW	Time
Bihar	5011	12-July-18	0:05	4204	18:47
DVC	3536	12-July-18	8:55	3009	20:11
Jharkhand	1319	19-May-18	21:02	1233	07:11
Odisha	5558	23-Aug-18	20:21	3720	19:09
W. Bengal	8896	18-June-18	19:51	6186	17:47
Sikkim	117	28-Oct-16	19:22	93	08:19
ER	23030	03-Oct-18	20:43	18598	18:49

So Far Highest Energy Consumption			
Constitute	Energy consumption (in MUs)	Date	Energy met on 31st Dec'18 (max dmd met day)
Bihar	104.0	02-Oct-18	75.1
DVC	75.8	12-July-18	64.3
Jharkhand	27.8	19-May-18	25.2
Odisha	123.5	02-Oct-18	68.3
West Bengal	192.6	05-Oct-18	109.3
Sikkim	2.1	07-Dec-17	1.6
ER	499.8	18-Aug-18	352

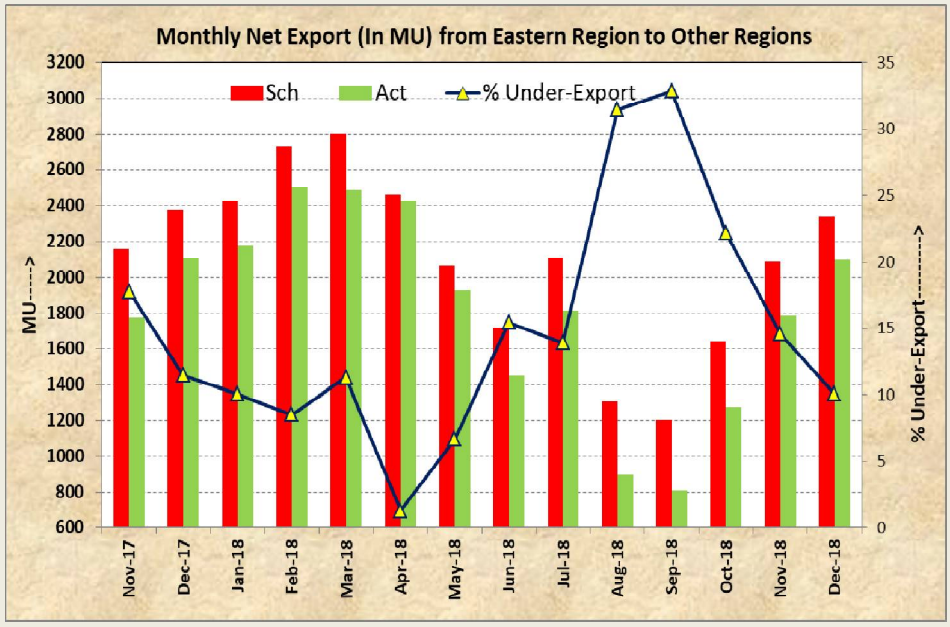
3D VIEW OF ER DEMAND PATTERN (APR-18 to Dec-18)



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



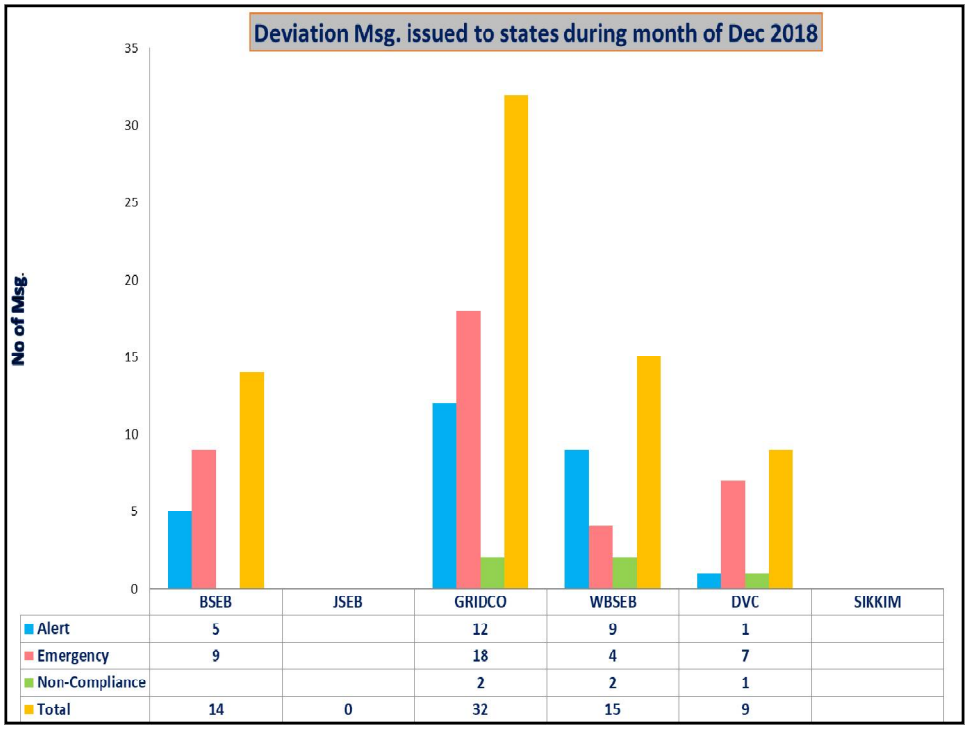
Over Drawl / Under Injection by ER Entities
Non-compliance of direction issued by SLDC

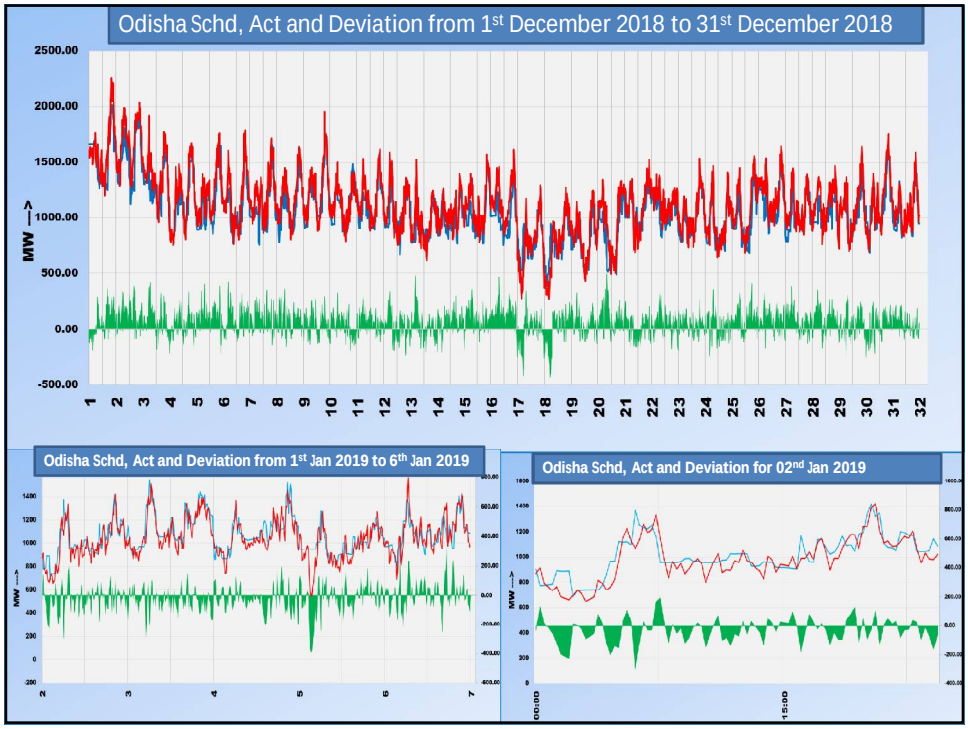


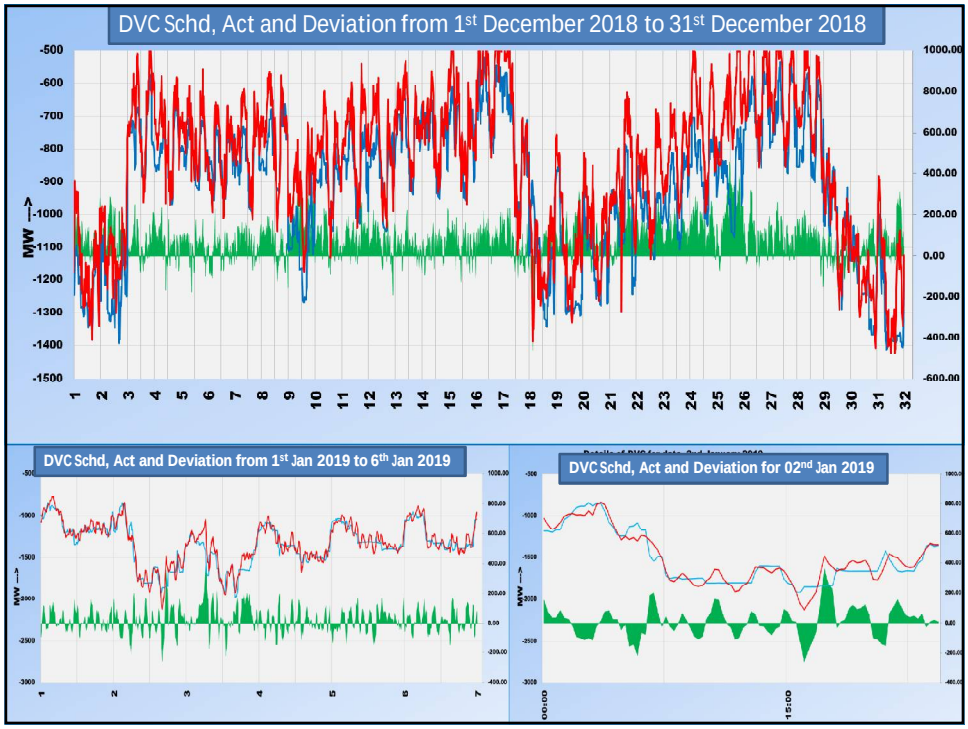
Actual Export schedule for Dec-18 was 2339 Mu, whereas actual export was 2103 Mu

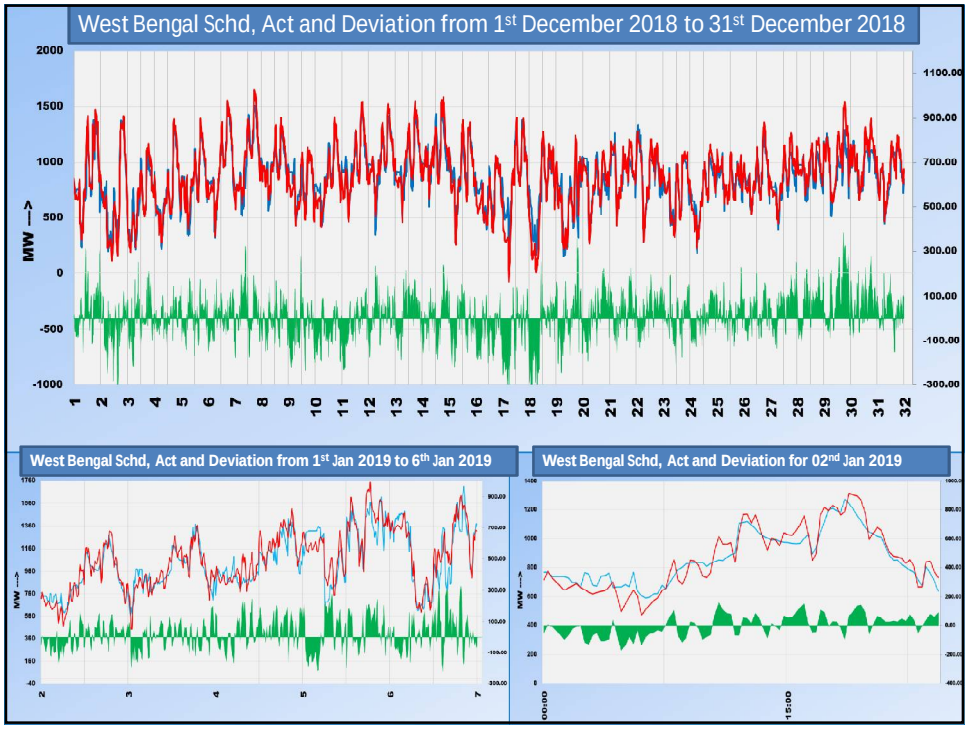
Total Under export was 235 Mu for the month.

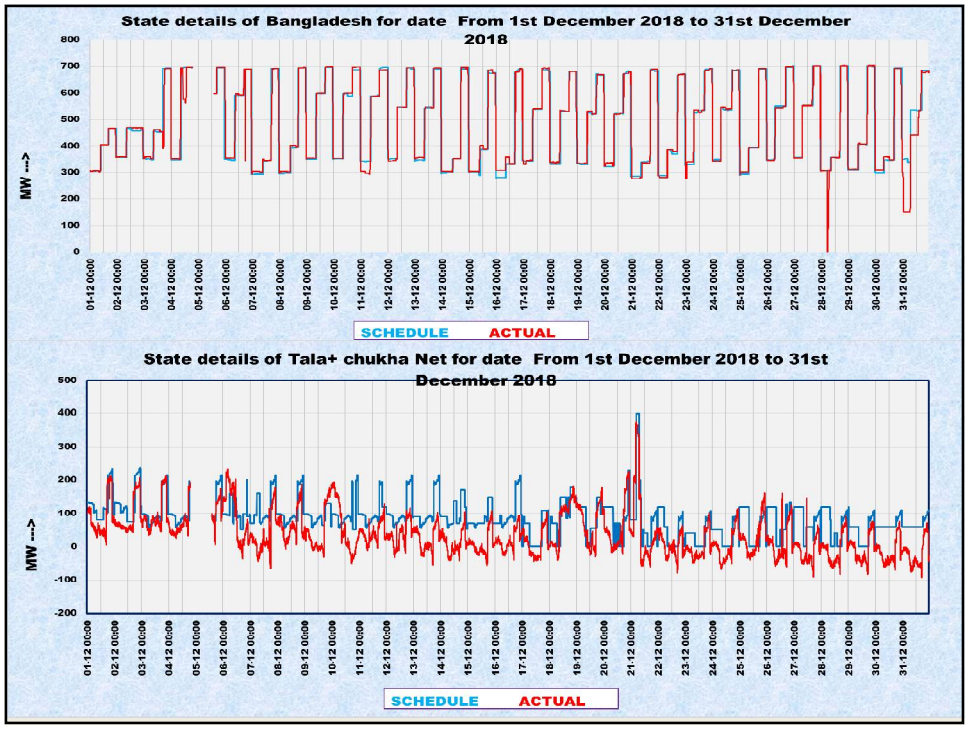
December 2018 Schedule vs Actual Status					
	Schedule	Actual	OD	Daily Avg OD	% Deviation
Bihar	2133	2106	-28	-0.9	-1.3
Jharkhand	454	457	3	0.1	0.6
DVC	-700	-615	85	2.7	12.1
Odisha	1087	1188	102	3.3	9.3
West Bengal	780	835	55	1.8	7.1
Sikkim	44	44	0	0.0	0.0
FSTPP I & II	1008	996	-12	-0.4	-1.2
FSTPP III	233	227	-6	-0.2	-2.5
KHSTPP I	458	459	1	0.0	0.1
KHSTPP II	878	878	1	0.0	0.1
TSTPP I	537	538	1	0.0	0.2
BARH II	803	799	-4	-0.1	-0.5
GMR	363	351	-12	-0.4	-3.4
MPL	563	562	-1	0.0	-0.2
APRNL	250	248	-2	-0.1	-0.7
JITPL	266	267	1	0.0	0.5



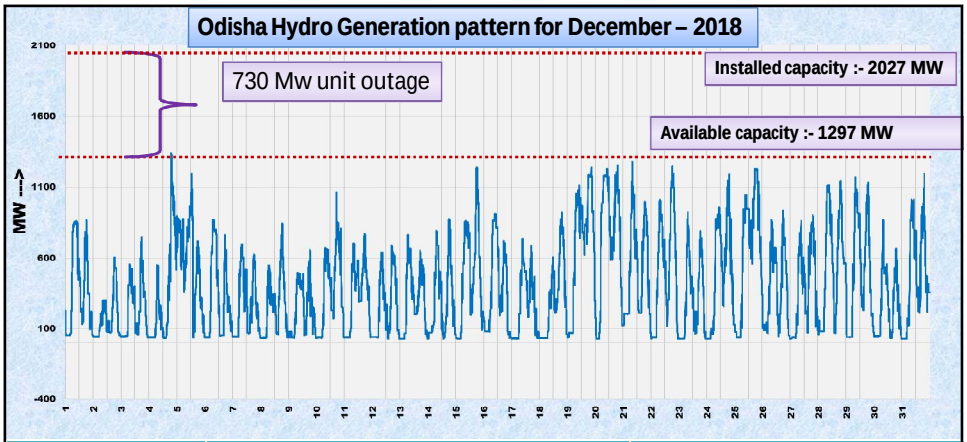

Odisha Schd, Act and Deviation from 1st December 2018 to 31st December 2018
MW
Odisha Schd, Act and Deviation from 1st Jan 2019 to 6th Jan 2019
Odisha Schd, Act and Deviation for 02nd Jan 2019


DVC Schd, Act and Deviation from 1st December 2018 to 31st December 2018
MW
DVC Schd, Act and Deviation from 1st Jan 2019 to 6th Jan 2019
DVC Schd, Act and Deviation for 02nd Jan 2019

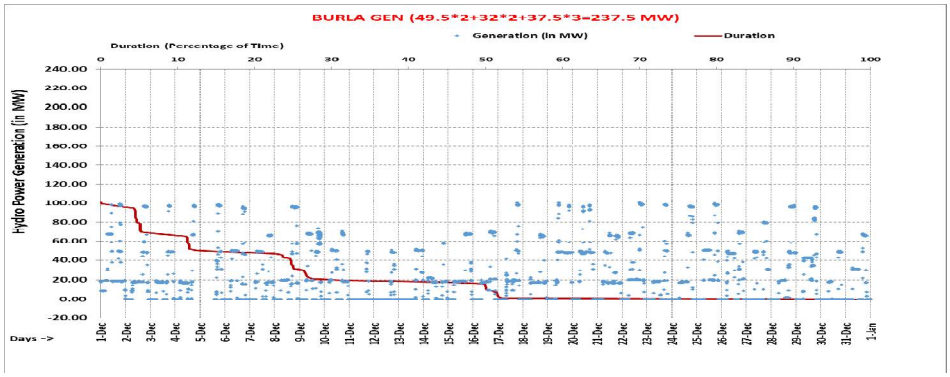

West Bengal Schd, Act and Deviation from 1st December 2018 to 31st December 2018
MW ---->
West Bengal Schd, Act and Deviation from 1st Jan 2019 to 6th Jan 2019
West Bengal Schd, Act and Deviation for 02nd Jan 2019

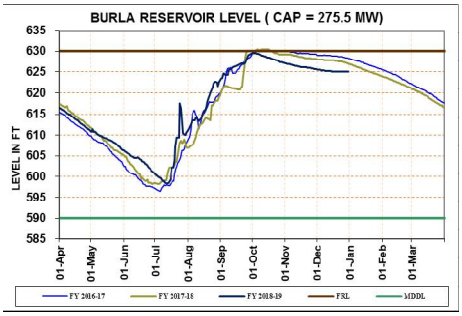

State details of Bangladesh for date From 1st December 2018 to 31st December 2018
MW ---->
SCHEDULE
ACTUAL
State details of Tala+ chukha Net for date From 1st December 2018 to 31st December 2018
MW ---->
SCHEDULE
ACTUAL

State Hydro Generators Performance

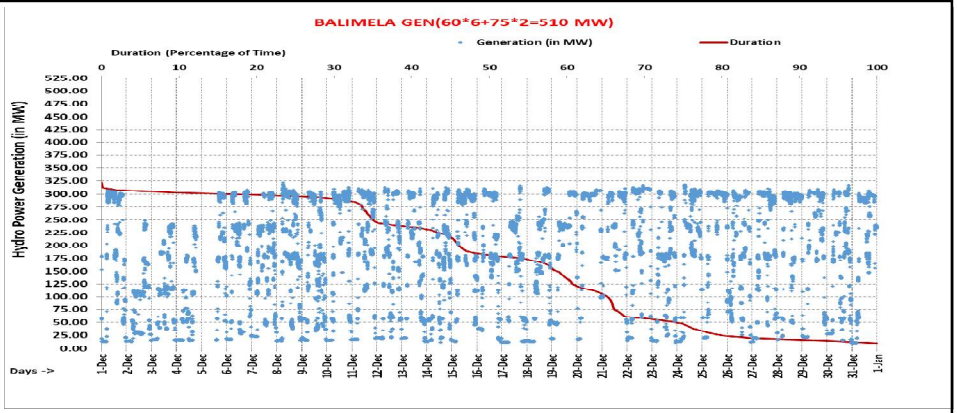


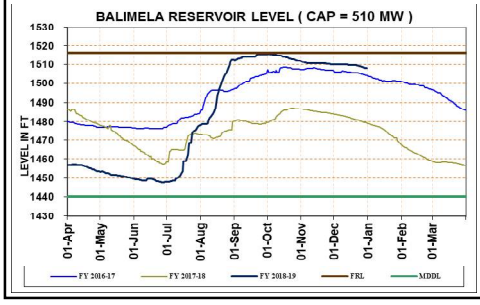
	Long Outage	Forced Outage
Burla	75 : U-5(37.5 mw), U-6(37.5 mw)	90: U-1(49.5 mw), U-4(32 mw)
Chipilima	24 :U-3 (24mW)	
Balimela	180 : U-1(60 mw) U-2(60Mw) U-5 (60mW)	
Rengali		100: U-2(50mw), U-4(50 mw)
Up Kolab	80 : U-2(80 Mw)	
Indravati		150: U-1(150 mw)
	359	340



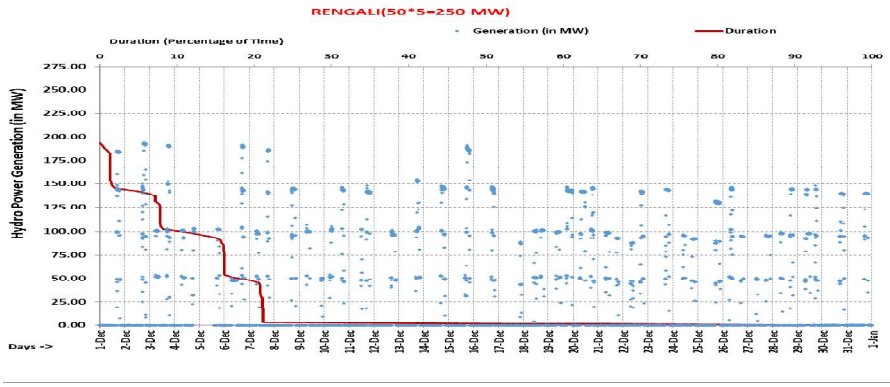


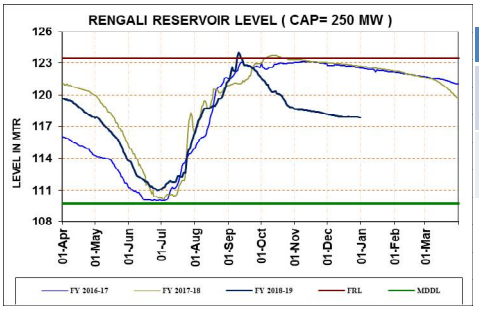
Unit No	Date of Outage	Reason
U - 1	19.11.17(19:00)	Gen. UGB oil temp high
U - 4	15.12.18	Annual Maint.
U - 5	25.10.2016	R & M Work
U - 6	16.10.2015	R & M Work



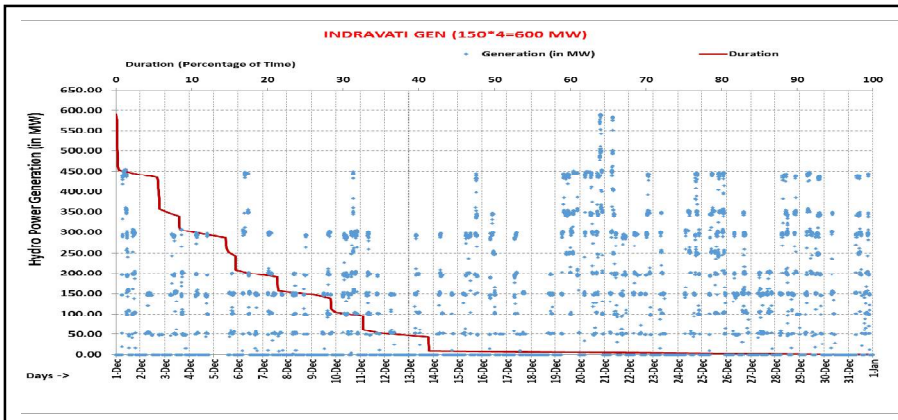


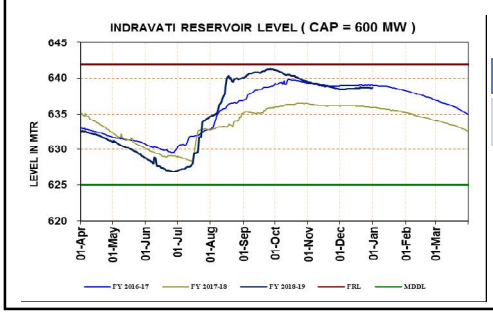
Unit No	Date of Outage	Reason
U – 1(60 MW)	05.08.16	R & M Work
U – 5 (60 MW)	12.10.17(17:30)	Vibration problem
U – 2(60 MW)	20.11.17	R & M Work



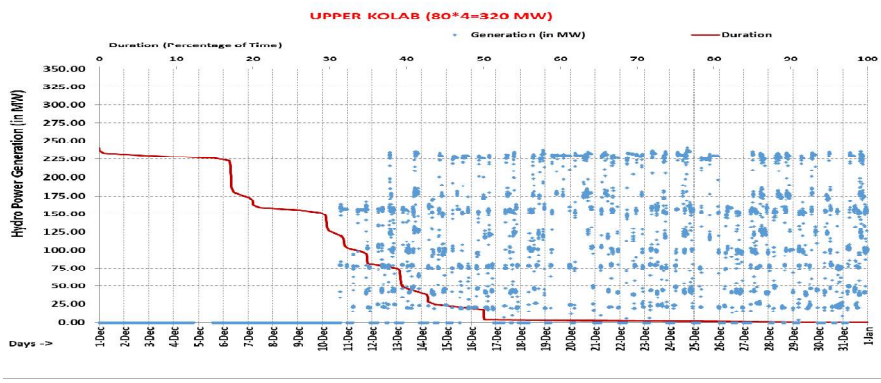


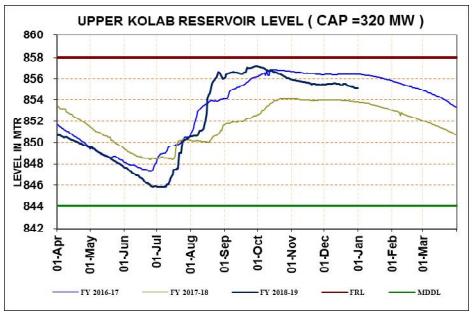
Unit No	Date of Outage	Reason
U – 2(50 MW)		Cap. Maint.
U – 4 (50 MW)		Replacement of old AVR



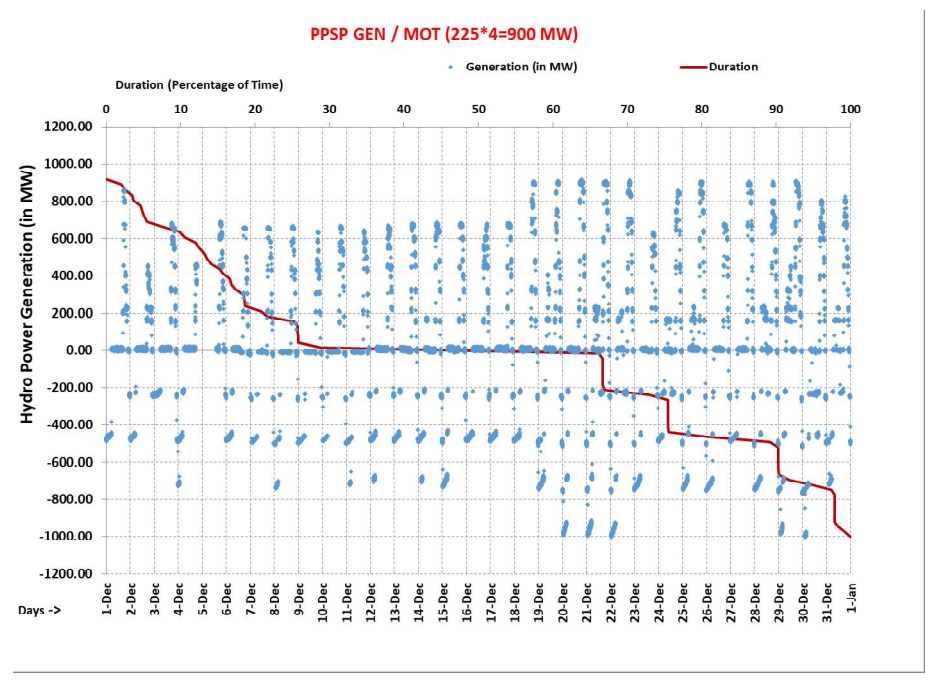


Unit No	Date of Outage	Reason
U - 1		Ann. Maint.

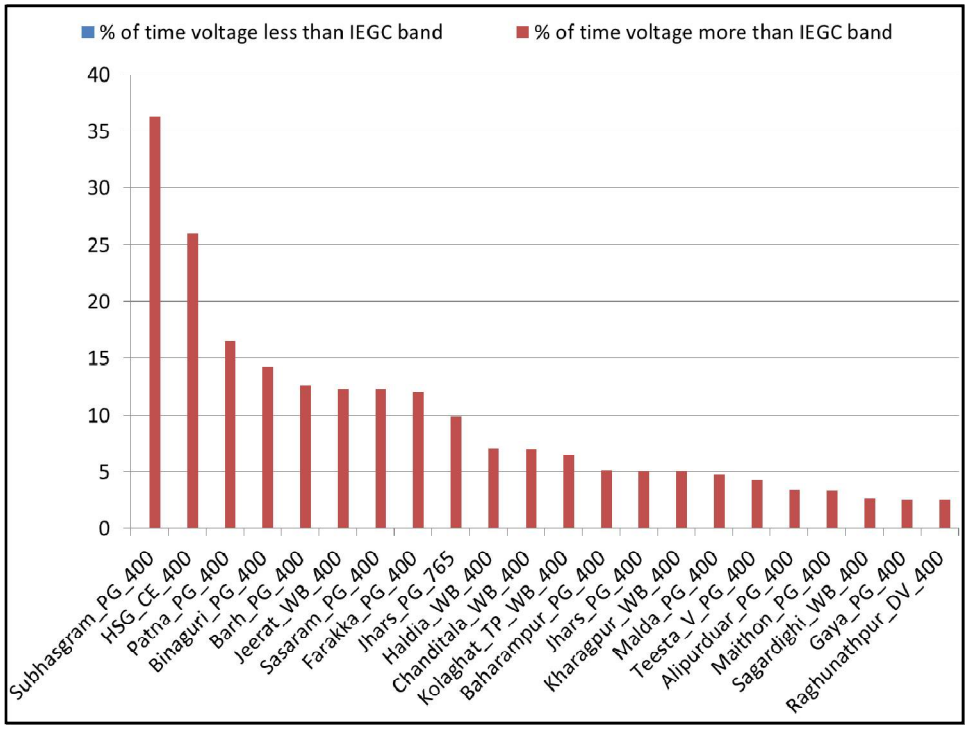




Unit No	Date of Outage	Reason
U – (80 MW)	28.05.2017	Repair of MIV & Draft Tube Gate leakage



VDI & Reactive power performances of various units in the month of December, 2018



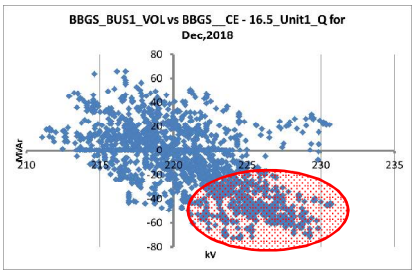
Reactive power injection and terminal bus voltage are compared for various generating units in ER.

