



Minutes of **148th OCC Meeting**

Date: 03.09.2018
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 148th OCC Meeting held on 20th August, 2018 at ERPC, Kolkata

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

Member Secretary, ERPC chaired the meeting. He welcomed Director (Projects), BSPTCL and all the other participants to the meeting. He informed that Generation availability and demand during Durga Puja is placed in Annexure-D1.1. He advised all the constituents to confirm the figures. He informed that OCC meeting in September 2018 would be held on 18th September 2018 and the same for October 2018 would be held on 11th October 2018.

Director (Projects), BSPTCL informed that few lines in around Forbesganj and Kishanganj were not available because of severe rains and floods in Bihar. Nepal is also drawing more from Forbesganj. As a result, they are facing acute shortage of power at Kishanganj. Moreover, the demand in around Kishanganj and Baisi would be significant on Bakrid (22-08-2018). He requested WBSETCL to charge 132kV Dalkhola-Baisi S/c line in radial mode to draw 50 MW power from Dalkhola. He added that metering arrangement had been done and PLCC panels at both ends would be installed by BSPTCL. He requested WBSETCL to provide space for installation of PLCC panels at Dalkhola.

WBSETCL agreed to give 25-30 MW through 132kV Dalkhola-Baisi S/c line in radial mode.

Item no. 1: Confirmation of minutes of 147th OCC meeting of ERPC held on 20.07.2018

The minutes of 147th OCC meeting were uploaded in ERPC website and circulated vide letter dated 02.08.2018 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 147th OCC meeting.

PART A : ER GRID PERFORMANCE

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

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

- 1. Frequency profile**
- 2. Over drawl/under injection by ER Entities**

Over drawl figure of West Bengal and Odisha from 01-08-2018 to 09-08-2018 are shown below:

State	West Bengal		Odisha	
Date	Over Drawl (MU)	Max. Over Drawl (MW)	Over Drawl (MU)	Max. Over Drawl (MW)
01/08/18	0.69	200	3.09	250

02/08/18	1.2	400	1.3	250
03/08/18	3.93	480	2.4	400
04/08/18	4.82	300	-0.51	220
05/08/18	4.76	250	1.63	225
06/08/18	1.26	250	2.96	250
07/08/18	2.07	390	0.94	200
08/08/18	4.53	520	1.4	380
09/08/18	3.7	620	3.3	430

3. Performance of Hydro Power Stations during peak hours

4. Performance of ISGS during RRAS

5. Reactive Power performance of Generators

Deliberation in the meeting

ERLDC presented the performance of the Eastern Region grid during July 2018. Presentation is enclosed at **Annexure- A1**.

ERLDC informed that Odisha, West Bengal and DVC had overdrawn from the Grid for significant times during July and Aug, 2018.

West Bengal informed that they had been continuously buying power from Market. However, due to uncertainty of availability of generation, they were compelled to draw from Grid. West Bengal agreed to avoid overdrawal from the Grid.

Odisha informed that Chiplima, Indravati and Balimela units were not available due to flooding inside the plant and damage of penstock gasket. Hence, they were compelled to draw from Grid. Odisha informed that hydro units would be available from next month and Odisha would avoid overdrawal from the Grid.

DVC informed that they could not generate due to severe coal shortage issues.

OCC advised DVC, Odisha and West Bengal to plan their generation to balance the load by maximizing the availability of their internal generation and arranging procurement of power through STOA/ MTOA/ Power Exchange.

ERLDC informed that Farakka, Kahalgaon units were generating less during peak hours.

NTPC informed that they were not able to generate as per DC because of low quality wet coal.

OCC opined that beneficiaries would be greatly inconvenienced due to reduced generation during peak hours. OCC advised NTPC to improve the performance.

It was opined by OCC that ERLDC should closely monitor the DC of the ISGS including the revision therein. In the event of emergence of a definite pattern in DC declaration which is in contravention of the CERC regulation, action accordingly might be taken.

6. Restricted Governor /Free Governor Mode Operation of generators in ER

ERLDC has prepared a report on highlighting the poor response of Eastern region in comparison to other region in providing the primary frequency response. The report for the three events has been submitted in

the 147th OCC. Based on the above, following ISGS/IPP generators may kindly update the reason for no response:

Name of Generators (ISGS/IPP)	Reason for Nil governor response during the events
JITPL	
Farakka St 3	
Barh	
Teesta 5	
Teesta 3	
Nabinagar	
Talcher St 1	
GMR	
MPL	

Submission of High-resolution data for July'18 FRC Event: Two more events has occurred in the Month of July i.e. on 10th July 2018 at 08:14 Hrs and 30th July 2018 at 2:48 Hrs. All ISGS/SSGS/IPP are advised to submit the 1-second or higher resolution data to ERLDC on erldcprotection@posoco.in at earliest. E-Mail communication has been sent to ISGS/IPP and State SLDC. State SLDC may kindly collect the details from state generators and submit to ERLDC.

Event	NR	ER	WR	SR	NER*
Event 1 at Teesta III &Dikchu in NR (1025 MW Gen Loss)	16.3%	51.4%	20.0%	47.1%	24.2%
Event 2 at Teesta III &Dikchu in NR (1024 MW Gen Loss)	13.8%	4.6%	9.5%	4.2%	38.4%
Average Response	15.05%	28.00%	14.75%	25.65%	31.30%

Event	Bihar	Jharkhand	DVC	OPTCL	WB	SIKKIM
Event 1 at Teesta III &Dikchu in NR (1025 MW Gen Loss)	190.7%	-439.4%	4.5%	34.5%	41.3%	124.5%
Event 2 at Teesta III &Dikchu in NR (1024 MW Gen Loss)	-45.1%	385.9%	23.9%	-178%	24.9%	165.4%
Average Response	72.8%	-26.7%	14.2%	-71.9%	33.1%	145.0%

Deliberation in the meeting

OCC advised all the concerned generators to take necessary action to improve the performance.

It was decided that a separate meeting with the power station authorities in the Eastern Region would be convened to have a detailed deliberation in this respect.

7. Non-Operation of SPS-1 for 400 kV Rangpo-Binaguri D/C on 13th June 2018 at 06:32 Hrs.

At 06:32 Hrs, there was a successful Auto-Reclosure on 400 kV Binaguri- Bongaigaon 2 circuit due to B phase to earth fault. At the same time , 400 kV Binaguri-Rangpo circuit 2 which is in same diameter of 400 kV Binaguri-Bongaigaon 2 at Binaguri end got tripped from Binaguri end on Over voltage stage 2 operation (Y phase voltage) . In addition 400 kV Bingauri-Tala 1 also has tripped on over voltage stage 2 operation from Binaguri end (R phase Voltage). The reason for the transient overvoltage is not known. Rest of the circuit from Binaguri end did not trip during this event.

Prior to the event, 400 kV Rangpo-Binaguri each circuit was carrying around 800 MW. Immediately with the tripping of 400 kV Rangpo-Binaguri 2, the SPS-1 should have operated and given trip command for all teesta 3 Units except one and one unit each at Tashiding, Jorethang, Chujachen and Dikchu. However, the signal did not generate. This led to loading of the remaining circuit above 1600 MW. With this condition, SPS-2 should have operated however, that also did not operate. This led to loading of 400 kV Rangpo-Binaguri circuit 1 above 1600 MW (Above thermal loading) and instructions were passed on to generators to reduce their loading to avoid permanent damage to the circuit. After 15 minutes the loading were reduced below 900 MW for this circuit.

Immediately after the event, SPS at Rangpo was tested and details of SPS testis given below:

Event	Time stamp	Delay (In sec)
Signal generation time at Rangpo	15:06:44.027	--
Bus coupler opened at Teesta 3	15:06:44.056	0.029
Receipt of SPS I signal at Chujachen	15:06:44.278	0.251
Receipt of SPS I signal at Jorethang	15:06:44.447	0.420
Receipt of SPS I signal at Tashiding	15:06:44.866	0.839

Issues of Concern and Discussion:

- Over-Voltage Stage 2 operation at Binaguri due to rise in the healthy phase voltage.
- Failure of SPS operation at Rangpo end for 400 kV Rangpo-Binaguri circuits.
- Redundancy of SPS at Rangpo and Binaguri substations.
- Status of DTPC based SPS scheme in order to avoid any time delay and increasing its robust operation.

8. Simultaneous Operation SPS-1 and SPS-2 of 400 kV 400 kV Rangpo-Binaguri D/C on 10th and 30th July 2018

Event 1: On 10th July at 08:14 Hrs, 400 kV 400 kV Rangpo-Binaguri 1tripped on transient fault with which SPS-1 operated. However, after 700 ms of this SPS-2 has also operated causing blackout of Teesta3 and Dikchu generation complex with envisaged tripping of 400 kV Teesta3-Rangpo circuit.

Event 2: On 30th July at 20:48 Hrs, 400 kV 400 kV Rangpo-Binaguri 2tripped on Permanent Nature fault with which SPS-1 operated. However, after 700 ms of this SPS-2 has also operated causing blackout of Teesta3 and Dikchu generation complex with envisaged tripping of 400 kV Teesta3-Rangpo circuit.

Both incidents have led to more than 1000 MW generation loss in the system and frequency drop of more than 0.1 Hz in the system.

Following are the reason of concern over these events, which may kindly be discussed by members:

- **Operation of Both SPS-1 and SPS-2 operation during one line tripping:** It is the cause of concern that both SPS are operating indicating that the line loading of one circuit after tripping of another circuit and SPS-1 operation is not coming below 850 MW after the SPS-1 operation. The time delay for SPS-2 operation may kindly be reviewed in order to avoid operation during the power swing after SPS-1 operation.
- **Delay in commissioning of 400 kV Rangpo-Kishenganj D/C:** The delay in the commission of 400 kV Rangpo-Kishenganj D/C is leading to congestion in evacuation of generation of all the hydro IPPs in Sikkim. Tripping of Rangpo-Binaguri line with consequent SPS operation and generation outage is experienced in each rainy season. The above line needs to be commissioned at earliest for the evacuation of Sikkim hydro complex to ensure reliability and security.
- **Faults and Conductor snapping of 400 kV Rangpo-Binaguri circuits:** The conductor snapping in above case, hot spots and frequent faults on the 400 kV Rangpo-Binaguri D/C are cause of concern. This may be due to continuous loading of these lines above 850 MW. It is desirable to have proper monitoring and maintenance of these line to avoid any unwanted tripping of permanent damage to the line.
- **Unwanted tripping of 220 kV Rangpo-Tashiding circuit:** It was observed that on both days (10 July and 30th July), 220 kV Rangpo-Tashiding circuit got tripped from Tashiding end. At Tashiding end, line has tripped on power swing protection indication. It may be noted that power swing based tripping has to be allowed only for Zone 1 and not for other zones.
- **Time synchronization Issue in Event Logger/DR:** During analysis of event, it was found that there are time synchronization issue in DR/Event logger of Dikchu, Chujachen, Jorethang and Teetsa. This is highly undesirable as utilities are confirming healthiness of DR/EL/Time synch instruments however in actual the same is not found correct.

Members may please discuss.

Deliberation in the meeting

ERLDC representative explained the two incidents of Rangpo-Binaguri tripping together with SPS actuated generation loss from various hydro stations of Sikkim, which occurred on 10.07.18 & 30.07.18. Members concluded that the reason for operation of SPS-2 even after generation reduction by SPS-1 was primarily due to over generation by Chujachen, Tashiding, Jorethang and Dikchu. For maximum utilization of the available water, these stations were operating both their units at their overload capacities, in contravention to the decision taken in the special meeting held on 21.06.17 of maintaining lower generation in one of the units.

The frequent incidents of line faults, conductor snapping etc. over the last couple of months amply indicated that it would not be safe to enhance the present limit of power flow (1700MW) through Rangpo-Binaguri line any further and expediting Rangpo-Kishnanganj line is the only way to avoid spillage of water at Teesta-3 station. Further, in response to TUL letter dated 25.07.18 regarding validity of transfer capability studies carried out earlier by ERLDC, it was clearly illustrated by ERLDC that the frequency of voltage and power flow oscillations and settling time of such oscillations as derived through stability studies closely matched with those actually observed during tripping of Rangpo-Binaguri circuit on fault on 27.07.17 and 12.08.18. Therefore, validity of ERLDC study results stood established.

For avoiding repeated operation of SPS-2 and consequent total loss of Teesta-3 generation, it was, therefore, decided to modify the logic for SPS-2 so that it operates at a line flow of 900 MW instead of at 850 MW. The time delay for actuation of SPS-2 would continue to be set at 700 ms and might be reviewed in future, if required. However, all the generators selling power on STOA

through Rangpo-Binaguri corridor should strictly adhere to their respective schedules as agreed earlier in RPC forum, in case of loss of any Rangpo-Binaguri circuit.

On the issue of enhancing the reliability of the existing SPS, representative of PGCIL informed that the logic of checking CB status at both ends of Rangpo-Binaguri line for operation of SPS-1 was already in the process of implementation, together with modernization of the PLC based system to a SAS based one. As regards use of DTPC for transmission of SPS signal to various generating stations from Rangpo, PGCIL assured to explore its feasibility at the earliest.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: Status of projects funded under PSDF schemes

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

A. Projects approved:

SN	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	PSDF grant approved (in Rs.)	Amount drawn till date (inRs.)	Latest status
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14	April 2018	108.6 Cr	37 Cr.	100 % Supply is Completed 95 % Erection is completed
2		Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17	25 months from date of release of 1 st instalment	70.13	21.03 Cr	Order has been placed for 96.44 Cr. 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 1 st instalment	43.37	6.59 Cr	Order has been placed and work is in progress.
4	WBPDCCL	Implementation of Islanding scheme at Bandel Thermal Power Station	10.04.17	March 2018	1.39 Cr	1.25 Cr	The implementation would be completed by July 2018.
5		Upgradation of Protection and SAS			23.48	2.348 Cr	Bid opened
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	15.11.2017		25.61 Cr.		Agreement signed on 03.01.2018
8	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		U.Kolab-March 19 Balimela-Feb 2019 U.Indravati-Jan 19 Burla-Nov 2018, Chiplima Dec 2018	22.35 Cr.	2.235 Cr	Placed work order for Balimela.
9	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/2015	31.07.2018	64.02 crore	56.04 crore	85% of work has been completed. Contract awarded for Rs.71.37 Cr till date.
10		Installation of capacitor bank at different 35 nos. of GSS under	5/9/2016	12 th March 2019	18.88	Nil	Work awarded for all GSS.

		BSPTCL			crore		
11		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.	02.01.17	31 st 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.
12	JUSNL	Renovation and up-gradation of protection system	September 2017	2 years	138.13 crores		Board of Directors approval is pending for work award.
13	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 is in progress.
14		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.	1 st 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.
15	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.
16	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 30 th 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 3 rd training on PSCT has been also completed at ERPC Kolkata.
17a	ERPC	Training for Power System Engineers					The proposal was approved by Appraisal Committee. The proposal was sent to CERC. CERC has sought some queries from the Appraisal Committee. The matter shall be taken up by the Appraisal Committee during its next meeting.
17b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents					

B. Projects under process of approval:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	Sikkim	Renovation & Upgradation of Protection System of Energy and Power Department, Sikkim.	09-08-17	68.95 Cr	Scheme was examined by TSEG. Inputs sought from entity. Sikkim submitted the relevant information.
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 examined by TSEG. Inputs sought from entity. Sikkim submitted the relevant information.
3	JUSNL	Reliable Communication & Data Acquisition System upto 132kV Substations.	23-08-17	102.31 Cr	Scheme was examined by TSEG. Inputs sought from entity. Scheme has been revised as suggested by TSEG and it would be submitted within a week.
4	OPTCL	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	28-08-17	31.94 Cr	Scheme was examined by TSEG. Inputs sought from entity. OPTCL submitted the relevant information.

C. Projects recently submitted:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	WBSETCL	Implementation of Integrated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal	22-12-17	25.96 Cr	
2	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	3.26 Cr	
3	OPTCL	Protection upgradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir&Paradeep).	20.02.2018	41.1 Cr.	

Respective constituents may update the status.

Deliberation in the meeting

Respective constituents updated the status as mentioned in above table.

Item No. B.2: Scheduling of Un-requisitioned Surplus (URS) power from ISGS – ERLDC

CERC vide order dated 17/10/2017 against Petition No. 16/SM/2015 had directed the following modification to the order dated 11.1.2010 in Petition No.134/2009(regarding scheduling of URS from ISGS):

“(a) All generating companies whose tariff is determined by this Commission under section 62 or adopted by this Commission under section 63 of the Act shall be permitted to revise their schedule for URS power from one beneficiary to another beneficiary of the same power station in terms of Regulation 6.5.18 of the Grid Code within 4 time blocks....”

*“Where both the **generating station and its beneficiaries (surrendering and requesting beneficiaries) give their standing consents in writing to RLDC that the decision of the concerned RLDC will be binding on them with regard to scheduling and dispatch of URS power, the concerned RLDC shall schedule such URS power to the requesting beneficiaries in relative proportion to the quantum requested by them. In other cases, RLDCs shall schedule URS power on the basis of the consents submitted by the generating stations ...”***

In line to this order, the scheduling of URS of any generator within its beneficiaries by ERLDC is dependent upon the receipt of standing consent from the ISGS station and its beneficiaries. As on date ERLDC did not receive any standing instruction from majority of the beneficiaries/ISGS generators and also in some consent letter, parties did not mention that the decision of the concerned RLDC will be binding on them with regard to scheduling and dispatch of URS power and that they indemnify RLDCs/NLDC in all respects i.r.o the same. The URS scheduling practice followed at ERLDC is:

1. Beneficiaries send their URS requisition quantum directly to NTPC, RHQ with a copy to ERLDC.
2. NTPC, RHQ furnish their consent to ERLDC (URS quantum from respective ISGSs).
3. ERLDC allocate the consented URS quantum generator wise of each beneficiaries in the WBES URS module.

However, such practice of routing the requisition through NTPC/Patna causes unnecessary delay in scheduling URS power to the beneficiaries who are at that time in utter need of power due to sudden loss of state generation availability or any other reasons.

So, to avoid such delay in processing, all ISGS stations/beneficiaries are requested to submit the standing instruction to ERLDC in letter format mentioning that the decision of the concerned RLDC will be binding on them with regard to scheduling and dispatch of URS power and that they indemnify RLDCs/NLDC in all respects i.r.o the same as per the CERC order.

NTPC & all beneficiaries may please deliberate.

Deliberation in the meeting

In the OCC meeting NTPC accorded standing consent for scheduling and dispatching of URS power of Farakka, Kahalgaon, Talcher stage-I, Barh Stage –II and Nabinggar by ERLDC.

All the ER beneficiaries also gave the standing consent for scheduling and dispatching of URS power.

NTPC and the beneficiaries of ER agreed that the decision of ERLDC in respect of scheduling & dispatch of URS power from the NTPC stations in the Eastern Region shall be binding on them. They also unanimously decided to indemnify ERLDC in all respects for this scheduling of URS power.

Item No. B.3: Guidelines for the charging of Transmission line connecting two generating plants after tripping on fault or outage

There is a prevailing issue on the charging of transmission line connecting two generating complex after its outage/tripping. It has been observed sometimes that either of the utility is not ready for charging of the line from their end after its tripping on fault/outage. This results in the delay in the restoration of line and thus affecting the reliability of both the generating station. In view of this, there is a need of guideline on charging of such transmission lines.

List of such transmission lines is given below:

- I. 400 kV Farakka-Kahalgaon Q/C.
- II. 400 kV Kahalgaon-Barh D/C.
- III. 400 kV Farakka-Sagardighi D/C.
- IV. 400 kV RTPS-DSTPS D/C.

As a general guideline following may be considered

- If voltage difference between two system is more than 5 kV system which have lower voltage should charge the line
- In case voltage difference is less than 5 kV system which have higher fault level should charge
- If only one end has line reactor than the end which is not having the line reactor should attempt to charge first.

Members may decide.

Deliberation in the meeting

OCC advised the concerned generators to submit their comments to ERPC and ERLDC.

Item No. B.4: Reactive Energy Charge calculation i.r.o. Subhasgram(PGCL) S/S--WBSETCL

WBSETCL has requested for exclusion of MVarh drawal from Subhasgram(PGCL) / MVarh injection to Subhasgram (PGCL) S/S by West Bengal for calculation of weekly Reactive charge account with the E.R. pool.

400/220 KV Subhasgram(PGCL) sub-stn. is embedded within STU network of West Bengal state control area. It is not connected to any CTU/ ISTS/ ISGS sub-stn. of Eastern Region. Rather this standalone PGCL S/S is connected only with West Bengal load buses of Jeerat, Subhasgram, Newtown, KLC Bantala and EMSS(CESC) and West Bengal generation buses of Sagardighi TPP and Haldia Energy Ltd. Whatever lagging reactive power is drawn from SubhasGram(PGCL) S/S by STU load buses at low voltage (<97%) is mostly supplied by state generators like SgTPP and HEL through PGCL Subhasgram buses. Subhasgram (PGCL) S/S has no reactive power supplying equipment like synchronous condenser, SVC etc., rather it consumes some reactive energy to supply magnetizing current of its 5 nos. 400/220kv ICTs.

Same logic may be applicable to leading MVar injection to SubhasGram(PG) S/S by STU S/S as lightly loaded CTU-STU tie lines generates capacitive MVar. As Subhasgram(PG) has no bus reactor, it has no contribution towards absorbing any reactive power to reduce system voltage in high voltage scenario. Generators of Haldia Energy limited and Sagardighi TPP are operated to absorb reactive power from SubhasGram(PG) during high voltage.

So charging any amount to West Bengal on account of MVarh drawal from Subhasgram(PG) S/S at low voltage (below 3%) or MVarh injection to Subhasgram(PG) S/S at high voltage (above 3%) seems not justified considering exchange of reactive power with Subhasgram(PGCL) is not exchange between West Bengal and regional grid.

In 147th OCC, it was decided that the methodology adopted by the other regions for computation of Reactive Energy Charges would be implemented in the Eastern Region with immediate effect.

Accordingly, changes in the computations for weekly Reactive Energy Charge are being effected in stages. It is hoped that with the changes, the concerns of the Eastern Regional constituents would be taken care of.

Members may note.

Deliberation in the meeting

ERPC Secretariat informed that accounting of Reactive Energy Charges had been implemented in line with the other regions computation methodology as per the decision taken in the last OCC meeting.

Members expressed satisfaction with the adoption of new methodology.

Item No. B.5: Collapse of one tower of 400kV Purnia-Biharsharif Ckt-1&2 due to change of course of river Ganga and water flow with very high velocity--ENICL

ENICL informed that that 400kV D/C Purnia-Biharsharif line got tripped on dated 10.08.2018 at 10:28.

After the line patrolling based on the fault details, it has been identified that one tower was totally collapsed/damaged and this caused tripping of both the circuits. Also, it was noted that the incident happened due to the change of course of the Ganges river and heavy velocity of flow of water which lead to tower collapse.

ENICL requested to kindly consider the above restoration period may be treated as force majeure condition which was beyond the control of ENICL.

ENICL may explain.

Members may decide.

Deliberation in the meeting

ENICL explained the incident of tower collapse of 400kV Purnia-Biharsharif Ckt-1&2 with detailed presentation. Presentation is enclosed at **Annexure-B5**.

ENICL informed that restoration of the line is in progress using a temporary arrangement and the restoration of the line would take 50 days approximately.

ENICL added that permanent restoration of the line would take 6 months.

ENICL requested to consider the restoration period as force majeure condition

OCC in principle agreed to consider the restoration period as force majeure condition. However, the restoration period is to be decided judiciously.

OCC advised ENICL to submit the restoration plan along with the time schedule to ERPC and ERLDC. ENICL was also advised to submit the weekly progress report to ERPC and ERLDC.

It was decided that ERPC, ERLDC and Powergrid would go through the details to assess the restoration period and place the outcome in next OCC meeting.

Item No. B.6: Request for approval of deemed availability for transmission lines of POWERGRID in Odisha for Delta Tower strengthening work in 765KV Angul-Sundargarh Ckt-I & II.--Powergrid

Powergrid informed that in the meeting of the Standing Committee of Experts on 2.12.2016 at CEA Head Quarters regarding failure of towers in 132KV and higher Voltage Transmission Lines during the period December, 2015 to September, 2016(MOM is attached).The Committee suggested many remedial measures to arrest the failure of the Towers. One of the suggestions was to strengthening the members of the Delta Tower by adopting new technology(Steel clipping).

Accordingly, Delta Tower strengthening work for 765KV Angul-JharsugudaCkt-I &Ckt-II was planned in Odisha and s/d of the lines were approved in 146th and 147th OCC. Now the Tower strengthening work is under progress after taking shutdown of the line as follows:

SI NO	Name of the line	Date	Date	Remark
1	765KV Angul JarsugudaCkt-I	07.07.2018	11.07.2018	On daily basis-10days Shutdown was availed
		16.07.2018	20.07.2018	
2	765KV Angul JarsugudaCkt-II	26.07.2018	31.07.2018	On daily basis-9days Shutdown was availed
		02.08.2018	04.08.2018	

Proposed Shutdown date and time

SI NO	Name of the line	Date	Time	Date	Time	Remark
1	765KV Angul-JharsugudaCkt-I	08.08.2018	08:00	09.08.2018	17:00	On daily basis Shutdown request mail sent to ERLDC
2	765KV Angul JharsugudaCkt-II	10.08.2018	08:00	12.08.2018	17:00	

The 765KV Tower Strengthening work has been done in accordance with the CEA Standing Committee recommendation as a remedial measure against Tower Failure. In view of this it is requested that the approved Shut down for the said lines towards the strengthening works may please be granted as deemed availability.

Powergrid may explain.

Members may decide.

Deliberation in the meeting

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

Item No. B.7: Request for approval of deemed availability for the insulator replacement works at NH/SH/River/Power Line/Railway Crossing in various transmission lines of POWERGRID in Odisha.---Powergrid

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 above said crossing span will be provided with punctured proof Composite Long Road Polymer Insulator for which no incident of de-capping has been reported. Insulator replacement work in the above said crossings in most of the transmission lines in Odisha have been completed except few lines.

Accordingly, the shutdown of 400KV Jeypore-Gazuwaka line-I & II was planned and approved in 147th OCC meeting for replacement of Porcelain insulator with Polymer insulator (shutdown nature of defects) as mentioned below. Further, during PID testing of Insulators of 400KV Jeypore-Gazuwaka line-I & II, it is found that at many locations the existing Porcelain Insulators are defective. Hence to keep the line healthy and defect free for uninterrupted power flow, the defective porcelain insulators are also planned to be replaced with long rod polymer insulators.

Shutdown Approved in 147th OCC:

SI NO	Name of the line	Date	Time	Date	Time	Remark
1	400KV Jeypore-Gazuwaka Line-I	01/08/2018	09:00	02/08/2018	17:30	ODB
2	400KV Jeypore-Gazuwaka Line-II	03/08/2018	09:00	04/08/2018	17:30	ODB

Actual Shut down Proposed date and time:

SI NO	Name of the line	Date	Time	Date	Time	Remark
1	400KV Jeypore-Gazuwaka Line-I	27/08/2017	09:00	28/08/2017	17:30	ODB
2	400KV Jeypore-Gazuwaka Line-II	29/08/2018	9:09	30/08/2018	17:30	ODB

In view of this it is requested that the approved Shut down for the said lines may please be granted as deemed availability.

Powergrid may explain.

Members may decide.

Deliberation in the meeting

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

Item No. B.8: Long Outage of transmission elements in Eastern Region

a) 400 kV Barh – Motihari – D/C :

Line was out of service since 28/06/18 due to reduced clearance as water level in Gandak river has increased.

DMTCL may please update.

Deliberation in the meeting

DMTCL informed that tower erection had been completed and stringing is in progress. DMTCL added that the line would be in service by 20th September 2018.

OCC observed that the restoration of this line was being delayed and DMTCL has deferring the schedule in every OCC.

OCC advised DMTCL to give a brief presentation on status of the line and restoration plan in 70th PCC Meeting scheduled to be held on 21st August 2018.

b) 400kV Farakka – Baharampur – D/C :

400 KV Farakka-Baharampur - Jeeratline reconfigured & liloed at Sagardighi as 400 kV Farakka – Sagardighi-II & 400 kV Jeerat – Sagardighi. Currently Baharampore is radially connected through 400 kV Baharampore – Sagardighi-D/C.

Power grid ER – II may please update restoration plan.

Deliberation in the meeting

Powergrid submitted the shutdown requirement to bring 400 KV Farakka-Baharampur D/C line into service.

*Approved shutdown list is enclosed at **Annexure-D2**.*

c) 400 kV Rangpo – Dikchu :

Line was out of service from 06/07/18 due to ROW issue.

TPTL may please update restoration plan

Deliberation in the meeting

TPTL representative was not available in the meeting.

d) 400 KV Binaguri – Kisanganj – Purnea – D/C–

Line was taken under shutdown since 01/06/18 and charged as 400 KV Binaguri – Purnea direct ckt since 03/06/2018. Line supposed to be returned on original configuration 19/07/18 on completion of pile foundation work.

PGCIL may please update status of restoration.

Deliberation in the meeting

Powergrid informed that the line had been restored on 15th August 2018.

e) 315MVA 400/220KV ICT-II Kolaghat:

ICT was taken under S/D on 03/07/18 for tan-delta test of transformer winding and bushing. However, due to failure on tan-delta test, the ICT has been kept out of service.

WBSETCL may please update.

Deliberation in the meeting

It was informed that the ICT had been restored.

f) Breakers at 400/220kV Indravati (OHPC) S/s

In 141st OCC, it was explained that 3x105 MVA 400/220kV ICT-I tie breaker, 220kV Bus coupler and transfer bus breakers are not in service at 400/220kV Indravati (OHPC) S/s.

In 142nd OCC, OHPC submitted the action plan as follows:

- 1. 220kV Bus Coupler: CB and CT needed to be replaced. They would restore the Bus coupler by August 2018.*
- 2. 220kV Bus tie: CB and CT needed to be replaced. They would restore the Bus Tie by November 2018.*
- 3. 400kV Tie-1 Breaker: CB and CT needed to be replaced. They would restore the 400kV Tie-I by January 2019.*

OHPC may please update.

Deliberation in the meeting

OHPC informed that 220kV Bus Coupler would be restored by end of August 2018.

g) 132 kV Sonenagar(BSPTCL) – Rihand(UPPCL) inter regional link:

In 147th OCC meeting, BSPTCL has informed the line re-conductoring of the line was going on and line would be charged as per original ISTS configuration by end of July.

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed that the line had been charged on 13th August 2018.

h) Prolonged Outage of FSC of 400 kV Ranchi-Sipat D/C line

Fixed Series Capacitor of 400 kV Ranchi-Sipat D/C are under prolonged outage since 7th September 2017. RTAMC has intimated that the FSCs have been kept out due to Group B card faulty issue. Such prolonged outage of FSCs will result in operational issue due to the long length of the circuits (405 km –Twin Moose) and will result in delay in charging due to high-rise in the voltage along the line.

POWERGRID may kindly update.

Deliberation in the meeting

Powergrid informed that the issue had been resolved and the FSC would be in service by September 2018 subjected to availability of shutdown.

Item No. B.9: Installation of PMU for observation of the dynamic performance of STATCOMs--ERLDC

Four STATCOMs (Rourkela, Jeypore, Kishanganj, New Ranchi) are being commissioned in the Eastern Region to improve the dynamic var compensation in the grid and for the improvement of the transient stability. STATCOM is a dynamic VAR compensation device and provides the fast reactive support to the grid during transient as well steady state operation. In order to analyze the dynamic performance of STATCOM (STATCOM+ MSR /MSC) during day-to-day operation, it is desired to install PMU on the Coupling Transformer of the STATCOM as a part of the URTDSM project.

In the 37th ERPC meeting, the followings were decided:

- i) Power Grid shall first explore the possibilities by diverting the unutilized PMUs under URTDSM project and would complete the work on urgent basis.
- ii) If adequate no. of PMUs are not available under URTDSM project, balance PMUs will be implemented under project "Upgradation of SCADA / RTUs / SAS in the Central sector stations and strengthening of OPGW network".

In 147th OCC, ERLDC informed that spare connection was available at 765kV Ranchi S/s which could be used for integration of Ranchi STATCOM. Since PMUs available at Ind Bharat and Monnet S/s could not be shifted due prevailing administrative issues, PMUs at Tenughat and Patratu might be diverted for STATCOM integration at Rourkela, Jeypore and Kishanganj S/s.

ERLDC added that the same had been communicated to Powergrid.

Powergrid informed that they were exploring all possibilities to provide PMU on the Coupling Transformer of the STATCOM.

Powergrid may update.

Deliberation in the meeting

After detailed deliberation, OCC decided to discuss the issue in a separate meeting with concerned members from ULDC Powergrid, ERLDC, ERPC, JUSNL and NTPC.

