

# Minutes of 133<sup>rd</sup> OCC Meeting

Date: 12.06.2017 Eastern Regional Power Committee 14, Golf Club Road, Tollygunge Kolkata: 700 033

### Eastern Regional Power Committee

Minutes of 133<sup>rd</sup> OCC Meeting held on 26<sup>th</sup> May, 2017 at ERPC, Kolkata

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

### <u>PART A</u>

#### Item no. 1: Confirmation of minutes of 132<sup>nd</sup> OCC meeting of ERPC held on 21.04.2017

The minutes of 132<sup>nd</sup> OCC meeting were uploaded in ERPC website and circulated vide letter dated 09.05.2017 to all the constituents.

Members may confirm the minutes.

#### **Deliberation in the meeting**

Members confirmed the minutes of 132<sup>nd</sup> OCC meeting.

### PART B: ITEMS FOR DISCUSSION

#### Item No. B.1: Commissioning of new transmission elements in Eastern Region

In 118<sup>th</sup> OCC, it was informed that the network diagram of eastern region needs to be updated on regular basis on account of commissioning of new elements in the CTU as well as STU networks.

OCC advised all the constituents to update the list of newly commissioned power system elements to OCC on monthly basis so that ERLDC/ERPC can update the network diagram on regular basis.

The list of new Transmission Elements commissioned/charged during **April**, **2017** as informed by ERLDC is given below:

- 1) GT-2 BRBCL (Nabinagar) charged for the first time on 06:04hrs of 02-04-2017.
- 2) 125MVAR BR-2 at Alipurduar charged for the first time on 15:36hrs of 07-04-2017.
- 3) 400kV Darbhanga-Muzzafarpur-I charged for the first time on 19:20hrs of 07-04-2017.
- 4) 400kV Bus-I & II at Darbhanga charged for the first time on 21:33hrs of 08-04-2017.
- 5) 500MVA ICT-I at Darbhanga charged for the first time on 22:29hrs of 09-04-2017.
- 6) 220kV Bus-I & II at Darbhanga charged for the first time on 22:52hrs of 09-04-2017.
- 7) 125MVAR Bus Reactor-I at Darbhanga charged for the first time on 01:07hrs of 10-04-2017.
- 8) 220kV Samastipur-Darbhanga-SC charged for first the time on 14:00hrs of 16-04-2017.
- 9) 220kV Motipur-Darbhanga-I charged for the first time on 18:58hrs of 17-04-2017.
- 10) 220kV Motipur-Darbhanga-II charged for the first time on 18:12hrs of 22-04-2017.
- 11) 80MVAR switchable Line Reactor with 400kV Farakka- Gokarna-I at FSTPS, NTPC Farakka charged for the first time on 16:49hrs of 28-04-2017.

Other constituents may update.

#### **Deliberation in the meeting**

OPTCL informed the following:

12) 20MVA 220/132kV ATR at Bonai charged for the first time on 12-04-2017.

#### Item No. B.2: 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. The latest status as updated in 35<sup>th</sup> TCC is as given below:

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 (in Rs.)	Status as updated in 35 <sup>th</sup> TCC
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14		120.67 Cr	11.04 Cr.	95 % Supply Completed
2	WBSETCL	Transmission System improvement of WBSETCL					
3	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	10.05.17	162.5 Cr.	19.53 Cr	Total contract awarded for Rs. 67.73 Cr Erection work for received equipment is in progress.
4	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16		20 Cr.	4.94 Cr. + 9.88 Cr.	<ol> <li>Hardware supplied and installed.</li> <li>SAT completed for pilot state</li> <li>Protection database management software (PDMS) delivered.</li> <li>Training on PDMS organised at Odisha.</li> </ol>
5		Renovation and up-gradation of 220/132/33 KV GSS Biharsharif, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone & 132/33 kV GSS Kataiya	11/5/2015	Feb'2017	64.33 crore	23.68 crore	Project is on going. Order for supply of equipment placed for Rs.13.51 Cr.
6	BSPTCL	Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016		18.88 crore		Approved (triparty agreement among NLDC, Govt. of Bihar & BSPTCL is in under process)
7		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.					Recommendation of appraisal committee is awaited. Estimated cost 54.69 crore.
8	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation			25.96		Approved by Ministry of Power
9		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			140		Appraisal committee has recommended. It will be placed in next monitoring Committee meeting.
10	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station					Appraisal committee has recommended. It will be placed in next monitoring Committee
		Upgradation of Protection and SAS			26.09		Approved by Ministry of Power

11	OHPC	Renovation and up-gradation of protection and control system of 4 nos OHPC substations.	OHPC will submit the detailed proposal soon as per the requirement of Appraisal committee.
12a	ERPC	Training for Power System Engineers	The proposal was examined by the Techno Economic sub group of PSDF and advised to submit revised proposal with consideration of views of the group.
12b		Training on Integration of Renewable Energy resources	The proposal was examined by the Techno Economic sub group of PSDF and advised to
12c		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents	submit revised proposal only for training at NORD POOL Academy with consideration of views of the group.

In 35<sup>th</sup> ERPC meeting, CE-NPC, CEA informed that grant has been allotted to Powergrid for installation of STATCOM but no update on the progress have been received from Powergrid.

Powergrid informed that project has already been awarded and they will submit the details to PSDF Nodal Agency and NPC.

In 131st OCC, Powergrid informed that they will submit the details shortly.

Respective constituents may update.

#### **Deliberation in the meeting**

Members noted.

# Item No. B.3: OPERATIONAL LOAD FLOW STUDY FOR OFF-PEAK PERIOD (WINTER LEAN PERIOD)

In 128<sup>th</sup> OCC for lean off-peak load flow study, OCC finalized the date and time as follows

- 13.00 Hrs of 28<sup>th</sup> December,2016.
- 02:00 Hrs of 29<sup>th</sup> December,2016

In 130<sup>th</sup> OCC, PRDC informed that they will submit the report by end of March, 2017. The report is available at ERPC website (www.erpc.gov.in)

Further OCC advised PRDC to carry out another load flow study in the first week of May, 2017 tentatively for 4<sup>th</sup> and 5<sup>th</sup> May, 2017 for 19:00 and 20:00 Hrs. Therefore, all utilities have to record data for four instances.

OCC advised all the constituents to note the date and timings for recording the data and send it to ERPC/PRDC.

PRDC may update.

#### **Deliberation in the meeting**

PRDC informed that load flow studies of Summer Peak Condition (4<sup>th</sup> and 5<sup>th</sup> May, 2017) for 19:00 and 20:00 hrs, they have received data from BSPTCL and CESC. Data pending for rest of the utilities for the mentioned time stamps is tabulated below:

	State wise Load Generation data received (%)			
States	Data Received for	Only 04 <sup>th</sup> May-	Only 05 <sup>th</sup> May-	
	both time interval	17	17	
Bihar	Data received			
Jharkhand(DVC data pending)	38.36%	38.36%	38.36%	
Odisha	18.25%	24.60%	21.43%	
Sikkim	0.00%	0.00%	0.00%	
West Bengal(WBSETCL+DVC data pending)	16.67%	16.67%	16.67%	

OCC advised DVC, Odisha, Sikkim and WBSETCL to submit the data at the earliest.

#### Item No. B.4: Status of UFRs healthiness installed in Eastern Region

UFR Healthiness Certification for the month of May, 2017 has been received from CESC and BSPTCL.

DVC WBSETCL, OPTCL and JUSNL may update.

#### **Deliberation in the meeting**

UFR Healthiness Certification has been received from all the constituents except OPTCL.

OPTCL was advised to send the UFR status to ERPC and ERLDC.

#### Item No. B.5: Healthiness of SPS existing in Eastern Region

CESC, NTPC & Powergrid-Odisha have submitted the healthiness certificate for the month of May, 2017.

GMR, JITPL, Vedanta, Chuzachen & Powergrid ER-II may submit the healthiness certificate for May 2017.

#### Deliberation in the meeting

SPS Healthiness Certification has been received from all the constituents except Powergrid ER-II.

OCC advised Powergrid ER-II to submit the healthiness certificate to ERPC and ERLDC.

#### A. Testing of SPS at 400 kV Rangpo S/s

In 129<sup>th</sup> OCC, on query about SPS at 400kV level at Rangpo S/s for reliable power evacuation through 400kV Rangpo – Siliguri D/c, Powergrid informed that the SPS at Rangpo substation has been completed and the extension of signal to respective generation stations have been tested.

In 131st OCC, ERLDC informed that the SPS needs to be tested and the response time of each generator needs to be checked.

OCC advised to carry out the SPS test on 22.03.2017 and advised to review the response time of each generator on special meeting of 29.03.2017.

In the special meeting of 29.03.2017, ERLDC informed that as per the decision of 131<sup>st</sup> OCC, the SPS was tested on 24.03.2017 and the response time of Generators are as follows:

- a) Teesta-III: 130 ms
- b) Jorethang: 1.2 sec for SPS receipt
- c) Cuzachen: 2.1 sec & 3.3 sec

The response time of Jorethang and Chuzachen needs to be reviewed and they should respond faster.

Further, Powergrid communicated that presently the scheme has been implemented using available resources and codes have been transferred through available PLCC panels without redundancy. As the SPS scheme is very important and also for future accommodation of Tashiding and Dikchu generations, fresh connectivity of the Logic signals and PLCC channel up gradation is required.

On getting concurrence from TUL regarding cost implications, necessary steps will be taken for implementation of the system through SCADA and dedicated data channels.

In 132<sup>nd</sup> OCC, ERLDC informed that another test may be done to check the SPS response time of above generators including Dikchu HEP.

OCC advised to carry out the SPS test on 26.04.2017 and check the response time of each generator.

Regarding upgradation of communication channel to provide redundancy for the SPS scheme, OCC advised to convene a special meeting for further discussion.

Respective members may update.

#### **Deliberation in the meeting**

It was informed that SPS testing could not been done as Teesta-3 was not able to transfer the 400kV DIKCHU line to Bus-1 at 400kV Teesta-3 end so that the islanding of DIKCHU HPS can be avoided in the event of actual tripping of the bus coupler CB at Teesta-3 during testing.

#### Item No. B.6: Furnishing of data for Merit Order Web Portal – CEA

During the Power Minister's Conference held on 3<sup>rd</sup> and 4<sup>th</sup> May 2017, at New Delhi, it was decided to develop a web portal/mobile app in about a month's time with a view to having transparency in Merit order scheduling & dispatch and ensuring most economic system operation.

In the conference Hon'ble Union Minister for Power requested all the States/UTs to submit the requisite data to CEA immediately. A number of States have already submitted the required data. However, the same is still awaited from others.

ERPC vide mail dated 14.04.17, 25.04.17 & 15.05.17 has requested all the ER constituents to submit the above information.

A meeting was convened by CEA to discuss the matter regarding the data and the issues related to the development of merit order web portal/mobile app on 17<sup>th</sup> May, 2017.

CEA vide letter dated 15.05.2017 intimated that complete data has not been received from any ER constituents except Jharkhand. Odisha has furnished incomplete data. The CEA letter is attached at **Annexure-B.6**.

Members may discuss.

#### Deliberation in the meeting

OCC advised SLDCs of Bihar, DVC, Odisha and West Bengal to submit the data to CEA as per the format available in the CEA portal. The format is also available in ERPC website.

#### Item No. B.7: Status of Islanding Schemes of Eastern Region

#### B.7.1. Status of commissioned Islanding Schemes in Eastern Region

At present, the following islanding schemes are in service:

- 1. CESC as a whole Islanding Scheme, CESC
- 2. BkTPS Islanding Scheme, WBPDCL
- 3. Tata Power Islanding Scheme, Haldia
- 4. Chandrapura TPS Islanding Scheme, DVC

In 108<sup>th</sup> 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 May, 2017 has been received from CTPS, DVC, and CESC.

BkTPS, Tata Power may update.

#### **Deliberation in the meeting**

The healthiness certificate for Islanding Scheme has been received from all the constituents.

#### B.7.2. FSTPS Islanding Scheme, NTPC

In 132<sup>nd</sup> OCC, NTPC informed that the FSTPS islanding scheme with U#1 has been implemented. NTPC's official communication is attached at **Annexure-7.2**.

OCC may decide further course of action.

#### **Deliberation in the meeting**

OCC advised NTPC and JUSNL to submit the healthiness certificate on monthly basis to ERPC secretariat.

#### B.7.3. Bandel Islanding Scheme, WBPDCL

As per the latest status available in PSDF web site the scheme was approved for an amount of Rs.1.39 crore by the Monitoring Committee on 10.04.2017.

Ministry is yet to issue the approval letter.

WBPDCL may update the latest status.

#### **Deliberation in the meeting**

WBPDCL noted.

#### Item No. B.8: Testing / Calibration of Main and Check Energy Meters -- DGPC

In 132<sup>nd</sup> OCC, DGPC representative explained the matter and informed that as per their guidelines the energy meters need to be checked/ calibrated at intervals of twelve months as per PPA.

DGPC also requested for the test reports of energy meters which are owned by PTC/Powergrid.

Powergrid informed that as per CEA metering regulations the interval for checking of energy meters is five years.

OCC advised Powergrid to furnish all the relevant documents and last test reports of the meters to DGPC and resolve the matter at the earliest.

DGPC vide mail informed that till date POWERGRID has not submitted the relevant documents of CEA and the last test reports for energy meters.

Further it was learnt that POWERGRID has replaced the main energy meters of 400kV Tala-Siliguri Feeder No. I & IV at Binaguri end on April 21, 2017 and the main energy meters of 220kV Chhukha-Birpara Feeder No. II & III at Birpara end on April 20, 2017 without any intimation to Tala Hydropower Plant (THP), Chhukha Hydropower Plant (CHP)/DGPC. As per sub clause No. 5.3 of Power Purchase Agreement (PPA) "Any change in metering system/methodology shall be carried out with concurrence / mutual agreement between the two parties". Therefore THP and CHP vide letter No. DGPC/THP/SE(O&M)/E-1/2017/855 dated April 28, 2017 (Annexure-A) and letter No. DGPC/CHP/CE/TC-2/2017/1652 dated May 08, 2017 (Annexure-B) has requested PTC to submit the reason for replacement of energy meters by violating the relevant clause of PPA. PTC vide letter No. PTC/MTFG/ERLDC/421 dated May 01, 2017 (Annexure-C) has referred the matter to POWERGRID to provide the reason for replacement of energy meters of 400kV Tala-Siliguri Feeder I & IV at Binaguri end without any intimation to THP especially when POWERGRID during CCM held on February 06, 2017 had intimated that all energy meters at Binaguri end were checked and found OK by POWERGRID.

Therefore DGPC request OCC to persue with PTC/POWERGRID to provide proper justifications for replacement of above energy meters without informing DGPC and to henceforth respect all the provision of PPA and intimate DGPC in advance regarding testing/replacement of their main and check energy meters for all feeders connected to Bhutan system. As informed earlier the non-adherence to the above important clause of PPA shall invite serious audit observation for DGPC.

DGPC/Powergrid may update.

#### **Deliberation in the meeting**

Powergrid informed that the replacement of above main energy meters at Binaguri S/s were done as per the 35<sup>th</sup> ERPC/TCC decision as the meters were heavily time drifted. The list was circulated in 130<sup>th</sup> OCC meeting.

Powergrid added that the same was communicated to PTC.

OCC advised Powergrid to intimate DGPC/Bhutan whenever they intends to do any work/testing related to the meters of the above lines.

Powergrid agreed.

#### Item No. B.9: ENABLING OF 3-PHASE AUTO RECLOSE AT 132 KV NORTH BENGAL AND SIKKIM AREAS TO MINIMIZE ELEMENT OUTAGES DUE TO TRANSIENT FAULTS -- Powergrid

During rainy season In North Bengal and Sikkim area, high element outages observed of 132 KV level. Mainly from past experience it is observed that 90% of the fault is of Single Phase to Ground fault and transient in nature. However as per general practice 132 KV level CB's are of mechanically ganged and any single phase fault also causing tripping of all three phases.

To make system more dynamic it is prudent to go for, three phase auto reclosure for any single phase Fault in the 132 KV lines. Only by introduction of A/R facility line availability may be increased in the tune of 90% i.r.o present situations. POWERGRID proposed to implement the same however other constituents as well as ERLDC may give respective views. Upon concurrence detailed road map for Implementation will be given.

In 132<sup>nd</sup> OCC, Powergrid informed that in North Bengal and Sikkim area most of the time the 132 kV lines were tripping on transient fault and the system can be saved by implementing 3-phase auto-reclosure scheme.

OCC discussed the matter in detail and agreed in principle for implementation of 3-pase autoreclosure scheme for 132 kV lines. Further, it was decided that the implementation would start with North Bengal and Sikkim area.

Further, OCC advised Powergrid to submit a report on the status of PLCC/telemetry, A/R facility etc. for both ends of each 132 kV lines of North Bengal and Sikkim area.

Powergrid may update.

#### **Deliberation in the meeting**

Powergrid informed that as a pilot project they are implementing the 3-phase auto-reclosure scheme for 132kV Rangpo-Gantok line.

OCC agreed and further advised Powergrid to submit a report on the status of PLCC/telemetry, A/R facility etc. for both ends of each 132 kV lines of North Bengal and Sikkim area.

Powergrid agreed.

# Item No. B.10: Under utilization of 220 kV Ara (PG)-Pusauli New (Nadokhar) T/L and 220 kV Ara (PG)-Khagaul D/C T/L-- BSPTCL

BSPTCL vide mail dated 13.04.17 informed that despite all possible arrangements in BSPTCL system, high voltage problem (220 kV and 132 kV voltage goes upto 238 kV and 146 kV respectively) at Ara (PG) and Pusauli New (Nadokhar) GSS and connected sub-stations persists during off-peak hours, so to avoid any unwanted tripping and connected load loss at our system we have to switch off 220 kV Ara (PG)-Pusauli (Nadokhar) T/L from both end during OFF-Peak hours. Because of this, in case of power disturbance in 220kV Sasaram (PG)-Ara (PG) and 220 kV Sasaram (PG)-Pusauli New (Nadokhar) line complete power failure at Ara (PG) (load loss 160 MW) and Pusauli New (Nadokhar) (load loss 80 MW) respectively happens due to unavailability of 220 kV Ara(PG)-Pusauli New (Nadokhar) T/L

Also on closing the 220 kV Patna (PG)-Khagaul-Ara (PG) loop, there remains continuous back feed of power from Khagaul GSS to Ara (PG) (of the magnitude of 100 MW during OFF-PEAK and 150 MW during PEAK hours), which causes overloading of 220 kV Patna (PG)-Sipara D/C T/L during PEAK hour. So we are forced to take this loop out of service at Ara (PG) end. Because of this, in case of power disturbance in 220 kV Patna (PG)-Khagaul-Sipara or at Patna (PG) complete power failure at Khagaul GSS with load loss of 250 MW happens due to unavailability of 220 kV Patna (PG)-Khagaul-Ara (PG) loop.

Above stated problem is causing under utilization of 220 kV Ara (PG)-Pusauli New (Nadokhar) T/L and 220 kV Ara (PG)-Khagaul D/C T/L. Also reliability of system at Ara (PG), Pusauli New (Nadokhar) and Khagaul GSS is getting badly affected. System reliability at these sub-stations can be increased if Ara (PG) feeds power to Khagaul GSS on closing the 220 kV Patna (PG)-Khagaul-Ara (PG) loop {which at present gets reverse feed from Khagaul to Ara (PG)}.

As in a single day we observe both high voltage and low voltage problem in Ara (PG) and Sasaram (PG) area, so we are unable to reach at any permanent solution.

Voltage profile of 220 kV Khagaul, 220 kV Ara (PG) and load profile of 220 kV Patna (PG)-Sipara and 220 kV Ara (PG)-Khagaul for the month of March 2017 along with respective line diagram has been enclosed.

In 132<sup>nd</sup> OCC, ERLDC informed that tap positions of Sasaram ICT is being changed to resolve the high voltage problem.

OCC felt that for long term solutions a system study needs to be carried out and requested ERLDC to carry out a joint system study with BSPTCL along with all the details (line loading, ICT tap etc.).

Members may discuss.

#### **Deliberation in the meeting**

ERLDC informed that detailed study has been carried out in coordination with BSPTCL. ERLDC presented the study results. The presentation is enclosed at **Annexure-B10**.

ERLDC explained that closing of 220kV Arrah-Khagul line increasing the power flow in 220kV Patna-Sipara line during peak hours so closing of 220kV Arrah-Khagul line is not advisable until 220kV Patna-Sipara line-III is commissioned. The the following recommendations were suggested:

- 1. Earlier commissioning of
  - 220 kV Patna-Sipara 3rd circuit (if possible HTLS conductor may be used)
  - Replacement of second 315 MVA ICTs at Sasaram and Patna with 500 MVA ICT

2. Other recommendations for consideration

- Re-conductoring of 220 kV Patna-Sipara D/C(which is only 500 meters long) with HTLS
- Implementation of load rejection scheme with tripping of one ICT at
  - I. Patna (Tripping 220/132 kv ATR at Sipara to limit loading)
  - II. Sasaram (Tripping of 220/132kV ATRs at New Pusauli)
  - III. Gaya(Tripping of 220 kV Gaya-Sonenagar D/C)
- New 500 MVA ICT at Patna, Gaya, Sasaram and Biharsariff.
- Planning of new substations matching with expected load growth in Bihar.

BSPTCL informed that second line of 220 kV Ara(PG)-Pusauli will be LILOed at Nadokar S/s.

BSPTCL added that the demand at Arrah and Nadokar has increased and the over voltage problem at 220kV Nadokar is getting reduced.

#### Item No. B.11: Restoration of PLCC system of important JUSNL ties

#### I) 220 KV Chandil – Santaldih line

In 130th OCC meeting, JUSNL intimated that PLCC for 220 kV Chandil-Santaldih line has been tested and commissioned successfully on 25.01.17.

WBPDCL informed that the PLCC was activated but the auto-reclosure could not be put into service as the R-Ph pole of Circuit Breaker is not getting closed during auto-reclosure operation. The same is taken up with the OEM (i.e. ABB) and they will be rectifying the CB.

In 35<sup>th</sup> TCC, WBPDCL informed that overhauling of the R-ph pole of CB will be done by 15<sup>th</sup> March 2017. Subsequently, auto-reclosure feature will be enabled.

In 132<sup>nd</sup> OCC, WBPDCL informed that though the overhauling of the R-ph pole of CB was completed, the auto-reclosure could not be put into service as there was some problem in Main-2 relay of line. The same is taken up with the OEM (i.e. ABB).

WBPDCL informed that the work will be completed by May, 2017.

#### II) 220 KV Ramchandrapur-Joda line

In 130th OCC meeting, OPTCL informed that PLCC panels at 220kV Joda end will be commissioned within a week. JUSNL informed that the Ramchandrapur end is ready in all respect for implementation of PLCC.

In 35<sup>th</sup> TCC, OPTCL informed that PLCC panels at 220kV Joda end will be commissioned by March 2017.

In 131<sup>st</sup> OCC, WBPDCL informed that shutdown was proposed on 31<sup>st</sup> March, 2017 to complete the work.

In 132<sup>nd</sup> OCC, OPTCL informed that the PLCC panels have been commissioned and will be put in service after completion of testing.

JUSNL/WBPDCL/OPTCL may update.

#### **Deliberation in the meeting**

WBPDCL informed that the work is getting delayed as they are not getting proper response from Schnider and GE, however the work will be completed within a week.

OPTCL informed that the panels will be commissioned by June, 2017.

#### Item No. B.12: Implementation of Automatic Demand Management Scheme (ADMS)

In special PRM held on 7<sup>th</sup> June, 2016, Chemtrols provided the following status of DO implementation:

Constituent	Target by June end	Actual
Bihar	50	67
DVC	12	17
WBSETCL	10	65**
Jharkhand	2	2

(\*\*As per the WB instruction, In all RTUs of WB the DO cable has been terminated in the C&R Panel TBs. WBSETCL testing Team to further extend the connections to the trip relays)

OCC requested constituents to submit the details of their ADMS scheme to ERLDC.

Constituents may update present status of implementation ADMS.

#### **Deliberation in the meeting**

ERLDC informed that DVC has submitted the scheme.

WBSETCL informed that they have implemented the scheme in some sub-stations and they have submitted the details to ERPC/ERLDC.

Bihar informed that they have not yet decided the feeders.

OCC advised Bihar and JUSNL to send the scheme details to ERLDC.

### Item No. B.13: Concerned members may update the latest status.

#### B.13.1. Status of construction of 400 kV Sterlite-Jharsuguda D/C sections

35<sup>th</sup> ERPC decided to extend the dead line for removal of LILO up to 15.04.2017 and advised Vedanta to strictly adhere to the schedule for commissioning of the dedicated line in all aspects.

Further, ERPC authorised CTU to open the LILO on 16.04.2017.

In 131<sup>st</sup> OCC, Vedanta submitted the item wise schedule.

Subsequently, GRIDCO vide letter dated 13.04.17 has requested for extending the LILO connectivity till 30.06.2017.

Activities	Nos	Status as updated in 35 <sup>th</sup> TCC	Status as updated in 132 <sup>nd</sup> OCC	Remarks
Tower Foundation	64	64	64	Completed
Tower Erection	64	59	61	
Stringing /OPGW	20.5	9 km completed	11.6 km	
Cabling & Testing	Km	9 km completed	completed	
Sub station Bay	2	Bay construction	Testing going	
Sub station Day	2	completed	on	

In 132<sup>nd</sup> OCC, Vedanta updated the latest status as follows:

GRIDCO/OPTCL intimated that the line is expected to be completed by 31st May, 2017 in all respects. But keeping in view of peak summer the LILO may be allowed to continue till 30th June, 2017 to support the OPTCL system.

In view of above, OCC agreed to extend the interim LILO connectivity till 30th June, 2017.

It was also decided that the LILO may be disconnected on 1st July, 2017.

Members may discuss.

#### **Deliberation in the meeting**

OPTCL updated the status as follows:

Activities	Nos	Status as updated in 35 <sup>th</sup> TCC	Status as updated in 132 <sup>nd</sup> OCC	Remarks
Tower Foundation	64	64	64	Completed
Tower Erection	64	59	63	
Stringing /OPGW	20.5	0 km completed	15 km	
Cabling & Testing	Km	9 km completed	completed	
Sub station Bay	2	Bay construction completed	Testing going on	

GRIDCO/OPTCL assured that the dedicated line will be completed by mid of June, 2017 and the LILO may be disconnected on 01.07.2017.

OCC advised OPTCL and Vedanta to complete the work at the earliest and no further extension will be granted for removal of LILO.

#### B.13.2. Status of Bus Splitting schemes in Eastern Region

#### A. Bus Splitting of Powergrid Sub-stations

As per decision of Standing Committee of ER CTU was entrusted to do Bus splitting at 400 kV Maithon, Durgapur & Biharsariff S/Ss or ER. The latest status on the same are:

- 400 kV Maithon ---Completed
- 400 kV Durgapur--Completed
- 400 kV Biharshariff—Physical work has been completed.

In 130<sup>th</sup> OCC, Powergrid informed that physical bus splitting at 400kV Biharshariff S/s has been completed. Protection part is yet to be completed.

Powergrid added that bus splitting at 400kV Biharshariff S/s will be commissioned by March 2017.

In 132<sup>nd</sup> OCC, Powergrid added that bus splitting at 400kV Biharshariff S/s will be commissioned by April, 2017.

During third party protection of 400kV Maithon S/s on 18<sup>th</sup> May 2017, it was observed that bus splitting scheme at 400kV Maithon S/s has been commissioned but not in service. Powergrid and ERLDC may place the action plan to commence the split bus operation.

Powergrid and ERLDC may update.

#### **Deliberation in the meeting**

In 132<sup>nd</sup> OCC, Powergrid informed that bus splitting at 400kV Biharshariff S/s has been commissioned successfully.

Powergrid informed that CTU approval is needed to make the bus splitting scheme operational.

#### B. Bus Splitting of Kahalgaon STPS Stage I&II, NTPC

In 24<sup>th</sup> ERPC meeting held on 27.04.2013, ERPC advised NTPC to go ahead with the bussplitting scheme as it is a technical requirement for safe, secure operation of the grid.

In 32<sup>nd</sup> TCC, NTPC informed that they are going ahead with the implementation of Bus Splitting of Kahalgaon STPS Stage I&II and the implementation is expected to be completed by December, 2018.

In 126<sup>th</sup> OCC, NTPC has given the present status as follows:

- > 400/132kV Switchyard package bid opened on 14.03.16. Awarded on 04.05.2016.
- Site levelling Site levelling work has been completed.
- Transformer package and Shunt reactor have been awarded.

In 35<sup>th</sup> TCC, NTPC informed that the work is in progress as per the schedule and the bus splitting will be completed by December, 2018.

In 132<sup>nd</sup> OCC, NTPC informed that the bus splitting will be implemented by December, 2018.

NTPC may update.

#### **Deliberation in the meeting**

NTPC informed that the work is in progress as per schedule.

#### B.13.3. 11KV Auxiliary power supply of 400KV Berhampore Powergrid Substation.

In 34<sup>th</sup> TCC, WBSEDCL informed that the construction of dedicated line has been delayed due to ROW issues. The same has been resolved now and the construction of dedicated line will be completed by December, 2016.

WBSEDCL added that cable needs to be laid out for highway crossing for which cost estimate will be given to Powergrid within a week.

Powergrid agreed to do the payment after receiving the estimate.

In 130<sup>th</sup> OCC, WBSEDCL informed that the requisite amount has been received from Powergrid and the work will be completed by 15<sup>th</sup> March, 2017.

In 131<sup>st</sup> OCC, WBSEDCL informed that the work will be completed by the end of March,2017.

In 132<sup>nd</sup> OCC, WBSEDCL informed that line is ready and will be commissioned by next week after completion of testing.

WBSEDCL/Powergrid may update.

#### Deliberation in the meeting

WBSEDCL informed that one testing report is awaited which will be received within a week, on receipt of report line will be commissioned.