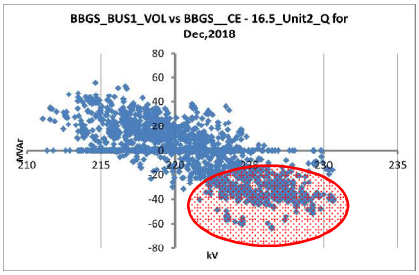
- Scatter plot is plotted with taking
  - Terminal voltage across x axis
  - Reactive power injection across y axis
  - (Nominal terminal voltage (kV), 0 MVAr) as origin
- MVAr injection should reduce with increase in terminal voltage

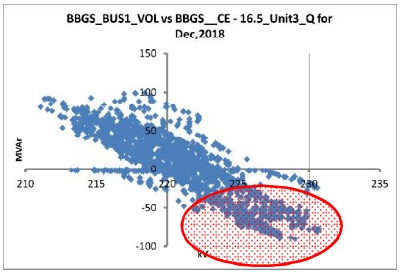
Performance of units in South Bengal in the month of December 2018

- In the month of December 2018, voltage at Jeerat and Subhasgram was higher than nominal value (400 kV) for considerable amount of time. MVAr absorption by nearby units is plotted along with their bus voltage
  - **Except Sagardighi and Kolaghat, MVAr absorption of all units in south Bengal was satisfactory during high voltage condition.**

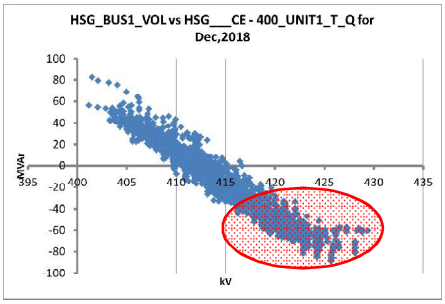
Budge Budge units (3 x 250 MW) MVAr injection along with 220 kV bus voltage at Budge Budge

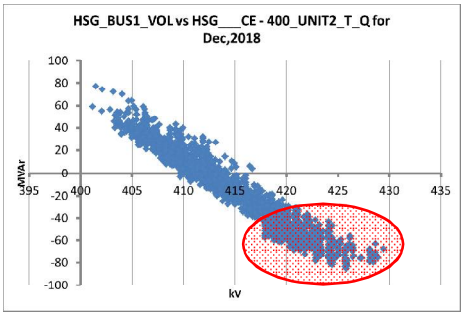




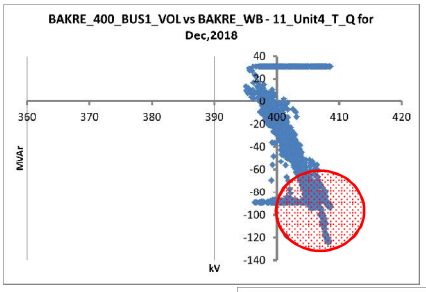


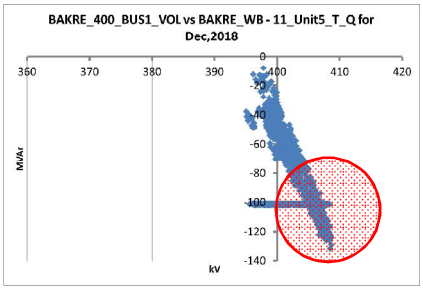
HEL units (2 x 300 MW) MVAr injection along with 400 kV bus voltage at HEL

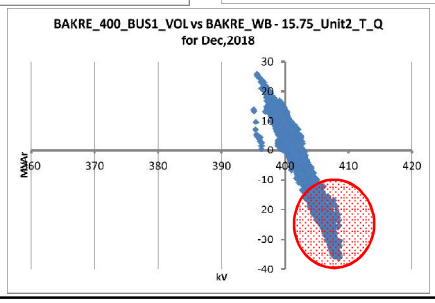




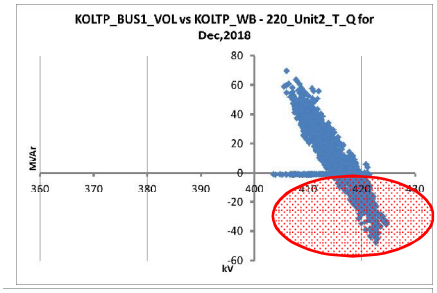
Bakreswar units (5 x 210 MW) MVAr injection along with 400 kV bus voltage at Bakreswar

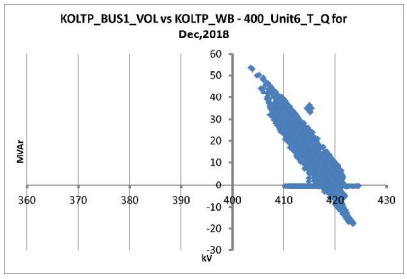


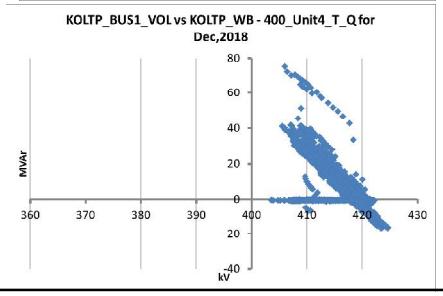


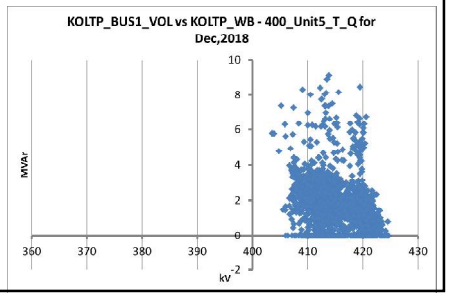


KTPP units (6 x 210 MW) MVAr injection along with 400 kV bus voltage at KTPP

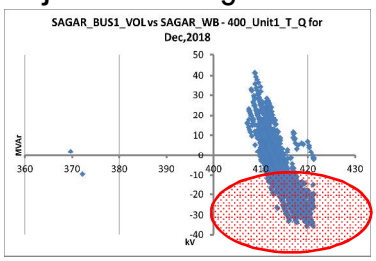


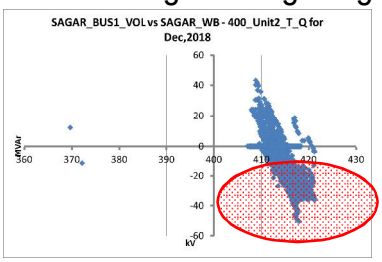


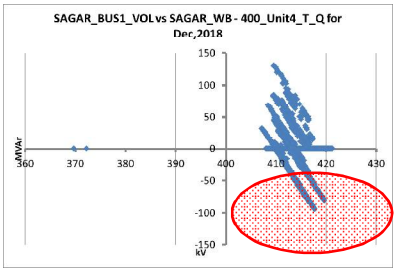




Sagardighi units (2 x 300 MW + 2 x 500 MW) MVAr injection along with 400 kV bus voltage at Sagardighi







Eastern Regional Power Committee, Kolkata

Minutes of Special Meeting on Islanding Scheme of IB-TPS held at ERPC, Kolkata on 12th December 2018 at 11:00hrs

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

Member Secretary, ERPC chaired the meeting. He welcomed participants from OPTCL, OPGC, Bakreswar TPS, Bandel TPS, ERLDC and ERPC. He informed that in line with discussion of 73rd PCC Meeting, this special meeting on Islanding Scheme of IB-TPS has been called.

At the start of the meeting, OPTCL and OPGC explained the draft islanding scheme with a detailed presentation. The presentation is enclosed at **Annexure-I**. OPTCL and OPGC had presented two cases for designing the islanding scheme as follows:

- Two units (2 X 210 MW) of IB TPS with 239 MW load
- One unit (210 MW) of IBTPS with the selected loads of 149 MW

Members from Bandel and Bakreswar opined that the difference in generation and load is more in case of islanding Two units (2 X 210 MW) of IB TPS with 239 MW load. The units are to be backing down at a higher rate in order to balance the generation with load. They suggested OPGC to interact with OEM regarding ramping down rate of the units. OPGC agreed to interact with M/s BHEL, OEM to assess the ramping down rate of the units.

OPGC also informed that the unit tripping of IB TPS generators is at 47.5 Hz with 1 sec delay and at 52 Hz with 2 sec delay.

Members discussed both the cases in details and decided to consider the islanding scheme with one unit (210 MW) of IBTPS with the selected loads of 149 MW in view of the following merits:

- Load-Generation balance at the time islanding can be easily achievable
- Traction load at Jharsuguda can be excluded from the islanding scheme
- 149 MW radial loads can be easily segregated at 220/132kV Budhipadar S/s and transferring the trip command to remote substations is not required except 132kV Kalunga S/s to trip 132kV Kalunga-Tarkera line.
- Islanding scheme can survive even with outage of one 220/132kV ATR at 220kV Budhipadar S/s

After detailed discussion the following were decided:

- The alarm for islanding scheme shall be initiated at 49.2 Hz at both Budhipadar and IB TPS to alert the operators
- Islanding of one unit (210 MW) of IBTPS with the selected loads of 149 MW connected through 132 kV level at Budhipadar substation will be initiated at 47.8 Hz of grid frequency with 250msec time delay.
- The islanding relay Micom P341 at Budhipadar will give trip command to all 220KV feeders connected to Bus-I and Bus II along with Bus coupler except Auto transformer- I & II and selected islanding IB TPS ckts either (IB -1 & 3) or (IB-2 & 4).

- Give trip command to circuit breakers of 132kV Budhipadar-Lapanga S/c line, 132kV Budhipadar-Jharsuguda D/C line and 132kV Budhipadar-Rajgangpur S/C lines at Budhipadar end.
- It will send carrier command to both Kalunga and Tarkera end to trip 132kV Kalunga-Tarkera S/c line from both the ends to make radial load at Kalunga.
- It will send carrier signal to IB TPS to start ramping and adjust IB TPS (one unit) generation to match the load.

OPTCL and OPGC were advised to present final islanding scheme in the OCC Meeting of January 2019.

Regarding implementation, OPTCL and OPGC informed the following:

- The islanding relay Micom P341 is already installed at bus coupler panel of 220kV Budhipadar S/s
- OPGW is available for 220 kV lines
- Installation of OPGW is in progress for 132kV lines
- Logic for generation control of islanding after receiving the command from Budhipadar is to be implemented at IB TPS

Meeting ended with vote of thanks to the chair.

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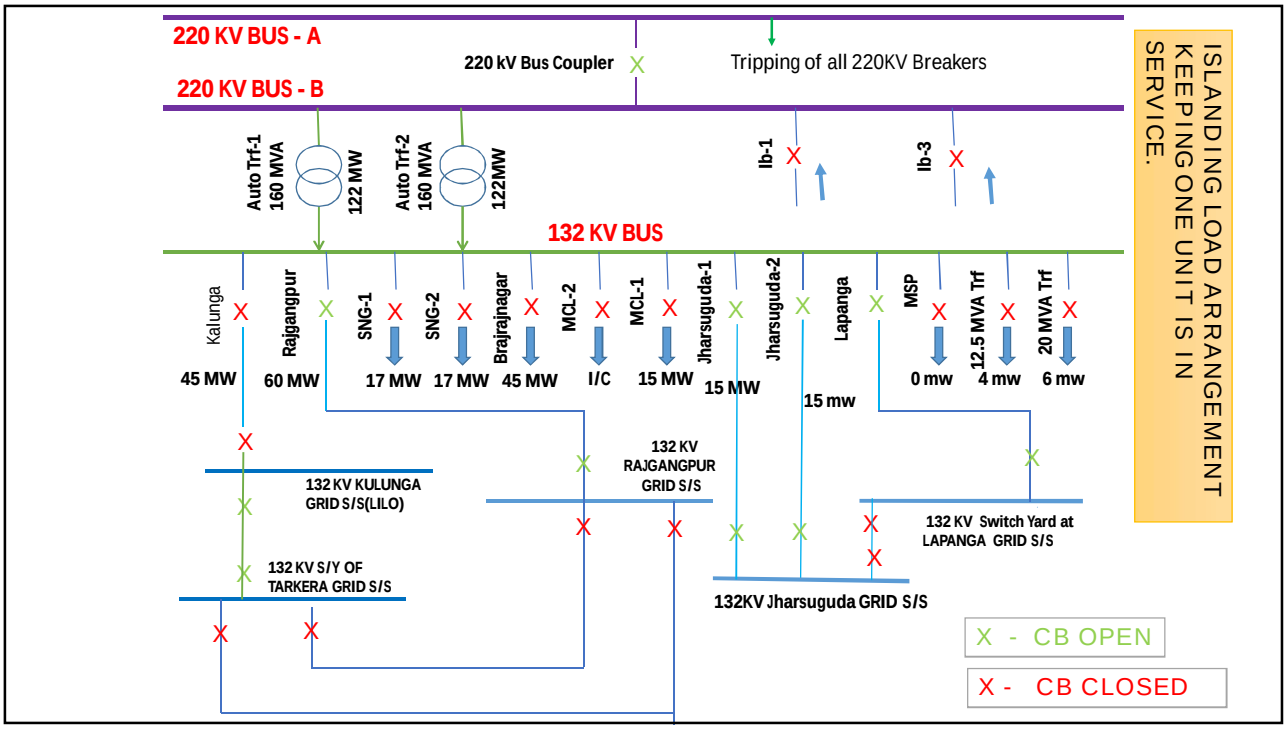
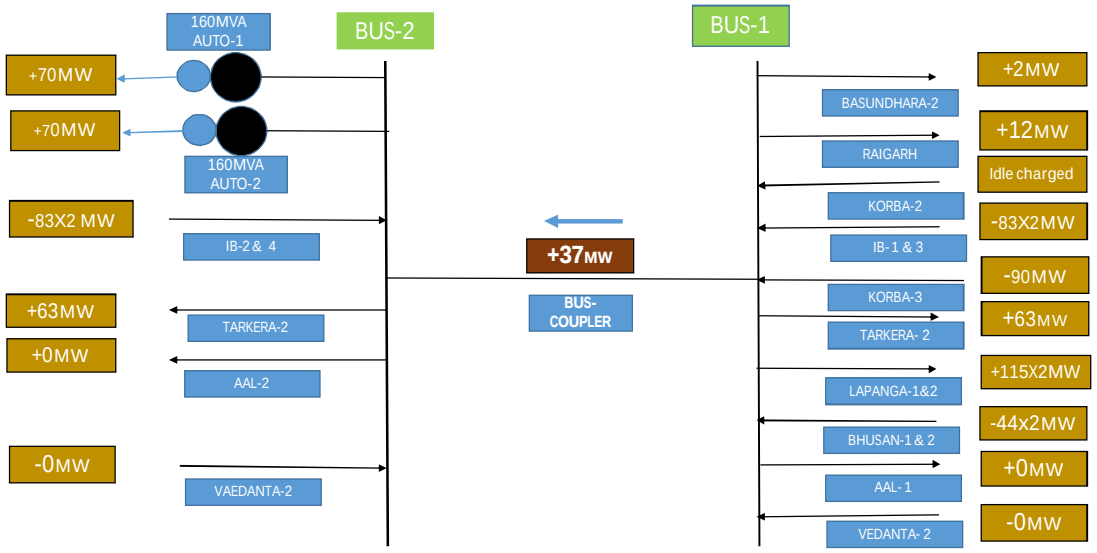
ISLANDING SCHEME FOR IB THERMAL – BUDHIPADAR GSS

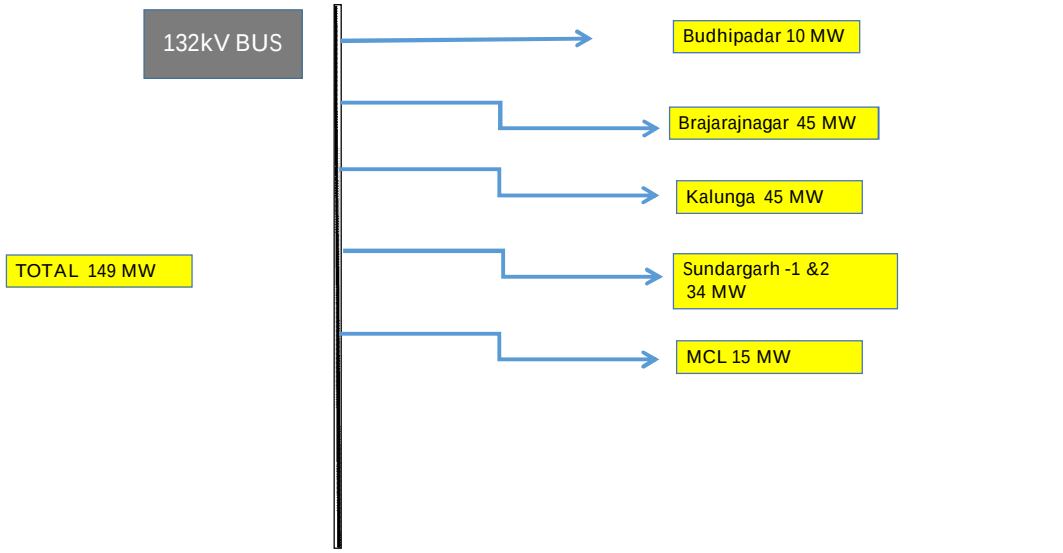

220 KV BUS - A
220 KV BUS - B
220 kV Bus Coupler
Tripping of all 220KV Breakers
Auto Trf-1 160 MVA
122 MW
Auto Trf-2 160 MVA
122MW
Ib-1
Ib-3
132 KV BUS
Kalunga
Rajgangpur
SNG-1
SNG-2
Brajrajnagar
MCL-2
MCL-1
Jharsuguda-1
Jharsuguda-2
Lapanga
MSP
12.5 MVA Trf
20 MVA Trf
45 MW
60 MW
17 MW
17 MW
45 MW
I/C
15 MW
15 MW
15 mw
0 mw
4 mw
6 mw
132 KV KULUNGA GRID S/S(LILO)
132 KV S/Y OF TARKERA GRID S/S
132 KV RAJGANGPUR GRID S/S
132 KV Switch Yard at LAPANGA GRID S/S
132KV Jharsuguda GRID S/S
X - CB OPEN
X - CB CLOSED
ISLANDING LOAD ARRANGEMENT KEEPING ONE UNIT IS IN SERVICE.

POWER FLOW DETAILS OF 220KV SYSTEM

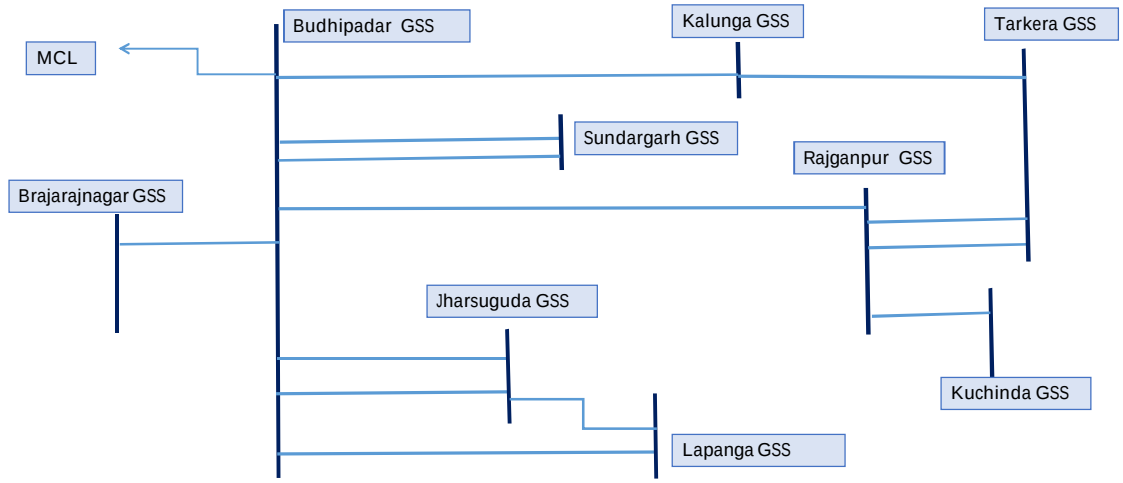
TYPICAL LOAD PATTERN OF DIFFERENT FEEDERS 12.07.2018 AT 12.00 HRS.



132kV RADIAL LOAD ARRANGEMENT FOR ISLAND SCHEME IN CASE OF SINGLE UNIT CONDITION



132KV Connectivity of Budhipadar GSS



ISLANDING SCHEME DESCRIPTION

1. Islanding schemes are implemented by generating stations & transmission system to isolate the healthy subsystems following a large-scale disturbance. This is a system requirement under contingency conditions according to which the power network may be split into healthy and self-sustaining zones so that cascade tripping of all generating stations in the entire region is avoided.
2. With a view to protect the generation of IB TPS during sudden and major disturbance in power system network, one special islanding scheme with part loads of Budhipadar GSS of OPTCL has been proposed.
3. Two numbers 210 MW generators of IB TPS connect to 220/132/33kV Grid substation through four numbers dedicated 220kV lines.
4. The islanding scheme envisages segregation of a group of matching 132kV load in closed loop with the IB generators.

ISLANDING SCHEME DESCRIPTION

5. 132kV feeders will be arranged radially in order to form islanding scheme with IB generation.
6. 220kV Budhipadar GSS has system with two main bus and a transfer bus system. The generation & matching loads put into two buses with bus coupler in operation.
7. Any two numbers 220kV feeders from IB TPS put into Bus –II and the other two are kept in the other bus as normal arrangement.
8. In normal condition, 220 kV interstate line to Korba-2 & 3 and Raigarh will be distributed to both the buses.
9. The islanding relay Micom P341 is installed at Bus coupler panel of the 220kV system.

ISLANDING SCHEME DESCRIPTION

10. In the event of system disturbance and actuation of islanding relay:

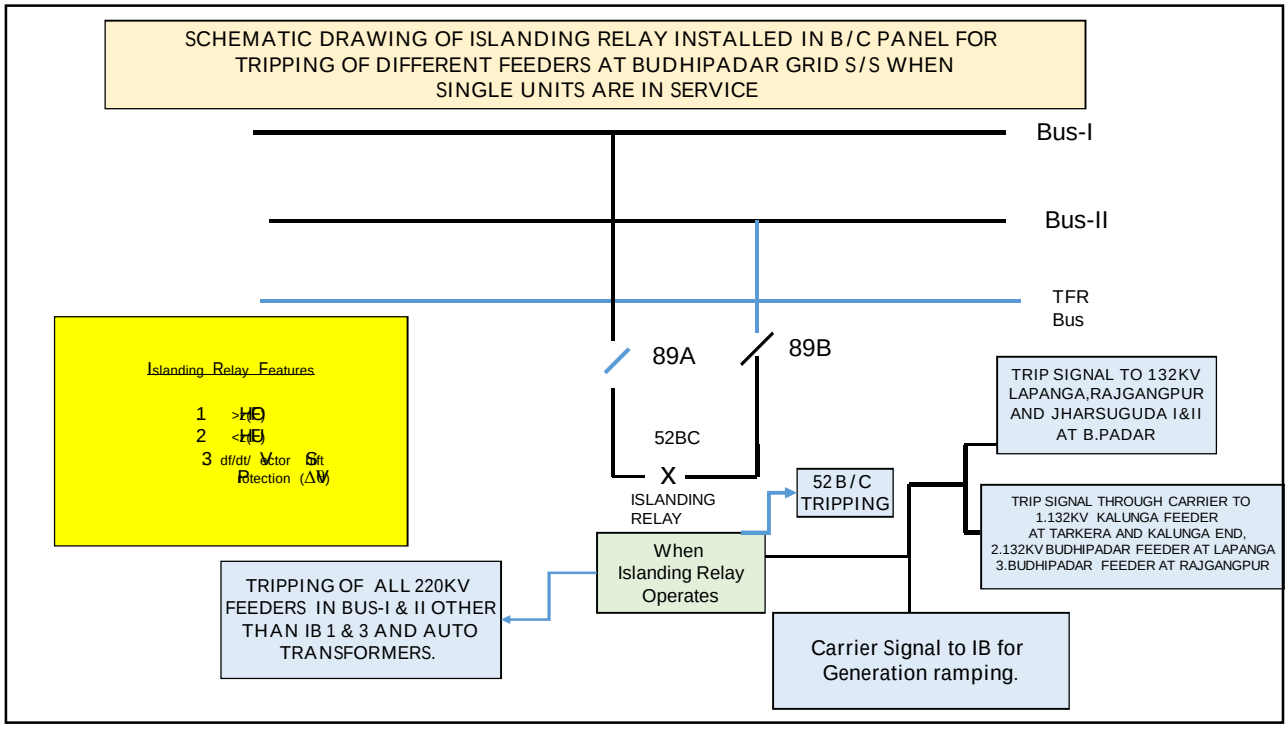
a. Relay will give command to trip all 220KV feeders connected to Bus-I and Bus II along with Bus coupler except selected islanding IB ckts. either (IB -1 & 3) / (IB-2 & 4) and Auto transformer- I & II.
b. It will also trip non- selected islanding IB ckts. incomer breaker either (IB -1 & 3) / (IB-2 & 4).
c. It will trip 132 KV Rajgangpur,Lapanga and Jharsuguda Feeders.
d. It will send carrier command to Tarkera end and trip 132kV Tarkera- Kalunga feeder so as to feed Kalunga Grid Load in radial arrangement.
e. It will send carrier signal to IB thermal end to start ramping and adjust IB generation to match the load.
f. It will send carrier signal to Lapanga end to trip 132kV Lapanga – Budhipadar feeder at Lapanga.

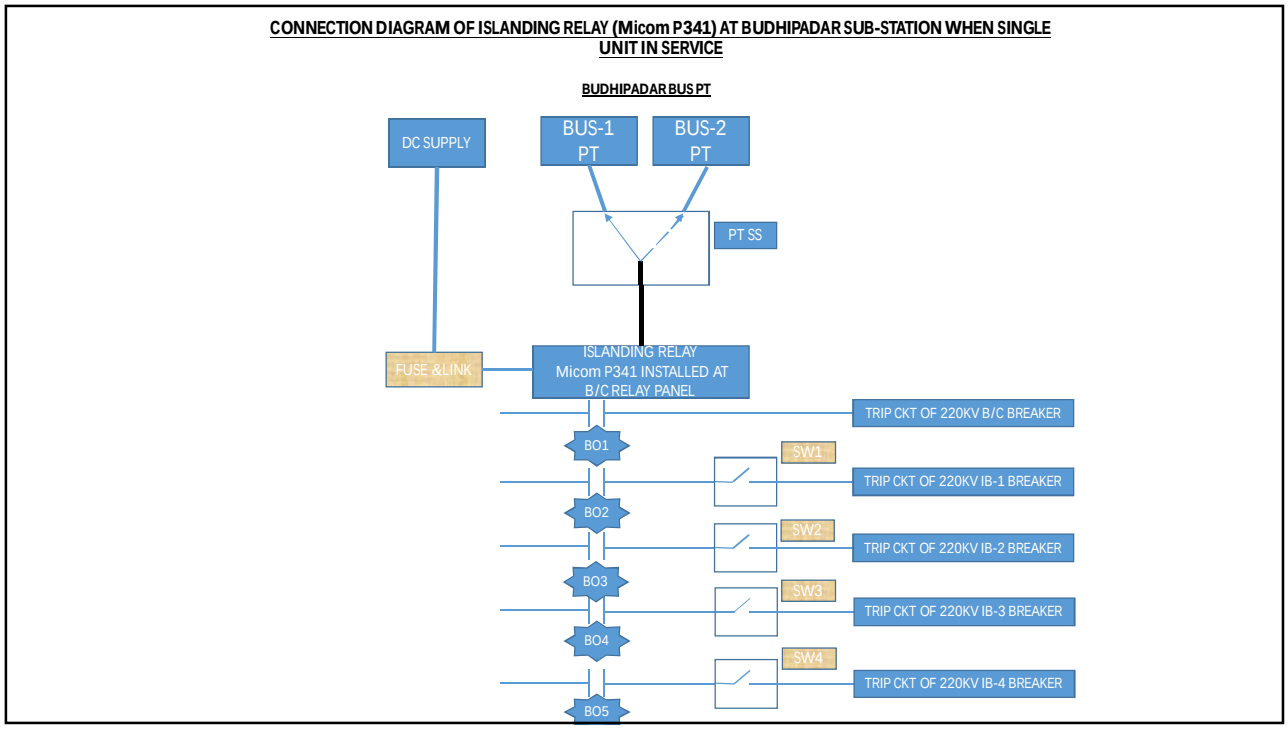
ISLANDING SCHEME DESCRIPTION

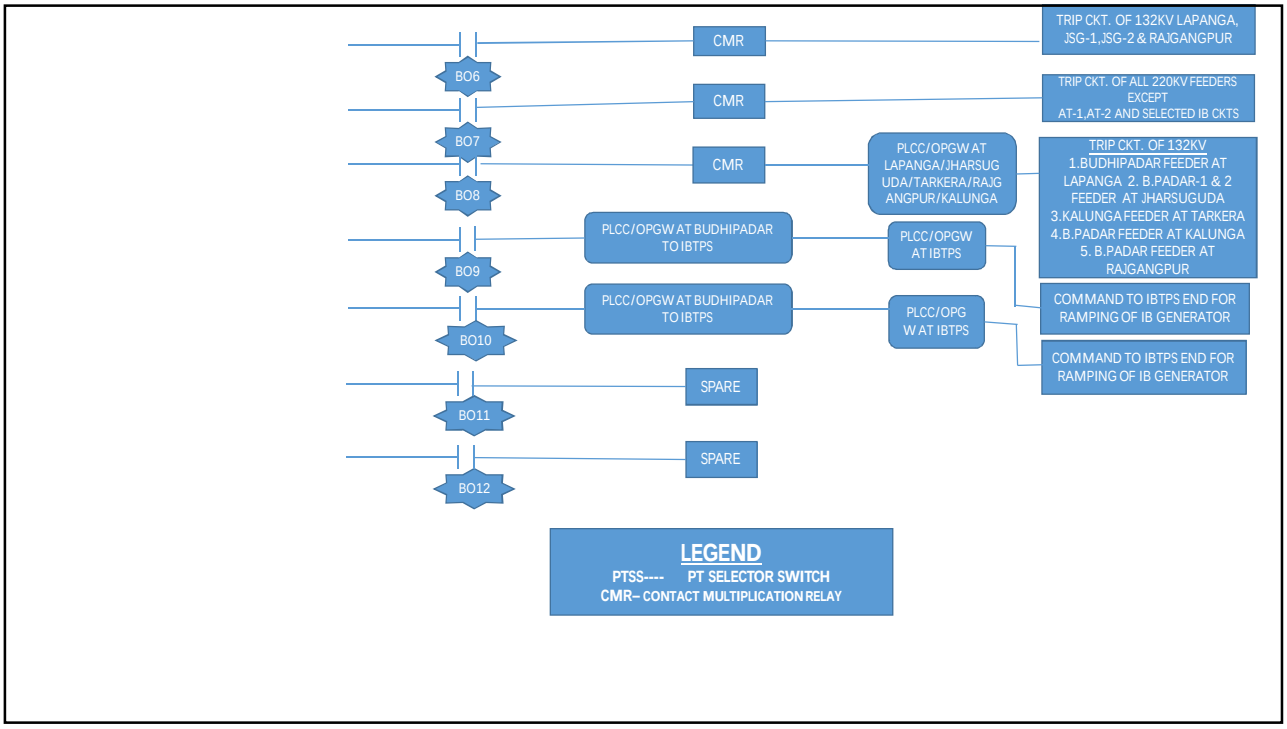
11. The CGP feeders such as Vedanta , Bhusan and Aditya Aluminium have their own islanding schemes to cater their industry load.

12. The general arrangement of 220kV feeder configuration, 132kV loads for islanding has been shown in the above slides.

- Total Generation at IBTPS with two Units operation is 380MW.
- Proposed Maximum Load for Islanding Scheme with Two units in operation 239MW.
- As though the generation and Load gap with two unit operation is very high. So it is suggested for single unit operation where generation load gap is low.
- Proposed Maximum Load for Islanding Scheme with Single unit in operation 149MW.