Item No. B.10: PSS tuning of Generators in Eastern region

Several Cases of Low frequency Oscillations have been observed in the Eastern Region. In view of this, it is desirable to have the PSS tuning of Generators in Eastern region to improve the system damping. It is mandatory as per existing CERC and CEA regulation to tune 100 MW and above generating units.

In view of that, Generating station may kindly update the following details to ERLDC/ERPC:

Name of Generating Power Plant:

Unit No	Type of Excitation System (Static/ Brushless /Other)	IEEE Model (IEEET1/ ESST1A/ Other)	Name of Excitation System Vendor (ABB/GE /Hitachi/ other)	Whether PSS is Tuned or not (If tuned Date of tuning)	Whether Report of tuning Submitted or not.

In line with regulations, all generating power plant to take up the PSS tuning activities at earliest with their vendors and submit the report after PSS tuning for verification. The response data with PSS tuning also to be shared with ERLDC/ERPC for validation in either excel or .csv format. This will be monitored in OCC on regular basis.

Generators may kindly submit the details and inform the tentative plan for PSS Tuning.

Deliberation in the meeting

OCC advised all the generators to submit the relevant data as per the format to ERLDC and ERPC.

Member Secretary, ERPC suggested to hold a separate meeting with the authorities of the Power Stations in the Eastern Region to deliberate on this issue.

Item No. B.11: 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:

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

Deliberation in the meeting

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

Item No. B.12: FLEXIBILITY IN GENERATION & SCHEDULING OF THERMAL POWER STATIONS TO REDUCE EMISSIONS-MOP, GOI ORDER

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

CEA requested for plant performance data as per the format enclosed at **Annexure-B12**. CEA requested to submit the hard copy and softcopy (in excel) to cetrmcea@yahoo.com.

Members may note and comply.

Deliberation in the meeting

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

Item No. B.13: Ratification of Demand and Generation for calculation of POC of Q-3 2018-19

The projected Demand and Generation of ER constituents to be considered in the base case for POC transmission charge and loss calculations for Q3 (Oct 18-Dec 18) was circulated to all the concerned via email dated 6th August 2018 for verification and enclosed at **Annexure-B13**.

Odisha informed that the projected generation is considered as 2628 MW instead of 3076 MW and the projected demand is considered as 4305 MW instead of 4148 MW. Odisha informed that node-wise drawal and injection figures were submitted to NLDC/ERLDC. Odisha requested to correct the figures accordingly.

Members may discuss and confirm.

Deliberation in the meeting

WBSETCL informed that they had already sent their comments to ERLDC.

ERLDC informed that Odisha and West Bengal observations would be taken care of after detailed discussion with NLDC.

OCC advised other constituents to send their comments to ERLDC immediately, if any.

PART C: ITEMS FOR UPDATE

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

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

OPTCL may submit.

Deliberation in the meeting

OPTCL submitted the healthiness certificate.

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, WBPDC
3. Tata Power Islanding Scheme, Haldia
4. Chandrapura TPS Islanding Scheme, DVC
5. Farakka Islanding Scheme, NTPC

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

WBPDC may submit.

Deliberation in the meeting

WBPDC submitted the healthiness certificate.

Item no. C.3: Status of Implementation of islanding schemes in ER

1. Islanding scheme at Bandel TPS-WBPDC

In 145th OCC, WBPDC informed that the implementation at Power station would be completed by May 2018. Implementation part at Substation for load segregation would be done by WBSETCL.

In 38th TCC Meeting, WBPDC informed that the implementation at Power station has been completed.

In 147th OCC, WBSETCL informed that implementation part at Substation end for load segregation would be completed by end of July 2018.

WBPDC and WBSETCL may update.

Deliberation in the meeting

WBPDC and WBSETCL informed that islanding scheme had been implemented and it can be put in service.

2. Islanding scheme at IbTPS- OPGC

The islanding scheme was discussed in 68th PCC Meeting held on 18-06-2018. PCC opined that the draft scheme submitted by Odisha was three years old and the draft scheme is needed to be reviewed with existing network configuration.

PCC decided to discuss the islanding scheme in next PCC Meeting and advised OPTCL to submit all the relevant details to ERPC and ERLDC.

In 69th PCC Meeting, it was decided that ERLDC and ERPC would study and finalize the islanding scheme in next PCC Meeting.

Members may note.

Deliberation in the meeting

Members noted.

Item no. C.4: Healthiness of SPS existing in Eastern Region

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

Sl. No.	Name of the SPS	Healthiness certificate received from	Healthiness certificate not received from
1.	Talcher HVDC	Powergrid, GMR, NTPC & JITPL	Nil
2.	Rangpo	Chuzachen, Powergrid, Teesta-III	Dikchu, Dansenergy
3.	SPS of 132 kV Muzaffarpur-Dhalkebar D/C	Nil	Powergrid
4.	SPS in CESC system	CESEC	Nil
5.	SPS for Power Export to Bangladesh	Powergrid	Nil
6.	SPS at Chuzachen	Chuzachen	Nil

In 145th OCC, ERLDC informed that generation relief provided by the generators was not sufficient during SPS Operation on HVDC Talcher-Kolar Pole 1 tripping on 16-05-2018 15:34 Hrs. ERLDC elaborated the event with detailed presentation.

OCC advised Powergrid to submit a report on frequent tripping of only pole 1.

OCC opined that a Committee was already formed to study the SPS issues related to HVDC Talcher-Kolar. OCC advised the Committee to analyze this event and place the report in OCC Meeting.

The report is placed at **Annexure-C4**.

Members may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

Powergrid informed that Rangpo SPS had been tested successfully on 25th July 2018.

Powergrid informed that 132 kV Muzaffarpur-Dhalkebar D/C line is now charged at 220kV level and the SPS would be modified accordingly.

Powergrid added that SPS for Power Export to Bangladesh would also be modified as per the new configuration.

Item no. C.5: Low-Frequency Oscillation (LFO) observed At Durgapur and nearby nodes on 05th APRIL 2018 from 14:21 hrs to 14:28 hrs.

Low-frequency oscillation of 0.1 Hz was observed in Durgapur and nearby nodes on 05th April 2018 from 14:21 hrs to 14:28 hrs. The oscillation was prominent in the Eastern region near Durgapur only based on the synchrophasor data analysis. Plot of Durgapur bus voltage based on PMU data is shown in the figure below where oscillation can be clearly observed. No significant oscillation was recorded by any other PMU during the said period, indicating some nearby local phenomenon or generator hunting. On further analysis of Eastern region SCADA data, large variations in the MW and MVAR of Sagardighi Unit 4 was noticed during the same time period.

In 146th OCC, WBDCL informed that BHEL engineers had visited the site and attributed turbine vibration as the reason for low frequency oscillation. The necessary work for corrective measures is in progress. They will submit the detailed report after completion of the work.

In 147th OCC, WBDCL informed that the unit #4 was synchronized after attending the turbine vibration problem by BHEL engineers.

OCC advised WBDCL to submit a detailed report to ERPC and ERLDC on the issues related to turbine vibration and the corrective action taken to resolve the issues.

WBDCL may update.

Deliberation in the meeting

WBDCL informed that the unit #4 was synchronized after attending the turbine vibration problem by BHEL engineers.

WBDCL submitted the action taken report which is enclosed at **Annexure-C5**.

WBDCL added that root cause was not yet identified and the performance of the unit is under observation.

Item no. C.6: 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	3 months Feeders identified. Implemented by June 2018	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	9 Months Tendering for RTU installation is in progress. Implemented by	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

		< 49.9 Hz AND deviation > 12 % or 50 MW 3. System Frequency < 49.9 Hz AND deviation > 12 % or 75 MW	May 2018	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 June'18, several number of times ADMS criteria for the state got satisfied. The details for each state are given below. It may kindly be noted that on 19th July 2018, the Indian Grid Frequency has touched 49.62 Hz during which there was significant over drawl by West Bengal to tune of 400 MW. Details are enclosed at **Annexure-C6**. West Bengal and DVC may kindly update on ADMS Operation on the dates and relief obtained. Further, Other state like Bihar/Jharkhand/Orissa also done over drawl when grid frequency was below 49.7 Hz. Therefore, ADMS implementation may kindly be accelerated in compliance of IEGC Regulation 5.4.2.d.

Members may update.

Deliberation in the meeting

West Bengal informed that ADMS was operated in all cases except 6th July 2018.

OCC advised West Bengal to submit the details to ERLDC.

DVC informed that 25th July 2018 incident was lasted for less than one minute hence ADMS was not operated as per the logic.

Bihar requested for a special meeting with Chemtrol to resolve the issues.

Item no. C.7: Unreliable operation at Motihari (DMTCL) SS

400/132kV Motihari S/Stn is of critical importance as the two high capacity inter-regional lines (400kVBarh-Gorakhpur Qd. Moose D/C) link E. Region with N. Region at this S/Stn. The Barh-Motihari D/C Qd. Moose line is essential for reliable power evacuation from Barh STPS of 2X660MW capacity. Motihari S/Stn is also responsible for meeting about 200MW load, considering Bihar and Nepal together.

As on date main CB of 125MVAR bus reactor-1, line isolator of 400kV Gorakhpur-2 line along with main and tie CBs of this line are out of service due to problem in gas duct. 400 kV Motihari – Gorakhpur – II was out of service due to unavailability of both bays at Motihari S/S.

In 144th OCC, it was decided to pursue the issue with DMTCL and decided to discuss the issue in 66th PCC Meeting scheduled to be held on 25th April 2018.

In 145th OCC, DMTCL informed that 400kV Motihar-Gorakhpur D/C line is under outage due to non-availability of GIS spares.

DMTCL added that the line would be restored within a month.

OCC advised DMTCL to expedite the work to restore the line at the earliest.

In 38th TCC, DMTCL informed that three bays, which are under outage, would be in service by 20th July 2018.

DMTCL may update.

Deliberation in the meeting

DMTCL informed that all the three bays were brought into service on 10th August 2018.

Item no. C.8: Repair/Rectification of tower at location 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines - Powergrid

Powergrid informed that their patrolling team has observed bent in part of tower no. 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines which may further degrade the condition of tower.

In 141st OCC, Sikkim informed that rectification of the tower has been taken up with Gati. The work would be completed by 2nd week of February 2018.

In 37th TCC, it was decided that Sikkim would give a comprehensive proposal to PGCIL within one week regarding handing over of the relevant segments of the line to PGCIL. Thereafter, PGCIL and Sikkim would sit together and sort out the issues involved therein.

In 145th OCC, Sikkim informed that the proposal had been sent to State Govt. for approval.

In 38th TCC, Sikkim informed that State Govt. for approval is pending.

Powergrid and Sikkim may update.

Deliberation in the meeting

Sikkim informed that State Govt. for approval is still pending.

Item no. C.9: 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:

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

Powergrid may update.

Deliberation in the meeting

Powergrid informed that STATCOM at Kishanganj would be commissioned by December 2018 as per the schedule.

Item no. C.10: 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 last OCC, 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-Kesinga 220 kV D/C line at Bolangir S/S	Only 7 towers left (Severe ROW problem). By December, 2018.
2.	400/220kV Pandiabil Grid S/s:	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	By Dec, 2018.
3.	400/220 kV Keonjhar S/S	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By Sep, 2018.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019. The work is yet to be started.

OPTCL may update.

Deliberation in the meeting

OPTCL updated the status as mentioned in above table.

Item no. C.11: 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj&Dhanbad

In lastOCC, JUSNL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	Daltonganj 400/220/132kV S/s:	
a.	Daltonganj(POWERGRID)–Latehar220kVD/c	By April, 2019.
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	The line expected to be completed by May, 2018 but – Garhwa 220kV is expected to be completed by Dec 2018.
C	Daltonganj (POWERGRID) – Daltonganj (JUSNL)	The line charged as per original configuration

	132kV D/c	on 26 th July 2018.
D	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Tendering is in progress. Expected to be completed by October 2019
2	Chaibasa400/220kVS/s	
A	Chaibasa(POWERGRID)–Noamundi220kVD/c	Not yet started
3	Dhanbad400/220kVS/s	
A	LILO of Govindpur–Jainamore/TTPS 220kVD/c at Dhanbad	ROW issues.Target date November 2018.

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as mentioned in above table.

Item no. C.12: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Alipurduar & 2x500 MVA Rajarhat sub-stations

In lastOCC, WBSETCL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	2x315MVA, 400/220kV Alipurduar sub-station	
a.	Alipurduar (POWERGRID) – Alipurduar (WBSETCL) 220kV D/c (Twin moose)	<i>The line was commissioned on 6th June 2018.</i>
2.	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
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	ROW problem
3	Subashgram400/220kVS/s	
a	Subashgram–Baraipur220kVD/c/line	Feb 2019, 50% of work has been completed.

WBSETCL may update.

Deliberation in the meeting

WBSETCL updated the status as mentioned in above table.

Powergrid informed that Subashgram bays were ready from December 2014 but construction of the line is getting delayed. Hence, Powergrid requested to consider the commercial declaration of the bays at Subashgram.

OCC in principle agreed for commercial declaration of Subashgram–Baraipur 220kV D/c line bays at Subashgram. However, the declaration would be from prospective date.

Item no. C.13: 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.

ERLDC may present. Members may update.

Deliberation in the meeting

*ERLDC has placed the latest status of telemetry, which is enclosed at **Annexure-C13**.*

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

Item no. C.14: Failure of Real time telemetry from North Bengal and Sikkim to ERLDC

In 141st OCC meeting POWERGRID pointed out the alternate communication path could be established after installation of OPGW communication link between Purnea 400 kV to Biharshariff 400 kV. This link is owned by M/s East North Interconnection Company Limited (A subsidiary of Sterlite Power Transmission Limited).

In 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 is pending. ENICL added that the same is under discussion at their end for early implementation of the same.

In 143rd OCC, ENCIL updated that termination of OPGW would be completed by end of June 2018.

Powergrid informed that the link would be in service by end of July 2018 subjected to termination of OPGW link.

ENCIL & POWERGRID may update

Deliberation in the meeting

ENCIL informed that that OPGW work was getting delayed because in some location hot line replacement of OPGW was to be done, some locations theft of OPGW noticed & work for the same is under process.

OCC advised ENCIL to put serious efforts to complete the work at the earliest.

ENCIL assured to complete the work by September 2018.

Item no. C.15: 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 November -2018

Sl No	State/Utility	TTC import(MW)		RM(MW)		ATC (Import) MW		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	--	--	--	--	--	--	Last available for Jan-18
2	JUSNL	1085	--	60	--	1025	--	
3	DVC	1243	3708	60	47	1183	3661	
4	OPTCL	1835	--	82	--	1753	--	
5	WBSETCL	3630	--	300	--	3300	--	Sep-18

6	Sikkim	--	--	--	--	--	--	
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BSPTCL has neither declared TTC nor has provided updated base case in last six months.

BSPTCL and Sikkim may update the status.

Deliberation in the meeting

BSPTCL and Sikkim assured to send the ATC and TTC figures from September 2018.

Item no. C.16: 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 also reduce the cost of GSM.

In 147th OCC, POWERGRID informed that the replacement of GPRS communication of the Remaining 34 locations would be completed by August 2018.

POWERGRID may please update the progress.

Deliberation in the meeting

POWERGRID informed that the replacement of GPRS communication of all the locations had been completed except few locations.

Item no. C.17: Accounting of state drawl from Substation of PGCIL/ISTS Licensee in ER

As per Clause 7(1) (C) of CEA (Installation and Operation of Meters) Regulations, 2006 & its subsequent amendments, Main Meters for drawl computation through ICT should be installed on HV side of ICT and meters installed on LV side of ICT should be considered as Standby meters.

In view of the above it is proposed that State drawl from PGCIL/ISTS Licensee S/S may be computed by using the meter installed on HV side of ICTs in line with CEA regulation.

In 146th OCC, Powergrid informed that the SEM installation in ER-I stations has been completed and the same at ER-II stations would be completed by June 2018. Powergrid(Odisha) informed they will complete the SEM installation by July, 2018.

However locations in ER-I for ex, Purnea, Banka, Lakhisarai, and Ranchi are still pending.

A List of Time drifted Meters installed at ICTs at PGCIL S/station in ER was prepared by ERLDC from AMR system and vide letter dated 04.07.18, PGCIL was requested for replacement of the same.

In 147th OCC, Powergrid informed that the list had been received from ERLDC and the replacement of SEMs is in progress.

However Meter at either side of ICTs at Purnea(2 nos of 220/132 ICT), Birpara (1 no of 220/132 ICT) and Baripada(2 nos of 400/220 ICT) is yet to be installed. Further Meters installation at IV side of many ICTs is also pending. Latest status of meter installation along with CT/PT details is enclosed in **Annexure-C17**.

Powergrid may update.

Deliberation in the meeting

OCC advised POWERGRID to submit the progress to ERLDC and ERPC.

Item no. C.18: Meter related issues

1. Error between the Main and Check energy meter of 400kV Tala-Siliguri Feeder-I & IV (Siliguri end).

The percentage error between the Main and Check energy meter of 400kV Tala-Siliguri Feeder-I and IV at Siliguri end is found to be beyond permissible limit at 18.93% and 1.93 % respectively for the month of June 2018. As per PPA the percentage error should not exceed $\pm 0.6\%$. The check energy meter pertaining to DGPC/THP has been tested on 20th January, 2018 and the error was found to be within the permissible limit.

There was abnormal difference between energy send from Tala end and received at Siliguri end on 8th, 9th, 10th & 11th of June, 2018 due to loose connection in main energy meter of 400kV Tala-Siliguri Feeder I. The energy recorded by check energy meter couldn't be considered due to high error as mentioned above.

Therefore, PTC/POWERGRID is requested to test/replace the energy meter at the earliest.

DGPC and Powegrid may update the status.

Deliberation in the meeting

Powergrid informed that energy meters had been checked, now the error is within the permissible limits (less than 0.2%).

Powergrid added that Energy Meters at 132kV side of 80MVA ICT 1 & 2 at Jigmeling would be checked by September 2018.

2. Reverse Polarity of Meter at ICT at Subhasgram

Meter No NP-8718-A installed at HV side of Meter at ICT at subhasgram has reverse polarity and due to the same, export power is showing as import. Accounting of states drawl will be computed through HV side of ICTs of PGCIL substation. The CT polarity of the meter may be reversed at the earliest. A communication from ERLDC is was sent to PGCIL for the same on 07.08.18

Powegrid may please update the status.

Deliberation in the meeting

Powergrid informed that polarity had been corrected.

Item no. C.19: 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 8 th June, 2018	Last Week of January 2019	

2	Maithon	1stweek of June 2018	Completed on 6 th June,2018	1stWeek of February2019	
3	Rengali	2ndweek of June 2018	Done on 18 th August,2018.	Last week of November 2018	
4	U. Indarvati	3rdweek of June 2018	Planned in Sep,2018.	2ndweek of February2019	
5	Subarnarekha	1stweek of October 2018	Done on 10 th August,2018.	1stweek of January2019	
6	Balimela	3rdweek of October 2018		1stweek of March 2019	
7	Teesta-V	2ndweek of Nov 2018	Done on 3 rd May 2018	Last week of February2019	
8	Chuzachen	Last Week of May2018	In May 2018	2 nd week of January2019	
9	Burla	Last Week of June 2018	Completed on 7 th June,2018	Last week of February2019	
10	TLDP-III	1 st Week of June 2018	After Monsoon	2ndWeek of January2019	
11	TLDP-IV	Last Week of June 2018	After Monsoon	1 st Week of February2019	
12	Teesta-III	Last week of Oct 2018		First Week of March 2019	
13	Jorthang	First Week of May 2018		First Week of Feb 2019	
14	Tasheding	2 nd Week of May 2018		2 nd Week of Feb 2019	
15	Dikchu	3 rd Week of May 2018		3 rd Week of Feb 2019	

Members may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

Item no. C.20: Schedule for reactive capability tests

In last OCC, Members updated the status and informed the schedule as follows:

- AdhunikTPS(both units) –Unit #2 would be in service from April 2018.
- JITPL(Unit #2) –Unit #2 testing would be done in Sep 2018
- Barh TPS – Vibration problems will be attended during overhauling. The testing would be done after overhauling in December 2019.
- Raghunathpur – Coal not available
- GMR (Unit #3) –

Members may update.

Deliberation in the meeting

OCC advised concern Generators to plan reactive capability test at the earliest.

Item no. C.21: Agenda point related to reporting of grid events by users, STU, CTU and SLDC to RLDC

As per IEGC section 5.9.4 (b) and 5.9.6 (a), all users, STU, CTU and SLDC are to send written report to RLDC for the events notified by IEGC section 5.9.5. Format of draft written report as per IEGC section 5.9.6 (c). All users, STU, CTU and SLDC are requested to send flash report in

given format to erldcprotection@posoco.in/ erldccr@posoco.in/ erpcprotection@gmail.com followed by events mentioned in IEGC section 5.9.5.

ERLDC elaborated that flash report for events occurred in STU also needed to be submitted to ERLDC.

*OCC advised STU, CTU, IPPs and SLDC to send flash report as per the format enclosed at **Annexure-C21** to erldcprotection@posoco.in/ erldccr@posoco.in/ erpcprotection@gmail.com.*

Members may comply.

Deliberation in the meeting

OCC advised all the constituents to send the flash report within the stipulated time as per the format to ERLDC.

Item no. C.22: Agenda point related to load forecasting by SLDC

For better grid management and shutdown planning, RLDCs needs to do short term load forecasting. Accuracy and effectiveness of load forecasting depend on input data. As per current practice, day ahead load forecasting is being done at ERLDC by analysing trend previous days demand. However, for further tuning and better accuracy of load forecasting result, demand estimation from SLDCs are to be done at their end and same need to be shared with ERLDC for estimation of Eastern Region demand.

In 147th OCC, all the SLDCs were advised to share the relevant demand forecasting data to ERLDC.

ERLDC may update.

Deliberation in the meeting

ERLDC informed that they have not received any information from constituents.

OCC once again advised to share the relevant demand forecasting data to ERLDC.

Item no. C.23: Implementation of Web based PSP report in ERLDC

ERLDC is currently preparing PSP report on daily basis which contains ISGS/IPP schedule & actual generated energy, inter-regional tie line energy exchange, energy consumption of states and energy generated by state generators (including DVC), voltages of important substations etc. The content in the report is being used by MOP, States and various other agencies for data compilation and preparation of other reports. This report is prepared during night shift hours as per the energy data submitted by all ISGS/PPs, states, transmission licensees to ERLDC. Generally ERLDC received data from all users by 02:00 Hrs of night in different reporting formats(Ex-cell, Word, Mail, Over phone etc..) and prepared PSP report by 0400 hrs which is uploaded in ERLDC website and sent to MOP. However, due to submission of data in different formats by the users, it is very difficult compile and validates such data during night hours before preparation of the PSP report.

To improvise the data reporting system, a new web based PSP reporting portal has been developed, wherein generators, transmission licensees& states can log-in to the portal and submit their energy data. Beta version of this software is already installed at ERLDC and parallel testing is going on. The new PSP web based portal will be operationalized with effect from 00:00 hrs of 01st August, 2018.

In this regard all generators, transmission licensees & states are requested to nominate one nodal person to ERLDC in erldcso@posoco.in, who will co-ordinate with ERLDC nodal person and their nightshift executives to fill energy data. In the meantime it is requested to all generators, transmission licensees & states to instruct their night shift operators to enter the energy data using their user credential in ERLDC PSP web portal. Individual user id and password will be shared to respective nodal co-ordinators/ control room through mail.

Nodal Persons from ERLDC side:

1. Shri Tushar Ranjan Mohapatra - (9433041873)
2. Shri Chandan Mallick – (9007059660)

In 147th OCC, ERLDC informed a new web based PSP reporting portal has been developed, wherein generators, transmission licensees & states can log-in to the portal and submit their energy data. Username and password will be issued to all the concern utilities. Beta version of this software is already installed at ERLDC and parallel testing is going on. The new PSP web based portal will be operationalized with effect from 00:00 hrs of 01st August, 2018.

OCC advised all the utilities to nominate a nodal officer to ERLDC vide mail: erldcso@posoco.in and submit the relevant data in PSP reporting portal.

Members may comply.

Deliberation in the meeting

ERLDC informed that most of the utilities have nominated their nodal person for co-ordination except Bihar, Tashiding, Rangit and APNRL.

ERLDC added that login credentials of PSP portal has been shared with the nodal person of the respective utilities. Most of the utilities are filling up the data in portal on regular basis other than Odisha, West Bengal (only few data are being filled), Barh (NTPC), KHSTPP, BRBCL, DVC, DMTCL.

To make the process of generation of error free web based PSP report, OCC once again advised to all utilities to fill the data in ERLDC PSP portal (<http://report.erldc.in/POSOCO>) by 02:00hrs of every day.

OCC advised Bihar, Tashiding, Rangit and APNRL to nominate the nodal person at the earliest.

Item no. C.24: Installation of PMUs in Eastern Region under URTDSM project

LOA for installation of PMUs in Eastern Region under URTDSM project was awarded to M/s Alstom on 15th January 2014. The contract has to be completed in all respect within 24 months from the award. The status of implementation may be informed since PMU data is very much important to real time shift operator for analyzing the security of the grid.

POWERGRID informed that air-conditioning and lighting arrangement in PDC control room at SLDC-Howrah was not yet provided by WBSETCL for PDC installation. The requirement of air-conditioning and lighting in PDC control room at SLDC-Howrah was intimated to WBSETCL during survey on November-2014 but the same is not yet provided. The matter has also been discussed in 20th SCADA O&M meeting held on 15th December 2017 wherein WBSETCL intimated that the same would be done on priority.

OCC advised WBSETCL to provide the air-conditioning and lighting in PDC control room at SLDC-Howrah at the earliest.

Regarding Patratu, it was decided that NTPC and JUSNL would sit together and sort out the issue by March, 2018.

In 143rd OCC, WBSETCL informed that the air-conditioning and lighting in PDC control room at SLDC-Howrah by July 2018.

Regarding Patratu, NTPC and JUSNL informed that they would settle the issues in April, 2018.

POWERGRID may update the status.

Deliberation in the meeting

Members noted.

Item no. C.25: Flexible Operation of thermal power stations- Identification of pilot projects--CEA

Central Electricity Authority vide letter dated 16th February 2018 informed that a special Task Force was constituted under IGEF Sub-Group-I for enhancing the flexible operation of existing coal-fired power plants. The committee has recommended for implementation of measures for 50%, 40% and 25% minimum load in thermal power stations. The measures for 50% minimum load operation requires no investment or minimal investment. (Report is available on CEA website under TRM division)

Subsequently, a meeting was held under the chairmanship of Member (Thermal) on 8th February 2018 where in it was decided that 55% minimum load operation would be implemented nationwide in first phase. Further, Six units, including two units of NTPC and one unit each from DVC, GSECL, APGENCO, MSPGCL, would be taken up for 55% minimum load operation on pilot basis as 55% minimum load operation in line with the CERC notification dated 6th April 2016 and 5th May 2017 (IEGC 4th Amendment).

In 142nd OCC, NTPC informed all the units of NTPC were capable of 55% minimum load operation. DVC informed that they were planning to implement at DSTPS.

In 37th TCC, DVC informed that they would demonstrate the capability of 55% minimum load operation for one unit of DSTPS by March 2018.

In 144th OCC, DVC informed that an exercise to test 55% minimum load operation had been conducted at DSTPS recently. The details of the test results, as and when received, would be shared with OCC members.

In 146th OCC, DVC informed that they could bring down their machine up to 60 % without oil support and with the available quality of coal.

In 38th TCC, DVC assured that the necessary demonstration to bring down their machine up to 55% would be done by July 2018.

DVC may update.

Deliberation in the meeting

DVC informed that they could not test the machine due to coal shortage issues.

Item no. C.26: Issuance of TOC for DSTPS-RTPS OPGW link by DVC

In 19th SCADA O & M meeting held on 7th April 2017 at ERLDC, Kolkata, POWERGRID had informed that they were not able to complete the OPGW work in DSTPS – RTPS in DVC Sector under Microwave Replacement Package due to severe ROW issue. POWERGRID further informed that they had mobilized the team several times but work could not be completed due to

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heavy ROW / compensation issues related to TL construction resulting non-completion of 2 nos. OPGW drum (approx. 9 Km) out of total 69.182 Km. POWERGRID again informed that this issue was discussed in various forums but the solution could not be provided by DVC. DVC informed that they are not able to resolve the issue as this was an old ROW / compensation issue related to TL construction. OPGW work in this link could not be completed due to ROW/Compensation issues since September-2013.

In 36th ERPC meeting, matter was deliberated and DVC informed that they would try to resolve ROW issues by 31st October-2017. Otherwise they would provide the necessary certificate.

In 20th SCADA O&M meeting held on 15th December-2017, POWERGRID informed that DVC had not yet issued TOC for this link. DVC confirmed that they will issue TOC and request for a letter from POWERGRID. POWERGRID issued the request letter on 20.12.2017. However, ToC is yet to be issued by DVC.

In 37th TCC, DVC informed that the ROW issue would likely to be resolved after the Panchayat Election of West Bengal.

In 38th TCC, DVC assured that the issue would be resolved by July 2018. In case the issue is not resolved MS, ERPC will take up the matter with DVC for early resolution of the issue.

In 147th OCC, DVC informed that they had taken up the issue with appropriate administration and the issue would be resolved soon.

DVC may update.

Deliberation in the meeting

DVC informed that a letter had been sent to Powergrid to settle the issue.

PART D:: OPERATIONAL PLANNING

Item no. D.1: Anticipated power supply position during September'18

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of September 18 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**.

ERPC Secretariat has prepared the expected availability of generation and expected demand during ensuing Puja festival 2018, which is given at **Annexure-D.1.1**. All constituents requested to confirm.

Members may confirm.

Deliberation in the meeting

*Modified anticipated power supply position for the month of September 2018 after incorporating constituents' observations is given at **Annexure-D.1**.*

*Constituents updated the the expected availability of generation and expected demand during ensuing Puja festival 2018. Updated status is given at **Annexure-D.1.1**.*

Item no. D.2: Shutdown proposal of transmission lines and generating units for the month of September'18

Members may finalize the Shutdown proposals of transmission lines and generating stations for the month of September'18.

KhSTPP # Unit-5 shall be under overhaul from 05.09.2018 to 29.09.2018 and shall be available for operation for balance period of month, Sep'18

Shutdown proposals of generating stations:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	MTPS	2	210	16.09.18	16.10.18	31	AOH (Boiler acid cleaning + LPT)
ODISHA	TTPS	4	60	16.09.18	29.09.18	14	Boiler Overhaul
WBPDC	Kolaghat TPS	6	210	01.09.18	10.09.18	10	Boiler License
BRBCL	Nabinagar TPP	2	250	05.09.18	30.09.18	26	Boiler OH incl. Turbine LP Rot., Gen. Rot. Checking etc.
IPP	GMR	3	350	01.09.18	24.09.18	24	Annual Boiler Overhauling

ERLDC may place the list transmission line shutdown. Members may confirm.

Deliberation in the meeting

Approved maintenance programme of generators as follows:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	KTPS	2	210	05.09.18	10.10.18	35	AOH (Boiler acid cleaning + LPT)

ODISHA	TTPS	6	60	15.09.18	09.10.18	25	Boiler Overhaul
ODISHA	TTPS	5	60	27.08.18	08.09.18	12	Boiler Overhaul
WBPCL	Kolaghat TPS	6	210	01.09.18	10.09.18	10	Boiler License
BRBCL	Nabinagar TPP	2	250	05.09.18	30.09.18	26	Boiler OH incl. Turbine LP Rot., Gen. Rot. Checking etc.
IPP	GMR	3	350	01.09.18	24.09.18	24	Annual Boiler Overhauling

- *KhSTPP # Unit-5 from 05.09.2018 to 29.09.2018*
- *KhSTPP # Unit-1 from 24.08.2018 to 04.09.2018 for 12 days for emergency shutdown*
- *TSTPS stage-I, unit #2 from 22nd October for 30 days*
- *Santadiah Unit #6 from 25th August 2018 for 20 days*

1. Overhauling/shutdown schedule of MTPS Units of KBUNL

The Overhauling Schedule of U1 (110 MW) MTPS of KBUNL was approved in 146th OCC for the period from 01.08.2018 to 25.08.2018 (25 days).

However, due to technical considerations, the above Planned Shutdown has been rescheduled for the period from 20.08.2018 to 13.09.2018 (25 days).

Members may approve.

Deliberation in the meeting

It was informed that the shutdown would be approved subjected to Bihar approval.

2. Shutdown of 400kV Main Bus Darbhanga

400KV Main bus I (DMTCL): 10th September to 17th September 2018 – 8 days , 192 Hrs. For integration of Main Bus –I. Substation will remain charged on Main Bus – II

400KV Main bus II (DMTCL): 19th September to 26th September 2018 – 8 days, 192 Hrs. For integration of Main Bus –II. Substation will remain charged on Main Bus – I

400KV Main bus I (DMTCL) & 400KV Main bus II (DMTCL) : 28th September 2018 to 29th September 2018- 2 days , 48 Hrs. For integration of Bus Bar protection . Substation will remain in shut down for two days.