#### B.13.4. Run-back scheme of Sasaram 500MW HVDC B-t-B converter -- ERLDC

It is understood that the following run–back schemes are functional for the 500 MW B-t-B HVDC converter at Sasaram:

- 1. Tripping of any circuit of 400kV Biharshariff-Sasaram D/C line reduction of HVDC power order to 250 MW
- 2. Tripping of both circuits of 400kV Biharshariff-Sasaram D/C line complete blocking of the HVDC converter.

In this connection it is stated that the above run-back conditions were relevant when 400kV Biharshariff-Sasaram D/C line was the only AC source on the East side bus. However, at present due to existence of 765kV Sasaram-Fatehpur 765kV line along with 765/400kV Sasaram ICT, there would be no loss of AC voltage of the 400kV East bus, even if both circuits of Biharshariff-Sasaram 400kV D/C line trip.

It is to mention that on 19-12-16, the HVDC Sasaram power order had to be reduced to 250MW when 400kV Biharshariff-Sasaram-I was taken under planned shutdown. Thereafter, at 12:43 Hrs, the other 400kV circuit Biharshariff-Sasaram-II tripped due to transmission of DT signal from Biharshariff to Sasaram leading to complete blocking of the converter. However, such blocking was unwarranted as the 765kV Sasaram-Fatehpur line together with the 765/400kV ICT at Sasaram was still in service.

It is therefore suggested that the existing run-back scheme may be activated only when Sasaram 765/400kV ICT or Sasaram-Fatehpur 765kV line is under outage and bypassed under normal conditions. The scheme may be further reviewed when at least two units of Nabinagar TPS commence firm generation.

ERLDC explained the scheme in 128<sup>th</sup> OCC.

OCC decided to implement the revised scheme and advised Powergid to modify the scheme in coordination with CTU.

In 129<sup>th</sup> OCC, Powergrid informed that for implementing the scheme there is a requirement of modification in CCU which will be done by the OEM (Alstom). The same will be implemented by March,2017.

In 130<sup>th</sup> OCC, Powergrid informed that the CCU at Sasaram is old and it is not possible to implement the revised scheme. So, the CCU needs to be changed for implementation of new scheme.

In 131<sup>st</sup> OCC, ERLDC advised Powergrid to at least block or bypass the existing run back scheme logic for the time being.

Powergrid informed that they will explore the possibilities to bypass the existing scheme.

In 132<sup>nd</sup> OCC, Powergrid informed that the matter has been taken up with the OEM (i.e. Alstom).

Powergrid may update.

#### **Deliberation in the meeting**

Powergrid informed that the matter has been taken up with the OEM (i.e. Alstom) to explore the possibilities of bypassing the existing scheme.

OCC decided to refer the issue to CTU.

### B.13.5. 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

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

SI. No.	Name of the transmission line	Completion schedule
1.	2x315MVA 400/220kV Bolangir S/s	
a.	LILO of one circuit of Sadeipalli-Kesinga220 kV D/C line at Bolangir S/S	Only 7 towers left (Severe ROW problem). By May, 2017.
b.	LILO of one circuit of Katapalli-Sadeipalli220 kV D/C line at Bolangir S/S	Charged on 04.05.16
2.	400/220 kV Keonjhar S/S	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By 2017.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019.
3.	400/220kV Pandiabil Grid S/s:	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	Dec, 2017.
b.	LILO of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG)	220kV Atri-Pandiabil completed on 19.05.2017 and 220kV Pandiabil-Puri (Samangara) completed on 20.05.2017.

In 130<sup>th</sup> OCC, OPTCL updated the completion schedule of inter-connecting system as follows:

#### **Deliberation in the meeting**

OPTCL updated the status as above.

#### B.13.6. 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV substations at Chaibasa, Daltonganj & Dhanbad

In 125<sup>th</sup> OCC, JUSNL updated the latest status as follows:

SI. No.	Name of the transmission line Completion sch				
1.	Chaibasa 400/220kV S/s	•			
a.	Chaibasa (POWERGRID) – Chaibasa (JUSNL) 220kV D/c	Completed.			
b.	Chaibasa (POWERGRID) – Ramchandrapur (JUSNL) 220kV D/c	July, 2017			
2.	Daltonganj 400/220/132kV S/s:				
a.	Daltonganj (POWERGRID) – Latehar 220kV D/c	By Dec, 2017.			
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	May, 2018			
С	Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132kV D/c	Dec, 2018			
d	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Matching with S/s			
3.	Dhanbad 400/220 kV S/s: Awarded under TBCB				
a.	Dhanbad – Dhanbad (Govindpur) (JUSNL) 220kV D/c	Matching with S/s			

JUSNL may update.

#### **Deliberation in the meeting**

JUSNL updated the status as above.

# B.13.7. 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Alipurduar & 2x500 MVA Rajarhat sub-stations

In 126<sup>th</sup> OCC, WBSETCL updated the latest status as follows:

SI. No.	Name of the transmission line	Completion schedule		
1.	2x315MVA, 400/220kV Alipurduar sub-station			
a.	Alipurduar (POWERGRID) – Alipurduar (WBSETCL) 220kV D/c ( <b>Twin moose</b> )	Existing plan is to be revised due to ROW issues		
2.	2x500MVA, 400/220kV Rajarhat			
a.	Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line	Matching		
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	June, 2018		
С.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	June, 2018		

WBSETCL may update.

#### Deliberation in the meeting

WBSETCL updated the status as above.

#### Item No. B.14: Third Party Protection Audit

#### 1. Status of 1<sup>st</sup> Third Party Protection Audit:

The compliance status of 1<sup>st</sup> Third Party Protection Audit observations is as follows:

Name of Constituents	Total Observations	Complied	% of Compliance
Powergrid	54	37	68.52
NTPC	16	14	87.50
NHPC	1	1	100.00
DVC	40	26	65.00
WB	68	27	39.71
Odisha	59	38	64.41
JUSNL	34	16	47.06
BSPTCL	16	5	31.25
IPP (GMR, Sterlite and MPL)	5	5	100.00

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

In 118<sup>th</sup> 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.

OCC advised all specially JUSNL and BSPTCL to send the revised DPRs at the earliest after clarifying the queries if any.

Members may comply.

#### **Deliberation in the meeting**

Members noted for compliance.

#### 2. Schedule for 2<sup>nd</sup> Third Party Protection Audit:

The latest status of 2<sup>nd</sup> Third Party Protection audit is as follows:

- 1) Jeerat (PG)
- 2) Subashgram (PG)
- 3) Kolaghat TPS (WBPDCL)-
- 4) Kharagpur (WBSETCL) 400/220kV -
- 5) Bidhannagar (WBSETCL) 400 &220kV
- 6) Durgapur (PG) 400kV S/s
- 7) DSTPS(DVC) 400/220kV
- 8) Mejia (DVC) TPS 400/220kV
- 9) 400/220/132kV Mendhasal (OPTCL)
- 10) 400/220kV Talcher STPS (NTPC)
- 11) 765/400kV Angul (PG)
- 12) 400kV JITPL
- 13) 400kV GMR
- 14) 400kV Malda (PG)
- 15) 400kV Farakka (NTPC)
- 16) 400kV Behrampur(PG)
- 17) 400kV Sagardighi (WBPDCL)
- 18) 400kV Bakreswar (WBPDCL)
- 19) 765kV Gaya(PG)
- 20) 400kV Biharshariff(PG)
- 21) 220kV Biharshariff(BSPTCL)

Completed on 15<sup>th</sup> July 2015 Completed on 16<sup>th</sup> July 2015 Completed on 7<sup>th</sup> August 2015 Completed on 7<sup>th</sup> August 2015 Completed on 8<sup>th</sup> September, 2015 Completed on 9<sup>th</sup> September, 2015 Completed on 9<sup>th</sup> September, 2015 Completed on 11<sup>th</sup> September, 2015 Completed on 2<sup>nd</sup> November, 2015 Completed on 3<sup>rd</sup> November, 2015 Completed on 4<sup>th</sup> November, 2015 Completed on 5<sup>th</sup> November, 2015 Completed on 5<sup>th</sup> November, 2015 Completed on 2<sup>sth</sup> February, 2016 Completed on 25<sup>th</sup> February, 2016 Completed on 25<sup>th</sup> February, 2016 Completed on 26<sup>th</sup> February, 2016 Completed on 26<sup>th</sup> February, 2016 Completed on 3<sup>rd</sup> November, 2015

The list of observations for the above sub-stations is already available at ERPC website (www.erpc.gov.in). Respective constituents are requested to comply and submit the report to ERPC for regular update.

Third party protection audit of the following sub-stations was carried out from 17-05-2017 to 19-05-2017:

- 1. 400kV Maithon (PG)
- 2. 132kV Gola (DVC)
- 3. 132kV Barhi (DVC)
- 4. 132kV Koderma (DVC)
- 5. 132kV Kumardhubi (DVC)
- 6. 132kV Ramkanali (DVC)

Members may note.

#### **Deliberation in the meeting**

Members noted.

#### Item No. B.15: Inspection of Under Frequency Relays (UFR)

UFR testing of following substations was carried out on 17-05-2017 & 19-05-2017

- 1. 132kV Koderma (DVC)
- 2. 132kV Kumardhubi (DVC)

#### The proposed UFR audit schedule is placed below:

Sl No	<b>Proposed Date</b>	Substation/feeder inspected by the sub-group
1		220/132/33 KV Kalyaneswari of DVC
2	June, 2017	220/132/33 KV New Bishnupur of WBSETCL
3		132/33 KV Old Bishnupur of WBSETCL
4	July, 2017	BRS (Liluah S/Stn.) of CESC

Members may note.

#### **Deliberation in the meeting**

The UFR audit report is placed at Annexure-B.15.

### Item No. B.16: 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.

NTPC communicated their activity of the preparation of Crisis Management Plan for countering the cyber attacks vide letter dated 2<sup>nd</sup> August, 2013.

In 113<sup>th</sup> OCC, Member Secretary informed that during interaction with consultants of Grid Study Committee, NLDC agreed that they will plan for conducting workshops on crisis management plan for Cyber Security and few workshops will also be held in Eastern Region.

CESC vide letter dated 22.08.15 had furnished their status of the preparation of Crisis Management Plan (CMP) for Cyber attacks in their system.

Members may note and comply.

#### **Deliberation in the meeting**

Members noted.

#### Item No. B.17: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

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

In 85<sup>th</sup> OCC NTPC informed that, NTPC-Farakka has been certified with IS 18001. Other constituents including OHPC requested to interact with BIS with intimation to ERPC and get certified as per CEA direction. The matter is getting reviewed by highest authorities with top priority.

In 88<sup>th</sup> OCC NTPC informed that, all NTPC stations in Eastern Region are certified with IS 18001. NHPC informed that, Teesta is also certified with IS 18001. After that, OHPC and CESC informed that their stations are certified with IS18001.

In 104<sup>th</sup> OCC, WBPDCL informed that Bandel TPS is certified with IS 18001.

OPTCL vide letter No. TB-SO-MISC-9/2010/1914 dated 20.12.2014 had proposed to go for IS 18001:2007 certification as per direction of CEA.

In 113<sup>th</sup> OCC, CESC informed that Budge-Budge Generating station (3x250 MW) has renewed their certification of BS 18001:2007.

In 121<sup>st</sup> OCC, it was informed that Kolaghat Generating station of WBPDCL has received certification of IS 18001:2007 from BIS on 29.04.2016.

In 124<sup>th</sup> OCC, WBPDCL informed that Bakreswar Generating station has received certification of IS 18001:2007 from BIS.

In 130<sup>th</sup> OCC, WBPDCL informed that Sagardighi Thermal Power Project has also received certification of IS 18001:2007 from BIS in December, 2016.

Members may note and update the status.

#### **Deliberation in the meeting**

Members noted.

#### Item No. B.18: Energy Generation data management from Renewable Energy Sources

RES development Division, CEA has been receiving monthly generation details and installed capacity of Renewable Energy Sources from respective SLDCs and other authorized agencies. Some discrepancies has been found in the data as received by CEA and MNRE.

Constituents are requested to reconcile/confirmed the correct information at the earliest.

In 120<sup>th</sup> OCC, all the SLDCs were advised to submit the data to CEA as per the format given in **Annexure- B.18** with a copy to ERPC Secretariat.

In 121<sup>st</sup> OCC, SLDC West Bengal and SLDC Odisha informed that they have submitted the relevant data to CEA.

SLDCs may update.

#### **Deliberation in the meeting**

Members noted.

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### Item No. B.19: Compilation of data for meeting Renewable Energy targets of 175 GW by 2020 -- Reference from MNRE

CEA vide letter dated 29.03.16 has referred Ministry of Power letter no. 23/2/2005-R &R(Vol-XI), dated 22.03.2016 & MNRE letter dated 02.03.2016 regarding compilation of data for meeting Renewable Energy targets of 175 GW by 2020.

Concerned State Utilities /Generating companies are requested to submit data of their respective control areas.

Members may update.

#### **Deliberation in the meeting**

Members noted for compliance.

#### Item No. B.20: Data of Peak Demand – Submission of hourly power cut data

The peak demand met figure calculated by CEA is a part of the monthly Power Supply Postion Report prepared by CEA, based on the data provided by five Regional Power committee (RPCs), who in turn collect the data from State / UTs and RLDCs. As per the present methodology being adopted for calculation of States /Regional peak demand met, the figure of peak demand met at any time in the month is taken as peak demand met for the month. For all India monthly peak demand met, the sum of five regional peaks met, which may occur at different points of time is taken.

The above methodology has been reviewed and it has been decided with the approval of Chairperson, CEA that Peak demand Met and Peak Demand in the country should be based on hourly all India demand data. The matter was taken up with POSOCO for getting the hourly data of peak demand met for each month in respect of all the regions in the country in the first week of following month and they have assured to furnish the same. To calculate the demand, data of hourly scheduled and unscheduled power-cuts / load shedding is also required, which is not available with POSOCO.

It is, therefore, requested that hourly figures of scheduled/ unscheduled power cuts/load shedding data may be collected from States / UTs and the same may be sent to CEA every month as per above schedule in the enclosed format, in spread sheet, so that hourly figures of peak demand can be calculated and incorporated in Power Supply Position report.

This data for a month may kindly be sent in the first week of each month, along with PSP data, starting from the data for the month of February, 2015. The format for sending the data of hourly scheduled and unscheduled power-cuts / load shedding has already been circulated.

In 110<sup>th</sup> OCC meeting, OCC advised all the concerned utilities (BSPTCL, JUSNL, OPTCL, WBSETCL & Sikkim) to send the data of hourly scheduled and unscheduled power-cuts / load shedding by mail to mserpc-power@nic.in latest by first week of each month.

For the month of April, 2017 data has been received from OPTCL, CESC, DVC, WBSETCL & JUSNL.

BSPTCL may update.

#### **Deliberation in the meeting**

BSPTCL submitted the data.

Further, OCC advised all constituents (i.e. BSPTCL, DVC, JUSNL, OPTCL/GRIDCO, WBSETCL, CESC) to submit the data also to ERLDC (erldcprotection@gmail.com).

#### Item No. B.21: Reasons for demand -supply gap and its variation -- Agenda by NPC

It was deliberated in the 4<sup>th</sup> NPC meeting that monthly power supply position prepared & published by CEA based on the data furnished by the states reflected shortages in almost all the states. However, a number of those states intimated adequate availability of power. This meant that the deficit / shortage in such states was actually not the deficit in true sense but demand - supply gap due to reasons other than shortage of power. The other reasons for the demand - supply gap could be inadequate availability of power, transmission constraint, distribution constraint, financial constraint etc. The reason for demand –supply gap needed to be clearly mentioned to reflect true picture of power supply position in different states and also to invite attention of various agencies including policy makers to the specific problem areas in the power sector for suitable solution.

It was agreed by all the RPCs to advise the states in their respective regions to intimate broad break-up of demand –supply gap due to various reasons, or at least, the main reason(s) for demand supply in each month.

In 129<sup>th</sup> OCC, all the constituents are advised to comply.

Members may update.

#### **Deliberation in the meeting**

OCC advised all the constituents to comply.

#### Item No. B.22: Transfer capability determination by the states -- Agenda by NPC

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.

33<sup>rd</sup> TCC felt that grid operator should have the information on how much power they can export and import and they should restrict to that figures in order to avoid major grid disturbances.

Accordingly, TCC advised all the constituents to place the details in monthly OCC meetings till they upload the information in their respective websites.

130<sup>th</sup> OCC requested all the SLDCs to compute and send the ATC/TTC figures for the next month in advance along with the details like assumptions, constraints etc.

All the SLDCs were computing the ATC/TTC figures except Bihar.

In 131<sup>st</sup> OCC, BSPTCL informed that they will submit the ATC/TTC figures at the earliest.

SI No	State/Utility	TTC (MW)	RM(MW)	ATC (Import) MW
1	BSPTCL	3792	86	3716
2	JUSNL	829	100	729
3	DVC			
4	OPTCL	1528	88	1100(LTA),340
5	WBSETCL	3700	300	3400
6	Sikkim			

ATC/TTC declared by states for the month of May-2017 is given below:

Members may update.

#### Deliberation in the meeting

Members noted.

#### Item No. B.23: Long outage of important transmission elements

#### a) Non availability of Line Reactor of 400KV Malda-Purnea-I

In 123<sup>rd</sup> OCC, Powergrid informed that order has been placed for Reactor-1 and it will be commissioned by September, 2016.

In 130<sup>th</sup> OCC, Powergrid informed that the reactor will be commissioned by end of February,2017.

In 131<sup>st</sup> OCC, Powergrid informed that the reactor commissioning was delayed due to some vibration issue and now it is expected to be commissioned by April, 2017.

In 132<sup>nd</sup> OCC, Powergrid informed that the reactor will be commissioned by end of May, 2017.

Powergrid may update.

#### Deliberation in the meeting

Powergrid informed that the dispatch got delayed due to commercial issues and it will be dispatched by May, 2017 & commissioned by end of June, 2017.

#### b) 400kV Patna-Kishengunj D/C

Tower collapsed at Loc.51 in Kankai river on 26.07.2016 and three nos towers at Loc no 128F/0, 128 G/0 and 128E/0 in Ganga riveron 01.09.2016.

In 129<sup>th</sup> OCC, Powergrid informed that the work has been awarded.

In 132<sup>nd</sup> OCC, Powergrid informed that line will be restored by July, 2017.

Powergrid may update.

#### Deliberation in the meeting

Powergrid informed that line will be restored by June, 2017.

#### c) 400kV Purnea-Biharshariff D/C(under outage wef 23/08/16)

Three Nos.Tower (mid river) collapsed.

In 126<sup>th</sup> OCC, ENICL informed that the final assessment is under progress. The same will be submitted to ERPC and ERLDC.

In 132<sup>nd</sup> OCC, ENICL informed that line will be restored by last week of June, 2017.

ENICL may update.

#### **Deliberation in the meeting**

ENICL informed that line will be restored by last week of June, 2017.

#### d) Tie bay of 125MVAR Bus reactor and 400kV Indravati-Indravati and Indravati(PG):

Under outage wef 18/03/16 due to R-Ph pole bursting of Tie CB. Due to non-availability of the tie bay, the Buses are coupled only via the tie bay of 400kV Rengali-Indravati and 400kVIndravati-Jeypore at Indravati and any outage of the lines would result in decoupling of the Buses.

In 125<sup>th</sup> OCC, Powergrid informed that main CB has some problem which will be taken care by OHPC/OPTCL.

In 129<sup>th</sup> OCC,OPTCL informed that the CB has reached at the site. The installation work will be completed by February,2017.

In 131st OCC,OPTCL informed that the work will be completed by end of March, 2017.

In 132<sup>nd</sup> OCC, OPTCL informed that the testing has been completed and the work will be completed by end of April 2017.

Powergrid/OHPC may update.

#### **Deliberation in the meeting**

OPTCL informed that tie CB has been charged on 8<sup>th</sup> May 2017.

#### e) 220 kV Waria – Bidhannagar-II

The line is under outage wef 20.08.16 due to collapse of one no of tower collapse.

In 130<sup>th</sup> OCC, WBSETCL requested DVC for early restoration of line in view of summer peak.

OCC requested DVC to expedite the work.

In 131<sup>st</sup> OCC, DVC informed that the line will be restored by mid of June, 2017.

In 132<sup>nd</sup> OCC, DVC informed that the line will be restored by end of May, 2017.

DVC may update.

#### **Deliberation in the meeting**

DVC informed that the line will be restored by 15<sup>th</sup> June, 2017.

#### f) 315MVA ICT-I at Meramundali

The ICT is under outage wef 12/11/16 due to damage after B-ph LA blasting.

In 131<sup>st</sup> OCC, OPTCL informed that the ICT will be in service by first week of April, 2017.

In 132<sup>nd</sup> OCC, OPTCL informed that transformer work has been completed and the inspection work is going on.

OPTCL may update.

#### **Deliberation in the meeting**

OPTCL informed that ICT-I has been charged on 4<sup>th</sup> May 2017.

#### g) 50MVAR Bus Reactor-I at Farakka (alongwith main and tie bays)

Under shutdown wef 31/05/16 for dismantling from old bay and re-installation in new bay in the dia of FSTPP GT#3.

In 130<sup>th</sup> OCC, Powergrid informed that the reactor will be charged by 1<sup>st</sup> week of March, 2017.

In 131<sup>st</sup> OCC, Powergrid informed that they have requested for shutdown on 22<sup>nd</sup> and 23<sup>rd</sup> March, 2017 to complete the work.

In 132<sup>nd</sup> OCC, NTPC informed that the shutdown will be allowed after completion of overhauling of unit #5 of FSTPS. It was informed that the reactor will be in service by first week of May, 2017.

Powergrid may update.

#### **Deliberation in the meeting**

Powergrid informed that the reactor will be in service by second week of June, 2017.

#### Item No. B.24: Accounting of Tertiary Loading Arrangement at PGCIL s/station in ER

Auxiliary consumption of PGCIL EHV AC sub stations are usually met from HT feeders of the state Discom. In few substations of PGCIL, auxiliary consumption is met through tertiary winding (as alternate supply for reliability).

At present State net drawl through PGCIL substation in ER is being computed considering meter installed at feeders after LV side of Transformer. Those sub stations where auxiliary requirement is met through tertiary, States net drawl need to be computed by adding drawl through feeders after LV side of Transformer and auxiliary consumption through tertiary.

In NR, WR & SR, auxiliary power through is already being accounted in states net drawl.

In order to account for the drawl through tertiary for Auxiliary consumption, PGCIL is requested to:

- 1. Provide list of substations in ER where auxiliary supply is met through tertiary.
- 2. Install SEM on 33 KV tertiary side of transformers used for auxiliary supply.

131<sup>st</sup> OCC advised Powergrid to submit the list of substations in ER where auxiliary supply is met through tertiary(both for 33 kV and 11kV level).

Powergrid agreed.

In 132<sup>nd</sup> OCC, Powergrid ER-I & ER-II submitted the list of substations which is given at **Annexure- B.24**.

OCC advised Powergrid-Odisha to submit the list at the earliest.

Further, OCC advised Powergrid to submit the details of all the SEMs connected to tertiary windings and also the SEM readings on regular basis to ERLDC and ERPC.

S No	Substation	Transformer Tertiary Charged (Yes/No)	SEM Installed in transformer Teritiary (Yes/No)	SEM meter No.
1	765/400KV Angul	Yes	Yes	NP-5942A
2	400/220 KV Keonjhar	YES	YES	NP-7921A

Details received from Powergrid Odisha are as follows:

3	400/220 KV Jeypore	YES	YES	NP5965A
4	400/220 KV Rengali	yes	YES	NP0629B
5	400/220 KV Pandiabili GIS	YES	YES	NP7462A
6	400/220/132 KV Baripada	Yes	Yes	NP-5909A
7	400KV Indravati	NA	NA	NA
8	765/400KV Sundergarh	NO	NO	NO
9	400/220 KV Bolangir	YES	YES	NP-7951A
10	400/220 KV Rourkela	NO	NO	NO

Powergrid may update.

#### **Deliberation in the meeting**

OCC advised Powergrid to send the readings of SEMs connected to tertiary windings to ERLDC regularly for accounting purpose.

Further OCC decided that after getting the SEMs details of all tertiary loadings, ERPC/ERLDC will devise an mechanism for accounting of the tertiary loading arrangement.

#### Item No. B.25: LILO Connection of Inter-Regional tie line 132 KV Sonenagar-Rihand (UP,NR) Circuit-I (direct line) at NPGC,Nabinagar for providing startup power to NPGC -- BSPTCL

BSPTCL vide letter dated 18.02.17 intimated that LILO connection of inter-regional tie line 132kV Sonenagar-Rihand (UP,NR) Circuit-I (direct line) is urgently required at NPGC, Nabinagar for providing startup power for commissioning of Super Thermal Power Project (3x660MW) Unit # 1 which is expected to be commissioned in March,2017. At present 132kV Sonenagar-Rihand (UP,NR) Circuit-I remain charged on No Load from Sonenagar end & open at Rihand (UP) end.

BSPTCL requested for LILO Connection of 132 KV Sonenagar-Rihand(UP,NR) Circuit-I transmission line at NPGC ,Nabinagar for providing start up power.

In 131<sup>st</sup> OCC, BSPTCL informed that NPGC, Nabinagar has applied for 65 MVA start up power and initially they will draw around 5-10 MW power through 132 kV Sonenagar-Rihand-I line LILOed at NPGC, Nabinagar. It was also pointed that 132kV Sonenagar-Rihand (UP,NR) Circuit-I is lying idle charged since last 5-6 years and presently it remains charged on no load from Sonenagar end & open at Rihand (UP) end.

Further, BSPTCL added that in order to cater the start up power from Sonenagar end they are strengthening the 132 kV Sonenagar GSS with double moose conductor which will be completed by March, 2017.

It was informed that NPGC, Nabinagar will only draw startup power for commissioning activities through the above LILO as an interim arrangement and injection of power/trial-run will be done after the completion of 400 kV ATS of NPGC, Nabinagar

OCC agreed for commencement of start up power through LILO of 132kV Sonnagar-Rihand-I line at NPGC, Nabinagar as consumer of BSPTCL and as an interim arrangement subject to the consent of NRPC.

Further, it was decided that the now the inter-regional tie-line will be 132 kV NPGC, Nabinagar-Rihand and requested Powergrid to install a new SEM at NPGC, Nabinagar end for accounting purpose. Subsequently, ERPC vide letter dated 28.03.2017 requested NRPC to do the needful for LILO connection of inter-regional tie line 132kV Sonenagar-Rihand (UP,NR) Circuit-I at NPGC, Nabinagar at the earliest

In 132<sup>nd</sup> OCC, BSPTCL informed that the LILO part is ready and the strengthening part will be completed by end of April, 2017 however, the consent of NRPC is yet to be received.

Further, it was informed that the new SEM at NPGC, Nabinagar end for accounting purpose has been installed on 20.04.17.

ERPC vide letter dated 09.05.17 has given the confirmation to SLDC, UPPTCL that as per the decision of OCC, NPGC is going to start availing the start up power from BSPTCL by closing Sonnagar-NPGC 132KV LILO section of 132kV Sonnagar-Rihand-I line keeping the line open at Rihand end. The letter is attached at **Annexure-B.25**.

BSPTCL/NPGC may update.

#### **Deliberation in the meeting**

BSPTCL informed that Sonnagar-NPGC 132KV LILO section of 132kV Sonnagar-Rihand-I line was charged on 12<sup>th</sup> May 2017.

ERLDC advised BSPTCL to ensure the data availability of power flow.

### Item No. B.26: Time correction of SEMs in Eastern Region – Replacement of heavily drifted SEMs

The issue was discussed in 35<sup>th</sup> TCC/ERPC meetings and it was felt that the meters with severe drift greater than 10 min need to be replaced first and if replacement is done with Genus then readings are to be collected manually using Laptop till interfacing with AMR is completed.

35<sup>th</sup> ERPC advised Powergrid to replace the 10% of the heavily drifted SEMs with new Genus make meters and monitor the performance of the Genus meters. Powergrid should present this performance before constituents and subsequently the decision on replacement of the other time drifted meters will be taken up.

ERPC also advised Powergrid to place the list of 10% of the heavily drifted SEMs to be replaced with Genus make meters in next OCC meeting.

Subsequently, ERLDC has prepared a list of such SEMs, the same is placed at Annexure- B.26.

In 131<sup>st</sup> OCC, Powergrid informed that they have already started meter replacement work and all highly drifted meters as per list will be replaced by 1<sup>st</sup> week of April, 2017.

Powergrid also informed that the present list of drifted SEMs were of Powergrid sub-stations which are being replaced. Further, Powergrid agreed to send the weekly data of newly installed SEMs to ERLDC by every Tuesday till the integration of Genus meter with AMR system by TCS,

In 132<sup>nd</sup> OCC, Powergrid updated the status for ER-II which is enclosed at **Annexure-B.26A**. ER-I informed that the SEM of Ranchi & Muzaffarpur has been replaced and rest are in progress.

OCC advised to submit the status for ER-I and Powergrid-odisha.

Powergrid/ ERLDC may update.

#### **Deliberation in the meeting**

Powergrid informed that 22 meters were replaced except Purnea.

ERLDC informed that the performance of 22 newly installed meters are satisfactory and suggested that all other meters can be replaced.

OCC advised Powergrid to replace next 10% of heavily drifted meters as per the list.

#### Item No. B.27: Integration of Genus Make meter in AMR-- ERLDC

In Eastern Region, order for procurement of 965 no of SEM's was placed with M/s Genus Power. First Lot of the meters have already been delivered by Genus and 24 meters of Genus make meter has been installed in different substation in ER.

Issue of Integration of Genus make meters in AMR system was discussed in meeting held with PGCIL, ERLDC, M/s Genus, & M/s TCS on 02.03.17 at ERLDC. M/s TCS informed that they have done the AMR integration test with Genus meter and informed that communication with existing Genus meter for AMR integration couldn't be established. Moreover M/s TCS had informed that they will try the subsequent steps for communication with Genus meter and update ERLDC & PGCIL accordingly.