SCHEMATIC DRAWING OF ISLANDING RELAY INSTALLED IN B/C PANEL FOR TRIPPING OF DIFFERENT FEEDERS AT BUDHIPADAR GRID S/S WHEN SINGLE UNITS ARE IN SERVICE
Bus-I
Bus-II
TFR Bus
89A
89B
52BC
X
ISLANDING RELAY
52 B/C TRIPPING
TRIP SIGNAL TO 132KV LAPANGA,RAJGANGPUR AND JHARSUGUDA I&II AT B.PADAR
TRIP SIGNAL THROUGH CARRIER TO 1.132KV KALUNGA FEEDER AT TARKERA AND KALUNGA END, 2.132KV BUDHIPADAR FEEDER AT LAPANGA 3.BUDHIPADAR FEEDER AT RAJGANGPUR
When Islanding Relay Operates
TRIPPING OF ALL 220KV FEEDERS IN BUS-I & II OTHER THAN IB 1 & 3 AND AUTO TRANSFORMERS.
Carrier Signal to IB for Generation ramping.

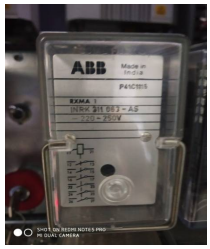

CONNECTION DIAGRAM OF ISLANDING RELAY (Micom P341) AT BUDHIPADAR SUB-STATION WHEN SINGLE UNIT IN SERVICE
BUDHIPADAR BUS PT
DC SUPPLY
BUS-1 PT
BUS-2 PT
PT SS
FUSE &LINK
ISLANDING RELAY Micom P341 INSTALLED AT B/C RELAY PANEL
TRIP CKT OF 220KV B/C BREAKER
BO1
SW1
TRIP CKT OF 220KV IB-1 BREAKER
BO2
SW2
TRIP CKT OF 220KV IB-2 BREAKER
BO3
SW3
TRIP CKT OF 220KV IB-3 BREAKER
BO4
SW4
TRIP CKT OF 220KV IB-4 BREAKER
BO5

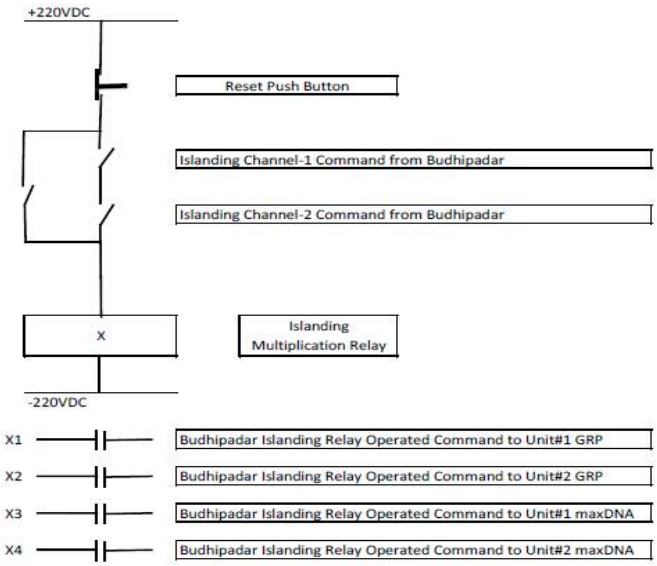


Frequency	Budhipadar End	ITPS End(In REG670 Generator Protection Relay)	Remarks
Under Frequency	Stage1: 49.2Hz	Stage1:49.2Hz	ALARM AT BUDHIPADAR AND IBTPS
Under Frequency	Stage2: 47.8Hz, TD:250mSec	Stage1:47.8Hz TD:250mSec	ISLANDING RELAY OPERATES AT BUDHIPADAR

ISLANDING MULTIPLICATION RELAY CONFIGURED IN IBTPS SWITCHYARD CONTROL ROOM

Hold ON Contact of X Relay





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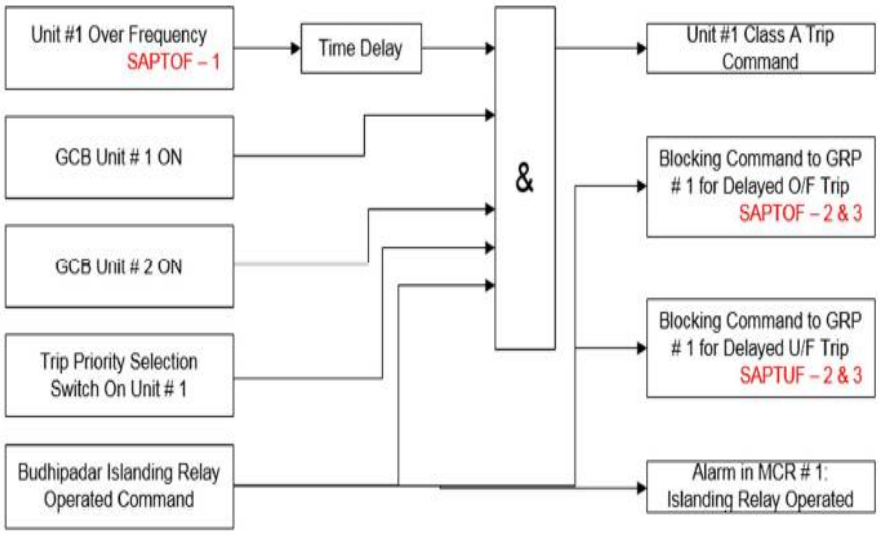
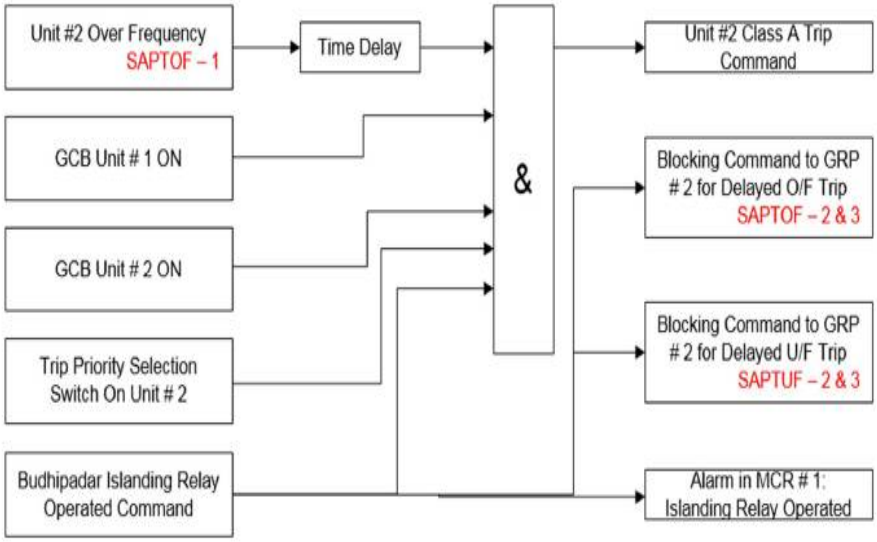
Logic configured in REG670 Relay for Islanding of Unit-I Generator



16

Logic configured in REG670 Relay for Islanding of Unit- 2 Generator



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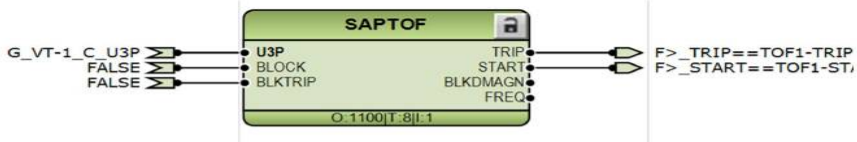
- The over – frequency protection is achieved using SAPTOF function block in Generator Protection relay REG670. There are 3 instances of SAPTOF function in REG670 relay, in which the 1st is used to confirm the disturbance in the system frequency (As shown in above figure- red colored), 2nd and 3rd instance is used for delayed operation of the over- frequency function in line with the logic shown above.

- Function Block and Parameter Settings of Over - Frequency Protection-1st Instance:



SAPTOF: 1				
Setting Group1				
Operation	On			
UBase	15.75	kV	0.05	2000.00
StartFrequency	51.50	Hz	35.00	75.00
IntBlockLevel	50	%UB	0	100
TimeDlyOperate	1.000	s	0.000	60.000
TimeDlyReset	0.050	s	0.000	60.000

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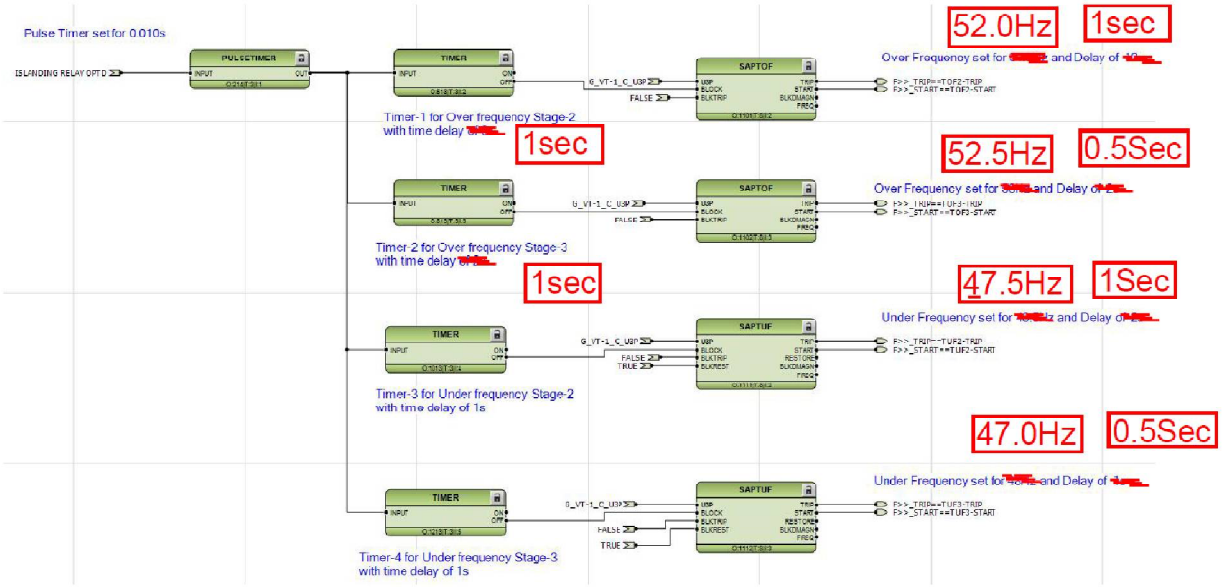
Configuration of Delayed Over Frequency and Under Frequency Function



- Above timers can be set and adjusted as per requirement. If there is no trip from islanding relay, over and under frequency protections will operate as per the times shown without external timers (timer-1 to 4).
- If there is a trip from Islanding relay, over and under frequency protections are blocked till the time set in corresponding timers as per the above shown configuration. Hence total tripping time delay will be corresponding timer delay + over and under frequency protection function set time delay.

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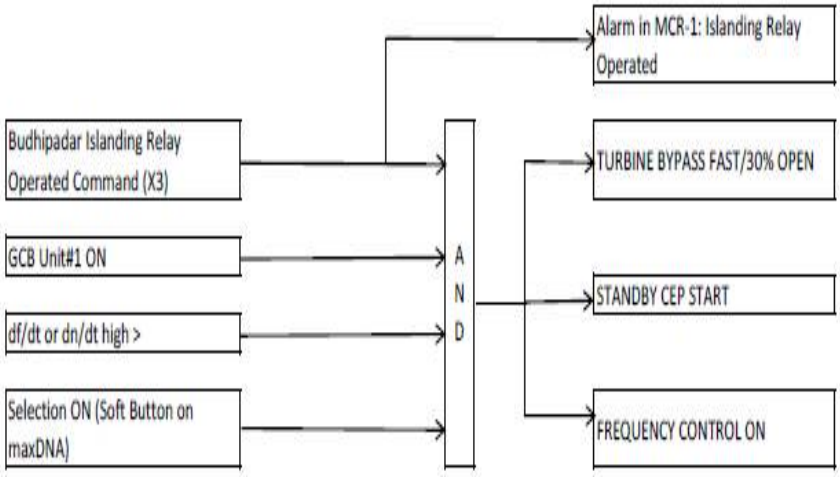
LOAD-GENERATION BALANCE SCHEME CONFIGURATION IN UNIT#1 MAXDNA CONTROL SYSTEM



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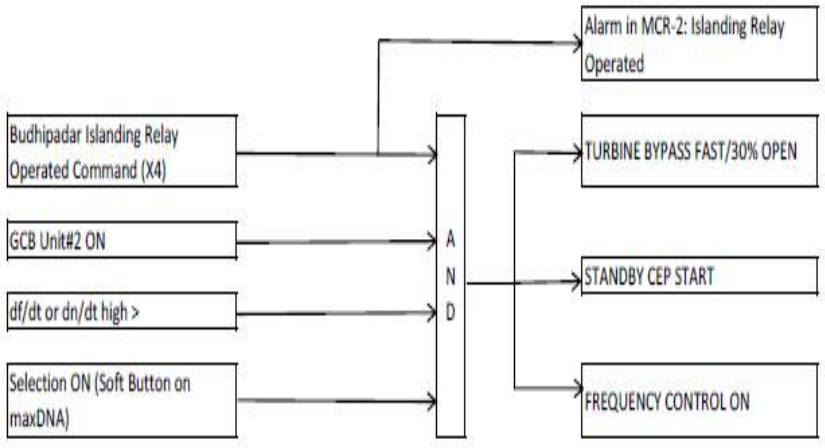
LOAD-GENERATION BALANCE SCHEME CONFIGURATION IN UNIT#2 MAXDNA CONTROL SYSTEM



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Islanding Operation	After islanding operation, IBTPS Generators shall cater to the demand of connected islanded load and maintain the frequency. In case of further extension of power to other loads if required, it may be done with close coordination of SLDC, IBTPS & Budhipadar S/S so that the islanded system shall not collapse and able to maintain at the desired frequency.
Normalisation / Resynchronisation	After system stabilization, islanded system may be synchronised with main grid at IBTPS end. Ensure that unloaded 220KV IB-Budhipadar lines are disconnected from both (IBTPS & Budhipadar) sides. Charge one of same lines from Budhipadar 220KV Other BUS connected to main system. The same line may be synchronized at IBTPS end after acheiving synchronisation permissive then connecting both systems. After this Budhipadar 220KV Bus Coupler breaker can be closed for normilazation. Alternatively both systems may be synnchronized through 220KV Budhipadar Bus Coupler breaker after acheiving required synnchronisation permissive.

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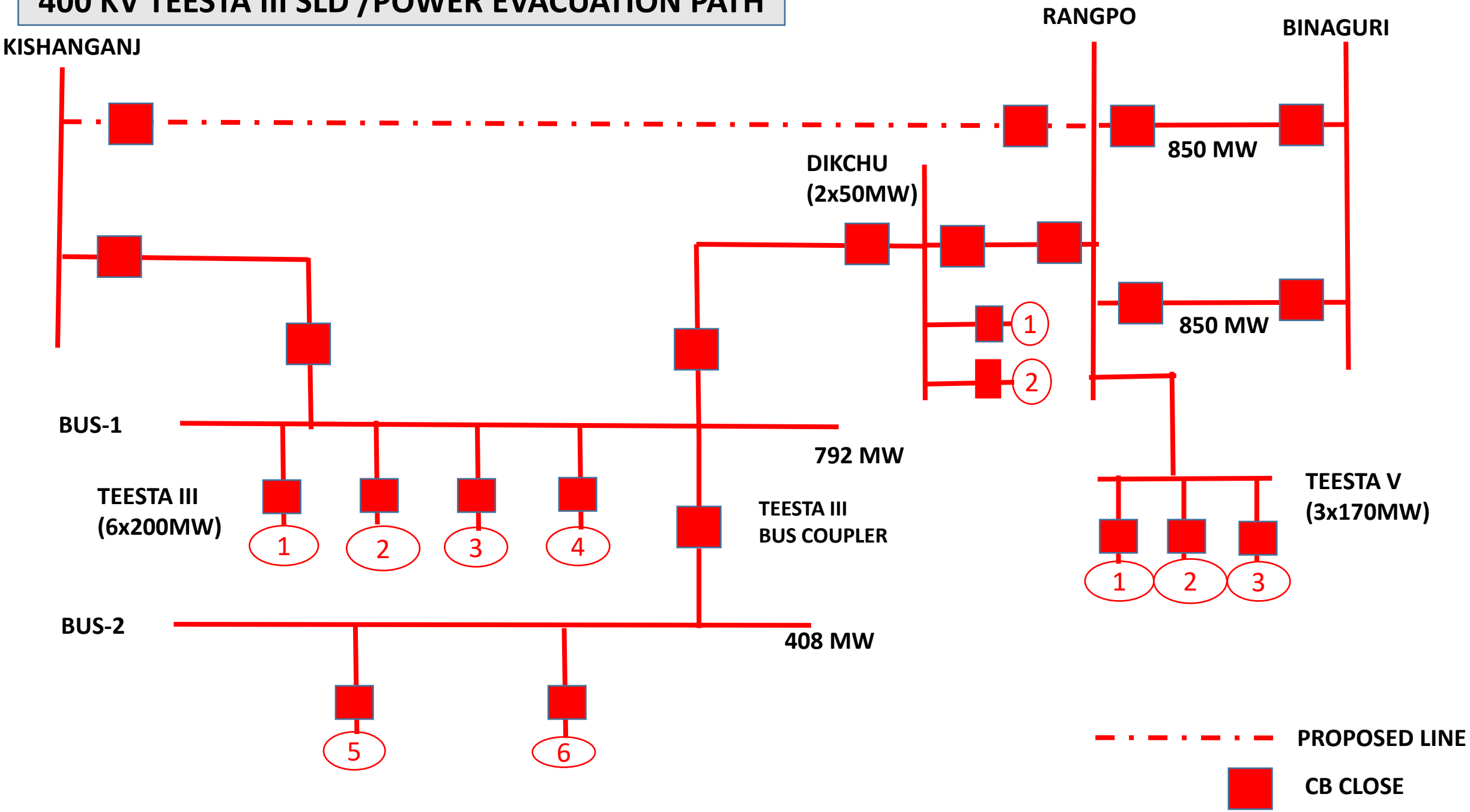
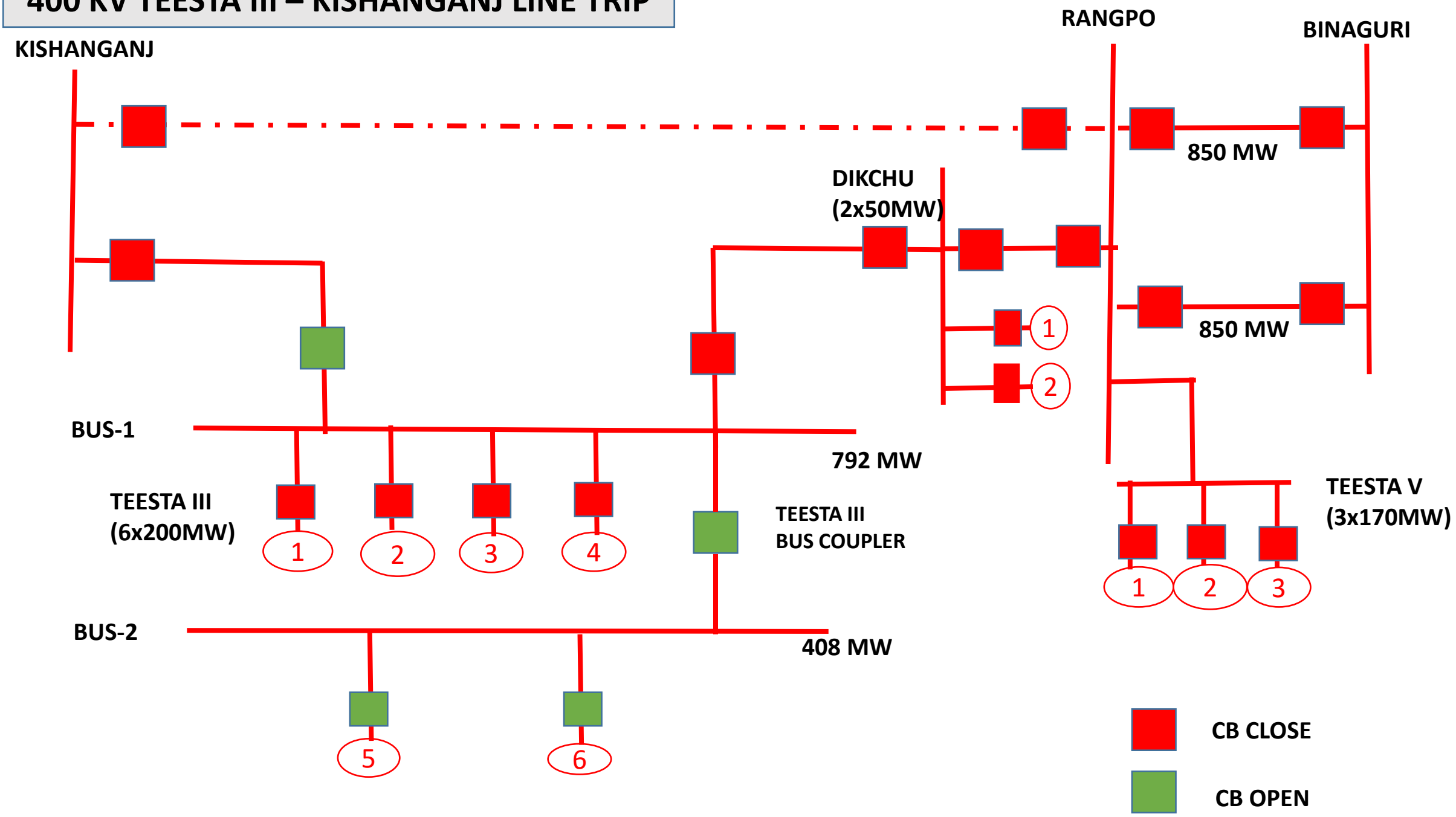
Annexure-B9

400 KV TEESTA III SLD /POWER EVACUATION PATH



400 KV TEESTA III – KISHANGANJ LINE TRIP



400 KV TEESTA III – KISHANGANJ LINE TRIP

- Bus I will have 4 units with load restricted to less than 800MW and Bus II is connected with remaining 2 units with balance load.

- If 400 KV Teesta III – Kishanganj line trips, bus coupler will open and two units will be tripped which are in Bus II.

ANNEXURE - B10.1

ERPC:KOLKATA

Proposed Maintenance Schedule of Thermal Generating Units of ER during 2019-20
(as finalised in LGBR meeting dated 18.12.2018)

System	Station	Unit	Capacity (MW)	Period		No. of Days	Reason
				From	To		
Jharkhand	TVNL, Tenughat	1	210	15.07.19	10.08.19	27	Annual Overhauling
		2	210	12.08.19	08.09.19	28	Annual Overhauling
DVC	MTPS	1	210	11.12.19	15.01.20	36	COH (Blr,Turb-RLA,Gen.)
		2	210	29.10.19	03.12.19	36	COH (Blr-RLA,Turb-RLA,Gen.)
		3	210	25.06.19	30.07.19	36	COH (Blr-RLA,Turb-RLA,Gen.)
		7	500	14.05.19	18.06.19	36	COH (Blr,Turb,Gen.)
	CTPS	8	250	22.02.20	28.03.20	36	COH (Blr,Turb,Gen.)
	DSTPS	1	500	16.08.19	20.09.19	36	COH (Blr,Turb,Gen.)
	KTPS	1	500	16.01.20	19.02.20	35	COH (Blr,Turb,Gen.)
ODISHA	TTPS	1	60	01.02.20	15.02.20	15	AOH
		2	60	25.06.19	09.07.19	15	AOH
		3	60	20.07.19	03.08.19	15	AOH
		4	60	13.08.19	27.08.19	15	AOH
		5	110	09.09.19	28.09.19	20	AOH
		6	110	09.10.19	28.10.19	20	AOH
	IB TPS	1	210	11.07.19	31.07.19	21	AOH
		2	210	06.06.19	30.06.19	25	AOH
		3	660	01.12.19	25.12.19	25	AOH
		4	660				NO MAINTENANCE
WBPDCL	Kolaghat TPS	1	210	07.06.18	30.06.19	91	R&M
		2	210	01.08.19	31.03.20	122	R&M
		4	210	01.02.20	15.03.20	44	Capital Overhauling
		5	210	24.11.19	30.11.19	7	Boiler License renewal
		6	210	01.11.19	28.11.19	28	Boiler Overhauling
	Bakreswar TPS	1	210	16.11.19	05.12.19	20	Boiler Overhauling
		2	210	21.08.19	27.08.19	7	Boiler License renewal
		3	210	01.11.19	07.11.19	7	Boiler License renewal
		4	210	01.07.19	07.07.19	7	Boiler License renewal
		4	210	01.01.20	07.02.20	38	COH
		5	210	24.06.19	30.06.19	7	Boiler License renewal
	Bandel TPS	1	60	16.06.19	14.08.19	60	Capital Overhauling
		2	60	25.12.19	31.12.19	15	Boiler License renewal
		5	210	12.11.19	18.11.19	7	Boiler License renewal
	Santaldih TPS	5	250	01.11.19	05.12.19	35	Capital Overhauling
		6	250	15.09.19	21.09.19	7	Boiler License renewal
	Sagarighi TPS	1	300	12.07.19	15.08.19	35	Capital Overhauling
		2	300	01.07.19	07.07.19	7	Boiler License renewal
		3	500	01.05.19	07.05.19	7	Boiler License renewal
		4	500	20.12.19	26.12.19	7	Boiler License renewal
CESC	BUDGE-BUDGE	1	250	10.11.19	14.11.19	4	Not Specified
		2	250	16.11.19	30.11.19	15	Not Specified
		3	250	02.12.19	19.12.19	18	Not Specified
	TITAGARH	1	60	02.01.20	05.01.20	4	Not Specified
		2	60	22.02.20	07.03.20	15	Not Specified
		3	60	12.12.19	26.12.19	15	Not Specified
		4	60	27.12.19	30.12.2019	4	Not Specified
	SOUTHERN	1	67.5	01.01.20	15.01.20	15	Not Specified
		2	67.5	17.01.20	20.01.20	4	Not Specified
HEL	HALDIA	1	300	21.12.19	03.02.20	45	AOH
		2	300				NO MAINTENANCE
DPL	DPPS	7	300	17.08.19	31.08.19	15	Boiler License renewal & Maintenance of Boiler
		8	250	23.12.19	31.01.20	40	BTG OH
NTPC	FSTPP	1	200	01.09.19	25.09.19	25	AOH
		3	200	20.07.19	23.08.19	35	AOH
		4	500	11.03.20	05.04.20	26	AOH
		5	500	11.03.19	05.04.19	26	AOH
		6	500	01.11.19	05.12.19	35	AOH
	KhSTPP	1	210	27.08.19	30.09.19	35	AOH
		2	210	10.11.19	09.12.19	30	AOH
		4	210	25.07.19	23.08.19	30	AOH
		7	500	06.04.19	30.04.19	25	AOH
	Barh	4	660	01.11.19	04.01.20	65	Boiler Modification
		5	660	15.01.20	19.03.20	65	AOH
	TSTPS	1	500	01.12.19	04.01.20	35	AOH
		3	500	03.09.19	27.09.19	25	AOH
		4	500	21.06.19	15.07.19	25	AOH
	KBUNL	3	195	15.11.19	20.12.19	35	LP rotor inspection,Boiler OH & Com.Modifi/NOX
	MTPS	4	195	01.03.19	04.04.19	35	LP rotor inspection,Boiler OH
BRBCL	Nabinagar TPP	1	250	26.07.19	19.08.19	25	LP turbine inspection,Rotor threading,Generator inspection.
		2	250	16.04.19	30.04.19	15	Boiler and TG PG Test,Boiler License Renewal
		3	250				No planned maintenance
IPP	GMR	1	350	01.06.19	05.07.19	35	Turbine Overhauling
		2	350				No planned maintenance
		3	350				No planned maintenance
	JITPL	1	600	01.04.19	05.05.19		AOH
		2	600				No planned maintenance
	MPL	1	525	01.11.19	14.11.19	14	AOH
		2	525	06.04.19	03.05.19	28	AOH
	APNRL	1	270				No planned maintenance
		2	270				No planned maintenance

Notes:

1) Considering the Secondary School Exam., on- set of summar load and expected Lok Sabha election , NTPC was requested to defer/prepone their S/D proposal of FSTPS U#4 &5 to after festival month / to winter months as convenient to NTPC. But NTPC did not agreed to that and they opined that due to water sharing agreement with Bangladesh in the month of March & April ,water availability would be less and they would be compelled to take shut down the units during that period. In such a situation NTPC would be allowed to take oppertuinty shut down during that period. However, Constituenta did not agreed to that.

2) Also NTPC did not agree the shut down programme of Barh STPS unit#4&5(660 MW each) due to mobilization/ tie up with agency for major boiler modification. but the LGBR Committee decided the above S/D as per Grid load pattern/ requirement.

एनटीपीसी NTPC
एक महारत्न कम्पनी

एनटीपीसी लिमिटेड
(भारत सरकार का उद्यम)
NTPC Limited
(A Govt. of India Enterprise)
पूर्वी क्षेत्र–I मुख्यालय / Eastern Region-I Headquarters

To,

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

Subject – Revised Overhauling Schedule proposal of NTPC ER-I stations for consideration in 153rd OCC meeting

Dear Sir,

In view of changing scenario in 2019-24 tariff period, NTPC is committed to support customer demand in a better way. For enhanced reliability of the Units, following planned maintenance is proposed for approval in 153rd OCC meeting and making it a part of LGBR for 2019-20:

Station	Unit	As per draft LGBR for 2019-20		Proposed Revised schedule		Scope	Remarks
		Start date	Dur. days	Start date	Dur. days		
FSTPS	1	01.09.19	25	11.10.19	35	Boiler+DDCMIS	Shifted after Durga Puja.
	3	20.07.19	35	20.07.19	45	Boiler+Turbine+Gen	Same start day.
	4	11.03.20	26	11.03.20	30	Boiler	Not feasible in 26 days. Earlier proposal was for 30 days. NTPC is perusing with West Bengal.
	5	11.03.19	26	01.04.19	30	Boiler	
	6	01.11.19	35	01.06.19	45	Boiler+Turbine+Gen	Overhauling long due, it will not be safe to run upto Nov'19.
KhSTPS	1	27.08.19	35	27.08.19	45	Blr.+Turb.+ESP R&M	Same start day.
	2	10.11.19	30	10.11.19	30	Boiler+Gen+ESP R&M	Same start day.
	4	25.07.19	30	25.07.19	30	Boiler+Gen+ESP R&M	Same start day.
	7	06.04.19	25	06.04.19	30	Boiler	Same start day.
Barh	4	01.11.19	65	01.03.19	80	Boiler modification	Boiler modification plan is tied up with OEM. NTPC is perusing with Bihar.
	5	15.01.20	65	01.03.20	80	Boiler modification	

The above proposal may please be put up as agenda for 153rd OCC meeting.