The above shut down is required for the augmentation of existing Darbhanga substation by Alipurduar Transmission Limited.

Alipurduar Transmission Limited may explain. Members may approve.

Deliberation in the meeting

OCC approved the following shutdown:

400KV Main bus I (DMTCL): 10th September to 17th September 2018 – 8 days , 192 Hrs. For integration of Main Bus –I. Substation will remain charged on Main Bus – II

400KV Main bus II (DMTCL): 19th September to 26th September 2018 – 8 days, 192 Hrs. For integration of Main Bus –II. Substation will remain charged on Main Bus – I

BSPTCL informed that simultaneous shutdown of 400KV Main bus I (DMTCL) & 400KV Main bus II (DMTCL) from 28th September 2018 to 29th September 2018 for 2 days is not possible till 15 November 2018 and requested for clarification on simultaneous shutdown of both buses at Darbhanga.

3. Emergency shutdown in 400kV KhSTPS Switchyard during Aug-Sep'18 for 400kV BUS splitting work

S.N.	Line Description	Date	Period	400 KV Bus details
1.	400 KV Kh-Lakhisarai#1 line	22/08/2018	09:30 hrs to 17:30 hrs	400 KV Bus#1
2.	400 KV Kh-Farakka#3 line	24/08/2018	09:30 hrs to 13:00 hrs	
3.	400 KV Kh-Maithon#2 line	25/08/2018	09:30 hrs to 13:00 hrs	
4.	400 KV Kh-Farakka#2 line	25/08/2018	13:00 hrs to 17:30 hrs	
5.	400 KV Kh-Banka#1 line	27/08/2018	09:30 hrs to 17:30 hrs	
6.	400 KV Kh-Barh#2 line	30/08/2018	09:30 hrs to 17:30 hrs	
7.	400KV/132KV ICT#2	28/08/2018	09:30 hrs to 17:30 hrs	400 KV Bus#2
8.	400KV/132KV ICT#1	29/08/2018	09:30 hrs to 17:30 hrs	
9.	400 KV Kh-Lakhisarai#2 line	23/08/2018	09:30 hrs to 17:30 hrs	
10.	400 KV Kh-Banka#2 line	31/08/2018	09:30 hrs to 17:30 hrs	
11.	400 KV Kh-Farakka#4 line	24/08/2018	14:30 hrs to 17:30 hrs	

Members may approve.

Deliberation in the meeting

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

4. Shutdown of 400kV Vedanta -Mermundali line

OPTCL informed that the LILO arrangement of 400kV Vedanta - Meramundali line at upcoming 400/220kV, Lapanga substation has been completed. Necessary phase wise shutdown of Circuit-I and Circuit -II is required to put the LILO in to operation. Further, 400kV IBTPS and Lapanga line is scheduled to be completed by coming week and will be connected to Lapanga Grid Substation.

OPTCL may explain. Members may approve.

Deliberation in the meeting

OPTCL informed that following shutdown is required for LILO arrangement of 400kV Vedanta-Meramundali D/C line at upcoming 400/220kV, Lapanga substation:

- 400kV Vedanta- Meramundali line –I from 08:00hrs of 26.08.2018 to 17:00hrs of 27.08.2018
- 400kV Vedanta- Meramundali line –II from 08:00hrs of 28.08.2018 to 17:00hrs of 29.08.2018

400kV Vedanta- Meramundali D/C line would be a direct line till the completion of inspection of multi ckt towers of LILO arrangement.

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

OPTCL requested ERLDC for issuing of charging code to charge 400kV Lapanga-IBTPS line to give start up power to OPGC Generator no. 3.

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
1	NABINAGAR	BIHAR	BRBCL	2	250	COAL SHORTAGE	29-Jul-18
2	NABINAGAR	BIHAR	BRBCL	1	250	COAL FEEDING PROBLEM	13-Aug-18
3	JITPL	ODISHA	JITPL	2	600	COAL SHORTAGE	26-Jun-18
4	APNRL	JHARKHAND	APNRL	1	270	LEAKAGE IN CONDENSER	9-Aug-18
5	FARAKKA	WEST BENGAL	NTPC	1	200	WIND BOX BOTTOM PORTION LEAKAGE	13-Aug-18
6	FARAKKA	WEST BENGAL	NTPC	3	200	GOVERNOR SYSTEM PROBLEM	12-Aug-18
7	GMR	ODISHA	GMR	2	350	CONVEYOR BELT PROBLEM	12-Aug-18
8	KBUNL STG-II	BIHAR	NTPC	2	195	FLAME FAILURE	10-Aug-18
9	VEDANTA	ODISHA	GRIDCO	2	600	PROBLEM IN BOILER	8-Feb-18
10	VEDANTA	ODISHA	GRIDCO	4	600	PROBLEM IN TURBINE CONTROL VALVE	10-Aug-18
11	KBUNL STG-I	BIHAR	BSPHCL	1	110	COAL SHORTAGE	28-Jul-18
12	TENUGHAT	JHARKHAND	JUVNL	2	210	COAL SHORTAGE	17-Jul-18
13	RAGHUNATH PUR	WEST BENGAL	DVC	2	600	COAL SHORTAGE	7-Aug-18
14	RAGHUNATH PUR	WEST BENGAL	DVC	1	600	COAL SHORTAGE	1-Jun-18
15	KOLAGHAT	WEST BENGAL	WBDCL	6	210	COAL SHORTAGE	2-Aug-18
16	SAGARDIGHI	WEST BENGAL	WBDCL	2	300	COAL SHORTAGE	4-Jul-18
17	MEJIA	WEST BENGAL	DVC	3	210	COAL SHORTAGE	12-Aug-18
18	MEJIA	WEST BENGAL	DVC	2	210	COAL SHORTAGE	6-Aug-18

19	BAKERSWAR	WEST BENGAL	WBPDC	3	210	ECONOMISER TUBE LEAKAGE	12-Aug-18
20	IBTPS	ODISHA	GRIDCO	2	210	GENERATOR OIL LEAKAGE	10-Aug-18

(ii) Hydro Generating units:

Sr. No	Generating Station	UNIT NO	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE
1	BURLA	ODISHA	OHPC	1	37.5
2	BURLA	ODISHA	OHPC	2	37.5
3	BURLA	ODISHA	OHPC	5	37.5
4	BURLA	ODISHA	OHPC	6	37.5
5	BALIMELA	ODISHA	OHPC	1	60
6	BALIMELA	ODISHA	OHPC	2	60
7	INDRAVATI	ODISHA	OHPC	3	150
8	INDRAVATI	ODISHA	OHPC	4	150

It is therefore seen that about 570 MW hydro capacity in Odisha is under forced outage / R&M and therefore not available for providing the much needed peaking support in summer peak. SLDC / OHPC may please indicate the capacity expected to be restored by 31/08/18.

(iii) Transmission elements

SL NO	Transmission Element / ICT	Agency	Outage Date	Reasons for Outage
1	220 KV BALIMELA - U' SILERU	OPTCL / APSEB	10.03.18	LINE ANTITHEFT CHARGED FROM UPPER SILERU ON 17-04-18
2	220 KV BUDHIPADAR - KORBA- II	OPTCL / POWERGRID	8.08.18	ANTI THEFT CHARGED FROM BUDHIPADAR END.
3	400 KV BARH-MOTIHARI-I	POWERGRID	15.06.18	Y-N FAULT/CLEARANCE REDUCED AS WATER LEVEL IN GANDAK RIVER HAS INCREASED.
4	400 KV BARH-MOTIHARI-II	POWERGRID	28.06.18	SWITCHED OFF DUE TO INCREASE IN LEVEL OF GANDAK RIVER
5	400 KV IBEUL JHARSAGUDAD/C	IBEUL	29.04.18	TOWER COLLAPSE AT LOC 44,45
6	400 KV DIKCHU-RANGPO	TVTPL	6.07.18	INITIALLY S/D AVAILABLE BY TVTPL/LINE COULD NOT BE CLOSED AFTER S/D DUE TO LOCAL ISSUES.
7	400KV NEW PURNEA-BIHARSARIFF(PG)-D/C	ENICL	10.8.18	TOWER COLLAPSE AT LOC 47/0

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

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

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

Members may update.

Deliberation in the meeting

Members noted.

Item no. D.4: Additional agenda

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, Kolkata on 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 WBPDCCL
- 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 Powergrid are 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/emails 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, cepm-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 / 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.

Members may comply.

Item No. E.9: Commissioning of new transmission elements in Eastern Region

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

Monthly commissioning List of Transmission element and generators: July 2018					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	STATCOM 150 MVAR VSC -2 AT NEW RANCHI	PG	03-07-2018	15:34	TEST COMPLETED AT 20:20 HRS WITH FULL CAPACITY (+/- 150 MVAR)
2	STATCOM 150 MVAR VSC -1 AT NEW RANCHI	PG	04-07-2018	15:52	During testing VSC reached max. MVAR (+150 MVAR) at 19:31 hrs and Min MVAR at 19:51 hrs (-150 MVAR) . +/- 2 KV Voltage changed observed
3	132kV Daltonganj(PG)-Daltonganj(J'Khand)-I	JSUNL	27-07-2018	17:20	
4	400KV Sagardighi Farakka-2 Line including LILO portion	PGCIL	28-07-2018	21:23	
5	125 MVAR BR 4 at Durgapur	PGCIL	31-07-2018	17:14	
6	132kV Haldia-IOCL-II	WBSETCL	10-07-2018		

1st 315 MVA, 400/220kV ICT at 400/220kV Lapanga S/s in Odisha was test charged on 10.08.2018.

Deliberation in the meeting

OPTCL informed that the following elements will be charged in August/September 2018:

- Second 315 MVA, 400/220kV ICT at 400/220kV Lapanga S/s
- 400kV Ib-Lapanga D/C line
- LILO of 400kV Meramundali-Vedanta D/c line at Lapanga
- 220kV Keonjhar (PG)-Keonjhar(OPTCL) D/c line first time charging

Item No. E.10: 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.

Constituents may comply.

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

System frequency touched a maximum of 50.24 Hz at 18:01 Hrs of 24/07/18 and a minimum of 49.61 Hz at 19:28 Hrs of 19/07/18. Hence, no report of operation of UFR has been received from any of the constituents.

Item No. E.12: Grid incidences during the month of July, 2018

SI No	Date	Time	Affected System	Summary	Load loss (MW)	Gen loss (MW)
1	04-07-2018	10:52	ISTS	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 10:52 hrs on O/V resulting total power failure at Motihari S/S as there is no other source.	200	0
2	04-07-2018	19:00	WBSETCL	At 19:00 hrs 220 kV NJP - TLDP - III S/C tripped resulting total power failure at TLDP - III	0	136
3	10-07-2018	08:14	ISTS	At 08:14 hrs, 400 KV Binaguri Rangpo I tripped on RBN fault. 400 KV Teesta III Rangpo tripped at 08:14 hrs on SPS-2 operation. All running units of Teesta III and Dikchu tripped due to loss of evacuation path.	0	890
4	19-07-2018	13:31	BSPTCL	At 13:15 Hrs , 220 kV Madhepura-New Purnea-II tripped on BN fault. At 13:31 Hrs Purnea –Madhepura I also tripped due to Y-B phase fault resulting total power failure at Madhepura S/S.	150	0
5	20-07-2018	09:10	JUSNL	At 13:15 Hrs , 220 kV Madhepura-New Purnea-II tripped on BN fault. At 13:31 Hrs Purnea –Madhepura I also tripped due to Y-B phase fault resulting total power failure at Madhepura S/S.	150	0
6	20-07-2018	19:00	ISTS	At 08:44 hrs 220 kV Ranchi - Hatia - I tripped on B-N fault along with 220/132 kV ICTSs at Hatia resulting loss of power supply at nearby area. Power was restored back at 09:02 hrs by charging ICTs. But 220 kV Ranchi - Hatia - II along with 220 kV Patratu - Hatia D/C tripped at 09:10 hrs resulting total power failure at Hatia S/S as well as nearby area.	78	0
7	21-07-2018	07:11	ISTS	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 19:00 hrs on gas compartment zone protection due to mal-operation of gas monitoring relay which shows low indication despite proper level being maintained.	280	0
8	27-07-2018	01:42	DVC	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 07:11 hrs on gas compartment zone protection due to mal-operation of	110	0

				gas monitoring relay which shows low indication despite proper level being maintained.		
9	28-07-2018	21:07	DVC	220 kV main bus II at Kalyaneswari and Mejia tripped resulting tripping of all elements connected to these buses due to LBB operation after non-opening of breakers at both ends on R-N fault at 220 kV Mejia - Kalyaneswari - I	0	328
10	30-07-2018	20:48	ISTS	400 kV Andal – Jamshedpur D/C tripped at 21:07 hrs on R-N fault. At same time, unit II at Andal tripped on stator E/F protection.	0	360

Item No. E.13: 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 July18.

Meeting ended with vote of thanks to the chair.

Participants in 148th OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 10:30 hrs

Date: 20.08.2018 (Monday)

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

Participants in 148th OCC Meeting of ERPC

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Time: 10:30 hrs

Date: 20.08.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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Participants in 148th OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 10:30 hrs

Date: 20.08.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
61	Zemakanta Sahā	Sr. GM, SLDC, Odisha.	9438907403	uk86bsr@yahoo.com	
62	P. K. Mishra	ELD, SUPC Odisha	9438907402	oldesld@slc.co.in	
63	P. S. Sahu	CGM (C) II SBP OPTCL	9438907778	ele.pssahu@optcl.co.in	
64	H. P. Mahapatra	GM, OHPC	7328840015	hpon.ohpc@gmail.com	
65	P. K. Gupta	DGM/NSPDL	8866708960	pgupta@nspl.co.in	
66	H. K. Ghosh	L.O. GRIDCO KOLKATA	9238688492	homena62@gmail.com	
67	C. R. Mishra	DGM OPTCL	943890 7305	ele.comishra@optcl.co.in	
68	S. K. Maharana	AGM, GRIDCO	9438591100	sanjitmaharana1100@gmail.com	
69	R. Biswas	DDL, Durgam	9434735985	88ldc.dps@gmail.com	
70	Deepak Kumar	AEE / Tm (C4M) JUSM	8808033082	cetm.fseb@gmail.com	
71	D. N. Gaur	DGM (EL) OPGC	9338715434	dhirendra.gaur@opgc.co.in	
72	Brigish Kumar	Manager/ NTPC/Kaly	9473196573	brigishkumar@ntpc.co.in	
73	J. G. Rao	EE, ERPC	9547891353	eseb-cca@yahoo.co.in	
74					
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78					
79					
80					

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

Power System Operation Corporation Ltd.



148th OCC Meeting



At ERPC, Kolkata

20th August, 2018

ER Grid Performances

ERLDC POSOCO

Highlights for the month of July-18

Frequency Profile

Average Freq:- 49.98 Hz

Avg FVI:- - 0.043

Lowest FVI:- 0.02

Max- 50.24Hz on 24th July' 18

Min- 49.61 Hz on 19th July' 18

78.48% of the time freq was with in IEGC Band

Peak Demand

ER: 22440 MW on 12th July 2018 at 19:33 hrs

% Growth in Average Demand Met w.r.t. last year- 9.56%

BSPHCL : 4930 MW ; ON 19/07/18

JUVNL: 1210 MW; ON 07/07/18

DVC: 3536 MW; ON 12/07/18

GRIDCO: 4753 MW; ON 28/07/18

WB: 8832 MW; ON 19/07/18

SIKKIM: 94 MW; ON 25/07/18

Energy met

Max. 486 MU on 19th July 2018

%Growth w.r.t. last year on Max energy 11.70%

Avg. 443 MU in July 2018

%Growth w.r.t. last year on Avg. energy : 10.6%

New Element

Generating Units-NIL

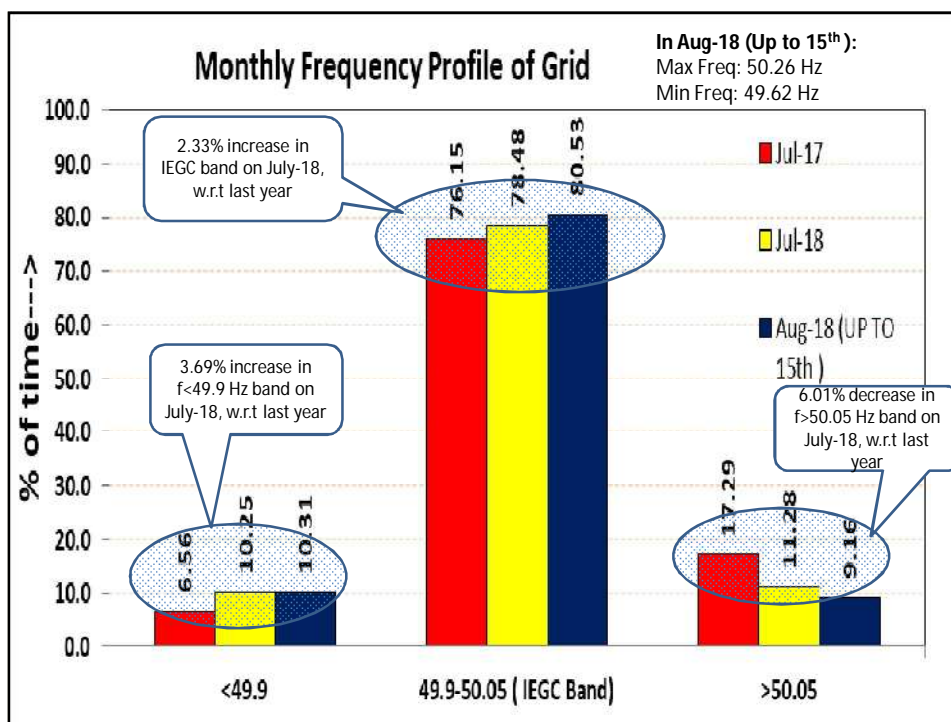
Open Access

STOA transactions approved -408 nos.

Energy Approved- 708.83 MUs

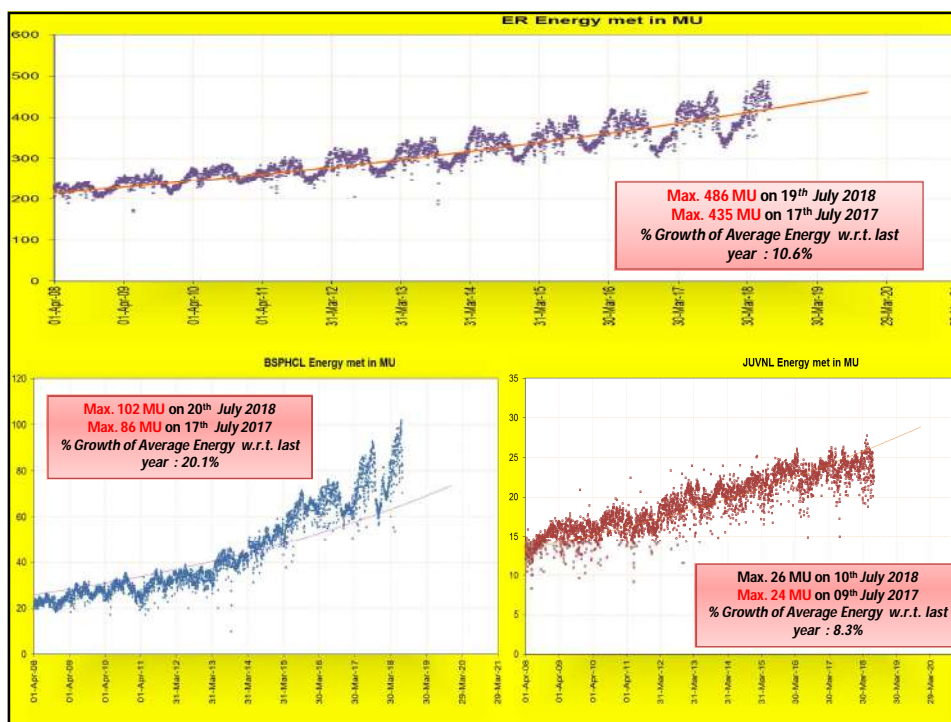
Achievements during the month:

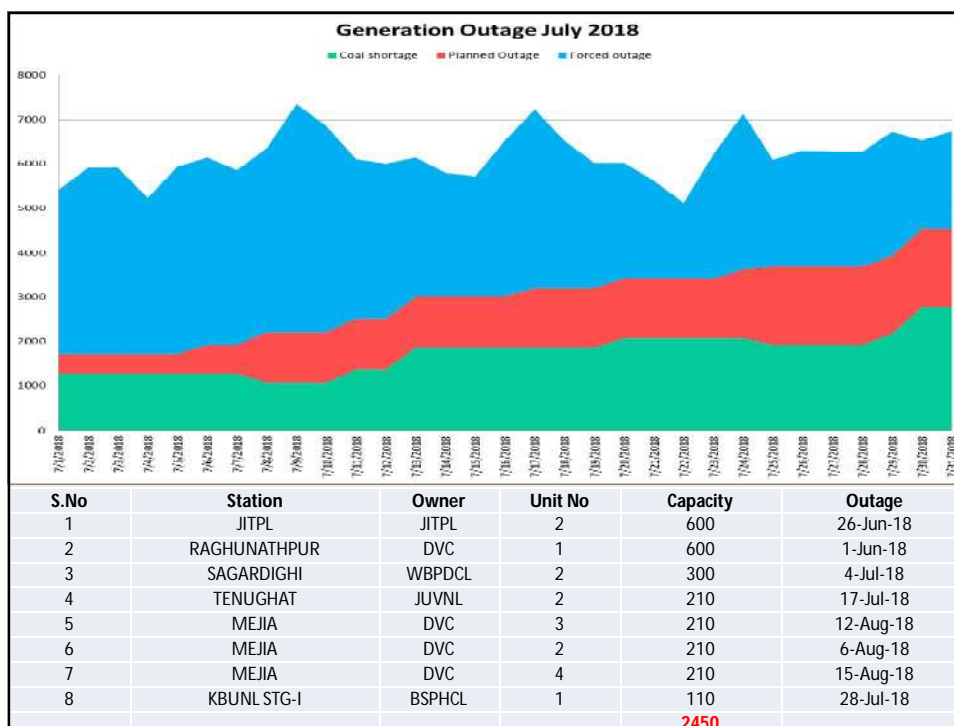
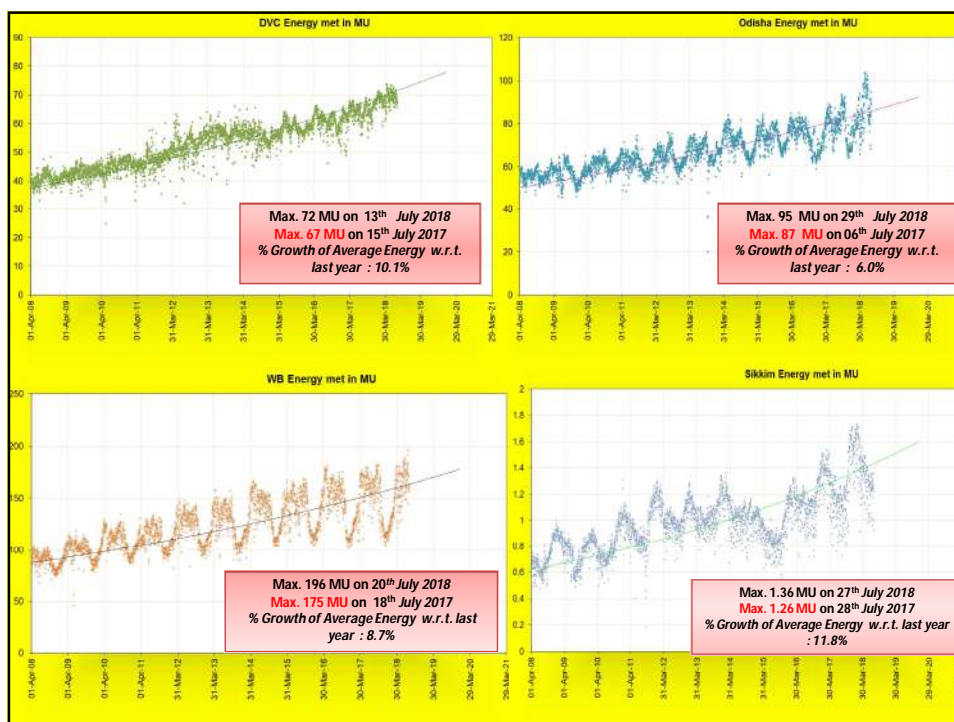
Monthly commissioning List of Transmission element and generators: July 2018					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	STATCOM 150 MVAR VSC - 2 AT NEW RANCHI	PG	03-07-2018	15:34	TEST COMPLETED AT 20:20 HRS WITH FULL CAPACITY (+/- 150 MVAR)
2	STATCOM 150 MVAR VSC - 1 AT NEW RANCHI	PG	04-07-2018	15:52	During testing VSC reached max. MVAR (+150 MVAR) at 19:31 hrs and Min MVAR at 19:51 hrs (-150 MVAR) . +/-2 KV Voltage changed observed
3	132kV Daltonganj(PG)-Daltonganj(J'Khand)-I	JSUNL	27-07-2018	17:20	
4	400KV Sagardighi Farakka-2 Line	PGCIL	28-07-2018	21:23	400kV Farakka-Baharampur reconfigured as 400kV Farakka-Sagardighi-II
5	125 MVAR Bus Reactor- 4 at Durgapur	PGCIL	31-07-2018	17:14	



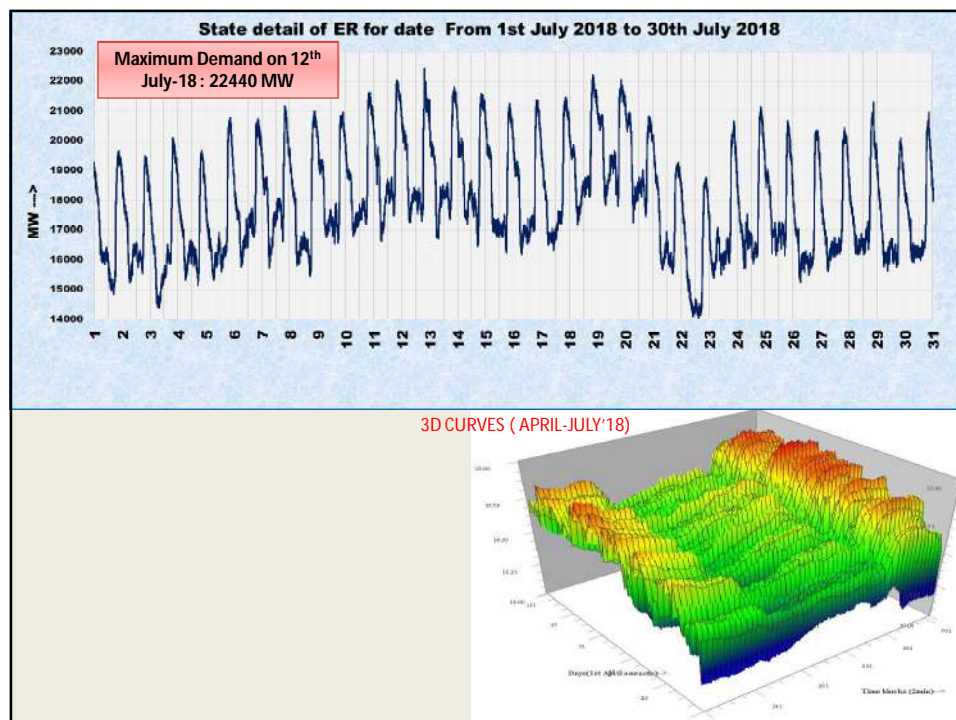
So Far Highest Demand				
Constitute	Demand (in MW)	Date	Time	Dmd met on 12 th July'18 (max dmd met day)
Bihar	4932	13-July-18	21:26	4656
DVC	3536	12-July-18	20:57	3536
Jharkhand	1319	19-May-18	20:58	1012
Odisha	5238	09-Aug-18	18:57	4606
W. Bengal	8896	18-June-18	23:06	8193
Sikkim	117	28-Oct-16	18:59	87
ER	22690	18-June-18	20:44	22440

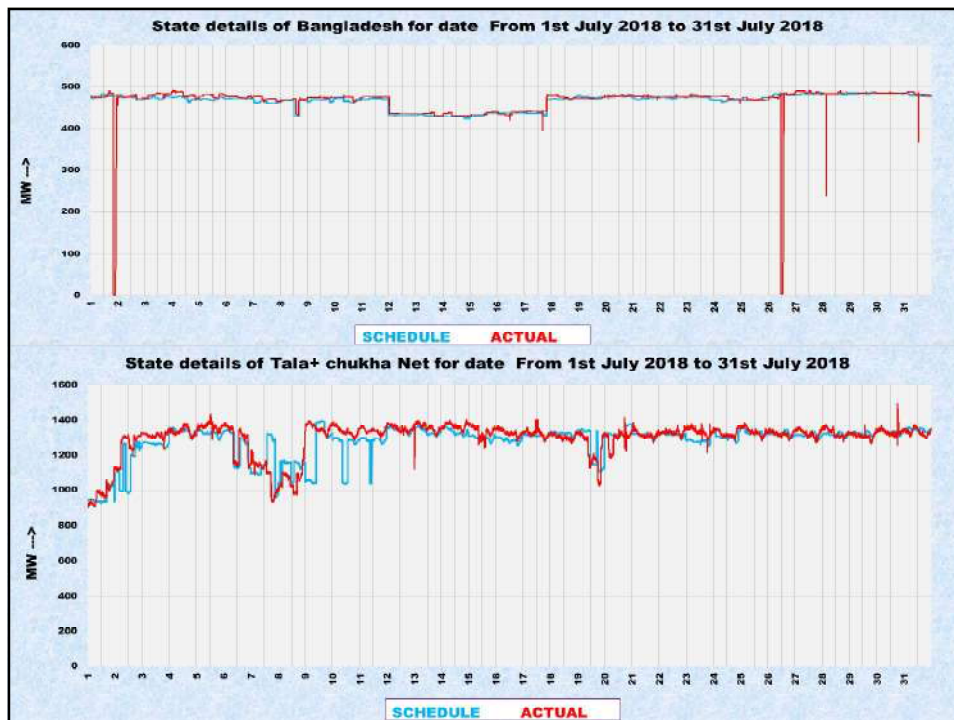
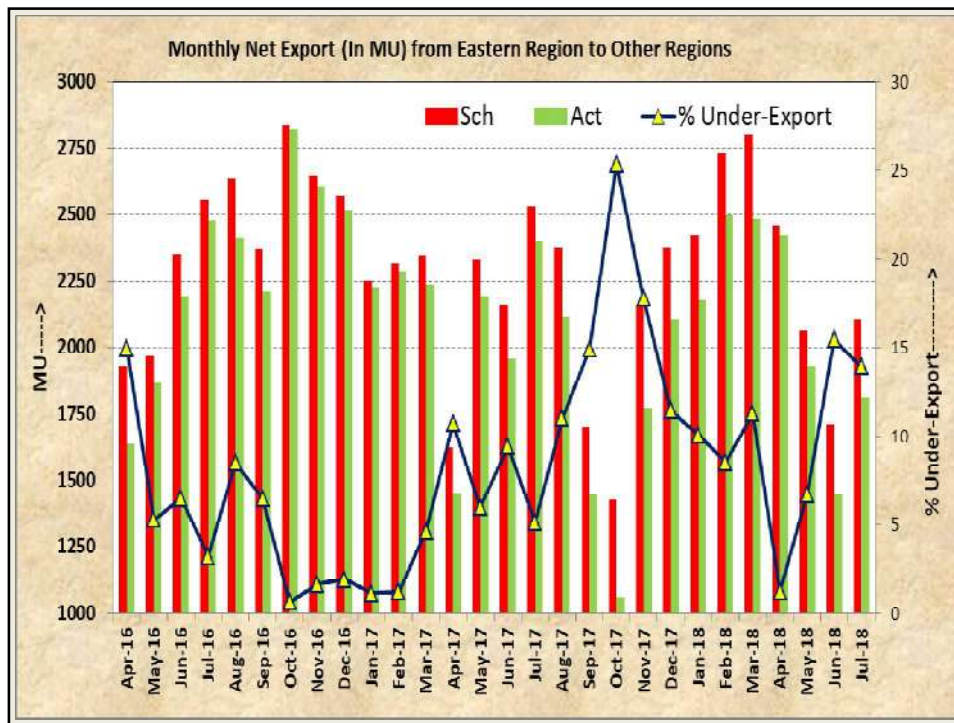
So Far Highest Energy Consumption			
Constitute	Energy consumption (in MUs)	Date	Energy met on 12 th July'18 (max dmd met day)
Bihar	101.7	20-July-18	95.6
DVC	75.8	12-July-18	75.8
Jharkhand	27.8	19-May-18	21.3
Odisha	109.6	09-Aug-18	88.2
West Bengal	188.5	19-Jun-18	170.3
Sikkim	2.1	07-Dec-17	1.4
ER	488	19-Jun-18	460