In 132<sup>nd</sup> OCC, Powergrid informed that as per their communication with M/s TCS, integration of Genus meters in AMR system is possible, but it will take some more time to establish the communication.

Powergrid may please update the status.

#### **Deliberation in the meeting**

Powergrid informed that it will take some more time and asserted it will be done by June, 2017.

#### Item No. B.28: Non Receipt of meter Data -- ERLDC

#### 1. FSTPP NTPC

400 KV FSTPP-Gokarna (WB) Line-1 & 2 has already been charged and synchronized on 28.03.17 & 29.03.17 respectively. Main & Check meter has been installed at Farakka end of D/C Line. FSTPP NTPC was requested to send SEM data to ERLDC by every Tuesday. It has been seen that in spite of ERLDC request Farakka, NTPC is not sending the data of Genus Meter (Main & Check both) installed at Farakka end of Gokarana Line-1.

In 132<sup>nd</sup> OCC, NTPC informed they will make the arrangement to send the data at the earliest.

NTPC may please update.

#### **Deliberation in the meeting**

It was informed that the data is now available to ERLDC.

#### 2. Motipur & Samastipur in BSPTCL

220 KV Darbhanga(DMTCL)-Motipur (BSPTCL) D/C Line & 220 KV Darbhanga(DMTCL)-Samastipur (BSPTCL) S/C Line has already been charged and synchronized in April'17. Meter has been installed at BSPTCL end. BSPTCL was requested to send SEM data to ERLDC by every Tuesday. It has been seen that in spite of ERLDC request BSPTCL is not sending the data of Genus Meter installed at Motipur & Samastipur.

BSPTCL may please respond.

#### Deliberation in the meeting

ERLDC informed that the Genus meter software is available in ERLDC website and it can be installed in Laptop. The SEM data can be downloaded through Laptop.

BSPTCL agreed to send the SEM data after downloading the software.

#### 3. Jeynagar meter data at OPTCL

Jeynagar end meter NP-5964-A for 220 KV Jeypore(PG) Line-2 is not being sent from OPTCL since last 2 month. Moreover, the above meter is also not reporting in AMR. Matter is already informed to OPTCL as well as PGCIL. In absence of meter data end to end data validation is not possible.

OPTCL & PGCIL may please respond.

#### **Deliberation in the meeting**

OCC advised OPTCL & PGCIL to check the SEM and resolve the issue at the earliest.

#### 4. Chandil meter at JUSNL

Chandil end meter NP-7434-A of 220 KV Ranchi (PG) Line is not recording any data since last one month. PGCIL Ranchi was requested to check the meter healthiness. However problem is still persisting.

PGCIL may please respond.

#### **Deliberation in the meeting**

Powergrid informed that SEM is healthy and there may be connection problem.

OCC advised JUSNL to check the meter connections.

# Item No. B.29: Replacement of old RTU in Eastern Region for reporting of RTU / SAS to back-up control centre

The matter for replacement of old RTU in Eastern Region for reporting to back up control centre has been discussed in a special project review meeting held on 14<sup>th</sup> February 2017 at ERPC & also on 35<sup>th</sup> TCC/ERPC meeting held on 24<sup>th</sup> / 25<sup>th</sup> February 2017, It was also mentioned that there would not be any service support for the old RTUs from POWERGRID after 15 years of operation period. It was accordingly advised to ERLDC to form a committee with POWERGRID as a nodal agency for assessment of such old RTUs vis-a-vis further action plan on replacement. It was also advised to submit a report in the next TCC/ERPC meeting.

The matter for replacement of old RTU in Eastern Region for reporting to back up control centre has been discussed again in 19<sup>th</sup> SCADA O&M meeting held at ERLDC, Kolkata on 07<sup>th</sup> April 2017, wherein nomination of nodal person name from OPTCL, WBSETCL, DVC, BSPTCL, JUSNL, POWERGRID ERTS-1, POWERGRID ERTS-2, ERLDC, MPL &Jorethang has been collected.

Nomination from NTPC all stations including Nabinagar, NHPC all stations, Dikchu, Teesta-III, Chuzachen, JITPL, GMR, Ind Bharat & APNRL are yet to be provided. ERLDC has already issued letter ref no: ERLDC / SCADA O&M / 2017/ dated 11.04.2017 for the same. It is requested to provide the nomination from these stations.

OCC requested all the respective members to nominate their representatives at the earliest.

NTPC and NHPC may nominate.

#### **Deliberation in the meeting**

OCC advised NHPC to submit the nomination list at the earliest.

ERLDC informed that a meeting has been scheduled on 09<sup>th</sup> June 2017 to discuss the above matter and requested all the constituents to send their nominated members to attend the meeting.

#### Item No. B.30: Shifting of communication links for PMUs reporting to ERLDC--ERLDC

Presently, PMUs locations at Farakka, Talcher, Jamshedpur, Ranchi, Binaguri, Durgapur, Rourkela & Jeypore are reporting through Alcatel Mux using E1 – Ethernet convertor at both end. In case of fibre cut between Kasba to ERLDC, all the 8 nos PMUs data stopped reporting to ERLDC (happened on 16/May/2017 from 04:25 Hrs to 12:49 Hrs). There is no redundant path provided for these communication links. So, it is requested POWERGRID to shift these PMUs' communication path / equipment so that the protection path of ULDC network would be used and this type of outage could be avoided. Communication link for Patna PMU is taken from PowerTel. It is also requested to POWERGRID that communication path may also be shifted for Patna PMU so that PowerTel communication could be removed.

PGCIL may update.

#### **Deliberation in the meeting**

PGCIL informed that they will look into the matter.

Further, ERLDC informed that CESC has provided a redundant path from Kasba to ERLDC for communication link.

OCC applauded CESC for extending their helping hand.

#### Item No. B.31: 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.

In 120<sup>th</sup> OCC, ERLDC informed that every month they were updating the status and posting at ERLDC website.

132<sup>nd</sup> OCC advised all the respective constituents to ensure the availability of telemetry data to ERLDC. The updated status is enclosed at **Annexure- B.31**.

Members may update.

#### **Deliberation in the meeting**

OCC advised all the respective constituents to ensure the availability of telemetry data to ERLDC. The updated status is enclosed at **Annexure- B.31**.

#### Item No. B.32: Availability of Hot Line Voice Communication--ERLDC

Hot line voice communication from Subashgram, Purnia 220, Baharampur, Biharsarif, Patna, Jeypore, Dalkhola, Birpara, Daltonganj, Kisanganj, Indrabati, Bolangir & Pandiavil are either not yet provided or not working since last couple of days. It is requested to POWERGRID to rectify the same at the earliest.

Powergrid may update.

#### Deliberation in the meeting

#### Powergrid agreed to look into.

#### Item No. B.33: 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.

OCC advised Powergrid to submit a report on latest status of implementation and advised to update the status on every OCC.

In 131<sup>st</sup> OCC, Powergrid submitted the latest status of PMU installation.

The updated status as furnished in 132<sup>nd</sup> OCC by Powergrid is given at **Annexure-B.33**.

POWERGRID may update the status.

#### Deliberation in the meeting

Members noted.

# Item No. B.34: 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-B.34.

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

Members may update.

#### **Deliberation in the meeting**

Members noted.

### Item No. B.35: Status of Emergency Restoration System (ERS Towers) for Eastern Region constituents

The latest status of Emergency Restoration System (ERS towers) as well as the future plan of procurement was given at **Annexure- B.35**.

Members may update the latest status.

#### **Deliberation in the meeting**

Members noted.

Minutes of 133rd OCC Meeting

#### Item No. B.36: BSPTCL Agenda

#### 1. Erection and commissioning of 02 nos. of 220 kV line bays at KBUNL

Presently 220 KV KBUNL- Samastipur (new) (D/C) & 220 KV KBUNL - Motipur (D/C) tr lines have only one 220 KV bays each at KBUNL end since long & due to this one circuit each from KBUNL to Samastipur (new) & KBUNL to Motipur remain unutilised.

Due to unavailability of these bays at KBUNL end, BSPTCL is facing difficulties for synchronising 220 KV line at KBUNL. This results in high voltage during off-peak hours. As observed in system study taking these circuits in loop at KBUNL will result in increment of 220 kV system voltage (which goes down to 206 kV during peak hours) at Darbhanga (New) by 3-4 kV. So keeping these lines in loop at KBUNL will enhance the reliability and stability of system.

So KBUNL (NTPC) may be instructed to complete the 02 nos. Of 220 kV line bays at KBUNL end at the earliest.

KBUNL may explain.

#### **Deliberation in the meeting**

Representative of KBUNL mentioned that contract, for execution of the said job, was awarded to M/S GET Power (Sister concern of M/S Techpro Systems Ltd.). However, due to worsening of financial condition, M/S GET failed to complete the work and left the work in between. KBUNL made all out efforts to get the vendor (M/S GET Power) on job but all its efforts met with little success.

He placed on record that, keeping in view of the fact that complete material for execution of the job was available at site, KBUNL had earlier requested BSPTCL to take up the job as BSPTCL has engaged various agencies for similar type of work. He also mentioned that BSPTCL had earlier agreed to take up the job on deposit basis.

He further mentioned that, KBUNL has started the process of termination of contract to M/S GET Power as well as for award of fresh contract for completion of remaining work. However, keeping in view the urgency of the work and also that awarding fresh contract and mobilization of resources may take some time, KBUNL representative again requested BSPTCL to take up the job on deposit basis.

BSPTCL representative informed that they will send some vendor/contractor for taking up the job.

#### 2. Charging of 132 kV NPGC-Rihand (UP,NR) T/L

Despite submitting required format for first time charging of 132 kV NPGC - Rihand (UP,NR) T/L after LILO of 132 kV Sonenagar-Rihand (UP,NR) T/L at NPGC, code for charging 132 kV NPGC - Rihand (UP,NR) T/L from NPGC upto Rihand (UP,NR) on no-load is not made available by ERLDC/NRLDC/NLDC. Charging of this line is must from anti-theft point of view.

ERLDC may explain.

#### **Deliberation in the meeting**

BSPTCL informed that the issue has been resolved.

#### 3. Loading of 220 kV Pusauli (PG)-Sahupuri (UP,NR) T/L

This BSPTCL line is very old (about 37 years) and so loading should be restricted to 160 MW. It is found that load on this line remain around 175/180 MW during peak hours. On date 16.05.2017 load was around 216 MW, SLDC, BSPTCL had sent mail to ERLDC also to reduce load to 160 MW.

Members may discuss.

#### **Deliberation in the meeting**

BSPTCL informed that the issue has been resolved.

#### Item No. B.37: WBSETCL Agenda

- 1. Non completion of Main bay 400kV Farakka-Gokarna line II at FSTPP end.
- 2. Creating contingency by FSTPP in WBSETCL network by not returning 400kV Main bus-I after taking shutdown
  - On 14.04.2017: taken from 08:00hrs to 15:08hrs against proposed 07:00hrs to 10:00 hrs
  - On 07.05.17: taken from 11:52 hrs to 00:10(next day) against proposed 100:00 hrs to 12:00hrs
- 3. Web based scheduling page cannot be accessed by any other browser other than google chrome

Members may discuss.

#### **Deliberation in the meeting**

Powergrid informed that Main bay of 400kV Farakka-Gokarna line II at FSTPP end has been completed.

Regarding not returning 400kV Main bus-1 after taking shutdown, OCC advised NTPC to take care in future and plan the shutdown properly.

ERLDC informed that Google Chrome browser is having advanced features in which user can get maximum features of WBS software. However user can open WBS in other browser with less features. Further, they assured to pursue the issue with the developer.

#### Item No. B.38: Pollution mapping for Eastern Region

The Pollution Mapping work in ER was started with on-site measurement of ESDD and NSDD.

OCC advised all the respective constituents to coordinate with Powergrid for online filling of measurement data.

	Scope (no. of location s)	Installed Locations	1st set of Measurements submitted	2nd set of Measureme nts submitted	3rd set of Measureme nts submitted	Measureme	5 <sup>th</sup> set of Measurements submitted
JUSNL	67	27	17	17	13	15	24
BSPTCL	59	52	40	29	4	3	0
WBSETCL	73	68	43	4	3	1	1
OPTCL	164	102	100	90	79	78	24
SIKKIM POWER	12	9	6	6	0	0	9

Powergrid updated the latest status as follows:

POWERGRID ER1	99	99	99	47	0	15	0
POWERGRID ER2	40	40	40	40	24	0	0
POWERGRID ODISHA	42	42	42	42	40	40	0

Powergrid added that they prepared an online format to submit the details of measurements. Powergrid requested to fill the Google form(https://goo.gl/6375HJ) for onward submission of measurements for better analysis of results.

Further, the schedule for measurement as informed vide letter dated 20.01.2016 & mail dated 21.01.2016 are as follows:

Measurement Schedule					
4th set	5th set	6th set			
21st -30th Sep 2016	21st -31st Jan 2017	21st -31st May 2017			

OCC advised all the constituents to complete the measurements as per the schedule.

It is also requested to send the onward measurement results to following emails in addition to current email ids

1. vbhaskar@powergridindia.com

2. ritesh.kumar@powergridindia.com

Members may update.

#### **Deliberation in the meeting**

Members noted.

#### Item No. B.39: Mock Black start exercises in Eastern Region – ERLDC

#### i) The status of black start exercises

The tentative schedule of black-start exercises for F.Y 2017-18 is as follows :

	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2017	May, 2017	Last Week of January2018	30 <sup>th</sup> May 2017
2	Maithon	1stweek of June 2017	Completed or 04.04.17	1stWeek of February2018	
3	Rengali	2ndweek of June 2017		Last week of November 2017	
4	U. Indarvati	3rdweek ofJune 2017		2ndweek of February2018	
5	Subarnarekha	1stweek of October 2017		1stweek of January2018	
6	Balimela	3rdweek of October 2017		1stweek of March 2018	
7	Teesta-V	2ndweek of Nov 2017		Last week of February2018	

8	Chuzachen	Last Week of May2017	May, 2017	January2018	
9	Burla	Last Week of June 2017		Last week of February2018	
10	TLDP-III	1stWeek of June 2017		2ndWeek of January2018	
11	TLDP-IV	Last Week of June 2017		1stWeek of February2018	

Members may update.

#### **Deliberation in the meeting**

OHPC informed that they will conduct the black start exercise of U.Kolab on 30<sup>th</sup> May 2017.

#### Testing of DG sets meant for Black start

Test run report of DG sets for blackstart has been received only from Odisha hydro units. The test run reports of other machines may be sent to erldc.cal@gmail.com and erldcoutage@gmail.com.

Constituents may kindly ensure compliance.

#### Deliberation in the meeting

Members noted.

#### Item No. B.40: Restricted Governor /Free Governor Mode Operation of generators in ER

The latest status of units of ER under RGMO is available at ERPC website (http://www.erpc.gov.in/) under Operation>Important data.

In 126<sup>th</sup>OCC requested all the generators to share their governor response with ERLDC in the group (https://in.groups.yahoo.com/neo/groups/ er\_gov\_respons/info). Members may also send their request for joining the group to <u>erldcprotection@gmail.com</u>.

ERLDC had uploaded the unit wise responses in the group "er\_gov\_respons@yahoogroups.co.in." i.r.o the following events for monitoring of RGMO response of generator:

- (1) On 13.04.17, at 09:36 hrs, due to tripping of Karad & kohlapur ICT's, the Load loss of 1840 MW took place.
- (2) On 26.04.17, at 10:01 hrs,due to tripping of Karad & kohlapur ICT's, the Load loss of 900 MW took place.

ERLDC may update.

#### Deliberation in the meeting

ERLDC informed that only four / five generators are giving satisfactory response and some generators are giving negative response which is not acceptable. The response of the generators is enclosed at **Annexure-B.40**.

OCC advised all the generators to go through their respective responses and take the appropriate action to improve the response.

#### Item No. B.41: Presentation on weather website for Eastern Region

ERLDC-IMD has developed a weather website for Eastern Region. The information provided on this website is dedicated to Power System operators. ERLDC would deliberate the detail features available in the website which would be beneficial for the users during preparation of their load forecast in the OCC meeting. All the beneficiaries are requested to furnish their load forecast data to ERLDC on daily basis using weather data information available in ERLDC website.

Members may discuss.

#### **Deliberation in the meeting**

ERLDC demonstrated features of weather website developed by ERLDC-IMD.

OCC appreciated ERLDC efforts and advised all the SLDCs to use this information for better forecasting of loads.

#### Item No. B.42: Reactive Power performance of Generators

Generating stations have been monitored for certain sample dates in the month of April,17.

Power Plant	Max and Min Voltage observed for April 17 (KV)	Date for monitoring (April 17)
Farakka STPS	428,402	20,24
Khalgaon STPS	425,406	20,24
Talcher STPS	406,393	18,20
Teesta	427,394	18,20
Bakreshwar TPS		
Kolaghat TPS		
Sagardighi TPS		
MPL	420,405	10,24
Mejia-B	421,407	8,24
DSTPS	426,412	15,20
Adhunik TPS	421,406	17,20
Sterlite	412,403	8,15
Barh	426,401 20,24	
JITPL	410,404	17,18
GMR	408,400	3,17
HEL		
Kodarma	426,403	11,24

ERLDC may present the reactive performance.

#### **Deliberation in the meeting**

ERLDC presented the response of the generators and members noted.

#### a) Schedule for reactive capability tests

The following was status of regarding reactive capability testing:

- a. Adhunik TPS(both units) –Yet to be confirmed by Adhunik
- b. DSTPS (Unit#2 only pending) done
- c. Koderma TPS Unit#1 -- done on 08.08.2016
- d. JITPL(both units) Procedure given. Not yet done
- e. Barh TPS In June 2016
- f. Raghunatpur (both units)

- g. GMR (Three units) h. Haldia TPS (Unit #4)

Members may update.

#### **Deliberation in the meeting**

Members noted.
# PART C:: OPERATIONAL PLANNING

# Item no. C.1: Anticipated power supply position during June'17

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of June'17 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-C.1**.

Members may confirm.

# **Deliberation in the meeting**

Modified anticipated power supply position for the month of June, 2017 after incorporating constituents' observations is given at Annexure-C.1.

# Item no. C.2: Shutdown proposal of transmission lines and generating units for the month of June'17

Members may finalize the Shutdown proposals of the generating stations for the month of June'17 as placed at **Annexure-C.2**.

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

### **Deliberation in the meeting**

Approved maintenance programme of generators and transmission elements for the month of June, 2017 is given at Annexure-C.2.

# 1. Shutdown of Kahalgaon STPS unit 4--NTPC

Shutdown of Kahalgaon STPS unit 4 is pre-pone to 28th May 2017 for 35 days due to coal shortage. Details are placed in **Annexure-C2.1**.

### **Deliberation in the meeting**

OCC approved

# 2. Shutdown of 132 kV Sahupuri (UP,NR)-Karmnasa & 132 kV Chandauli (UP,NR)-Karmnasa T/Ls.--BSPTCL

Shutdown of 132 kV Karamnasa - Sahupuri (UP) & 132 kV Chandauli (UP) - Karmnasa tr lines are required for construction of CVT foundation and erection of wave trap in Sahupuri bay at Karmnasa GSS. Since the clearance of CVT foundation area to the line is less than one meter, so for safety concern shutdown of said lines are required on daily basis from 08:00 hrs to 18:00 hrs from 01/06/17 to 03/06/17.

It is to be noted that above line remains charged on no load from Sahupuri end (open at Karmnasa end). This work is important from protection point of view at Karmnasa end.

### **Deliberation in the meeting**

OCC approved.

# 3. Insulator Replacement programme for the month of June'2017.

The Schedule of insulator replacement submitted by Powergrid Odisha projects for June 17 is enclosed at **Annexure-C2.3.** Schedule of POWERGRID/ER-II is given below:

SI No.	Name of TL	Description of Work	Remarks
1	220 KV MALDA- DALKHOLA-D/C.	Replacement of porcelain insulators with CLR insulators.	Complete replacement of insulators.
2	132kV SILIGURI- KURSEONG	DO	Railway crossing, NH/SH Crossings. S/D will be availed only if work pending during railway diversion period.
3	132kV SILIGURI-MELLI	DO	Complete replacement of insulators.
4	132KV KURSEONG RANGIT	DO	Complete replacement of insulators.
5	132KV RANGPO-MELLI	DO	Complete replacement of insulators.
6	132KV MELLI-RANGIT	DO	Complete replacement of insulators.
7	132KV RANGPO- CHUZACHEN		Complete replacement of insulators.
8	132KV RANGPO-RANGIT	DO	Complete replacement of insulators.
9	132KV RANGPO- GANGTOK	DO	Complete replacement of insulators.
10	132KV RANGIT-RAMMAM	DO	Complete replacement of insulators.
11	400 KV DURGAPUR- JAMSHEDPUR.	DO	Railway crossing, NH/SH Crossings.
12	400 KV FKK-DGP-2.	DO	Railway crossing, NH/SH Crossings.
13	400 KV JEERAT- SUBHASGRAM.	DO	National Highway/State highway/River crossing.
14	400 KV Sagardighi- SUBHASGRAM.	DO	National Highway/State highway/River crossing.

For all above places conventional porcelain insulator will be replaced by Composite Long Rod Insulator. Placed before members for discussion and subsequent consideration of the outages as deemed availability.

Members may approve.

# **Deliberation in the meeting**

OCC agreed to consider the shutdown period as per the decision of 30<sup>th</sup> TCC/ERPC meetings and provisions of CERC regulations.

# 4. Shut-down of 400kV D/C Binaguri-Bongaigaon TL Ckt-I & II due to conductor theft.

400 KV D/C Binaguri-Bongaigaon TL Ckt-I & II kept under S/D on various occasions (Mainly during low hydel season) and also was under continuous shut down w.e.f 18/04/2017 to 10/05/2017 due to Railway Diversion work. During system constraints of ER/NER grid, permission for Anti-theft charging are not always provided specifically during S/D activity, in general, antitheft permission from Bongaigaon end was not allowed. Since, the line is passing through theft prone areas , it has been observed that conductor theft (outer layers) has been noticed in several spans for which we require Shut-down on OCB basis from Mid of June-17 for 5 (Five) days Ckt-wise. Copy of FIR enclosed as ready reference. Tentative schedule are given below for reference:

SL NO	Name of element			From date	To date	From time	To time	Nature
01.	400 BONG	KV GAIGAC	BINAGURI- )N-I.	20.06.17	24.06.17	08:00	17:00	OCB
02.	400 KV BINAGURI- BONGAIGAON-II.			25.06.17	29.06.17	08:00	17:00	OCB

Members may approve.

# **Deliberation in the meeting**

OCC approved.

# 5. Shut-down of 220kV D/C Birpara-Chukha & 220kV S/C Birpara-Malbase due to Course Change of River Torsa.

Due to River course change (Torsa) towers between loc no.-81-84 of 220kV D/C Birpara-Chukha TL and loc no. 39A-44 of 220kV S/C Birpara-Malbase TL have come near to River. As such, urgent diversion of the two lines are required. Already foundation completed, however for erection & Stringing work we require S/D of 220kV D/C Birpara-Chukha for 10 days on continuous basis & 220kV S/C Birpara-Malbase for 3(three) days on continuous basis. Tentative schedule is given below for discussion:

SL NO	Name of element			From date	To date	From time	To time	Nature
01.	220 CHUK	KV HA-D/C	BIRPARA-	05.06.17	14.06.17	08:00	17:00	OCB
02.	220 MALB	KV ASE	BIRPARA-	15.06.17	17.06.17	08:00	17:00	OCB

Members may approve.

# **Deliberation in the meeting**

OCC approved.

# 6. Impedance measurement of important 400 KV Lines in ER-II.

ER-II has already procured impedance measurement kit for actual measurement of impedance. This measurement will help Relays to locate fault more accurately thus reducing patrolling time. For June month following lines are proposed for measurements:

SL NO	Name of element	From date	To date	From time	To time	Nature
01.	400 KV Maithon-Jamshedpur.	10.06.17	10.06.17	08:00	17:00	ODB
02.	400 KV Mejia-Jamshedpur	11.06.17	11.06.17	08:00	17:00	ODB
03.	400 KV Maithon-Mejia-I	12.06.17	12.06.17	08:00	17:00	ODB
04.	400 KV Maithon-Mejia-II.	13.06.17	13.06.17	08:00	17:00	ODB

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

Members may discuss.

# Deliberation in the meeting

OCC allowed the above shutdowns and also agreed to consider the shutdown period as per the provisions of CERC regulations.

# 7. Shut down of 50 MVAR Temporary Bus Reactor of Berhampur SS.

As per NLDC requirement and ERPC decision, 50 MVAR Temporary Reactor commissioned at Berhampur to mitigate the voltage rise issue in winter season. The Reactor commissioned on 29.12.16. However, under ERSS-XV, one permanent 125 MVAR Reactor is going to be commissioned at Berhampur. The construction/Erection activity of the upcoming bays are severally affected as the Temporary Reactor is charged through ERS.

Considering the requirement of the construction, it is proposed to allow the S/D of the Reactor till the construction activity finished. Expected shut down requirement is 02 Month i.e. up to July'2017.

Members may discuss.

### **Deliberation in the meeting**

OCC approved.

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

#### (i) Generating units:

Generating Station	UNIT	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE	Restoration
JITPL	1	600	COAL SHORTAGE	5-May-17	
JITPL	2	600	INITIALLY OUT DUE TO LEAKAGE	24-Mar-17	
FSTPP	3	200	OUT TO ATTEND MINOR	17-May-17	
RAGHUNATHPUR	2	600	COAL SHORTAGE	23-Mar-17	
KODERMA	1	500	BOILER TUBE LEAKAGE	19-Jan-17	
TENUGHAT	2	210	TURBINE MAINTENANCE	7-Nov-16	
KOLAGHAT	2	210	DESYN DUE TO POLLUTION	24-Feb-17	
KOLAGHAT	3	210	TUBE LEAKAGE	22-Feb-17	
SAGARDIGHI	4	500	COAL SHORTAGE	12-May-17	
SAGARDIGHI	2	300	COAL SHORTAGE	11-May-17	
MEJIA	2	210	STATOR EARTH FAULT	14-Apr-17	
MEJIA B	8	500	BOILER TUBE LEAKAGE	11-May-17	
BOKARO B	3	210	ECONOMIZER TUBE LEAKAGE	16-May-17	
BOKARO B	1	210	BOILER TUBE LEAKAGE	11-Apr-17	
BOKARO A	1	500	ASH EVACUATION PROBLEM	9-May-17	
WARIA	4	210	ECONOMIZER TUBE LEAKAGE	9-May-17	
GMR	1	250	COAL SHORTAGE	13-May-17	
TENUGHAT	1	210	LEAKAGE IN REHEATER	17-May-17	
BAKRESHWAR	4	210	BOILER TUBE LEAKAGE	16-May-17	

# (ii) Transmission elements

Name of the Line/Element	Outage Date	Reason
220 KV BALIMELA - U' SILERU	27.04.15	LINE IDLE CHARGED FROM UPPER SILERU END AT 12:42 HRS OF 25.01.17
400 KV PATNA-KISHANGANJ D/C	26.07.16	TOWER COLLAPSED AT LOC NO 51
400 KV BIHARSARIFF-PURNEA- I & II	23.08.16	THREE NUMBER OF TOWER ARE BADLY DAMAGED AT LOCATION 46/9, 47/0 & 47/1 (In the mid of river Ganga).
220KV WARIA - BIDHANNAGAR-II	10.09.16	LINE UNDER B/D, TOWER COLLAPSED AT LOC NO 28

400 KV BOKARO-KODERMA-D/C	13.05.17	TOWER COLLAPSE AT LOC NO 172 AND 173
400 KV FARAKKA-KAHALGAON-I-II	15.05.17	TOWER COLLAPSE AT LOC NO142,143 AND 144
765 KV GAYA VARANASI-I	17.05.18	TOWER COLLAPSE AT LOC NO 66,67,68. Peak of
220 KV GAYA DEHRI D/C	17.05.19	TOWER BENDING; Z-1;56.33 KM,Y_N;1.5 KA @ DEHRI,II:R-Y-B

Members may update.

# **Deliberation in the meeting**

Members noted.

### Item no. C.4: Status of commissioning of generating station and transmission elements

#### New generating units:

S.No.	Power Plant	Plant Size	Expected date

### New transmission elements:

SI No.	Name of Element Expected date							
1	400kV Rajarhat-Purnea D/C (with LILO of one circuit each at							
	Farakka and Gokarno)							
2	Augmentation of 400kV Farakka-Malda D/C with HTLS conductor							
3	400kV Ind-Bharath-Jharsuguda D/C							
4	400kV Talcher-Bramhapur-Gazuwaka D/C							
5	400kv Talcher-Rourkella(2 <sup>nd</sup> D/C-Quad)							
6	400kV Sterlite-Jharsuguda D/C							
7	765kv Anugul-Srikakulum D/C							
8	400kV Sasaram-Daltonganj D/C &Daltonganj S/Stn							
9	400 kV Ranchi-Raghunathpur D/C							
10	220 kV TLDP-IV – NJP ckt-2							
11	220 kV Bidhansai-Cuttack D/C							
12	220kV Gola- Ranchi							

Members may update.

### **Deliberation in the meeting**

Members noted.

# PART D:: OTHER ISSUES

# Item no. D.1: UFR operation during the month of April'17

System frequency touched a maximum of 50.26 Hz at 18:02Hrs of 30/04/17 and a minimum of 49.66 Hz at 19:15Hrs of 18/04/17. Accordingly, no report of operation of UFR has been received from any of the constituents.

Members may note.

### **Deliberation in the meeting**

Members noted.

Minutes of 133<sup>rd</sup> OCC Meeting

# Item no. D.2: 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 April'17.

Members may note.

# **Deliberation in the meeting**

Members noted.