With warm regards,

H. P. Joshi 17/1/19
GM(OS)

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE PEAK DEMAND- vs- AVAILABILITY IN EASTERN REGION FOR THE PERIOD FROM APRIL-2019 TO MARCH-2020

(ALL FIGURES IN MW & NET)

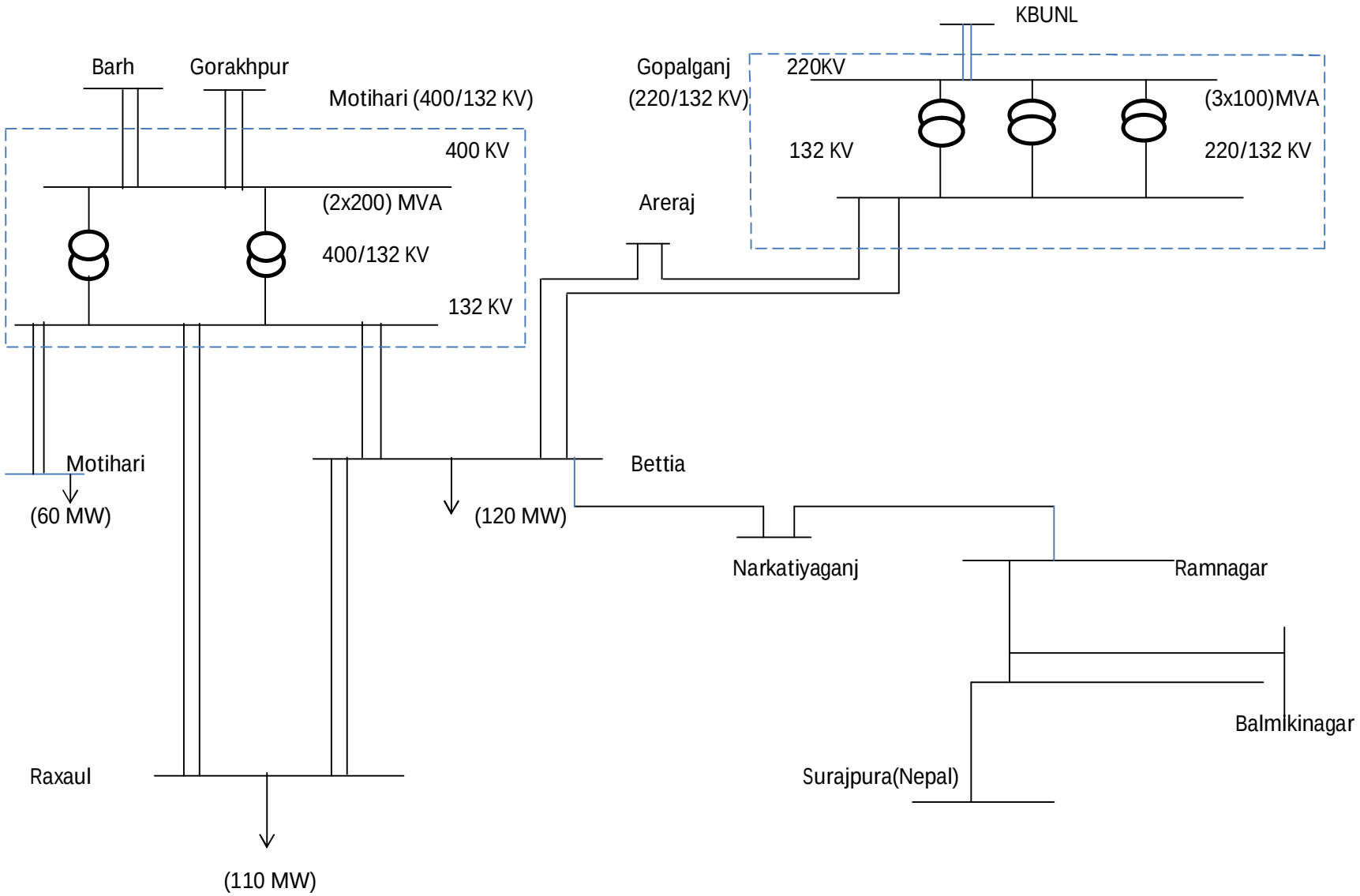
SL.NO	PARTICULARS	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
1	BIHAR												
i)	NET MAX DEMAND	4850	5000	5100	5180	5130	5250	5300	4875	4800	5300	5055	5350
ii)	NET POWER AVAILABILITY- Own+KBUNL+BRBCL	311	316	332	517	519	520	427	412	406	422	427	419
	Central Sector+Bi-Lateral	3532	3596	3634	3590	3506	3507	3707	2967	2832	3269	3207	3294
iii)	SURPLUS(+)/DEFICIT(-)	-1007	-1088	-1134	-1073	-1105	-1224	-1166	-1496	-1561	-1609	-1420	-1638
2	JHARKHAND												
i)	NET MAX DEMAND	1410	1400	1340	1340	1380	1430	1390	1410	1440	1440	1370	1360
ii)	NET POWER AVAILABILITY- Own Source	321	341	341	305	242	346	386	341	341	341	341	341
	Central Sector+Bi-Lateral+KBUNL	886	904	930	924	915	915	989	840	834	902	922	919
iii)	SURPLUS(+)/DEFICIT(-)	-203	-155	-69	-111	-223	-169	-15	-229	-265	-197	-107	-100
3	DVC												
i)	NET MAX DEMAND (OWN)	3000	2980	2960	2930	2885	2820	2900	2925	3000	3135	3045	3055
ii)	NET POWER AVAILABILITY- OWN SOURCE	5475	5247	5207	5401	5358	5299	5544	5311	5348	5193	5165	5298
	- Central Sector+MPL+KBUNL	507	552	561	546	515	561	561	521	517	519	543	545
	BI-LATERAL EXPORT BY DVC	1675	1772	1731	1644	1416	1467	1241	1446	1684	1671	1825	1765
iii)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	1307	1048	1077	1373	1572	1572	1964	1460	1181	907	838	1023
4	ODISHA												
i)	NET MAX DEMAND	4445	5075	4780	4620	5075	5035	5250	4610	4975	4950	4930	5235
ii)	NET POWER AVAILABILITY- OWN+IPP+CPP	3843	3913	3589	3628	4167	4079	3736	3778	3492	3673	3690	3848
	- Central Sector+KBUNL	1635	1658	1649	1626	1618	1575	2027	1826	1706	1893	1932	1923
iii)	SURPLUS(+)/DEFICIT(-)	1033	495	459	634	710	620	512	993	224	616	692	536
5	WEST BENGAL												
5.1	WBSEDCL												
i)	NET MAX DEMAND (OWN)	6875	6800	6710	7290	6910	7030	7080	5770	5795	5910	6370	7735
ii)	IPCL DEMAND	85	86	84	83	83	83	83	81	79	79	82	84
iii)	TOTAL WBSEDCL's DEMAND (incl.B'Desh+Sikkim+IPCL)	7165	7091	7004	7583	7203	7323	7373	6061	6084	5994	6457	7824
iv)	NET POWER AVAILABILITY- Own Source	3740	3690	3480	3456	3214	3373	3577	3255	3610	3375	3449	3632
	- Import from DPL	170	155	160	160	68	165	185	195	139	9	185	175
	- Central Sector+Bi-lateral+IPP&CPP+TLDP+IPCL	2400	2428	2543	2508	2499	2358	2634	2223	2236	2309	2458	2463
v)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	-855	-819	-821	-1460	-1422	-1428	-977	-388	-98	-301	-365	-1554
vi)	EXPORT (TO B'DESH & SIKKIM)	205	205	210	210	210	210	210	210	210	5	5	5
5.2	DPL												
i)	NET MAX DEMAND	295	310	305	305	295	300	280	270	275	280	280	290
ii)	NET POWER AVAILABILITY	465	465	465	465	363	465	465	465	414	289	465	465
iii)	SURPLUS(+)/DEFICIT(-)	170	155	160	160	68	165	185	195	139	9	185	175
5.3	CESC												
i)	NET MAX DEMAND	2100	2250	2260	1850	1900	2050	2030	1700	1520	1450	1680	1850
ii)	NET POWER AVAILABILITY - OWN SOURCE	750	750	750	750	750	750	750	700	460	700	700	750
	IMPORT FROM OTHER SOURCE	810	960	970	560	610	760	740	460	520	482	440	560
	IMPORT FROM HALDIA ENERGY LTD.	540	540	540	540	540	540	540	540	540	268	540	540
iii)	TOTAL AVAILABILITY	2100	2250	2260	1850	1900	2050	2030	1700	1520	1450	1680	1850
iv)	SURPLUS(+)/DEFICIT(-)	0	0	0	0	0	0	0	0	0	0	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC+IPCL) (excluding DVC's supply to WBSEDCL's command area)												
i)	NET MAX DEMAND OWN (Excl. Export)	9355	9446	9359	9528	9188	9463	9473	7821	7669	7719	8412	9959
ii)	NET POWER AVAILABILITY- Own Source	4955	4905	4695	4671	4327	4588	4792	4420	4484	4364	4614	4847
iii)	CS SHARE+BILETARAL+IPP/CPP+TLDP+HEL	3750	3928	4053	3608	3649	3658	3914	3223	3296	3059	3438	3563
iv)	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP.	-650	-614	-611	-1250	-1212	-1218	-767	-178	112	-296	-360	-1549
v)	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	-855	-819	-821	-1460	-1422	-1428	-977	-388	-98	-301	-365	-1554
7	SIKKIM												
i)	NET MAX DEMAND	100	100	95	90	95	95	105	125	125	125	120	110
ii)	NET POWER AVAILABILITY- Own Source	8	8	8	8	8	8	8	4	2	2	2	2
	- Central Sector	169	171	171	170	167	167	183	172	136	149	172	173
iii)	SURPLUS(+)/DEFICIT(-)	77	80	84	89	80	80	86	51	13	26	55	65
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR												
i)	NET MAX DEMAND	22931	23763	23400	23454	23517	23855	24176	21551	21790	22444	22703	24820
ii)	BI-LATERAL EXPORT BY DVC	1675	1772	1731	1644	1416	1467	1241	1446	1684	1671	1825	1765
iii)	EXPORT BY WBSEDCL	205	205	210	210	210	210	210	210	210	5	5	5
iv)	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+CPP+HEL)	25392	25540	25171	24995	24991	25222	26273	23815	23396	23787	24453	25171
v)	PEAK SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv - i -ii - iii)	581	-200	-170	-313	-152	-310	645	607	-289	-333	-80	-1419

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE ENERGY REQUIREMENT- vs- AVAILABILITY IN EASTERN REGION FOR THE PERIOD FROM APRIL-2019 TO MARCH-2020

(ALL FIGURES IN MU & NET)

SL.NO	PARTICULARS	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	TOTAL 2019-20
1	BIHAR													
i)	NET ENERGY REQUIREMENT	2600	2800	2880	2950	3050	2985	2850	2350	2500	2810	2380	2860	33015
ii)	NET ENERGY AVAILABILITY- Own	207	171	175	251	252	244	245	270	278	240	235	240	2808
iii)	Central Sector+Bi-Lateral	2067	2239	2236	2414	2359	2265	2368	1740	1713	1988	1749	1971	25108
iv)	SURPLUS(+)/DEFICIT(-)	-326	-390	-469	-285	-440	-476	-238	-340	-509	-582	-396	-649	-5099
2	JHARKHAND													
i)	NET ENERGY REQUIREMENT	810	825	820	825	810	800	810	800	810	820	770	830	9730
ii)	NET ENERGY AVAILABILITY- Own Source	237	237	213	214	200	259	254	240	235	236	231	221	2777
iii)	Central Sector+Bi-Lateral+KBUNL	502	542	553	601	594	572	610	467	488	527	474	521	6450
iv)	SURPLUS(+)/DEFICIT(-)	-71	-45	-54	-9	-16	31	53	-93	-87	-58	-65	-88	-503
3	DVC													
i)	NET ENERGY REQUIREMENT (OWN)	1880	1960	1915	1970	1890	1785	1875	1870	1885	1890	1710	1890	22520
ii)	NET ENERGY AVAILABILITY- OWN SOURCE	3305	3254	3144	3347	3329	3175	3437	3213	3344	3131	2896	3297	38873
iii)	Central Sector+MPL+KBUNL	263	316	333	383	361	374	351	267	269	268	242	270	3697
iv)	Bi- lateral export by DVC	1206	1318	1246	1223	1053	1056	923	1041	1253	1243	1227	1313	14102
v)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	482	292	317	537	747	707	991	570	475	266	200	364	5948
4	ODISHA													
i)	NET ENERGY REQUIREMENT	2660	2944.8	2905	2684.68	3225.2	2989.6	3285.3	2834.6	2529.6	2705	2500	2910	34174
ii)	NET ENERGY AVAILABILITY- OWN+IPP+CPP	2371	2498	2047	2309	2608	2447	2305	2213	1740	2188	2057	2294	27078
iii)	Central Sector+KBUNL	987	1054	1033	1099	1091	1027	1331	1116	1093	1212	1121	1210	13374
iv)	SURPLUS(+)/DEFICIT(-)	698	608	175	723	474	485	351	494	304	695	677	594	6279
5	WEST BENGAL													
5.1	WBSEDCL													
i)	WBSEDCL'S OWN REQUIREMENT	3630	3678	3837	3992	4102	3896	3481	2744	2704	2940	2963	3873	41840
ii)	SUPPLY TO IPCL	61	64	60	62	62	60	62	58	59	59	57	62	726
iii)	TOTAL WBSEDCL's Energy Requirement (incl.B'Desh+Sikkim+IPCL	3839	3895	4048	4210	4320	4107	3699	2953	2919	3003	3023	3939	43955
iv)	NET ENERGY AVAILABILITY- OWN SOURCE	2460	2477	2412	2497	2600	2467	2787	2173	2381	2653	2466	2745	30119
v)	Contribution from DPL	110	111	81	78	-9	67	95	114	23	23	79	109	882
vi)	Central Sector+Bi-lateral+IPP&CPP+TLDP	1300	1449	1559	1791	1773	1590	1635	1233	1269	1297	1216	1301	17411
vii)	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	32	142	4	155	43	17	818	568	753	970	738	216	4457
viii)	EXPORT (TO B'DESH & SIKKIM)	148	153	151	156	156	151	156	151	156	4	3	4	1389
5.2	DPL													
i)	NET ENERGY REQUIREMENT	200	210	210	210	212	205	200	190	195	195	190	205	2422
ii)	NET ENERGY AVAILABILITY	310	321	291	288	203	272	295	304	218	218	269	314	3304
iii)	SURPLUS(+)/DEFICIT(-)	110	111	81	78	-9	67	95	114	23	23	79	109	882
5.3	CESC													
i)	NET ENERGY REQUIREMENT	980	1103	1105	1070	1060	1080	985	775	713	703	720	972	11266
ii)	NET ENERGY AVAILABILITY - Own Source	498	536	525	510	508	507	499	364	363	452	420	483	5665
iii)	FROM OTHER SOURCE (INCL. IPP/CPP-29-30 MU/M)	115	176	197	172	166	194	118	100	92	96	50	125	1601
iv)	FROM HEL	367	391	383	388	386	379	368	311	258	155	250	364	4000
v)	TOTAL AVAILABILITY OF CESC	980	1103	1105	1070	1060	1080	985	775	713	703	720	972	11266
vi)	SURPLUS(+)/DEFICIT(-)	0	0	0	0	0	0	0	0	0	0	0	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)													
i)	NET ENERGY REQUIREMENT	4871	5055	5212	5334	5436	5241	4728	3767	3671	3897	3930	5112	56254
ii)	NET POWER AVAILABILITY- Own Source	3269	3334	3228	3295	3311	3246	3581	2841	2961	3323	3155	3542	39087
iii)	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	1782	2016	2139	2351	2325	2163	2121	1644	1619	1548	1516	1790	23012
iv)	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP.	180	295	155	311	199	168	974	719	909	974	741	220	5846
v)	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	32	142	4	155	43	17	818	568	753	970	738	216	4457
7	SIKKIM													
i)	NET ENERGY REQUIREMENT	50	45	45	46	44	44	48	61	61	62	63	56	624
ii)	NET POWER AVAILABILITY- Own Source	3	3	3	3	3	3	3	1	1	1	1	2	27
	- Central Sector+KBUNL	83	99	107	118	114	113	112	82	70	75	68	78	1119
iii)	SURPLUS(+)/DEFICIT(-)	36	57	64	74	73	72	66	22	11	15	6	24	522
8	EASTERN REGION													
i)	NET ENERGY REQUIREMENTOF ER	12870	13630	13777	13810	14456	13844	13596	11682	11456	12184	11353	13658	156316
ii)	BILATERAL EXPORT BY DVC	1206	1318	1246	1223	1053	1056	923	1041	1253	1243	1227	1313	14102
iii)	EXPORT BY WBSEDCL	148	153	151	156	156	151	156	151	156	4	3	4	1389
iv)	NET TOTAL ENERGY AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)	15076	15765	15212	16384	16547	15888	16717	14095	13812	14737	13743	15436	183412
v)	ENERGY SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv - i -ii - iii)	851	664	38	1195	882	836	2042	1222	947	1306	1161	461	11605

ERPC/LGBR 19-20


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)

Annexure-B13

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

पावरग्रिड

प्लाट नं.- 4, युनिट - 41, निलाद्री विहार, चंन्द्रसेखरपुर - 751021
दुरभाष : 0674 - 2720754
Plot. No. 4, Unit - 41, Niladri Vihar, Chandrasekharpur,
Bhubaneswar-751021, Tel: 0674-2720754

Ref: ODP/BB/AM/TLM /2517

Date:24th Dec 2018

To
The Member Secretary
Eastern Regional Power Committee
14, Golf Club Road
Tollygunge, Kolkata-700033

Sub: Intimation regarding replacement of Porcelain insulator by Long Rod Polymer Insulator in transmission line of POWERGRID in Odisha

Dear Sir,

During Insulator de-capping, Conductor is grounded and if such incident occurs in crossing span of other transmission line/Railway line/Road/River, consequential effects are much higher. To minimize consequential effects in case of de-Capping the following lines will be provided with Composite Long Road Polymer Insulator for which no incident of de-capping has been reported. Few insulator strings will also be changed in these lines where insulator strings found defective during PID test and also de-capping of porcelain insulator incidents occurred in the past.

The list of the lines for which Long Rod polymer insulators has already been procured and contract has been awarded for replacement work is mentioned as below:

Sl NO	Name of the line	Remark
1	400KV Rourkela-Talcher ckt-1&2	Material has already been procured and contract has been awarded for Installation of Long Rod Polymer insulators. Insulators will be replaced from Jan 2019 to May 2019 in stages after taking due shutdown approval of the lines in OCC.
2	400KV Bolangir-Angul	
3	400KV Jeypore-Bolangir	
4	400KV Jeypore-Indravati	
5	400KV Jeypore-Gazuwaka ckt-1 &2	

This is for your kind information.

Regards.

24.12.2018

(R.P. RATH)
Chief General Manager(AM)
POWERGRID, Odisha Projects

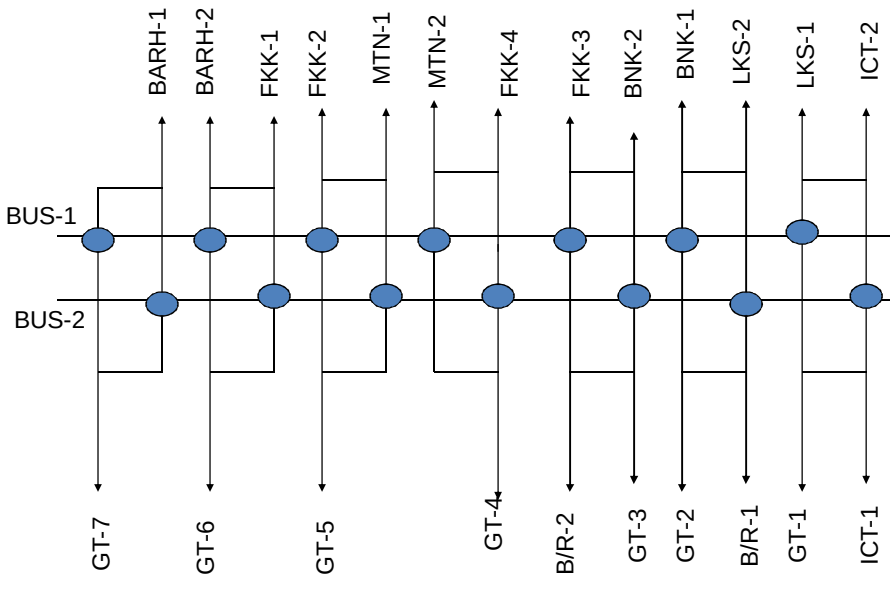
CC: For kind information
1.ED, Odisha Projects
2.ED, ERLDC, POSOCO, Kolkata

KAHALGAON

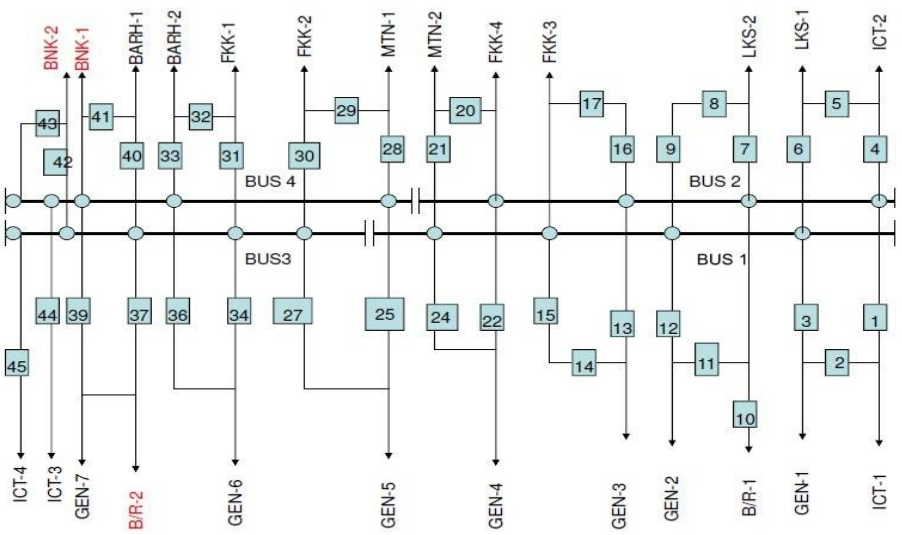
400 KV BUS SPLITTING AT NTPC KAHALGAON

21st JAN 2019

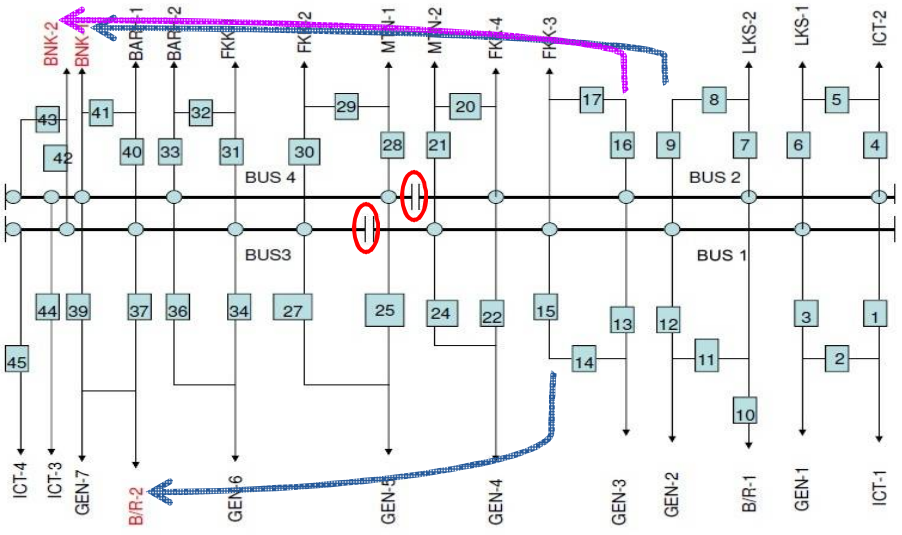
SLD OF 400 KV SWITCHYARD BEFORE SPLITTING



NTPC KAHALGAON SWITCHYARD SLD AFTER BUS SPLITTING



NTPC KAHALGAON SWITCHYARD SLD AFTER BUS SPLITTING



PRESENT STATUS AS ON DATE

S.N.	ACTIVITY	STATUS	TARGET DATE
1.	400 KV BUS#1 SPLITTING & formation of 400 KV Bus#1 & Bus#3.	Completed	09th- 10th Jan 2019
	Commissioning of new 400KV duplicated Bus bar differential & BFR for new 400 KV Bus#1 & Bus #3.		
	Removal of existing 400 KV Bus bar differential & BFR for all associated main bays w.r.to old 400 KV Bus #1.		
	CVT input segregation for synchronization of associated bays w.r.to new Bus#1 & 3 topology.		
2.	Charging of 400 KV Kh-Banka#1 line through its main bay after shifting through new 400 KV Bus#3.	Completed	10th Jan 2019
3.	Charging of Tie bay between new dia i.e. 400 KV Kh-Banka#1 line & 400 KV Kh-Barh#1 line.	Completed	12th Jan 2019

PLANNING AS ON DATE

P1

S.N.	ACTIVITY	STATUS	TARGET DATE
1.	Charging of new 400 KV Kh-Banaka#2 line through its tie bay under double breaker scheme. (Shutdown of new 400 KV Bus#3 for dead bus charging is required.)	Commissioning works are in advanced stage.	23rd Jan 2019
2.	Charging of 400 KV Kh-LKS#2 dia with old Banka#1 main bay & tie bay with new TEED protection in between Bay no.- 8 & 9.	Final commissioning work is under progress.	25th Jan 2019
3.	Charging of new 400 KV Bus sectionizer#1 between 400 KV Bus#1 & 400 KV Bus#3. (Shutdown of new 400 KV Bus#1 & 3 is required for dead bus charging)	Civil foundation work is in progress.	12th Feb 2019

PLANNING AS ON DATE

P2

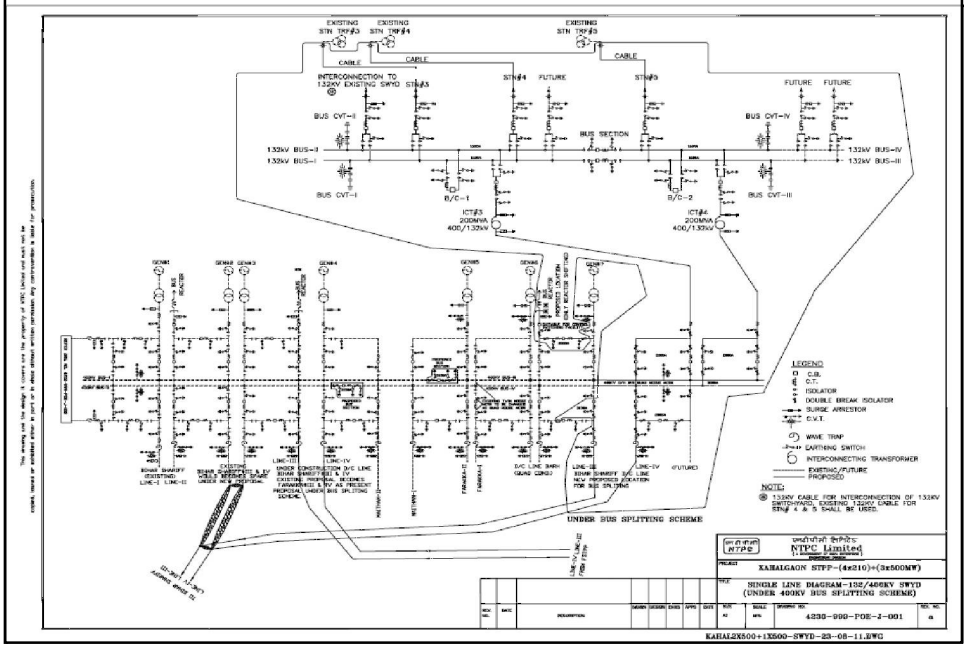
S.N	ACTIVITY	STATUS	TARGET DATE
4.	400 KV BUS#2 SPLITTING & formation of 400 KV Bus#2 & Bus#4.	All secondary sides input s w.r.to existing 400 KV Bus#2 taken in BBD relay.	19th-20th Feb 2019
	Commissioning of new 400KV duplicated Bus bar differential & BFR for new 400 KV Bus#2 & Bus #4.		
	Removal of existing 400 KV Bus bar differential & BFR for all associated main bays w.r.to old 400 KV Bus #1.		
	CVT input segregation for synchronization of associated bays w.r.to new Bus#1 & 3 topology.		
5.	Charging of 400 KV Kh-Banka#2 main bay via new 400 KV Bus#4.	Commissioning in advanced stage.	20th Feb 2019
6.	Charging of 400 KV Kh-fkk#3 dia with old Banka#2 main bay & tie bay with new TEED protection in between Bay no.- 17 &18.	Commissioning in advanced stage.	22th Feb 2019

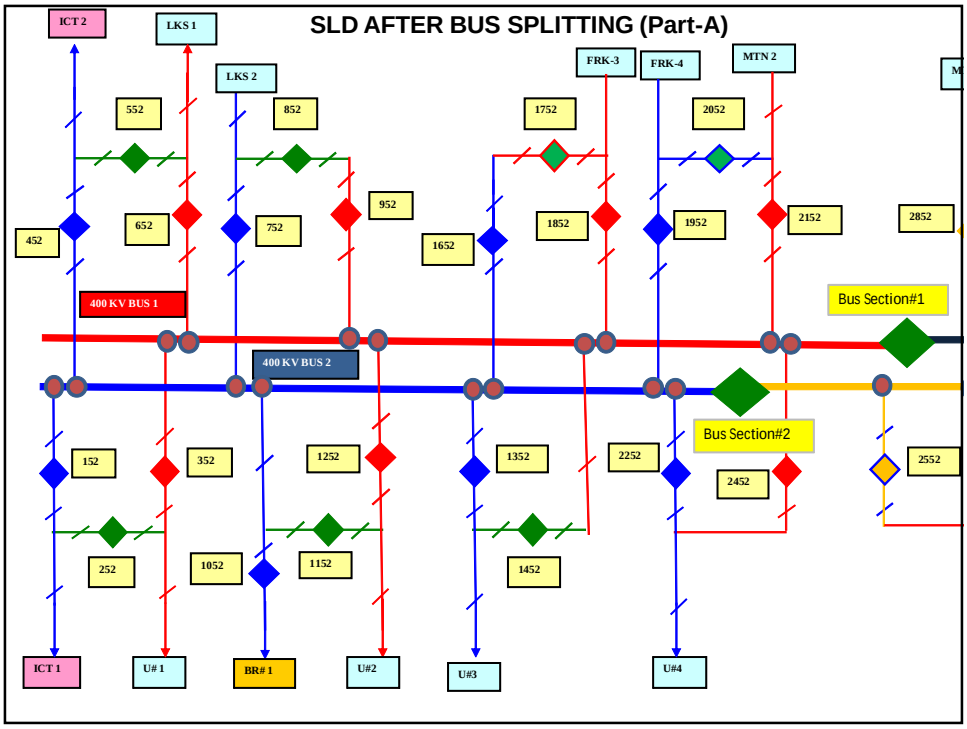
PLANNING AS ON DATE

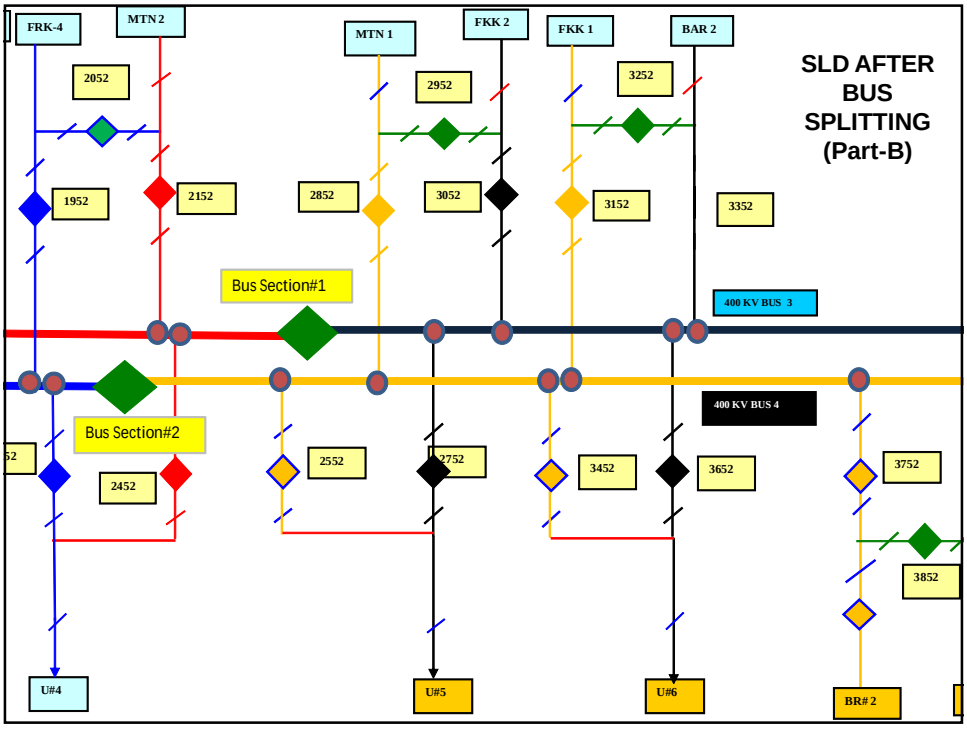
P3

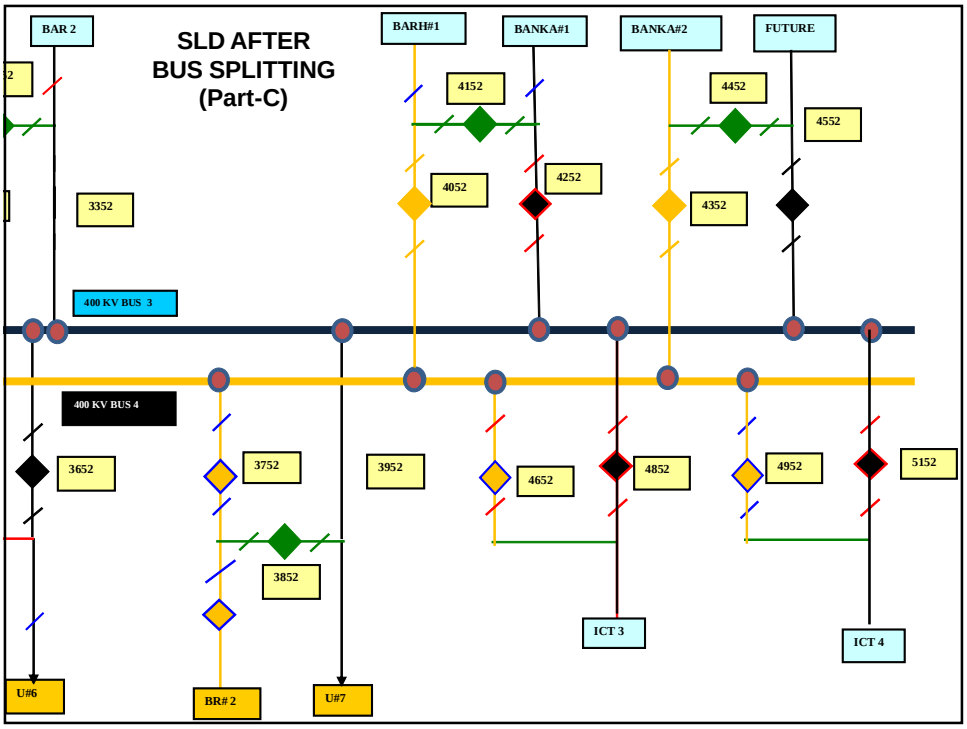
S.N.	ACTIVITY	STATUS	TARGET DATE
7.	Charging of new 400 KV Bus sectionizer#2 between 400 KV Bus#2 & 400 KV Bus#4. (Shutdown of new 400 KV Bus#2 & 4 is required for dead bus initial charging).		20th March 2019
8.	Charging of new 50 MVAR Bus reactor#2 at stage#2 side in dia of unit#7 .	During Unit#7 overhauling	April 2019

NTPC Kahalgaon 400KV/132 KV BUS splitting Proposed Layout






SLD AFTER
BUS
SPLITTING
(Part-B)
FRK-4
MTN 2
MTN 1
FKK 2
FKK 1
BAR 2
2052
2952
3252
1952
2152
2852
3052
3152
3352
Bus Section#1
400 KV BUS 3
400 KV BUS 4
Bus Section#2
2552
2752
3452
3652
3752
2452
3852
U#4
U#5
U#6
BR# 2


SLD AFTER
BUS SPLITTING
(Part-C)
BAR 2
BARH#1
BANKA#1
BANKA#2
FUTURE
4152
4452
4552
4052
4252
4352
3352
400 KV BUS 3
400 KV BUS 4
3652
3752
3952
4652
4852
4952
5152
3852
ICT 3
ICT 4
U#6
BR# 2
U#7

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L

Presentation by-
POWERGRID/ERTS-I

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Incident Cronology

- On 08.01.2019, New Ranchi-Chandwa Ckt-1 tripped at 22:33 hrs on R-N fault. The fault distance was approximately 20 kms from New Ranchi end.
- Upon patrolling on early morning of 09.01.2019, it was found that miscreants had attempted theft of conductor by cutting the hanger of Ckt-1 bottom phase at lo. No. 46 of said T/L.