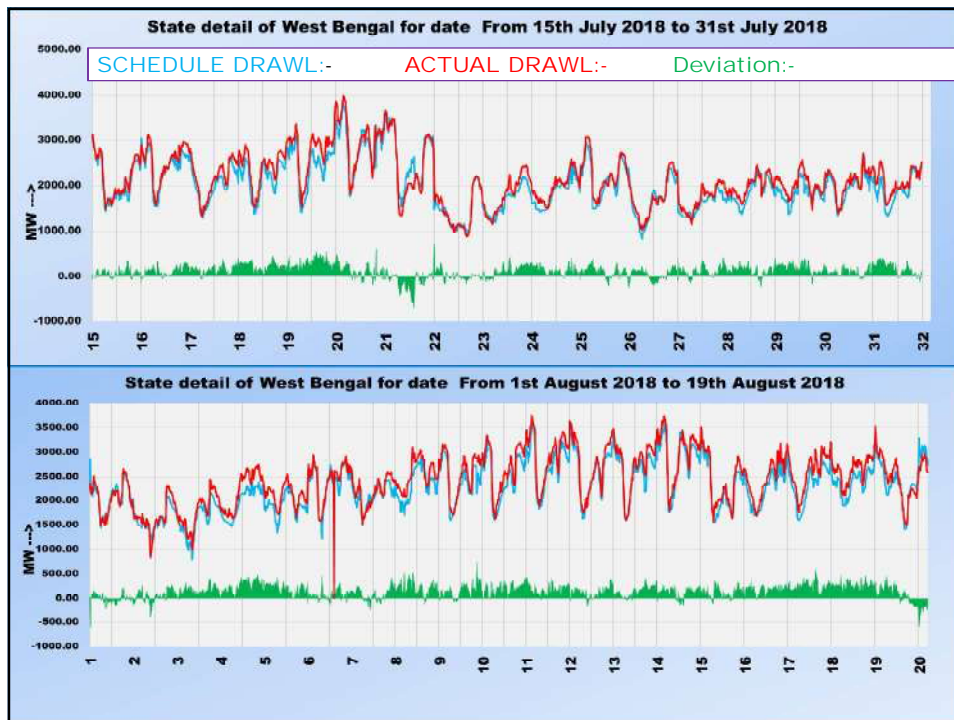
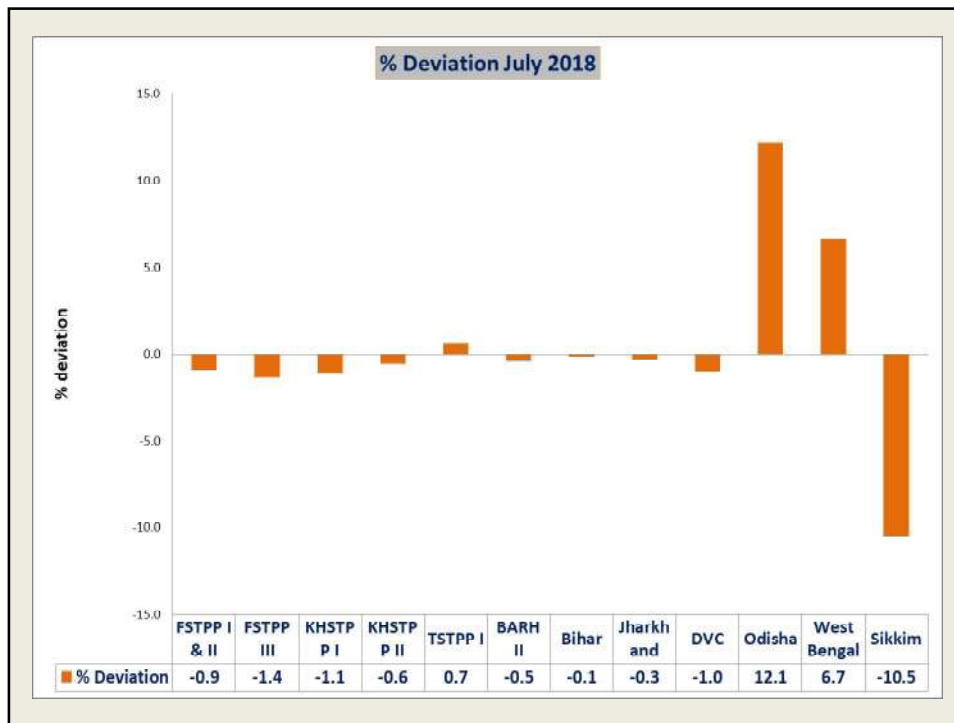
3D VIEW OF ER DEMAND PATTERN (APR-18 to JUL-18)

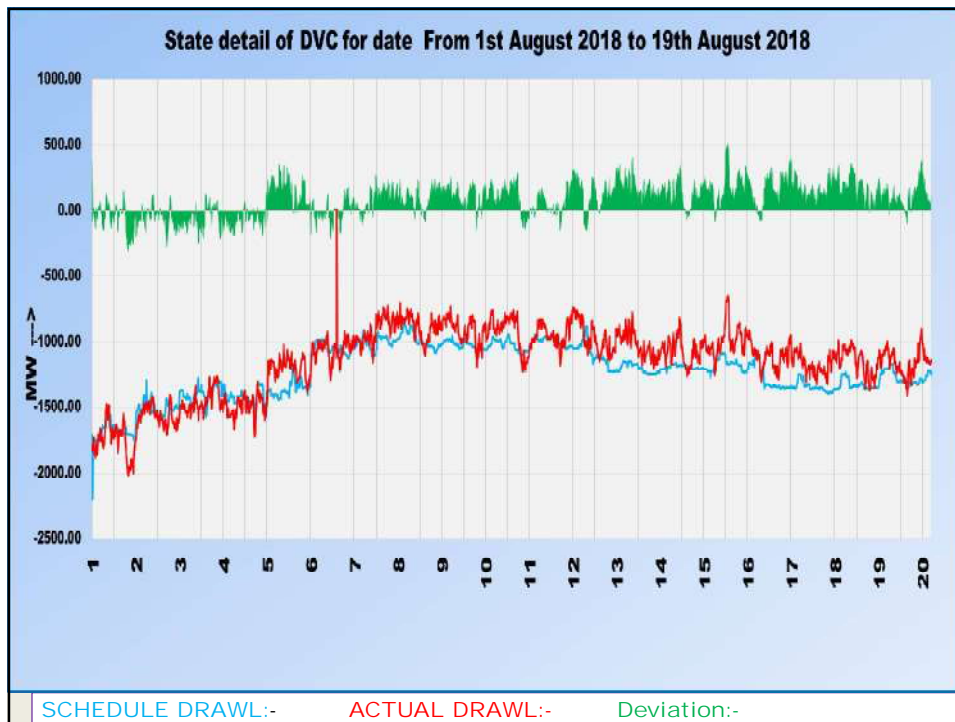
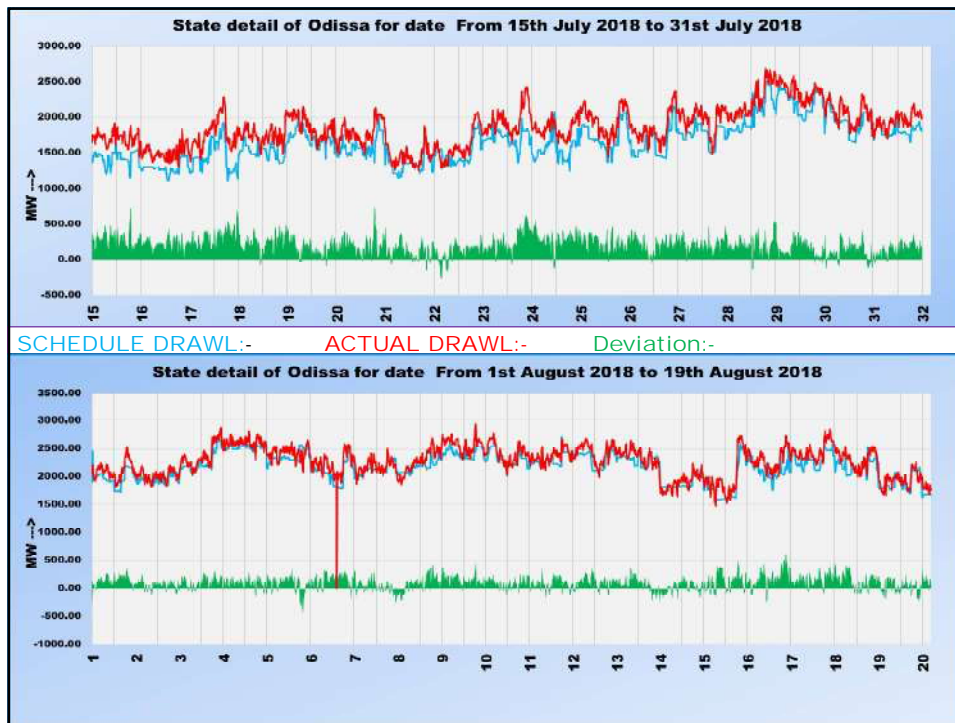


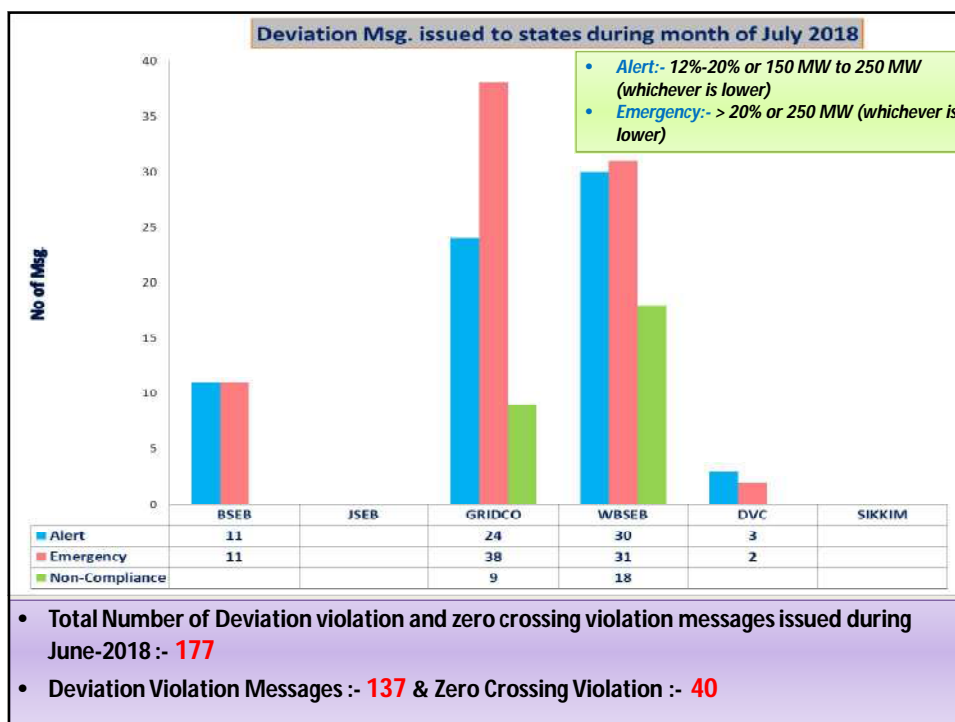


Over Drawl / Under Injection by ER
Entities
Non-compliance of direction issued by
SLDC

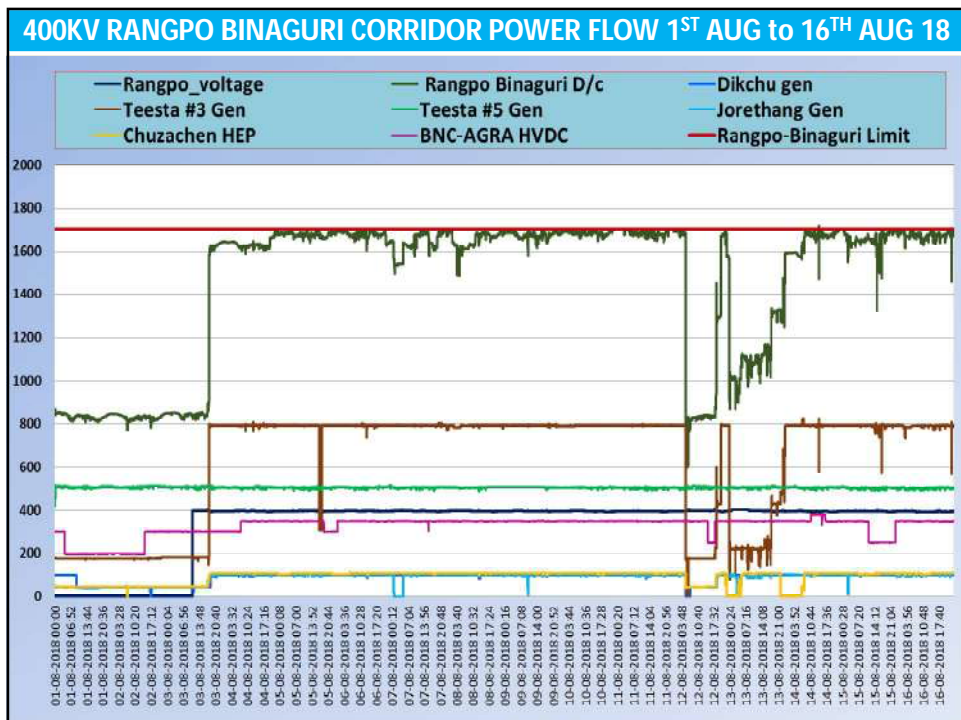
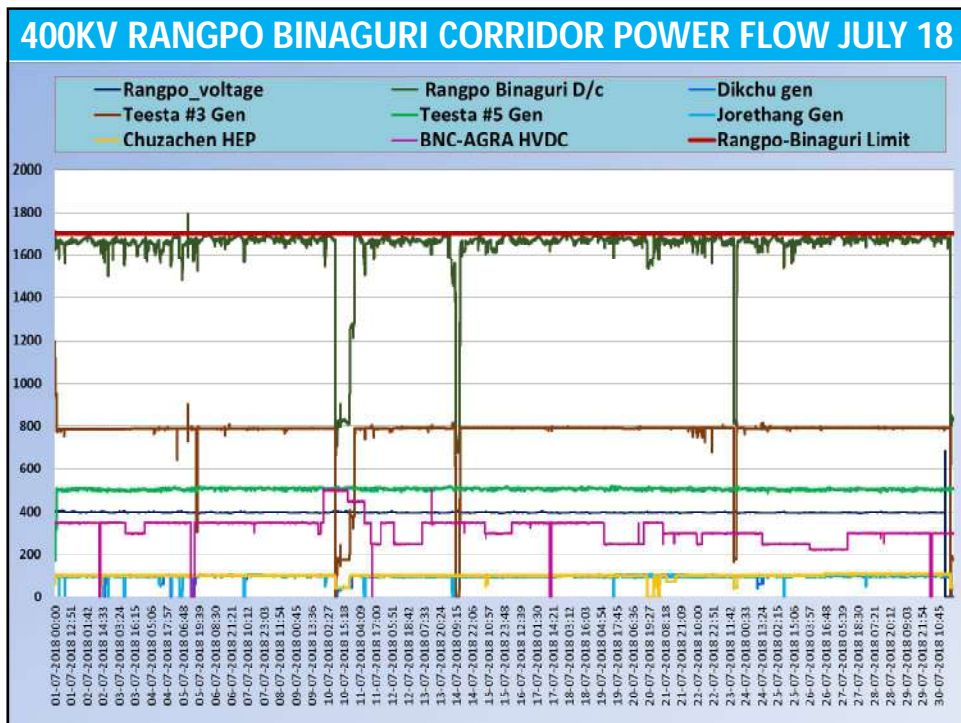
June-2018 Schedule Vs Actual Drawl					
	Schedule (Mu)	Actual (Mu)	Deviation (Mu)	Daily Avg. Dev (Mu)	% Deviation (Daily Average)
Bihar	2682	2678	-4	-0.1	-0.1
Jharkhand	570	568	-2	-0.1	-0.3
DVC	-950	-941	10	0.3	-1.0
Odisha	1171	1313	142	4.6	12.1
West Bengal	1526	1627	102	3.3	6.7
Sikkim	42	38	-4	-0.1	-10.5
FSTPP I & II	916	908	-9	-0.3	-0.9
FSTPP III	283	279	-4	-0.1	-1.4
KHSTPP I	400	396	-4	-0.1	-1.1
KHSTPP II	756	752	-4	-0.1	-0.6
TSTPP I	564	568	4	0.1	0.7
BARH II	843	839	-4	-0.1	-0.5



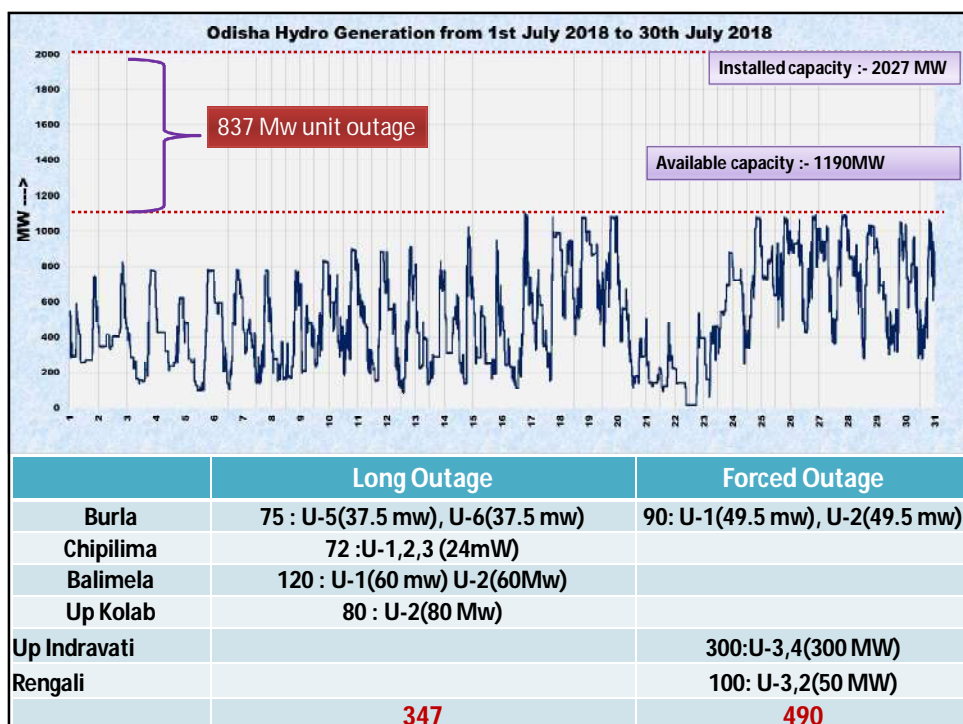


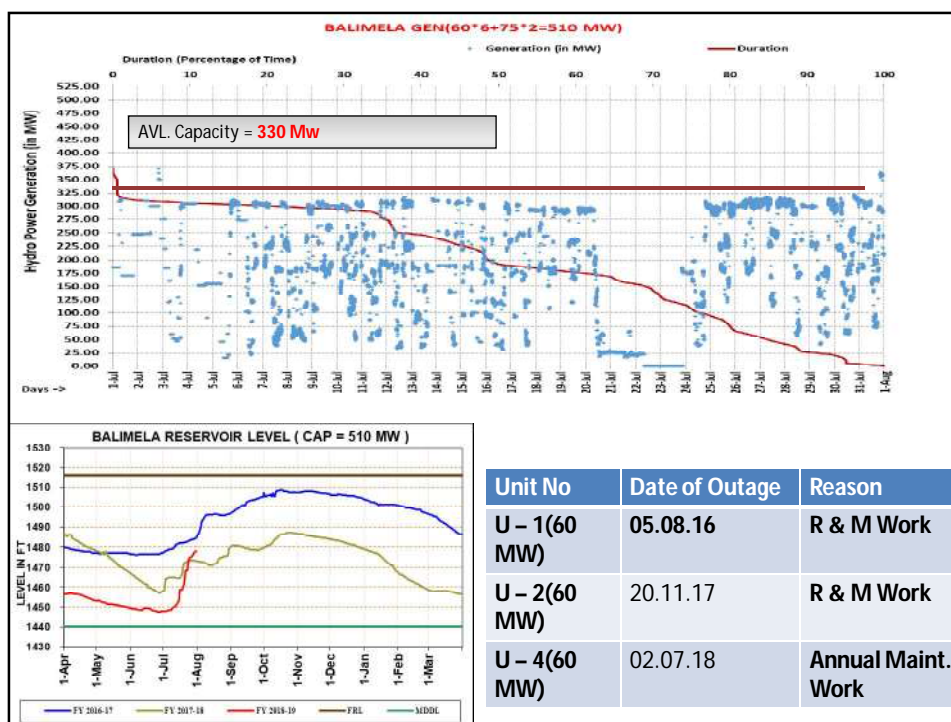
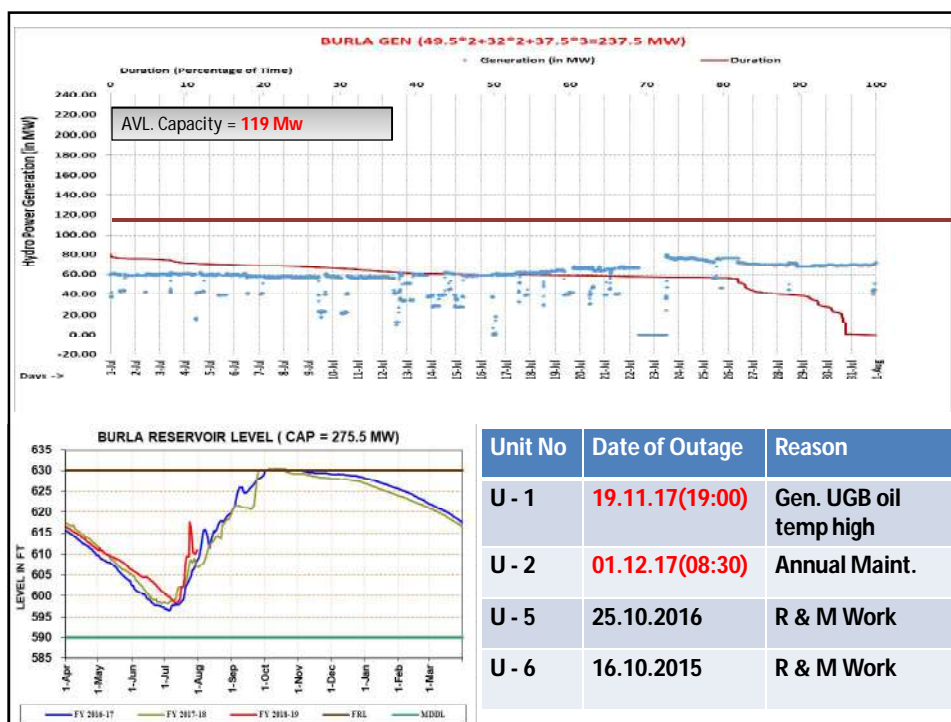


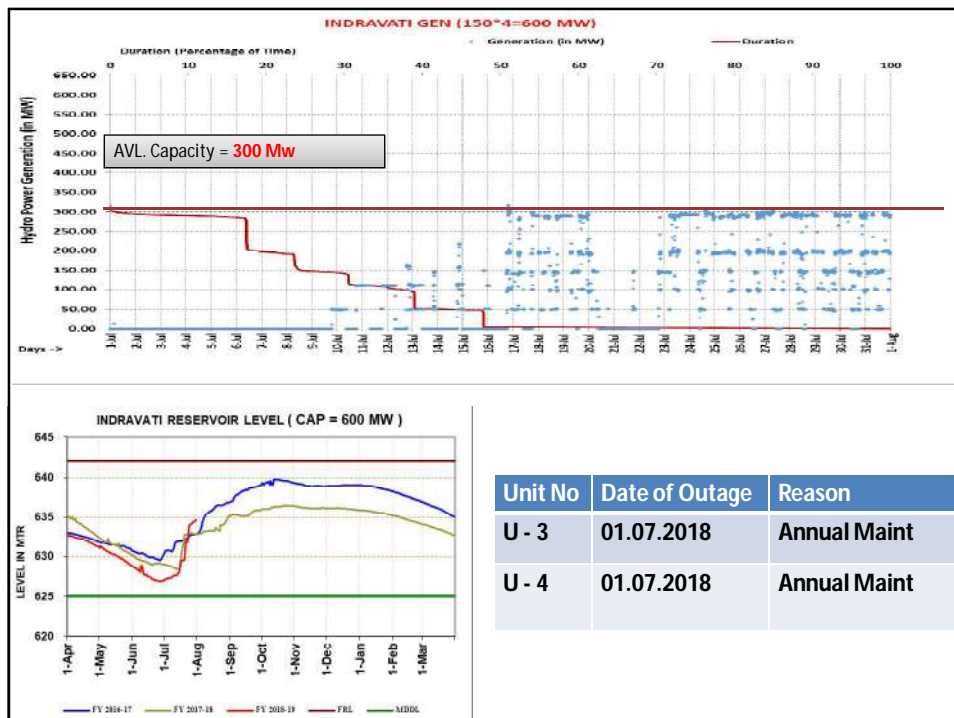
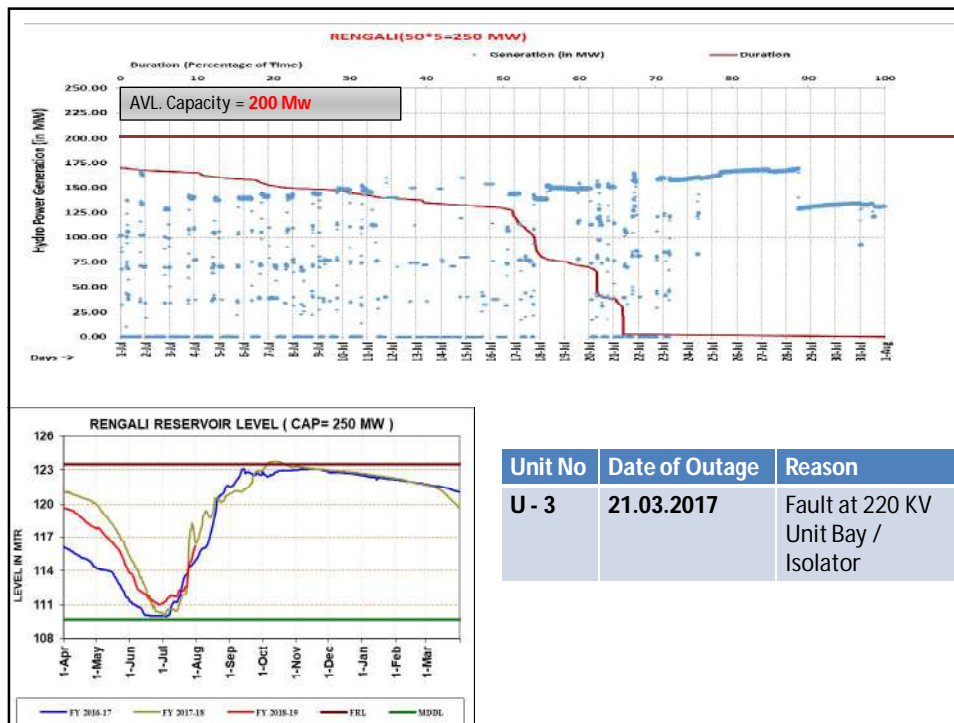
Rangpo – Binaguru – D/C loading
Pattern

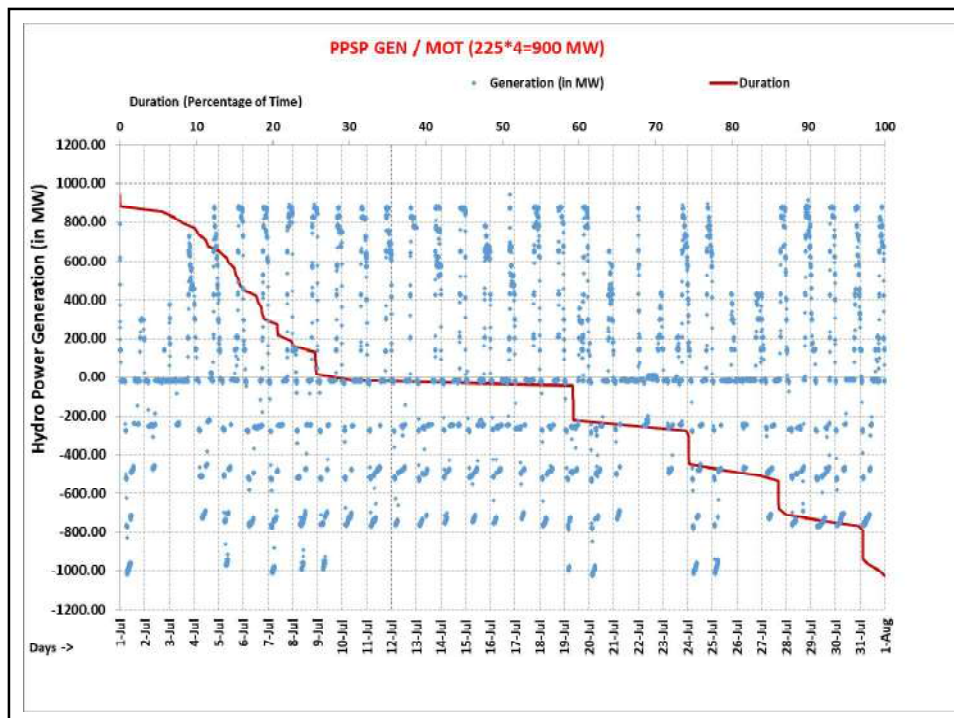
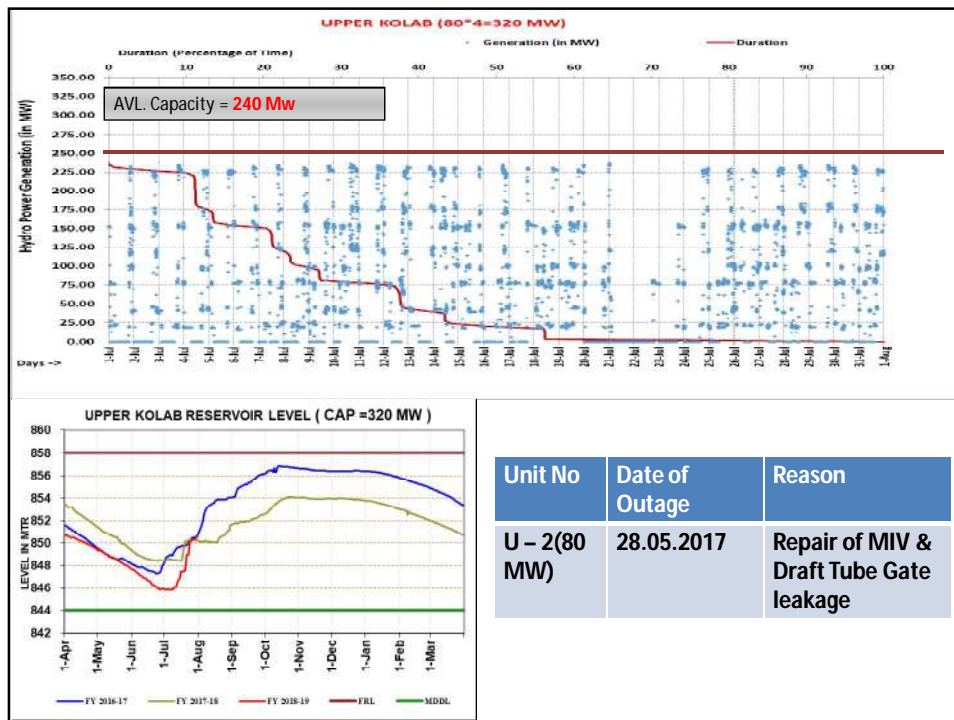


State Hydro Generators Performance









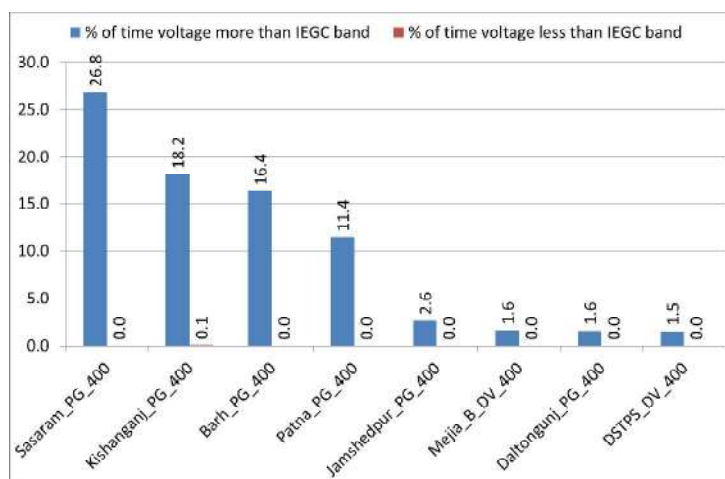
Statistics of VDI of various S/S in Eastern Region for July, 2018