# Item no. D.3: Grid incidences during the month of March, 2017

Sr No	GD/ GI	Date	Time	Affected System	Summary
1	GD - I	02/04/2017	19:01	JUSNL	At 19:01 hrs, 132 kV Ramchandrapur – Adityapur D/C along with 220/132 kV ATR II & III and 220 kV B/C at Ramchandrapur tripped resulting due to B-N fault at 132 kV Adityapur – Ramchandrapur – I (B phase insulator string was completely broken). At the same time, 132 kV Adityapur – Chandil S/C, 132 kV Adityapur – Rajkarswan S/C & 132 kV Chandil – Rajkarswan S/C tripped
2	GD - I	05/04/2017	15:52	JUSNL	At 15:37 hrs, 220 kV Ranchi – Chandil tripped due to B-N fault. Remaining 220 kV feeders at Chandil, 220 kV Ramchandrapur – Chandil and 220 kV STPS – Chandil S/C tripped at 15:52 hrs resulting power loss at Chandil and its adjacent areas.
3	GD - I	09/04/2017	18:49	BSPTCL/ISTS	At 18:49:50.54 hrs, 400/220 kV ICT – III at Biharshariff tripped from 400 kV side due to operation of o/c protection. After the tripping of 400/220 KV ICT – III, other two ICTs got overloaded and tripped in O/C protection from HV side.
4	GD - I	26/04/2017	20:24	BSPTCL/ISTS	At 20:24 Hrs, 400/220 kV ICT-I,II,III at Biharshariff tripped on o/c. At same time, 220/132 KV ATRs at Biharshariff also tripped. Some part of load was being fed through 220 kV Tenughat - Biharshariff S/C.
5	GD - I	28/04/2017	00:02	BSPTCL/ISTS	400/220 KV 315*3 MVA ICTs at Biharshariff tripped at 00:02 hrs. At 00:02 hrs, bursting of Y Phase CT of 132 kv side of 220/132 kV ATR - III AT Fatua resulted tripping of all 400/220 kV ICTs at Biharshariff in back up O/C. At same time, 220 kV Biharshariff - Fatua D/C also tripped.
6	GD - I	13/04/2017	14:05	JUSNL	At 14:05 hrs, 220 kV Ranchi – Chandil and 220 kV Chandil – STPS S/C tripped from Chandil end due to fault in 220/132 kV ATR – IV at Chandil. Local load at Chandil was unaffected as it was being fed through 132 kV Manique – Manique S/C.
7	GD - I	29/04/2017	15:57	ISTS	At 15:57 hrs due to inclement weather around Teesta 3 and Dikchu, 400 kv Teesta3-Dikchu tripped on R-N fault. At same time 400 KV Teesta3-Rangpo tripped on DT receipt at Rangpo end resulting tripping of all running units at Teesta 3 and Dikchu due to loss of evacuation path

8	GI-II	19/04/2017	15:45	ISTS	Due to sudden thunderstorm with lightning and heavy winds at Jharsuguda S/S at 15:45 hrs, connectors in 70989A ,71289A ,71389A and 71689A isolators were broken and the conductors were free hanging. As a result 765/400 kV ICTs along with lines i.e. 765kv Jharsuguda-Angul D/C & 765kv Jharsuguda - Dharamjaygarh D/C tripped due to phase to phase fault.
9	GI-II	21/04/2017	20:17	OPTCL	Due to R phase LA burst of 400 kV Meramundali - Angul - II at Meramundali end, multiple elements tripped from Meramundali end. As 220 kV bus was not dead, there was no load loss
10	GD - I	18/04/2017	12:35	ISTS	400 kV Muzaffarpur - Darbhanga - I was under s/d. 400 kV Muzaffarpur - Darbhanga - II tripped on B-N fault resulting load loss at radially connected area such as Darbhanga, Sitamari, Pandual, Madhubani etc.
11	GD - I	19/04/2017	22:56	ISTS	400 KV Muzaffarpur-Darbhanga-I was under breakdown. Load at Samastipur, Motipur, Musari and Darbhanga were fed through 400/220 kV ICT - I at Darbhanga. So tripping of ICT resulted loss of all radially connected load (including 15 MW traction load).
12	GD - I	20/04/2017	04:54	ISTS	400 KV Muzaffarpur-Darbhanga-I and 400 kV bus - I at Darbhanga were under breakdown. Load at Samastipur, Motipur, Musari and Darbhanga were fed through 400/220 kV ICT - I at Darbhanga. So tripping of ICT resulted loss of all radially connected load.
13	GD - I	20/04/2017	15:27	ISTS	400 KV Muzaffarpur-Darbhanga-I and 400 kV bus - I at Darbhanga were under breakdown. Load at Samastipur, Motipur, Musari and Darbhanga were fed through 400/220 kV ICT - I at Darbhanga. So tripping of ICT - I due to hard wire problem at bay 401 resulted loss of all radially connected load.
14	GD - I	24/04/2017	09:42	BSPTCL	400/220 kV ICT - I at Darbhanga was out of service due to over flux. Other 400/220 kV ICT at Darbhanga along with 400 kV Muzaffarpur - Darbhanga - II tripped due to LBB operation at Darbhanga.
15	GD - I	26/04/2017	16:16	WBSETCL	All 220/132 kV ATRs at Lakhikantapur tripped when 132 kV strung bus of 220/132 kV ATR - II fell on main bus. As Lakhikantapur was being radially fed from 220 kV, power interruption occurred at Lakhikantapur, Joka, Sirakol, Falta, Kakdeep
16	GD - I	29/04/2017	20:38	BSPTCL	Due to CT failure of 220/132 kV ICT at Bodhgaya, 220 kV Gaya - Bodhgaya D/C tripped from Bodhgaya end only resulting load loss at surrounding areas.
17	GD - I	22/04/2017	20:04	WBSETCL/ ISTS	At 20:04 Hrs, 400 KV Haldia-Subhasgram D/c tripped due to B_N fault. Consequently, 2 running units generating 300 MW tripped at Haldia tripped due to loss of evacuation path. At same time 220 kV CESC - Subhasgram - I also tripped
18	GD - I	25/04/2017	19:09	DVC	Due to B phase Bulk oil CB failure in HV side of 132/33 kV ATR - II at Jamshedpur (DVC), both 220 & 132 kV bus became dead at affected s/s
19	GD - I	13/04/2017	15:03	BSPTCL	Radial load fed from Hazipur, Vaishali, Chapra and Shetalpur and traction load at Bela and Sonepur was shed due to tripping of 220 kV Muzaffarpur - Hazipur D/C on Y-B-N fault.
20	GD - I	15/04/2017	08:48	Sikkim	Due to increment weather condition, 132 kV Chujachen - Gangtok and 132 kV Rangpo Gangtok tripped on R-N fault. 132 kV Rangpo Gangtok tripped from Rangpo only

21	GD - I	19/04/2017	11:50	ISTS	220 kV Arrah - Sasaram S/C and 220 kV Arrah - Khagul D/C were in opened condition. 220 kV Arrah - Nandokhar tripped due to O/V at Nandokhar.
22	GD - I	28/04/2017	17:23	WBSETCL	At 17:32 Hrs, all running units (2,4,5) at Bandel tripped and generation became zero due to Bus fault at 132kv side for Y- phase CT failure at Bandel.

Members may note.

# **Deliberation in the meeting**

Members noted.

# Item no. D.4: Additional items by ERLDC

# 1) Reporting of voltage deviation indices (VDI) for select S/Stns in ER

ERLDC vide letter dated 04.05.17 has submitted the Voltage Deviation Index (VDI) of selected 400 kV Sub-stations for April, 2017 of Eastern Region which is enclosed at **Annexure- D.4.1**.

### **Deliberation in the meeting**

Members noted.

# 2) ER Grid performance during April 2017

GM, ERLDC has presented the performance of the Eastern Region grid during April 2017. Presentation is enclosed at **Annexure- D.4.2**.

### **Deliberation in the meeting**

Members noted.

Meeting ended with vote of thanks to chair.

\*\*\*\*\*\*

Annexuse - A

# Participants in 133<sup>rd</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata Time: 11:00 hrs

Date: 26.05.2017 (Friday)

51. No	Name	Designation/ Organization	Contact Number	Email	Signature
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"Coming together is a beginning, staying together is progress, and working together is success." -Henry Ford

# Participants in 133<sup>rd</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 26.05.2017 (Friday)

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# Participants in 133<sup>rd</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata Time: 11:00 hrs

Date: 26.05.2017 (Friday)

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55	Mangi Panda	AGM/vedparte	9777457222	margi panda@vodasta . Co. in	Colordy
56	Ch. Mobran Rao	Manarger, PG-oclisha	9437962193	mohan-rac@power godiadia.com	- Famo
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"Coming together is a beginning, staying together is progress, and working together is success." -Henry Ford

[Page 31

# **IMMEDIATE**





भारत सरकार

Government of India विद्युत मंत्रालय

Ministry of Power केन्दीय विद्युत प्राधिकरण

Central Electricity Authority য়িত্ত মৰ্ৰথন মখাग Grid Management Division

# FAX MESSAGE

FROM: CHIEF ENGINEER, GRID MANAGEMENTTO: MEMBER SECRETARY, ERPCSUB: DATA FOR MERIT ORDER OPERATION PORTAL

# No. 1/AI/COR/GM/2017/939

DATED: 15.05.2017

Please refer to this division's letter no. 1/AI/COR/GM/2017/798-833 dated 13.04.2017 requesting to forward necessary data in respect of various States/UTs of your region for development of merit order portal. In this regard, it is to state that despite repeated reminders from this division, data for merit order portal has not been received from any of the states except that of Jharkhand. The data has also been received from Odisha, but it is incomplete.

Hon'ble Union Minister of Power in the Conference of Power, New & Renewable Energy & Mines Ministers of States & UTs held on 3<sup>rd</sup> and 4<sup>th</sup> May, 2017 had expressed concern regarding non-availability of required data for Merit Order Portal, and requested the states to provide the same to CEA, without any delay.

In view of the above it is requested to take up the matter with the ER States/UTs and get the requisite data forwarded to this division in the prescribed Excel format without any delay.

(Dinesh Chandra) Chief Engineer

सेवा भवन, आग के. पुरम-I, नई दिल्ली-110066 टेलीफैक्स: 011-26732652. ईमेल:cegmcea1@gmail.com वेबसाइट: <u>www.cea.nic.in</u> Sewa Bhawan, R.K Puram-I, New Delhi-110066 Telefax: 011-26732652 Email: cegmcea1@gmail.com Website: <u>www.cea.nic.in</u>

Annexure-7.2



एन टी पी सी लिमिटेड NTPC Limited

फरका / Farakka

दिनोक / Date: 27.04.2017

संदर्भ संख्या/Ref. No. :FS:42:GM-O&M::

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

# Sub : Islanding Scheme of Farakka STPS.

Dear Sir,

With reference to NTPC-Farakka Islanding Scheme, hooking of command to C&I control panels of Unit-1 was done during last overhauling of the unit (14th March,2017 to 17th April,2017). After overhauling, Islanding Scheme has been commissioned in Unit-1 of NTPC, Farakka.

This is for your kind information please.

Thanking you,

Yours faithfully,

(श्री कृष्ण सि'ह / S.K.Singh ) (महाप्रबधक (प्र व आ) /General Manager(O&M)

Copy to :

- 1. GM,ERLDC,Kolkata : for kind information pl.
- 2. RED(ER-1),NTPC Ltd., Patna : for kind information pl.
- 3. ED(OS),NTPC Ltd.,Noida : for kind information pl.
- 4. ED(Farakka),NTPC Ltd. : for kind information pl.

फरवका सुपर धर्मल पावर स्टेशन, पो: नबारूण, जिला : मुर्शिदाबाद, पश्चिम बंगाल, पिन - 742 236, फैक्स : 03512-226126 Farakka Super Thermal Power Station, P.O. Nabarun, Dist. Murshidabad, W.B., Pin-742236,Fax:03512-226126

# Closing of 220 kV loop in Bihar for reliable system operation

# Introduction

- At present peak load of Bihar is around 4000 MW
- During peak condition N-1 contingency of following elements are not satisfied
  - 220 kV Patna-Sipara
  - 500 & 315 MVA ICT at Patna
  - 500 & 315 MVA ICT at Sasaram
  - 500 & 315 MVA ICT at Gaya

# **Simulation Results**

Bihar Demand 4200 MW, Generation 220 MW

N-1 Contingency Not Satisfied for Both 500 MVA and 315 MVA ICT at Patna, Sasaram and Gaya



Bihar Demand 4200 MW, Generation 220 MW

# Opeining of 220 kV Sasaram-Sahupuri S/C

Reduction in loading of ICT at Sasaram Still N-1 Contingency of 500 MVA ICT at Sasaram is not satisfied



Bihar Demand 4200 MW, Generation 220 MW



Bihar Demand 4200 MW, Generation 220 MW



Bihar Demand 4200 MW, Generation 220 MW





#### Summary of Simulation Studies carried out with BSPTCL representatives

- 1. Closing of 220 kV Arah-Khagaul D/C
  - a. Peak Case
    - Around 60 MW power flows from Khagaul towards Arah.
    - 220 kV Patha(PG)-Sipara D/C flow becomes more than 200 MW each.
    - III. Thus it is not advisable to connect this line during peak hours till new 220 kV Patna(PG)-Sipara-III is commissioned which is expected in next 2 months
  - b. Off Peak Case
    - i. Around 50 MW power flows from Khagaul towards Arah
    - ii. Voltage of 220 kV Arah comes down by 5-6 kV.
    - iii. Line may be kept in service in off-peak hours as loading of 220 kV Patna (PG) -Sipara D/C remains around 140 MW each.
  - c. Thus instead of daily opening of 220 kV New Pusauli(Nadhokar)-Arah S/C in off peak hours and closing in peak hour; 220 kV Arah-Khagaul may be closed in off-peak hours and taken out in peak hours.
- 2. Closing of 220 kV Fatuah-Patna(PG) S/C
  - a. Peak and Off-Peak
    - i. Power flows from Patna(PG) towards Fatuah (Peak- 48MW ; Off-Peak 22 MW)
    - ii. Line may be kept close for better reliability of supply at Fatuah, which at present is radially fed from 220 kV Biharsariff.
- 3. Closing of 220 kV Biharsariff-Bodhgaya D/C
  - a. Peak and Off Peak
    - i. Power flows from Biharsariff towards Bodhgaya (Peak- 70 MW ; Off-Peak 40 MW)
    - ii. Line may be kept close for better reliability of supply at Bodhgaya, which at present is radially fed from 220 kV Gaya.

Sahay ERLDC 05/05/2019.

Grænderberg OSTS12017 Dufnh Ung osforfig

# Recommendation

- Earlier commissioning of
  - 220 kV Patna-Sipara 3<sup>rd</sup> circuit (if possible HTLS conductor may be used)
  - Replacement of second 315 MVA ICT at Sasaram and Patna with 500 MVA ICT
- Other recommendations which may be considered
  - Re-conductoring of 220 kV Patna-Sipara D/C(which is only 500 meters long) with HTLS
  - Implementation of load rejection scheme with tripping of one ICT at
    - Patna (Tripping 220/132 kv ATR at Sipara to limit loading)
    - Sasaram (Tripping of 220/132kV ATRs at New Pusauli)
    - Gaya(Tripping of 220 kV Gaya-Sonenagar D/C)
  - New 500 MVA ICT at Patna, Gaya, Sasaram and Biharsariff.
  - Planning of new substations matching with expected load growth in Bihar.

# UFR Inspection Report of DVC substations on 18.05.17 & 19.05.17

The ERPC UFR inspection group visited 132kV Koderma and Kumardhubi substations of DVC for UFR Audit on 18.05.17 & 19.05.17. The team physically inspected the feeders which are connected with UFRs at the above sub-stations. The report of the inspection is furnished below:

S1.	Name of the	Feeder	Voltage	Adopted	Tested	UFR
No.	substations	connected	rating	UFR	initiated	make
		with UFR		setting	frequency	
			(Kv)	(Hz)	(Hz)	
1	132/33 kV Koderma	Koderma (JSEB) -I	33			Westing
	Koderina	Koderma (JSEB) -I	33	49.2	49.16	House KF
	132/33kV	DPSCO Dishergarh-I, II, III	33			Siemens
2	Kumardhubi	Mugma (JSEB)- I & II	33	48.8	48.81	7SJ8042
		Kumardhubi (JSEB) I & II	33			

The above UFR setting were tested with help of Secondary injection Kit owned by DVC. The During the testing at 132/33kV Kumardhubi S/s, the DPSCO Dishergarh-I, II, III feeders tripped at 49.95 Hz. The connections of these feeders were corrected and repeated the test. All the feeders were tripped at desired frequency and UFRs are provided with direct trip wiring.

Installed Capacity (MW) and Generation (MU) from renewable Resources (Injected into the Grid)

2. Month :

3. Year :

of the month		funel annull rife		Cumulative Generation (MU)				
Sector	State Sector	Private Sector	Central Sector	State	Private	Central	State	Private
					occion	Jector	Sector	Sector
							1	
	Central	Central State Sector	Central State Sector Private	Central State Sector Private Central	Central State Sector Private Central State	Of the month     month : January       Central     State Sector     Private     Central     State     Private	Of the month     month : January     Cumulat       Central     State Sector     Private     Central     State     Private     Central     State     Private     Central     State     Central     Central     State     Central     State     Private     Central     State     Private     Central     Central     State     Private     Central <td>Central Sector     State Sector     Private     Central     State     Private     Central     State     Private     Central     State     Private     Central     State     State</td>	Central Sector     State Sector     Private     Central     State     Private     Central     State     Private     Central     State     Private     Central     State     State

S. No.	Region	Name of Substation	Transformer tertiary
5. 110.	Kegion	Name of Substation	Charged
1		PATNA	Yes
2		MUZAFFARPUR	Yes
3		NEW PURNEA	Yes
4		LAKHISARAI	Yes
5		BANKA	Yes
6		BIHARSARIF	Yes
7		ARA(220)	Yes
8	ER I	GAYA (765kV)	Yes
9		PUSAULI	Yes
10		KISHANGANJ	Yes
11		NEW RANCHI (765kV)	Yes
12		CHAIBASA	Yes
13		JAMSHEDPUR	Yes
14		RANCHI	Yes

# List of Substation in POWERGRID ER-I where auxilliary supply is met through Tertiary

#### Subject: Details of S/S having Tertiary Loading at ER-II.

- To: "eeop.erpc@gov.in" <eeop.erpc@gov.in> Cc: "mserpc-power@nic.in" <mserpc-power@nic.in>, S V S Sathynarayana {एस.वी.एस. सत्यनारायण} <svs@powergridindia.com>

Date: 04/20/17 05:21 PM From: Partha Ghosh {पार्थ घोष} <partha.ghosh@powergridindia.com>

#### Dear Sir,

In reference to agenda point no: B.24 of 132<sup>nd</sup> OCC, PFA no of S/S from ER-II having Tertiary Transformer loading facility, however, none of the station is running solely on Tertiary Loading:-

SL No	Name of Sub-station	Tertiary Voltage level	Tertiary Transformer Capacity (KVA)
01.	Rangpo	33 KV	630
02.	Birapara	33 KV	630
03.	Siliguri	33 KV	630
04.	Durgapur	33 KV	800
05.	Maithon	33 KV	800
06.	Subhasgram	33 KV	630

#### Partha Ghosh {पार्थ घोष}

#### दावात्याग / Disclaimer:

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड इस ईमेल में वितरित किसी भी सामग्री के लिए या इसमें दी गई किसी सूचना के आधार पर की गई किसी भी कार्रवाई के परिणामों के लिए कोई भी दायित्व नहीं स्वीकारता है। चूँकि सूचना को अवरुद्ध, भ्रष्ट, तुप्त, नष्ट, विलंबित, अपूर्ण अथवा संक्रमित किया जा सकता है अत: प्राप्तकर्ता यह मानता है कि इलेक्ट्रॉनिक मेल में परिवर्तन किए जा सकते हैं एवं उनके सुरक्षित या त्रुटिमुक्त होने की गारंटी नहीं दी जा सकती। इसलिए पावरग्रिड इस संदेश अथवा इसके संलग्नकों की सामग्री में इस प्रेषण के परिणामस्वरुप उत्पन्न किसी भी त्रुटि, चूक, वायरस या क्षति के लिए उत्तरदारी लहीं से पाय जानकारी हो सकती है। यदि आप आशयित प्राप्तकर्ता नहीं हैं, तो तुरंत इस ईमेल के प्रेषक को इस बाबत सूचित करें तथा इस संदेश की सभी प्रतियां और इसके सभी संलग्नक तत्काल नष्ट कर दें। इस संदेश या इसके किसी भी प्रकार से जिस की भी प्रकार से (चाह पूर्णत: या अशत: ) अनधिकृत प्रयोग, प्रकटीकरण या उसकी प्रतियां बनीचा के एक गेर-कानूनी कृत्य हो सकता है।

Annexure-B25



भारत सरकार Government of India विद्युत मंत्रालय Ministry of Power पूर्वी क्षेत्रीय विद्युत समिति Eastern Regional Power Committee 14 गोल्फ क्लब रोड टालीगज, कोलकाता-700023 14 Golf Club Road, Tollygunj, Kolkata-700033



Tel No.:033-24235199, 24235016 FAX No.:033-24221802, 24221358 Web: www.erpc.gov.in

# No. ERPC/MS/Operation/2017-18/

Date: 09.05. 2017

FAX MESSAGE NO. 259

To,

Director, SLDC, UPPTCL, 5th floor, Shakti Bhawan, Lucknow - 226 001 (M. No.- 9415311802, Fax: 0522-2287880)

# Subject: LILO Connection of 132 KV Sonenagar-Rihand (UP,NR) Circuit-I at NPGC, Nabinagar for providing startup power to NPGC - reg

Sir,

Please refer our telephonic discussion today on the issue. It is to inform that Unit # 1 of Super Thermal Power Project (3x660MW) of NPGC, Nabinagar is expected to be commissioned shortly.

In 131<sup>st</sup> OCC meeting of ERPC, BSPTCL informed that NPGC, Nabinagar has applied for 65 MVA start up power and initially they will draw around 5-10 MW power through 132 kV Sonenagar-Rihand-I line LILOed at NPGC, Nabinagar. It was also pointed that 132kV Sonenagar-Rihand (UP,NR) Circuit-I is lying idle charged since last 5-6 years and presently it remains charged on no load from Sonenagar end & open at Rihand (UP) end.

It was informed that NPGC, Nabinagar will only draw startup power for commissioning activities through the above LILO as an interim arrangement and injection of power/trial-run will be done after the completion of 400 kV ATS of NPGC, Nabinagar.

The issue was discussed also with CTU and CEA. CEA vide their letter 69/2/PSPA-II/2017/362, dated 8.5.17 communicated their no objection.(Copy enclosed). CTU also expressed the same.

Therefore as advised by you this is our confirmation that as per the decision of OCC, NPGC is going to start availing the start up power from BSPTCL by closing Sonnagar-NPGC 132KV LILO section of 132kV Sonnagar-Rihand-I line keeping the line open at Rihand end.

This is for your further information that this is an interim arrangement subject to post facto approval of Standing Committee of ER in its forthcoming meeting. NPGC, ERLDC, BSPTCL and NLDC are now being requested to do the needful for commencement of startup power through the aforesaid arrangement.

Thanking you,

Yours faithfully,

(A. K. Bandyopadhyaya) Member Secretary

Copy to:

- Member Secretary, Northern Regional Power Committee, 18A, SJSS Marg, Katwaria Sarai, New Delhi-110016
- 2. Chief Engineer, PSP&A-II division, CEA, Sewa Bhawan, R.K.Puram, New Delhi- 110066.
- Executive Director, NLDC, POSOCO, B-9, Qutab Institutional Area, Katwaria Sarai, N. Delhi- 110016 (Fax No.- 011-26524525, 26536901)
- 4. COO (CTU-Planning), PGCIL, Saudamini, Plot No-2, Sector-29, Gurgaon- 122001
- Director (Project), Bihar State Power Transmission Company Ltd., Vidyut Bhavan, Bailey Road, Patna-800021.
- 6. Director (Project), JUSNL, Kusai Colony, Doranda, Ranchi-834002.
- 7. General Manager, ERLDC, 14 Golf Club Road Tollygunge, Kolkata 700033
- 8. Chief Executive Officer, NPGC, Nabinagar.





# भारत सरकार Government of India विद्युत संत्रालय Ministry of Power केंद्रीय विद्युत प्राधिकरण Central Electricity Authority विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग-II Power System Planning & Appraisal Division-II

# No: 69/2/PSPA-11/2017/362

Dated: 08.05.2017

To

Member Secretary, Eastern Regional Power Committee, 14, Golf Club Road, Tollygunge,Kolkata – 700033

Subject: Notice for special meeting on issues related to BSPTCL-reg.

Ref: (i) ERPC letter No. ERPC/MS/2017-18/ 256 dated 05.05.2017

(ii) BSPTCL letter dated 03.05.2017

Sir.

Reference is invited to Item No. 1 of the ERPC letter regarding LILO of inter-regional tie line 132 KV Sonenagar - Rihand (UP,NR) Circuit-I (direct line) by BSPTCL at NPGC, Nabinagar for providing start up power to NPGC.

- Request of BSPTCL vide their letter dated 03.05.2017 for permission for charging of LILO Connection of inter-regional tie line 132 KV Sonenagar - Rihand (UP,NR) Circuit-I (direct line) at NPGC, Nabinagar so as to provide start up power to NPGC, has been examined and following is submitted for consideration in the proposed ERPC meeting on 11.05.2017.
- In BSPTCL letter, it is mentioned that presently 132 KV Sonenagar Rihand (UP,NR) Circuit-I remains charged on No-load from Sonenagar end, and open at Rihand(UP) end. Therefore, we have no objection in charging of the LILO carried out by BSPTCL, considering the following:
  - This is a temporary arrangement till the commissioning of planned 400 KV D/c Nabinagar (NPGC) - BRBCL transmission Line.
  - This line may be treated as line connected to Bihar grid i.e. Sonenagar to NPGC because the line is open at Rihand(UP) end.

Yours faithfully. (Pardeep Jinda) Chief Engineer( PSPA-II)

सेवा भवन, आर. के. पुरम-I, नई दिल्ली-110066 टेलीफोन : 011-26198092 ईमेल: ceatransplan@gmail.com वेवसाइट: <u>www.cea.nic.in</u>

# Annexure-B.26

S.No	MAKE	Date/Year of SEM Installation	ERLDC_ID	NEW MTR NO	LOCATION	Time Drift (Min)
1	L&T	2006	EM-07	NP-5086-A	BINAGURI(PG)	11
2	L&T	2006	EM-09	NP-5088-A	BINAGURI(PG)	12
3	L&T	2006	EM-10	NP-5888-A	BINAGURI(PG)	13
4	L&T	2008	ER-85	NP-5962-A	JEYPORE(PG)	49
5	L&T	2008	ER-34	NP-5957-A	JEYPORE(PG)	52
6	L&T	2008	ER-35	NP-5958-A	JEYPORE(PG)	55
7	L&T	2008	ER-53	NP-5946-A	SILIGURI(PG)	10
8	L&T	2008	ER-40	NP-6464-A	BIRPARA(PG)	-11
9	L&T	2008	ER-59	NP-6478-A	MALDA(PG)	-16
10	L&T	2008	ER-12	NP-6451-A	MAITHON(PG)	-11
11	L&T	2008	ER-41	NP-6490-A	BIRPARA(PG)	-10
12	L&T	2011	ER-44	NP-5892-A	BIRPARA(PG)	35
13	L&T	2012	EM-96	NP-5068-A	DALKHOLA(PG)	23
14	L&T	2013	EP-56	NP-5233-A	MUZAFFARPUR(PG)	13
15	L&T	2013	EP-57	NP-5234-A	MUZAFFARPUR(PG)	15
16	L&T	2013	ER-58	NP-7555-A	MALDA(PG)	18
17	L&T	2013	EP-72	NP-7935-A	SUBHASGRAMA(PG)	11
18	L&T	2013	EP-55	NP-7969-A	DALKHOLA(PG)	16
19	L&T	2013	EP-83	NP-7828-A	PURNEA(PG)	12
20	L&T	2013	EP-84	NP-7829-A	PURNEA(PG)	16
21	L&T	2013	EP-93	NP-7612-A	BERHAMPORE(PG)	19
22	L&T	2013	EP-94	NP-7993-A	BERHAMPORE(PG)	17
23	L&T	2014	EN-16	NP-7938-A	SUBHASHGRAM(PG)	12
24	L&T	2015	EN-96	NP-7881-A	RANCHI(PG)	15

# Status of replacement of Time drifted meters at ER-II.

As on date followings Time drifted meters have been replaced as per direction of ERLDC, (Ref Agenda point: B.26) :-

S.No	LOCATION	Time Drift (Min)	Line/Element	Remarks
1	BINAGURI(PG)	11	400 KV BINAGURI (PG)-TALA (THP)-1	Will be replaced in next week.
2	BINAGURI(PG)	12	400 KV BINAGURI (PG)- MALBASE(PG)-3	Will be replaced in next week.
3	BINAGURI(PG)	13	400 KV BINAGURI (PG)-TALA (THP)-4	Will be replaced in next week.
4	SILIGURI(PG)	10	132 KV SILIGURI (PG) - NJP(WBSETCL)	Will be replaced in next week.
5	BIRPARA(PG)	-11	220 KV BIRPARA (PG) - CHUKHA (CHPC) -2	Replaced on 20.04.2017.
6	MALDA(PG)	-16	132 KV MALDA (PG) - MALDA (WBSETCL) -2	Replaced on 18.04.2017.
7	MAITHON(PG)	-11	220 KV MAITHON (PG) - DHANBAD (DVC) -2	Replaced on 18.04.2017.
8	BIRPARA(PG)	-10	220 KV BIRPARA (PG) - MALBASE	Replaced on 20.04.2017.
9	BIRPARA(PG)	35	132 KV BIRPARA (PG) - BIRPARA (WB)-1	Replaced on 20.04.2017.
10	DALKHOLA(PG)	23	220 KV DALKHOLA(PG)- DALKHOLA(WBSETCL)-2	Will be replaced in next week.
11	MALDA(PG)	18	132 KV MALDA (PG) - MALDA (WBSETCL) -1	Replaced on 18.04.2017.
12	SUBHASGRAMA(PG)	11	220 KV SUBHASGRAM(PG)-EMSS CESC(WB) -1	Replaced on 19.04.2017.
13	DALKHOLA(PG)	16	220 KV DALKHOLA(PG)- DALKHOLA(WBSETCL)-1	Will be replaced in next week.
14	BERHAMPORE(PG)	19	400 KV BERHAMPORE(PG)- BHERAMARA-1 M	Will be replaced in next week.
15	BERHAMPORE(PG)	17	400 KV BERHAMPORE(PG)- BHERAMARA-1 C	Will be replaced in next week.
16	SUBHASHGRAM(PG)	12	400 KV SUBHASHGRAM(PG)- HALDIA (WB) -1	Replaced on 19.04.2017.