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Incident Cronology (contd..)

- It was ascertained that the hanger of the bottom conductor was cut by the miscreants on charged line condition and fall of the same had caused the said tripping.

- The bottom phase insulator string got completely damaged and snapping of the conductors of the bottom phase also happened subsequently.

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Incident Cronology (contd..)

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Incident Cronology (contd..)

- The snapping of the bottom phase conductor resulted in causing consequential damage to 10 spans of the bottom phase of the said line.

- However, as the patrolling team reached the site early in the morning, the miscreants could not cause any further damage to the line and fled away.

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Incident Cronology (contd..)

- The sabotage was caused at loc. no. 46 situated at Village- Sukhra, PS- Narkopi, Bedo.
-
- A FIR regarding the sabotage caused by miscreants in the said line was lodged with the Bedo Police Station on 09.01.2019.

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Action Taken

- The restoration of the said line was taken up immediately on War footing.
- All Hardware Fittings in between location no. 40 to 49 was damaged due to the sudden jerk of conductor.
- Accordingly, T & Ps were arranged at site on immediate basis and the Bottom Conductor at location no. 46 was repaired including replacement of all hardware fittings and spacers in between location no. 40 to 49 in the 400 kV New Ranchi- Chandwa Ckt-1.

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Action Taken (contd..)

- Power flow in the 400 kV New Ranchi- Chandwa Ckt-1 could be restored on 14.01.2019, 02:39 hrs.
- Total outage period of the said line due to the aforementioned sabotage and restoration thereof is 124 Hrs and 6 mins (i.e from 08.01.19; 22:33 hrs to 14.01.2019; 02:39 hrs).

Sabotage of 400 kV D/C New Ranchi- Chandwa T/L : Submission

- Plea:
  - As the breakdown/ tripping of the 400 kV New Ranchi- Chandwa Ckt-1 and consequential damage to the transmission line was caused by the miscreants, the outage period from 08.01.2019; 22:33 hrs to 14.01.2019; 02:39 hrs necessitated for restoration of the same may be considered as force majeure, for the purpose of calculation of Availability.

Sabotage of Three (03) Nos. Towers of ±800 kV HVDC Bishwanath Chariyali- Agra T/L

Presentation by-
POWERGRID/ERTS-I

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L:

- During the routine Patrolling of ± 800 kV HVDC BNC- Agra T/L near Kishenganj area on 14.12.2018, **it was noticed that two diagonal stubs and associated Cleat Plates of three nos. towers have been cut by Miscreants.**
- The sabotage has been done at location no. 1619 (A+0), 1620 (A+3) and 1621 (A+0).

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L (contd..):

- The aforementioned locations are situated in village Ratau, Block- Pothia, PS- Paharkatta, Kishenganj.

- The condition of all towers are critical. Location no. 1621 being the most vulnerable.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L (contd..):

- A committee consisting of POWERGRID Officials from RHQ and Site, visited the affected locations and assessed the situation.

- Subsequently, the regional team has sought site visit of Expert members of POWERGRID Corporate Engineering Dept. for suggesting rectification procedure.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L (contd..): Committee Visit

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L (contd..):

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L (contd..):

- Looking into the acute importance of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L in ER and National Grid, the matter of sabotage was taken up with the state administration at highest level.
- Same has been informed to ERPC/ NRPC vide our letter dtd. 18.12.2018.
- Addl. Chief Secretary, Bihar, vide its letter no. 578 dtd. 18.12.2018 advised District Magistrate and Superintendent of Police, Kishanganj, to provide police force for protection of the aforementioned transmission line.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L : Action Plan

- POWERGRID intends to take up rectification/ replacement of the existing towers as per the procedure suggested by its CC/Engineering Dept.
- Presently, rectification of the damaged Stubs is being taken up at location no. 1619, 1620 & 1621.
- It is worth to mention that the rectification of loc. no. 1621 shall be very challenging as the location is very vulnerable and entire stub has been cut by the miscreant.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L : Action Plan (contd..)

- Need for shutdown of both of the poles of **± 800 kV HVDC Bishwanath Chariyali- Agra T/L On Continuous Basis for 4-5 days may be required during rectification, for de-stringing, rectification of Tower Stub and re-stringing at the loc. no. 1621.**
- Further, placement of Award/ Finalization of Agency for rectification of the towers stubs at Location no. 1619, 1620 & 1621 is already under process.
- Meanwhile, back stay have been provided using GI guy wires for the most critical tower location no. 1621.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L : Action Plan (contd..)

- Requirement:
  - **Shutdown of both pole-1 & 2 of ± 800 kV HVDC Bishwanath Chariyali- Agra on continuous basis for a period of about 5 days.**

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L : Challenges

- Challenges:
  - **Vulnerability of Tower at loc. no. 1619, 1620 & 1621:** As all the tower at the above locations are vulnerable with Loc. no. 1621 being the most Vulnerable, there is a possibility that the rectification of the tower stub/ leg may fail, which me necessitate the requirement of Change of entire tower at the above locations, during rectification or in future, in due course of time.

Sabotage of Three (03) Nos. Towers of ± 800 kV HVDC Bishwanath Chariyali- Agra T/L : Submission

- Plea:
  - As the requirement of shutdown of both pole-1 & 2 of **± 800 kV HVDC Bishwanath Chariyali-Agra** on continuous basis for a period of about 5 days, for rectification of tower stub/ leg at location no 1621, has arisen due to sabotage of the said tower caused by miscreants, the required shutdown period may be considered as force majeure.

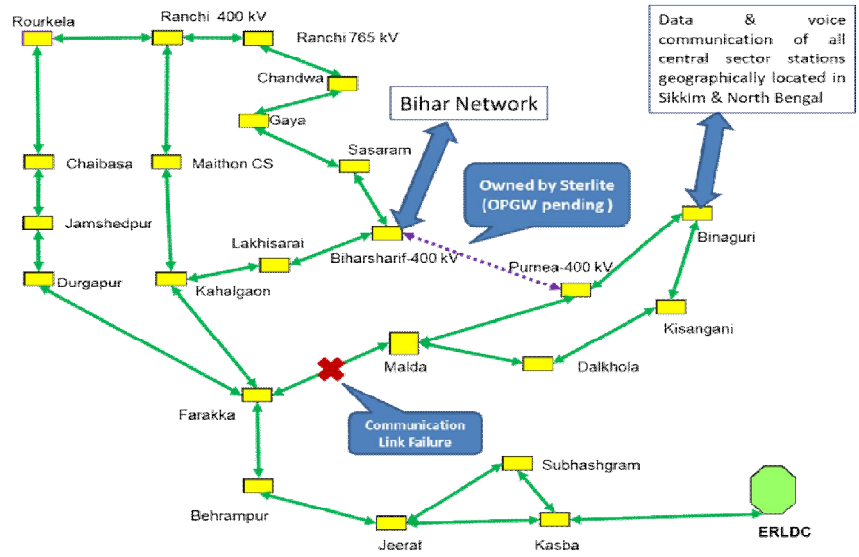
Annexure-C9

"Alternate Route for Malda- Farakka OPGW Link"

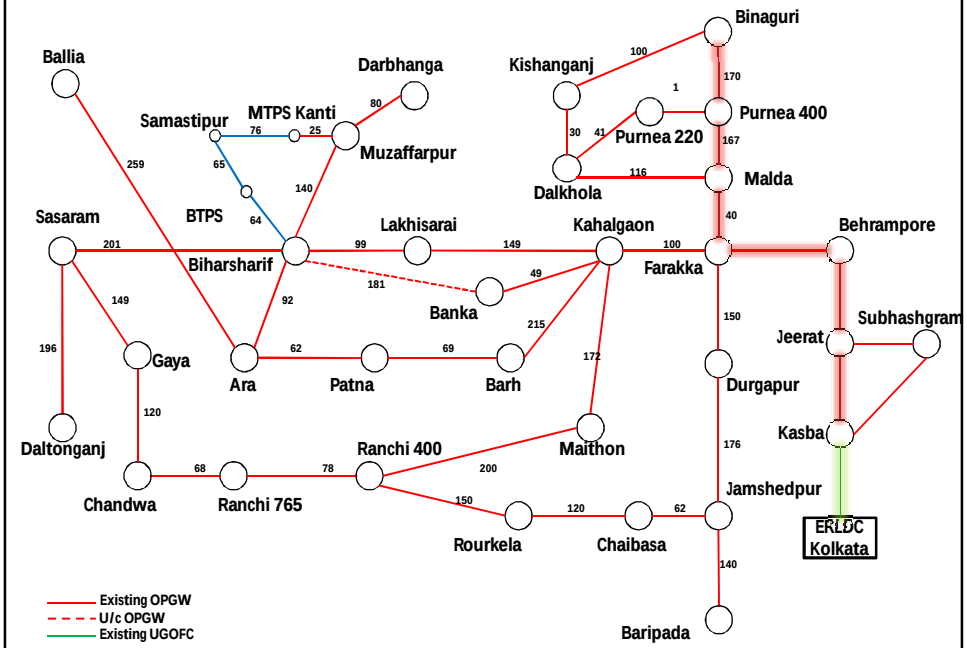
(OCC Agenda tem No. C.9 iii.)

Presentation by-
POWERGRID/ERTS-I

Criticality of Malda- Farakka OPGW Connectivity



SLD of Existing OPGW Connectivity of ER Stations



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

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

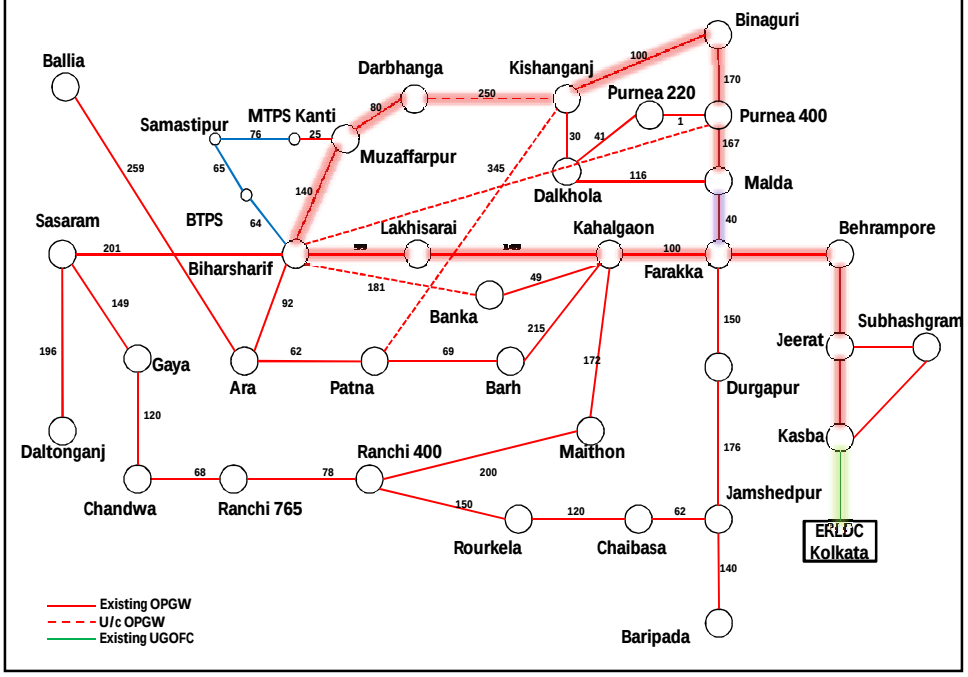
- Out of the above, only Malda- Farakka & Muzaffarpur-Biharsharif has an existing OPGW connectivity.

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

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

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

SLD of Upcoming OPGW Connectivity of ERTS-I Stations



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

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

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

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

Provisioning of alternate path for Malda- Farakka OPGW link:

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

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

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

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

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

Provisioning of alternate path for Malda- Farakka OPGW link:

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

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

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

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

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

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

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

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

Talcher STPS related matter

1. Non availability of elementary SCADA data

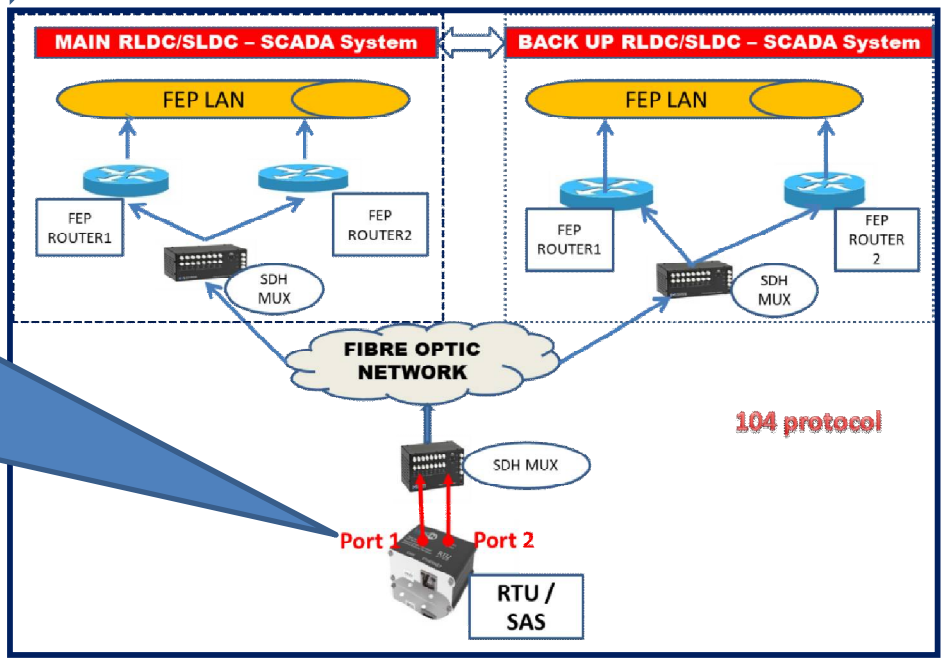
Sl No.	Feeder Name	Measurement
1	400kv Rourkela -1	MVAr
2	400/11 kV Station transformer #3	MVAr
3	400/11 kV Station transformer #4	MVAr
4	400kvV Bus Sectionalizer of Bus 2 of stage 1 and Bus 2 of stage 2	MW & MVAr
5	GT - 6 (UNIT-6)	MVAr

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

2. Stand by channel configuration.

Resolution:

1. Port 1 & Port 2 should be dedicated for reporting to ERLDC Main CC and ERLDC Back up CC



Non availability of SCADA data above 220 kV Level

WBSETCL

- Following 220 kV station data not available:
  - TLDP 4 220kV : Communication link failure.
  - TLDP 3 220kV : Stopped reporting since 3rd January 2019.
  - Dharampur 220kV : Communication link issue.
  - Egra 220 : Communication link issue.
  - Dalkhola 220kV : Communication link issue. **Restored on 14th January 2019.**
  - Bantala 220kV : Communication link issue.
  - Alipurduar 220kV: Communication link yet to be established.

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

- **BIHAR**
  - Sonenagar 220kV : (Communication link not healthy)
  - Motipur 220kV
  - Barauni TPS 220kV
  - Baisi 132kV.
- **Odisha**
  - Narsingpur 220kV Station commissioned on 24-08-2018. SCADA data yet to be integrated at Odissa SLDC end.
  - Nalco 220kV : Most of CB and Isolator data are not available
  - Jindal Steel and Power Limited (JSPL): Most of CB and Isolator data are not available
- **JHARKHAND**
  - Hatia New 220 : RTU not reporting to SLDC.
  - Dumka 220 : RTU not yet integrated at Jharkhand SLDC.
  - Jamtara 132kV
  - Dalbhumgarh 132kV
  - Garwa 132kV
  - Deoghar 132kV
  - Kendposi 132 kV
- **DVC**
  - TISCO 400kV : Was not reporting to DVC SLDC/ERLDC since 14-07-2018. **Restored on 27th December 2018.**

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

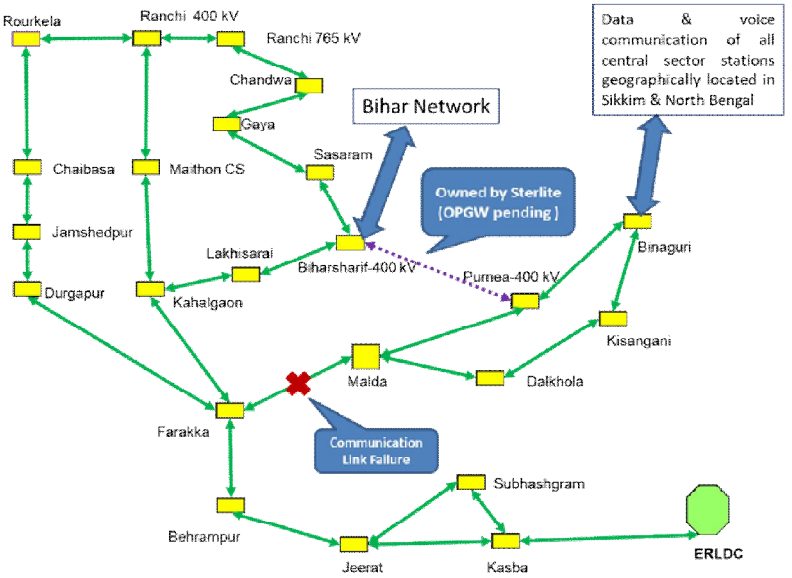
141st OCC: Event was reported by ERLDC.

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

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

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

Event



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

ENICL & POWERGRID may update.

Annexure-D.1

Anticipated Power Supply Position for the month of
Feb-19

SL.NO		PARTICULARS	PEAK DEMAND MW	ENERGY MU
1		**BIHAR**		
	i)	NET MAX DEMAND	4000	2246
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	632	307
		- Central Sector	3179	1609
	iii)	SURPLUS(+)/DEFICIT(-)	-189	-330
2		**JHARKHAND**		
	i)	NET MAX DEMAND	1250	750
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	341	147
		- Central Sector	830	390
	iii)	SURPLUS(+)/DEFICIT(-)	-79	-213
3		**DVC**		
	i)	NET MAX DEMAND (OWN)	2825	1595
	ii)	NET POWER AVAILABILITY- Own Source	5000	2507
		- Central Sector	316	138
		Long term Bi-lateral (Export)	1474	991
	iii)	SURPLUS(+)/DEFICIT(-)	1017	58
4		**ODISHA**		
	i)	NET MAX DEMAND	4100	2150
	ii)	NET POWER AVAILABILITY- Own Source	2963	1396
		- Central Sector	1278	620
	iii)	SURPLUS(+)/DEFICIT(-)	141	-134
5		**WEST BENGAL**		
5.1		**WBSEDCL**		
	i)	NET MAX DEMAND (OWN)	5507	2901
	ii)	CESC's DRAWAL	0	0
	iii)	TOTAL WBSEDCL's DEMAND	5507	2901
	iv)	NET POWER AVAILABILITY- Own Source	3449	1800
		- Import from DPL	218	0
		- Central Sector	2064	1106
	v)	SURPLUS(+)/DEFICIT(-)	224	5
	vi)	EXPORT (TO B'DESH & SIKKIM)	5	3
5.2		**DPL**		
	i)	NET MAX DEMAND	247	150
	ii)	NET POWER AVAILABILITY	465	172
	iii)	SURPLUS(+)/DEFICIT(-)	218	22
5.3		**CESC**		
	i)	NET MAX DEMAND	1650	675
	ii)	NET POWER AVAILABILITY - OWN SOURCE	700	454
		FROM HEL	540	314
		FROM CPL/PCBL	40	0
		Import Requirement	370	0
	iii)	TOTAL AVAILABILITY	1650	768
	iv)	SURPLUS(+)/DEFICIT(-)	0	93
6		**WEST BENGAL (WBSEDCL+DPL+CESC)** **(excluding DVC's supply to WBSEDCL's command area)**		
	i)	NET MAX DEMAND	7404	3726
	ii)	NET POWER AVAILABILITY- Own Source	4614	2427
		- Central Sector+Others	3014	1420
	iii)	SURPLUS(+)/DEFICIT(-)	224	121
7		**SIKKIM**		
	i)	NET MAX DEMAND	100	35
	ii)	NET POWER AVAILABILITY- Own Source	1	0
		- Central Sector+Others	157	54
	iii)	SURPLUS(+)/DEFICIT(-)	58	19
8		**EASTERN REGION** **At 1.03 AS DIVERSITY FACTOR**		
	i)	**NET MAX DEMAND**	19106	10502
		Long term Bi-lateral by DVC	1474	991
		EXPORT BY WBSEDCL	5	3
	ii)	**NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)**	22324	11014
	iii)	**PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)**	1740	-482

ERLDC, KOLKATA

TRANSMISSION ELEMENTS OUTAGE APPROVED IN 153rd 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	220KV Birpara-Salakati D/C	20-01-2019	08:00	21-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
2	400KV Binaguri-Alipurduar D/C	22-01-2019	08:00	23-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
3	400KV Binaguri-Bongaigaon D/C	24-01-2019	08:00	24-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
4	220KV Birpara-Siliguri D/C	25-01-2019	08:00	25-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
5	400KV Tala-Binaguri-I	27-01-2019	08:00	27-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
6	400KV Tala-Binaguri-II	25-01-2019	08:00	25-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
7	132KV Earth Electrode Matahbhanga - Alipurduar	30-01-2019	08:00	31-01-2019	16:00	ODB	ATL	for stringing activity of 400KV D/C Quad Alipurduar-Silliguri Transmission line	
8	132 KV Gangtok-Chuzachen Line	10/01/19	9:00 Hrs/	10/02/19	12:00 Hrs/	ODB	POWERGRID,ER-II	For AnnualAMp Works & DCRM	SIKKIM
9	66 KV Gangtok-Tadong Line	16/01/19	9:00 Hrs/	16/12/19	12:00 Hrs/	ODB	POWERGRID,ER-II	For AnnualAMp Works	SIKKIM
10	66 KV Gangtok-Bulbulay Line	18/01/19	9:00 Hrs/	18/12/19	12:00 Hrs/	ODB	POWERGRID,ER-II	For AnnualAMp Works	SIKKIM
11	66 KV Gangtok-LLHP Line	20/01/19	9:00 Hrs/	20/12/19	12:00 Hrs/	ODB	POWERGRID,ER-II	For AnnualAMp Works	SIKKIM
12	765 kV Sasaram - fatehpur	22/01/19	08:00	29/01/19	18:00	OCB	POWERGRID NR3	Strengthing of suspension towers Delta Configuration (419 Nos)	NLDC
13	765KV Angul- Srikakulam ckt-I	22/01/19	07:00	22/01/19	18:00	ODB	ER-II/Odisha/Talcher TLM	AMP Work	NLDC
14	400 KV Tisco- Baripada Line	22/01/19	09:00	22/01/19	18:00	ODB	DVC	Line side CVT(409) testing and Gaurd wire adjustment at span between tower no . 3 to 3A & 3 to 2	
15	400 KV Subhasgram Jeerat Line	25/01/19	09:00	26/01/19	17:00	OCB	POWERGRID,ER-II	For termination of Jeerat-Subhasgram line into Rajarhat Gantry for 1st time charging and making Earthwire Diamond Crossing under ERSS-V.	WB
16	400 KV Subhasgram Sagardighi Line.	25/01/19	09:00	26/01/19	17:00	ODB	POWERGRID,ER-II	For termination of Jeerat-Subhasgram line into Rajarhat Gantry for 1st time charging and making Earthwire Diamond Crossing under ERSS-V.	WB
17	A/R 400KV Biharsarif - Koderma CKT -I	26/01/19	09:00	25/02/19	18:00	ODB	POWERGRID ER-1	Auto recloser Put in Non Auto Mode for PID testing .	**DVC**
18	A/R 400KV Biharsarif - Koderma CKT -II	26/01/19	09:00	25/02/19	18:00	ODB	POWERGRID ER-1	Auto recloser Put in Non Auto Mode for PID testing and OPGW installation work	DVC
19	A/R OF 400KV BIHARSHARIFF-KODERMA-II	27/01/19	08:00	28/02/19	18:00	ODB	POWERGRID ER-1	OPGW INSTALLATION WORK.	DVC
20	Talcher HVDC Pole-1	31/01/19	06:00	01/02/19	17:00	OCB	ER-II/Odisha/Talcher TLM	Insulator replacement with CLR & Bi-Pole shutdown for Electrode Line Shifting at Talcher station for Railway line.	NLDC
21	400 KV TIE BAY OF RNC-I & BR-II AT NEW RANCHI	01/02/19	09:00	01/02/19	17:00	ODB	POWERGRID ER-1	AMP	
22	400KV MAIN BAY OF ICT-II AT CHAIBASA	01/02/19	09:30	01/02/19	17:30	ODB	POWERGRID ER-1	AMP work	
23	400KV BUS-I AT KISHANGANJ	01/02/19	10:00	05/02/19	18:00	OCB	POWERGRID ER-1	CONNECTION NEW (Darbhanga - kishanaganj Line) BUS WITH EXISTING BUS	BIHAR
24	400KV TIE BAY OF KAHALGAON-II AND B/R-I AT LAKHISARAI AT LAKHISARAI	01/02/19	10:00	01/02/19	14:00	ODB	POWERGRID ER-1	AMP of Tie Bay of 400 kV LKR-KHG-2 & 80MVAR Bus Reactor	
25	765 /400 kV ICT-I at Gaya ss	01/02/19	09:00	01/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
26	400 KV Biharsharif - Varanasi CKT- I	01/02/19	08:00	25/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line due to Construction of New Railway Line by ECR from Natesar to Islampur	NLDC
27	400 KV Biharsharif - Varanasi CKT- II	01/02/19	08:00	25/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line due to Construction of New Railway Line by ECR from Natesar to Islampur	NLDC
28	400KV BSF - SASARAM -I	01/02/19	08:00	20/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line due to Construction of New Railway Line by ECR from Natesar to Islampur	NLDC
29	400KV BSF - SASARAM -II	01/02/19	08:00	20/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Biharsharif - Varanasi & 400KV Biharsharif - Sasaram Line due to Construction of New Railway Line by ECR from Natesar to Islampur	NLDC
30	400KV Bus -1 AT PATNA	01/02/19	09:30	02/02/19	17:30	ODB	POWERGRID ER-1	For Construction activity for Nabinagar bay under under Nabinagar - 2 Project.	BIHAR
31	400/220KV 500MVA ICT 1 AT PATNA	01/02/19	09:30	15/02/19	17:30	OCB	POWERGRID ER-1	Construction of firewall under ICT 2 package and For Construction activity for Nabinagar bay under Nabinagar - 2 Project	BIHAR
32	400KV 80MVAR Bus reactor AT PATNA	01/02/19	09:30	15/03/19	17:30	OCB	POWERGRID ER-1	For Construction activity for Nabinagar bay under under Nabinagar - 2 Project.	
33	400KV TIE BAY OF ICT-I AND 80MVAR B/R AT PATNA	01/02/19	09:30	03/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
34	3*110MVAR 765kV Bus Reactor Bay at Pusauli	01/02/19	08:00	01/02/19	18:00	ODB	POWERGRID ER-1	AMP work	NLDC