Statistics of VDI of various S/S* in Eastern Region for July, 2018

% of time	No of S/S having voltage higher than IEGC limit for ...	No of S/S having voltage lower than IEGC limit for ...	No of S/S having voltage not in IEGC band for ...
100%	0	0	0
>= 50% but < 100%	0	0	0
>= 30% but < 50%	0	0	0
>= 10% but < 30%	4	0	4

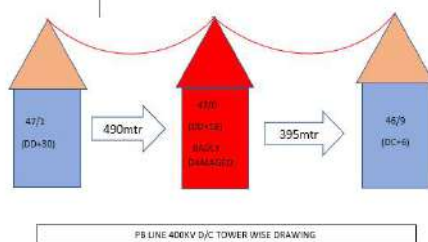
* For all S/S at 400 kV and above voltage level where voltage data were available in SCADA for considerable amount of time

% of time voltage outside IEGC band

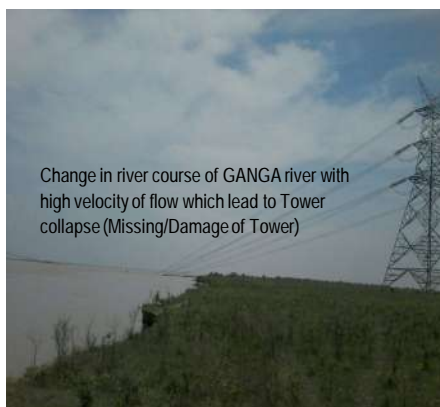


• ENICL Incident report: - 10-Aug-2018

- ENICL 400kV D/C Purnia-Biharsharif line tower collapse on dated 10.08.2018 at 10:28 due to change in course of river Ganga & water flow with high velocity near the tower location which lead to collapse of tower 47/0 tower type is DD+18



Photos & News paper cutting



Change in river course of GANGA river with high velocity of flow which lead to Tower collapse (Missing/Damage of Tower)

होम बिहार बेगूसराय

शाम्हो दियारा के खेतों में फैला गंगा का पानी

हिन्दुस्तान टीव, बेगूसराय

Last updated: Fri, 10 Aug 2018 08:32 PM IST

Google द्वारा विज्ञापन बंद कर दिया गया

यह विज्ञापन देखना बंद करें

Google द्वारा विज्ञापन

प्रखंड के दियारा क्षेत्रों में गंगा नदी के जलस्तर में तेजी से वृद्धि हो रही है। वहीं दूसरी ओर किउल नदी का जलस्तर भी बढ़कर खेतों तक पहुँच गया है। गंगा और किउल नदी के बढ़ने की वजह से परबल, मक्का समेत कई फसल बर्बाद होने लगी है। इस वजह से किसानों की सोकड़ों एकड़ फसल डूबने से लाखों रुपये की लागत फुँजी भी डूब गई है।

किसान बिट्टू कुमार, गुड्डू कुमार, फुलचु बिंद, सुखो बिन्द आदि ने बताया कि जलस्तर बढ़ने से परबल गंगा नदी में समा गया है। इस बार किसानों को लागत फुँजी भी नहीं मिल पायी। किसानों ने प्रखंड के अधिकारियों से मुआवजा की मांग की है।

New paper cutting

Photos before Tower collapse

Sterlite Power



3

Photos of Collapsed/Missing Tower

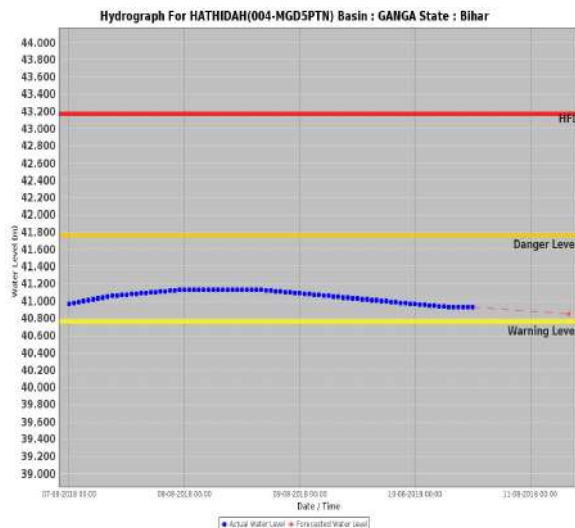
Sterlite Power



4

Hydrograph Report

Sterlite Power



8/10/2018

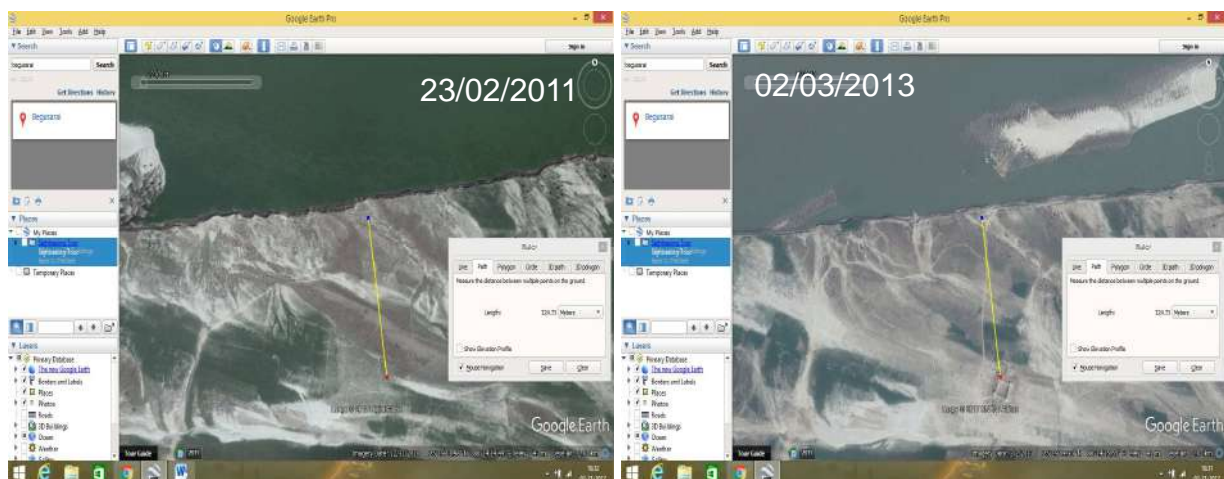
flood-forecasted-site



5

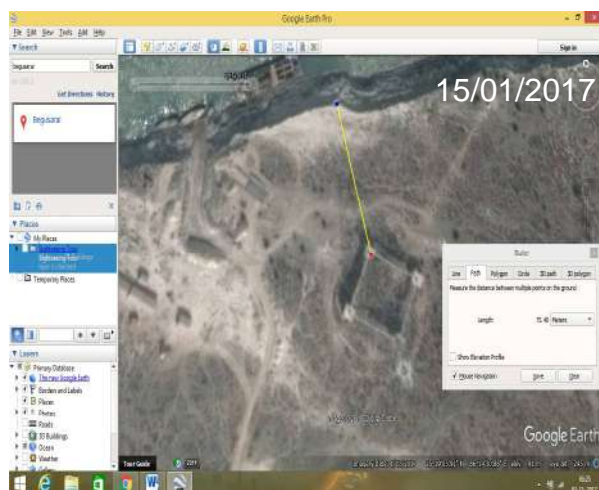
Change in River Course google earth data

Sterlite Power



6

Change in River Course google earth data



Distance between Tower (47/0) & River Bank

23/02/2010 distance is 324Mtr

02/03/2013 distance is 324Mtr

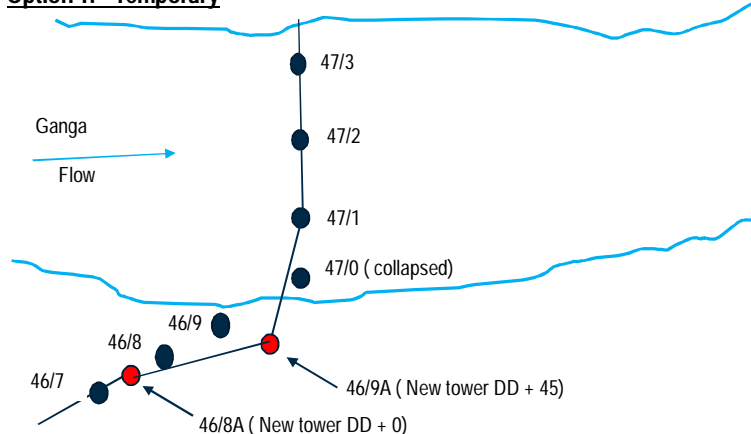
15/01/2017 distance is 75Mtr

10/08/2018 distance is comes inside main river Bed

7

Restoration Option

Option 1: - Temporary

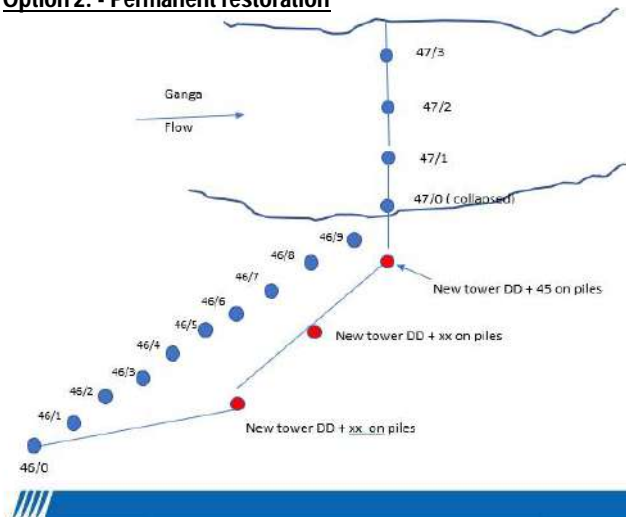


- De-string from 46/9 and dismantle 46/9 as the tower is very unstable.
- Install a DD+45 tower (46/9A) between 46/9 and 46/8 in alignment with 46/7.
- Install a new tower in line with between 46/7 and 46/8 in line with 46/7
- Connect from 47/1 to 46/9A (new), 46/9A to 46/8A and 46/7 to 46/8A (new)
- Only twin HTLS conductor is proposed as it is only temporary arrangement. Twin HTLS is capable of carrying the same load equivalent to Quad AAAC.

8

Restoration Option

Option 2: - Permanent restoration



In view of the fact that there is too much erosion of the river bank due to change of course of river Ganga, the nine towers from 46 to 47 are under threat of collapse in the next few years. To mitigate the same, the Option: -2 scheme is proposed:

- Collapsed tower 47/0 will be bypassed and 47/1 will be connected to new DD + 45 tower. Three new towers on pile foundations may be installed and used to bypass the towers from 46/9 to 46/0.
- Option-2 will take approx. 6month because approval have to be taken for re-routing of line & 3 Pile foundation have to be construct.

Restoration Plan for Option:- 1

Sl. No	Activity	No Of Days
1	Destring of conductor from 46/9 & 47/1 & providing Back Stay to 46/9	2
2	Arrangement of barges & boat for Tower 47/1 & providing Back stay towards collapse tower	7
3	Destring & Dismantling of tower 46/9 & 46/8	7
4	New foundation of tower 46/9A & 46/8A including curing time	15
5	Erection of 46/9A(DD+45) & 46/8A(DD+___) (Including tower checking & Tack welding)	10
6	Stringing between 46/7 to 46/8A	2
7	Stringing between 46/8A to 46/9A & 46/9A to 47/1	7
Total No of Days		50

Kindly Note:- 1) Restoration time is considered subjected to no rain fall & no flood condition.

2) Permanent restoration will take more than 6 month because 3 more pile foundation have to be construct & approval have to be taken for re-routing the Line.

****Detail day wise plan will share to ERPC & ERLDC shortly & weekly DPR will send to ERLDC & ERPC**

Restoration activity Till dated

- Remove the conductor from the river for 47/1 & 46/9 for no further damaged to any other tower.
- Providing Back stay to 46/9 with the help of conductors, along with the approx. 500 sand bag put in the river bank for protection of 46/9 which was approx. 35Mtr away from the Bank.
- Jumper removed from 46/9 for Both the circuit & spacer also removed from both the circuit.



11

Current Situation at site for 46/9 & 46/8



47/0 on 06/08/2018

- Span Between 47/0 & 46/9 is 395Mtr as per Tower Schedule.
- On dated 06.08.2018 distance between 46/9 to River bank is 395Mtr.
- On dated 19.08.2018, distance between 46/9 to River bank is 0.0Mtr.

46/9 on 19/08/2018;
14:0046/9 on 19/08/2018
13:00

12

[illegible]

Annexure-B13

Generation Projection (Oct 2018 - Dec 2018)																	
				Generation declared Commercial from 1st Jan'18 to 30th June'18					Generation declared/expected to be declared Commercial from 1st July'18 to 30th Sep'18								
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/ PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)
1	West Bengal	ER	4847											4847			4847
2	Odisha	ER	2628											2628			2628
3	Bihar	ER	186						Brauni Extn	8	250	164	164	350			350
4	Jharkhand	ER	428											428			428
5	Sikkim	ER	0											0			0
6	Chujachan	ER	109											109			109
7	DVC	ER	3736											3736			3736
8	Durgapur Steel	ER															
9	Koderma TPP	ER															
10	Bokaro TPS	ER															
11	Raghunathpur	ER															
12	MPL	ER	955											955			955
13	Teesta V	ER	533											533			533
14	Kahalgaoon	ER	2205											2205	As per NTPC	2178	2178
15	Farakka	ER	1912											1912		1968	1968
16	Talcher	ER	959											959			959
17	Rangit	ER	62											62			62
18	Adhunik Power	ER	256											256			256
19	Barh	ER	1255											1255	As per data givrn by NTPC	1057	1057

Generation Projection (Oct 2018 - Dec 2018)

				Generation declared Commercial from 1st Jan'18 to 30th June'18					Generation declared/expected to be declared Commercial from 1st July'18 to 30th Sep'18									
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/ PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand	
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)	
20	Kamalanga TPP (GMR)	ER	629											629			629	
21	JITPL	ER	938											938			938	
22	Jorethang	ER	73											73			73	
23	Bhutan	ER	851											851			851	
24	Teesta-III	ER	962											962			962	
		ER																
		ER																
		ER																
		ER																
		ER																
25	Dikchu HEP	ER	100											100			100	
26	Nabinagar BRBCL	ER	273	Nabinagar BRBCL	2	250	164	164	Nabinagar BRBCL	3	250	164	164	600			600	
27	Tashiding HEP	ER	83											83			83	
	TOTAL		23980						164						327	24471		24302

Note:

- Projections are based on monthly maximum injection in the last 3 years from actual metered data.
- Generation forecast has been done based on the following criteria
 - If there is an increasing trend then last year average generation has been considered
 - Otherwise average of past three year average generation has been considered
- In case of new generators where past data was not available following has been assumed
 - 0.8 plf for hydro generators
 - 0.7 plf for thermal generators.
 - 0.3 plf for gas stations

DEMAND FORECAST USING PAST 3 YEARS DATA (Oct 2018 - Dec 2018)																
		2015-16								1	2	3	4	Data given by DICs	Comments	
	2015-16			2016-17			2017-18									
	Oct'15	Nov'15	Dec'15	Oct'16	Nov'16	Dec'16	Oct'17	Nov'17	Dec'17	2015-16 Average	2016-17Average	2017-18 Average	Projected Demand for (Oct 2018 - Dec 2018) before normalization			
Bihar	3,435	3,313	3,407	3,702	3,759	3,534	4,515	3,917	4,038	3,385	3,665	4,157	4,507			
DVC	2,324	2,310	2,321	2,450	2,357	2,507	2,573	2,731	2,737	2,318	2,438	2,680	2,841			
Jharkhand	1,103	1,127	1,101	1,172	1,168	1,194	1,206	1,245	1,200	1,110	1,178	1,217	1,275			
Odisha	4,015	3,884	3,759	3,920	3,788	3,837	4,370	4,108	4,151	3,886	3,848	4,210	4,305			
West Bengal	7,755	6,935	6,478	7,886	7,402	6,207	7,777	6,610	6,045	7,056	7,165	6,811	6,765			
Sikkim	95	95	108	92	92	91	90	96	94	99	92	93	89			

Notes

1. Projections are based on the past 3 years' monthly Peak Demand Metdata available on the website of CEA
2. The above projections are being done for financial year 2018-2019 (Q3) i.e. Oct 2018 to Dec 2018
3. Projections are being done based on the forecast function available in MS Office Excel
4. CEA Reports can be accessed from the following links:
http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-10.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-11.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-12.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-10.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-11.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-12.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2015/psp_peak-10.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2015/psp_peak-11.pdf
http://www.cea.nic.in/reports/monthly/powersupply/2015/psp_peak-12.pdf

Eastern Regional Power Committee, Kolkata

Summary of the Study Committee Report on Review of Talcher-Kolar SPS

As decided in 37th TCC and ERPC meeting of Eastern region held on 16th & 17th March 2018, a special meeting was convened at ERPC, Kolkata to discuss the issues associated with HVDC Talcher-Kolar SPS on 6th April 2018. The meeting focused on the issue of 400 MW generation reduction at GMR and JITPL in case of any pole tripping of HVDC Talcher-Kolar. During the meeting, it was decided to constitute a Committee with the members from NLDC, ERLDC, ERPC, Odisha, JITPL and GMR to conduct a detailed study and find out a possible solution.

Accordingly, a small group was formed by ERPC and its first meeting was held at ERPC, Kolkata on 18th April 2018. Detailed report of the study committee is enclosed at **Annexure-A**. Highlights of the findings are given as follows:

1. Two case studies were simulated in PSS/E software considering the updated network of the all India grid as follows:

Case study 1: Limiting case of SR import (Power flow of around 2500 MW from WR to ER direction) for analyzing the contingency impact on Vemagiri ICTs.

Case Study 2: Power Flow from ER to WR direction of around 1300 MW to analyze the contingency impact on 400 kV Talcher-Meramundali.

2. The following contingencies were simulated in order to check the network security:

Contingency1: Tripping of HVDC Talcher-Kolar one pole and other pole in the Metallic return mode

Contingency2: Tripping of HVDC Talcher-Kolar one pole and other pole in ground return mode (HVDC power Order 150 MW) or HVDC Talcher-Kolar Bipole tripping.

Contingency 3: Tripping of one 765/400 kV 1500 MVA ICT of Vemagiri

Contingency 4: Tripping of 400 kV Talcher-Angul circuit

3. Major observations derived from the study results are as follows:

- i. After commissioning of new transmission elements in NEW as well as in SR grid, the sensitivity of Talcher-Kolar pole tripping on 765 kV Solapur-Raichur

- D/C(WR→SR corridor) has been reduced and shifted to 765 kV Angul-Srikakulam-Vemagiri D/C(ER→SR corridor). ER-SR path forms the weak link in power transfer to SR.
- ii. The limiting constraint in import of Southern Region is loading on 2x1500 MVA, 765/400 kV Vemagiri ICTs which is not satisfying N-1 reliability. The flow on 765/400 kV Vemagiri ICTs exceeds the n-1 security limit under both the contingencies (Contingency 1 & 2 as mentioned above) and need corrective actions.
 - iii. Key sensitivities as observed from study are as below:
 - a. N-1 sensitivity (distribution factor) of 765/400 kV Vemagiri ICTs = 82%
 - b. Sensitivity to loading on Vemagiri ICTs :
 - Reduction of Talcher generation = 9%
 - Reduction of GMR and JITPL generation = 12% on each
 - Reduction of load in SR with corresponding frequency response = 19%
 - iv. Normally the power flow in ER-WR corridor is from WR to ER. Under such condition, it is observed that
 - a. In case of single pole tripping of Talcher – Kolar, generation reduction of at least 600 MW is required in Eastern region at Talcher /GMR / JITPL along with load reduction of 875 MW (Group-1 load) in Southern Region to satisfy N-1 reliability of 765/400 kV Vemagiri(PG) ICTs.
 - b. In case of bipole tripping of Talcher – Kolar, generation reduction of at least 1600 MW is required in Eastern region at Talcher / GMR / JITPL along with load reduction of 1655 MW in Southern Region (Group-1 and Group-2 loads) to satisfy N-1 reliability of 765/400 kV Vemagiri(PG) ICTs.
 - v. When the Power Flow is in ER to WR direction (Case Study 2), the limiting constraint is the loading of 400 kV Talcher-Meramundali which is not satisfying the N-1 reliability after the contingency 2. To bring the line loadings within thermal limits, at least 800 MW of generation reduction is required at Talcher /GMR /JITPL in Eastern region. Power flows are within the safe limit in the Eastern Region Network post this quantum of generation reduction. On 16th May event of HVDC one pole tripping and other pole going to ground return mode, the existing quantum of generation reduction were found to be insufficient to reduce the loading on these circuits (refer detailed report).
4. Committee observed that the loading of 765/400 kV Vemagiri ICTs is significant even during normal operating conditions of peak load in Southern Region because of number of 400 kV outlets connected from 765/400 kV Vemagiri S/s. As per the SCADA data, Power flow through 2 x 1500 MVA, 765/400 kV ICTs at Vemagiri S/s was above 1000 MW for a large duration of time during March 2018 which is not satisfying N-1 reliability (refer Fig. 4 of detailed report). The committee noted that loading on 765/400 kV Vemagiri(PG) ICTs were close to N-1 limits in peak hours of 12th April 2018 and 16th April 2018. On these two

occasions mentioned, prevailing low voltages in Southern region prevented utilization of additional overload margins on the Talcher – Kolar HVDC link to control loading on 765/400 kV Vemagiri(PG) ICTs. Any contingencies on HVDC Talcher – Kolar link would have severely compromise grid security.

5. Committee observed that existing load Shedding scheme of Talcher-Kolar SPS in Southern Region need to have higher sensitivity on 765/400 kV Vemagiri ICTs to reduce its loading during pole contingency. Therefore the existing load shedding scheme needs to be re-distributed. This will help in ensuring the higher reliability margin for N-1 security at 2 x 1500 MVA, 765/400 kV ICTs at Vemagiri. The issue may be discussed with SRPC and SRLDC.
The existing generation reduction schemes at Talcher / GMR / JITPL in Eastern Region need to be in service to ensure frequency balance in All India grid and prevent injection of additional power through WR-SR path.
6. During the review meeting regarding SPS on Talcher-Kolar, NLDC intimated that 765 kV Vemagiri – Chilikaluripeta D/C lines alongwith downstream 400 kV network from Chilikaluripeta, and HVDC Raigarh – Pugalur have been put on fast track, and are expected by April 2019. These additional corridors may relieve the constraint on Vemagiri ICTs in case of tripping of HVDC Talcher – Kolar.
7. **Based on the report and discussion held , It is recommended to adopt the remedial action as proposed below:**
 - a. For single-pole tripping and other pole in metallic return: Faster generation reduction in Eastern Region at Talcher Stage 2, GMR and JITPL to the tune of 600 MW along with load shedding of 875 MW in Southern Region. (Sensitivity of Generation reduction for relieving the loading of Vemagiri ICTs is GMR: 12 % ; JITPL 12 %; Talcher Stage 2 : 9 %)
 - b. For bipole tripping or One pole tripping and other pole going to ground return mode: Generation reduction required in Eastern Region is 1600 MW at Talcher stage 2, GMR and JITPL with 1655 MW Load Shedding in Southern Region. In this case, it is desirable to trip two units at Talcher Stage 2 to get the instantaneous reduction of more than 800 MW followed by faster backing down at other units of Talcher stg-II, GMR and JITPL.
 - c. Redistribution of Loads in the existing load shedding scheme of Talcher-Kolar SPS in Southern Region in order to have higher sensitivity on loading of 1500 MVA, 765/400 kV ICTs at Vemagiri as it provides the low impedance path for power transfer for any contingencies in ER-SR Path.

The above proposal will help in safeguarding the grid by ensuring the N-1 reliability under all contingencies. Further, the proposal is simple yet a comprehensive and effective System for taking care of HVDC Talcher-Kolar bipole contingency under various scenarios.

The committee thus proposes that the SPS schemes related to tripping of one pole or both poles of HVDC Talcher – Kolar bipole may be modified as per observation no. 7.a, 7.b and 7.c above, and implemented in place of existing SPS 450 / SPS 1000 after discussion in ERPC and SRPC fora.

THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED



(A Govt. of West Bengal Enterprise)

SAGARDIGHI THERMAL POWER PROJECT

P.O. Monigram, P.S. Sagardighi, Dist. Murshidabad West Bengal, Pin: 742237

Phone No.: (03483) 237003, EPBAX- 237005, 237006, Fax: 237002

Memo No: WBPDC/SgTPP/GM

To

The Executive Director (ERLDC)

14, Golf Club Road

Tollygunge, Kol-700033

Date:

8 AUG 2018

Signature

4346

Mr P. Anupla
Dam Cos
13/08/18

Ref: 1) Letter No. ERLDC/SS/2018/107 dated 10.04.18

2) Memo No. WBPDC/SgTPP/GM/4404 dated 01.05.18

Sub: Action taken report for oscillation of load of SGTPP #4 on 05.04.18

Respected Sir,

This is for your kind information that the following job/activity has been taken up and completed successfully within 06/07/18 as per remedial action to avoid & eradicate subject oscillation:

- 1) Removing of Control valve Pilot (HP & IP) & cleaning thoroughly
- 2) Line & hydraulic system flushing by running control fluid pump, cleaning of all filters
- 3) Control valves calibration (HP & IP) checked jointly with M/S BHEL & found OK
- 4) HP bypass valve (BP-1) checking & passing problem rectification

Schedule periodic checking & monitoring of control fluid quality (TAN, NAS & moisture content) has already been taken up for cleaning / replacement program of filter as per schedule.

Unit #4 was put into bus on 09/07/18. M/c was synchronized twice after that & now in running condition. Till date no such oscillation was observed.

Thanking you.

Yours faithfully,

Sd/-

(A. Datta Roy)

General Manager

SgTPP, WBPDC

GM/OS -
away from here to me
and get it endroos in
joint - see me
03/08/18

Enclosure: Copy of calibration report of turbine control valve.

Memo No: WBPDC/SgTPP/GM/8283

Date: 03.08.2018

Copy to:

1. The Director (O&M), Corporate Office.
2. The Executive Director (OS), Corporate Office.
3. The Executive Director (PSER), BHEL.
4. The General Manager (OS), Corporate
4. The Chief Engineer, SLDC, Danesh Seikh Lane, Andul Road, Howrah
5. The Dy. General Manager (IC-O&M), SgTPP/WBPDC.
6. Office Copy

Cy 03/8/18
General Manager
SgTPP/WBPDC

Corporate Identity No.: U40104WB1985SGC039154

Regd. & Corporate Office: "Bidyut Unnayan Bhavan",

Plot No: 3/C, LA Block, Sector - III, Salt Lake City, Kolkata - 700 098

Detail Calibration Report, Mode-Normal

Governing system valve calibration jointly done with M/s BHEL on 06.07.2018

EHTC Command(%)	HP Sec. Oil Pressure (kg/cm2)	HPCV-1 Pos. (mm)	HPCV-2 Pos. (mm)	IP Sec. Oil Pressure (kg/cm2)	IPCV-1 Pos. (mm)	IPCV-2 Pos. (mm)
0	1.6	0	0	0.3	0	0
8	3.0	0	0	2.2	0	0
12	3.1+	2	1	3.4	0	0
15	3.2	3	2	3.55	1	2
20	3.3	4	4	3.8	7	8
25	3.4	6	6	4.0	15	16
30	3.55	8	8	4.3	25	26
35	3.65	10	10	4.5	74	76
40	3.75	11	12	4.75	150	151
45	3.85	13	14	5.0	172	172
50	3.95	15	15			
60	4.2	18	19			
70	4.4	24	24			
80	4.6	33	33			
90	4.8	73	75			
95	4.9	95	97			
100	5.0	100	100			
90	4.85	74	73			
80	4.6	33	35			
70	4.4	23	25			
60	4.2	18	20			
50	3.95	14	15			
45	3.85	12	13	4.95	172	172
40	3.75	11	11	4.75	142	148
35	3.65	9	9	4.5	68	72
30	3.55	7	8	4.25	24	25
25	3.4	6	6	4.0	15	16
20	3.3	4	4	3.8	7	8
15	3.2	2	2	3.6	1	2
12	3.1	1	1	3.4	0	0
8	3.0	0	0	2.2	0	0

Dr.

A. West Bengal

Date	Time	West Bengal O/D (MW)	Frequency (Hz)	ADMS Optd (Y/N)	Relief (MW)
06-07-18	06:13 to 06:15	170-180	49.69		
06-07-18	20:25 to 20:26	180-200	49.68		
10-07-18	19:27 to 19:32	188-224	49.68		
18-07-18	19:13 to 19:17	336-348	49.65		
19-07-18	19:25 to 19:33	395-495	49.62		

B. DVC

Date	Time	West Bengal O/D (MW)	Frequency (Hz)	ADMS Optd (Y/N)	Relief (MW)
25-07-18	19:19-19:20	170	49.69		

C. Odisha

Date	Time	West Bengal O/D (MW)	Frequency (Hz)
10-07-18	19:27 to 19:32	158-230	49.68
10-07-18	19:55 to 19:56	314-331	49.68
18-07-18	19:15 to 19:17	247-307	49.65
18-07-18	19:40 to 19:45	160-263	49.65
27-07-18	06:14 to 06:18	160-235	49.68

D. Bihar

Date	Time	West Bengal O/D (MW)	Frequency (Hz)
10-07-18	19:27 to 19:32	180-275	49.68
10-07-18	19:55 to 19:56	314-331	49.68
18-07-18	19:15 to 19:17	247-307	49.65
18-07-18	19:40 to 19:45	160-263	49.65
27-07-18	06:14 to 06:18	160-235	49.68

E. Jharkhand

Date	Time	West Bengal O/D (MW)	Frequency (Hz)
18-07-18	19:40 to 19:45	109-111	49.65

Central Sector

➤ **Prolonged outage of Data:**

- Lalmatia 220kV NTPC (since 01-01-2018)
 - NTPC may update
- DMTCL Motihari 400kV (since 01-07-2018)
 - Motihari – Barh PLCC is not in service. Will be restored with restoration of line.

➤ **Elementary Data outage:**

- Barh NTPC (status and Isolator of Patna 1 & 2 , Kahalgaon #2 feeder) --- **Resolved**

➤ **VOIP for following station not yet provided:**

- Indravati (Communication established, VOIP Handset to be installed)
- Jeypore (Communication established, VOIP Handset to be installed)

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.
 - Dharampur 220kV :Communication link issue.
 - Hura 220kV : Communication link issue.
 - Barasat 220 Communication link issue.
 - Egra 220 : Communication link issue.
 - Dalkhola 220kV
 - Bantala 220kV : Communication link issue.
 - Alipurduar 220kV: Communication link yet to be established.

Non availability of SCADA data above 220 kV Level

BIHAR

- Kishanganj 220kV: (Not yet integrated, OPGW termination issue)
- Sonenagar 220kV: (Intermittent, FOTE issue)

Odisha

- Nalco 220kV : **Most of CB and Isolator data not available**
- Jindal Steel and Power Limited (JSPL): **Most of CB and Isolator data not available**

JHARKHAND

- Hatia New 220 :Data not reporting
- Dumka 220 :Not yet integrated

DVC

- TISCO 400kV : Not reporting since 14-07-2018.