Balance meters will be replaced by next week and readings will be sent to ERLDC manually by Each Wednesday.

# Annexure-B31

# Hot Line Voice Communication Availability (in %) from ERLDC



n

%



Non availability of Real time data from Banka(PG) and Chuzachen station for the duration from 16-05-17 to 25-05-17



BANKA\_PG (Percentage NON- availability)

CHEP\_\_PG(Percentage NON-availability)

# Non availability of Unit side data

- Farakka Unit #6, Unit #5 (As per inputs from NTPC, This will be done during overhauling of Unit#5 ).
- > Teesta V HPS unit (LV) data.

# No VOICE over VOIP

 IPP : JITPL, GMR.
POWERGRID: Bolangir , Indravati , Jeypore , Purnea 220 , Baharampur 400kV , Rourkela , Rengali, Dalkhola (PG), Kishanganj, Pandiabili.

>NTPC : Nabinagar.
# OLTC

- 1. NEW SASARAM @ 1500 MVA 765/400 kV ICT 1
- 2. ANGUL @ 1500 MVA 765/400 kV ICT 1
- 3. ANGUL @ 1500 MVA 765/400 kV ICT 3
- 4. ANGUL @ 1500 MVA 765/400 kV ICT 4
- 5. JHARSUGUDA @ 1500 MVA 765/400 kV ICT 1
- 6. JHARSUGUDA @ 1500 MVA 765/400 kV ICT 2
- 7. BOLANGIR @ 315 MVA 400/220 kV ICT 1
- 8. BIHARSHARIF @ 315 MVA 400/220 kV ICT 1
- 9. BIHARSHARIF @ 315 MVA 400/220 kV ICT 3
- 10. INDRAVATI (2ND ICT) @ 315 MVA 400/220 kV ICT 1
- 11. INDRAVATI (2ND ICT) @ 315 MVA 400/220 kV ICT 2
- 12. KEONJHAR @ 315 MVA 400/220 kV ICT 1
- 13. KEONJHAR @ 315 MVA 400/220 kV ICT 2
- 14. MALDA @ 315 MVA 400/220 kV ICT 1
- 15. MUZAFFARPUR @ 315 MVA 400/220 kV ICT 3
- 16. RANCHI @ 315 MVA 400/220 kV ICT 1

# OLTC

19. RANCHI @ 315 MVA 400/220 kV ICT 2 20. RENGALI @ 315 MVA 400/220 kV ICT 2 21. ROURKELA @ 315 MVA 400/220 kV ICT 3 22. CHAIBASA @ 315 MVA 400/220 kV ICT 1 23. CHAIBASA @ 315 MVA 400/220 kV ICT 2 24. CHAIBASA @ 315 MVA 400/220 kV ICT 3 25. SUBHASGRAM @ 315 MVA 400/220 kV ICT2 26. KISHANGUNJ @ 500 MVA 400/220 kV ICT 1 27. KISHANGUNJ @ 500 MVA 400/220 kV ICT 3 28. BARH @ 200 MVA 400/132 kV ICT 1 29. BARH @ 200 MVA 400/132 kV ICT 2 30. LAKHISARAI @ 200 MVA 400/132 kV ICT 3 31. ARRAH @ 100 MVA 220/132 kV ICT 1 32. ARRAH @ 100 MVA 220/132 kV ICT 2

## GRIDCO

### MW/MVAr flow of Meeramandali – GMR line at Meeramundali end.

### WBSETCL ➤ Following station data not available:

➢Dharampur 220, ➢Krishnanagar 220, ≻Hura 220, ➢Foundry Park 220. ▶Dalkhola ➢ Bantala Lakshmikantapur New Town

Kolaghat TPS : Kharagpur #1 MW/MVAR flow (of Kolaghat station ) not available at ERLDC.

# NTPC

# Lalmatia: ICT #2 data not available. Farakka STPS:

- >Unit # 6 LV side not available.
- ►<u>Nabinagar NTPC :</u>
  - Alternate Data channel not yet provided.
    No VOIP.

# POWERGRID

### Data Intermittent / not available:

- Purnea 400kV, Malda, Durgapur (Frequent Failure of these RTUs)
- Ranchi 400kV, Baripada, Gaya, Angul, Chaibasa ,Banka.

## VOIP for following station not yet provided:

Indravati , Jeypore, Bolangir

### VOIP not Working:

Purnea 220, Baharampur 400kV, Rourkela, Rengali, Dalkhola, Kishanganj, ,Pandiabili.

### IBEUL : Stand by channel upto Back up ERLDC not yet provided.

### JITPL : No voice communication available between JITPL and ERLDC.

# **BSPHCL** > Data Intermittent / not available:

Dumraon, Sonenagar, Khagaul , Darbhanga, Dehri, sultangaunj, Lakhisarai, Karmanasa, Kahalgaon, Jamaui, Banka, Gopalganj, Kisanganj, Arrah, Rajgir, Sipara, Hajipur(New), Pusauli, Valmikinagar, Koshi, Begusarai, Gopalganj, Hajipur, Muzzafarpur, Sitamni.

# JSUNL

- Data not available :
  - > Hatia New 220,
  - Patratu
  - Deoghar
  - Garwh
  - Goelkera
  - > Jamtarta
  - Kendoposi

# DVC

## Data Intermittent / not available:

- Kolaghat
- > Kharagpur



#### PMU Installation and commissioning status of ER as on 20.04.2017

S.No	Region	State	Sub-Station 78	Owner/ Utility	S/S type	PMU 286	TOTAL PANEL QTY 175	PMU Delivery status 73	Cable Delivery status 61	Erection 51	Cable laying 45	CT/PT/DI termination 40	Commiss ioning 40	Integration 24	SAT 37	Remarks
1	ER-II	West Bengal	-	WBSETCL	CR	3	1	Yes	Yes	done	done	pending	pending	Pending	-	CT/ PT/ DI interfacing pending due to permission issue.
2	ER-II		BAKRESHWAR TPS	WBSETCL	CR	4	1	Yes	Yes	done	pending		pending	Pending		Panel erected. Cable laying pending due to permission issue.
3	ER-II	West Bengal	Bidhannagar	WBSETCL	CR	3	1	Yes	Yes	done	done	pending	pending	Pending		Panel erected. Cable laying and termination at PMU panel completed. CT/ PT/ DI interfacing pending due to permission issue.
4	ER-II	West Bengal	JEERAT	WBSETCL	CR	2	1	Yes	Yes	done	done	done	done	done	pending	SAT pending as customer didn't agree to witness SAT.
5	ER-II	West Bengal	Kolaghat TPS	WBSETCL	CR	4	1	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
6	ER-II	0	KASBA	WBSETCL	CR	3	1	Yes	Yes	done	done	done	done	done		SAT pending as customer didn't agree to witness SAT.
7	ER-II	DVC	DSTPS	DVC	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	Communication Link not available.
8	ER-II	DVC	Kodarma TPS	DVC	CR	3	1	Yes	Yes	done	done	done	done	Pending	done	Communication panel does not exist.
9	ER-II	DVC	MEJIA-B	DVC	CR	2	1	Yes	Yes	done	done	done	done	done	done	Integrated on 07.12.2016
10	ER-II	DVC	Maithon RB TPS	DVC	CR	2	1	Yes	Yes	pending	pending	pending	pending	Pending		Work started on 04.07.2016. Panel shifted. Team demobilised due to access issue and panel location issue.
11	ER-II	DVC	Raghunathpur TPS	DVC	CR	3	1	Yes	Yes	done	done	done	done	Pending		Communication link was not available during work.
12	ER-II	DVC	AILA	DVC	CR	5	2	Yes	Yes	done	done	done	done	Pending		S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Will be integrated on Mar 2017.
13	ER-II	DVC	Bokaro	DVC	CR	2	1	Yes	Yes	done	done	done	done	done	done	PMU integrated on 24.06.2016
14	ER-II	DVC	CTPS(Chanderpura)	DVC	CR	2	1	Yes	Yes	done	done	done	done	Pending		S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Will be integrated on Mar 2017.
15	Odisha	Orissa	Budhipadar	OPTCL	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
16	Odisha		MENDHASAL	OPTCL	CR	2	1	Yes	Yes	done	done	done	done	Pending		OPTCL is not providing CT/ PT connection for Meeramundali-2 feeder.
17	Odisha	Orissa	MERAMANDALI	OPTCL	CR	6	2	Yes	Yes	done	under progress	pending	pending	Pending	pending	
18	Odisha	Orissa	RENGALI	OPTCL	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	Integration delayed because CAT-6 cable is faulty.
19	Odisha	Orissa	U.KOLAB	OPTCL	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	
20	Odisha		BALIMELA(H)	OPTCL	CR	3	1	Yes	Yes	done	done	partially done		Pending		OPTCL denied to provide DC connection. CT/PT/DI interfacing pending due to permission issue.
21	ER-II	-	Durgapur	Powergrid	CR	5	2	Yes	Yes	done	done	done	done	done	done	PMU integrated on 30.05.2016.
22	ER-II	West Bengal	FARRAKA	NTPC	CR	5	2	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
23	Odisha	Orissa	Indrawati	Powergrid	CR	2	1	Yes	Yes	done	done	done	done	Pending	done	Communication Link not available.
24	Odisha	Orissa	Indrawati HPS	OPTCL	CR	1	1	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	OPTCL denied to provide DC connection.
25	Odisha	Orissa	JEYPORE	Powergrid	CR	2	1	Yes Yes	Yes Yes	done	done done	done done	done	Pending	done	Communication Link not available.
26 27	ER-II ER-II	•	MAITHON MALDA	Powergrid	CR CR	2	2	Yes Yes	Yes Yes	done	done done		done done	done done		PMU integrated on 21.06.2016. PMU integrated on 24.06.2016
27	Odisha	West Bengal Orissa	Rengali	Powergrid Powergrid	Kiosk	2	1	Yes	Yes	done done	done	done done	done	done done		PMU integrated on 24.06.2016 PMU integrated on 04.05.2016
28	Odisha	Orissa	ROURKELA	_	Kiosk	5	2	Yes	Yes	done	done	done	done	done	done	PMU integrated on 04.05.2016 PMU integrated on 21.04.2016
29 30	ER-II		Binaguri	Powergrid	CR	5	2	Yes Yes	Yes	done	done	done done	done	done	done	PMU integrated on 21.04.2016 PMU integrated on 28.07.2016
30	ER-II ER-II	<u> </u>	SUBHASHGRAM	Powergrid Powergrid	Kiosk	2	1	Yes	Yes	done	done	done	done	done	done	PMU integrated on 22.06.2016
31	Odisha	Orissa	Baripada	Powergrid	CR	3	1	Yes	Yes	done	done	done	done	done	done	PMU integrated on 32.06.2016 PMU integrated on 30.01.2017.
32	Odisha	Orissa	Bolangir	Powergrid	CR+Kiosk	2	3	Yes	Yes	done	done	done	done	Pending	done	Communication Link not available.
34	Odisha		ANGUL	Powergrid	Kiosk	10	11	Yes	Yes	done	done	done	done	done		PMU integrated on 24.03.2017.
54	Ouisna	Unssa	ANGUL	Powergrid	KIUSK	10	11	res	res	uone	laone	uone	uone	luone	luone	Pivio integrated on 24.03.2017.

#### PMU Installation and commissioning status of ER as on 20.04.2017

		[					TOTAL	PMU	Cable		1		1			
S.No	Region	State	Sub-Station	Owner/	S/S type	PMU	-		Delivery	Erection	Cable	CT/PT/DI	Commiss	Integration	SAT	Remarks
				Utility			QTY	-	status		laying	termination	ioning			
35	Odisha	Orissa	Keonjhar	Powergrid	CR	2	3	Yes	Yes	done	done	done	done	done	done	PMU integrated on 18.01.2017.
36	Odisha	Orissa	Jharsuguda	Powergrid	Kiosk	8	9	Yes	Yes	done	done	done	done	done	done	PMU integrated on 29.07.2016
37	Odisha	Orissa	GMR	GMR	Kiosk	3	4	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
38	ER-II	Sikkim	RANGPO	Powergrid	CR	4	1	Yes	Yes	done	done	done	done	Pending	done	S/S couldn't be integrated because distance between PMU
				_										_		panel and SDH is more than 100 mtrs. Will be integrated on
																Mar 2017.
39	ER-II	West Bengal	Baharampur	Powergrid	CR	2	3	Yes	Yes	done	done	done	done	done	done	PMU integrated on 10.05.2016
40	ER-II	West Bengal	Birpara	Powergrid	CR	4	1	Yes	Yes	done	done	done	done	done	done	PMU integrated on 15.07.2016.
41	ER-II	DVC	CTPS B	DVC	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
42	ER-II	DVC	KALYANESWARI	DVC	CR	4	1	Yes	Yes	done	done	done	done	done	done	PMU integrated on 02.01.2017.
43	ER-II	DVC	PARULIA	DVC	CR	5	2	Yes	Yes	done	done	done	done	done	done	PMU integrated on 21.02.2017.
44	ER-II	West Bengal	Purulia PSP	WBSETCL	CR	2	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
45	ER-II	Jharkhand	Bokaro TPS	DVC	CR	1	1	Yes	Yes	done	pending	pending	pending	Pending	pending	
46	ER-II	West Bengal	Durgapur TPS	DVC	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
47	Odisha	Orissa	TTPS(Talcher)	OPTCL	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
48	Odisha	Orissa	TALCHER	NTPC	CR	5	2	No	No	N/A	N/A	N/A	N/A	N/A	N/A	NTPC is not allowing to deliver mterial.
49	ER-II	Sikkim	TEESTA	Powergrid	CR	1	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
50	Odisha	Orissa	Uttara	Powergrid	CR	2	1	Yes	Yes	done	done	done	done	Pending	pending	Communication link from s/s to ERLDC and NTAMC to be
				-										_		provided by PGCIL.
51	Odisha	Orissa	Jindal	JITPL	CR	2	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
52	Odisha	Orissa	Monnet	Monnet	CR	1	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
53	Odisha	Orissa	Strelite	Strelite	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
54	Odisha	Orissa	Ind barath	Ind barath	Kiosk	1	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
55	ER-II	Sikkim	New Melli	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
56	ER-II	Sikkim	TT Pool	Powergrid	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.
57	ER-II	West Bengal	Alipurduar	Powergrid	CR	6	7	Yes	Yes	partially	partially	pending	pending	Pending	pending	
		_		_						done	done			_		Work started on 22.12.2016. 4 PMU panels and network
																panel installed. Rest 2 PMU panels could not be erected
																because location not finalised. Cable laying and
																termination at PMU panel completed for 6 feeders. CT/PT
																interfacing pending due to unavailability of shutdown.
																PGCIL is asking to take DI points from field, which is not in
																scope. Work is held up. Team demobilised.
58	ER-II	West Bengal	Rajarhat	Powergrid	CR	2	1	Yes	Yes	done	pending	pending	pending	Pending	pending	Work withheld due to localite agitation issue.
59	ER-I	Jharkhand	JAMSHEDPUR	Powergrid	CR	6	2	Yes	Yes	done	done	done	done	done	done	PMU integrated on 14.02.2017
60	ER-I	BIHAR	Kahalgaon(KHSTPP)	NTPC	CR	6	2	Yes	Yes	done	done	pending	pending	Pending	pending	Work withheld due to gate pass issue.
61	ER-I	BIHAR	Purnea	Powergrid	CR	6	2	Yes	Yes	done	done	pending	pending	done	pending	PMU integrated on 13.04.2017
62	ER-I	BIHAR	PATNA	Powergrid	Kiosk	6	7	Yes	Yes	done	done	done	done	done	done	PMU integrated on 11.04.2017
63	ER-I	Jharkhand	RANCHI	Powergrid	Kiosk	12	13	Yes	Yes	done	under	pending	pending	Pending	pending	
											progress			-		
64	ER-I	BIHAR	SASARAM(Pusauli)	Powergrid	CR+Kiosk	9	3	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
65	ER-I	BIHAR	BARH	NTPC	CR	4	1	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
66	ER-I	BIHAR	LakhiSarai	Powergrid	Kiosk	4	5	Yes	Yes	done	done	done	done	Pending	done	SAT completed. PMU not integrated because FO cable was
																not delivered due to road permit issue.
67	ER-I	BIHAR	BANKA	Powergrid	Kiosk	4	5	Yes	Yes	done	done	done	done	Pending	pending	SAT pending. PMU not integrated because switch was not
				5.1.5.B.1.U												delivered to site. Switch in transit.

#### PMU Installation and commissioning status of ER as on 20.04.2017

S.No	Region	State	Sub-Station	Owner/ Utility	S/S type	PMU	TOTAL PANEL QTY	Delivery	Cable Delivery status	Erection	Cable laying	CT/PT/DI termination	Commiss ioning	Integration	SAT	Remarks
68	ER-I	Jharkhand	Chaibasa	Powergrid	Kiosk	4	5	Yes	Yes	done	under progress		pending	Pending	pending	
69	ER-I	BIHAR	765kv Gaya	Powergrid	Kiosk	11	12	Yes	Yes	done	done	done	done	done	done	PMU integrated on 24.02.2017
70	ER-I	Jharkhand	765/400kV Ranchi (N)	Powergrid	Kiosk	8	9	Yes	Yes	done	done	done	done	done	done	PMU integrated on 24.02.2017
71	ER-I	Bihar	Biharshariff	Powergrid	CR	9	3	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	
72	ER-I	Bihar	MUZAFFAPUR	Powergrid	CR	5	2	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
73	ER-I	Jharkhand	Daltonganj	Powergrid	Kiosk	2	3	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Road permit for Switch is pending.
74	ER-I	Bihar	Kishanganj (karandegł	Powergrid	CR	4	1	Yes	Yes	done	done	done	done	Pending	done	S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mts.
75	ER-I	Jharkhand	Jharkhand Pool (Chan	Powergrid	Kiosk	4	1	Yes	Yes	done	done	done	done	Pending	done	S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mts.
76	ER-I	Jharkhand	Patratu	Jharkhand	CR	3	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
77	ER-I	Jharkhand	Tenughat	Jharkhand	CR	2	1	Yes	No	N/A	N/A	N/A	N/A	N/A	N/A	
78	ER-I	Bihar	Barauni PP	Bihar	CR	0	0	No	No	N/A	N/A	N/A	N/A	N/A	N/A	BOQ not finalized.

#### ER PMU site activity Summary:

	Desien	Utility	As per approve	d BOQ	Supp	lied	Ins	talled	Commi	ssioned	ntegrated	to ERLDC/ SLD
SI. No.	Region	Othity	No. of Substations	No. of PMU	s/s	PMU	s/s	PMU	S/S	PMU	s/s	PMU
1	ER-I	Powergrid	15	94	15	94	11	69	8	47	5	37
2	ER-I	NTPC	2	10	2	10	1	6	0	0	0	0
3	ER-I	Jharkhand	2	5	2	5	0	0	0	0	0	0
4	ER-I	Bihar	1	0	0	0	0	0	0	0	0	0
	ER-I	Total	20	109	19	109	12	75	8	47	5	37
1	ER-II	Powergrid	13	42	11	42	10	39	8	33	7	29
2	ER-II	NTPC	1	5	1	5	0	0	0	0	0	0
3	ER-II	DVC	13	37	13	37	10	29	9	28	4	13
4	ER-II	WBSETCL	7	21	7	21	5	15	2	5	2	5
	ER-II	Total	34	105	32	105	25	83	19	66	13	47
1	Odisha	Powergrid	10	38	10	38	10	38	10	38	6	30
2	Odisha	OPTCL	8	19	6	16	5	15	3	6	0	0
3	Odisha	NTPC	1	5	1	5	0	0	0	0	0	0
4	Odisha	IPP	5	10	5	10	0	0	0	0	0	0
	Odisha	Total	24	72	22	69	15	53	13	44	6	30
	ER	Total	78	286	73	283	52	211	40	157	24	114

SI. No.	Site Name	Work Progress
		Installed, powered up, functioning and integrated with DVC,
1	ERLDC	WBSETCL and OPTCL PDS system.
2	Backup-NLDC	POSOCO did not provide space for PDS system installation.
		Installed, powered up, functioning and integrated with ERLDC
3	SLDC, Maithon	PDS system.
		Installed, powered up, functioning and integrated with ERLDC
4	SLDC, Bhubaneswar	PDS system.
		Installed, powered up, functioning and integrated with ERLDC
5	SLDC, Howrah (WBSETCL)	PDS system.

Status of PDS system Installation and commissioning at ER as on 20.04.2017

			Protect	ion & Co	ntrol Syst	tem		
SI.	Substation	Av	vailability		Time Sy	ynchror	nization	Remarks
NO		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

#### **AVAILABILITY STATUS OF EVENT LOGGER, DISTURBANCE RECORDER & GPS**

								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 submitted during ERS meeting held on 10.11.14 taken by Member (Power System), CEA is given below:

1) As per 100<sup>th</sup> OCC meeting held on 22.08.2014, the status of ERS towers as available in Powergrid is as given below:

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

- 2) As informed by OPTCL, the present status of ERS towers in OPTCL system is as follows:
- > 220 kV ERS towers: 42 nos located at Mancheswar, Chatrapur & Budhipadar
- ➢ 400 kV ERS towers: 2 nos located at Mancheswar.
- 12 nos. of new 400 kV ERS towers have been approved by Board of Director for procurement in the current financial year. Purchase order has been placed.
- > Another, 16 nos of 400 kV towers accompanied with 6 sets of T&P are required.
- WBSETCL informed that they have placed order for 2 sets of ERS towers on 31.10.2014 and expected by June, 2015.
- 4) The 25<sup>th</sup> ERPC meeting held on 21.09.2014, the board 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) Bihar informed that they have 10 sets of 220 kV ERS towers and 2 sets are under process of procurements.
- DVC informed that they are in process of procuring two (2) sets of 400 kV ERS towers.

Annexure-B40

# Governor response of ER generating units in Apr - 2017

### Generation loss at Karad & Kolahpur at 09:36 hrs on 13-04-17

- Generation loss: 1840 MW.
- Frequency changed 50:02 Hz to 50.15 Hz
- Observation as per ERLDC SCADA data
  - Units having response more than 70% of ideal response
    - KhSTPP #2, Balimela #3, 4 & 6, U. Kolab #1, Indravati #1
  - Units having response more than 30% of ideal response & less than 70%

• Nil

- Response was unsatisfactory due to inadequate margin
  - FSTPP #3, TSTPP #2, Bakreswar #4 & 5
- DVC has shared generation response observed as per their SCADA data
  - Bokaro U#2, MHS #2, CTPSB #8, KTPS #2 & MTPS #7 have shown satisfactory response

Generation loss at Karad & Kolahpur at 10:01 hrs on 26-04-17

- Generation loss: 900 MW.
- Frequency changed 50:02 Hz to 50.20 Hz
- Observation as per ERLDC SCADA data
  - Units having response more than 70% of ideal response
    - KhSTPP #1, JLHEP #2, Balimela #4, #5 & #6
  - Units having response more than 30% of ideal response & less than 70%
    - KhSTPP #4 & #5, TSTPP #3, Balimela #2, DSTPS #2 & Bandel #5
  - Response was unsatisfactory due to inadequate margin
    - None
- DVC has shared generation response observed as per their SCADA data
  - MHS #3, MTPS #3 & #8 have shown satisfactory response

#### Comparison between various unit response and ideal governor response (assuming 5% droop)

>=70%
Name
KhSTPP #2
Balimela unit-3
Balimela unit-4
Balimela unit-6
UBKLB unit-1
Indravati unit-1

>= 30% and <70%

Name

> 0% and <30%	<0%	SCADA data suspect	Zero Previous generation
Name	Name	Name	Name
KhSTPP #6	FSTPP #4	FSTPP #2	FSTPP #1
TSTPP #1	KhSTPP #1	FSTPP #6	FSTPP #5
TSTPP #3	KhSTPP #4	KhSTPP #3	Rangit #1
TSTPP #5	KhSTPP #5	TSTPP #4	Rangit #3
TSTPP #6	KhSTPP #7	APNRL #1	SEL #2
Rangit #2	SEL #1	GMR unit-1	Chujachen #1
SEL #4	SEL #3	GMR unit-2	JORETHANG #1
MPL #1	MPL #2	GMR unit-3	JORETHANG #2
APNRL #2	Chujachen #2	Santaldih Unit-5	JITPL #2
Barh Unit-4	Balimela unit-5	Santaldih Unit-6	Balimela unit-1
Barh Unit-5	Indravati unit-3	Budgebudge Unit-3	Balimela unit-2
JITPL #1	Bakreswar Unit-2	Bokara B unit-1	Balimela unit-7
Bakreswar Unit-1	Sagardighi Unit-1	Bokara B unit-2	Balimela unit-8
Bakreswar Unit-3	Sagardighi Unit-2	TENUGHAT Unit-1	UBKLB unit-2
DSTPS unit-1	Budgebudge Unit-2	TENUGHAT Unit-2	UBKLB unit-3
TEESTA3 UNIT5	DSTPS unit-2	Teesta #1	UBKLB unit-4
	Bandel Unit-5	Teesta #2	Indravati unit-2

Teesta #3

IBTPS unit-1

IBTPS unit-2

t-2 t-7 t-8 Indravati unit-2 Indravati unit-4 Rengali unit-1 Rengali unit-2 Rengali unit-3 Rengali unit-4 Rengali unit-5 Kolaghat Unit-1 Kolaghat Unit-2 Kolaghat Unit-3 Sagardighi Unit-3 Bokara B unit-3 PPSP Unit - I PPSP Unit - II PPSP Unit - III PPSP Unit - IV **TEESTA3 UNIT1 TEESTA3 UNIT2 TEESTA3 UNIT3** TEESTA3 UNIT4 & 6

#### Comparison between various unit response and ideal governor response (assuming 5% droop)

>=70% Name KhSTPP #1 JORETHANG #2 Balimela unit-4 Balimela unit-5 Balimela unit-6

Name KhSTPP #4 KhSTPP #5 TSTPP #3 Balimela unit-2 DSTPS unit-2 Bandel Unit-5

>= 30% and <70%

> 0% and <30%	<0%
Name	Name
FSTPP #2	FSTPP #1
KhSTPP #7	FSTPP #4
TSTPP #2	KhSTPP #2
TSTPP #6	KhSTPP #6
Rangit #1	TSTPP #1
Rangit #2	TSTPP #5
Rangit #3	SEL #1
SEL #4	SEL #3
Balimela unit-8	MPL #1
Indravati unit-3	APNRL #2
Bakreswar Unit-3	Chujachen #1
DSTPS unit-1	Chujachen #2
	JITPL #1
	Rengali unit-4
	Bakreswar Unit-1
	Bakreswar Unit-2
	Bakreswar Unit-4
	Bakreswar Unit-5

Sagardighi Unit-1

Sagardighi Unit-2

**TEESTA3 UNIT5** 

Name FSTPP #3 FSTPP #6 KhSTPP #3 TSTPP #4 MPL #2 APNRL #1 Barh Unit-4 Barh Unit-5 GMR unit-1 GMR unit-2 GMR unit-3 Santaldih Unit-5 Santaldih Unit-6 Budgebudge Unit-1 Budgebudge Unit-2 Budgebudge Unit-3 Bokara B unit-1 Bokara B unit-2 **IBTPS** unit-1 **IBTPS** unit-2 **TENUGHAT Unit-1 TENUGHAT Unit-2** 

SCADA data suspect

FSTPP #5 Teesta #1 Teesta #2 Teesta #3 SEL #2 JORETHANG #1 JITPL #2 Balimela unit-1 Balimela unit-3 Balimela unit-7 UBKLB unit-1 UBKLB unit-2 **UBKLB** unit-3 UBKLB unit-4 Indravati unit-1 Indravati unit-2 Indravati unit-4 Rengali unit-1 Rengali unit-2 Rengali unit-3 Rengali unit-5 Kolaghat Unit-2 Kolaghat Unit-3 Sagardighi Unit-3 Bokara B unit-3 PPSP Unit - I PPSP Unit - II PPSP Unit - III PPSP Unit - IV **TEESTA3 UNIT1 TEESTA3 UNIT2 TEESTA3 UNIT3 TEESTA3 UNIT4 TEESTA3 UNIT6** 