35	765kV Gaya-Varanasi-I	01/02/19	09:00	28/02/19	18:00	OCB	POWERGRID ER-1	for replacement of tower no.448 due to bend tower	NLDC
36	400 kV SASARAM - NABINAGAR - I	01/02/19	09:00	15/02/19	18:00	OCB	POWERGRID ER-1	For replacement of leg of tower location no 70 which found bend during the routine patrolling.	
37	765 kV Gaya - Balia	01/02/19	08:00	04/02/19	18:00	OCB	POWERGRID NR3	Strengthing of suspension towers Delta Configuration (82 Nos)	NLDC
38	400 KV Bus -1 at Binaguri	01/02/19	09:00	07/02/19	18:00	ODB	POWERGRID,ER-II	400 KV Busbar relay Replacement Under ERSS-XX.	
39	132 KV kurseong-Rangit	01/02/19	09:00	01/02/19	17:00	ODB	POWERGRID,ER-II	Sag/Tension correction between Loc 51-52, due to land slide. Complete release of tension required.	**WB**
40	220 KV BIRPARA-SLG FDR-I (ONE)	01/02/19	08:00 Hrs	02/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	A/H replacement of various Suspension towers along with VD Adjustment, CC ring tightening etc.	
41	220KV CESC CKT#2 (Bay No.203) at Powergrid,Subhasgram	01/02/19	09:00	01/02/19	17:00	ODB	POWERGRID,ER-II	AMP work	WB
42	315 MVA ICT-II at Durgapur	01/02/19	09:00	01/02/19	17/00 hrs	ODB	POWERGRID,ER-II	Bushing tan delta & AMP works	DVC
43	400KV Maithon-Right Bank #2	01/02/19	08:00	15/02/19	18:00	OCB	POWERGRID,ER-II	Re conductoring work	
44	160 MVA ICT#2	01/02/19	09:00	01/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	GRIDCO
45	407 MAIN BAY (ICT I)	01/02/19	09:00	01/02/19	17:00	ODB	ER-II/Odisha /Jeypore	For AMP Works of 407 MAIN BAY (ICT I)	
46	765KV Sundargarh-Angul Ckt #4 with LR	01/02/19	09:00	01/02/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take spare Reactor in to service in place of B-Ph Reactor for attending oil leakage in B-Ph reactor	NLDC
47	40708 Bus Reactor Tie bay	01/02/19	09:00	01/02/19	18:00	ODB	ER-II/Odisha/Keonjhar	AMP activity of Bay	
48	Talcher HVDC Bipole	02/02/19	06:00	04/02/19	17:00	OCB	ER-II/Odisha/Talcher TLM	Insulator replacement with CLR & Bi-Pole shutdown for Electrode Line Shifting at Talcher station for Railway line.	NLDC
49	At Durgapur 400 kv ss :400 Kv B-bus along with 400kv DURGAPUR-PGCIL CKT-II	01/02/19	07:00	01/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
50	At GOKARNA 400 KV SS: 400/220KV 315 MVA TR 1 Winter Maintainance	01/02/19	07:00	01/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
51	At JEERAT 400KV SS: 400KV Main Bus-II & Diversion of 400kv elements to 400KV Transfer Bay O.A.A	01/02/19	07:00	01/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
52	400KV MAIN BAY OF RNC-I AT NEW RANCHI	02/02/19	09:00	02/02/19	17:00	ODB	POWERGRID ER-1	AMP	
53	400KV MAIN BAY OF ICT-I AT CHAIBASA	02/02/19	09:30	02/02/19	12:00	ODB	POWERGRID ER-1	DCRM TEST OF 40352 CB	
54	400KV MAIN BAY OF JSR-I AT CHAIBASA	02/02/19	13:00	02/02/19	17:00	ODB	POWERGRID ER-1	DCRM TEST OF 40152 CB	
55	765 /400 kV ICT-II at Gaya ss	02/02/19	09:00	02/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
56	330MVAR 765kV Bus-Reactor at Pusauli	02/02/19	**08:00**	02/02/19	**18:00**	**ODB**	POWERGRID ER-1	AMP work	NLDC
57	132 KV siliguri Melli	02/02/19	09:00	02/02/19	17:00	ODB	POWERGRID,ER-II	For 3-Ph A/R implementation.	SIKKIM
58	220KV NEWTOWN LINE (Bay No.205) at Powergrid,Subhasgram	02/02/19	09:00	02/02/19	17:00	ODB	POWERGRID,ER-II	AMP work	WB
59	132kV BUS-1 Shutdown at Rangpo	02/02/19	09:00	12/02/19	17:00	OCB	POWERGRID,ER-II	For Bus extension to new Chuzachen bays (Construction works)	**SIKKIM**
60	400 kV Bus-3 at Powergrid,Maithan	02/02/19	10:00	02/02/19	14:00	ODB	POWERGRID,ER-II	Project Work under ERSS-XVII (Dismentling of Jumpers)	
61	400KV,Balangir-Jeypore Line TIEBAY(40304 BAY)	02/02/19	09:00	02/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 40304 52CB & 40304 CT	
62	400 KV 401R keonjhar line Reactor main bay	02/02/19	09:00	02/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works & Reactor Air Cell Replacement Works	
63	3X166.67MVA coupling transformer (STATCOM)	02/02/19	09:30	02/02/19	12:30	ODB	ER-II/Odisha /Jeypore	For unit change over from Unit-I,II, III to Unit-I , II & IV	
64	400kV Sundargarh-Rourkela Ckt #3 & 4	02/02/19	08:00	02/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works (Shut down of Sundargarh - Rourkela Ckt-III & IV is required together for maint. of Multi circuit/ LILO portion)	
65	765KV Bus-I at Sundargarh	02/02/19	08:00	05/02/19	18:00	OCB	ER-II/Odisha/Sundergarh	Erection of busduct and SF6 to Air bushing of 765KV GIS bus sectionalizer for commissioning of 765KV GIS and Stringing of jack bus of 765KV Raipur Ckt-1&2 i.e. Bay 709	NLDC
66	At 400KV JEERAT 400KV SS: 400KV Main Bus-II & Diversion of 400kv Sagardighi Feeder to 400kv Bus Transfer Bay & 400kv Bus-Coupler, Bus Transfer Bay O.A.A	02/02/19	07:00	02/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
67	220KV BIRPARA-SLG FDR-II (TWO)	03/02/19	08:00 Hrs	04/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	VD Adjustment, CC ring tightening and repair sleeve at various locations .	
68	220KV KLC Bantala Line (Bay No.206) at Powergrid,Subhasgram	03/02/19	09:00	03/02/19	17:00	ODB	POWERGRID,ER-II	AMP work	WB
69	400 KV 406 Main Bay of 315 MVA ICT-II	03/02/19	09:00	03/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
70	A/R OF 400kV Sundargarh-Raigarh Ckt#3	03/02/19	08:00	14/02/19	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
71	Tie bay (709) of ANGUL 4	03/02/19	08:00	04/02/19	18:00	OCB	ER-II/Odisha/Sundergarh	Raipur- II Bay extn works	
72	At JEERAT 400KV SS: 400KV Main Bus-II & Diversion of 400kv Subhasgram,100MVAR Bus Reactor & 315MVA ICT 4 to 400KV Bus Transfer Bay O.A.A	03/02/19	07:00	03/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
73	**400kV JSR -DURGAPUR LINE**	**04/02/19**	**09:30**	**04/02/19**	**17:30**	**ODB**	**POWERGRID ER-1**	**Static Auto reclose relay to be replaced with numerical relay at JSR**	

74	765/400 KV, 1500 MVA, ICT-I AT NEW RANCHI	04/02/19	09:00	05/02/19	17:00	ODB	POWERGRID ER-1	AMP	NLDC
75	400/220kV 315 MVA ICT-1 AT DALTANGANJ	04/02/19	09:30	04/02/19	17:30	ODB	POWERGRID ER-1	CSD Commissioning work	**JSEB**
76	400kV BUS-II AT NEW PURNEA	04/02/19	09:30	04/02/19	18:00	ODB	POWERGRID ER-1	Bus AMP	
77	22O KV MAIN BUS-1 AT PURNEA	04/02/19	09:00	04/02/19	16:00	ODB	POWERGRID ER-1	AMP	**BIHAR**
78	400KV MAIN BAY OF RANCHI-RAURKELA-I AT RANCHI	04/02/19	10:00	04/02/19	17:00	ODB	POWERGRID ER-1	AMP	
79	400KV MAIN BAY OF RKL-I AT CHAIBASA	04/02/19	09:30	04/02/19	12:00	ODB	POWERGRID ER-1	DCRM TEST OF 40452 CB	
80	400KV TIE BAY OF RKL-I & ICT-II AT CHAIBASA	04/02/19	13:00	04/02/19	17:00	ODB	POWERGRID ER-1	DCRM TEST OF 40552 CB	
81	400/132KV 200 MVA ICT-1 AT LAKHISARAI	04/02/19	**09:00**	05/02/19	**17:00**	**OCB**	POWERGRID ER-1	Checking of Air Cell & AMP works. (132 kV Bay No.-109 and 33 kV Tretiary bay will also remain out of service.)	BIHAR
82	400KV BUS-I AT CHANDWA	04/02/19	09:00	06/02/19	18:00	OCB	POWERGRID ER-1	HV & PD Test of Northkarnpura - I GIS Bay No. 403 with extended Bus-I. Removal of shield & fixing of Main Bus - I section conductor,vacumming, gas filling & energizing.	JSEB
83	765 /400 kV ICT-III at Gaya ss	04/02/19	09:00	04/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
84	400kV Bus 2 AT PATNA	04/02/19	09:30	05/02/19	17:30	ODB	POWERGRID ER-1	For Construction activity for Nabinagar bay under under Nabinagar - 2 Project.	BIHAR
85	400KV TIE BAY OF Barh -2 Ballia-1 AT PATNA	04/02/19	09:30	08/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
86	132 KV siliguri kurseong	04/02/19	09:00	04/02/19	17:00	ODB	POWERGRID,ER-II	Line defect rectification & Line AMP works.	WB
87	400kV Berhampore-Bheramara-1	04/02/19	09/00Hrs	04-02-2019	17/00Hrs	ODB	POWERGRID,ER-II	Modified SPS scheme implementation	NLDC
88	220KV Subhasgram Ckt#1 (Bay No.207) at Powergrid,Subhasgram	04/02/19	09:00	04/02/19	17:00	ODB	POWERGRID,ER-II	AMP work	WB
89	400 KV Rangpo-KISHANGANJ	04/02/19	08:00	08/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work by HYOSUNG/KOREA.	
90	400\220kV 315 MVAICT -3 at Rangpo	04/02/19	08:00	08/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work	
91	125 MVAR BR-IV at Durgapur	04/02/19	09:00	04/02/19	17/00 hrs	ODB	POWERGRID,ER-II	Reactor Isolator balance works under ERSS-XIV	
92	400 kV Bus-4 at Powergrid,Maithan	04/02/19	10:00	04/02/19	14:00	ODB	POWERGRID,ER-II	Project Work under ERSS-XVII (Dismentling of Jumpers)	
93	400 KV Farakka- Kahalgaon-I line	04/02/19	09:00	04/02/19	18:00	ODB	POWERGRID,ER-II	For bay stability between bay-22 (Main Bay of 400 KV Farakka- Kahalgaon-I) & bay-23	
94	400/220/33kv 315MVA ICT- II at Alipurduar	04/02/19	08:00	06/02/19	18:00	OCB	POWERGRID,ER-II	Attending Oil leakage (Oil lekage of OLTC diverter compartment).	
95	220KV 203 Bus Coupler Bay	04/02/19	09:00	04/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	GRIDCO
96	416 MAIN BAY (63MVAr Bus Reactor)	04/02/19	09:00	04/02/19	17:00	ODB	ER-II/Odisha /Jeypore	For AMP Works of 416 MAIN BAY OF 63MVAR BR	
97	400 KV ROURKELA-SUNDARGARH#1	04/02/19	09:00	04/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK LINE BAY & LINE REACTOR	
98	50 MVAR Line Reactor	04/02/19	09:00	04/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 50MVAR LR.Power flow will be interrupt for this shutdown .	
99	Main Bay (404) of 400kV Bus Reactor-3 at Angul	04/02/19	09:00	04/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
100	405 Main bay	04/02/19	09:00	04/02/19	18:00	ODB	ER-II/Odisha/Keonjhar	AMP activity of Bay	
101	Talcher HVDC Pole-2	05/02/19	06:00	06/02/19	17:00	OCB	ER-II/Odisha/Talcher TLM	Insulator replacement with CLR & Bi-Pole shutdown for Electrode Line Shifting at Talcher station for Railway line.	NLDC (approved in SRPC)
102	Maintenance work for BUS Reactor	04/02/19	09:30hrs	11/02/19	18:00 hrs	OCB	BARH	Annual Maintenance & Testing of BUS Reactor	
103	Maintenance work for BUS Reactor Bay	04/02/19	09:30hrs	11/02/19	18:00 hrs	OCB	BARH	Annual Maintenance & Testing of Bays Equipments	
104	400KV FKK-SGD Line-2	04/02/19	09:00hrs	09/02/19	17:00 hrs	OCB	FARAKKA	CT replacement	WB
105	At JEERAT 400KV SS: 400KV Main Bus-I & Diversion of 400kv 315MVA ICT3,ICT2 & ICT1 to 400kv Bus Transfer Bay O.A.A	04/02/19	07:00	04/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
106	At GOKARNA 400 KV SS: 400/220 kv ,315MVA TR 1 winter maintainance	04/02/19	07:00	04/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
107	400KV MTPS-Maithon L#1	04/02/19	09:00	04/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
108	400kV BUS-I AT BANKA	05/02/19	09:30	22/02/19	17:30	ODB	POWERGRID ER-1	AMP	BIHAR
109	TIE BAY OF 400KV RAURKELA-I &RAGHUNATHPUR-2 AT RANCHI	05/02/19	10:00	05/02/19	17:00	ODB	POWERGRID ER-1	AMP	
110	400KV MAIN BAY OF JSR-I AT CHAIBASA	05/02/19	09:30	05/02/19	11:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
111	400KV TIE BAY OF JSR-I LINE & ICT-I AT CHAIBASA	05/02/19	11:30	05/02/19	01:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	

112	400KV MAIN BAY OF ICT-I AT CHAIBASA	05/02/19	13:30	05/02/19	15:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
113	400KV MAIN BAY OF RKL-I AT CHAIBASA	05/02/19	15:30	05/02/19	17:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
114	400kV Koderma - Bokaro CKT -I	05/02/19	09:00	05/02/19	18:00	ODB	POWERGRID ER-1	Replaccement of insulators damaged by miscreants at Location no 195 and 196	DVC
115	765 KV BUS-I at Gaya S/S	05/02/19	09:00	05/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
116	400 kV Koderma-Gaya-1 & 2 Line	05/02/19	09:00	19/02/19	18:00	OCB	POWERGRID ER-1	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80 (Brassing member and legs of tower no 80 is found bend during the routine patrolling)	DVC
117	400 kV Maithon-Gaya-1 & 2 Line	05/02/19	09:00	19/02/19	18:00	OCB	POWERGRID ER-1	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80 (Brassing member and legs of tower no 80 is found bend during the routine patrolling)	NLDC
118	400KV Tie bay of koderma-2 and Future at Bihashariff	05/02/19	10:00	05/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
119	220kV Bus-I at Pusauli	05/02/19	09:00	05/02/19	**18:00**	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BIHAR
120	220kV Pusauli-Sahapuri	05/02/19	08:00	05/02/19	**13:00**	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
121	220kV Pusauli-Ara	05/02/19	13:00	05/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	**BIHAR**
122	400/220kV 500MVA ICT-I at Pusauli	05/02/19	09:00	08/02/19	18:00	OCB	POWERGRID ER-1	Shiting of new 500 MVA ICT for replacement of ICT - II	BIHAR (ER-I IS ADVISED TO TAKE APPROVAL OF NRPC REGARDING SD OF 220KV PUSALI-SAHUPURI LINE)
123	132KV main Bus at Malda	05/02/19	**08:00**	05/02/19	**17:00**	**ODB**	POWERGRID,ER-II	Main Bus CVT replacement	WB
124	400kV Berhampore-Bheramara-2	05/02/19	09/00Hrs	05-02-2019	17/00Hrs	ODB	POWERGRID,ER-II	Modified SPS scheme implementation	**NLDC**
125	220KV Subhasgram Ckt#2 (Bay No.209) at Powergrid,Subhasgram	05/02/19	**09:00**	05/02/19	**17:00**	**ODB**	POWERGRID,ER-II	AMP work	WB
126	220 KV BIRPARA-SALAKATI-I (ONE)	05/02/19	08:00 Hrs	05/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Replacement of LA.	NLDC
127	400 KV BUS-I at Durgapur	05/02/19	09:00	05/02/19	17/00 hrs	ODB	POWERGRID,ER-II	Bus bar relay testing	DVC
128	400KV Maithan-Jamshedpur Line (413)	05/02/19	**09:00**	06/02/19	**18:00**	**ODB**	POWERGRID,ER-II	Replacement of Main Bay and Line Bay CT and To replaced Punctured disc Insulator	
129	400 KV Farakka- Berhampur-II	05/02/19	09:00	05/02/19	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 & to carry out punch point works in	
130	132 KV D/C Purulia - Jamshedpur (TL-	05/02/19	00:00	06/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 95/0 ,(DD+9)-96/0(DD+18). Span Length-258 mtr	
131	220 KV Main BUS # 1	05/02/19	09:00	05/02/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
132	50 MVAR, Jeypore Line Reactor	05/02/19	09:00	05/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 50 MVAR Jeypore L/R &NGR and AMP for 403R 52 CB	
133	400 kV 407 main Bay of Baripada-Duburi line	05/02/19	**09:00**	06/02/19	**17:30**	**OCB**	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
134	400 KV ROURKELA-SUNDARGARH#3	05/02/19	09:00	05/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK LINE BAY & LINE REACTOR	
135	Tie Bay (405) of 400kV B/R-3 & Meramundali Line-1 at Angul	05/02/19	09:00	05/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
136	400kV Sundargarh-Raigarh Ckt#2&4	05/02/19	07:00	16/02/19	18:00	OCB	ER-II /ODISHA/SUNDERGARH	1) Lara Railway Diversion work 2) OPGC Line diversion (Rectification work at Railway crossing)	**NLDC (SUBJECT TO APPROVAL IN WRPC)**
137	Tie bay (712) of ANGUL 3	05/02/19	08:00	06/02/19	18:00	OCB	ER-II/Odisha/Sundergarh	Raipur- II Bay extn works	
138	At JEERAT 400KV SS: 400KV Main Bus-I & Diversion of 400kv Subhasgram,100MVAR Bus Reactor & 315MVA ICT 4 to 400kv Bus Transfer Bay O.A.A	05/02/19	07:00	05/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
139	At GOKARNA 400 KV SS:400/220KV 315MVA TR 2 winter maintainance	05/02/19	07:00	05/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
140	At Arambag 400 kv ss:400KV ARAMBAG-BKTPP line	05/02/19	07:00	05/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
141	At KLC BANTALA 220KV SS:220KV KLC-SUBHASGRAM PGCIL ckt	05/02/19	07:00	05/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
142	400KV MTPS-Maithon L#1	05/02/19	09:00	05/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
143	400kV JSR - Mejia LINE	06/02/19	09:30	06/02/19	17:30	ODB	POWERGRID ER-1	Static Auto reclose relay to be replaced with numerical relay AT JSR	
144	765 KV MAIN BAY OF DMG-I AT NEW RANCHI	06/02/19	09:00	06/02/19	17:00	ODB	POWERGRID ER-1	AMP	NLDC
145	400/220kV 315 MVA ICT-2 AT DALTANGANJ	06/02/19	09:30	06/02/19	17:30	ODB	POWERGRID ER-1	CSD Commissioning work	**JSEB**
146	400kV NEW PURNEA- MALDA-I	06/02/19	09:30	06/02/19	18:00	ODB	POWERGRID ER-1	R-ph CVT to be replaced at Nprn due to secondry voltage violation	After charging of 400KV Farakka-New Purnea-DC
147	22O KV MAIN BUS-2 AT PURNEA	06/02/19	09:00	06/02/19	16:00	ODB	POWERGRID ER-1	AMP	BIHAR
148	400kV BUS-II AT BANKA	06/02/19	09:30	23/02/19	17:30	ODB	POWERGRID ER-1	AMP	BIHAR
149	400KV MAIN BAY OF RANCHI - RAGHUNATHPUR -2 AT RANCHI	06/02/19	10:00	06/02/19	17:00	ODB	POWERGRID ER-1	AMP	

150	400KV TIE BAY OF RKL-I LINE& ICT-II AT CHAIBASA	06/02/19	09:30	06/02/19	11:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
151	400KV MAIN BAY OF ICT-II AT CHAIBASA	06/02/19	11:30	06/02/19	01:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
152	400KV TIE BAY OF BR-I & RKL-II AT CHAIBASA	06/02/19	13:30	06/02/19	15:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
153	400KV MAIN BAY OF BR-I AT CHAIBASA	06/02/19	15:30	06/02/19	17:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
154	400KV BUS-II AT KISHANGANJ	06/02/19	10:00	10/02/19	19:00	OCB	POWERGRID ER-1	CONNECTION NEW BUS (Darbhanga - kishanaganj Line) WITH EXISTING BUS	BIHAR
155	400/132KV 200 MVA ICT-2 AT LAKHISARAI	06/02/19	09:00	07/02/19	17:00	OCB	POWERGRID ER-1	Checking of Air Cell & AMP works.	**BIHAR**
156	400kV Koderma - Bokaro CKT -II	06/02/19	09:00	06/02/19	18:00	ODB	POWERGRID ER-1	Replaccement of insulators damaged by miscreants at Location no199 and 200	DVC
157	765 KV BUS-II at Gaya S/S	06/02/19	09:00	06/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
158	400KV MAIN BAY OF KODERMA-II AT BIHARSHARIFF	06/02/19	10:00	06/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
159	220kV Main Bus-II at Pusauli	06/02/19	08:00	06/02/19	20:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	**BIHAR**
160	400/220kV 500MVA ICT-II at Pusauli	06/02/19	08:00	06/02/19	13:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	**BIHAR (ER-I IS ADVISED TO TAKE APPROVAL OF NRPC REGARDING SD OF 220KV**
161	220kV Pusauli-Dehri	06/02/19	13:00	06/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	BIHAR
162	315 MVA ICT#1 at Subhasgram S/s	06/02/19	09:00	06/02/19	17:00	ODB	POWERGRID,ER-II	Retrofitting of Numerical REF Relay.	WB
163	220 KV BIRPARA-SALAKATI-II (TWO)	06/02/19	08:00 Hrs	06/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Replacement of LA.	NLDC
164	400 KV BUS-II at Durgapur	06/02/19	09:00	06/02/19	17/00 hrs	ODB	POWERGRID,ER-II	Bus bar relay testing	
165	220 KV Main BUS # 2	06/02/19	09:00	06/02/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
166	(+) 300/(-) 550 MVAR STATCOM SYSTEM	06/02/19	09:00	06/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK & TIGHTENING WORKS OF CLAMPS & CONNECTORS	
167	765/400kV, 3*500MVA ICT-4 at Angul	06/02/19	09:00	06/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	**NLDC**
168	80 MVAR Bus Reactor	06/02/19	09:00	06/02/19	18:00	ODB	ER-II/Odisha/Keonjhar	AMP activity of Bus Reactor	
169	At 400KV JEERAT 400KV SS: 400KV Main Bus-I & 400kv Bus-Coupler, Bus Transfer Bay O.A.A	06/02/19	07:00	06/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
170	At GOKARNA 400KV SS: 400/220KV 315 MVA TR 2 winter maintanance	06/02/19	07:00	06/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
171	400KV MTPS-Maithon L#1	06/02/19	09:00	06/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
172	765 KV MAIN BAY OF B/R-I AT NEW RANCHI	07/02/19	**09:00**	07/02/19	**17:00**	**ODB**	POWERGRID ER-1	AMP	NLDC
173	400kV NEW PURNEA- MALDA-II	07/02/19	09:30	07/02/19	18:00	ODB	POWERGRID ER-1	R-ph CVT to be replaced at Nprn due to secondry voltage violation	After charging of 400KV Farakka-New Purnea-DC
174	132 KV Main BUS AT BANKA	07/02/19	09:30	07/02/19	17:30	ODB	POWERGRID ER-1	FOR AMP (ALL 132KV LINES WILL BE OUT DURING THE S/D)	BIHAR
175	TIE BAY OF 400KV RNC-3 & 125MVAR B/R AT RANCHI	07/02/19	10:00	07/02/19	17:00	ODB	POWERGRID ER-1	AMP	
176	400KV MAIN BAY OF KGP-I AT CHAIBASA	07/02/19	09:30	07/02/19	11:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
177	400KV TIE BAY OF BR-II & KGP-I AT CHAIBASA	07/02/19	11:30	07/02/19	01:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
178	400KV MAIN BAY OF KGP-II AT CHAIBASA	07/02/19	13:30	07/02/19	15:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
179	400KV TIE BAY OF KGP-II LINE & FUTURE BAY AT CHAIBASA	07/02/19	15:30	07/02/19	17:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
180	400KV BUS-II AT CHANDWA	07/02/19	09:00	09/02/19	18:00	OCB	POWERGRID ER-1	HV & PD Test of Northkarnpura -II GIS Bay No. 403 extended Bus-II. Removal of shield & fixing of Main Bus -II section conductor,vacumming, gas filling & energizing.	JSEB
181	765kV 240MVAR L/R OF Varanasi-2 AT GAYA	07/02/19	09:00	07/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	NLDC
182	400KV TIE BAY OF BANKA-I & II AT BIHARSHARIFF	07/02/19	10:00	07/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
183	400KV PATNA - BARH CKT 1	07/02/19	08:00	07/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
184	400KBV MAIN BAY OF BARH-I AT PATNA	07/02/19	09:30	08/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
185	765kV Pusauli-Fatehpur Line	07/02/19	**09:00**	08/02/19	**18:00**	**ODB**	POWERGRID ER-1	For Polymer Anchoring Connection Work	NLDC
186	400kV East Side Bus-I at Pusauli	07/02/19	08:00	07/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
187	50MVA ICT-IV at Malda	07/02/19	**08:00**	07/02/19	**17:00**	**ODB**	POWERGRID,ER-II	AMP OF ICT.	WB

188	315 MVA ICT#2 at Subhasgram S/s	07/02/19	09:00	07/02/19	17:00	ODB	POWERGRID,ER-II	Retrofitting of Numerical REF Relay.	WB
189	425 bay (BR-IV main Bay) at Durgapur	07/02/19	9/00 hrs	07/02/19	17/00 hrs	ODB	POWERGRID,ER-II	BAY AMP	
190	400KV Maithan-Mejia-1 Line (415)	07/02/19	09:00	09/02/19	18:00	ODB	POWERGRID,ER-II	Replacement of Main Bay and Line Bay CT	
191	400KV Mejia-Jamshedpur line	07/02/19	09:00	08/02/19	18:/00	ODB	POWERGRID,ER-II	To replaced Punctured disc Insulator	
192	400 KV Farakka- Berhampur-I	07/02/19	09:00	07/02/19	18:00	ODB	POWERGRID,ER-II	For Jumper connection and Bay stability between Bay- 34 & 33 after upgradation of bay-34 under ERSS-XV projects & to carry out punch point works in TL	
193	220 KV Bus Coupler Bay (Bay No-204)	07/02/19	09:00	07/02/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
194	400 kV 411 Tie Bay of Baripada-Pandiabili & Baripada-TISCO line	07/02/19	09:00	08/02/19	17:30	OCB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
195	400 kV Jeypore-Bolangir S/C Line	07/02/19	08:00	08/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For attending shutdown nature defects & AMP of Bolangir L/R	NLDC (SUBJECT TO SRPC APPROVAL)
196	400 KV ROURKELA-CHAIBASA#2	07/02/19	09:00	07/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK LINE BAY & LINE REACTOR	
197	Main Bay (406) of 400kV Meramundali Line-1 at Angul	07/02/19	09:00	07/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
198	765KV Bus-II at Sundargarh	07/02/19	**08:00**	10/02/19	**18:00**	**OCB**	ER-II/Odisha/Sundergarh	Erection of busduct and SF6 to Air bushing of 765KV GIS bus sectionalizer for commissioning of 765KV GIS under construction head	NLDC
199	At JEERAT 400KV SS: 315MVA ICT 4 & 400kv Bus Transfer Bay O.A.A	07/02/19	07:00	07/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
200	At ARAMBAG 400 KV SS: 400KV ARAMBAG-DURGAPUR line	07/02/19	07:00	07/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
201	At GOKARNA 400 KV SS:400 KV 80 MVAR BUS REACTOR winter maintance	07/02/19	07:00	07/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
202	400KV MTPS-Maithon L#2	07/02/19	09:00	07/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
203	400kV JSR - Maithon Line	08/02/19	09:30	08/02/19	17:30	ODB	POWERGRID ER-1	**Static Auto reclose relay to be replaced with numerical relay AT JSR**	
204	765 KV TIE BAY OF B/R-I AND FUTURE AT NEW RANCHI	08/02/19	09:00	08/02/19	17:00	ODB	POWERGRID ER-1	AMP	NLDC
205	220KV TRANSFER BAY AT NEW PURNEA	08/02/19	09:30	08/02/19	18:00	ODB	POWERGRID ER-1	BAY AMP	
206	132 KV PURNEA-PURNEA-I	08/02/19	09:00	08/02/19	16:00	ODB	POWERGRID ER-1	AMP	BIHAR
207	220 KV CHAIBASA-CHAIBASA-I	08/02/19	**09:30**	08/02/19	**11:00**	**ODB**	POWERGRID ER-1	CT OIL SAMPLING	JSEB
208	220 KV CHAIBASA-CHAIBASA-II	08/02/19	11:30	08/02/19	01:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	JSEB
209	220KV BAY OF 400/220KV 315 MVA ICT-II AT CHAIBASA	08/02/19	13:30	08/02/19	**15:00**	ODB	POWERGRID ER-1	CT OIL SAMPLING	
210	220KV BAY OF 400/220KV 315 MVA ICT-I AT CHAIBASA	08/02/19	15:30	08/02/19	**17:00**	ODB	POWERGRID ER-1	CT OIL SAMPLING	
211	220KV BUS COUPLER BAY AT CHAIBASA	08/02/19	17:30	08/02/19	19:00	ODB	POWERGRID ER-1	CT OIL SAMPLING	
212	400KV MAIN BAY OF 80MVAR B/R AT LAKHISARAI	08/02/19	10:00	08/02/19	14:00	ODB	POWERGRID ER-1	**AMP of Main Bay of 80 MVAR Bus Reactor**	
213	400 /220 kV ICT-I at Gaya ss	08/02/19	09:00	08/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	BIHAR
214	400KV MAIN BAY OF BANKA-II AT BIHARSHARIFF	08/02/19	10:00	08/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
215	400 KV PATNA - BARH CKT 2	08/02/19	08:00	08/02/19	**17:30**	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
216	400kV East Side Bus-II at Pusauli	08/02/19	08:00	08/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
217	400 KV Bus -2 at Binaguri	08/02/19	09:00	14/02/19	18:00	ODB	POWERGRID,ER-II	400 KV Busbar relay Replacement Under ERSS-XX.	
218	220KV D/C BIRPARA -Chukha FEEDER I	08/02/19	08:00 Hrs	09/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Placement of New A/H at all Tension Tower	NLDC
219	315 MVA ICT#3 at Powergrid,Subhasgram	08/02/19	09:00	08/02/19	17:00	ODB	POWERGRID,ER-II	AMP of 315 MVA ICT#3.	**WB**
220	426 Bay (BR-IV & Future Tie bay) at Durgapur	08/02/19	9/00 hrs	08/02/19	17/00 hrs	ODB	POWERGRID,ER-II	BAY AMP	
221	400 KV Farakka- Kahalgaon-III line	08/02/19	09:00	08/02/19	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.	
222	400 KV Farakka-Gokarna-I	08/02/19	**09:00**	09/02/19	**18:00**	**ODB**	POWERGRID,ER-II	For Event Logger commissioning (Integration with NTPC system) under ERSS-V.	WB
223	125 MVAR BR- II at Alipurduar	08/02/19	08:00	09/02/19	18:00	OCB	POWERGRID,ER-II	Attending Oil leakage (Oil lekage from Conservator tank) and Associated Bay AMP work	
224	400 KV Keonjhar - Talcher # 2 Tie Bay (Bay No-402)	08/02/19	09:00	08/02/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
225	220KV, Balangir-Kantapali line (203 BAY)	08/02/19	09:00	08/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 203 52 CB and 203 CT	