Installation of Meters at ICTs at PGCIL substations in ER & Odhisa Project

Location	Bay	S No	Time Drift	Whether drifted Meter replaced (Y/N)	Status of meters on both side at ICTs
ALIPURDUAR(PG)	220 KV SIDE ICT-1	ER-1463-A	-	-	All done
ALIPURDUAR(PG)	400 KV SIDE OF 400/220 ICT-2	ER-1469-A	-	-	
ALIPURDUAR(PG)	220 KV SIDE OF 400/220 ICT-2	ER-1467-A	-	-	
ALIPURDUAR(PG)	400 KV SIDE OF 400/220 ICT-1	ER-1465-A	-	-	
ARA(PG)	220 KV SIDE OF 160 MVA ICT-3	NP-8860-A	11	NO	IV side Pending
ARAH(PG)	220/132 KV ICT-1	NP-6055-A	11	NO	
ARAH(PG)	220/132 KV ICT-2	NP-6059-A	-	-	
BANKA(PG)	400 KV SIDE 400/132 200 MVA ICT-1	ER-1349-A	-	-	IV side Pending
BANKA(PG)	400 KV SIDE 400/132 200 MVA ICT-2	ER-1347-A	-	-	
BARIPADA(PG)	220KV SIDE OF BARIPADA 220/132 KV ICT -1	NP-5911-A	13	NO	IV side Pending
BARIPADA(PG)	220KV SIDE OF BARIPADA 220/132 KV ICT -2	NP-5905-A	-	-	
BARIPADA(PG)	400 KV SIDE OF 500 MVA ICT-3	NP-8074-A	-	-	IV side Pending
BIHARSHARIFF(PG)	400/220 KV ICT-1	NP-6063-A	-	-	All done
BIHARSHARIFF(PG)	400/220 KV ICT-2	NP-6069-A	-	-	
BIHARSHARIFF(PG)	400/220 KV ICT-3	NP-6068-A	-	-	
BINAGURI(PG)	220 KV SIDE OF 400/220 KV ICT-1	NP-5883-A	8	NO	All done
BINAGURI(PG)	220 KV SIDE OF 400/220 KV ICT-2	NP-5890-A	-	-	
BINAGURI(PG)	400 KV SIDE OF 400/220 KV ICT-1	NP-8805-A	-	-	
BINAGURI(PG)	400 KV SIDE OF 400/220 KV ICT-2	ER-1539-A	-	-	
BIRPARA(PG)	220 KV SIDE OF 220/132 160 MVA ICT-2	NP-5891-A	-	-	IV pending
BIRPARA(PG)	220 KV SIDE OF 220/132 160 MVA ICT-1	NP-6474-A	Meter Incorporated	NO	
BOLANGIR(PG)	400 KV BOLANGIR ICT-II	NP-7536-A	19	NO	IV pending
BOLANGIR(PG)	400 KV BOLANGIR ICT-I	NP-7560-A	20	NO	
CHAIBASA(PG)	400 KV SIDE OF 400/220 ICT-2	NP-8678-A	-8	NO	IV pending
CHAIBASA(PG)	400 KV SIDE OF 400/220 ICT-1	NP-8637-A	-	-	
DALTONGANJ(PG)	400 KV SIDE OF 315 MVA DALTONGANJ ICT-1	ER-1197-A	-	-	IV pending
DALTONGANJ(PG)	220 KV SIDE OF 160 MVA 220/132 DALTONGANJ ICT-1	ER-1196-A	-	-	
DALTONGANJ(PG)	220 KV SIDE OF DALTONGANJ 220/132 ICT-2	ER-1191-A	-	-	
DARBHANGA(DMTCL)	400 KV SIDE OF DARBHANGA 500 MVA ICT-1	ER-1274-A	-	-	
DARBHANGA(DMTCL)	400 KV SIDE OF DARBHANGA 500 MVA ICT-2	ER-1275-A	-	-	All done
DARBHANGA(DMTCL)	220 KV SIDE OF DARBHANGA 500 MVA ICT-1	ER-1271-A	-	-	
DARBHANGA(DMTCL)	220 KV SIDE OF DARBHANGA 500 MVA ICT-2	ER-1276-A	-	-	
DURGAPUR(PG)	400/220 KV ICT -1	NP-8803-A	-	-	
DURGAPUR(PG)	400/220 KV ICT -2	NP-8804-A	-	-	All done
DURGAPUR(PG)	220 KV SIDE OF 400/220 315 MVA ICT-1	ER-1491-A	-	-	
DURGAPUR(PG)	220 KV SIDE OF 400/220 315 MVA ICT-2	ER-1496-A	-	-	
GANGTOK(PG)	132KV SIDE 132/66 KV ICT-1	NP-6029-A	8	NO	All done
GANGTOK(PG)	66KV SIDE 132/66 KV ICT-1	NP-6030-A	9	NO	
GANGTOK(PG)	132KV SIDE 132/66 KV ICT-2	NP-6028-A	17	NO	
GANGTOK(PG)	66KV SIDE 132/66 KV ICT-2	NP-6025-A	18	NO	
GAYA(PG)	400 KV SIDE 500 MVA GAYA ICT-2	NP-7858-A	7	NO	IV pending
GAYA(PG)	400 KV SIDE 500 MVA GAYA ICT-1	NP-7453-A	13	NO	
JAMSHEDPUR(PG)	400/220 KV ICT-1	NP-6106-A	-	-	All done
JAMSHEDPUR(PG)	400/220 KV ICT-2	NP-6105-A	6	NO	
JAMSHEDPUR(PG)	400/220 KV ICT-3	ER-1297-A	-	-	
JEYPORE(PG)	400/220 KV ICT -1	NP-5955-A	11	NO	All done
JEYPORE(PG)	400/220 KV ICT -2	NP-5956-A	16	NO	
JEYPORE(PG)	220 KV SIDE OF 315 MVA JEYPORE-ICT-1	ER-1566-A	-	-	
JEYPORE(PG)	220 KV SIDE OF 315 MVA JEYPORE-ICT-2	ER-1570-A	-	-	
KEONJHAR(PG)	HV SIDE OF 315 MVA 400/220 ICT-1	NP-7546-A	17	NO	IV pending
KEONJHAR(PG)	HV SIDE OF 315 MVA 400/220 ICT-2	NP-7549-A	13	NO	
KISHANAGNJ(PG)	400 KV SIDE OF 500 MVA ICT-1	NP-7013-A	-	-	IV pending
KISHANAGNJ(PG)	400 KV SIDE OF 500 MVA ICT-2	NP-8858-A	-	-	
LAKHISARAI(PG)	400 KV SIDE OF 200 MVA ICT-2	NP-7889-A	-	-	IV pending
LAKHISARAI(PG)	400 KV SIDE OF 200 MVA ICT-1	NP-7429-A	-	-	
MAITHON(PG)	400/220 KV ICT -1	NP-6453-A	7	NO	All done
MAITHON(PG)	400/220 KV ICT -2	NP-6449-A	16	NO	
MAITHON(PG)	400 KV SIDE OF 500 MVA ICT-3	NP-7401-A	-	-	
MAITHON(PG)	220KV SIDE OF 400/220 500 MVA ICT-1	ER-1045-A	-	-	
MALDA(PG)	220KV SIDE OF 400/220 500 MVA ICT-2	ER-1010-A	-	-	All done
MALDA(PG)	220 KV SIDE OF 400/220 MALDA ICT-1	NP-7925-A	18	NO	
MALDA(PG)	220 KV SIDE OF 160 MVA ICT-1	NP-7978-A	17	NO	
MALDA(PG)	220 KV SIDE OF 160 MVA ICT-2	ER-1103-A	-	-	
MALDA(PG)	220 KV SIDE OF 400/220 ICT-2	NP-7926-A	18	NO	
MALDA(PG)	400 KV SIDE OF 400/220 315MVA ICT-3	ER-1086-A	-	-	
MALDA(PG)	400 KV SIDE OF 400/220 315MVA ICT-5	ER-1472-A	-	-	
MALDA(PG)	220 KV SIDE OF 220/132 160MVA ICT-1	ER-1466-A	-	-	
MALDA(PG)	220 KV SIDE OF 220/132 160MVA ICT-2	NP-7977-A	15	NO	
MALDA(PG)	220 KV SIDE OF 220/132 50MVA ICT-4	ER-1082-A	-	-	
MALDA(PG)	220 KV SIDE OF 50 MVA 220/132 MALDA ICT-3	ER-1511-A	-	-	
MOTIHARI(DMTCL)	HV SIDE OF 400/132 ICT-1	ER-1247-A	-	-	All done
MOTIHARI(DMTCL)	HV SIDE OF 400/132 ICT-2	ER-1243-A	-	-	

MOTIHARI(DMTCL)	LV SIDE OF 400/132 ICT-1	ER-1174-A	-	-	
MOTIHARI(DMTCL)	LV SIDE OF 400/132 ICT-2	ER-1179-A	-	-	All done
MUZAFFARPUR(PG)	400/220KV ICT-2	NP-5073-A	-	-	
MUZAFFARPUR(PG)	400/220KV ICT-1	NP-9983-A	-	-	
MUZAFFARPUR(PG)	400 KV SIDE OF 500 MVA ICT-3	NP-8874-A	-	-	IV pending
MUZAFFARPUR(PG)	220 KV SIDE OF 220/132 100 MVA ICT-1 &2 (M)	NP-8871-A	-	-	
MUZAFFARPUR(PG)	220 KV SIDE OF 220/132 100 MVA ICT-1&2@	NP-8873-A	-	-	
PANDIABILI(PG)	400 KV SIDE OF PANDIABIL 500 MVA ICT-1	NP-7438-A	6	NO	
PANDIABILI(PG)	400 KV SIDE OF PANDIABIL 500 MVA ICT-2	NP-7407-A	6	NO	
PANDIABILI(PG)	220 KV SIDE OF 500 MVA PANDIABILI-ICT-1	ER-1098-A	-	-	
PANDIABILI(PG)	220 KV SIDE OF 500 MVA PANDIABILI-ICT-1	ER-1591-A	-	-	All done
PATNA(PG)	400KV SIDE OF PATNA ICT-1	NP-5270-A	9	NO	
PATNA(PG)	220KV SIDE OF PATNA ICT-1	NP-5271-A	12	NO	
PATNA(PG)	400KV SIDE OF PATNA ICT-2	NP-5839-A	11	NO	
PATNA(PG)	220KV SIDE OF PATNA ICT-2	NP-5866-A	10	NO	
PATNA(PG)	400 KV SIDE OF 500 MVA 400/220 PATNA ICT-3	ER-1231-A	-	-	All done
PATNA(PG)	220 KV SIDE OF 500 MVA 400/220 PATNA ICT-3	ER-1232-A	-	-	
PURNEA(PG)	400 KV SIDE 315 MVA ICT-1	NP-6087-A	7	NO	
PURNEA(PG)	400/220 KV ICT-2	NP-6086-A	-	-	IV pending
PUSAULI(PG)	400/220KV ICT-2	NP-6516-A	-	-	
PUSAULI(PG)	400/220KV ICT-1	NP-6513-A	-	-	IV pending
PUSAULI(PG)	765 KV SIDE OF 1500 MVA 765/400 ICT-1	NP-7411-A	11	NO	
PUSAULI(PG)	400 KV SIDE OF 1500 MVA 765/400 ICT-1	NP-7410-A	10	NO	All done
RANCHI NEW(PG)	765 KV SIDE 765/400 MVA ICT-1	NP-7875-A	-	-	
RANCHI NEW(PG)	765 KV SIDE OF 765/400 ICT-1	NP-7846-A	-	-	All done
RANCHI(PG)	400KV SIDE ICT-2	NP-5873-A	-	-	
RANCHI(PG)	220KV SIDE ICT-2	NP-5872-A	-	-	
RANCHI(PG)	400KV SIDE OF RANCHI ICT-1	NP-5878-A	-	-	
RANCHI(PG)	220KV SIDE OF RANCHI ICT-1	NP-5870-A	-	-	All done
RANGPO(PG)	220 KV SIDE OF 220/132 100 MVA ICT-1	NP-7933-A	-	-	
RANGPO(PG)	400 KV SIDE OF 400/220 315 MVA ICT-4	NP-7955-A	-	-	
RANGPO(PG)	400 KV SIDE OF 315 MVA ICT-3	NP-7922-A	-	-	
RANGPO(PG)	400 KV SIDE OF 315 MVA ICT-5	NP-7923-A	-	-	
RANGPO(PG)	220KV SIDE OF 100 MVA ICT-2	NP-7924-A	-	-	
RANGPO(PG)	220KV SIDE OF 100 MVA ICT-3	ER-1101-A	-	-	
RANGPO(PG)	400 KV SIDE OF 315 MVA ICT-2	ER-1148-A	-	-	
RANGPO(PG)	400 KV SIDE OF 315 MVA ICT-1	ER-1039-A	-	-	All done
RENGALI(PG)	400/220 KV ICT -1	ER-1598-A	-	-	
RENGALI(PG)	400/220 KV ICT -2	ER-1595-A	-	-	
RENGALI(PG)	220 KV SIDE OF 400/220 ICT-1	ER-1593-A	-	-	
RENGALI(PG)	220 KV SIDE OF 400/220 ICT-1	ER-1581-A	-	-	All done
ROURKELLA(PG)	400/220 KV ICT -1	NP-8806-A	-9	NO	
ROURKELLA(PG)	400/220 KV ICT -2	NP-5930-A	16	NO	
ROURKELLA(PG)	220 KV SIDE OF 315 MVA 400/220 ICT-1	ER-1580-A	-	-	
ROURKELLA(PG)	220 KV SIDE OF 315 MVA 400/220 ICT-2	ER-1579-A	-	-	All done
SILIGURI(PG)	132 KV SIDE OF SILIGURI ICT -1	NP-5951-A	11	NO	
SILIGURI(PG)	132 KV SIDE OF SILIGURI ICT-2	NP-7979-A	14	NO	
SILIGURI(PG)	220 KV SIDE OF 220/132 160 MVA ICT-1	ER-1493-A	-	-	
SILIGURI(PG)	220 KV SIDE OF 220/132 160 MVA ICT-1	ER-1500-A	-	-	All done
SUBHASGRAM(PG)	400KV SIDE ICT-1	NP-5848-A	9	NO	
SUBHASGRAM(PG)	400KV SIDE ICT-2	NP-5845-A	9	NO	
SUBHASGRAM(PG)	400 KV SIDE 315 MVA SUBHASGRAM ICT-3	NP-7545-A	10	NO	
SUBHASGRAM(PG)	400 KV SIDE OF SUBHASHGRAM 400/220 ICT-4	NP-7939-A	12	NO	
SUBHASGRAM(PG)	220 KV SIDE 400/220 315 MVA ICT-4	NP-7566-A	19	NO	
SUBHASGRAM(PG)	220 KV SIDE 400/220 315 MVA ICT-3	NP-7996-A	14	NO	
SUBHASGRAM(PG)	400 KV SIDE OF 500 MVA SUBHSGARAM ICT-5	NP-8718-A	8	NO	
SUBHASGRAM(PG)	220 KV SIDE OF 500 MVA SUBHSGARAM ICT-5	NP-8717-A	11	NO	All done
SUNDERGARH(PG)	765 KV SIDE OF 1500 MVA 765/400 ICT-2	NP-7906-A	-	-	
SUNDERGARH(PG)	765 KV SIDE OF 1500 MVA ICT-1	NP-7907-A	-	-	All done
SUBHASGRAM(PG)	220KV SIDE OF 400/220 315 MVA ICT-1	ER-1544-A	-	-	
SUBHASGRAM(PG)	220KV SIDE OF 400/220 315 MVA ICT-2	ER-1478-A	-	-	All done

Flash Report

- 1. Date and time of the Incident:**
- 2. Antecedent Conditions:**
 - i. Frequency:**
 - ii. Demand Met:**
Pre incidence Demand Met:
 - iii. Lines/units/elements under shutdown :**
 - iv. Weather condition:**
- 3. Details of tripping (Along with cause of the event and relay flag, whatever available):**

Sl. No.	Area/ Region	LOSS OF LOAD(MW)	LOSS OF GENERATION (MW)
1			

- 4. Action Taken/Remedial measures taken:**
- 5. Restoration details:**
- 6. Duration of the disturbance:**
- 7. Amount of energy unserved:**

Copy to : MS, ERPC

SCE

Annexure-D.1

**Anticipated Power Supply Position for the month of
Sep-18**

SL.NO	PARTICULARS	PEAK DEMAND MW	ENERGY MU
1	BIHAR		
	i) NET MAX DEMAND	4800	2678
	ii) NET POWER AVAILABILITY- Own Source (including bilateral)	750	184
	- Central Sector	3171	1881
	iii) SURPLUS(+)/DEFICIT(-)	-879	-613
2	JHARKHAND		
	i) NET MAX DEMAND	1280	760
	ii) NET POWER AVAILABILITY- Own Source (including bilateral)	350	181
	- Central Sector	818	471
	iii) SURPLUS(+)/DEFICIT(-)	-112	-108
3	DVC		
	i) NET MAX DEMAND (OWN)	2900	1760
	ii) NET POWER AVAILABILITY- Own Source	4600	2644
	- Central Sector	322	211
	Long term Bi-lateral (Export)	1511	1088
	iii) SURPLUS(+)/DEFICIT(-)	511	7
4	ODISHA		
	i) NET MAX DEMAND	4150	2520
	ii) NET POWER AVAILABILITY- Own Source	3210	1843
	- Central Sector	1150	723
	iii) SURPLUS(+)/DEFICIT(-)	210	46
5	WEST BENGAL		
5.1	WBSEDCL		
	i) NET MAX DEMAND (OWN)	6185	3588
	ii) CESC's DRAWAL	0	0
	iii) TOTAL WBSEDCL's DEMAND	6185	3588
	iv) NET POWER AVAILABILITY- Own Source	3373	1984
	- Import from DPL	130	0
	- Central Sector	2823	1611
	v) SURPLUS(+)/DEFICIT(-)	141	7
	vi) EXPORT (TO B'DESH & SIKKIM)	10	7
5.2	DPL		
	i) NET MAX DEMAND	270	169
	ii) NET POWER AVAILABILITY	400	187
	iii) SURPLUS(+)/DEFICIT(-)	130	18
5.3	CESC		
	i) NET MAX DEMAND	2020	1064
	ii) NET POWER AVAILABILITY - OWN SOURCE	765	486
	FROM HEL	540	337
	FROM CPL/PCBL	40	0
	Import Requirement	675	241
	iii) TOTAL AVAILABILITY	2020	1064
	iv) SURPLUS(+)/DEFICIT(-)	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)		
	i) NET MAX DEMAND	8475	4821
	ii) NET POWER AVAILABILITY- Own Source	4538	2657
	- Central Sector+Others	4078	1948
	iii) SURPLUS(+)/DEFICIT(-)	141	-217
7	SIKKIM		
	i) NET MAX DEMAND	85	34
	ii) NET POWER AVAILABILITY- Own Source	2	0
	- Central Sector+Others	159	102
	iii) SURPLUS(+)/DEFICIT(-)	76	68
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR		
	i) NET MAX DEMAND	21058	12573
	Long term Bi-lateral by DVC	1511	1088
	EXPORT BY WBSEDCL	10	7
	ii) NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)	23148	12844
	iii) PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)	569	-824

6819
1240
8059

488.64	210.25	698.89
		0.332805

* for Eastern Region only.

**EASTERN REGIONAL POWER COMMITTEE
PUJA LOAD FORECAST '2018**

DEMAND IN NET MW AND AT 50.0 HZ

		WEST BENGAL								
PUJA DAYS		WBSEDCL	CESC	DPL	TOTAL WEST BENGAL*	BSPHCL	JUVNL	DVC	ODISHA	REGION
SASTHI 15-Oct-18 MONDAY	MAX	6470	1860	270	8600	5130	1275	2875	4305	21850
	MIN	4341	1090	229	5689	2891	983	2386	3340	16041
	AVG	5225	1391	250	6865	3844	1096	2584	3746	18135
SAPTAMI 16-Oct-18 TUESDAY	MAX	6200	1650	266	8114	4935	1228	2920	4428	20938
	MIN	4059	1070	207	5414	3458	903	2281	3559	16411
	AVG	5209	1206	241	6656	4174	1054	2619	3909	18411
ASTAMI 17-Oct-18 WEDNESDAY	MAX	5910	1480	239	7615	4851	1218	2634	4225	20128
	MIN	3715	990	180	5076	3615	912	2188	3388	15697
	AVG	4756	1180	223	6159	4249	1092	2456	3750	17705
NAVAMI 18-Oct-18 THURSDAY	MAX	5750	1460	236	7399	4570	1183	2500	4225	19598
	MIN	3707	940	173	4947	2927	775	2172	3405	14847
	AVG	4577	1135	203	5914	3787	1005	2359	3726	16791
DASHMI 19-Oct-18 FRIDAY	MAX	5715	1410	220	7298	4188	1108	2235	3980	18035
	MIN	3243	890	180	4317	2868	647	1900	3137	13526
	AVG	4302	1095	199	5596	3607	858	2128	3462	15652

There would be around 540 MW shortfall in West Bengal System w.r.t its availability during peak hours on Sasthi day(i,e 15.10.2018 Monday)

EASTERN REGIONAL LOAD DESPATCH CENTRE
KOLKATA

TRANSMISSION ELEMENTS OUTAGE APPROVED IN 148TH OCC MEETING OF ERPC

SL. No	NAME OF THE ELEMENTS	FROM		TO		REMARKS	S.D availed BY	Reason	SUBJECT TO CONSENT FROM AGENCY
		DATE	TIME	DATE	TIME				
1	400/220/33kv 315MVA ICT-I at Alipurduar	06/09/18	08:00	06/09/18	14:00	ODB	Powergrid, ER-II	Associated Bay AMP and Pump Motor change	
2	400KV Sagardighi Subhashgram S/C Line	01-09-2018	09:00	04-09-2018	17:00	ODB	Powergrid, ER-II	For de-stringing and re-stringing of U/C 400KV Berhampore Farakka line under ERSS-XV	WB
3	400KV Berhampore Sagardighi Ckt-2 line	05-09-2018	09:00	05-09-2018	17:00	ODB	Powergrid, ER-II	For AMP work	WB
4	400KV Berhampore Sagardighi Ckt-1 line	06-09-2018	09:00	06-09-2018	17:00	ODB	Powergrid, ER-II	Shutdown is required during testing of Bay stability of u/c 400KV Berhampore Farakka I Bay under ERSS-XV.	WB
5	400KV BUS-I at Baharampore	08-09-2018	09:00	09-09-2018	17:00	ODB	Powergrid, ER-II	For jumper connection during conversion of 409 future Bay into Line bay of 400KV Berhampore Farakka Ckt-I Bay under ERSS-XV.	NLDC
6	400KV Tie Bay of 400KV Berhampore Sagardighi Ckt-I Bay (Bay no-408) at Baharampore	05-09-2018	09:00	25-09-2018	17:00	OCB	Powergrid, ER-II	For conversion of existing Future Dia into Main Bay of U/C 400KV Berhampore Farakka Ckt-I Bay under ERSS-XV.	
7	400 KV Binaguri-Purnea Ckt-1	03-09-2018	09:00	04-09-2018	17:00	ODB	Powergrid, ER-II	Indenified Defect insulator replacment work with CLR	NLDC
8	400 KV Binaguri-Purnea Ckt-2	05-09-2018	09:00	06-09-2018	17:00	ODB	Powergrid, ER-II	Indenified Defect insulator replacment work with CLR	NLDC
9	400 KV Binaguri-Rangpo Ckt-1	13-09-2018	09:00	13-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	
10	400 KV Binaguri-Rangpo Ckt-2	14-09-2018	09:00	14-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	
11	220 KV Binaguri-Birpara Ckt-1	20-09-2018	09:00	20-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	NLDC
12	220 KV Binaguri-Birpara Ckt-2	21-09-2018	09:00	21-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	NLDC
13	220 KV Siliguri-Kishanganj Ckt-1	27-09-2018	09:00	27-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	NLDC
14	220 KV Siliguri-Kishanganj Ckt-2	28-09-2018	09:00	28-09-2018	17:00	ODB	Powergrid, ER-II	Identified defect liqudation work	NLDC
15	160MVA ICT-1 at Birpara	06-09-2018	08:00	06-09-2018	17:30	ODB	Powergrid, ER-II	Varibale frequencv Tan-delta & Relay	WB
16	160MVA ICT-2 at Birpara	07-09-2018	08:00	07-09-2018	17:30	ODB	Powergrid, ER-II	Varibale frequencv Tan-delta & Relay	WB
17	220KV Birpara-Malbase Line	11-09-2018	08:00	11-09-2018	17:30	ODB	Powergrid, ER-II	Testing of Y-ph CVT	NLDC
18	Bus Sectionaliser#1 at Durgapur	14-09-2018	09:00	14-09-2018	17:00	ODB	Powergrid, ER-II	CB Aux. Contact replacement	
19	Bus Sectionaliser#2 at Durgapur	15-09-2018	09:00	15-09-2018	17:00	ODB	Powergrid, ER-II	CB Aux. Contact replacement	
20	430 bay(Jamshedpur-I Main) at Durgapur	18-09-2018	09:00	18-09-2018	17:00	ODB	Powergrid, ER-II	CB Aux. Contact replacement	
21	400 KV Durgapur-Bidhannagar line-I	04-09-2018	09:00	04-09-2018	17:00	ODB	Powergrid, ER-II	CVT JB replacement work due damage	WB
22	400 KV Durgapur-Bidhannagar line-II	07-09-2018	09:00	07-09-2018	17:00	ODB	Powergrid, ER-II	CVT& LA shifting to new Location and jumper connection.	WB
23	315 MVA ICT-1 at Durgapur	11-09-2018	09:00	11-09-2018	17:00	ODB	Powergrid, ER-II	relay replacement & LBB DC supply modification works	DVC
24	50 MVA ICT 132/66 KV at Gangtok	17-09-2018	09:00	17-09-2018	18:00	ODB	Powergrid, ER-II	Back up impedance relay installation as per LOA no : ER-II/KOL/CS/I-1769/P-	SIKKIM
25	50 MVA ICT 132/66KV at Gangtok	18-09-2018	09:00	18-09-2018	18:00	ODB	Powergrid, ER-II	Back up impedance relay installation as per LOA no : ER-II/KOL/CS/I-1769/P-1813/220A Dated: 22.05.2018 and	SIKKIM
26	132KV Bus of Gangtok S/s	19-09-2018	09:00	19-09-2018	12:00	ODB	Powergrid, ER-II	All bus isolator AMP and 132KV Bus AMP, proper alienment checking of all	SIKKIM
27	66 KV Bus of Gangtok S/s	20-09-2018	09:00	20-09-2018	12:00	ODB	Powergrid, ER-II	All bus isolator AMP and 132KV Bus AMP, proper alignment checking of all	SIKKIM
28	220kV ICT-1 Bay (206) at Maithan	01-09-2018	09:00	03-09-2018	17:00	OCB	Powergrid, ER-II	overhauling of 220kV CB (make-CGL). During the shut down the load of 220kV side shifted to TBC and no	
29	220kV ICT-2 Bay (213) at Maithan	04-09-2018	09:00	07-09-2018	17:00	OCB	Powergrid, ER-II	overhauling of 220kV CB (make-CGL). During the shut down the load of 220kV side shifted to TBC and no	
30	220kV Bus-1 at Maithan	08-09-2018	09:00	10-09-2018	17:00	ODB	Powergrid, ER-II	Overhauling work of 220kV Bus Coupler Bay CB (Bay no. 210).	DVC
31	220 kV Maithon-Dhanbad 2 line	11-09-2018	09:00	11-09-2018	18:00	ODB	Powergrid, ER-II	Replacement of LINE CVT	DVC
32	220 kV Maithon-Kalyaneswari 1 Bay	12-09-2018	09:00	14-09-2018	18:00	OCB	Powergrid, ER-II	Overhauling work of 220kV CB. During shut down there will be no POWER Interruption and Feeder will be charged	DVC
33	220 kV Maithon-Kalyaneswari 2 Bay	15-09-2018	09:00	17-09-2018	18:00	OCB	Powergrid, ER-II	Overhauling work of 220kV CB. During shut down there will be no POWER Interruption and Feeder will be charged	DVC
34	500MVA ICT #1 at Maithan	18-09-2018	06:00	18-09-2018	18:00	ODB	Powergrid, ER-II	On load testing of CSD , Rectification of MOG	DVC

35	400KV Maithon-RB #1 line	19-09-2018	09:00	19-09-2018	18:00	ODB	Powergrid, ER-II	Construction work under ERSS-XVII	
36	400KV Maithon-DGP #1 line	20-09-2018	09:00	20-09-2018	18:00	ODB	Powergrid, ER-II	Construction work under ERSS-XVII	
37	400KV RB#1-DGP #1 Tie Bay at Maithan	21-09-2018	09:00	30-09-2018	18:00	ODB	Powergrid, ER-II	Construction work under ERSS-XVII	
38	400KV Maithon-Meija 3 Line	22-09-2018	09:00	23-09-2018	18:00	ODB	Powergrid, ER-II	Line CT replacement work	DVC
39	400KV Maithon-JSR Line	24-09-2018	09:00	24-09-2018	18:00	ODB	Powergrid, ER-II	Line CT replacement work	
40	400KV Malda-Purnea-II	14-09-2018	08:00	14-09-2018	17:00	ODB	Powergrid, ER-II	Numerical Diff. Relay Retrofitting with newly supply M/s Siemens Relay	After restoration of 400kV Biharsariff-New Purnea-DC
41	132KV Malda WBSETCL-I	15-09-2018	08:00	15-09-2018	17:00	ODB	Powergrid, ER-II	Replacing Over current Earth fault relay with newly supply M/s Siemens Relay	WB
42	132KV Malda WBSETCL-II	16-09-2018	08:00	16-09-2018	17:00	ODB	Powergrid, ER-II	Replacing Over current Earth fault relay with newly supply M/s Siemens Relay	WB
43	220KV Malda-DLK-I	24-09-2018	08:00	24-09-2018	17:00	ODB	Powergrid, ER-II	Main-I relay retrofitting	
44	220KV Malda-DLK-II	25-09-2018	08:00	25-09-2018	17:00	ODB	Powergrid, ER-II	AR relay retrofitting	
45	400KV TBC at Malda	01-09-2018	08:00	01-10-2018	17:00	OCB	Powergrid, ER-II	ERSS-XVIB BAY UPGRADATION	
46	220KV TBC at Malda	01-09-2018	08:00	01-10-2018	17:00	OCB	Powergrid, ER-II	ERSS-XVIB BAY UPGRADATION	
47	132 KV Rangit-Kurseong	12/09/18	09:00	12/09/18	17:30	ODB	Powergrid, ER-II	95-96 conductor damage in bottom phase	WB
48	132 KV Rangit-Kurseong	19/09/18	09:00	19/09/18	17:30	ODB	Powergrid, ER-II	61-62 conductor damage in bottom phase	WB
49	400KV Teesta 3-408 bay at Rangpo	04-09-2018	08:00	08-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work	
50	220KV BUS-1 at Rangpo	09-09-2018	08:00	11-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates) and line AMP works	
51	220KV Rangpo- NEW MELLI line	09-09-2018	08:00	11-09-2018	17:00	OCB	Powergrid, ER-II		
52	400\220kV 315 MVA ICT-2 at Rangpo	12-09-2018	08:00	15-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage	
53	220\132 Kv 100 MVA ICT-2 at Rangpo	16-09-2018	08:00	19-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage	
54	400\220kV 315 MVAICT -1 at Rangpo	20-09-2018	08:00	24-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage	
55	400\220kV 315 MVAICT -4 at Rangpo	25-09-2018	08:00	29-09-2018	17:00	OCB	Powergrid, ER-II	For rectification of SF6 gas leakage repair work	
56	132KV Rangpo-Gangtok line	18-09-2018	08:00	18-09-2018	17:00	ODB	Powergrid, ER-II	Line A/R implementation	SIKKIM
57	132KV Rangpo-Chuzachen line	19-09-2018	08:00	19-09-2018	17:00	ODB	Powergrid, ER-II	Line A/R implementation	
58	132KV Rangpo-Melli line	06-09-2018	08:00	10-09-2018	17:00	ODB	Powergrid, ER-II	Line AMP works	SIKKIM
59	220 KV Rangpo-Tashiding line	20-09-2018	08:00	23-09-2018	17:00	ODB	Powergrid, ER-II	Line AMP works	
60	132KV Rangpo-Rangit line	24-09-2018	08:00	27-09-2018	18:00	ODB	Powergrid, ER-II	Line AMP works	SIKKIM
61	315 MVA ICT#1 at Subhasgram S/s	03-09-2018	09:00	05-09-2018	17:30	ODB	Powergrid, ER-II	Y-Ph LA Rlacement, Retrofitting of Numerical Diff Protection & Backup	WB
62	315 MVA ICT#2 at Subhasgram S/s	06-09-2018	09:00	08-09-2018	17:30	ODB	Powergrid, ER-II	Replacement of Y & B-Ph LA, Retrofitting of Numerical Diff	WB
63	50 MVAR LINE REACTOR at Subhasgram S/s	10-09-2018	09:00	11-09-2018	17:30	ODB	Powergrid, ER-II	Retrofitting of Numerical Diff Protection, Protection Relay	
64	500 MVA ICT#5 at Subhasgram S/s	10-09-2018	09:00	10-09-2018	17:30	ODB	Powergrid, ER-II	Rectification and commissioning of CSD for ICT#5 Tie bay CB	WB
65	100MVAR Bus Reactor at WBSETCL Jeerat Substation	11-09-2018	09:00	15-09-2018	17:30	OCB	Powergrid, ER-II	B-Ph Bushing Replacement of Bus Reactor Unit-I (3X16.67 MVAR)	WB
66	400 KV Subhasgram Jeerat Line	17-09-2018	09:00	17-09-2018	17:30	ODB	Powergrid, ER-II	R,Y & B-Ph LA Rlacement	WB
67	220KV WBSETCL Subhasgram CKT#1 Line	18-09-2018	09:00	18-09-2018	17:30	ODB	Powergrid, ER-II	Y & B-Ph LA Rlacement	WB
68	220 KV WBSETCL KLC Bantala Line	19-09-2018	09:00	19-09-2018	17:30	ODB	Powergrid, ER-II	R-Ph LA Rlacement	WB
69	220KV Bus Coupler Bay (Bay No.204) at Powergrid,Subhasgram	20-09-2018	09:00	23-09-2018	17:30	OCB	Powergrid, ER-II	CGL make CB Overhauling	WB
70	220 kV Siliguri -New Siliguri (Binaguri) - II	04-09-2018	09:00	04-09-2018	17:00	ODB	Powergrid, ER-II	AMP of 220 KV Siliguri -New Siliguri (Binaguri) Ckt-II; Bay-203 at Siliguri	
71	220KV FARAKKA-LALMATIA T/L	28-08-2018	08:00	28-08-2018	18:00	ODB	Powergrid, ER-II	For stringing between location no- 5/0 to 6/0 of 400 KV Farakka -Behrampur D/c line	JSEB
72	400KV D/C FARAKKA - KAHALGAON -(I & II) T/L	30-08-2018	08:00	31-08-2018	18:00	ODB	Powergrid, ER-II	For stringing between location no- 4/0 to 5/0 of 400 KV Farakka -Behrampur D/c line	