**Zero Previous generation** 

Name

#### Annexure-C.1

#### Anticipated Power Supply Position for the month of Jun-17

	SL.NO	P A R T I C U LA R S	PEAK DEMAND	ENERGY
	SL.NO		MW	MU
1			4050	0050
	i) ii)	NET MAX DEMAND NET POWER AVAILABILITY- Own Source (including bilateral)	4250 460	2250 158
	")	- Central Sector	3133	1706
	iii)	SURPLUS(+)/ DEFICIT(-)	-657	-386
	,		-037	-300
2		JHARKHAND		
	i)	NET MAX DEMAND	1280	815
	ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	289	215
		- Central Sector	729	364
	iii)	SURPLUS(+)/ DEFICIT(-)	-262	-236
2		DVC		
3	i)	DVC NET MAX DEMAND (OWN)	2770	1658
	ii)	NET POWER AVAILABILITY- Own Source	4945	2669
	,	- Central Sector	400	386
		Long term Bi-lateral (Export)	1300	936
	iii)	SURPLUS(+)/ DEFICIT(-)	1275	461
4		ORISSA		
	i)	NET MAX DEMAND	4300	2520
	ii)	NET POWER AVAILABILITY- Own Source	3151	1834
	iii)	- Central Sector SURPLUS(+)/ DEFICIT(-)	1293 144	715 29
	,		144	23
5		WEST BENGAL		
5.1		WBSEDCL		
	i)	NET MAX DEMAND (OWN)	6000	3396
	ii)	CESC's DRAWAL	0	0
	iii)	TOTAL WBSEDCL'S DEMAND	6000	3396
	iv)	NET POWER AVAILABILITY- Own Source	3716	1979
		- Import from DPL	185	0
		- Central Sector SURPLUS(+)/ DEFICIT(-)	2780 681	1519 102
	v) vi)	EXPORT (TO B'DESH & SIKKIM)	10	7
	,			
5.2		DPL		
	i)	NET MAX DEMAND	260	184
	ii)	NET POWER AVAILABILITY	445	181
	iii)	SURPLUS(+)/ DEFICIT(-)	185	-3
		0.500		
5.3	i)	CESC NET MAX DEMAND	2120	1089
	ii)	NET POWER AVAILABILITY - OWN SOURCE	830	473
	,	FROM HEL	540	328
		FROM CPL/ PCBL	40	0
		Import Requirement	710	288
	iii)	TOTAL AVAILABILITY	2120	1089
	iv)	SURPLUS(+)/ DEFICIT(-)	0	0
4		WEST BENGAL (WBSEDCL+DPL+CESC)		
6		(excluding DVC's supply to WBSEDCL's command area)		
	i)	NET MAX DEMAND	8380	4669
	ii)	NET POWER AVAILABILITY- Own Source	4991	2634
		- Central Sector+Others	4070	1847
	iii)	SURPLUS(+)/ DEFICIT(-)	681	-188
_		CH//ZM		
7	i)	SIKKIM NET MAX DEMAND	05	32
			85 10	32 7
		NET POWER AVAILABILITY- Own Source		
	ii)	NET POWER AVAILABILITY- Own Source - Central Sector+Others	169	95
				95 70
	ii)	- Central Sector+Others	169	
8	ii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION	169	
8	ii) iii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR	169 95	70
8	ii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND	169 95 20451	70 11944
8	ii) iii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND Long term Bi-lateral by DVC	169 95 20451 1300	70 11944 936
8	ii) iii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND	169 95 20451	70 11944
8	ii) iii) i)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND Long term Bi-lateral by DVC EXPORT BY WBSEDCL	169 95 20451 1300 10	70 11944 936 7
8	ii) iii)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND Long term Bi-lateral by DVC EXPORT BY WBSEDCL NET TOTAL POWER AVAILABILITY OF ER	169 95 20451 1300	70 11944 936
8	ii) iii) i)	- Central Sector+Others SURPLUS(+)/ DEFICIT(-) EASTERN REGION At 1.03 AS DIVERSITY FACTOR NET MAX DEMAND Long term Bi-lateral by DVC EXPORT BY WBSEDCL	169 95 20451 1300 10	70 11944 936 7

Proposed Maintenance Schedule of Thermal Generating Units of ER during June, 2017 (as finalised in LGBR meeting)

System	Station	Unit	Size (MW)	Per	riod	No. of	Reason
System	Station	Unit	Size (IVI VV)	From	То	Days	Reason
	TVNL,			1st week			
JUSNL	Tenughat			of July			Annual Overhauling/Boiler
	Tenugnat	2	210	2017		15	Overhauling
ODISHA	TTPS	4	60	26.06.17	10.07.17	15	Boiler Overhaul
WBPDCL	KTPS						BTG+DCS+Stator Replacement+HPC
WBFDCL	KIFS	6	210	01.07.17	31.08.17	61	Replacement
NTPC	KhSTPS	4	210	28.05.17	03.07.17	35	Boiler, Gen., DDCMIS R&M

#### EASTERN REGIONAL LOAD DESPATCH CENTRE KOLKATA

#### TRANSMISSION ELEMENTS OUTAGE APROVED IN 133TH OCC MEETING OF ERPC

		1	1	•					
Sr. No	NAME OF THE ELEMENTS	DATE	TIME	DATE	TIME	REMARKS	S/D availed BY	Reason	SUBJECT TO CONSENT FROM AGENCY
1	Non-auto mode of A/R for PID testing 400KV Rourkela-Sundergarh line-I	01/06/2017	0.375	30/06/2017	0.75	ODB	ER-II	For PID testing of Insulator of Rourkela-Sundergarh line-I (LILO portion) and A/R switch is to be made Non auto mode at both	
2	Non-auto mode of A/R for PID testing 400KV Rourkela-Sundergarh line-II	01/06/2017	09:00	30/06/2017	18:00	ODB	ER-II	For PID testing of Insulator of Rourkela-Sundergarh line-II (LILO portion) and A/R switch is to be made Non auto mode at both end.	
3	400KV 50MVAR Bus Reactor at Rourkela	01/06/2017	09:00	31/08/2017	18:00	ОСВ	ER-II	M/S BHEL has requested for the shutdown for the replacement said reactor by 125MVAR Bus Reactor under ERSS-IX package.	
4	132 KV MAIN BUS AT PURNEA	01/06/2017	09:00	01/06/2017	10:00	ODB	ER-1	GIS WORK	BIHAR
5	132 KV PURNEA - PURNEA BSPTCL#1 LINE	01/06/2017	09:00	15/06/2017	16:00	OCB	ER-1	GIS WORK	BIHAR
6	160 MVA ICT#3	01/06/2017	09:00	15/06/2017	16:00	ОСВ	ER-1	GIS WORK	BIHAR
7	132 KV PURNEA - PURNEA BSPTCL#2 LINE	01/06/2017	09:00	15/06/2017	16:00	OCB	ER-1	GIS WORK	BIHAR
8	Main bay of 400kV BSf-Muzaffarpur-I at BSF	01/06/2017	10:00	04/06/2017	17:00	OCB	ER-1	Pneumatic Drive Overhauling of Circuit Braker	
9	400kV Bus-2 AT BSF	01/06/2017	10:00	01/06/2017	16:00	ODB	ER-1	Jumper opening of bay no.17 from jack bus connected to Bus-2 for Tenughat main bay equipment erection and commissioning work	
10	BSf-Lakhisarai-2 Tie Bay no417 AT BSF	01/06/2017	10:00	12/06/2017	18:00	ОСВ	ER-1	Tenughat main bay no16 equipment erection and commissioning work	
	A/R of 400 KV BANKA- Biharsharif Ckt-2	01/06/2017	07:00	30/06/2017	18:00	ODB	ER-1	No Outage- LIVE LINE Installation of OPGW under ULDC Project	1
12	A/R of 400 KV Koderma- Biharsharif Ckt-2	01/06/2017	07:00	20/06/2017	18:00	ODB	ER-1	No Outage- LIVE LINE Installation of OPGW under ULDC Project	1
13	A/R of 400 KV MUZ- Biharsharif Ckt-I	01/06/2017	07:00	20/06/2017	18:00	ODB	ER-1	No Outage- LIVE LINE Installation of OPGW under ULDC Project	1
14	400KV BSF-BALIA-I	01/06/2017	08:00	02/06/2017	18:00	ODB	ER-1	for liquidation of all line defects in concerned tr. lines	NLDC
15	400 KV Bus-II AT NEW RANCHI	01/06/2017	08:00	02/06/2017	18:00	ODB	ER-1	Commissioining of tie Bays /BUS BAR testing of 400kV Ranchi-Patratu D/C line under JCP	
16	765KV RANCHI - DHARMAJAYGARH -1	01/06/2017	08:00	01/06/2017	18:00	ODB	ER-1	Fixing of spacer cum damper at location No-15 to 20	NLDC
17	400/220kV, 315MVA ICT-1 AT JSR	01/06/2017	09:30	01/06/2017	17:30	ODB	ER-1	Differential relay Replacement work	JUSNL
	220 KV MPTS LINE-1	01/06/2017	10:00	03/06/2017	18:00	OCB	ER-1	OVERHAULING OF CIRCUIT BREAKER AT KANTI END	BIHAR
	220kV SILIGURI-KISHANGANJ TL-II (ONE CKT AT A TIME)	01/06/2017	08:00	02/06/2017	17:00	ODB	ER-II	Opportunity Shut down for DALKHOLA for remaining insulator replacement work, in case shut down is availed by SILIGURI	
20	315 MVA ICT #2 at Durgapur	01/06/2017	08:00	01/06/2017	16:00	ODB	ER-II	Installation of insulation sleeve	DVC
	220kV NSLG-BRP Ckt-I	01/06/2017	08:00	01/06/2017	17.00 hrs	ODB	ER-II	PG clamp removal	
22	315 MVA ICT-I at Subhasgram	01/06/2017	08:00	01/06/2017	17:30	ODB	ER-II	Insulation of Tertiary Side	WB
23	400 KV MALDA-FARAKKA-I	01/06/2017	08:00	02/06/2017	17:00	ODB	ER-II	FOR BALANCE CONSTRUCTION PUNCH POINT	NLDC
24	220KV Budhipadar-Korba S/C line by Sundargarh TLM	For diversion of multi circuit line in between 220KV Budhipad		For diversion of multi circuit line in between 220KV Budhipadar-korba S/C from Loc 29 to 39 and 400KV D/C Rourkela-raigarh line III & IV from 385 to 375 for construction of dedicated MGR (Rail Line) at Village Belpahar, Amdhara & Chualiberna	NLDC				
25	80 MVAR B/R at Pandiabili GIS	01/06/2017	09:00	01/05/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	TAN DELTA OF BUSHING AND AMP	
26	Main Bay-703 of 765/400KV ICT-I at Sundargarh	01/06/2017	08:00	01/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
27	315 MVA, 400/220 KV ICT#2 AT BARIPADA	01/06/2017	08:00	07/06/2017	18:00	OCB	ER-II/Odisha/Baripada	For Replacement of Bushings.	GRIDCO
28	220 KV SIDE OF 160 MVA ICT-II, BAY-210 AT BARIPADA	01/06/2017	09:00	04/06/2017	18:00	ODB	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. AMP OF BAY	GRIDCO
29	400 kV Bus-I at Jeypore	01/06/2017	09:30	01/06/2017	13:30	ODB	ER-II/Odisha/Jeypore	For Relay Testing after Retrofitting of BusBar Protection System (SD will be taken if Not available in the month of May 2017)	GRIDCO
30	400 kV Bus-II at Jeypore	01/06/2017	14:00	01/06/2017	18:00	ODB	ER-II/Odisha/Jeypore	For Relay Testing after Retrofitting of BusBar Protection System (SD will be taken if Not available in the month of May 2017)	GRIDCO
31	400kV Bus-I at Rengali	01/06/2017	09:00	01/06/2017	17:00	ODB	ER-II/Odisha/Rengali	For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work and Relay Testing after Retrofitting of BusBar Protection System at Rengali.	
32	315 MVA ICT-II at Bolangir	01/06/2017	08:00	01/06/2017	18:00	ODB	ER-II/Odisha/Bolangir	AMP works	GRIDCO
33	A/R Non-Auto opertaion in 400KV Rengali-Indravati line (PID, A/R shi	ut 01/06/2017	07:00	30/06/2017	18:00	ODB	ER-II/Odisha/Bolangir	PID (No interuption of power flow).	
34	765KV D/C Sundargarh-Korba Pooling station CKT 1&2 01/06/2017		07:00	02/06/2017	17:00	Daily	OGPTL	for Overhead Hot Line Stringing of U/C 400KV D/C OPGC- Sundargarh (IB Thermal)Transmission line(of OGPTL) at OGPTL Location numbers AP 5- AP6 (PGCIL tower Nos: 4-5)	NLDC
35	400KV Sundergarh-Raigarh line-II	02/06/2017	0.375	02/06/2017	0.75	ODB	ER-II/Odisha/Sundergarh TLM	For Trees/Bamboos cutting in the spain of 426-427 by providing local administration/ police.	
36	132kV BSF-sekhpura Line AT BSF	02/06/2017	10:00	03/06/2017	18:00	ОСВ	ER-1	Stringing of 400kV Tenughat Biharsharif line for necessary clearence of powerline	BIHAR
37	400/220kV, 315MVA ICT-2 AT JSR	02/06/2017	09:30	02/06/2017	17:30	ODB	ER-1	Circuit breaker repalecement work ADD Cap	JUSNL
38	403 Bay( Main bay of ICT-2) AT JSR	02/06/2017	09:30	08/06/2017	17:30	ОСВ	ER-1	Circuit breaker repalecement work ADD Cap	JUSNL
	220 KV BRP-Malbase	Erection of 1 No. Multi Ckt. Tower and shifting of all the 3 Ckts OF Chukkha (i.e. CHP-L. II and Malbase) in the Multi		NLDC					

40	220 KV BRP- CHP-I and II	02/06/2017	08:00 Hrs	14/06/2017	17:00 Hrs	ОСВ	ER-II	Erection of 1 No. Multi Ckt. Tower and shifting of all the 3 Ckts OF Chukkha (i.e CHP-I, II and Malbase) in the Multi Ckt in the section of Loc. No. 40-43 in S/C and Loc. No. 81-84 in D/C	NLDC
41	400KV Andal-Jamshedpur Ckt-1	02/06/2017	09:00	06/06/2017	17:00	ODB	ER-II	Replacement of defcetive Insulator string having defective disc >=3 ( as per PID test results) and replacement of porcelen insulator string with glass string at major crossing	DVC
42	220kV Salakathi -I Line	02/06/2017	09:00	02/06/2017	18:00	ODB	ER-II	Erection of Beam for 220kV line bays for APD (PGCIL) APD (WBSETCL) D/C TL	NLDC
43	220kV NSLG-BRP Ckt-II	02/06/2017	08:00	02/06/2017	17.00 hrs	ODB	ER-II	PG clamp removal	
44	315 MVA ICT# 3 Of Malda SS	02/06/2017	08:00	02/06/2017	17:00	ODB	ER-II	TERTIARY TRANSFORMER COMMISSIONING WORK	WB
45	400kV Bus-II at Rengali	02/06/2017	09:00	02/06/2017	17:00	ODB	ER-II/Odisha/Rengali	For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work and Relay Testing after Retrofitting of BusBar Protection System at Rengali.	
46	400 KV Rourkela-Chaibasa#1 by Rourkela	02/06/2017	09:00	02/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
47	220 kV Bus-I at Jeypore	02/06/2017	09:30	02/06/2017	13:30	ODB	ER-II/Odisha/Jeypore	For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of May 2017)	GRIDCO
48	220 kV Bus-II at Jeypore	02/06/2017	14:00	02/06/2017	18:00	ODB	ER-II/Odisha/Jeypore	For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of May 2017)	GRIDCO
49	Main Bay-706 of 765/400KV ICT-II at Sundargarh	02/06/2017	08:00	02/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
50	63 MVAR LINE REACTOR IN BARIPADA LINE (SWITCHABLE) at Pandiabili GIS	02/06/2017	09:00	02/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	TAN DELTA OF BUSHING AND AMP	
51	40102 tie bay of Balangir-Angul Line & ICT-I at Bolangir	02/06/2017	07:00	17/06/2017	18:00	OCB	ER-II/Odisha/Bolangir	Construction works of ACP under reactor bay extension.No Power interuption as both line & ICT will be charged through their respective main bay.	
52	400KV BSF-BALIA-II	03/06/2017	08:00	05/06/2017	18:00	ODB	ER-1	for liquidation of all line defects in concerned tr. lines	NLDC
53	220KV Sipara -I line	03/06/2017	10:00	03/06/2017	14:00	ODB	ER-1	Isolator alignment work	BIHAR
54	220 KV GAYA -DEHRI -I LINE	03/06/2017	08:00	03/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR
55	220kV MALDA-DALKHOLA TL-I (ONE CKT AT A TIME)	03/06/2017	08:00	07/06/2017	17:00	ODB	ER-II	Porcelain Insulator replacement work, One ckt S/D shall be taken, other ckt shall remain in service	WB
56	220kV Main Bus - 1 (APD)	03/06/2017	09:00	06/06/2017	18:00	OCB	ER-II	Installation of bay equipment of 02 nos 220 line bays for APD (PGCIL) - APD (WBSETCL) D/C TL of WBSETCL. Line is almost ready and S/D required for complition the bays within time.	
57	220kV NSLG-SLG Ckt-II	03/06/2017	9.00 hrs	03/06/2017	17.00 hrs	ODB	ER-II	Relay retrofitting / AMP	
58	400kV NSLG-Kishanganj-2 Line	03/06/2017	07.00 hrs	03/06/2017	17.00 hrs	ODB	ER-II	Hot spot rectification	
59	400kV Bus-I at Binaguri	03/06/2017	07.00 hrs	04/06/2017	17.00 hrs	ODB	ER-II	To facilitate hot spot rectification in Purnea-3 & 4 Line and Rangpo-1 & 2 Line	
60	400kV MTN Mejia-I line	03/06/2017	10:00	03/06/2017	17:30	ODB	ER-II	AMP & Tie CT replacement work	DVC
61	220kV S'gram-CESC-Ckt _I	03/06/2017	08:00	03/06/2017	17:30	ODB	ER-II	AMP	WB
62	400 KV MALDA-FARAKKA-II	03/06/2017	08:00	04/06/2017	17:00	ODB	ER-II	FOR BALANCE CONSTRUCTION PUNCH POINT	NLDC
63	315MVA ICT-I at Bolangir	03/06/2017	07:00	30/06/2017	18:00	OCB	ER-II/Odisha/Bolangir	Construction works of Firewall for Reactor package (on continuous basis)	GRIDCO
64	63 MVAR LINE REACTOR IN DUBURI LINE (SWITCHABLE)	03/06/2017	09:00	03/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	TAN DELTA OF BUSHING AND AMP	
65	Main Bay-710 of 765KV Sundargarh-Angul Line-I at Sundargarh	03/06/2017	08:00	03/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
66	400kV Bus-II at Rengali	03/06/2017	09:00	03/06/2017	14:00	ODB	ER-II/Odisha/Rengali	For Relay Testing after Retrofitting of BusBar Protection System at Rengali	
67	765KV D/C Angul-Jharsuguda TL (Ckt -I & II)	03/06/2017	08:00	04/06/2017	17:00	OCB	ER-II/Odisha/Sundergarh TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	NLDC
68	400KV Rourkela-Sundergarh line-II	04/06/2017	08:00	05/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Porcelain Insulator at single crossing span (317-318) by CLR Polymer.	
69	220kV Biharsharif Tenughat line AT BSF	04/06/2017	10:00	05/06/2017	18:00	OCB	ER-1	Stringing and connection of 400kv Tenughat TL towards POWERGRID Biharsharif SS	BIHAR
70	132 KV Main Bus at Birpara	04/06/2017	08:00 Hrs	04/06/2017	12:00 Hrs	ODB	ER-II	For replacement of 2 Nos. Bus Loop Jumper between Bay No. 102-103, and 104-105	WB
71	400kV NSLG-Kishanganj-1 Line	04/06/2017	07.00 hrs	04/06/2017	17.00 hrs	ODB	ER-II	Hot spot rectification	
72	2 x 765 KV S/C Angul - Jharsuguda line (Ckt-I & II)	04/06/2017	08:00	14/06/2017	17:00	OCB	ER-II/Odisha/Sundergarh TLC	Swapping arrangement : Erection & Stringing work of 765KV Angul-Jharsuguda TL, Ckt-III & IV with Ckt-II & IV	NLDC
73	400kV Bus-II at Rengali	04/06/2017	09:00	04/06/2017	14:00	ODB	ER-II/Odisha/Rengali	For Relay Testing after Retrofitting of BusBar Protection System at Rengali	
74	400KV D/C Sundargarh-Raigarh (CKT-1&)Rourkela-Raigarh (CKT 2)	04/06/2017	07:00	05/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 400KV D/C OPGC- Sundargarh(IB Thermal) Transmission line(of OGPTL) at OGPTL Location numbers AP 23/0- AP24/0(PGCIL tower Nos: 797-798)	NLDC
75	Main bay of 400kV BSf-Muzaffarpur-II at BSF	05/06/2017	10:00	08/06/2017	17:00	OCB	ER-1	Pneumatic Drive Overhauling of Circuit Braker	
76	400 KV Bus-I AT NEW RANCHI	05/06/2017	08:00	06/06/2017	18:00	ODB	ER-1	Commissioining of tie Bays of 400kV Ranchi-Patratu D/C line under JCP	JUSNL
77	315MVA ICT-II AT PATNA	05/06/2017	09:00	06/06/2017	18:00	ODB	ER-1	FOR APPLICATION OF INSULATION SLEEVE ON TERTIARY SIDE	BIHAR
78	400 KV NEW RANCHI -RANCHI Ckt-1	05/06/2017	08:00	05/06/2017	18:00	ODB	ER-1	Fixing of spacer cum damper at location No-160 to 172 , Fixing of arching horn at Loc. No-30	
79	220 KV GAYA -DEHRI -II LINE	05/06/2017	08:00	05/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR
80	220 KV MPTS LINE-2	05/06/2017	10:00	07/06/2017	18:00	OCB	ER-1	OVERHAULING OF CIRCUIT BREAKER AT KANTI END	BIHAR
81	220kV Birpara-Chukha-I	05/06/2017	08:00 Hrs	06/06/2017	17:00 Hrs	ODB	ER-II	AMP work	NLDC
82	Alipurduar-I L/R along with line 400kV Bus-II at Binaguri	05/06/2017 05/06/2017	9.00 hrs 9.00 hrs	05/06/2017 05/06/2017	17.00 hrs	ODB ODB	ER-II ER-II	AMP / Isolator hot spot rectification AMP / Isolator hot spot rectification	
83		1 15/06/2017		1 UE/UE/2017	17.00 hrs	008			

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84	500MVA ICT-I at MTN	05/06/2017	10:00	05/06/2017	17:30	ODB	ER-II	Erection of LM Tower near 500MVA ICT, Erection of CB, CT for tertiary transformer	DVC
85	132 KV TBC BAY AT MALDA	05/06/2017	08:00	09/06/2017	17:00	ODB	ER-II	FOR ISOLATOR REPLACEMENT WORK	WB
86	132 KV RANGPO-RANGIT	05/06/2017	08:00	05/06/2017	17:00	ODB	ER-II	FOR AMP WORK	
87	401 CB,MAIN BAY OF 80 MVAR B/R at Pandiabili GIS	05/06/2017	09:00	05/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
88	Tie Bay-714 of 765KV Sundargarh-Dharamjaygarh Line-I at Sundargarh	05/06/2017	08:00	05/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
89	400KV Rourkela-Chaibasa#1 L/R Bay at Rourkela (Bay No 416LR).	05/06/2017	09:00	05/06/2017	14:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
63	400KV KOUIKEIa-Chaibasa#1 L/K Bay at Kouikeia (Bay NO 410LK).	03/00/2017	09.00	03/00/2017	14.00	ODB	ER-II/OUISIIa/ROUIREIa	ANT WORK.	
90	400 KV Indravati-Rengali line	05/06/2017	09:00	05/06/2017	16:00	ODB	ER-II/Odisha/Indravati	For removal of 50MVAR LR of Rengali-Indravati Line from service for replacement of insulating oil. And Testing of 50MVAR L/R in Rengali Line before replacement of Oil.	NLDC
91	50MVAR L/R of 400KV Indravati-Rengali Line at indravati	05/06/2017	16:00	14/06/2017	10:00	ОСВ	ER-II/Odisha/Indravati	Replacement of insulating Oil. During this period, only 50MVAR LR will be out of service but the 400KV Indravati- Rengali line will remain in charged condition and there will be no power interruption.	
92	315MVA ICT#1	06/06/2017	09:00	10/06/2017	18:00	ОСВ	ER-II/Odisha/Rourkela	For attending the oil mix up problem of OLTC in 315 MVA ICT#1 and to arrest oil lekage problem from tan delta test tap	
52		00,00,2017	05.00	10,00,2017	10.00	000		assemblies of its bushings.	
93	400 KV KAHALGAON - BARH CKT I & II	06/06/2017	09:00	08/06/2017	18:00	ОСВ	POWERGRID ER-1	Powerline crossing of existing 400KV Kahalgaon - Barh (Loc. No.: 22 to 23) by construction of new line (23/0 to 24/0) for shifting of 400KV Kahalgaon - Banka Line under bus split scheme at NTPC switchyard, Kahalgaon.	NLDC
94	400KV PATNA-BALIA-I	06/06/2017	08:00	06/06/2017	18:00	ODB	ER-1	for liquidation of all line defects in concerned tr. lines	NLDC
95	400 KV NEW RANCHI -RANCHI Ckt - 2	06/06/2017	08:00	06/06/2017	18:00	ODB	ER-1	Fixing of spacer cum damper at location No-160 to 172	
96	HVDC Back to Back System including AC Bypass	06/06/2017	09:00 Hrs	09/06/2017	17:00Hrs	HVDC System on daily basis for two days.AC Bypass continuous for 04 days.	ER-1	<ul> <li>HVDC system will be out on 06.06.16 and 09.06 on daily basis only. However AC bypass will be out on continuous basis from 06.06.16 to 09.06.16. No power flow between Eastern Region and Northern Region at 400KV Level durin the outage of HVDC. To carry out following activities</li> <li>(i) Faulty Thyrister Replacement,</li> <li>(ii) UV Detector Cleaning,</li> <li>(iii) BPI erection for AC Bypass modification.</li> </ul>	g NLDC
97	125 MVAR bus reactor-2 parallel with 50MVAr bus reactor-1	06/06/2017	08:00	06/06/2017	16:00	ODB	ER-II	CSD commissioning.	NLDC
0.0	400kV/Tala LL/D alang with Line	00/00/2017	0.00 hrs	00/00/2017	17.00 hrs	000		Dependent ten delte of 40010/ D Dhoos Ducking & Neutral Ducking Deplecement / oil lookage errort	
98	400kV Tala-I L/R along with Line	06/06/2017	9.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Repeat tan delta of 400kV R Phase Bushing & Neutral Bushing Replacement / oil leakage arrest.	NLDC
99	220kV NSLG-BRP Ckt-II	06/06/2017	9.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Relay retrofitting / AMP / hot spot rectification in WT	
100	400kV Tala Ckt-I	06/06/2017	9.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Relay retrofitting	NLDC
101	400kV NSLG-Bangaigaon Ckt-1	06/06/2017	07.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Insulator CC ring fitting	NLDC
102	400kV NSLG-Tala Ckt-1	06/06/2017	07.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	NLDC
103	400kV NSLG-Tala Ckt-4	06/06/2017	07.00 hrs	06/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	NLDC
104	125 MVAR Bus Reactor-I	06/06/2017	07.00 hrs	20/06/2017	17.00 hrs	ODB	ER-II	Internal Inspection	
105	400 KV Subhasgram- Jeerat Line	06/06/2017	08:00	06/07/2017	17:30	ODB	ER-II	Insulator replacement work at Line	WB
106	765 KV Bus-II at Sundargarh 402 CB,Tie of BARIPADA AND B/R at Pandiabili GIS	06/06/2017	08:00 09:00	08/06/2017	18:00 17:00	OCB ODB	ER-II/Odisha/Sundergarh ER-II/Odisha/Pandiabili GIS	Extension of 4.5" Al Tube & stability checking for commissiong of 765KV Angul Line-3&4 main bay(713 & 716)for new bays construction work GIS CB AMP	NLDC
107	402 CB, THE OF BARIPADA AND B/R at Panulabili GIS	00/00/2017	09.00	00/00/2017	17.00	UDB		Checking of Bus-bar Stability of 765kV Angul-Sundargarh Line-3&4 for connection with existing system under	
108	765kV Main Bus-I at Angul	06/06/2017	08:00	07/06/2017	08:00	OCB	ER-II/Odisha/Angul SS	Construction Head.	NLDC
109	400 kV Jeypore-Indravati S/C Line	06/06/2017	06:00	07/06/2017	18:00	ODB	ER-II/Odisha/Jeypore	For Replacement of PID Defective Insulators in Jey-Ivt Line	NLDC
110	Jeypore-Rengali Tie Bay (402) at Indravati	06/06/2017	09:00	06/06/2017	16:00	ODB	ER-II/Odisha/Indravati	AMP Works	
111	400/200kV ICT-I Main Bay ( Bay No-407) at Rengali	06/06/2017	09:00	06/06/2017	17:00	ODB	ER-II/Odisha/Rengali	For attending hotspot and Isolator allignment work.	
112	400KV PATNA-BALIA-II	07/06/2017	08:00	07/06/2017	18:00	ODB	ER-1	for liquidation of all line defects in concerned tr. lines	NLDC
113	400 KV New Ranchi-Purulia Line at New Ranchi	07/06/2017	08:00	08/06/2017	18:00	ODB	ER-1	Commissioining of tie Bays of 400kV Ranchi-Patratu D/C line under JCP	
	400 KV NEW RANCHI -RANCHI Ckt - 3	07/06/2017	08:00	07/06/2017	18:00	ODB	ER-1	Fixing of spacer cum damper at location No-105 to 108 , Loc. No -140 to 162	
	400kV BSF-Varanasi-I 220kV Birpara-Chukha-II	07/06/2017 07/06/2017	07:00 Hrs 08:00 Hrs	07/06/2017 08/06/2017	19:00 Hrs 17:00 Hrs	ODB ODB	ER-1 ER-II	For fixing of open spacer Dampers and missing jumper volts. AMP work	NLDC NLDC
	400KV Andal-Jamshedpur Ckt-2	07/06/2017	09:00	11/06/2017	17:00	ODB	ER-II	Replacement of defcetive Insulator string having defective disc >=3 ( as per PID test results) and replacement of porcelen insulator string with glass string at major crossing	DVC
118	132kV Siliguri - Melli	07/06/2017	08:00	20/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	SIKKKIM
119	132kV Siliguri-Kurseong	07/06/2017	08:00	20/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	WB
120	WBSETCL 220kV Bus Section-1 at Binaguri	07/06/2017	9.00 hrs	07/06/2017	17.00 hrs	ODB	ER-II	AMP	WB
	400kV NSLG-Tala Ckt-2	07/06/2017	07.00 hrs	07/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	NLDC
	400 KV Kahalgaon Farakka Line-2	07/06/2017	09:30hrs	07/06/2017	17:30 hrs	ODB	KAHALGAON	PM works & relay testing	
123	403 CB, BARIPADA LINE MAIN CB at Pandiabili GIS	07/06/2017	09:00	07/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
124	400KV Rourkela-Talcher#1 Main Bay (Bay No 406) at Rourkela	07/06/2017	09:00	07/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
125	400KV Rourkela-Sterlite line-II	08/06/2017	09:00	09/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Porcelain Insulator at single crossing span (317-318) by CLR Polymer.	
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126	MAIN BAY OF 125MVAR B/R-II (BAY NO.418)	08/06/2017	10:00	08/06/2017	18:00	ODB	ER-1	BAY AMP	DEFFERED BY
	315MVA ICT-I AT PATNA	08/06/2017	09:00	09/06/2017	18:00	OCB	ER-1	Attending commissioning punch point	BIHAR
127									