226	400KV Talcher-Rengali ckt-II	08/02/19	10:00	08/02/19	13:00	ODB	ER-II/Odisha	PMU Connectivity under URTDSM Project at Talcher NTPC end	
227	125 MVAR BUS REACTOR-II	08/02/19	09:00	08/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
228	Tie Bay (408) of 400kV ICT-2 & Talcher Line at Angul	08/02/19	09:00	08/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
229	765KV Angul- Srikakulam ckt-I	08/02/19	07:00	08/02/19	18:00	ODB	ER-II/Odisha/Talcher TLM	AMP Work (Shut down is required if not approved for 22/01/2019)	NLDC
230	400KV MTPS-Maithon L#2	08/02/19	09:00	08/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
231	At JEERAT 400KV SS: 315MVA ICT 1 & 400kv Bus Transfer Bay O.A.A	08/02/19	07:00	08/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
232	At GOKARNA 400 KV SS:400KV,80 MVAR BUS REACTOR winter maintance	08/02/19	07:00	08/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
233	400 kV New Ranchi-Ranchi CKT-3.	09/02/19	09:00	09/02/19	18:00	ODB	POWERGRID ER-1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	
234	401 kV New Ranchi-Ranchi CKT-4.	09/02/19	09:00	09/02/19	18:00	ODB	POWERGRID ER-1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	
235	400 Ranchi-Maithan ckt-I	09/02/19	09:00	09/02/19	18:00	ODB	POWERGRID ER-1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	
236	400 kv Ranchi-Raghunathpur CKT-I	09/02/19	09:00	09/02/19	18:00	ODB	POWERGRID ER-1	For Insulation sleeve installation work at Loc 054-055 OF 400 kV Ranchi-New Ranchi CKT-3 & 4.	DVC
237	400 /220 kV ICT-II at Gaya ss	09/02/19	09:00	09/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	BIHAR
238	400KV MAIN BAY OF BALIA-II AT PATNA	09/02/19	09:30	11/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
239	400kV North Side Bus- I at Pusauli	09/02/19	08:00	09/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
240	400/220kV 315MVA ICT-II at Pusauli	09/02/19	09:00	16/03/19	18:00	OCB	POWERGRID ER-1	Replacement of 315 MVA ICT with 500 MVA ICT	BIHAR
241	400 KV Binaguri Bongaigaon Ckt-1	09/02/19	09:00	09/02/19	17:00	ODB	POWERGRID,ER-II	A/R relay retrofitting works in main & Tie bay.	NLDC
242	315 MVA ICT#4 at Powergrid,Subhasgram	09/02/19	09:00	09/02/19	17:00	ODB	POWERGRID,ER-II	AMP of 315 MVA ICT#4.	**WB**
243	220 KV BUS-1 at Rangpo	09/02/19	08:00	11/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates).	
244	220KV Rangpo NEW MELLI	09/02/19	08:00	13/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates).	
245	404 Bay (B' Nagar-II Main bay) at Durgapur	09/02/19	9/00 hrs	09/02/19	17/00 hrs	ODB	POWERGRID,ER-II	BAY AMP	
246	400 kV 405 Tie Bay of Baripada-Kharagpur line & 315 MVA ICT-2	09/02/19	09:00	09/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
247	400KV Talcher-Meramundali Ckt-I	09/02/19	10:00	09/02/19	13:00	ODB	ER-II/Odisha	PMU Connectivity under URTDSM Project at Talcher NTPC end	GRIDCO
248	765KV Angul- Srikakulam ckt-II	09/02/19	07:00	09/02/19	18:00	ODB	ER-II/Odisha/Talcher TLM	AMP Work.(If shutdown for ckt-I is approved for 22/01/2019 , then it is not required)	NLDC
249	New 400KV Bus #1 & 400KV Bus#3	09/02/19	09:30hrs	09/02/19	17:30 hrs	ODB	KAHALGAON	For 400KV Bus sectionizer Bay#1 commissioning	After completion of bus sectionalizer between bus-1 & 3
250	At JEERAT 400KV SS: 315MVA ICT 2 & 400kv Bus Transfer Bay O.A.A	09/02/19	07:00	09/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
251	At ARAMBAG 400KV SS:315 MVA ICT 1	09/02/19	07:00	09/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
252	400KV MTPS-Maithon L#2	09/02/19	09:00	09/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
253	400KV Barh- Motihari CKT-1	10/02/19	08:00	25/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	MAY BE AVAILED IN MARCH
254	400KV Barh- Motihari CKT-II	10/02/19	08:00	25/02/19	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	MAY BE AVAILED IN MARCH
255	220 KV S/C Birpara-Malbase Feeder	10/02/19	08:00 Hrs	10/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Placement of New A/H at all Tension Tower	NLDC
256	220KV D/C BIRPARA -Chukha FEEDER II	10/02/19	08:00 Hrs	11/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Placement of New A/H at all Tension Tower	NLDC
257	500 MVA ICT#5 at Powergrid,Subhasgram	10/02/19	09:00	10/02/19	17:00	ODB	POWERGRID,ER-II	CSD FINE TUNING.	**WB**
258	400KV Maithan KHG-2 Line Bay	10/02/19	09:00	11/02/19	18:00	ODB	POWERGRID,ER-II	Replacement of Main Bay and Line Bay CT	
259	400 KV Farakka-Gokarna-I	10/02/19	09:00	11/02/19	18:00	ODB	POWERGRID,ER-II	For Event Logger commissioning (Integration with NTPC system) under ERSS-V.	**WB**
260	132KV 109 Main Bay of Baripada Line	10/02/19	09:00	10/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
261	63 MVAR DUBURI LINE REACTOR AT BARIPADA SS	10/02/19	09:00	10/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
262	Tie Bay-705 of 765KV 240MVAR B/R-II & 765/400KV ICT-II at Sundargarh	10/02/19	09:00	10/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
263	400kV JSR - Chaibasa 1 Line	11/02/19	09:30	11/02/19	17:30	ODB	POWERGRID ER-1	Static Auto reclose relay to be replaced with numerical relay AT JSR	

264	765/400 KV, 1500 MVA, ICT-II, AT NEW RANCHI	11/02/19	09:00	12/02/19	**17:00**	ODB	POWERGRID ER-1	AMP	NLDC
265	400KV DALLTANGANJ-SASARAM LINE-2	11/02/19	09:30	11/02/19	17:30	ODB	POWERGRID ER-1	Erection of Bushing of 50 MVAR Line Reactor at Daltanganj	
266	220 kV Main Bus-I AT ARA	11/02/19	10:00	11/02/19	17:00	ODB	POWERGRID ER-1	AMP	BIHAR
267	220KV Main bay of Purnea - 1 AT NEW PURNEA	11/02/19	09:30	11/02/19	18:00	ODB	POWERGRID ER-1	BAY AMP	
268	132 KV PURNEA-PURNEA-II	11/02/19	09:00	11/02/19	16:00	ODB	POWERGRID ER-1	AMP	BIHAR
269	400KV MAIN BAY OF 125MVAR B/R AT RANCHI	11/02/19	10:00	11/02/19	17:00	ODB	POWERGRID ER-1	AMP	
270	400KV MAIN BAY OF KAHALGAON-I	11/02/19	10:00	11/02/19	14:00	ODB	POWERGRID ER-1	AMP of Main Bay of 400 kV LKR-KHG Line -1	
271	220 KV BUS-1 AT MUZAFFARPUR	11/02/19	09:30	12/02/19	17:30	ODB	POWERGRID ER-1	AMP WORK	BIHAR
272	220KV MAIN BAY OF 400/220KV 500MVA ICT-1 AT PATNA	11/02/19	09:30	11/02/19	17:30	ODB	POWERGRID ER-1	AMP	
273	220kV Bus Coupler at Pusauli	11/02/19	08:00	11/02/19	18:00	ODB	POWERGRID ER-1	AMP work	
274	400kV North Side Bus-II at Pusauli	11/02/19	08:00	11/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Misalignment Problem & Reley retrofitting Job	NLDC
275	400kV Gaya -Varanasi-II	11/02/19	09:00	12/02/19	18:00	ODB	POWERGRID ER-1	for washing of polluted insulator and defect rectification	NLDC
276	765/400kV, 1500MVA, ICT at Pusauli	11/02/19	09:00	13/02/19	18:00	OCB	POWERGRID ER-1	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 time charging of 500MVA, B-Phase	NLDC
277	400 KV Binaguri Bongaigaon Ckt-2	11/02/19	09:00	11/02/19	17:00	ODB	POWERGRID,ER-II	Line defect rectification & Line AMP works.	NLDC
278	220KV Bus-I(with BC CB) at Malda	11/02/19	08:00	11/02/19	17:00	ODB	POWERGRID,ER-II	Rectification and Maintanance to attend Hotspot in Bus and DCRM in CB	WB
279	125MVAR BUS REACTOR at Baharampore	11/02/19	09/00Hrs	11-02-2019	17/00Hrs	ODB	POWERGRID,ER-II	For balance construction activity (Fire fighting ring modification) pertaining to ERSS-XV.	
280	50 MVAR Sagardighi Line Reactor at Subhasgram S/s	11/02/19	09:00	11/02/19	17:00	ODB	POWERGRID,ER-II	Retrofitting of Numerical REF Relay and AMP of 50 MVAR Line Reactor	
281	409 bay (ICT-I Main bay) at Durgapur	11/02/19	9/00 hrs	11/02/19	17/00 hrs	ODB	POWERGRID,ER-II	BAY AMP	
282	400 KV BUS-I of NTPC Farakka	11/02/19	09:00	11/02/19	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).	
283	220KV,Main BUS-1	11/02/19	09:00	11/02/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of 203 89A, R- PH Dropper connected to 220Kv main BUS-1 due to damage of some strands of conductor and also higher temperature found during	
284	400 KV 415 Main bay of 125 MVAR	11/02/19	09:00	11/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
285	400KV Talcher-Angul ckt	11/02/19	10:00	11/02/19	13:00	ODB	ER-II/Odisha	PMU Connectivity under URTDSM Project at Talcher NTPC end	
286	400 kV Jeypore-Gazuwaka I S/C Line	11/02/19	08:00	11/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	NLDC
287	125 MVAR BR	11/02/19	09:00	11/02/19	13:00	ODB	ER-II/Odisha /Indravati	To Replace Terminal Box of PRD.	
288	Main Bay (419) of 400kV side ICT-4 at Angul	11/02/19	09:00	11/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
289	Main Bay-706 of 765/400KV ICT-II at Sundargarh	11/02/19	09:00	11/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
290	Mendhasal-Pandiabili CKT-1 at Mendhasal along with Main bay & Tie Bay NB: DIA WILL BE IN OPENED CONDITION DURING	11/02/19	08:30	11/02/19	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Maintenance of ISOLATORs at Mendhasal	
291	125 MVAR Bus Reactor	11/02/19	09:00	14/02/19	18:00	OCB	ER-II/Odisha/Keonjhar	For replacement of defective rediator of Bus Reactor	
292	400KV FKK-DGP Line#1	11/02/19	09:00hrs	14/02/19	17:00 hrs	OCB	FARAKKA	Numerical Relay retrofitting of non-switchable Shunt Reactor	
293	At ARAMBAG 400KV SS:315 MVA ICT 2	11/02/19	07:00	11/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
294	400KV MTPS-Maithon L#3	11/02/19	09:00	11/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
295	400 KV BIHARSHARIF - BALIA -1	12/02/19	08:00	13/02/19	18:00	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	NLDC
296	220 kV Main Bus-II AT ARA	12/02/19	10:00	12/02/19	17:00	ODB	POWERGRID ER-1	AMP	BIHAR
297	220KV Main bay of Purnea - 2 AT NEW PURNEA	12/02/19	**09:30**	12/02/19	**18:00**	**ODB**	POWERGRID ER-1	BAY AMP	
298	400KV 125 Bus Recator AT RANCHI	12/02/19	10:00	12/02/19	17:00	ODB	POWERGRID ER-1	AMP	
299	400KV TIE BAY OF BR-I & RKL-II AT CHAIBASA	12/02/19	09:30	12/02/19	17:30	ODB	POWERGRID ER-1	AMP work	
300	400KV BUS-I AND BUS-II AT CHANDWA	12/02/19	09:00	12/02/19	18:00	ODB	POWERGRID ER-1	HV & PD Test of NORTH KARNPURA-II GIS BAY NO 406.	NLDC (NOT ALLOWED BY NLDC)
301	765 kV Gaya-Balia Line	12/02/19	09:00	12/02/19	18:00	ODB	POWERGRID ER-1	For Replacement of Insulators Damaged by Miscreant.	NLDC

302	400KV TIE BAY OF VARANASI-II AND FUTURE AT BIHARSHARIFF	12/02/19	10:00	12/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
303	400KV MAIN BAY OF BARH-IIII AT PATNA	12/02/19	09:30	12/02/19	17:30	ODB	POWERGRID ER-1	AMP	
304	400KV TIE BAY OF Barh -1 Ballia-2 AT PATNA	12/02/19	09:30	14/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
305	400\220kV 315 MVA ICT-2 at Rangpo	12/02/19	08:00	15/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work,	
306	132KV Rangpo-Gangtok line	12/02/19	09:00	12/02/19	18:00	ODB	POWERGRID,ER-II	Line A/R implementation .For DCRM & AMP at Gangtok	SIKKIM
307	500MVA ICT-1 at Powergrid,Maithan	12/02/19	07:00	13/02/19	18:00	OCB	POWERGRID,ER-II	Rectification of MOG, CT replacement Main and X-mer bay, and AMP	**DVC & JSEB consented for S/D of 500MVA ICT-I at Maithon (PG) in February provided DVC & JSEB are allowed to draw 300MW & 100MW respectively from other 500MVA ICT-II at**
308	400 KV D/C Maithan - Jamshedpur(TATA) (TL -(316-317)	12/02/19	00:00	14/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 85/0, (DD+25)-86/0(DD+25+1.5 RC). Span Length-262 mtr	
309	400 KV Talcher # 2 Main Bay (Bay No-403)	12/02/19	09:00	12/02/19	17:00	ODB	ER-II/Odisha/Rengali	AMP Work	
310	160MVA ICT#1	12/02/19	09:00	12/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	GRIDCO
311	400 kV Jeypore-Gazuwaka II S/C Line	12/02/19	08:00	12/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For replacement of porcelain insulator strings at major crossings with new Polymer strings.	NLDC
312	400 KV BUS-I	12/02/19	09:00	12/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
313	Tie Bay (420) of 400kV ICT-4 & Future Line at Angul	12/02/19	09:00	12/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
314	Main Bay-707 of 765KV Angul L/R-IV at Sundargarh	12/02/19	09:00	12/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	
315	Mendhasal-Pandiabili CKT-2 at Mendhasal along with Main bay & Tie Bay NB: DIA WILL BE IN OPENED CONDITION DURING THE S/D	12/02/19	08:30	12/02/19	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Maintenance of ISOLATOR at Mendhasal	GRIDCO
316	400KV MTPS-Maithon L#3	12/02/19	09:00	12/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
317	400kV JSR - Chaibasa 2 Line	13/02/19	09:30	13/02/19	17:30	ODB	POWERGRID ER-1	Static Auto reclose relay to be replaced with numerical relay AT JSR	
318	765KV MAIN BAY OF ICT-II AT NEW RANCHI	13/02/19	09:00	13/02/19	**17:00**	ODB	POWERGRID ER-1	AMP	NLDC
319	400KV MAIN BAY OF BUS REACTOR AT DALTANGANJ	13/02/19	09:30	13/02/19	17:30	ODB	POWERGRID ER-1	AMP	
320	132kV Main Bus AT ARA	13/02/19	10:00	13/02/19	17:00	ODB	POWERGRID ER-1	AMP & Replacement of R and B-Phase Corona Ring of Dumraon Bay's Bus Isolator. All 132kv lines will be out of service.	BIHAR
321	220KV BUS COUPLER BAY AT NEW PURNEA.	13/02/19	09:30	13/02/19	**18:00**	ODB	POWERGRID ER-1	BAY AMP	
322	132 KV PURNEA-PURNEA-III	13/02/19	09:00	13/02/19	16:00	ODB	POWERGRID ER-1	AMP	BIHAR
323	400KV TIE BAY OF 400KV RNC-4 & FUTURE AT RANCHI	13/02/19	10:00	13/02/19	17:00	ODB	POWERGRID ER-1	AMP	
324	400KV TIE BAY OF KHG-I AND FUTURE AT LAKHISARAI	13/02/19	10:00	13/02/19	14:00	ODB	POWERGRID ER-1	AMP of Tie Bay of 400 kV LKR-KHG-1 & Future Bay	
325	220 KV BUS-2 AT MUZAFFARPUR	13/02/19	09:30	14/02/19	17:30	ODB	POWERGRID ER-1	AMP WORK	BIHAR
326	400 KV BUS-II at Gaya S/S	13/02/19	09:00	18/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	BIHAR
327	400 KV GAYA-NABINAGAR -1 line	13/02/19	09:00	15/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	
328	400KV MAIN BAY OF VARANASI-II AT BIHARSHARIFF	13/02/19	10:00	13/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
329	400KV PATNA - BALIA CKT 1	13/02/19	08:00	13/02/19	**17:30**	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	NLDC
330	220KV MAIN BAY OF 400/220KV ICT- 2 AT PATNA	13/02/19	09:30	13/02/19	17:30	ODB	POWERGRID ER-1	AMP	
331	132kV Pusauli-Dehri	13/02/19	09:00	13/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Problem at Dehri.	BIHAR
332	400 KV Malda Farakka-I	13/02/19	08:00	13/02/19	17:00	ODB	POWERGRID,ER-II	AMP	After charging of 400KV Farakka-New Purnea-DC
333	132KV Rangpo-Chuzachen line	13/02/19	09:00	13/02/19	18:00	ODB	POWERGRID,ER-II	Line A/R implementation	SIKKIM
334	160 MVA ICT-I at Birpara	13/02/19	08:00 Hrs	13/02/19	17:30 Hrs	ODB	POWERGRID,ER-II	Arresting of Oil seepage from PRD as well as providing double earthing for 220KV side LA.	GRIDCO
335	400 KV Talcher # 1 Main Bay (Bay No-404)	13/02/19	**09:00**	13/02/19	**17:00**	**ODB**	ER-II/Odisha/Rengali	AMP Work	
336	220KV,Future Line-III BAY (207 BAY)	13/02/19	09:00	13/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 207 52 CB and 207 CT	
337	132KV Baripada-Bangriposi Line	13/02/19	09:00	13/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement	GRIDCO
338	220KV Jeypore- JEYNAGAR-I Line	13/02/19	08:00	13/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-I TBC Isolator) & AMP Works	GRIDCO

339	765kV, 3*110MVAR Bus Reactor-1 at Angul	13/02/19	09:00	13/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC
340	765KV Sundargarh-Angul Ckt #4 with LR	13/02/19	09:00	13/02/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take B-Ph reactor in service in place of spare Reactor after attending oil leakage in B-Ph Reactor	**NLDC**
341	Bus-I along with Main bay of Mendhsal- Pandiabili CKT-1at Mendhsal	13/02/19	**08:30**	13/02/19	**18:00**	**ODB**	ER-II/Odisha/ Pandiabili GIS	Maintenance of ISOLATOR at Mendhasal	GRIDCO
342	At ARAMBAG 400KV SS:315 MVA ICT 3	13/02/19	07:00	13/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
343	At JEERAT 400KV SS: 400kv JEERAT-BKTPP bay & Line & 400KV Bus Transfer Bay	13/02/19	07:00	13/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
344	400KV MTPS-Maithon L#3	13/02/19	09:00	13/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
345	400 KV BIHARSHARIF - BALIA -2	14/02/19	08:00	15/02/19	18:00	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	NLDC
346	220KV SIDE MAIN BAY OF 400/220KV 500MVA ICT-II AT NEW PURNEA	14/02/19	09:30	14/02/19	**18:00**	ODB	POWERGRID ER-1	BAY AMP	
347	400KV MAIN BAY OF 80MVAR B/R AT RANCHI	14/02/19	**10:00**	14/02/19	**17:00**	**ODB**	POWERGRID ER-1	AMP	
348	400/220KV 315 MVA ICT-I AT CHAIBASA	14/02/19	09:30	14/02/19	17:30	ODB	POWERGRID ER-1	AMP work	JSEB
349	400 kV Koderma-Gaya-1 Line	14/02/19	09:00	14/02/19	18:00	ODB	POWERGRID ER-1	For Replacement of Insulators Damaged by Miscreant.	DVC
350	400KV MAIN BAY OF KODERMA-I AT BIHARSHARIFF	14/02/19	10:00	14/02/19	18:00	ODB	POWERGRID ER-I	Bay AMP	
351	400KV PATNA - BALIA CKT 2	14/02/19	08:00	14/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	**NLDC**
352	400KV MAIN BAY OF BARH-IV AT PATNA	14/02/19	09:30	14/02/19	17:30	ODB	POWERGRID ER-1	AMP	
353	132kV Pusauli-Karmanasha	14/02/19	09:00	14/02/19	18:00	ODB	POWERGRID ER-1	To attend Isolator Problem at karmanasa .	BIHAR
354	132kV BUS-2 Shutdown at Rangpo	14/02/19	09:00	24/02/19	17:00	OCB	POWERGRID,ER-II	For Bus extension to new Chuzachen bays (Construction works)	SIKKIM
355	408 Bay (B' Nagar-I & ICT-I tie bay) at Durgapur	14/02/19	9/00 hrs	14/02/19	17/00 hrs	ODB	POWERGRID,ER-II	BAY AMP	
356	400 KV Farakka- Kahalgaon-I line	14/02/19	09:00	14/02/19	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	
357	Main bay of 400 KV Farakka- Kahalgaon-I (Bay- 22)	14/02/19	**09:00**	28/02/19	**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.	
358	400 KV Talcher # 1 Tie Bay (Bay No-406)	14/02/19	09:00	16/02/19	17:00	OCB	ER-II/Odisha/Rengali	Pole Overhauling of DCRM violated CB pole Y-Ph and AMP Work.	
359	315MVA ICT #1	14/02/19	09:00	14/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement & AMP	GRIDCO
360	220KV Jeypore-JEYNAGAR-II Line	14/02/19	08:00	14/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-II TBC Isolator) & AMP Works	GRIDCO
361	400 KV BUS-II	14/02/19	09:00	14/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
362	765KV Sundargarh-Angul Ckt #3 with LR	14/02/19	09:00	14/02/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take spare Reactor in to service in place of Y-Ph Reactor for attending oil leakage in Y-Ph reactor	**NLDC**
363	BUS-II along with Main bay of Mendhsal-Pandiabili CKT-II at Mendhsal	14/02/19	08:30	14/02/19	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Maintenance of Line ISOLATOR at Mendhasal	**GRIDCO**
364	At JEERAT 400KV SS: 400kv JEERAT-New Chanditala bay & Line & 400KV Bus Transfer Bay	14/02/19	07:00	14/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
365	400KV MTPS-Jamshedpur	14/02/19	09:00	14/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
366	400KV MAIN BAY OF SASARAM LINE-1 AT DALTANGANJ	15/02/19	09:30	15/02/19	17:30	ODB	POWERGRID ER-1	AMP	
367	220KV SIDE MAIN BAY OF 400/220KV 500MVA ICT-I AT NEW PUR	15/02/19	09:30	15/02/19	18:00	ODB	POWERGRID ER-1	BAY AMP	
368	132 KV PURNEA- KISHANGANJ -S/C	15/02/19	09:00	15/02/19	16:00	ODB	POWERGRID ER-1	AMP	BIHAR
369	80 MVAR Bus Reactor AT LAKHISARAI	15/02/19	09:00	15/02/19	17:00	ODB	POWERGRID ER-1	AMP of 80 MVAR Bus Reactor	
370	400 kV Maithon-Gaya-1 Line	15/02/19	09:00	15/02/19	18:00	ODB	POWERGRID ER-1	For Replacement of Insulators Damaged by Miscreant.	
371	50MAR L/R of Varanasi-I at Biharsharif	15/02/19	**10:00**	15/02/19	**18:00**	**ODB**	POWERGRID ER-I	AMP work	
372	400KV PATNA - BALIA CKT 3	15/02/19	08:00	15/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	NLDC
373	400kV Bus -1 AT PATNA	15/02/19	09:30	16/02/19	17:30	ODB	POWERGRID ER-1	For Construction activity for Nabinagar bay under under Nabinagar - 2 Project.	BIHAR
374	400KV MAIN BAY OF BALIA-I AT PATNA	15/02/19	09:30	15/02/19	17:30	ODB	POWERGRID ER-1	AMP	
375	400KV PATNA BARH-I	15/02/19	09:30	28/02/19	17:30	OCB	POWERGRID ER-1	For erection, testing and commisioning of 80 MVAR L/R to be installed with this line under Nabinagar - 2 Project.	
376	220KV MAIN BAY OF SIPRA -I AT PATNA	15/02/19	09:30	17/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	

377	400KV Binaguri Kishanganj Ckt-1	15/02/19	09:00	15/02/19	17:00	ODB	POWERGRID,ER-II	A/R relay retrofitting works at Binaguri end.	
378	400 KV Malda Farakka-II	15/02/19	08:00	15/02/19	17:00	ODB	POWERGRID,ER-II	AMP	After charging of 400KV Farakka-New Purnea-DC
379	220KV, Transfer Bay (210BAY)	15/02/19	09:00	15/02/19	18:00	OCB	ER-II/Odisha/Balangir	AMP for 210 52 CB and 210 CT	
380	400 kV 403 Baripada-Duburi Line Main Bay at Duburi SS	15/02/19	**09:00**	15/02/19	**17:30**	**ODB**	ER-II/Odisha/BARIPADA S/S	AMP works	
381	ICT-I (3x 105 MVA) at Jeypore	15/02/19	08:00	15/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For changing ICT-I combination form Unit-I,III, IV to Unit-I , II & IV for charging Unit-II & To carry Insulation sleeves work Teritiry side of ICT 1	GRIDCO
382	125 MVAR BUS REACTOR-I	15/02/19	09:00	15/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP OF BUS REACTOR & COMMISSIONING OF CSD IN ITS TIE BAY CB (42352 CB)	
383	Main Bay-715 of 765KV Dharamjaygarh Ckt-3 at Sundargarh	15/02/19	09:00	15/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	**NLDC**
384	ARAMBAG-NEW PPSP 1 400KV LINE	15/02/19	07:00	15/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
385	AT BKTPP:400 KV BUS REACTOR BAY	15/02/19	07:00	16/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
386	400KV MTPS-Jamshedpur	15/02/19	09:00	15/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
387	400 kV New Ranchi-Ranchi CKT-1.	16/02/19	09:00	16/02/19	18:00	ODB	POWERGRID ER-1	For balance Insulation sleeve installation work at Loc 017-018 and 053-054 OF 400 kV Ranchi-New Ranchi CKT-1 & 2 and Fixing of stool on Bus CVT Yph . 400 kv NRNC - RNC -1	
388	400 kV New Ranchi-Ranchi CKT-2.	16/02/19	09:00	16/02/19	18:00	ODB	POWERGRID ER-1	For balance Insulation sleeve installation work at Loc 017-018 and 053-054 OF 400 kV Ranchi-New Ranchi CKT-1 & 2 and Fixing of stool on Bus CVT Yph . 400 kv NRNC - RNC -1	
389	400 Ranchi-Maithan ckt-I	16/02/19	09:00	16/02/19	18:00	ODB	POWERGRID ER-1	For balance Insulation sleeve installation work at Loc 017-018 and 053-054 OF 400 kV Ranchi-New Ranchi CKT-1 & 2 and Fixing of stool on Bus CVT Yph . 400 kv NRNC - RNC -1	
390	400 kv Ranchi-Raghunathpur CKT-I	16/02/19	09:00	16/02/19	18:00	ODB	POWERGRID ER-1	For balance Insulation sleeve installation work at Loc 017-018 and 053-054 OF 400 kV Ranchi-New Ranchi CKT-1 & 2 and Fixing of stool on Bus CVT Yph . 400 kv NRNC - RNC -1	DVC
391	400KV BUS-II AT RANCHI	16/02/19	09:00	16/02/19	18:00	ODB	POWERGRID ER-1	Fixing of stool on Bus CVT Yph . 400 kv NRNC - RNC -1 AND 2 WILL BE UNDER S/D due to unavailability of its TIE bay.	
392	400 KV GAYA-NABINAGAR -2 line	16/02/19	09:00	18/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	
393	400KV PATNA - BALIA CKT 4	16/02/19	08:00	16/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	NLDC
394	220KV MAIN BAY OF SIPARA-II AT PATNA	16/02/19	**09:30**	16/02/19	**17:30**	**ODB**	POWERGRID ER-1	AMP	
395	220\132 Kv 100 MVA ICT-2 at Rangpo	16/02/19	08:00	19/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work.	
396	400KV Maithon-Right Bank #1	16/02/19	08:00	31/02/19	18:00	OCB	POWERGRID,ER-II	Re conductoring work	
397	400 kV 4034 Tie Bay of Baripada Line & Bus Reactor at Duburi SS	16/02/19	**09:00**	16/02/19	**17:30**	**ODB**	ER-II/Odisha/BARIPADA S/S	AMP works	
398	220 kV Bus -I at Jeypore & 220 kV Bus Coupler CB(202 52)	16/02/19	08:00	18/02/19	18:00	OCB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	GRIDCO
399	Tie Bay-717 of 765KV Dharamjaygarh Ckt-4 at Sundargarh	16/02/19	09:00	16/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	**NLDC**
400	400KV Bus Reactor#1	16/02/19	09:00hrs	16/02/19	17:00 hrs	ODB	FARAKKA	Reactor Testing	
401	400KV MTPS-Jamshedpur	16/02/19	09:00	16/02/19	17:00	ODB	DVC	Preventive maintenance of bay & tan delta test of CT	
402	400KV FARAKKA-GOKARANA-D/C	17/02/19	09:00	18/02/19	18:00	OCB	POWERGRID ER-1	For termination with Farakka & Gokarna line of 400KV D/C Rajarhat-Purnea Line (Bihar Section)	WB
403	400 kV Bus-3 at Powergrid,Maithan	17/02/19	10:00	17/02/19	14:00	ODB	POWERGRID,ER-II	Project Work under ERSS-XVII (Reconnection of Jumper)	
404	400 kV 404 Main Bay of 80 MVAR Bus Reactor at Duburi SS	17/02/19	**09:00**	17/02/19	**17:30**	**ODB**	ER-II/Odisha/BARIPADA S/S	AMP works	
405	400kV Sundargarh-Raigarh Ckt #3 & 4	17/02/19	08:00	18/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works (Shut down of Sundargarh - Raigarh Ckt-III & IV is required together for maint. of Multi circuit/ LILO portion)	**NLDC**
406	Main Bay-718 of 765KV Dharamjaygarh Ckt-4 at Sundargarh	17/02/19	09:00	17/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	**NLDC**
407	400KV TIE BAY OF ICT-1 AND FUTURE AT DALTANGANJ	18/02/19	09:30	18/02/19	17:30	ODB	POWERGRID ER-1	AMP	
408	400KV TIE BAY OF SILIGURI-II ANC ICT-I AT NEW PURNEA	18/02/19	09:30	18/02/19	18:00	ODB	POWERGRID ER-1	BAY AMP	
409	400/220KV 315MVA ICT-II AT RANCHI	18/02/19	**10:00**	20/02/19	**17:00**	**OCB**	POWERGRID ER-1	OVERHAULING OF OLTC	JSEB proposed to avail S/D of 220KV Ranchi-Hatia when 315MVA ICT-II@Ranchi will be
410	400KV 50MVAR L/R OF KAHALGAON-I AT LAKHISARAI	18/02/19	09:00	18/02/19	17:00	ODB	POWERGRID ER-1	AMP of 50 MVAR kahalgaon - I LR	
411	400KV KAHALGAON-LAKHISARAI-I	18/02/19	09:00	18/02/19	09:10	ODB	POWERGRID ER-1	for taking 50 MVAR Line Reactor out of service for AMP works.	
412	400KV KAHALGAON-LAKHISARAI-I	18/02/19	16:50	18/02/19	17:00	ODB	POWERGRID ER-1	for taking 50 MVAR Line Reactor-in service after AMP works.	
413	400/220KV 315 MVA ICT-1 AT MUZAFFARPUR	18/02/19	09:30	21/02/19	17:30	OCB	POWERGRID ER-1	OLTC OVERHAULING WORK	BIHAR
414	400kV Bus 2 AT PATNA	18/02/19	09:30	19/02/19	17:30	ODB	POWERGRID ER-1	For Construction activity for Nabinagar bay under under Nabinagar - 2 Project.	BIHAR