73	400 KV BUS-II of NTPC Farakka	29-08-2018	09:00	29-08-2018	18:00	ODB	Powergrid, ER-II	For connecting BUS isolator of bay no-35 to BUS-II (After augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	
74	400 KV BUS-I of NTPC Farakka	31-08-2018	09:00	31-08-2018	18:00	ODB	Powergrid, ER-II	For disconnecting BUS isolator of bay no-22 & 33 from BUS-I (For augmentation of BUS Isolator from	
75	400 KV Farakka- Gokarna-I	05-09-2018	09:00	06-09-2018	18:00	ODB	Powergrid, ER-II	For AMP work and CC ring rectification work at tower no-763 with jumper tightening work. Modification /	WB
76	400 KV Farakka- Gokarna-II	07-09-2018	09:00	08-09-2018	18:00	ODB	Powergrid, ER-II	For AMP work and pilot insulator erection at tower no-4. Modification / wiewlding of mechanical interlock in isolators	WB
77	400 KV Farakka- Kahalgaon-III line	01-09-2018	10:00	02-09-2018	18:00	ODB	Powergrid, ER-II	For disconnecting bay-34 (Tie Bay of 400 KV Farakka- Kahalgaon-III) from line side for augmentation of Isolator & CT from 2000A to 3150 A in bay-34	
78	Tie Bay of 400 KV Farakka- Kahalgaon-III (Bay-33 & 34)	01-09-2018	10:00	25-09-2018	18:00	OCB	Powergrid, ER-II	For augmentation of Isolator & CT from 2000A to 3150 A in bay-34 & for	
79	400 KV Farakka- Kahalgaon-I line	03-09-2018	10:00	03-09-2018	18:00	ODB	Powergrid, ER-II	For disconnecting bay-22 (Main Bay of 400 KV Farakka- Kahalgaon-I) from line	
80	Main Bay of 400 KV Farakka- Kahalgaon-I (Bay-22)	03-09-2018	10:00	25-09-2018	18:00	OCB	Powergrid, ER-II	For augmentation of Isolator & CT from 2000A to 3150 A rating under ERSS-XV	
81	400 KV BUS-II of NTPC Farakka	04-09-2018	09:00	04-09-2018	18:00	ODB	Powergrid, ER-II	For connecting BUS isolator of bay no-24 to BUS-II (After augmentation of	
82	400 KV Farakka- Kahalgaon-I line	25-09-2018	10:00	25-09-2018	18:00	ODB	Powergrid, ER-II	For connecting bay-22 (Main Bay of 400 KV Farakka- Kahalgaon-I) from line	
83	400 KV Farakka- Kahalgaon-III line	26-09-2018	10:00	26-09-2018	18:00	ODB	Powergrid, ER-II	For connecting bay-34 (Tie Bay of 400 KV Farakka- Kahalgaon-III) from line side after augmentation of Isolator & CT from 2000A to 3150 A rating under ERSS-XV projects.	
84	400 KV BUS-I of NTPC Farakka	28-09-2018	10:00	28-09-2018	18:00	ODB	Powergrid, ER-II	For connecting BUS isolator of bay no-22 & 33 to BUS-I (After augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	
85	400KV Tie Bay of B/R-I and RKL-II AT CHAIBASA	04-09-2018	10:00	04-09-2018	17:00	ODB	POWERGRID ER-1	AMP work	
86	400KV MAIN BAY OF KGP-I LINE AT CHAIBASA	06-09-2018	10:00	06-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
87	400KV MAIN BAY OF BUS REACTOR-II AT CHAIBASA	10-09-2018	11:00	10-09-2018	13:00	ODB	POWERGRID ER-1	CT OIL SAMPLING WORK	
88	400KV MAIN BAY OF JSR-II AT CHAIBASA	12-09-2018	10:00	12-09-2018	17:00	ODB	POWERGRID ER-1	AMP work	
89	400KV TIE BAY OF JSR-II & FUTURE AT CHAIBASA	13-09-2018	10:00	13-09-2018	17:00	ODB	POWERGRID ER-1	AMP work	
90	400KV MAIN BAY OF RKL-II	20-09-2018	10:00	20-09-2018	17:00	ODB	POWERGRID ER-1	AMP work	
91	400KV CHAIBASA -ROURKELA 1	23-09-2018	09:00	23-09-2018	17:00	ODB	POWERGRID ER-1	FOR REPLACEMENT OF FLASHED INSULATOR	
92	400KV BUS-1 AT MUZAFFARPUR	19-09-2018	09:00	21-09-2018	17:00	ODB	POWERGRID ER-1	AMP work	
93	400 KV BUS -I AT New RANCHI	05-09-2018	08:00	06-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	JSEB
94	400 KV BUS -2 AT New RANCHI	07-09-2018	08:00	08-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	JSEB
95	400KV TIE BAY OF RANCHI-1 & B/R-II AT NEW RANCHI	10-09-2018	08:00	10-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
96	400KV MAIN BAY OF 765/400KV ICT-II AT NEW RANCHI	11-09-2018	08:00	11-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
97	400KV MAIN BAY OF 765/400KV ICT-I AT NEW RANCHI	12-09-2018	08:00	12-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
98	400KV TIE BAY OF CHANDWA-I & FUTURE AT NEW RANCHI	13-09-2018	08:00	13-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
99	400KV TIE BAY OF CHANDWA-II & FUTURE AT NEW RANCHI	14-09-2018	08:00	14-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
100	400KV MAIN BAY OF CHANDWA-II AT NEW RANCHI	19-09-2018	08:00	19-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	
101	765 KV Bus-I AT NEW RANCHI	20-09-2018	08:00	21-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	NLDC
102	765 KV Bus-II AT NEW RANCHI	24-09-2018	08:00	25-09-2018	18:00	ODB	POWERGRID ER-1	AMP work	NLDC
103	400 KV Chandawa - Gaya Ckt-1	12-09-2018	09:00	12-09-2018	18:00	ODB	POWERGRID ER-1	Replacement of Insulators flashed over/ broken due to lightning	
104	400 KV Ranchi - New Ranchi Ckt-3	26-09-2018	09:00	26-09-2018	18:00	ODB	POWERGRID ER-1	Replacement of Insulators flashed over/ broken due to lightning	
105	400kV JSR-APNRL-II	04-09-2018	09:30	04-09-2018	17:30	ODB	POWERGRID ER-1	AMP WORK	
106	400kV JSR-BARIPADA	07-09-2018	09:30	07-09-2018	17:30	ODB	POWERGRID ER-1	INSULATOR REPLACEMENT DAMAGED BY MISREANTS	
107	400kV TIE BAY OF APNRL 2 & FUTURE AT JAMSHEDPUR	06-09-2018	09:30	06-09-2018	17:30	ODB	POWERGRID ER-1	AMP WORK	
108	400/220kV, 315MVA ICT-3 AT JAMSHEDPUR	10-09-2018	09:30	10-09-2018	17:30	ODB	POWERGRID ER-1	CSD TESTING WORK	JSEB
109	400kV TATA-BARIPADA	11-09-2018	09:30	11-09-2018	17:30	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC

110	400KV Tie Bay of ICT 1 & BR 1 AT JAMSHEDPUR	12-09-2018	09:30	12-09-2018	17:30	ODB	POWERGRID ER-1	AMP WORK	
111	400KV Tie Bay of ICT 2 & BR 2 AT JAMSHEDPUR	14-09-2018	09:30	14-09-2018	17:30	ODB	POWERGRID ER-1	AMP WORK	
112	400/132KV 200 MVA ICT-1 AT LAKHISARAI	04-09-2018	08:00	05-09-2018	18:00	ODB	POWERGRID ER-1	Checking of Air Cell	BSEB
113	400 kV MAIN BUS-2 AT LAKHISARAI	11-09-2018	10:00	11-09-2018	14:00	ODB	POWERGRID ER-1	AMP	
114	80 MVAR Bus Reactor AT LAKHISARAI	13-09-2018	08:00	14-09-2018	18:00	ODB	POWERGRID ER-1	For checking/rectification of alignment of Bus Reactor Isolator	
115	400/132KV 200 MVA ICT-2 & 80 MVAR Bus Reactor AT LAKHISARAI	18-09-2018	08:00	21-09-2018	18:00	ODB	POWERGRID ER-1	Fire wall Construction, Checking of Aircel of ICT-2	
116	400 KV KODERMA-BOKARO TL - 1	11-09-2018	10:00	11-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
117	400 KV KODERMA-BOKARO TL - 2	12-09-2018	10:00	12-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
118	400 KV KODERMA-GAYA TL - 1	05-09-2018	10:00	06-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
119	400 KV KODERMA-GAYA TL - 2	07-09-2018	10:00	08-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
120	400 KV KODERMA -BIHARSHARIF TL - 1	13-09-2018	10:00	13-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
121	400 KV KODERMA -BIHARSHARIF TL - 2	14-09-2018	10:00	14-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	DVC
122	400 KV GAYA -MAITHON TL - 1	03-09-2018	10:00	03-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	
123	400 KV GAYA -MAITHON TL - 2	04-09-2018	10:00	04-09-2018	16:00	ODB	POWERGRID ER-1	FOR INSULATOR REPLACEMENT WORK, DAMAGED BY MISREANTS	
124	400KV RANCHI-MAITHON(RB)-I	07-09-2018	10:00	07-09-2018	18:00	ODB	POWERGRID ER-1	Replcaement of flash over pilot Insulator String at loc-116	
125	400KV BUS-I AT NEW PURNEA	03-09-2018	10:00	03-09-2018	18:00	ODB	POWERGRID ER-1	Bay extension work of 400KV Gokarna-Farraka.	
126	400KV NEW PURNEA -SILIGURI LINE-I	04-09-2018	10:00	04-09-2018	18:00	ODB	POWERGRID ER-1	1. Replacement of Auto reclose relay, testing and commisioning. 2. Erection of BPI at Liine Isolator.	NLDC
127	400KV NEW PURNEA - SILIGURI LINE-II	05-09-2018	10:00	05-09-2018	18:00	ODB	POWERGRID ER-1	1. Replacement of Auto reclose relay, testing and commisioning. 2. Erection of BPI at Liine Isolator.	NLDC
128	400KV NEW PURNEA - SILIGURI LINE-III	06-09-2018	10:00	06-09-2018	18:00	ODB	POWERGRID ER-1	Erection of BPI at Liine Isolator.(Bay extension work of 400KV Gokarna-Farraka.)	NLDC
129	400KV NEW PURNEA -SILIGURI LINE-IV	07-09-2018	10:00	07-09-2018	18:00	ODB	POWERGRID ER-1	Erection of BPI at Liine Isolator.(Bay extension work of 400KV Gokarna-Farraka.)	NLDC
130	MAIN BAY OF 400KV SLG -III (41052) at New Purnea	10-09-2018	10:00	14-09-2018	18:00	OCB	POWERGRID ER-1	CB opertaing mechanism mid life overhaulling and PIR gas leakage arresting work.	
131	765 /400 kV ICT-III at Gaya ss	03-09-2018	09:00	06-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
132	400 KV BUS-I at Gaya S/S	07-09-2018	09:00	07-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 400/220 KV ICT - III AT AGAY SS	
133	400 KV BUS-II at Gaya S/S	08-09-2018	09:00	08-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 400/220 KV ICT - III AT AGAY SS	
134	765 KV BUS-I at Gaya S/S	10-09-2018	09:00	10-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
135	765 KV BUS-II at Gaya S/S	11-09-2018	09:00	11-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
136	765 /400 kV ICT-I at Gaya ss	12-09-2018	09:00	12-09-2018	13:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
137	765 /400 kV ICT-II at Gaya ss	12-09-2018	14:00	12-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
138	765 /400 kV ICT-III at Gaya ss	13-09-2018	09:00	13-09-2018	13:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
139	765 KV BR-I at Gaya S/S	13-09-2018	14:00	13-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
140	765 KV BR-II at Gaya S/S	14-09-2018	09:00	14-09-2018	13:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
141	400 KV BR-I at Gaya S/S	14-09-2018	14:00	14-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 400/220 KV ICT - III AT AGAY SS	
142	400 KV BR-II at Gaya S/S	15-09-2018	09:00	15-09-2018	13:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 400/220 KV ICT - III AT AGAY SS	
143	400 KV Chandwa-Gaya-Ckt -I Line	07-09-2018	09:00	07-09-2018	18:00	ODB	POWERGRID ER-1	For Replacement of flashed Insulator	
144	765 KV S/C Gaya-Balia Line	26-09-2018	09:00	27-09-2018	18:00	ODB	POWERGRID ER-1	For Replacement of flashed Insulator	NLDC
145	765 KV Tie Bay of Gaya-VNS Ckt-I Line & Future AT GAYA	03-09-2018	09:00	04-09-2018	18:00	ODB	POWERGRID ER-1	FOR BAY CONSTRUCTION WORK OF 765 KV ICT - IV AT GAYA	NLDC
146	400 KV LKS- KHG CKT- I	05-09-2018	08:00	05-09-2018	18:00	ODB	POWERGRID ER-I		
147	400 KV LKS- KHG CKT- II	06-09-2018	08:00	06-09-2018	18:00	ODB	POWERGRID ER-I	FOR Rectification of Spacer Cap, CC Ring, Jumper N/B/ Arcing horn, Repairing of Conductor Cut etc.	
148	400KV BSF - LKS CKT -II	07-09-2018	08:00	07-09-2018	18:00	ODB	POWERGRID ER-I		
149	400KV MAIN BAY OF BSF-Muz-2 AT BSF	03-09-2018	10:00	03-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
150	400KV MAIN BAY OF BSF-Muz-1 AT BSF	04-09-2018	10:00	04-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
151	400KV MAIN BAY OF B/R -1 AT BSF	05-09-2018	10:00	05-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	

152	400KV MAIN BAY OF Bsf- SSRM-2 AT BSF	06-09-2018	10:00	06-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
153	400KV TIE BAY OF Muz-1 & 2 AT BSF	10-09-2018	10:00	10-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
154	400KV MAIN BAY OF Lakhisarai 1 AT BSF	11-09-2018	10:00	11-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
155	400KV MAIN BAY OF NEW Purnea -2 AT BSF	12-09-2018	10:00	12-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
156	400KV TIE BAY OF Bsf- Sas 2 & bsf-Balia -2 AT BSF	13-09-2018	10:00	13-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
157	400KV MAIN BAY OF 125 MVAR BR-3 AT BSF	19-09-2018	10:00	19-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
158	400KV TIE BAY OF 315 MVA ICT -2 & BR-3 AT BSF	20-09-2018	10:00	20-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
159	400KV MAIN BAY OF BANKA- 1 AT BSF	21-09-2018	10:00	21-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
160	400KV TIE BAY OF 315 MVA ICT -3 & BR-2 AT BSF	22-09-2018	10:00	22-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
161	400KV MAIN BAY OF BANKA- 2 AT BSF	24-09-2018	10:00	24-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
162	400KV TIE BAY OF Bsf - Banka ckt- 1 & 2 AT BSF	25-09-2018	10:00	25-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
163	400KV MAIN BAY OF Bsf- Tenughat AT BSF(Bay no 416)	26-09-2018	10:00	26-09-2018	18:00	ODB	POWERGRID ER-I	For Bay AMP	
164	400KV 80 MVAR L/R OF NEW PURNEA-I AT BSF	27-09-2018	10:00	27-09-2018	18:00	ODB	POWERGRID ER-I	For Reactor and Reactor Bay AMP(SWITCHABLE L/R)	
165	400 kV PATNA-KISHANGANJ CKT1 & 400KV BIHAR SARIF-MUZAFFARPUR CKT 1	04-09-2018	08:00	04-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV BSF-MUZ LINE	After restoration of 400kv Biharsariff-New Purnea-DC
166	400 kV PATNA-KISHANGANJ CKT1 & 400KV BIHAR SARIF-MUZAFFARPUR CKT 2	05-09-2018	08:00	05-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV BSF-MUZ LINE	After restoration of 400kv Biharsariff-New Purnea-DC
167	400 kV PATNA-KISHANGANJ CKT 2 & 400KV BIHAR SARIF-MUZAFFARPUR CKT 1	06-09-2018	08:00	06-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV BSF-MUZ LINE	After restoration of 400kv Biharsariff-New Purnea-DC
168	400 kV PATNA-KISHANGANJ CKT 2 & 400KV BIHAR SARIF-MUZAFFARPUR CKT 2	07-09-2018	08:00	07-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV BSF-MUZ LINE	After restoration of 400kv Biharsariff-New Purnea-DC
169	400 kV PATNA-KISHANGANJ CKT 1 & 400KV KAHALGAON - BARH CKT 1	08-09-2018	08:00	08-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV KAH-BAR LINE	After restoration of 400kv Biharsariff-New Purnea-DC
170	400 kV PATNA-KISHANGANJ CKT 1 & 400KV KAHALGAON - BARH CKT 2	10-09-2018	08:00	10-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV KAH-BAR LINE	After restoration of 400kv Biharsariff-New Purnea-DC
171	400 kV PATNA-KISHANGANJ CKT 2 & 400KV KAHALGAON - BARH CKT 1	11-09-2018	08:00	11-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV KAH-BAR LINE	After restoration of 400kv Biharsariff-New Purnea-DC
172	400 kV PATNA-KISHANGANJ CKT 2 & 400KV KAHALGAON - BARH CKT 2	12-09-2018	08:00	12-09-2018	17:30	ODB	POWERGRID ER-I	Fixing of Insulation sleeves on Power line Xing point of 400KV PTN KSG LINE WITH 400 KV KAH-BAR LINE	After restoration of 400kv Biharsariff-New Purnea-DC
173	400 kV PATNA-BALIA -1	05-09-2018	09:00	05-09-2018	12:00	ODB	POWERGRID ER-I	E/W RECTIFICATION OF PAT-KSG#1 AT XING POINT OF 400 PAT-BALIA 1&2	NLDC
174	400 kV PATNA-BALIA-2	07-09-2018	13:00	07-09-2018	16:00	ODB	POWERGRID ER-I	E/W RECTIFICATION OF PAT-KSG#1 AT XING POINT OF 400 PAT-BALIA 1&2	
175	400 kV PTN-BRH CKT – II & 400KV KHL BARH CKT-I	24-09-2018	08:00	24-09-2018	15:30	ODB	POWERGRID ER-I	FOR REPLACEMENT OF PORCELAIN INSULATORS WITH POLYMER INSULATOR	NLDC
176	400 kV PTN-BRH CKT – I & 400KV KHL BARH CKT-II	25-09-2018	08:00	25-09-2018	15:30	ODB	POWERGRID ER-I	FOR REPLACEMENT OF PORCELAIN INSULATORS WITH POLYMER INSULATOR	
177	400KV PTN BARH -III & 400KV BARH MOTIHARI -I	26-09-2018	08:00	26-09-2018	17:30	ODB	POWERGRID ER-I	FOR REPLACEMENT OF PORCELAIN INSULATORS WITH POLYMER INSULATOR	
178	400KV PTN BARH -IV & 400KV BARH MOTIHARI -II	27-09-2018	08:00	27-09-2018	17:30	ODB	POWERGRID ER-I	FOR REPLACEMENT OF PORCELAIN INSULATORS WITH POLYMER INSULATOR	
179	500MVA ICT1	01-09-2018	08:00	01-09-2018	17:30	ODB	POWERGRID ER-I	TO ATTEND THE COMMISSIONING PUNCH POINTS	
180	315 MVA ICT2	02-09-2018	08:00	30-09-2018	17:30	OCB	POWERGRID ER-I	Repacement of ICT 2 with 500 MVA	
181	415 Main bay Patna Barh Line -I	06-09-2018	09:30	06-09-2018	17:30	ODB	POWERGRID ER-I	AMP	
182	418 Main bay Patna Barh -ii	07-09-2018	09:30	07-09-2018	17:30	OCB	POWERGRID ER-I	AMP	
183	408 Tie bay of ICT-II	13-09-2018	09:30	13-09-2018	17:30	ODB	POWERGRID ER-I	AMP	
184	413 Main bay Patna Ballia -II	21-09-2018	09:30	21-09-2018	17:30	OCB	POWERGRID ER-I	AMP	
185	417 Tie bay Barh-I and Ballia 2	22-09-2018	09:30	22-09-2018	17:30	OCB	POWERGRID ER-I	AMP	
186	Tie bay (Bay-411)of 400KV Khalgaon-Banka CKT-II	19-09-2018	09:00	25-09-2018	18:00	OCB	POWERGRID ER-I	Commissioning work of 400kv Bus Reactor-II at Banka S/S by M/s GE T&D.	
187	400 KV MAIN BUS-I AND II AT CHANDWA	23-08-2018	09:00	24-08-2018	18:00	OCB	POWERGRID ER-I	for the erection and bus interconnection of north karanpura bays	
188	Tie Bay of Maithan Rb-I & Future Bay (408 Bay)	03-09-2018	10:00	03-09-2018	17:00	ODB	POWERGRID ER-I	AMP	
189	Maithan RB-II Main Bay (410 Bay)	04-09-2018	10:00	04-09-2018	17:00	ODB	POWERGRID ER-I	AMP	

190	RNC-NRNC-3 Main Bay (433 Bay)	05-09-2018	10:00	05-09-2018	17:00	ODB	POWERGRID ER-I	AMP	
191	ICT-II 220KV Side Bay (209)	06-09-2018	10:00	06-09-2018	17:00	ODB	POWERGRID ER-I	AMP. During S/d ICT-II Chrage through TBC	
192	400KV BUS-BAR-I AT RANCHI	10-09-2018	10:00	10-09-2018	17:00	ODB	POWERGRID ER-I	Fixing of stool on Bus CVT (Rph,Yph & Bph). During All Lines and equipements remain Chrage through Bus-II Only	
193	400KV Ranchi Maithan-I	11-09-2018	10:00	11-09-2018	17:00	ODB	POWERGRID ER-I	Changing of flash over insulator	
194	400KV Ranchi RAGHUNATPUR-I	12-09-2018	10:00	12-09-2018	17:00	ODB	POWERGRID ER-I	Changing of flash over insulator	
195	Tie Bay of 125 MVAR B/R & RNC-NRNC Ckt-3 (432Bay)	13-09-2018	10:00	13-09-2018	17:00	ODB	POWERGRID ER-I	AMP	
196	400KV Ranchi RAURKELA-I	18-09-2018	10:00	18-09-2018	17:00	ODB	POWERGRID ER-I	Changing of flash over insulator	
197	400KV BUS-BAR-II AT RANCHI	19-09-2018	10:00	19-09-2018	17:00	ODB	POWERGRID ER-I	Fixing of stool on Bus CVT Yph . During All Lines and equipements remain Chrage through Bus-I Only	JSEB
198	400KV BUS-BAR-I AT RANCHI	26-09-2018	10:00	27-09-2018	17:00	ODB	POWERGRID ER-I	Errection & Commisssioning of Jack bus for Tie Bay of Ranchi-New Ranchi-I & II).During All Lines and equipements remain Chrage through Bus-II	JSEB
199	Tie Bay of 125 MVAR B/R & RNC-NRNC Ckt-3 (432Bay)	22-09-2018	10:00	22-09-2018	17:00	ODB	POWERGRID ER-I	AMP	
200	RNC-NRNC-4 Main Bay (436 Bay)	24-09-2018	10:00	24-09-2018	17:00	ODB	POWERGRID ER-I	AMP	
201	400/220kV 500MVA ICT-I AT PUSAULI	01-09-2018	09:00	02-09-2018	18:00	ODB	POWERGRID ER-I	Shifting of transformer for Transformer Retrofitting Work.S/D required on Continuous Basis for 02	BSEB
202	400kV ICT-I Main Bay@ Pusauli	02-09-2018	09:00	04-09-2018	18:00	ODB	POWERGRID ER-I	To attend Gas Leakage in Breaker. S/D required on Continuous Basis for 3 days	
203	132kV Pusauli-Dehri	03-09-2018	09:00	08-10-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Problem .	BSEB
204	400/220kV 315MVA ICT-II AT PUSAULI	03-09-2018	09:00	08-10-2018	18:00	ODB	POWERGRID ER-I	For Transformer Retrofitting Work. S/D required on Continuous Basis for 36 days	BSEB
205	3*110MVAR 765kV Bus Reactor Bay@Pusauli	03-09-2018	08:00	03-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	NLDC
206	400kV HVDC North side Filter Main Bay @ Pusauli	03-09-2018	09:00	03-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	NLDC
207	400kV North Converter Tnx_Filter Tie Bay@ Pusauli	04-09-2018	09:00	04-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	NLDC
208	400kV Allahabad L/R Bay @ Pusauli	05-09-2018	09:00	05-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
209	330MVAR 765kV Bus-Reactor at Pusauli	06-09-2018	08:00	06-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	NLDC
210	400kV Allahabad Main Bay @ Pusauli	07-09-2018	09:00	07-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
211	400kV Allahabad_Fut Tie Bay @ Pusauli	08-09-2018	09:00	08-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
212	765/400kV 1500MVA ICT at Pusauli	06-09-2018	08:00	06-09-2018	18:00	ODB	POWERGRID ER-I	AMP work.No Powerflow in 765kV Fatehpur Line	NLDC
213	400kV Saranath L/R Bay @ Pusauli	10-09-2018	09:00	10-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
214	400kV Saranath Main Bay @ Pusauli	11-09-2018	09:00	11-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
215	400kV Saranath_Fut Tie Bay @ Pusauli	12-09-2018	09:00	12-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
216	400kV HVDC East side Converter Tnx Main Bay @ Pusauli	13-09-2018	09:00	13-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	NLDC
217	400kV HVDC East side Filter Main Bay @ Pusauli	14-09-2018	09:00	14-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	NLDC
218	400kV East Converter Tnx_Filter Tie Bay@ Pusauli	15-09-2018	09:00	15-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	NLDC
219	400kV Biharsharif-I L/R Bay @ Pusauli	17-09-2018	09:00	17-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
220	400kV Biharsharif-I Main Bay @ Pusauli	18-09-2018	09:00	18-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
221	400kV Biharsharif-I _ICT-II Tie Bay @ Pusauli	19-09-2018	09:00	19-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
222	400kV Biharsharif-II L/R Bay @ Pusauli	20-09-2018	09:00	20-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
223	400kV Biharsharif-II Main Bay @ Pusauli	21-09-2018	09:00	21-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
224	400kV Biharsharif-II _BR-I Tie Bay @ Pusauli	22-09-2018	09:00	22-09-2018	18:00	ODB	POWERGRID ER-I	For Compressor Overhauling Work	
225	220kV Main Bus-I @ Pusauli	05-09-2018	08:00	05-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
226	220kV Main Bus-II @ Pusauli	06-09-2018	08:00	06-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
227	220kV Pusauli-Dehri	07-09-2018	08:00	07-09-2018	13:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
228	220kV Pusauli-Ara	07-09-2018	13:00	07-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
229	400kV 500MVA ICT-I AT PUSAULI	08-09-2018	08:00	07-09-2018	12:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
230	220kV Pusauli-Ara	08-09-2018	12:00	08-09-2018	16:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB
231	220kV Pusauli-Nadhokhar	08-09-2018	16:00	08-09-2018	20:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	BSEB

232	400kV East Side Bus-I@Pusauli	09-09-2018	08:00	09-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	NLDC
233	400kV East Side Bus-II@Pusauli	10-09-2018	08:00	10-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	NLDC
234	400kV North Side Bus-I@Pusauli	11-09-2018	08:00	11-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	NLDC
235	400kV North Side Bus-II@Pusauli	12-09-2018	08:00	12-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	NLDC
236	HVDC along with AC Bypass	13-09-2018	08:00	13-09-2018	18:00	ODB	POWERGRID ER-I	To attend Isolator Misalignment Problem	NLDC
237	765/400kV 1500MVA ICT Main Bay @ Pusauli	14-09-2018	09:00	14-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	NLDC
238	125MVAR Bus Reactor-II Main Bay	16-09-2018	09:00	16-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	
239	400kV Biharsharif-Varanasi-II	19-09-2018	09:00	16-09-2018	18:00	ODB	POWERGRID ER-I	Measurment of Jumper Clearance of LOC-605	NLDC
240	400kV Varanasi Main Bay (East Side) at Pusauli	22-09-2018	09:00	22-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	NLDC
241	400kV 125MVAR Bus Reactor-II AT PUSAULI	27-09-2018	09:00	27-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	
242	63MVAR Biharsharif-II L/R at Pusauli	29-09-2018	09:00	29-09-2018	18:00	ODB	POWERGRID ER-I	AMP work	
243	765 KV SASARAM - FATEHPUR	05-09-18	09:30	05-09-18	18:00	ODB	POWERGRID NR-III	Guy Wire Aragement as per CC AM Guideline,and AMP of the Line Reactor and line side Equipment, at Fatehpur	NLDC
244	765 KV SASARAM - FATEHPUR	25-08-18	08:00	31-08-18	18:00	ODB	POWERGRID NR-III	A Type suspension Tower (537 Nos) Delta Configuration Strengthening work. at Allahabad	NLDC
245	765 KV GAYA - BALIA	04-09-18	09:00	05-09-18	18:00	ODB	POWERGRID NR-III	For guy arrengment of Line Isolator & replacement of quard conductor to twin of line LA,CVT and BPI jumper at Ballia	NLDC
246	400 KV PATNA - BALIA - I	08-09-18	10:00	08-09-18	13:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
247	400 KV PATNA - BALIA - II	08-09-18	15:00	08-09-18	17:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
248	400 KV PATNA - BALIA - III	10-09-18	10:00	10-09-18	13:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
249	400 KV PATNA - BALIA - IV	10-09-18	15:00	10-09-18	17:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
250	400 KV BIHARSARAIF - BALIA - I	11-09-18	10:00	11-09-18	13:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
251	400 KV BIHARSARAIF - BALIA - I	11-09-18	15:00	11-09-18	17:00	ODB	POWERGRID NR-III	For installation of canopy over PRD & Buchholz relay of Line Reactor, at Ballia	NLDC
252	765kV D'JAIGARH-RANCHI II	05-09-18	09:00	05-09-18	18:00	ODB	POWERGRID WR - I	To facilitate Gantry & Equipment erection for under construction 765KV Bus Reactor bank#3 at Dharamaigarh PS.	NLDC
253	400kV RANCHI-SIPAT I	08-09-18	09:00	08-09-18	18:00	ODB	POWERGRID WR - I	PMU Installation at Sipat	NLDC
254	400kV RANCHI-SIPAT II	09-09-2018	09:00	09-09-2018	18:00	ODB	POWERGRID WR - I	PMU Installation at Sipat	NLDC
255	220kV Korba-Budhipadar Line Ckt-2 A/R Non Auto Mode	02-09-2018	08:00	12-09-2018	18:00	OCB	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL), To keep the auto reclosure in OFF mode-for Hot line crossing	NLDC
256	220kV Korba-Raigarh Line Ckt-1 A/R Non Auto Mode	02-09-2018	08:00	12-09-2018	18:00	OCB	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL), To keep the auto reclosure in OFF mode-for Hot line crossing	NLDC
257	220kV Korba-Budhipadar Line Ckt-3-A/R Non Auto Mode	02-09-2018	08:00	12-09-2018	18:00	OCB	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL), To keep the auto reclosure in OFF mode-for Hot line crossing	NLDC
258	400KV BARIPADA - PANDIABILI LINE	24-08-2018	08:00	24-08-2018	18:00	ODB	ER-II/Odisha/Cuttack	Maintenance work of accumulated S/D nature defects of lines under Cuttack TL	
259	400KV PANDIABILI - MENDHASAL CKT#-I	24-08-2018	08:00	24-08-2018	18:00	ODB	ER-II/Odisha/Cuttack	Maintenance work of accumulated S/D nature defects of lines under Cuttack TL	GRIDCO
260	400KV DUBURI - PANDIABILI LINE	25-08-2018	08:00	25-08-2018	18:00	ODB	ER-II/Odisha/Cuttack	Maintenance work of accumulated S/D nature defects of lines under Cuttack TL	GRIDCO
261	400KV PANDIABILI - MENDHASAL CKT#-II	25-08-2018	08:00	25-08-2018	18:00	ODB	ER-II/Odisha/Cuttack	Maintenance work of accumulated S/D nature defects of lines under Cuttack TL	GRIDCO
262	400 KV 402 keonjhar-315 MVA ICT-I Tie Bay	01/09/18	08:30	01/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
263	400KV Jeypore-Gazuwaka-I FSC	01-09-2018	09:00	01-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For rectification of SF6 gas leakage and overhauling of R-ph CB of 412 BPCB	NLDC
264	765kV, 3*80MVAR Srikakulam Line Reactor-2 at Angul	01-09-2018	09:00	01-09-2018	18:00	ODB	ER-II/Odisha/Angul SS	For replacement of modified SUKRUT Make contact switch in PRDs.	NLDC
265	400 KV Rourkela-Sundargarh - I	01-09-2018	08:00	30-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	
266	400 KV Sundargarh-Raigarh - I	01-09-2018	08:00	30-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	NLDC
267	400 KV Rourkela-Sundargarh - II	01-09-2018	08:00	30-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	
268	400 KV Sundargarh - Raigarh - II	01-09-2018	08:00	30-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	NLDC
269	765KV Bus-2 at Sundargarh	01-09-2018	09:00	03-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Dismantling, shifting and re-erection of 765 Bus E/s to a new location for casting of foundation of 765KV GIS Bus section,lines under construction work.	NLDC
270	765KV 240MVar Bus Reactor-1 at Sundargarh	02-09-2018	09:00	02-09-2018	13:00	ODB	ER-II/Odisha/Sundargarh	Shifting of Spare Reactor to B-Phase reactor after attending oil leakage of B-Phase Reactor	NLDC
271	Tie bay (414) of 400KV Gajuwaka Line-II & 400KV Bolangir Line at Jeypore	02-09-2018	09:00	02-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For rectification of Oil leakage of R-ph CB of 414CT-A	
272	400 KV 415 GIS Main Bay of 125 MVAR Bus Reactor-1	02/09/18	08:30	02/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
273	400 KV 403 Main Bay of 315 MVA ICT-I	03/09/18	08:30	03/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
274	315 MVA ICT#1 AT ROURKELA	03-09-2018	09:00	03-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	OVERHAULING OF MECHANICALLY JAMMED 42389B & 42489T ISOLATOR. AMP to be preppned	GRIDCO

275	Indravati Line - Gajuwaka-I TieBay (411) at Jeypore	03-09-2018	09:00	03-09-2018	18:00	ODB	ER-II/Odisha /Jeypore	For AMP Works	
276	765kV, 3*110MVAR Bus Reactor-1 at Angul	03-09-2018	09:00	03-09-2018	12:00	ODB	ER-II/Odisha/Angul SS	B-Phase Reactor to be taken taken in to service after attending oil leakage problem by full gasket replacement	NLDC
277	765KV 240MVAR Angul L/R-4 at Sundargarh	03-09-2018	09:00	03-09-2018	13:00	ODB	ER-II/Odisha/Sundargarh	Shifting of R-Ph Reactor to Spare reactor for attending oil leakage of R-Phase Reactor	NLDC
278	765KV Bus Reactor-2 at Sundargarh	04-09-2018	09:00	04-09-2018	12:00	ODB	ER-II/Odisha/Sundargarh	Replacement of OTI sensor in Y-Phase Reactor	NLDC
279	765kV, 3*110MVAR Bus Reactor-2 at Angul	04-09-2018	09:00	04-09-2018	12:00	ODB	ER-II/Odisha/Angul SS	R-Phase Reactor to be taken out of service for attending oil leakage problem by full gasket replacement	NLDC
280	Indravati Line Main Bay (410) at Jeypore	04-09-2018	09:00	04-09-2018	18:00	ODB	ER-II/Odisha /Jeypore	For AMP Works	
281	400 KV 404 Baripada-Kharagpur Line Main Bay	04/09/18	08:30	04/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
282	400 KV Rengali Main Bay (403)	04-09-2018	08:00	04-09-2018	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 400 KV Rengali Main Bay (403)	
283	400 KV Rourkela-Sundargarh - I	04-09-2018	08:00	04-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For S/D related works like C C Ring tightening, cotter pin inclusion, VD displaced work, Jumper tightening	
284	400 KV Rourkela-Sundargarh - II	05-09-2018	08:00	05-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For S/D related works like C C Ring tightening,cotter pin inclusion, VD displaced work, Jumper tightening checking etc	
285	400 KV 406 Main Bay of 315 MVA ICT-II	05/09/18	08:30	05/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
286	220 KVRengali PG- Rengali OPTCL CKT # 1 Line	05-09-2018	09:00	05-09-2018	17:00	ODB	ER-II/Odisha/Rengali	For Attending replacement of Isolator Clamp and nuts& bolts.	GRIDCO
287	125MVAR BUS REACTOR#1 AT ROURKELA	06-09-2018	09:00	06-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	COMMISSIONING OF CSD IN ITS TIE BAY CB (42352 CB). AMP to be prepped	
288	400KV 407 Baripada-Duburi Line Main Bay	06/09/18	08:30	06/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
289	ICT-I (3x 105 MVA) at Jeypore	06-09-2018	10:30	06-09-2018	12:30	ODB	ER-II/Odisha /Jeypore	For changing ICT-I combination form Unit-I,III, IV to Unit-II , III & IV for charging Unit-II after Oil Circulation Works due to H2 violation	GRIDCO
290	400kV, 80MVAR Line Reactor at Meramundali (OPTCL SS)	06-09-2018	10:00	06-09-2018	18:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	
291	400 KV Sundargarh - Raigarh - I	06-09-2018	08:00	07-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	For S/D related works like C C Ring tightening,cotter pin inclusion, VD displaced work, Jumper tightening checking etc	NLDC
292	400kV Sundargarh-Rourkela Ckt #4 at Sundargarh	06-09-2018	09:00	06-09-2018	13:00	ODB	ER-II/Odisha/Sundargarh	Rectification of phase to ground clearance issue of Bushing to wave trap jumper under construction head	
293	400kV Sundargarh-Raigarh Ckt #4 at Sundargarh	07-09-2018	09:00	07-09-2018	13:00	ODB	ER-II/Odisha/Sundargarh	Rectification of phase to ground clearance issue of Bushing to wave trap jumper under construction head	NLDC
294	220KV JEYNAGAR-I Line	07-09-2018	09:30	07-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-I TBC Isolator)	GRIDCO
295	400 kV 412 Main Bay of Baripada-TISCO Line	07/09/18	08:30	07/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
296	220KV 201 Main Bay of Balasore line I	08/09/18	08:30	08/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
297	220KV JEYNAGAR-II Line	08-09-2018	09:30	08-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-II TBC Isolator)	GRIDCO
298	765KV Bus-1 at Sundargarh	08-09-2018	09:00	08-09-2018	18:00	ODB	ER-II/Odisha/Sundargarh	Stringing of jack bus of 765KV Raipur Ckt-1&2 for commissioning of the lines under construction head.	NLDC
299	765KV Sundargarh-Darlipali(NTPC)#1 at Sundargarh	09-09-2018	09:00	09-09-2018	18:00	ODB	ER-II/Odisha/Sundargarh	Modification of Line side Jumpering from quad to twin to reduce load on CVT under system improvement scheme	NLDC
300	125 MVAR Bus Reactor	09-09-2018	09:00	09-09-2018	10:00	ODB	ER-II/Odisha /Jeypore	For STATCOM Post commissioning Test of External Reactive device switching	
301	400 KV 414 GIS Tie Bay of 125 MVAR Bus Reactor-1 & 500 MVA ICT-3	09/09/18	08:30	09/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For the above Outage to be booked under AMP works	
302	765KV Sundargarh-Darlipali(NTPC)#2 at Sundargarh	10-09-2018	09:00	10-09-2018	18:00	ODB	ER-II/Odisha/Sundargarh	Modification of Line side Jumpering from quad to twin to reduce load on CVT under system improvement scheme	NLDC
303	220KV 202 Main Bay of Balasore Line II	10/09/18	08:30	10/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
304	ICT-I (3x 105 MVA) at Jeypore	10-09-2018	09:30	10-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV ICT I TBC Isolator)	GRIDCO
305	220 kV Bus -II at Jeypore	11-09-2018	09:30	11-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of Jeynagar I	GRIDCO
306	220KV 203 Bus Coupler Bay	11/09/18	08:30	11/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
307	400KV TALCHER#1 TIE BAY (BAY NO.-405) AT ROURKELA	11-09-2018	09:00	11-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	OVERHAULING OF MECHANICALLY JAMMED 40589B ISOLATOR	
308	220 KV ICT # 2Main Bay (Bay No-202)	11-09-2018	09:00	14-09-2018	17:00	OCB	ER-II/Odisha/Rengali	For CB Overhauling Work	
309	220KV 204 Bay of 315MVA ICT II	12/09/18	08:30	12/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
310	400 KV UIHEP-BR Tie Bay (411)	12-09-2018	08:00	12-09-2018	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 400 KV UIHEP-BR Tie Bay (411)	
311	220 kV Bus -II at Jeypore	12-09-2018	09:30	12-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of Jeynagar II	GRIDCO
312	315 MVA ICT-II	13-09-2018	12:00	13-09-2018	13:00	ODB	ER-II/Odisha /Jeypore	For STATCOM Post commissioning Test of External Transformer Switching	GRIDCO
313	220KV 208 Bay of 315MVA ICT I	13/09/18	08:30	13/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For the above Outage to be booked under AMP works	
314	400KV CHAIBASA#1 MAIN BAY (BAY NO.-416) AT ROURKELA	13-09-2018	09:00	13-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	REPLACEMENT OF DEFECTIVE AUXILIARY SWITCH ASSEMBLY OF 41652 CB.	
315	220KV 209 Main Bay of 160 MVA ICT I	14/09/18	08:30	14/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
316	220 kV Bus -II at Jeypore	14-09-2018	09:30	14-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of ICT- I	GRIDCO
317	765KV 1500MVA ICT-1 at Sundargarh	14-09-2018	09:00	14-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	Shifting of R-Phase ICT to spare ICT to attend oil leakage of R-Phase ICT & insulation tape work on 33kv bus	NLDC

318	765KV 1500MVA ICT-2 at Sundargarh	15-09-2018	09:00	15-09-2018	12:00	ODB	ER-II/Odisha/Sundargarh	Shifting of B-Phase ICT to spare ICT to attend oil leakage of B-Phase ICT	NLDC
319	220 kV Bus -II at Jeypore	15-09-2018	09:30	15-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-II side Isolators of Bus Coupler	GRIDCO
320	220KV 210 Main Bay of 160 MVA ICT II	15/09/18	08:30	15/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
321	Main Bay-707 & Tie Bay-708 of 765KV Sundargarh-Angul CKt-3 at Sundargarh	16-09-2018	09:00	18-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Line side Jumpering & Checking of Protection for Commissioning of 765KV Angul Ckt-3	NLDC
322	765KV Bus-2 at Sundargarh	17-09-2018	09:00	19-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Erection of structure & bus duct of 765KV GIS bus sectionalizer under construction head	NLDC
323	765 KV SNG-DHARAMJAYGARH - I & II	17-09-2018	08:00	19-09-2018	17:00	ODB	ER-II/Odisha/Sundargarh	Replacement of Porcelain insulator with Polymer insulators at GIS bus near Dead end tower at Sundargarh S/S and INDRAPATI Powerline crossing	NLDC
324	220 kV 211 Bay of 500 MVA ICT#3	17/09/18	08:30	17/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
325	220 kV Bus -I at Jeypore	17-09-2018	09:30	17-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of Jeynagar I	GRIDCO
326	220 kV Bus -I at Jeypore	18-09-2018	09:30	18-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of Jeynagar II	GRIDCO
327	132KV 101 Main Bay of Jaleswar Line	18/09/18	08:30	18/09/18	17:30	OCB	ER-II/Odisha/BARIPADA S/S	AMP works	
328	400 KV Rengali -Talcher- CKT # 1 Tie Bay (Bay no-406)	18-09-2018	09:00	21-09-2018	17:00	OCB	ER-II/Odisha/Rengali	For CB Overhauling Work	
329	765kv, 3*80MVAR Line Reactor-2 at Angul	18-09-2018	09:00	18-09-2018	12:00	ODB	ER-II/Odisha/Angul SS	R-Phase Reactor to be taken out of service for attending oil leakage problem by full gasket replacement	NLDC
330	400KV ROURKELA-TALCHER#2	19-09-2018	08:00	19-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	REPLACEMENT OF BROKEN INSULATOR IN MIDDLE PHASE AT LOC. NO.- 234, REFIXING OF DISPLACED VD, TIGHTENING OF JUMPER & CORNING BOLT	
331	132KV 102 Bay of 160 MVA ICT I	19/09/18	08:30	19/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
332	132KV 104 Bay of 160 MVA ICT II	20/09/18	08:30	20/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
333	315 MVA ICT-II	20-09-2018	12:00	20-09-2018	13:00	ODB	ER-II/Odisha /Jeypore	For STATCOM Post commissioning Test of External Transformer Switching (For the above Outlets to be hooked under	GRIDCO
334	Main Bay-710 & Tie Bay-711 of 765KV Sundargarh-Angul CKt-4 at Sundargarh	20-09-2018	09:00	22-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Line side Jumpering & Checking of Protection for Commissioning of 765KV Angul Ckt-4 (UNDER CONSTRUCTION HEAD)	
335	765KV Bus-1 at Sundargarh	21-09-2018	09:00	23-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Erection of structure & bus duct of 765KV GIS bus sectionalizer under construction head	NLDC
336	400KV ROURKELA-RANCHI#1 MAIN BAY (428) AT ROURKELA	21-09-2018	09:00	21-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	ARREST OF MINOR SF6 GAS LEAKAGE IN R-PHASE OF 42852 CB (AREVA MAKE).	
337	132KV 109 Main Bay of Baripada Line	21/09/18	08:30	21/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
338	160 MVA ICT I	22/09/18	08:30	22/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP Works, CT Junction Box Replacement	GRIDCO
339	220 kV Bus -I at Jeypore	22-09-2018	09:30	22-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of ICT-I	GRIDCO
340	400 KV 413 GIS Main Bay of 500 MVA ICT-3	23/09/18	08:30	23/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	
341	315 MVA ICT II	24/09/18	08:30	24/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works	GRIDCO
342	220 kV Bus -I at Jeypore	24-09-2018	09:30	24-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	Isolator Retrofitting Works of Bus-I side Isolators of Bus Coupler	GRIDCO
343	400Kv Indravati-Rengali S/c Line	24-09-2018	07:00	26-09-2018	18:00	ODB	ER-II/Odisha/Bhawanipatna	For attending camera patrolling defects, fixing of Rigid Spacer and Tightening of Jumper and corona ring Nut & Bolts with soft pin fixing and changing displaced Rigid	NLDC
344	220KV JEYNAGAR-I Line	25-09-2018	09:30	25-09-2018	17:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-I 89C Isolator) & R-ph CVT replacement work	GRIDCO
345	400KV RANCHI#1 & SUNDARGARH#2 TIE BAY (BAY NO.-429) AT ROURKELA	25-09-2018	09:00	25-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF TIE BAY CONVENTIONAL A/R RELAY (VARM) BY NUMERICAL A/R RELAY.	
346	400KV ROURKELA-SUNDARGARH#2	25-09-2018	16:00	25-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	TESTING OF A/R CIRCUIT AFTER A/R RELAY RETROFITTING IN ITS TIE BAY.	
347	132 KV Main Bus	25/09/18	08:30	25/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP Works, CVT Junction Box Replacement	
348	400 KV UIHEP-Indravati Main Bay (412)	25-09-2018	08:00	25-09-2018	18:00	ODB	ER-II/Odisha /Indravati	AMP work of 400 KV UIHEP-Indravati Main Bay (412)	
349	Tie Bay-708 of 765KV Angul L/R-3 at Sundargarh	25-09-2018	09:00	27-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Erection of CB in Main Bay-709 of 765KV Raipur Line-1 for commissioning of the line under construction head	NLDC
350	500 MVA ICT	26/09/18	08:30	26/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works AMP	GRIDCO
351	400KV RANCHI#2 & SUNDARGARH#3 TIE BAY (BAY NO.-420) AT ROURKELA	26-09-2018	09:00	26-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF TIE BAY CONVENTIONAL A/R RELAY (VARM) BY NUMERICAL A/R RELAY.	
352	400KV ROURKELA-SUNDARGARH#3	26-09-2018	16:00	26-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	TESTING OF A/R CIRCUIT AFTER A/R RELAY RETROFITTING IN ITS TIE BAY.	
353	220KV JEYNAGAR-II Line	26-09-2018	09:30	26-09-2018	13:30	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV Jeynagar-II 89C Isolator)	GRIDCO
354	765kv, 3*110MVAR Bus Reactor-2 at Angul	26-09-2018	09:00	26-09-2018	12:00	ODB	ER-II/Odisha/Angul SS	B-Phase Reactor to be taken out of service for attending oil leakage problem by full gasket replacement	NLDC
355	400KV SUNDARGARH#4 & 125MVAR BUS REACTOR#2 TIE BAY (BAY NO.-426) AT ROURKELA	27-09-2018	09:00	27-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF TIE BAY CONVENTIONAL A/R RELAY (VARM) BY NUMERICAL A/R RELAY.	
356	400KV ROURKELA-SUNDARGARH#4	27-09-2018	16:00	27-09-2018	18:00	ODB	ER-II/ODISHA/ROURKELA	TESTING OF A/R CIRCUIT AFTER A/R RELAY RETROFITTING IN ITS TIE BAY.	
357	132KV Bangriposi Line	27/09/18	08:30	27/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement, AMP Works	GRIDCO
358	400KV Baripada-Kharagpur Line	28/09/18	08:30	28/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CVT Replacement work, AMP works	GRIDCO
359	ICT-I (3x 105 MVA) at Jeypore	28-09-2018	09:30	28-09-2018	11:00	ODB	ER-II/Odisha /Jeypore	For Isolator Retrofitting works (220KV ICT I 89C Isolator)	GRIDCO
360	Tie Bay-711 of 765KV Angul L/R-4 at Sundargarh	28-09-2018	09:00	30-09-2018	18:00	OCB	ER-II/Odisha/Sundargarh	Erection of CB in Main Bay-712 of 765KV Raipur Line-2 for commissioning of the line under construction head	NLDC

361	315MVA ICT I	29/09/18	08:30	29/09/18	17:30	ODB	ER-II/Odisha/BARIPADA S/S	CT Junction Box Replacement, AMP works
362	765kV, 3*80MVAR Line Reactor-2 at Angul	29-09-2018	09:00	29-09-2018	12:00	ODB	ER-II/Odisha/Angul SS	B-Phase Reactor to be taken out of service for attending oil leakage problem by full gasket replacement
363	400 kV Jeypore-Indravati S/C Line	30-09-2018	09:00	30-09-2018	17:30	ODB	ER-II/Odisha /Jeypore	For replacement of 400KV B-ph Line CVT
364	400kv Kharagpur-Baripada	02-09-2018	08:00	02-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
365	400kv Kharagpur-KTPP#1	03-09-2018	08:00	03-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
366	400kv Kharagpur-KTPP#2	04-09-2018	08:00	04-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
367	400kv Arambag-NewPPSP#1	05-09-2018	08:00	05-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
368	400kv Arambag-NewPPSP#2	06-09-2018	08:00	06-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
369	Gokarna: 400kv Main Bus#1	10-09-2018	07:00	10-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
370	132kv Birpara-Birpara(PG)#1	10-09-2018	09:00	10-09-2018	16:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
371	Gokarna: 400kv Main Bus#2	11-09-2018	07:00	25-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
372	132kv Birpara-Birpara(PG)#2	11-09-2018	07:00	26-09-2018	16:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
373	400kv Gokarna: 400kv Main bus#2 & 400/220kv, 315MVA TR#2 will be in TBC	12-09-2018	07:00	27-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
374	400kv Gokarna: 400kv Transfer Bus coupler	13-09-2018	07:00	28-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
375	400kv Gokarna: 400kv Farakka fdr #1	14-09-2018	07:00	29-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
376	400kv Gokarna: 400kv Farakka fdr #2	19-09-2018	07:00	19-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
377	400kv Gokarna: 400kv Bus Reactor	20-09-2018	09:00	20-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
378	400kv Gokarna: 400kv Bus Reactor	24-09-2018	09:00	24-09-2018	15:00	ODB	WBSETCL	Tan Delta test of Bushing/Reactor
379	400kv Durgapur: 50 MVAR BUS REACTOR	24-09-2018	24-09-2018	25-09-2018	16:00	ODB	WBSETCL	Bay maintenance work.
380	400kv Gokarna: 400/220kv 315MVA ICT#1	25-09-2018	09:00	25-09-2018	15:00	ODB	WBSETCL	Supervision test of ICT
381	400 KV DURGAPUR-ARAMBAG#	25-09-2018	09:00	25-09-2018	16:00	ODB	WBSETCL	Bay maintenance & Tree trimming work.
382	400KV DURGAPUR-PPSP#2	26-09-2018	09:00	26-09-2018	16:00	ODB	WBSETCL	Bay maintenance & Tree trimming work.
383	132kv NBU-Siliguri(PG)	26-09-2018	08:00	27-09-2018	15:00	ODB	WBSETCL	O.D.B. Prepuja maintenance
384	400KV DURGAPUR-PPSP#1	27-09-2018	09:00	27-09-2018	16:00	ODB	WBSETCL	Bay maintenance & Tree trimming work.
385	400KV DURGAPUR-PGCIL#2	28-09-2018	09:00	28-09-2018	16:00	ODB	WBSETCL	Bay maintenance & Tree trimming work.
386	220kv DALKHOLA(WB)-DALKHOLA(PG)#1	28-09-2018	08:00	28-09-2018	15:00	ODB	WBSETCL	Prepuja maintenance
387	400KV DURGAPUR-PGCIL#1	29-09-2018	09:00	29-09-2018	16:00	ODB	WBSETCL	Bay maintenance & Tree trimming work.
388	220kv DALKHOLA(WB)-DALKHOLA(PG)#2	29-09-2018	08:00	29-09-2018	15:00	ODB	WBSETCL	Prepuja maintenance
389	Maintenance work for Bus Reactor	10-09-2018	09:30	21-09-2018	18:00	OCB	BARH	Annual testing and internal inspection of Bus Reactor
390	Maintenance work for Bus Reactor Bay Equipments	10-09-2018	09:30	21-09-2018	18:00	OCB	BARH	Annual testing of Bay Equipments
391	Maintenance work for Barh Patna Line-4	26-09-2018	09:30	27-09-2018	18:00	OCB	BARH	Attending defects of isolator & annual testing of Bay equipments
392	400KV Kahalgaon-Maithon Line-1	01-09-2018	09:30	01-09-2018	17:30	ODB	KAHALGAON	commissioning work
393	400KV Kahalgaon-Farakka Line-1	03-09-2018	09:30	03-09-2018	17:30	ODB	KAHALGAON	commissioning work
394	400KV Kahalgaon-Barh Line-1	04-09-2018	09:30	04-09-2018	17:30	ODB	KAHALGAON	commissioning work
395	400KV Bus-1	11-09-2018	09:30	13-09-2018	17:30	OCB	KAHALGAON	commissioning work
396	400KV Bus-2	17-09-2018	09:30	19-09-2018	17:30	OCB	KAHALGAON	commissioning work
397	400kV/220kV Auto Tr.(Bay:11-12)	05-09-2018	09:00	06-09-2018	17:00	ODB	FARAKKA	CB testing
398	400kV Fkk-Kahalgaon Line-2	11-09-2018	09:00	11-09-2018	17:00	ODB	FARAKKA	Relay testing
399	400kV Fkk-Sagardighi Line-2 (Bay:16-17)	12-09-2018	09:00	13-09-2018	17:00	OCB	FARAKKA	CB testing
400	Auto reclose of 400KV Rengali-Idravati Line in non -auto mode	01-09-2018	08:00	30-09-2018	18:00	ODB	ER-II/Odisha/Balangir	For PID Scaning
401	Bolangir-Angul line Tie Bay(40102 bay)	01-09-2018	09:00	02-09-2018	18:00	ODB	ER-II/Odisha/Balangir	Cleaning and finishing of roof tile work of Newly constructed ACP
402	400KV, BUS-I at Bolangir	03-09-2018	09:00	05-09-2018	18:00	ODB	ER-II/Odisha/Balangir	Jumpring work for new 125 MVAR Bus Reactor Bay and Testing purpose

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403	400KV Bus-I at Keonjhar	03-09-2018	09.00	08-09-2018	18.00	ODB	ER-II/Odisha/Keonjhar	Stringing of Jack Bus over Bus-I for 125 MVAR Reactor	
404	400KV, BUS-II at Bolangir	06-09-2018	09:00	08-09-2018	18:00	ODB	ER-II/Odisha/Balangir	Jumprng work for new 125 MVAR Bus Reactor Bay and Testing purpose	
405	400KV Bus-II at Keonjhar	10-09-2018	09.00	15-09-2018	18.00	ODB	ER-II/Odisha/Keonjhar	Stringing of Jack Bus over Bus-II for 125 MVAR Reactor	
406	220 KV Bus Coupler Bay (204 Bay)	13-09-2018	09:00	13-09-2018	18:00	ODB	ER-II/Odisha/Balangir	AMP For 204 CB and 204 CT	
407	400 kV JEYPORE-GAJUWAKA-I LINE	14-09-2018	09:00	15-09-2018	17:30	ODB	ER-II/Odisha/Jeypore	For replacement of defective porcelain Insulator by Long rod polymer insulator	NLDC
408	400 kV JEYPORE-GAJUWAKA-II LINE	17-09-2018	09:00	18-09-2018	17:30	ODB	ER-II/Odisha/Jeypore	For replacement of defective porcelain Insulator by Long rod polymer insulator	NLDC
409	400Kv Jeypore-Bolangir S/c line	12-09-2018	08:00	13-09-2018	18:00	ODB	ER-II/Odisha/Jeypore	For Rectification of Shut Down Nature of Defects	NLDC
410	220KV JEYPORE-JEYNAGAR-I Line	25-08-2018	09:30	25-08-2018	17:30	ODB	ER-II/Odisha/Jeypore	For Isolator Retrofitting works (220KV JeynagarI TBC Isolator)	GRIDCO
411	3X166.67MVA coupling transformer of STATCOM	05-09-2018	09:00	05-09-2018	12:00	ODB	ER-II/Odisha/Jeypore	For unit change over from SPARE transformer to Bph transformer	
412	400 KV MERAMUNDALI-VEDANT CKT-I	26-08-2018	08:00	27-08-2018	17:00	OCB	GRIDCO	FOR MAKING LILO ARRANGEMENT AT LAPANGA	
413	400 KV MERAMUNDALI-VEDANT CKT-II	28-08-2018	08:00	29-08-2018	17:00	OCB	GRIDCO	FOR MAKING LILO ARRANGEMENT AT LAPANGA	
414	400 kV Ranchi Sipat-1	01-09-2018	10:00	01-09-2018	12:00	ODB	ER-1	For taking FSC i.r.o. 400 kV Ranhi-Sipat-1/2 in service	NLDC
415	400 kV Ranchi- Sipat-2	01-09-2018	12:30	01-09-2018	14:30	ODB	ER-1	For taking FSC i.r.o. 400 kV Ranhi-Sipat-1/2 in service	NLDC

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	765kv D'JAIGARH-RANCHI II	5-Sep-18	9:00	6-Sep-18	18:00	Conti...	WRPC	To facilitate Gantry & Equipment erection for under construction 765KV Bus Reactor bank#3 at Dharamjaigarh PS.	
2	400kv RANCHI-SIPAT I	8-Sep-18	9:00	8-Sep-18	18:00	Daily	WRPC	PMU Installation at Sipat	
3	400kv RANCHI-SIPAT II	9-Sep-18	9:00	9-Sep-18	18:00	Daily	WRPC	PMU Installation at Sipat	
4	400kv RAIGARH-SUNDERGARH-1	10-Sep-18	8:00	16-Sep-18	18:00	Conti...	WRPC	Diversion of Line at 622 -623 on account of Railway NTPC,Lara	
5	400kv RAIGARH-SUNDERGARH-3	10-Sep-18	8:00	16-Sep-18	18:00	Conti...	WRPC	Diversion of Line at 622 -623 on account of Railway NTPC,Lara	
6	400KV Binaguri-Bongaigaon-I	21-Aug-18	8:00	21-Aug-18	18:00	Daily	NERPC	Conductor repairing work.	
7	400KV Binaguri-Bongaigaon-II	22-Aug-18	8:00	22-Aug-18	18:00	Daily	NERPC	Conductor repairing work.	
8	FATEHPUR-PG (765 KV)-SASARAM-ER (765KV)	25-Aug-18	08:00	31-Aug-18	18:00	DAILY	NRPC	A Type suspension Tower (537 Nos) Delta Configuration Strengthening work.	
9	GAYA-ER (765KV)-BALIA (765KV)	4-Sep-18	09:00	5-Sep-18	18:00	DAILY	NRPC	For guy arrngment of Line Isolator & replacement of quad conductor to twin of line LA,CVT and BPI jumper AT BALIA	
10	FATEHPUR-PG (765 KV)-SASARAM-ER (765KV)	5-Sep-18	09:30	5-Sep-18	18:00	DAILY	NRPC	Guy Wire Arrangement as per CC AM Guideline,and AMP of the Line Reactor and line side Equipment	
11	TCSC-FSC System for 400 kV Gorakhpur-Muzaffarpur Line -1/400.00	5-Sep-18	09:00	7-Sep-18	17:30	DAILY	NRPC	For Annual Capacitance Measurement of TCSC & FSC System and Other AMP activities for other equipments including Timing/DCRM of Bypass CB's, Cleaning of Thyristor, Insulators etc. (400 kV Gkp Mzp Line I shall remain charged through MBS isolator and hence no line outage shall take place)	
12	BALIA(400KV)-PATNA-ER (400KV)1	8-Sep-18	10:00	8-Sep-18	13:00	DAILY	NRPC	For installation of canopy over PRD & Buchholz relay of Line Reactor	
13	BALIA(400KV)-PATNA-ER (400KV)2	8-Sep-18	15:00	8-Sep-18	17:00	DAILY	NRPC	For installation of canopy over PRD & Buchholz relay of Line Reactor.	
14	BALIA(400KV)-PATNA-ER (400KV)3	10-Sep-18	10:00	10-Sep-18	13:00	DAILY	NRPC	For installation of canopy over PRD & Buchholz relay of Line Reactor.	
15	BALIA(400KV)-PATNA-ER (400KV)4	10-Sep-18	15:00	10-Sep-18	17:00	DAILY	NRPC	For installation of canopy over PRD & Buchholz relay of Line Reactor.	

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 Utility	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	Thermal	WBPDC	SS	Bandel TPS	1	82.5	No	
			SS		2	82.5	No	
			SS		3	82.5	No	
			SS		4	82.5	No	
			SS	Santalidih	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 WBPDC 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	
			SS		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		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	Action has been initiated to put in RGMO, but testing is not yet completed.			
			CS		3	210	No				
			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			Kahalgaoan 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				
				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		1	48	No	
			PS	Dikchu	2	48	No	(RoR project with 3 hours pondage)
			PS					

Quarterly Preparedness Monitoring -AGENDA

(Status as on :
)

S.No.	State	Sector (G/T/D)	Utilities	Status of CISO Nomination	Critical Infra Identified	Crisis managem ent 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 _____		

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:

SI 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:

VDI of Selected 765 kV & 400 kV in Eastern Region in the month of July - 2018

नई रांची / Ranchi New			जमशेदपुर / Jamshedpur			मुजफ्फरपुर / Muzaffarpur		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
790	754	0.00	423	406	2.64	416	385	0.00

बिहार शरीफ / Bihar Sariff			बिनागुरी / Binaguri			जेरत / Jeerat		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
421	398	0.13	416	396	0.00	419	375	0.14

राउरकेला / Rourkela			जयपुर / Jeypore			कोडरमा / Koderma		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
414	399	0.00	424	397	0.17	418	399	0.00

मैथन / Maithon			तेस्ता / Teesta			रांगपो / Rangpo		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
421	404	0.81	409	396	0.00	408	395	0.00