	765 KV BR-I at Gaya S/S	08/06/2017	08:00	08/06/2017	18:00	ODB	ER-1	Repainting work of Reactor	NLDC	
	400/220kV, 315MVA ICT-2 AT JSR	08/06/2017	09:30	08/06/2017	17:30	ODB	ER-1	Circuit breaker repalecement work ADD Cap	JUSNL	
	400 KV BSF-1 MAIN BAY	08/06/2017	10:00	10/06/2017	18:00	OCB	ER-1			
132	400kV BSF-Varanasi-II	08/06/2017	07:00 Hrs	08/06/2017	19:00 Hrs	ODB	ER-1	For fixing of open spacer Dampers and missing jumper volts.	NLDC	
133	220kV MALDA-DALKHOLA TL-II (ONE CKT AT A TIME)	08/06/2017	08:00	12/06/2017	17:00	ODB	ER-II	Porcelain Insulator replacement work, One ckt S/D shall be taken, other ckt shall remain in service		
134	125 MVAR bus reactor-3	08/06/2017	08:00	08/06/2017	16:00	ODB	ER-II	CSD commissioning.		
135	220kV Main Bus - 1 & 2 (APD)	08/06/2017	09:00	08/06/2017	14:00:00 PM	ODB	ER-II	Installation of bay equipment of 02 nos 220 line bays for APD (PGCIL) - APD (WBSETCL) D/C TL of WBSETCL. Line is almost ready and S/D required for complition the bays within time.		
136	WBSETCL 220kV Bus Section-2 at Binaguri	08/06/2017	9.00 hrs	08/06/2017	17.00 hrs	ODB	ER-II	AMP	WB	
137	500MVA ICT-I at MTN	08/06/2017	10:00	08/06/2017	17:30	ODB	ER-II	Erection of LM Tower near 500MVA ICT, Erection of CB, CT for tertiary transformer		
138	220kV S'gram-WBSETCL Line #2	08/06/2017	08:00	08/06/2017	17:30	ODB	ER-II	AMP	WB	
139	400KV Rourkela-Talcher#1 Tie Bay (Bay No 405) at Rourkela	08/06/2017	09:00	08/06/2017	16:00	ODB	ER-II/Odisha/Rourkela	AMP Work.		
140	403R CB, BARIPADA LINER REACTOR CB at Pandiabili GIS	08/06/2017	09:00	08/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP		
141	765kV Main Bus-II at Angul	08/06/2017	08:00	09/06/2017	08:00	ОСВ	ER-II/Odisha/Angul SS	Checking of Bus-bar Stability of 765kV Angul-Sundargarh Line-3&4 for connection with existing system under Construction Head.	NLDC	
142	220KV BALASORE LINE-I BAY-201 AT BARIPADA	08/06/2017	09:00	11/06/2017	18:00	ОСВ	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	GRIDCO	
143	400/220 KV 500 MVA ICT#3 AT BARIPADA	08/06/2017	09:00	08/06/2017	18:00	ODB	ER-II/Odisha/Baripada	COMMISSIONING OF CSD WITH ONLINE OPERATION	GRIDCO	
	Indravati-Rengali Main Bay(403) at Indravati	08/06/2017	09:00	08/06/2017	16:00	ODB	ER-II/Odisha/Indravati	AMP Works		
	400KV S/C Korba- Bhilai-I	08/06/2017	07:00	09/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL) at OGPTL Location numbers AP 22/0- AP23/0(PGCIL tower Nos: 406-407)	NLDC	
146	TIE BAY OF 400kV BSf-Muzaffarpur-1 & 2 at BSF	09/06/2017	10:00	12/06/2017	17:00	OCB	ER-1	Pneumatic Drive Overhauling of Circuit Braker		
147	765 KV BR-II at Gaya S/S	09/06/2017	08:00	09/06/2017	18:00	ODB	ER-1	Repainting work of Reactor		
148	400KV Jsr-Chaibasa-1 line	09/06/2017	09:30	09/06/2017	17:30	ODB	ER-1	Circuit breaker repalecement work ADD Cap		
149	409 Bay (Chaibasa-1 Main bay) AT JSR	09/06/2017	09:30	15/06/2017	17:30	OCB	ER-1	Circuit breaker repalecement work ADD Cap		
150	220kV Birpara-Malbase	09/06/2017	08:00 Hrs	10/06/2017	17:00 Hrs	ODB	ER-II	AMP work	NLDC	
151	400kV NSLG-Tala Ckt-3	09/06/2017	07.00 hrs	09/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings		
152	400/220 KV 315 MVA ICT#1 MAIN BAY (403) AT BARIPADA	09/06/2017	09:00	09/06/2017	18:00	ODB	ER-II/Odisha/Baripada	AMP OF BAY		
153	404 CB, MAIN CB OF DUBURI LINE at Pandiabili GIS	09/06/2017	09:00	09/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP		
154	765KV Bus-I at Sundargarh	09/06/2017	08:00	09/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	Arh Changing of Bus CVT connectors to reduce the load of CVT under system improvement scheme.		
155	765 KV GAYA VNS-I LINE REACTOR	10/06/2017	08:00	10/06/2017	18:00	ODB	ER-1	Repainting work of Reactor	NLDC	
156	400 KV Bus-1	10/06/2017	10:00	10/06/2017	17:00	ODB	ER-II	Jumper rectification in Sagardighi-1 Bus isolator		
157	400kV NSLG-Bangaigaon Ckt-2	10/06/2017	07.00 hrs	10/06/2017	17.00 hrs	ODB	ER-II	Insulator CC ring fitting	NLDC	
158	Tala-2 L/R at Binaguri	10/06/2017	07.00 hrs	10/06/2017	17.00 hrs	ODB	ER-II	CSD Commissioning / Tan Delta in Variable Frequency	NLDC	
159	400KV Rourkela-Talcher line-II	10/06/2017	09:00	12/06/2017	18:00	ODB	ER-II/Odisha/Rengali	For replacement of Porcelain Insulator at various crossing span by CLR polymer		
160	400 kV Maithon-Durgapur line	10/06/2017	10:00	25/06/2017	16:00	OCB	ER-II	Diversion work of 400kv Maithon-Durgapur D/C 1 & 2 at loc no 134 - 136		
161	400kV Subhasgram- Sagardighi Line	10/06/2017	08:00	10/06/2017	17:30	ODB	ER-II	Insulator replacement work at Line	WB	
162	132 KV WBSETCL# 1 AT MALDA	10/06/2017	08:00	14/06/2017	17:00	ODB	ER-II	FOR ISOLATOR REPLACEMENT WORK	WB	
	765KV Sundargarh-Dharamjaygarh Line-I	10/06/2017	08:00	10/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	Modification of polymer anchoring in Y-Ph Line Isolator after damaged by thunderstorm on 19.04.2017	NLDC	
-	405 CB, TIE CB OF ICT-I and DUBURI LINE at Pandiabili GIS	10/06/2017	09:00	10/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	<u> </u>	
	400/220 KV 500 MVA ICT#3 AT BARIPADA	10/06/2017	09:00	10/06/2017	18:00	ODB	ER-II/Odisha/Baripada	CALLIBRATION OF OTI & WTI	GRIDCO	
-	400KV Rourkela-Talcher#2	10/06/2017	09:00	12/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	Replacement of insulators at different locations.		
-	PG-UIHEP Main Bay (412) at Indravati	10/06/2017	09:00	10/06/2017	16:00	ODB	ER-II/Odisha/Indravati	AMP Works	GRIDCO	
1	220kV Birpara-Salakati-I	11/06/2017	08:00 Hrs	12/06/2017	17:00 Hrs	ODB	ER-II	AMP work	NLDC	
169	Alipurdar-II L/R 125MVAR REACTOR AT BARIPADA	11/06/2017 11/06/2017	07.00 hrs 09:00	11/06/2017 11/06/2018	17.00 hrs 18:00	ODB ODB	ER-II ER II/Odisha/Paripada	Tan Delta in Variable Frequency REPLACEMENT OF RADIATOR		
170	400kV Bus-2 AT BSF	11/06/2017	10:00	11/06/2018	18:00	ODB	ER-II/Odisha/Baripada ER-1	Jumper connection of Tenughat main bay no16 to Bus-2	+	
	400 KV Jeypore-Bolangir S/C line	12/06/2017	09:00	12/06/2017	18:00	ODB	ER-II/Odisha/Jeypore	Replacement of One number Bundle Spacer		
-	400 KV Jeypore-Bolangii 3/C inte 400 KV New Ranchi-Arambagh Line at New Ranchi	12/06/2017	09:00	13/06/2017	18:00	ODB	ER-1	Commissioning of tie Bays of 400kV Ranchi-Patratu D/C line under JCP	WB	
	REACTOR BAY OF MUZ-II (BAY NO.409R)	12/06/2017	10:00	14/06/2017	18:00	OCB	ER-1	CB Overhauling	1	
	Main bay of Ara line-I at Khagaul bay	12/06/2017	10:00	14/06/2017	18:00	OCB	ER-1	CB overhauling work at Khagaul ss	BIHAR	
L	220 KV BUS-I at Gaya S/S	12/06/2017	08:00	12/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR	
-	400 KV BSF-1 TIE BAY	12/06/2017	10:00	14/06/2017	18:00	OCB	ER-1	OVERHAULING OF CIRCUIT BREAKER	1	
178	220kV Birpara-Salakati-II	12/06/2017	08:00 Hrs	13/06/2017	17:00 Hrs	ODB	ER-II	AMP work	NLDC	
179	400KV Farakka-Durgapur Ckt-2	12/06/2017	10:00	15/06/2017	17:00	ODB	ER-II	Replacement of defcetive Insulator string having defective disc >=3 ( as per PID test results) and replacement of porcelen insulator string with glass string at major crossing		
180	400 KV Bus-3	12/06/2017	10:00	12/06/2017	17:00	ODB	ER-II	Jumper rectification in Maithon-1 Bus isolator		
	220kV S'gram-KLC Bantala Line	12/06/2017	08:00	12/06/2017	17:30	ODB	ER-II	AMP	WB	
182	765kV Angul-Srikakulam Line-1	12/06/2017	08:00	12/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work	NLDC	

184	406 CB, MAIN CB OF ICT-I at Pandiabili GIS 765KV Sundargarh-Dharamjaygarh Line-II	12/06/2017	09:00	12/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
	765KV Sundargarh-Dharamjaygarh Line-II								
185 2		12/06/2017	08:00	12/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	Modification of polymer anchoring in Y-Ph Line Isolator after damaged by thunderstorm on 19.04.2017	NLDC
-	220KV BALASORE LINE-II BAY-202 AT BARIPADA	12/06/2017	09:00	15/06/2017	18:00	OCB	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	GRIDCO
186 I	CT-I (3x 105 MVA) at Jeypore	12/06/2017	10:30	12/06/2017	11:30	ODB	ER-II/Odisha/Jeypore	For changing ICT-I combination form Unit-I,II,III to Unit-II, III & IV for charging Unit-IV after Oil Refilling Works due to H2 violation	GRIDCO
187	400KV Bus-1 (Connected line -Jeypore Line and UIHEP Line) at ndravati	12/06/2017	09:00	12/06/2017	18:00	ODB	ER-II/Odisha/Indravati	For retrofitting of Bus Bar Protection panel at Indravati ss.	
	MAIN BAY OF 400kV BSf-Sasaram-II AT BSF	13/06/2017	10:00	16/06/2017	17:00	OCB	ER-1	Pneumatic Drive Overhauling of Circuit Braker	
189 4	400 KV Chandwa-Gaya Circuit-I	13/06/2017	9:00-18:00	14/06/2017	18:00	ODB	ER-1	To complete pre-warranty tests on line bay equipment and circuit breaker (Double Main Bus Scheme with no transfer Bus)	
190 4	400 KV BSF - Varanasi Ckt. I	13/06/2017	09:00	13/06/2017	18:00	ODB	ER-1	FOR TL Maintenance works	NLDC
191 2	220 KV BUS-II at Gaya S/S	13/06/2017	08:00	13/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR
192	3*110MVAR 765kV Bus Reactor	13/06/2017	09:00Hrs	13/06/2017	18:00 Hrs	ODB	ER-1	AMP work.	NLDC
193 4	100kV MALDA-NEW PURNEA-I	13/06/2017	08:00	14/06/2017	17:00	ODB	ER-II	Insulator change due to damage by miscreant, Jumper tightness work	NLDC
194 4	400kV Barh Patna Line 4	13/06/2017	09:30hrs	15/06/2017	18:00 hrs	OCB	BARH	Annual testing of Bay equipments & its Relay	
195 4	100KV Fkk-Kahalgaon line-2	13/06/2017	09:30hrs	13/06/2017	17:30 hrs	ODB	FARAKKA	Relay testing	
L	•					000		RECTIFICATION OF LINE EARTH SWITCH STOCK UP PROBLEM, WHICH CAUSED 14 HOUR DELAY IN RESTORATION	
196 4	400 KV BARIPADA LINE AT NEWDUBURI (OPTCL) SS	13/06/2017	09:00	13/06/2017	18:00	ODB	ER-II/Odisha/Baripada	LAST TIME.	
197	765KV Sundargarh-Angul Line-I	13/06/2017	08:00	13/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	Modification of polymer anchoring in Y-Ph Line Isolator after damaged by thunderstorm on 19.04.2017	NLDC
198	765kV Angul-Srikakulam Line-2	13/06/2017	08:00	13/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation Work	NLDC
199 4	400KV Rourkela-Talcher#2 Main Bay (Bay No 407) at Rourkela	13/06/2017	09:00	13/06/2017	14:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
200 4	401 KV BSF - Varanasi Ckt. II	14/06/2017	09:00	14/06/2017	18:00	ODB	ER-1	FOR TL Maintenance works	NLDC
201 4	400 KV BUS-I at Gaya S/S	14/06/2017	08:00	14/06/2017	18:00	ODB	ER-1	For isolator rectification work under S/S extn. Package	
202	765kV Gaya-Varanasi-I	14/06/2017	07:00 Hrs	15/06/2017	19:00 Hrs	ODB	ER-1	For fixing of open spacer Dampers and missing jumper volts.	NLDC
203 2	220kV Birpara-Binaguri-I	14/06/2017	08:00 Hrs	15/06/2017	17:00 Hrs	ODB	ER-II	AMP work	
204 2	220kV SLG-Kishanganj Ckt-2	14/06/2017	07.00 hrs	19/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	
	315MVA ICT#1 at Binaguri	14/06/2017	07.00 hrs	14/06/2017	17.00 hrs	ODB	ER-II	33kV Insulation taping	WB
	Sagardihgi - ICT#1 Tie bay (402)	14/06/2017	08:00	16/06/2017	17:30	OCB	ER-II	Yph Interrupter Unit repalcement for SF6 Leakage.No Power interruption	WB
	400 KV Kahalgaon Barh Line-2	14/06/2017	09:30hrs	14/06/2017	17:30 hrs	ODB	KAHALGAON	PM works & relay testing	NLDC
	400 kV Jeypore-Bolangir S/C Line	14/06/2017	09:30	14/06/2017	15:30	ODB	ER-II/Odisha/Jeypore	For Changing Y-Ph CVT of Bolangir Line due to Secondary Voltage Drift Violation (If Not available in the month of May 2017)	NLDC
209	765kV Angul-Sundargarh Line-1	14/06/2017	08:00	14/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability. And NTAMC Validation work	NLDC
210	765KV Sundargarh-Angul Line-II	14/06/2017	08:00	14/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	Modification of polymer anchoring in Y-Ph Line Isolator and alignment of line side BPI after damaged by thunderstorm on 19.04.2017	NLDC
211	400KV Bus-2 (Connected line -Rengali Line and 125MVAR Bus reactor) at Indravati	14/06/2017	09:00	14/06/2017	18:00	ODB	ER-II/Odisha/Indravati	For retrofitting of Bus Bar Protection panel at Indravati ss.	
212	400KV D/C DCDS Khedmara-Korba(West) and Khedamara-Marwa PH Circuit of CSPTCL	14/06/2017	07:00	15/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL) at OGPTL Location numbers AP12/0-AP13/0.(CSPTCL Tower nos 554-555)	NLDC
213	400 KV Indravati-Rengali line	14/06/2017	10:00	14/06/2017	18:00	ODB	ER-II/Odisha/Indravati	Testing of 50MVAR L/R in Rengali Line before charging. And taking the LR into service	NLDC
214	400 KV Chandwa-Gaya Circuit-II	15/06/2017	9:00-18:00	16/06/2017	18:00	ODB	ER-1	To complete pre-warranty tests on line bay equipment and circuit breaker (Double Main Bus Scheme with no transfer Bus)	
215 F	REACTOR BAY OF MUZ-II (BAY NO.412R)	15/06/2017	10:00	17/06/2017	18:00	OCB	ER-1	CB Overhauling	
216 4	400 KV BUS-II at Gaya S/S	15/06/2017	08:00	15/06/2017	18:00	ODB	ER-1	For isolator rectification work under S/S extn. Package	
217 4	400KV Jsr-Chaibasa-1 line	15/06/2017	09:30	15/06/2017	17:30	ODB	ER-1	Circuit breaker repalecement work ADD Cap	
218 4	400 KV BSF-2 MAIN BAY	15/06/2017	10:00	17/06/2017	18:00	OCB	ER-1	OVERHAULING OF CIRCUIT BREAKER	
219	765kV Fathepur Line Reactor	15/06/2017	09:00Hrs	15/06/2017	18:00 Hrs	ODB	ER-1	AMP work.	NLDC
220 4	400kV MALDA-NEW PURNEA-II	15/06/2017	08:00	16/06/2017	17:00	ODB	ER-II	Insulator change due to damage by miscreant, Jumper tightness work	NLDC
221 2	220kV Bus-I at Binaguri	15/06/2017	07.00 hrs	15/06/2017	17.00 hrs	ODB	ER-II	Bus isolator hot spot rectification / CVT replacement	WB
222 4	100kV NSLG-Rangpo Ckt-1	15/06/2017	07.00 hrs	15/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	
223	315MVA ICT#2 at Binaguri	15/06/2017	07.00 hrs	15/06/2017	17.00 hrs	ODB	ER-II	33kV Insulation taping	WB
224	400kV NSLG-Rangpo Ckt-I	15/06/2017	9.00 hrs	16/06/2017	17.00 hrs	ODB	ER-II	Sag adjustment	
	132 KV WBSETCL# 2 AT MALDA	15/06/2017	08:00	20/06/2017	17:00	ODB	ER-II	FOR ISOLATOR REPLACEMENT WORK	WB
	100KV Fkk-Kahalgaon line-3	15/06/2017	09:30hrs	16/06/2017	17:30 hrs	ODB	FARAKKA	Circuit Breaker testing	
	765KV 240MVAr Bus Reactor-II at Sundergarh	15/06/2017	08:00	15/06/2017	13:00	ODB	ER-II/Odisha/Sundergarh	To take spare reactor as B-Ph of Bus-reactor-II to attend oil leakage in B-Ph of the reactor.	NLDC
228	765kV Angul-Sundargarh Line-2	15/06/2017	08:00	15/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation Work	NLDC

229	400KV Sundergarh-Raigarh Line-II	15/06/2017	09:00	25/06/2017	17:00	ОСВ	ER-II/Odisha/Sundergarh TLM	Dismantling of tower location 375 and erection of new tower in place of new foundation and stringing through multi circuit with 220KV Budhipadar-Korba line	NLDC
230	400KV Sterlite-Raigarh line-II	15/06/2017	09:00	25/06/2017	17:00	ОСВ	ER-II/Odisha/Sundergarh TLM	Dismantling of tower location 375 and erection of new tower in place of new foundation and stringing through multi circuit with 220KV Budhipadar-Korba line	NLDC
231	132 KV PURNEA - PURNEA BSPTCL#3 LINE	16/06/2017	09:00	31/05/2017	16:00	OCB	ER-1	GIS WORK	BIHAR
231	132 KV PURNEA - KISHANGANJ LINE	16/06/2017	09:00	30/06/2017	16:00	ОСВ	ER-1	GIS WORK	BIHAR
233	160 MVA ICT#2	16/06/2017	09:00	30/06/2017	16:00	OCB	ER-1	GIS WORK	BIHAR
234	160 MVA ICT#1	16/06/2017	09:00	30/06/2017	16:00	OCB	ER-1	GIS WORK	BIHAR
235	400 KV BSF - BANKA Ckt. I	16/06/2017	09:00	16/06/2016	18:00	ODB	ER-1	FOR TL Maintenance works	
236	765 KV BUS-I at Gaya S/S	16/06/2017	08:00	16/06/2017	18:00	ODB	ER-1	For isolator rectification work under S/S extn. Package	NLDC
	400KV Jsr-Maithon line	16/06/2017	09:30	16/06/2017	17:30	ODB	ER-1	Circuit breaker repalecement work ADD Cap	
238	400KV Sundergarh-Raigarh line-II	16/06/2017	09:00	18/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Porcelain Insulator at various crossing span by CLR polymer	
	407 Bay (Maithon Main bay) AT JSR 220kV Birpara-Binaguri-II	16/06/2017 16/06/2017	09:30 08:00 Hrs	22/06/2017 17/06/2017	17:30 17:00 Hrs	OCB ODB	ER-1 ER-II	Circuit breaker repalecement work ADD Cap AMP work	
240	400 KB Rourkela-Sterlite-II & Rourkela - Sundargarh-II (both circuits								
241	together)	16/06/2017	08:00	17/06/2017	17:00	OCB	ER-II/Odisha/Sundergarh TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	
242	400kV Angul-Bolangir Line.	16/06/2017	08:00	16/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work	NLDC
243	220 KV BUS COUPLER BAY-203 AT BARIPADA	16/06/2017	09:00	19/06/2017	18:00	OCB	ER-II/Odisha/Baripada	FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	GRIDCO
244	220 kV Jeypore-Jayanagar-I Line	16/06/2017	09:30	16/06/2017	17:30	ODB	ER-II/Odisha/Jeypore	For Changing R & Y-Ph CT of Jayanagar-I Line due to H2 Violation (If Not available in the month of May 2017)	GRIDCO
	Main Bay-403 of 765/400KV ICT-I at Sundargarh	16/06/2017	08:00	16/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh	AMP Work	NLDC
246	765 KV BUS-II at Gaya S/S	17/06/2017	08:00	17/06/2017	18:00	ODB	ER-1	For isolator rectification work under S/S extn. Package	NLDC
247	400kV NEW SILIGURI-NEW PURNEA-I			ER-II	Jumper tightness work				
	220kV Bus-II at Binaguri	17/06/2017	07.00 hrs	17/06/2017	17.00 hrs	ODB	ER-II	Bus isolator hot spot rectification	NLDC
	400kV NSLG-Rangpo Ckt-2	17/06/2017	07.00 hrs	17/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	
250	400kV NSLG-Rangpo Ckt-II	17/06/2017	9.00 hrs	18/06/2017	17.00 hrs	ODB	ER-II	Sag adjustment	
	220kV Dhanbad-2 Line at Maithon	17/06/2017	10:00	17/06/2017	14:00	ODB	ER-II	Replacement of R ph LA	DVC
252	400KV Fkk-Durgapur Line line-2	17/06/2017	09:30hrs	17/06/2017	17:30 hrs	ODB	FARAKKA	Relay testing	
253	407 CB, MAIN CB OF ICT-II at Pandiabili GIS	17/06/2017	09:00	17/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
254	400KV Sundargarh#2 & Ranchi#1 Tie Bay (Bay No 429) at Rourkela	17/06/2017	09:00	17/06/2017	16:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
255	400KV Rengali-Indravati line	18/06/2017	07:00	26/06/2017	18:00	ODB	ER-II/Odisha/Bolangir	Bolangir: For replacement of Porcelain Insulators by Polymer Insulators in the major crossings. Rengali: Rigid Spacer i.e( in Jumper) dislocated in Location no-1086,1062,1054, 1022,1014, 1001,1105, 1006,998, 999,992,984,972,968,934,945,947,957,958.	
256	400 kV Maithon-Rightbank 1	18/06/2017	10:00	18/06/2017	16:00	ODB	ER-II	Broken Insulator replacement work	
257	MAIN BAY OF 400KV KNE-II(BAY NO.410)	19/06/2017	10:00	21/06/2017	18:00	OCB	ER-1	CB Overhauling	
258	315 MVA ICT-I AT RANCHI	19/06/2017	08:00	19/06/2017	17:00	ODB	ER-1	FOR APPLICATION OF INSULATION SLEEVE ON TERTIARY SIDE	JUSNL
259	400 KV BSF-2 TIE BAY	19/06/2017	10:00	21/06/2017	18:00	OCB	ER-1	OVERHAULING OF CIRCUIT BREAKER	
260	400kV NEW SILIGURI-NEW PURNEA-II	19/06/2017	08:00	20/06/2017	17:00	ODB	ER-II	Jumper tightness work	
261	400 kV Maithon-Rightbank 2	19/06/2017	10:00	19/06/2017	16:00	ODB	ER-II	Broken Insulator replacement work	
262	Bus Reactor 400kV Barh Kahal Line 1	19/06/2017	09:30hrs	22/06/2017	18:00 hrs	ОСВ	BARH	Annual testing of Bay equipments, Bus Reactor & Relay	
263	408 CB, TIE CB OF MENDHSAL-II& ICT-II at Pandiabili GIS	19/06/2017	09:00	19/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
	220 kV Jeypore-Jayanagar-2 Line	19/06/2017	09:30	19/06/2017	15:30	ODB	ER-II/Odisha/Jeypore	For Changing B-Ph CVT of Jayanagar-II Line due to Oil Leakage (If Not available in the month of May 2017)	GRIDCO
265	220KV Bus-I at Rourkela	19/06/2017	09:00	19/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	GRIDCO
266	132KV S/C Sambalpur-Rairakhol TL (OPTCL)	19/06/2017	08:00	20/06/2017	17:00	ОСВ	ER-II/Odisha/Sundergarh TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	GRIDCO
267	400KV D/C Korba-Raipur CKT 3&4	19/06/2017	07:00	20/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL) at OGPTL Location numbers AP 25/0- AP 26/0(PGCIL tower Nos: 464-465)	NLDC
268	765 KV Jharsuguda- Dharamjaygarh Tranmission line (Ckt-I & II)	20/06/2017	08:00	22/06/2017	17:00	OCB	ER-II/Odisha/Sundergarh TLC	Stringing work of 765KV Jharsuguda - Dharamjaygarh D/C (Ckt-III & IV) transmission line with swapping arrangement	NLDC
269	315 MVA ICT#1 AT BSF	20/06/2017	10:00	20/06/2017	14:00	ODB	ER-1	FOR APPLICATION OF INSULATION SLEEVE ON TERTIARY SIDE	BIHAR
270	400 KV Chandwa-Ranchi Circuit-I	20/06/2017	9:00-18:00	21/06/2017	18:00	ODB	ER-1	To complete pre-warranty tests on line bay equipment and circuit breaker (Double Main Bus Scheme with no transfer Bus)	
271	Ranchi-Maithan-I,Raghunathpur-I,Maithan RB-I,Maithan RB-II lines	20/06/2017	08:00	20/06/2017	18:00	ODB	ER-1	For diamond connection	
272	401 KV BSF - MUZ Ckt. I	20/06/2017	09:00	20/06/2016	18:00	ODB	ER-1	FOR TL Maintenance works	
273	500 MVA ICT II	20/06/2017	10:00	22/06/2017	10:00	OCB	ER-1	Relocation of Partial discharge sensors in bus duct due to acess problem for testing.	NLDC
274	400kV East Bus -I	20/06/2017	09:00Hrs	20/06/2017	18:00 Hrs	ODB	ER-1	AMP work.	NLDC
					I				

275	122W/Kurseeng Dengit	20/06/2017	09.00	28/06/2017	17.00 bro	0.00		Insulator replacement work	MD
275	132kV Kurseong - Rangit	20/06/2017	08:00	28/06/2017 28/06/2017	17.00 hrs	ODB ODB	ER-II ER-II	Insulator replacement work Insulator replacement work	WB SIKKKIM
276	132kV Rangpo-Melli 400kV NSLG-Purnea Ckt-1	20/06/2017 20/06/2017	08:00 07.00 hrs	22/06/2017	17.00 hrs 17.00 hrs	ODB	ER-II	Insulator replacement work	SIKKKIIVI
277	220kV SLG-Kishanganj Ckt-1	20/06/2017	07.00 hrs	25/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	
270	500MVA ICT# V at Subhasgram	20/06/2017	08:00	20/06/2017	17:30	ODB	ER-II	PSD Commissioning work	WB
280	400KV Fkk-Malda Line-1	20/06/2017	09:30hrs	20/06/2017	17:30 hrs	ODB	FARAKKA	Relay testing	NLDC
281	409CB, MAIN CB OF MENDHSAL LINE-II at Pandiabili GIS	20/06/2017	09:00	20/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
282	400kV Angul-Meramundali Line-1	20/06/2017	08:00	20/06/2017	18:00	ODB	ER-II/Odisha/Angul TLAM	Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work	GRIDCO
283	400KV Rourkela-Raigarh line-II (Direct)	20/06/2017	09:00	20/06/2017	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Broken/ Flash Inulator at Loc 781 by CLR Polymer or Glass Insulators	
284	765KV Angul-Sundergarh line-I	20/06/2017	09:00	23/06/2017	18:00	ODB	ER-II/Odisha/Angul TLM	To attend the Shutdown nature defects in the transmission line	
285	220 KV SIDE OF 315 MVA ICT-II, BAY-204 AT BARIPADA	20/06/2017	09:00	23/06/2017	18:00	ОСВ	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	GRIDCO
286	400kV Keonjhar Line ( Bay - 401)	20/06/2017	09:00	20/06/2017	14:00	ODB	ER-II/Odisha/Rengali	Retrofitting of DP Relay	
287	315 MVA ICT#2 AT BSF	21/06/2017	10:00	21/06/2017	18:00	ODB	ER-1	AMP	BIHAR
288	315 MVA ICT-II AT RANCHI	21/06/2017	08:00	21/06/2017	17:00	ODB	ER-1	FOR APPLICATION OF INSULATION SLEEVE ON TERTIARY SIDE	JUSNL
289	220 KV DALKHOLA-KISHANGANJ-I	21/06/2017	09:00	21/06/2017	16:00	ODB	ER-II	FOR NTAMC ADAPTATION WORK OF ISOLATORS.	
290	132 KV Kahalgaon Kahalgaon Line	21/06/2017	09:30hrs	21/06/2017	17:30 hrs	ODB	KAHALGAON	PM works & relay testing	BIHAR
291	400KV Fkk-Malda Line-2	21/06/2017	09:30hrs	21/06/2017	17:30 hrs	ODB	FARAKKA	Relay testing	NLDC
292	410 CB, MAIN CB OF FUTURE ICT at Pandiabili GIS	21/06/2017	09:00	21/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
293	220KV Bus-II at Rourkela	21/06/2017	09:00	21/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	GRIDCO
294	400KV Rengali-Indravati line at Bolangir	21/06/2017	07:00	24/06/2017	18:00	ODB	ER-II/Odisha/BOLANGIR	Replacement of Porcelain insulators with Polymer insulators in major crossings (SD will be taken if not availed in May'2017)	NLDC
295	400KV D/C IB-Meramundali TL (OPTCL)	21/06/2017	08:00	22/06/2017	17:00	ОСВ	ER-II/Odisha/Sundergarh TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	GRIDCO
296	315 MVA ICT#3 AT BSF	22/06/2017	10:00	22/06/2017	14:00	ODB	ER-1	FOR APPLICATION OF INSULATION SLEEVE ON TERTIARY SIDE	BIHAR
	400 KV Chandwa-Ranchi Circuit-II	22/06/2017			18:00	ODB	ER-1	To complete pre-warranty tests on line bay equipment and circuit breaker (Double Main Bus Scheme with no transfer Bus)	
298	TIE BAY OF 400KV KNE-II (BAY NO.411)	22/06/2017	10:00	24/06/2017	18:00	OCB	ER-1	CB Overhauling	21/2
299	402 KV BSF - KOD Ckt. I	22/06/2017	09:00	22/06/2016	18:00	ODB	ER-1	FOR TL Maintenance works	DVC
300 301	765 KV GAYA-BALLIA LINE	22/06/2017 22/06/2017	08:00 09:30	22/06/2017 22/06/2017	18:00 17:30	ODB ODB	ER-1 ER-1	Bay construction work of gaya - nabinagar transmision line Circuit breaker repalecement work ADD Cap	NLDC
302	400/220kV 315MVA ICT -II @ Pusauli	22/06/2017	09:00Hrs	22/06/2017	18:00 Hrs	Subject to availability of Main Bay CB of 400kV BSF- I line. Main Bay CB is under long outage and ABB engineer shall be coming next week to rectifiy the problem.	ER-1	AMP work.	BIHAR
303	220 KV DALKHOLA-KISHANGANJ-II	22/06/2017	09:00	22/06/2017	16:00	ODB	ER-II	FOR NTAMC ADAPTATION WORK OF ISOLATORS AND INSULATOR REPLACEMENT WORKS.	
304	411CB, TIE OF FUTURE ICT AND MENDHSAL CKT-1 at Pandiabili GIS	22/06/2017	09:00	22/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
305	315 MVA ICT-II at Jeypore	22/06/2017	09:30	22/06/2017	17:30	ODB	ER-II/Odisha/Jeypore	For AMP &LA Replacement Works	GRIDCO
306	400KV D/C Sipat-Raipur- I& II	22/06/2017	07:00	23/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line(of OGPTL) at OGPTL Location numbers AP 45/0- AP 46/0(PGCIL tower Nos: 202-203)	NLDC
307	A/R 400KV D/C Sundargarh-Sahajbahal Ckt-1&2	20/06/2017	07:00	05/07/2017	17:00	Daily	OGPTL	For Keeping AR in NON AUTO MODE/OFF, for Overhead Hot Line Stringing of U/C 765KV D/C Raipur- Sundargarh Transmission line (of OGPTL at OGPTL Location numbers AP 141- AP 142 (INDBHARAT tower Nos: 3-4)	
308	50 MVAR Bay AT JSR	23/06/2017	09:30	23/06/2017	17:30	ODB	ER-1	Bay construction work of 125 MVAR B/R	
309	400KV D/C Talcher- Rengali Line	23/06/2017	09:00	23/06/2017	18:00	ODB	ER-II/Odisha/Rengali	Conductor Vibration Damper dislocated in Location no- 46 of CKT-2.	
310	220 KV Kishanganj-Dalkohla CKT I	23/06/2017	10:00	25/06/2017	10:00	ОСВ	ER-1	Relocation of Partial discharge sensors in bus duct due to acess problem for testing.	
311	220 KV MAIN BUS-I AT DALKHOLA	23/06/2017	09:00	23/06/2017	16:00	ODB	ER-II	FOR NTAMC ADAPTATION WORK OF ISOLATORS.	WB
312	400KV Durgapur-Jamshedpur S/C	23/06/2017	09:00	30/06/2017	17:00	ODB	ER-II	Replacement of defcetive Insulator string having defective disc >=3 ( as per PID test results) and replacement of porcelen insulator string with glass string at major crossing	
313	400kV NSLG-Purnea Ckt-2	23/06/2017	07.00 hrs	25/06/2017	17.00 hrs	ODB	ER-II	Insulator replacement in crossings	
314	400KV MTN JSR Line	23/06/2017	10:00	23/06/2017	15:00	ODB	ER-II	Replacement of Y ph LA	
315	400KV Rourkela-SEL#2 Main Bay at Rourkela (Bay No 426)	23/06/2017	09:00	23/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
316	412 CB, MAIN CB OF MENDHASAL CKT-1	23/06/2017	09:00	23/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
317	765 KV GAYA-VNS-II LINE	24/06/2017	08:00	24/06/2017	18:00	ODB	ER-1	Bay construction work of gaya - nabinagar transmision line	NLDC
318	405 Bay (Tie bay Mejia & Durgapur line) AT JSR	24/06/2017	09:30	30/06/2017	17:30	OCB	ER-1	Circuit breaker repalecement work ADD Cap	
319	765KV Angul-Sundergarh line-II	24/06/2017	09:00	24/06/2017	18:00	ODB	ER-II/Odisha/Angul TLM	To attend the Shutdown nature defects in the transmission line	

220 Z20 KV MAIN BUS-II AT DALKHOLA	24/06/2017	09:00	24/06/2017	16:00	ODB	ER-II	FOR NTAMC ADAPTATION WORK OF ISOLATORS.	WB
21 400kV Bus Section - 2B (APD)	24/06/2017	08:00	24/06/2017	18:00	ODB	ER-II	1. Pole 4 (TIE BAY) jumper connection2. Punatsanchu Line - I (MAIN BAY) dropper connectionconnection3. Bus Staility (2B) for inclution of Pole - 4 and Punatsanchu - I Tentative date of Pole - 4 OLT is 25-06-2017, this S/D is Very URGENT, otherwise Pole - 4 commissioning will be delayed.	
404R CB, DUBURI LINE REACTOR CB at Pandiabili GIS	24/06/2017	09:00	24/06/2017	17:00	ODB	ER-II/Odisha/Pandiabili GIS	GIS CB AMP	
23 220 KV SIDE OF 315 MVA ICT-I, BAY-208 AT BARIPADA	24/06/2017	09:00	27/06/2017	18:00	ОСВ	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	GRIDCO
24 400kV Bus Section - 1B (APD)	25/06/2017	08:00	25/06/2017	18:00	ODB	ER-II	1. Punatsanchu Line - 2 (MAIN BAY) dropper connection2. Bus Staility (1B) for inclution ofPunatsanchu - 2	
25 220 Bus Coupler Bay at Binaguri	25/06/2017	9.00 hrs	25/06/2017	17.00 hrs	ODB	ER-II	AMP	WB
26 315MVA, ICT-2 at Maithon SS	25/06/2017	10:00	25/06/2017	15:00	ODB	ER-II	Replacement of Y ph LA of 400kV side	DVC
27 220 KV GAYA -DEHRI -II LINE	26/06/2017	08:00	26/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR
28 400kV MTN Kahalgaon-II Line	26/06/2017	10:00	26/06/2017	16:00	ODB	ER-II	Replacement of Y & B ph LA	
29 765KV 240MVAr Bus Reactor-II at Sundergarh	26/06/2017	08:00	26/06/2017	13:00	ODB	ER-II/Odisha/Sundergarh	To take B-ph reactor in service after attending of oil leakage.	NLDC
400 KV MAIN BUS COUPLER AT CHANDAWA	27/06/2017	9:00-18:00	27/06/2017	18:00	ODB	ER-1	To complete pre-warranty tests bus coupler circuit breaker	
31 220 KV GAYA -DEHRI -I LINE	27/06/2017	08:00	27/06/2017	18:00	ODB	ER-1	For KHIJARSARAI bay commisioning work	BIHAR
32 400kV Gaya-II LR	27/06/2017	10:00	27/06/2017	16:00	ODB	ER-II	Replacement of LA	
33 400kV D/C Sagardighi-Parulia	27/06/2017	09:00	29/06/2017	17:00	ODB	ER-II	AMP Works	WB
400KV Talcher-Meramundali & Talcher-Angul lines (D/C)	27/06/2017	0/375	02/07/2017	0.75	ОСВ	ER-II/Odisha/Angul TLM	For diversion of the existing line protion in GMR premises to the new section to be connected with the existing lines.	
400KV SEL#2 - 125MVAR B/R Tie Bay at Rourkela (Bay No 427)	27/06/2017	09:00	27/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
400/220/33kV, 315MVA ICT - 2 (APD)	28/06/2017	09:00	29/06/2017	16:00	OCB	ER-II	PVC Sleeve work and other minor works	
220 KV SIDE OF 160 MVA ICT-I, BAY-209 AT BARIPADA	28/06/2017	09:00	30/06/2017	18:00	ОСВ	ER-II/Odisha/Baripada	NO OUTAGE LINE WILL REMAIN IN SERVICE THROUGH TBC BAY. FOR OVERHAULING OF 220 KV CGL CB OPERATING MECHANISM	
220KV Bus Coupler Bay at Rourkela (Bay No 202)	28/06/2017	09:00	28/06/2017	18:00	ODB	ER-II/Odisha/Rourkela	AMP Work.	
765 KV GAYA VNS-II LINE REACTOR	29/06/2017	08:00	29/06/2017	18:00	ODB	ER-1	MOG Replacement work in Y Phase to arrest oil leakage	NLDC
40 400/220/33kV, 315MVA ICT - 1 (APD)	29/06/2017	09:00	30/06/2017	16:00	OCB	ER-II	PVC Sleeve work and other minor works	
41 132kV Rangpo-Chuzachen	29/06/2017	08:00	05/07/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	SIKKKIM
42 132kV Rangpo-Gangtok	29/06/2017	08:00	05/07/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	SIKKKIM
43 125 MVAR Bus reactor-II AT MAITHON	29/06/2017	10:00	29/06/2017	16:00	ODB	ER-II	Oil leakage arresting work of reactor	
44 220KV Rourkela- Tarkera#1	29/06/2017	10:00	29/06/2017	12:00	ODB	ER-II/Odisha/Rourkela	Jumper Tightening.	GRIDCO
45 400 KV KEONJHAR LINE AT BARIPADA	29/06/2017	09:00	30/06/2017	18:00	ODB	ER-II/Odisha/Baripada	MAIN 2 RELAY RETROFICATION WORK	
46 220KV ICT#1 Incomer Bay at Rourkela (Bay No 211)	30/06/2017	10:00	30/06/2017	12:00	ODB	ER-II/Odisha/Rourkela	Jumper Tightening.	
47 132kV Melli-Rangit	06/07/2017	08:00	11/07/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	SIKKKIM
48 132kV Rangpo-Rangit	06/07/2017	08:00	11/07/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	
132kV Rangit -Rammam	12/07/2017	08:00	19/07/2017	17.00 hrs	ODB	ER-II	Insulator replacement work	WB

				Outages p	roposed in other RP	PCs requiring ERPC ap	proval
1 765KV D/C Sundargarh-Korba Pooling station CKT 1&2	01/06/2017	07:00	02/06/2017	17:00	Daily	OGPTL	for Overhead Hot Line Stringing of U/C 400KV D/C OPGC- Sundargarh (IB Thermal)Transmission line(of OGPTL) at OGPTL Location numbers AP 5- AP6 (PGCIL tower Nos: 4-5)
2 400KV D/C Sundargarh-Raigarh (CKT-1&)Rourkela-Raigarh (CKT 2)	04/06/2017	07:00	05/06/2017	17:00	Daily	OGPTL	for Overhead Stringing of U/C 400KV D/C OPGC- Sundargarh(IB Thermal) Transmission line(of OGPTL) at OGPTL Location numbers AP 23/0- AP24/0(PGCIL tower Nos: 797-798)
3 SWITCHABLE LR_765kV_JHARSUGUDA 2_D'JAIGARH	07/06/2017	06:00	07/06/2017	15:00	Daily	WRTS-I	AMP WORKS OF CB
4 SWITCHABLE LR_765kV_JABALPUR 1_D'JAIGARH	10/06/2017	06:00	10/06/2017	15:00	Daily	WRTS-I	AMP WORKS OF Reactor
5 SIPAT- RANCHI CKT 1 &2	12/06/2017	08:00	17/06/2017	18:00	Continuous	WRTS-I	For attending rectification for Bend Leg at Tower 664 due to tree fallen on the Tower during cyclone.
6 765KV BUS #01 at D'JAIGARH	24/06/2017	06:00	25/06/2017	15:00	Continuous	WRTS-I	For connecting Jharsuguda #03 & #04 bays to 765kV Bus #01
7 765KV BUS #02 at D'JAIGARH	26/06/2017	06:00	27/06/2017	15:00	Continuous	WRTS-I	For connecting Jharsuguda #03 & #04 bays to 765kV Bus #02
8 Talcher_Kolar - 1 & 2	12/05/2017	09:00	30/06/2017	18:00	Daily	SR-2	Hot line Washing
9 Barh_Gorakhpur	07/06/2017	08:00	08/06/2017	18:00	Daily	NR-3	Stringing of LILO of both circuits of Barh to Gorakhpur line at Mothatri GIS SUBSTATION
10 Balia-Patna Ckt-1	05/06/2017	10:00	05/06/2017	13:00	Daily	NR-3	For the Commissioning and On load testing of the newly awarded 05 Nos. CSD for the Line reactors of Ballia Patna Circuits, at Ballia
11 Balia-Patna Ckt-2	05/06/2017	13:00	05/06/2017	17:00	Daily	NR-3	For the Commissioning and On load testing of the newly awarded 05 Nos. CSD for the Line reactors of Ballia Patna Circuits, at Ballia
12 Balia-Patna Ckt-3	06/06/2017	10:00	06/06/2017	13:00	Daily	NR-3	For the Commissioning and On load testing of the newly awarded 05 Nos. CSD for the Line reactors of Ballia Patna Circuits, at Ballia
13 Balia-Patna Ckt-4	06/06/2017	13:00	06/06/2017	17:00	Daily	NR-3	For the Commissioning and On load testing of the newly awarded 05 Nos. CSD for the Line reactors of Ballia Patna Circuits, at Ballia

Annexure-C2.1



**NTPC** Limited (A Gov. of India Enterprise)

Kahalgaon

Dated: 20th May '17

Ref. no.: Kh5:092:GM/O&M/

To, The General Manager POSOCO ERLDC KOLKATA- 700 033

#### Sub: Planned shutdown of Kahalgaon STPS Unit-4, reg

Dear Sir,

This is with reference to the planned shutdown of Kahalgaon STPS Unit-4 which was originally planned from 01/11/2017 and Unit-1 from 01/06/2017. The overhauling schedule of these two units was swapped and then Unit-4 was to be taken under overhaul from 01<sup>st</sup> June'2017. But due to the fast depleting coal stock of Kahalgaon STPS on account of less coal receipt from the linked Lalmatia mines(ECL), it has become necessary to take out of bar at least one of the units so that the rest of the units can survive with the available stock and daily received coal quantity.

At present we are left with just three days coal stock and once it comes down below two days stock we will not be having any option but to take out units one by one on account of coal shortage. To avoid such situation we are planning to pre-pone Unit-4 overhauling and to take under O/H from 28<sup>th</sup> May'2017. We have mobilized the overhauling groups and all efforts are being made to complete the Capital overhauling with DDCMIS renovation within the stipulated time of 35 days.

This is for your kind information and necessary action please.

Thanks and Regards,

#### esacuse

(S. SARKAR)

GENERAL MANAGER (O&M) Kahalgaon Super Thermal Power Station, NTPC Limited P.O. Kahalgaon STP, Bhagalpur, Bihar- 813214.

Copy to: i) GM (OS, ER1HQ, Patna) ii) Member Secretary, ERPC, Kolkata (for kind information please)

### पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)



POWER GRID CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)

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

Ref. No: ODP/BB/AM/TLM/

Date: 23.05.2017

To

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

Sub: Request for approval of deemed availability for the Insulator replacement works at NH/SH/ River/ Power line/ Railway crossings in various transmission lines of Odisha in 133<sup>nl</sup> OCC.

Dear Sir,

During insulator de-capping, conductor is grounded and if such incident occurs in crossing span of other transmission line/ Railway line/ Road/ River, consequential effects are much higher. To minimize consequential effects in case of de-capping the above said crossing spans will be provided with puncture proof Composite Long Rod 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. Tentative program for insulator replacement of the remaining lines have been scheduled in June'2017 as follows:

SL No.	Name of the Line	Date	Time	Date	Time	Remarks
1	400 KV Rengali-Indravati S/C Line	21.06.2017	07:00	24.06.2017	18:00	ODB
2	400KV Rourkela-Talcher#2	10.06.2017	09:00	12.06.2017	18:00	ODB
3	400KV Sundargarh-Raigarh#2	16.06.2017	08:00	18.06.2017	18:00	ODB
4	400KV Rourkela-SEL#2	08.06.2017	08:00	09.06.2017	18:00	ODB
5	400KV Rourkela-Sundargarh#2	04.06.2017	08:00	05.06.2017	18:00	ODB

It is requested that shutdown proposed for the said lines in the 133<sup>rd</sup> OCC may please be approved & deemed availability for the shutdown may please be granted.

Regards.

(A.K.Behera) Dy. General Manager(AM), POWERGRID, Odisha Projects

Copy for kind information : GM(AM), POWERGRID, Odisha Projects.

कारपोरेट सेन्टर : 'सौधमिनी', भट मं.2, सेक्टर-29, दुरूगांव (इरियान) – 122.001, दुरभाष :0124-2571700 to 719, फैल्स: 0124-2571780, 2571848 Corporate Centre: 'SAUDAMINI': Plot No.2, Sector-29, Gurgaon (Haryana) – 122001, Tel:0124-2571700-719, Fax: 0124-2571780, 2571848 प्रेडीकृत कार्यलय : मै.9, कुनुन इंग्टेटोट्रुशनत इरिया प्राई, नई दिल्ती – 110016, Registered Office: B.9. Outub Institutional Area, Katwara Sara, New Delh-110016 EPARX : 011-26560112, 26560121, 76564892, Website: http://www.powergridindia.com



पूर्वी क्षेत्रीय भार प्रेषण केन्द्र, 14, गोल्फ क्लब रोड, टालिगंज, कोलकाता 200033 EASTERN REGIONAL LOAD DESPATCH CENTRE, 14, Golf Club Road, Tolygunge, Kokata 200033 Tel / दुराभाष: 033 2423 5867/5875 \* Fax / फैक्स: 033 2423 5809/5704/5029 \* E-mail / ई-मेल: eride@posecb.in

ERLDC/KPI/2017/April/285

To,

Member Secretary Eastern Regional Power Committee 14, Golf Club Road, Kolkata – 33

Sub: Reporting of voltage deviation indices (VDI) for select S/Stns in ER, for April 2017

Dear Sir,

For complying with regulation 29(6) of CERC (Fees & Charges of Regional Load Despatch Centres and related matters) Regulations 2015, RLDCs / NLDC, are required to compute the Key Performance Indicators on annual basis, for the previous year ending on 31st March.

Further, as per MOU signed between POSOCO and MOP, RLDCs have to every month supplement the voltage deviation index (VDI) reported among other parameters by NLDC to CERC/RPCs, by computing the index for additional buses within the region and furnishing the same to RPC every month, as part of regular OCC agenda.

Enclosed please find VDI for select 400kV buses of Eastern Region, computed for the month of April, 2017, for deliberation in 133<sup>nt</sup> OOC meeting of ERPC.

Thanking you,

Yours faithfully,

Date: 09-05-17

(P. Mukhopadhyay)

General Manager

Encl: As stated

पंजीकृत एवं केन्द्रीय कार्यालय : प्रथम तल, ची-9, कुतुब इंस्टिट्यूशनल एरिया, कटकारिया सराथ, नई दिल्ली - 110016 Registered & Corporate Office : 1st Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110016 Websile - www.posoco.in, E-mail : posococc@posoco.in
F	Ranchi Nev	11	J	amshedpu	ur .	7	Auzaffarpu	ır
MAX	MIN	VDt (% of Time)	MAX	MIN	VOI (% of Time)	MAX	MEN	VDI (% of Time)
798.70	754.20	0.06	429.58	412.70	63.61	421.49	379.57	0.11
1	Bihar Sarif	Ŷ		Binaguri	(manana and		Jeerat	
MAX	MIN	VCI (% of Time)	MAX	MIN	VOF (% of Time)	MAX	MIN	VDI (% o Time)
422.78	391.36	0,76	428.50	394.17	3.71	425.36	0.00	2.23
	Rourkela			Jeypore			Koderma	
MAX	MIN	VDI (% of Time)	MAX	MIN	VDL(% of Time)	MAX	MIN	VDI (% o Time)
414.34	0.00	0.00	436.15	0.00	0.42	426.00	0.00	7.02

VDI of select 400KV and 765Kv s/s in Eastern Region April-2017

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4

MAX

419.27

 
 MIN
 VDI (% of Time)
 MAX
 MIN
 VDI (% of Time)
 MAX
 MIN

 0.00
 0.00
 428,34
 387,88
 0.63
 426,85
 385.72

VDF (% of Time)

0.53





## Power System Operation Corporation Ltd.

# **130 OCC Meeting**

# At ERPC, Kolkata 26<sup>th</sup> May, 2017 ER Grid Performances

ERLDC POSOCO

# Highlights for the month of April-17

**Frequency Profile** 

Average Freq:- 49.99 Hz Avg FVI: - 0.04 Lowest FVI:- 0.03

Max- 50.26Hz on 30<sup>th</sup> Apr 17 Min- 49.66 Hz on 18<sup>th</sup> Apr 17

74.49% of the time freq was with in IEGC Band

#### **Peak Demand**

ER: 20621 MW on 28<sup>th</sup> Apr 2017 at 19:08 hrs % Growth in Average Demand Met w.r.t. last year- 3.7%

BSPHCL : 3926 MW ; ON 27/04/17 JUVNL: 1216 MW; ON 27/04/17 DVC: 2870 MW; ON 28/04/17 GRIDCO: 4312 MW; ON 26/04/17 WB: 8656 MW; ON 13/04/17 SIKKIM: 95 MW; ON 17/04/17

Energy met Max. 426 MU on 29<sup>th</sup> Apr 2017 %Growth w.r.t. last year on Max energy – 2.1%

#### **New Element**

Generating Units- Nil Transmission Lines- 331 ckt Km. ICTs - 500 MVA Line/Bus Reactors- 330 MVAR

**Open Access** STOA transactions approved -260 nos

Energy Approved-1143 MUs

### New Elements integrated in the ER grid (Apr'17) Generating Units

### **Commercial Operation**

– 48 MW DIKCHU-I

### Synchronized

- NIL

### Transmission lines (331 Ckt.km)

- 400 KVDarbhanga-Muzaffarpur-I
- 220kV Samastipur-Darbhanga-S/C
- 220kV Motipur-Darbhanga-I & II
- 80MVAR switchable Line Reactor with 400kV Farakka- Gokarna-I at FSTPS, NTPC
- 500MVA ICT-I at Darbhanga
- 125 MVAR Bus Reactor at Darbhanga
- 125MVAR BR-II at Alipurduar (PG)















0.4

0.2

0.0

Max. 1.4 MU on 14<sup>th</sup> Apr 2017 %Growth w.r.t. last year - 9.1%





#### EASTERN REGIONAL EXPORT



DATE: 24 May 2017 Wednesday



\_\_\_\_\_ Frequency





SHOL - DRWL OWN GEN -DEMD -

TIME ZOOM

Actual

Schedule



ACTUAL MU	ΜΑΧ	MIN	STD	LF	SCHEDULE MU
3.1	139	83	7	0.92	3.44
Time:	14:30	15:00		-	



1,600

1,400

1,200

1,000

800

600

400

200

0

#### ISGS (THERMAL) DC, SCHEDULE & ACTUAL GENERATION DC Actual DATE : 21 May 2017 Sunday Schedule 500 FSTPPST1&2 450 400 350 300 250 200 Nor. DC = 471 Nor. DC = 1497 TM = 824 150 100

200

0:15 1:00 1:45 2:30 3:15 3:15 4:45 5:30 21:15 22:00 22:45 23:30 15 8 3:30 15 8 8 15 15 8 8000 ଚ 8 0:30 ы ы б ö ė ö ö Act MU MAX MIN STD UI schd MU 29.71 1492 878 201 -0.63 30.33 05:45 18:45 Time:



Act MU	MAX	MIN	STD	UI	schd MU
15.2	722	477	63	-0.63	15.87
Time:	16:30	18:30			



	8.8	460	291	52	-0.18	9.00	
	Time:	14:45	17:45				
1,600 -		KHST	PP ST 2	)			
1,400 - 1,200 -		*					
1,000 -							
800 -							
600 -		<b>•</b> • • •			TM = 7	78	
400 -	– Nor. D	C = 14	14		1101 - 7		

0																
	0:15 - 1:00															

ſ	Act MU	MAX	MIN	STD	UI	schd MU
	25.9	1418	791	215	0.10	25.83
	Time:	15:30	22:15			



#### ISGS (THERMAL) DC, SCHEDULE & ACTUAL GENERATION

Sunday

21 May 2017





DATE :



Act MU	MAX	MIN	STD	UI	schd MU
20.7	934	788	37	-0.47	21.16
Time:	23:45	17:45			

Act MU	MAX	MIN	STD	UI	schd MU
39.6	1745	1295	85	39.65	0.00
Time:	13:15	03:15			









Teesta Sch vs Act drawal and Deviation curve from 01-04-17 to 30-04-17 (Actual Max=532MW; Min=-1MW; Min Freq.=49.76Hz)









sudden rain In Catchment Area

# **PMU OBSERVATION**

 70 Kv Dip in B phase voltage of 400 kv Rangpo-Binaguri line is observed During that period on Binaguri PMU



# Continued..

 Power flow and Oscillation on 400 KV Binaguri-Rangpo line(in MW) :( Zoomed time range )



# Generators in E3 bid area (w.e.f. 1<sup>st</sup> June,17)

Generator	Connectivity (MW)	LTA operationalized	NOC Quantum for STOA (MW)
Teesta-V	561 (10% O/L)	561 (10% O/L)	NIL
Teesta-III	1200.0	NIL	1200.0
Dikchu	48.0	NIL	48.0
Jorethang	105.6 (10% O/L)	NIL	105.6 (10% O/L)
Chuzachen	108.9 (10% O/L)	NIL	108.9 (10% O/L)
Tashiding (yet to commission)	97.0	NIL	NIL
Total	2120.5	561	1462.50

### National Load Despatch Centre

### Export of Sikkim (E3) Transfer Capability for June 2017

### Issue Date: 17/5/2017

Issue Time: 1200 Hrs

Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA) Medium Term Open Access (MTOA) #	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments			
1st June 17 to 30th June 17	00-24	1515	Q	1515	555	960					
Limiting Cons	straints	(N-1) continger	ncy of 400 kV :	Ranpo - Binaga	n D/C criticially ov	erloads the other ci	reuit				
Note-1		Power stations within E3 include Teesta V HEP (510 MW). Teesta III HEP (1200 MW), Chujachen HEP (99 MW). Jorethang Loop HEP (96 MW), Dikchn HEP (96 MW), Tashiding HEP (97 MW)									
Note-2		LTA of 555 M	W is considered	l against Teesta	+V HEP						