415	220KV BUS COUPLER BAY AT PATNA	18/02/19	**09:30**	18/02/19	**17:30**	**ODB**	POWERGRID ER-1	AMP	
416	220KV MAIN BAY OF KHAGAUL AT PATNA	18/02/19	09:30	20/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
417	400kV Varanasi Main Bay (East Side) at Pusauli	18/02/19	09:00	18/02/19	18:00	ODB	POWERGRID ER-1	AMP work	NLDC
418	400kV Biharsharif-Varanasi-I	18/02/19	09:00	19/02/19	18:00	ODB	POWERGRID ER-1	for washing of polluted insulator	NLDC
419	4000KV Binaguri Kishanganj Ckt-2	18/02/19	09:00	18/02/19	17:00	ODB	POWERGRID,ER-II	A/R relay retrofitting works at Binaguri end.	
420	132KV Rangpo Melli	18/02/19	09:00	21/02/19	18:00	ODB	POWERGRID,ER-II	TLM insulator changing works at specified locations.	SIKKIM
421	132kV Bus Sectionalizer-2 110 Bay at Rangpo	18/02/19	09:00	18/02/19	18:00	ODB	POWERGRID,ER-II	Scheduled AMP	
422	400 kV Bus-4 at Powergrid,Maithan	18/02/19	10:00	18/02/19	14:00	ODB	POWERGRID,ER-II	Project Work under ERSS-XVII (Reconnection of Jumper)	
423	400 KV S/C Durgapur - Jamshedpur TL- (TL-329-330)	18/02/19	00:00	19/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 102/0 (DD+25+1.5 RC)-103/0(DD+9). Span Length-208 mtr	
424	400KV,Balangir-Angul Line Main BAY (401 BAY)	18/02/19	09:00	18/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 401 52 CB and 401 CT	NLDC
425	400 kV 402 Main Bay of Duburi-Pandiabili Line at Duburi SS	18/02/19	09:00	18/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
426	400 KV Indravati-Jeypore Main Bay (401)	18/02/19	09:00	18/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 400 KV Indravati-Jeypore Main Bay (401)	NLDC
427	Main Bay (430) of 400kV GMR Line-2 at Angul	18/02/19	09:00	18/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
428	Main Bay-719 of 765KV Darlipali Ckt-2	18/02/19	09:00	18/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
429	400KV/200KV Auto Transformer	18/02/19	09:00hrs	27/02/19	17:00 hrs	OCB	FARAKKA	Numerical Relay retrofitting and 220KV Lalmatia Line breaker O/H	JSEB
430	AT BKTPP:400/220/33KV IBT#1 S/D	18/02/19	07:00	19/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
431	765 kV New Ranchi - Dharamjaygarh CKT-I	19/02/19	09:00	23/02/19	18:00	ODB	POWERGRID ER-1	For replacement of spacer damper 131 nos., CC ring loose 67, rigid spacer missing 23 nos.	**NLDC**
432	400/220KV 500MVA ICT-I AT NEW PURNEA	19/02/19	09:30	19/02/19	18:00	ODB	POWERGRID ER-1	ICT AMP	
433	400KV Biharsarif - Koderma CKT -I	19/02/19	09:00	20/02/19	18:00	ODB	POWERGRID ER-1	replaccement of insulators damaged by miscreants at Location no 65 and 66	DVC
434	400 KV BUS-I at Gaya S/S	19/02/19	09:00	21/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	BIHAR
435	50MAR L/R of Varanasi-II at Biharsharif	19/02/19	**10:00**	19/02/19	**18:00**	**ODB**	POWERGRID ER-I	AMP work	
436	400KV MAIN BAY OF ICT-I AT PATNA	19/02/19	09:30	19/02/19	17:30	ODB	POWERGRID ER-1	AMP	
437	400KV Binaguri Purnea Ckt-1	19/02/19	09:00	20/02/19	17:00	ODB	POWERGRID,ER-II	A/R relay & Digital PLCC retrofitting works.	
438	400 KV Malda Purnea-I	19/02/19	08:00	19/02/19	17:00	ODB	POWERGRID,ER-II	AMP/Recification of OPGW peak bend	After charging of 400KV Farakka-New Purnea-DC
439	220 KV bus coupler-1 206 Bay at Rangpo	19/02/19	09:00	19/02/19	18:00	ODB	POWERGRID,ER-II	Scheduled AMP	
440	400 KV Rengali-Indravati Line	19/02/19	09:00	19/02/19	17:00	ODB	ER-II/Odisha/Rengali	Auto Reclose Relay Retrofitting and AMP Work	**NLDC**
441	400 kV 4012 Tie Bay of Duburi-Pandiabili Line at Duburi SS	19/02/19	09:00	19/02/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
442	220 kV Bus -II at Jeypore & 220 kV Bus Coupler CB(202 52)	19/02/19	**08:00**	21/02/19	**18:00**	**OCB**	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	
443	220 KV BUS-I	19/02/19	09:00	19/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
444	Main Bay 9707) of 765kV side ICT-2 at Angul	19/02/19	09:00	19/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
445	765 KV DC Sundargarh - Darlipali (NTPC) Ckt-I	19/02/19	08:00	19/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
446	Main Bay-721 of 765KV Dharamjaygarh Ckt-1 at Sundargarh	19/02/19	09:00	19/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
447	Barh Kahalgaon LINE # 1	19/02/19	09:30hrs	20/02/19	18:00 hrs	OCB	BARH	For Leveling of Land & Annual Maintenance & Testing of Bays Equipments	
448	AT ARAMBAG 400KV SS:ARAMBAG-PPSP2 400KV LINE	19/02/19	07:00	19/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
449	132KV DALTANGANJ-DALTONGANJ LINE-1	20/02/19	09:30	20/02/19	17:30	ODB	POWERGRID ER-1	LINE BAY AMP	**JSEB**
450	400 KV CHAIBASA-KGP-I	20/02/19	09:30	20/02/19	17:30	ODB	POWERGRID ER-1	CSD AND AUTO RECLOSE TEST	WB
451	400/220KV 315MVA ICT-3 at Biharsharif	20/02/19	10:00	22/02/19	18:00	OCB	POWERGRID ER-I	OLTC Overhauling work with AMP	BIHAR
452	400KV MAIN BAY OF 80 MVAR B/R AT PATNA	20/02/19	09:30	20/02/19	17:30	ODB	POWERGRID ER-1	AMP	
453	400kV Biharsharif-Varanasi-II	20/02/19	09:00	21/02/19	18:00	ODB	POWERGRID ER-1	for washing of polluted insulator	NLDC

454	400\220kV 315 MVAICT -1 at Rangpo	20/02/19	08:00	24/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work,	
455	220KV Maithan Dhanbad Line 2	20/02/19	09:00	20/02/19	17:00	ODB	POWERGRID,ER-II	CVT Y-P Replacement	DVC
456	220 KV Arambag - Midnapore LINE- (TL 128-DA+0--TL129DA+0)	20/02/19	00:00	22/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 400 KV CKTL-Loop OUT-AP-13/0--(DD+18)- AP-13A/0-(DD+18)- SPAN-280 MTR	WB
457	400 KV 401R keonjhar line Reactor main bay	20/02/19	09:00	21/02/19	17:30	OCB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
458	220 KV BUS-II	20/02/19	09:00	20/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
459	765kV, 3*80MVAR Line Reactor of Sundargarh Line-3 at Angul	20/02/19	09:00	20/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC
460	765 KV DC Sundargarh - Darlipali (NTPC) Ckt-II	20/02/19	08:00	20/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
461	Main Bay-722 of 765KV Darlipali Ckt-1	20/02/19	09:00	20/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
462	Future ICT main bay 400 kv (410)	20/02/19	10:00	20/02/19	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	
463	AT BKTPP:400/220/33KV IBT#2 S/D	20/02/19	07:00	21/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
464	400KV RTPS-Ranchi Line-1	20/02/19	10:00	20/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
465	400kV BUS-I AT NEW PURNEA	21/02/19	09:30	21/02/19	18:00	ODB	POWERGRID ER-1	BUS AMP	
466	400KV MAIN BAY OF RNC-SIPAT-2 AT RANCHI	21/02/19	**10:00**	21/02/19	**17:00**	**ODB**	POWERGRID ER-1	AMP	
467	400 KV CHAIBASA-KGP-II	21/02/19	09:30	21/02/19	17:30	ODB	POWERGRID ER-1	CSD AND AUTO RECLOSE TEST	WB
468	400KV Biharsarif - Koderma CKT -II	21/02/19	09:00	22/02/19	18:00	ODB	POWERGRID ER-1	replaccement of insulators damaged by miscreants at Location no 67 and 70	DVC
469	400 KV PATNA - BARH CKT 3	21/02/19	08:00	21/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
470	400KV TIE BAY OF 80 MVAR B/R -I AND ICT 2 AT PATNA	21/02/19	09:30	21/02/19	17:30	ODB	POWERGRID ER-1	AMP	
471	220KV MAIN BAY OF FATUHA AT PATNA	21/02/19	09:30	23/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
472	400KV Binaguri Purnea Ckt-2	21/02/19	09:00	22/02/19	17:00	ODB	POWERGRID,ER-II	A/R relay & Digital PLCC retrofitting works.	
473	400 KV Malda Purnea-II	21/02/19	08:00	21/02/19	17:00	ODB	POWERGRID,ER-II	AMP	After charging of 400KV Farakka-New Purnea-DC
474	132 KV Rangit-Rangpo Ckt	21/02/19	09:00	21/02/19	17:00	ODB	POWERGRID,ER-II	Insulator replacement.	SIKKIM
475	430 Bay (JSR-I main bay) at Durgapur	21/02/19	**9/00 hrs**	21/02/19	**17/00 hrs**	**ODB**	POWERGRID,ER-II	BAY AMP	
476	400 KV D/C Durgapur - Jamshedpur (TL-286-287)	21/02/19	00:00	23/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 101/0 (DD+25+1.5 RC)-102/0(DD+25+1.5 RC). Span Length-208 mtr	
477	315 MVA ICT#1	21/02/19	09:00	21/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	
478	ICT-II Main Bay (205)	21/02/19	09:00	21/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of ICT-II Main Bay (205) at OHPC S/Y.	
479	ICT-II Main Bay (403)	21/02/19	09:00	21/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP work of ICT-II Main Bay (403) at OHPC S/Y.	
480	Tie Bay (714) of 765kV ICT-4 & B/R-2 at angul	21/02/19	09:00	21/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC
481	Tie Bay-723 of 765KV Darlipali Ckt-1 & Dharamjaygarh Ckt-2 at Sundargarh	21/02/19	09:00	21/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
482	220 kv Pandiabili-Samagra ckt-1(204)	21/02/19	10:00	21/02/19	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	GRIDCO
483	400kV Talcher- Meramundali Line	21/02/19	08:00	21/02/19	17:00	ODB	ER-II/Odisha/Talcher TLM	Line maintenance work (To attend camera Patrolling defects)	GRIDCO
484	AT ARAMBAG SS: 315MVA ICT 3	21/02/19	07:00:00	21/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
485	400KV RTPS-Ranchi Line-1	21/02/19	10:00	21/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
486	400KV GAYA -CHANDWA-I	22/02/19	10:00	22/02/19	18:00	ODB	POWERGRID ER-1	FOR SHIFTING OF 132KV LINE OF JUSNL CROSSING UNDER THE 400KV CHANDWA-GAYA-D/C DUE TO LESS CLEARANCE.	DOUBLE BUS SHUTDOWN NOT ALLOWED BY NLDC
487	400KV GAYA -CHANDWA-II	22/02/19	10:00	22/02/19	18:00	ODB	POWERGRID ER-1	FOR SHIFTING OF 132KV LINE OF JUSNL CROSSING UNDER THE 400KV CHANDWA-GAYA-D/C DUE TO LESS CLEARANCE.	DOUBLE BUS SHUTDOWN NOT ALLOWED BY NLDC
488	132KV DALTANGANJ-DALTONGANJ LINE-2	22/02/19	09:30	22/02/19	17:30	ODB	POWERGRID ER-1	LINE BAY AMP	JSEB
489	400/220KV 315 MVA ICT-2 AT MUZAFFARPUR	22/02/19	09:30	25/02/19	17:30	OCB	POWERGRID ER-1	OLTC OVERHAULING WORK	BIHAR
490	220 KV BUS-I at Gaya S/S	22/02/19	09:00	22/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	**BIHAR**
491	400KV PATNA - BARH CKT 4	22/02/19	08:00	22/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
492	400KV Bus-I at Malda	22/02/19	08:00	22/02/19	17:00	ODB	POWERGRID,ER-II	Hot Spot	

493	132kV Bus Sectionalizer-1 109 Bay at Rangpo	22/02/19	09:00	22/02/19	18:00	ODB	POWERGRID,ER-II	Scheduled AMP	
494	400KV Rengali-Keonjhar Line	22/02/19	09:00	22/02/19	17:00	ODB	ER-II/Odisha/Rengali	Auto Reclose Relay Retrofitting and AMP Work	
495	315 MVA, ICT-1 Main BAY (402 BAY)	22/02/19	09:00	22/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 402 52 CB and 402 CT	
496	400 kV 408 Tie Bay of Baripada-Duburi & Baripada-Jamshedpur line	22/02/19	09:00	23/02/19	17:30	OCB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
497	413 MAIN BAY (JEYPORE-GAZ II MAIN BAY)	22/02/19	09:00	24/02/19	17:00	OCB	ER-II/Odisha /Jeypore	Overhauling of 41352 (CB)(JEYPORE-GAZ II MAIN BAY)	
498	315 MVA ICT#2	22/02/19	09:00	22/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	
499	Main Bay (715) of 765kV Bus reactor-2 at Angul	22/02/19	09:00	22/02/19	17:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
500	765 KV DC Sundargarh - Dharamjaygarh Ckt-I	22/02/19	08:00	22/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
501	Main Bay-724 of 765KV Dharamjaygarh Ckt-2	22/02/19	09:00	22/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
502	220 kv Pandiabili-Samagra ckt-2 (205)	22/02/19	10:00	22/02/19	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	GRIDCO
503	400kV Talcher- Angul Line	22/02/19	08:00	22/02/19	17:00	ODB	ER-II/Odisha/Talcher TLM	Line maintenance work (To attend camera Patrolling defects)	
504	**New 400KV Bus#2 & 400KV Bus#4**	22/02/19	09:30hrs	22/02/19	17:30 hrs	**ODB**	**KAHALGAON**	For 400KV Bus sectionizer Bay#1 commissiong	After completion of bus sectionalizer between bus-1 & 3
505	AT DALKHOLA SS: 220KV DALKHOLA(TCL)-DALKHOLA(PGCIL) CKT 1	22/02/19	07:00:00	22/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	
506	400kV RTPS-Ranchi Line-2	22/02/19	10:00	22/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
507	220 KV BUS-II at Gaya S/S	23/02/19	09:00	23/02/19	18:00	ODB	POWERGRID ER-1	For uprating of bay equipment under Nabinagar -2 Project.	**BIHAR**
508	400KV BARH - KAHALGAON CKT 1	23/02/19	08:00	23/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
509	400KV 80 MVAR B/R AT PATNA	23/02/19	09:30	23/02/19	17:30	ODB	POWERGRID ER-1	AMP	
510	132 KV SC Rangit -Rammam Line	23/02/19	09:00	23/02/19	17:00	ODB	POWERGRID,ER-II	To attend conductor damage in loc 21 to 22 in 3 phase	WB
511	765 KV DC Sundargarh - Darlipali (NTPC) Ckt-II	23/02/19	08:00	23/02/19	17:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC
512	765KV Sundargarh-Angul Ckt #3 with LR	23/02/19	09:00	23/02/19	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
513	220 Kv Pandiabili-Atri ckt-2 (208)	23/02/19	10:00	23/02/19	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	GRIDCO
514	AT DALKHOLA(TCL)-DALKHOLA(PGCIL)CKT 2	23/02/19	07:00:00	23/02/19	15:00	ODB	WB	WINTER MAINTENANCE WORK	WB
515	400kV RTPS-Ranchi Line-2	23/02/19	10:00	23/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
516	400KV BARH - KAHALGAON CKT 2	24/02/19	08:00	24/02/19	17:30	ODB	POWERGRID ER-1	REPLACEMENT OF PORCELAIN INSULATOR WITH POLYMER	
517	220KV DLK-DLK(WB) - I	24/02/19	**08:00**	24/02/19	**17:00**	**ODB**	POWERGRID,ER-II	AMP	WB
518	132 KV D/C CK Road - Medinipur TL	24/02/19	00:00	25/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 162/0 (DD+9)-163/0(DD+9). Span Length-265 mtr	WB
519	220KV ICT-2 Main Bay(Bay no- 209)	24/02/19	09:00	25/02/19	17:00	ODB	ER-II/Odisha/Rengali	Pole Overhauling of DCRM violated B-Ph pole of 220kV ICT-2 CGL CB.	
520	400 kV 410 main Bay of Baripada-Pandiabili line	24/02/19	09:00	25/02/19	17:30	OCB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
521	765KV 240 MVAR Bus Reactor-1	24/02/19	08:00	24/02/19	18:00	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
522	765 KV BUS-II AT NEW RANCHI	25/02/19	09:00	26/02/19	17:00	ODB	POWERGRID ER-1	AMP	**NLDC**
523	400KV MAIN BAY OF ICT-1 AT DALTANGANJ	25/02/19	09:30	25/02/19	17:30	ODB	POWERGRID ER-1	AMP	
524	400KV BUS-I AT RANCHI	25/02/19	10:00	25/02/19	**17:00**	ODB	POWERGRID ER-1	Errection & Commisssioning of Jack bus for Tie Bay of Ranchi-New Ranchi-I & II)	JSEB
525	132KV LAKHISARAI -LAKHISARAI-I	25/02/19	10:00	25/02/19	14:00	ODB	POWERGRID ER-1	AMP works of Bay Equipments.	**BIHAR**
526	220 KV Gaya- Bodhgaya-1 line	25/02/19	09:00	25/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	**BIHAR**
527	400KV 125 MVAR B/R AT PATNA	25/02/19	09:30	25/02/19	17:30	ODB	POWERGRID ER-1	AMP	
528	400KV TIE BAY OF Future & ICT 2 AT PATNA	25/02/19	09:30	26/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
529	400kV SAGARDIGHI-JEERAT	25/02/19	09/00Hrs	25-02-2019	17/00Hrs	ODB	POWERGRID,ER-II	A/R Relay retrofitting at WBSETCL Jeerat end.	WB
530	400kV SAGARDIGHI-JEERAT Tie Bay at SgTPP.	25/02/19	12/00Hrs	25-02-2019	14/00Hrs	ODB	POWERGRID,ER-II	For CT Oil Sampling	

531	400kV SAGARDIGHI-FARAKKA-2 Main Bay at SgTPP.	25/02/19	15/00Hrs	25-02-2019	17/00Hrs	ODB	POWERGRID,ER-II	For CT Oil Sampling	
532	400\220kV 315 MVAICT -4 at Rangpo	25/02/19	08:00	29/02/19	17:00	OCB	POWERGRID,ER-II	For rectification of SF6 gas leakage repair work,	
533	132 KV SC Rangit -Rammam Line	25/02/19	09:00	25/02/19	17:00	ODB	POWERGRID,ER-II	To attend conductor damage in loc 21 to 22 in 3 phase	WB
534	400KV Maithon-Durgapur#2	25/02/19	09:00	25/02/19	18:/00	ODB	POWERGRID,ER-II	Jumper rectification .	
535	220KV Jeypore-JEYNAGAR-I Line	25/02/19	10:00	25/02/19	12:00	ODB	ER-II/Odisha /Jeypore	For Change over of Jeynagar Line from TBC CB to Jeynagar-I Bay(204 CB) after Isolator Retrofitting works of 204 89C (Jeynagar -I Line Isolator)	GRIDCO
536	400 KV TALCHER#1 MAIN BAY (BAY NO.-406)	25/02/19	09:00	25/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
537	400KV Angul-Meramundali S/C Line-1	25/02/19	09:00	23/02/19	17:00	ODB	ER-II/Odisha/Angul TLO	Line Maintenance Work.	GRIDCO
538	765KV 240 MVAR Bus Reactor-2	25/02/19	08:00	25/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
539	220 KVBus Coupler (206)	25/02/19	10:00	25/02/19	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	
540	400kV RTPS-Ranchi Line-3	25/02/19	10:00	25/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
541	Main bay of 400KV DALTANGANJ-SASARAM LINE-2 at Daltonganj	26/02/19	09:30	26/02/19	17:30	ODB	POWERGRID ER-1	AMP	
542	400KV Ranchi- Maithan (RB)-II	26/02/19	10:00	26/02/19	**17:00**	ODB	POWERGRID ER-1	for replacement of porcelain insulator with polymer insulator	
543	220 KV Gaya-Bodhgaya-2 line	26/02/19	09:00	26/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	**BIHAR**
544	400 KV BSF- Banka CKT- I	26/02/19	08:00	26/02/19	18:00	ODB	POWERGRID ER-I	For Replacement of Insulators Damaged by Miscreant.	
545	50Mvar Sasaram-1 LR at Biharsharif	26/02/19	10:00	26/02/19	18:00	ODB	POWERGRID ER-I	CSD Commissioning work	
546	400/220KV 500MVA ICT-3 AT PATNA	26/02/19	08:00	26/02/19	17:30	ODB	POWERGRID ER-1	AMP	BIHAR
547	220 KV Malda Dalkola-I	26/02/19	08:00	26/02/19	17:00	ODB	POWERGRID,ER-II	AMP	
548	132 KV D/C Bishnupur - Khatra (TL- 180-181)	26/02/19	00:00	27/02/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 134/4 (DD+9+3 RC)-135/0(DD+9). Span Length-320 mtr	WB
549	315 MVA, ICT-2 Main BAY (404 BAY)	26/02/19	09:00	26/02/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 404 52 CB and 404 CT	
550	132 kV 102 Main Bay of 160 MVA ICT-2 of Baripada SS	26/02/19	09:00	27/02/19	17:30	OCB	ER-II/Odisha/BARIPADA S/S	Gasket replacement	
551	220KV Jeypore-JEYNAGAR-II Line	26/02/19	10:00	26/02/19	12:00	ODB	ER-II/Odisha /Jeypore	For Change over of Jeynagar Line from TBC CB to Jeynagar-II Bay(205 CB) after Isolator Retrofitting works of 205 89C (Jeynagar-II Line Isolator)	GRIDCO
552	220KV BUS COUPLER	26/02/19	09:00	26/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
553	Bus bar-1	26/02/19	09:00	26/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-1	
554	765/400KV 1500MVA ICT-1	26/02/19	08:00	26/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
555	400kV RTPS-Ranchi Line-3	26/02/19	10:00	26/02/19	17:00	ODB	DVC	Annual Relay Maintenance work by CRITM, Maithon	
556	766 kV New Ranchi - Dharamjaygarh CKT-II	27/02/19	09:00	27/02/19	18:00	ODB	POWERGRID ER-1	For replacement of broken Glass insulators by miscreants about 129 nos. locations, spacer damper 214 nso., 35 keeper missing, 24 nos. CC ring loose/broken.	**NLDC**
557	132KV LAKHISARAI -LAKHISARAI-II	27/02/19	10:00	27/02/19	14:00	ODB	POWERGRID ER-1	AMP works of Bay Equipments.	**BIHAR**
558	400/220KV 500 MVA ICT-3 AT MUZAFFARPUR	27/02/19	09:30	27/02/19	17:30	ODB	POWERGRID ER-1	AMP WORK	BIHAR
559	220 KV Gaya- Dehri-1 line	27/02/19	09:00	27/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	**BIHAR**
560	400KV BSF- Banka CKT-II	27/02/19	08:00	27/02/19	18:00	ODB	POWERGRID ER-I	For Replacement of Insulators Damaged by Miscreant.	
561	50Mvar Lakhisarai-2 LR at Biharsharif	27/02/19	10:00	27/02/19	18:00	ODB	POWERGRID ER-I	CSD Commissioning work	
562	400KV MAIN BAY OF 400/220KV 500MVA ICT-3 AT PATNA	27/02/19	09:30	27/02/19	17:30	ODB	POWERGRID ER-1	AMP	
563	400KBV MAIN BAY OF BARH-II AT PATNA	27/02/19	09:30	28/02/19	17:30	OCB	POWERGRID ER-1	AMP and to resolve the DCRM signature , SF6 leakage issue	
564	220KV Siliguri Kishanganj Ckt-1 & 2 and 220 KV Dalkhola-Kishanganj- 1 & 2.	27/02/19	09:00	27/02/19	17:00	ODB	POWERGRID,ER-II	For shorting of 220KV SLG-KNE-DLK LILO Anchor-I M/C tower at Nunia , Kishanganj for new pile tower erection purpose.	
565	400 KV BUS-I of NTPC Farakka	27/02/19	09:00	27/02/19	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).	
566	400 kV Jeypore-Indravati S/C Line	27/02/19	08:00	28/02/19	18:00	ODB	ER-II/Odisha /Jeypore	For testing New A/R relayof Jeypore - Indravati Line & For PID defect insulator replacement work	**NLDC**
567	400 KV SUNDARGARH#4 & 125 MVAR B/R#2 TIE BAY (BAY NO.-426)	27/02/19	09:00	27/02/19	18:00	ODB	ER-II/ODISHA/ROURKELA	AMP WORK	
568	Bus bar-2	27/02/19	09:00	27/02/19	18:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-2	
569	765/400KV 1500MVA ICT-2	27/02/19	08:00	27/02/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC

570	400KV TIE BAY OF SASARAMA-I AND FUTURE AT DALTANGANJ	28/02/19	09:30	28/02/19	17:30	ODB	POWERGRID ER-1	AMP	
571	400KV Ranchi- Maithan (RB)-I	28/02/19	10:00	28/02/19	17:00	ODB	POWERGRID ER-1	for replacement of porcelain insulator with polymer insulator	
572	220 KV Gaya-Dehri-2 line	28/02/19	09:00	28/02/19	18:00	ODB	POWERGRID ER-1	For AMP Work	BIHAR
573	400KV MAIN BAY OF 125 MVAR B/R AT PATNA	28/02/19	09:30	28/02/19	17:30	ODB	POWERGRID ER-1	AMP	
574	220 KV Malda Dalkola-II	28/02/19	**08:00**	28/02/19	**17:00**	**ODB**	POWERGRID,ER-II	AMP/Jumper Tightening and PG Clamp Change	
575	132kV Rangpo Chuzachen, 132kV Rangpo Melli	28/02/19	08:00	28/02/19	18:00	ODB	POWERGRID,ER-II	For new Chuzachen bays LILO (Construction works)	SIKKIM
576	400 KV Farakka- Kahalgaon-I line	28/02/19	09:00	28/02/19	18:00	ODB	POWERGRID,ER-II	For connecting bay-22 (Main Bay of 400 KV Farakka-Kahalgaon-I) after augmentation of Isolator & CT from 2000A to 3150 A rating under ERSS-XV projects & bay	
577	220 KV S/C STPS - Chandil TL-(TL-229-230)-WBSETCL	28/02/19	00:00	02/03/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 765 KV RMTL-AP 83/0, (DD+9)-84/0(DD+9). Span Length-160 mtr	WB
578	220 KV Arambag - Midnapore LINE- (TL139-DA+0-TL140 DA+0)	28/02/19	00:00	02/03/19	00:00	ODB	POWERGRID,ER-II	For Powerline crossing of 400 KV CKTL-Loop IN-AP-22/0--(DD+9+2 RC)- AP-23/0-(DD+18)- SPAN-243 MTR	WB
579	400kV RTPS-Ranchi Line-3	01/02/19	10:00	01/02/19	16:00	ODB	DVC	for top phase jumper maintenance at location 158	
580	220kV Transfer Bus,Budhipadar	12/02/19	**08:00**	12/02/19	16:00	ODB	GRIDCO	MAINTENANCE WORK	
581	220kV Katapalli- Sadeipalli Circuit-II	28/02/19	**08:00**	28/02/19	16:00	ODB	GRIDCO	MAINTENANCE WORK	
582	220KV Kaniha-Meramundali-2(220KV Bay 4)	07/02/19	**08:00**	09/02/19	17:30	OCB	TSTPP	03nos LA change and Annual maintenance work of Bay	
583	220KV Kaniha-Meramundali-2(220KV Bay 3)	11/02/19	**08:00**	13/02/19	17:30	OCB	TSTPP	02nos CVT replacement and Annual maintenance work of Bay	
584	400KV Kaniha-Angul (400 KV Bay 19 – 20)	14/02/19	**08:00**	16/02/19	17:30	OCB	TSTPP	Annual maintenance	
585	400KV Kaniha-Meramundali (400 KV Bay 17 – 18)	18/02/19	**08:00**	20/02/19	17:30	OCB	TSTPP	Annual maintenance	
586	220KV Bus-2 TSTPP	25/02/19	**08:00**	28/03/19	17:30	OCB	TSTPP	03 nos Bus CVT Replacement and Annual maintenance	
587	400KV Baripada-Duburi line	14/02/19	08:00	15/02/19	18:00	ODB	ER-II/Odisha/Cuttack TLM	AMP Work	**SUBJECT TO APPROVAL FROM SRPC**
588	400KV Angul-Bolangir	09/02/19	08:00	12/02/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of defective insulator by Polymer long Rod Insulator	**SUBJECT TO APPROVAL FROM SRPC**

***** **Detail paln of insulator replacement must be submitted**

Outages approved in other RPCs requiring ERPC approval

Sl No	Name of Elements	From		To		Basis	outages proposed in	Reason	Remarks
		Date	Time	Date	Time				
1	Talcher-Kolar pole-1	31-Jan-19	06:00	2-Feb-19	06:00	Continuous	SRPC	Replacement of Converter Transformer at Kolar Station & other S/D works	1000 MW ATC/TTC curtailment in ER-SR corridor durind Shut down period During single pole S/D, No LTA/MTOA Curtailment envisaged. Pole 2 will be in service with 1000 MW Capacity
2	Talcher-Kolar pole-1&2	2-Feb-19	06:00	4-Feb-19	19:00	Continuous	SRPC	Bi-Pole shutdown for Electrode Line Shifting at Talcher station for Railway Electrification Works and HVDC Raighar-Pugalur line crossing works	2000 MW ATC/TTC curtailment in ER-SR corridor durind Shut down period During Bipole shutdown, 700 MW of curtailment in LTOA/MTOA Transactions may there due to Line Loading in ER and likely curtailment of 450 MW Talcher Stage 2 Generation is expected.
3	Talcher-Kolar pole-2	4-Feb-19	19:00	6-Feb-19	19:00	Continuous	SRPC	Replacement of Converter Transformer at Talcher Station & other S/D works	1000 MW ATC/TTC curtailment in ER-SR corridor durind Shut down period During single pole S/D, No LTA/MTOA Curtailment envisaged. Pole 1 will be in
4	GAYA-ER (765KV)-BALIA (765KV)	1-Feb-19	08:00	4-Feb-19	18:00	DAILY	NRPC	Strengthening of suspension towers Delta Configuration (82 Nos)	
5	FATEHPUR-PG (765 KV)-SASARAM-ER (765KV)	22-Jan-19	08:00	29-Jan-19	18:00	DAILY	NRPC	Strengthening of suspension towers Delta Configuration (419 Nos)	
6	400KV RANCHI-SIPAT I	16-Feb-19	10:00	16-Feb-19	18:00	Daily	WRPC	For Replacement of Broken Insulator at Loc No: 583, 586 & 588 by Tamnar-TLM & Other ckt A/R in N/ mode.	
7	400KV RANCHI-SIPAT I	17-Feb-19	10:00	17-Feb-19	18:00	Daily	WRPC	For Line Spacer Missing at span 708-709 by Tamnar-TLM & Other ckt A/R in N/ mode.	

8	220kV KORBA(EAST)-BUDDHIPADAR III	11-Feb-19	09:00	20-Feb-19	18:00	Daily	WRPC	A/R to be kept in Non-Auto mode for PID Work.	
9	**765kV D'JAIGARH- JHARSUGUDA I**	10-Feb-19	10:00	10-Feb-19	18:00	Daily	WRPC	**For Replacement of Broken Insulator at Loc No: 129 & 158 Ckt-2 A/R keep in N/A mode.**	
10	765kV D'JAIGARH- JHARSUGUDA II	11-Feb-19	10:00	12-Feb-19	18:00	Daily	WRPC	For Replacement of Broken Insulator & Missing CC RING at Loc No: 214 & 205 Ckt-2 A/R keep in N/A mode.	
	765kV D'JAIGARH-RANCHI I	21/02/19	10:00	23/02/19	18:00	Daily	WRPC	For Replacement of 212 Nos.Open/Hanging quad Line Spacer by Tamnar-TLM.	
	765kV D'JAIGARH-RANCHI II	25/02/19	09:00	25/02/19	18:00	Continous	WRPC	For avoiding heavy induction to facilitate Jack Bus Conductor striging for under construction 765KV Bus Reactor-3 at Dharamjaigarh PS.	
	400KV Bongaigaon - New Siliguri Ckt I	21/01/19	08:00	21/01/19	15:00	Daily	NERPC	Testing & commissioning and Jumper connection of New Reactor	
	800 kV HVDC Biswanath Chariali -Agra Pole-1	31/01/19	07:00	14/02/19	15:00	Daily	NERPC	Erection of new tower at loc.118 on Pile foundation. Existing tower 118 is required to be shifted on Pile following erosion by river Mansiri.	

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: