

## **Eastern Regional Power Committee**

### **Salient Decisions taken in 111<sup>th</sup> OCC meeting held on 24.07.15**

1. OCC advised BSPTCL & JUSNL to cooperate and carry out re-tensioning of the 132 kV Kahalgaon(NTPC) - Lalmatia line near to KhSTPS so that the clearance can be achieved between R and Y phase for safe operation of line.
2. OCC agreed to explore for reserve shutdown of one or more unit(s) of NTPC for significant period if the station schedule were less than technical minimum till CERC guideline comes out in this regard.
3. OCC advised secretariat to convene a special meeting to resolve the issue related to synchronization of IBEUL unit #1 if situation demands with all concerned parties.
4. OCC recommended for procurement of 110 Laptops with special interface for downloading the SEM data.

## **Eastern Regional Power Committee**

### **Minutes of 111<sup>th</sup> OCC Meeting held on 24<sup>th</sup> July, 2015 at ERPC, Kolkata**

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

#### **Item no. A.1: Confirmation of minutes of 110<sup>th</sup> OCC meeting of ERPC held on 29.06.2015**

The minutes were uploaded in ERPC website and circulated vide letter dated 07.07.15 to all the constituents. No comments were received till date.

Members may confirm the minutes.

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

*Members confirmed the minutes of 110<sup>th</sup> OCC Meeting.*

### **PART B**

#### **Item no. B.1: Furnishing data on Power Purchase Agreements (PPA)**

You are aware that Central Electricity Authority has been collecting data from different sources on various aspects of the power sector, to disseminate the information to all the stakeholders of the sector. As a part of the process, CEA decided to build a data base on Power Purchase Agreements (PPAs) which are required for assessing the installed generation capacity available in the states. Accordingly, a format was devised to collect the data from all the DISCOMs on a regular basis, for analysis and report on various PPA- related issues. The format is given at **Annexure-B.1**. This data would be used to make policy decisions for the overall development of the power sector and to bring out a quarterly publication for stake-holder benefit.

Therefore, constituents are requested to furnish the details of PPAs (long, medium and short term) from existing and proposed power plants as per the format to CEA by mail (email: [rmrao@nic.in](mailto:rmrao@nic.in) and [rstomar@nic.in](mailto:rstomar@nic.in)) with a copy to this office by mail ([mserpc-power@nic.in](mailto:mserpc-power@nic.in))

Members may send the requisite information.

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

*OCC requested all the constituents to submit the requisite details of PPAs as per the format to CEA by mail as given above with a copy to ERPC.*

*It was informed that Bihar has already submitted the data.*

*Other constituents agreed to submit the details at the earliest.*

#### **Item no. B.2: Commissioning of 400/220KV, 315MVA spare ICT of regional pool in place of failed 315MVA ICT-I at Biharsharif Substation.**

400/220KV, 315MVA ICT-I of Biharsharif Substation was failed and completely burnt due to frequent severe fault in downstream system causing failure of Y&B phase bushing of IV Side (220 KV side) at 15:24 Hrs on 08.06.2015. The failed ICT was completely burnt and beyond repair.

In order to have early restoration of power-flow in Bihar, it is to inform that the spare 400/220KV, 315MVA ICT available as regional pool kept at Biharsharif Substation will be commissioned in place of failed 315MVA ICT-I at Biharsharif Substation.

Members may note.

### **Deliberation in the meeting**

*Powergrid informed that the ICT was subjected to abnormal stress during its years of service because of exposing the same to clear downstream faults.*

*On enquiry, Powergrid informed that the ICT was completely burnt out and it may not be repairable, however, the details will be shared after completion of investigation.*

*OCC advised Powergrid to place the investigation report before OCC.*

*OCC advised constituents to share their views on proposal for replacement of the spare.*

### **Item no. B.3: 11KV Auxiliary power supply of Powergrid Substation.**

#### **a) 11KV Aux. power supply at 400/220KV Patna Substation:**

The 11 KV auxiliary power supply at 400/220KV Patna Substation has been fed through 11 KV Sampatchak-Gaurichak rural feeders. The quality & reliability of above aux. power supply is extremely poor. The outage is more than 35% with maximum daily outage of even 24 hours. Also per day tripping is more than 20.

The matter has been up repeatedly with SBPDCL in the past but no improvement has been noticed. In view of unreliable 11KV aux. Supply, M/s SBPDCL has been requested, several times, in the past for a new connection for 400/220KV Patna Substation with same contract demand as existing i.e.420 KVA, through a dedicated 11KV feeder/cable.

Therefore, Powergrid has proposed to provide 11KV dedicated feeder in order to improve the quality and reliability of 11KV aux. supply at 400/220KV Patna Substation. Also, it is requested to improve the quality and reliability of existing feeder supply until a dedicated 11KV feeder is to be provided by M/s SBPDCL.

Members may discuss.

### **Deliberation in the meeting**

*OCC advised Powergrid to sort out the issue in cooperation with Bihar.*

#### **b) Auxiliary Supply of Rangpo 400/ 220/ 132KV Substation:**

At present the 11KV feeder used for the auxiliary supply of Rangpo 400/ 220/132KV Substation is not reliable. There is frequent outage of the feeder. For reliable auxiliary supply a 11KV dedicated had been constructed from Namthang Substation of Sikkim Energy and Power Department on deposit basis. POWERGRID had already deposited the entire amount as per the demand note submitted by Energy and Power Department of Sikkim. The Namthang substation had already been commissioned. However the 11KV dedicated feeder has not been charged till date.

Rangpo Substation is a very important substation and reliability of auxiliary power of Rangpo is very essential. In view of above, the charging of 11KV dedicated feeder to Rangpo Substation is required to be done at the earliest.

Members may discuss.

### **Deliberation in the meeting**

*Sikkim informed that the 11 kV dedicated feeder will be charged within next 10 days.*

#### **Item no. B.4: In-sufficient clearance between R & Y Phase of 132 KV Kahalgaon (NTPC)- Lalmatia line.**

NTPC vide mail dated 11.07.15 reported that similar (to 1<sup>st</sup> July, 2015's fault) phase to phase (R-Y) fault occurred on 11<sup>th</sup> July 2015 during stormy weather at 16:14 hrs in 132 KV Kahalgaon (NTPC)- Lalmatia line at 100 meters from NTPC Kahalgaon end. Distance numerical relay installed in said line recorded approx 12 KA fault current in R & Y phase. KhSTPS station LT auxiliaries were adversely affected during this incident due to excessive dip in system voltage. It may please be noted that similar fault in same phase at same distance are repeatedly occurring in recent past. This may lead to unit tripping in future due to tripping of Unit LT auxiliaries.

Further, NTPC placed the following findings/defects after checking at NTPC end & its nearby proximity regarding aforesaid incidents:-

1. Between 132 KV Kahalgaon(NTPC)- Lalmatia line gantry to 1st tower of said line from NTPC Kahalgaon, It seems that line clearance between R & Y phase is not sufficient & it becomes very less during stormy weather resulting into heavy fault. Even sometimes, heavy sound/light was also observed during tripping. Specified location is inside NTPC premises but said line is property of JUSNL.
2. Some conductor string in Y phase of 132 KV Kahalgaon (NTPC) - Lalmatia line at mentioned location found wrecked & open. Location is approx 100 meters from 132 KV Kahalgaon (NTPC) - Lalmatia bay.

On 11.07.15 representative of BSPTCL Kahalgaon was called to visit the site after tripping & their team has provided short-term solution by winding the open conductor strings & made ready to charge the line but insufficient clearance between R & Y phase is still a serious threat for NTPC, Kahalgaon.

Therefore, it is requested to advise concerned utility to take up this issue on emergent priority basis for permanent solution i.e. providing sufficient clearance between R & Y Phase so that such heavy fault can be avoided in future.

JUSNL/ NTPC/ BSPTCL may update.

### **Deliberation in the meeting**

*JUSNL informed that though the line is owned by JUSNL, the O&M of the line from tower location no 1 to 49 is under the jurisdiction of BSPTCL and from location no 49 to rest up to Lalmatia is looked after by JUSNL. Since the defects are at Kahalgaon end the same has to be rectified by BSPTCL.*

*However, BSPTCL informed that they need specific direction from JUSNL to carry out the above job.*

*OCC advised BSPTCL & JUSNL to cooperate and carry out re-tensioning of the line near to KhSTPS so that the clearance can be achieved between R and Y phase for safe operation of line.*

**Item no. B.5: Generation schedule below technical minimum**

NTPC vide fax message dated 13.07.15 informed that FSTPS Stage I & II, KhSTPS Stage I & Barh generation schedule are being given below technical minimum limit. (09/07/15- block no. 63 to 74, 10/07/2015- block no. 24 to 72 & 11/07/2015- block no. 13 to 44 & 61 to 73). Due to generation schedule less than technical minimum, units are kept running with oil supports to maintain the generation level near to schedule. It is further to mention that matter of technical minimum was discussed in the 100th OCC meeting of ERPC and NTPC has circulated the documents related to technical minimum to the constituents. In Eastern Region technical minimum limit of generator is 70%. If at any point of time demand crashes and it is difficult to maintain the safe grid operation then reserve shut down of one or more units of ISGS will help the grid. The period of reserve shut down of any unit should not be less than four days as frequent start & stop will reduce the life of plant and the thermal units are not designed for frequent start & stop. Though reserve shut down is having negative financial implication due to oil consumption during start up & shutdown & high APC but still NTPC prefers reserve shut down with respect to generation schedule less than technical minimum of 70%.

NTPC may elucidate.

**Deliberation in the meeting**

*NTPC informed that if the NTPC station schedule is less than 70% (technical minimum limit of generators) for considerable period of time, then NTPC may be allowed to go for reserve shutdown of one or more unit(s) for significant period. The demand of constituents will be met from rest of the running units and it will help the grid also.*

*WBSEDCL also pointed out that if beneficiary constituents ask for back down of 200 MW from schedule drawl for considerable period (3-4 days), it needs to be allowed by NTPC.*

*NTPC informed that if other beneficiaries also back down from schedule drawl or the station schedule is less than the technical minimum limit they will go for reserve shutdown.*

*On enquiry it was informed that in Northern Region the same is followed.*

*Pending further deliberation OCC agreed to explore the same if the station schedule were less than technical minimum till CERC guideline comes out in this regard.*

**Item no. B.6: Appointment of Consultant to conduct the study/ Analysis to ensure Secure and Reliable Operation of National Grid**

MoP vide order dated 16.07.2014 constituted a Grid Study Committee under the chairmanship of Member (GO&D), CEA to facilitate the study/analysis by consultants to ensure secure and reliable operation of National Grid. The process of appointment of two consultants is under way.

In 30<sup>th</sup> TCC meeting, in line with the decision of 1st meeting of the Grid Study Committee held in CEA on 22.05.2015 under the Chairmanship of Member (GO&D), CEA, it was decided that Sh. M.R. Mohanty, Sr. GM, OPTCL, will act as the principal nodal officer for Eastern Region.

Further, 30<sup>th</sup> TCC/ERPC advised all utilities viz. TRANSCO (STU), GENCOs, DISCOMs & SLDC of States to nominate two nodal officers at the level of Chief Engineer/General Manager from each constituent under the principal nodal officer and communicate the same to secretariat within a week.

In 110<sup>th</sup> OCC, It was informed that OHPC has nominated their nodal officers.

OPTCL, WBSETCL also submitted their nominations for nodal officer.

OCC advised all other utilities/states to nominate two nodal officers at the level of Chief Engineer/General Manager.

Subsequently, DVC, NHPC, CESC, DPL, WBPDC, NTPC ER-II have submitted the nomination for nodal officer.

BSPTCL, JUSNL, Sikkim, Powergrid, SSL, MPL and GMR may submit their nominations.

### **Deliberation in the meeting**

*It was informed that OPGC and BSPTCL have already submitted the name of nodal officer.*

*JUSNL informed that the proposed nominees of JUSNL are:*

- i. Shri Ajay Prasad, CE, CRITL*
- ii. Shri Subhas Mishra, CE, SLDC*

*However, the confirmation letter will be forwarded after the approval of competent authority.*

*Other constituents who submitted the nominees of nodal officer are as given below:*

- 1) NTPC, ER-I: Shri Chinmoy Sarkar, AGM, KhSTPS & Shri Anil Kumar, DGM, ER-I, Patna*
- 2) Powergrid, ER-I: Shri M. K. Jha, CM, ER-I, Patna*
- 3) Powergrid, ER-II: Shri Jiten Das, Asst. GM, ER-II, Kolkata*
- 4) GMR KEL: Shri Pradeep Mohanty, GM (Electrical)*
- 5) MPL: Shri A. K. Nayak, GH (Electrical)*

*OCC advised Sikkim, WBSEDCL, Powergrid-Odisha and SSL to nominate their nodal officer at the earliest.*

### **Item no. B.7: Identification of nodal officers on signing of MOU between ESSO-IMD and POSOCO -- ERLDC**

A MOU was signed on 18<sup>th</sup> May, 2015 between Earth System Science Organization-Indian Meteorological Deptt(ESSO-IMD) for synergy in the management of Indian Power System and weather related impact. Subsequent to signing of the MOU the following course of action was decided:

- a) Identification of two nodal officers from both sides at each level viz. National/Regional/State: Accordingly the names of two nodal officers for each SLDC/CLD alongwith contact numbers and e\_mail addresses may be provided.
- b) List of officers to avail SMS facility from IMD for extreme weather conditions: Names and contact details may be provided.
- c) Identification of stations for which weather data is required:

A list of stations is to be provided along-with the required weather parameters. The Station names are to be supplemented with the nearby city name, district name and State name. Accordingly, ERLDC has already prepared a tentative list and circulated.

SLDCs/CLD may kindly furnish the above required data and confirm or intimate any discrepancies regarding the list.

*In 110<sup>th</sup> OCC, house was informed that the requisite information is yet to be received from the constituents except Odisha. OCC advised all constituents to furnish the relevant information.*

*Subsequently, WBSETCL has submitted the list of officers for WBSLDC to avail SMS facility from IMD for extreme weather conditions.*

Members may update.

### **Deliberation in the meeting**

*It was informed that all the constituents have submitted their nodal officers except Sikkim and JUSNL.*

*JUSNL and Sikkim agreed to submit the nodal officer's name within a week.*

#### **Item no. B.8: Synchronisation of Unit #1 (350 MW) of Ind Barath Energy (UTKAL) Ltd. (IBEUL) with the Grid**

In 110<sup>th</sup> OCC, IBEUL was advised to place formal proposal to ERLDC for test synchronization with all details along with specific authorization from CTU for using the LILO for injection of in-firm power.

#### **Shutdown of PGCIL 220KV Budhipadar-Korba Ckt-3 Lines during Construction of 400 KV Transmission Line of Ind-Barath Energy (Utkal) Ltd. Jharsuguda**

Ind-Barath vide mail dated 14.07.15 has intimated that there are certain points on the proposed line which need to cross the PGCIL Lines, so they would be requiring shutdown for the same, during the stringing of conductors across the PGCIL Lines. The crossing, along with the tentative dates required for the shutdown, is given below:

Sl No	Name of the PGCIL Line to Be Crossed	PGCIL Crossing Location Nos	Corresponding Ind-Barath Towers	Tentative Dates for Shutdown	Approx Duration of Shutdown
1	220 KV S/C Line Budhipadar-Korba (CKT-3)	21(A+0) 22(B+0)	28/0(DD+18) 28A/0(DD+18)	25 <sup>th</sup> /26 <sup>th</sup> July 2015	8 hrs

Members may discuss.

### **Deliberation in the meeting**

*OCC agreed to allow the shutdown on 28<sup>th</sup> /29<sup>th</sup> July, 2015 subject to NLDC clearance.*

*Further, Ind-Barath informed that they had a meeting with CTU, NLDC and CEA on 8<sup>th</sup> July, 2015 regarding synchronization of their unit. Once again they requested OCC to allow their generator to be synchronized with the grid for commissioning activities with the present LILO as their line is expected to be commissioned by September, 2015.*

*GRIDCO stated that they are interested in getting power from Ind-Barath and early commissioning is recommended. Moreover, GRIDCO citing examples of LILO in respect of GMR, JITPL and Sterlite opined that since the generator is ready for synchronization it should be allowed.*

*OCC clarified that the clearance for injection of power through LILO is to be given by CTU. Accordingly IBEUL was advised to apply for test synchronization to ERLDC and for grid connectivity to CTU respectively.*

*OCC advised secretariat to convene a special meeting to resolve the issue if situation demands with all concerned parties.*

#### **Commissioning of 400 kV Ind-Bharath to Jharsuguda D/C (dedicated line)**

In 110<sup>th</sup> OCC Ind-Bharath informed that:

- 119 towers out of total 125 towers have been completed; remaining 6 towers will be completed by Aug, 2015.
- Stringing work for 10 km out of 40km line is pending.

Ind-Bharath may update the status.

### **Deliberation in the meeting**

*Ind-Bharath updated that:*

- *120 towers foundations out of total 125 towers have been completed and 117 have been erected; remaining 5 towers will be completed by Sept, 2015.*
- *Stringing work for 32 km line is completed.*
- *Line is expected to come by September, 2015.*

### **Item no. B.9: Status of PLCC system installed in Eastern Region**

In 30<sup>th</sup> TCC/ERPC, Powergrid agreed to restore the PLCC system at both ends (its own end as well as the constituent end) of a line wherein the other ends are not operational for some reasons or others as one time job.

TCC advised Powergrid to submit the survey report along with roadmap and requirement for restoration of PLCC system.

In 110<sup>th</sup> OCC, Powergrid informed that survey has been completed and the estimate is under preparation.

OCC advised Powergrid to place the complete survey report along with the estimate for restoration of PLCC.

Powergrid may update the status.

### **Deliberation in the meeting**

*Powergrid requested for joint survey with the utilities for their respective Sub-stations for preparing the list of detailed requirements.*

*But OCC expressed that locations are already identified and as per ERPC decision Powergrid has to rectify the PLCC system at both ends (its own end as well as the constituent end) of the identified line wherein the other ends are not operational for some reasons or others as one time job. Therefore to complete the job Powergrid has to place their requirement for which fresh joint surveys are not needed.*

*OCC advised Powergrid to place their requirement along with cost estimate as per the Powergrid norms.*

*Powergrid agreed.*

### **Item no. B.10: Future requirement of Special Energy Meters and DCDs ---Powergrid**

30<sup>th</sup> TCC approved and recommended to ERPC for approval of procurement of SEM meters as per list finalized in 109<sup>th</sup> OCC.

ERPC concurred the proposal

In 110<sup>th</sup> OCC, Powergrid informed that the procurement process will be initiated by next month.

Subsequently, on enquiry from Powergrid regarding procurement of new DCD/Laptops, ERLDC intimated since the no. of new location is 104, we may go for procurement of approximate 110 DCD / Laptop in Eastern Region.



ERLDC/Powergrid may update.

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

*OCC recommended for procurement of 110 Laptops with special interface for downloading the SEM data.*

- a) In 109<sup>th</sup> OCC, OPTCL requested for replacement of seven nos. of existing DCDs.

OCC advised Powergrid to do the needful.

In 110<sup>th</sup> OCC, Powergrid Odisha-projects informed that spare DCDs are now available and OCC advised to replace the defective DCDs. Powergrid Odisha-projects agreed.

Powergrid and OPTCL may update.

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

*Powergrid-Odisha informed that the DCDs are still under repair; after the repairing DCDs will be handed over to OPTCL.*

- b) MPL vide mail dated 15.07.15 informed that:

- Three nos of following SEM's are not responding through DCU since May, 2015:
  - a) GT-2 : Serial no. NP-7496-A
  - b) RMRBL-1 (Main) : Serial no. NP-7854-A
  - c) RMRBL-2 (Main) : Serial no. NP-7382-A
- DCD is not working properly, it needs replacement. It has been communicated to PGCIL, Maithon.
- OPGW cable work is completed, but its panel erection and commissioning is pending.

MPL/ Powergrid may update.

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

*OCC advised Powergrid to check the SEMs and if needed it may be replaced.*

*Powergrid, ER-I informed that out of 45 DCDs, 43 DCDs have been repaired and 2 are un-repairable and presently 17 DCDs are available, so 1 DCD can be given to MPL.*

*OCC advised MPL to collect the DCD from Powergrid.*

#### **Item no. B.11: Status of UFRs healthiness installed in Eastern Region**

Certification for the month of June, 2015 is received only from DVC only.

Members may update.

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

*It was informed that UFR healthiness certificate for the month of June, 2015 has been received from all the respective constituents.*

**Item no. B.12: Healthiness of SPS existing in Eastern Region**

In 107<sup>th</sup> OCC, all constituents agreed to check the SPS system under their control area and submit the healthiness certificate on monthly basis.

110<sup>th</sup> OCC advised all the concerned utilities to submit formal healthiness certificate for their respective parts in SPS.

Members may submit the healthiness certificate for June, 2015.

**Deliberation in the meeting**

*Powergrid-Odisha informed that on 26<sup>th</sup> June, 2015 test was carried out and report was submitted.*

*SSL informed that the SPS is healthy.*

*OCC advised ER-II and Chuzachen to submit the healthiness certificate of their respective SPS.*

**Item no. B.13: Handing over of O & M of 220 kV Farakka –Lalmatia transmission system**

30<sup>th</sup> ERPC advised JUSNL to place a roadmap to ensure proper O&M of Farakka- Lalmatia Transmission system in line with the decision taken in the special meeting of 24.03.2015 within a week to ERPC.

In 110<sup>th</sup> OCC, JUSNL informed that ECL is not cooperating for joint survey of the line so they are collecting legal documents related to this line to file petition before JSERC.

JUSNL may update.

**Deliberation in the meeting**

*JUSNL informed that they are seeking legal view from their legal section for filing the petition before JSERC.*

*Member Secretary informed that ERPC Secretariat has received a letter from ECL Pleader regarding filling of a petition on the issue before Hon'ble High Court, Kolkata.*

**Item no. B.14: Installation of polymer insulators on New Transmission lines**

In the 30<sup>th</sup> ERPC Meeting held on 20.06.2015, Powergrid representative delivered a brief presentation highlighting the benefits of Polymer insulators vis-à-vis porcelain/anti-fog disc type insulators mainly on account of high number of trippings of transmission lines due to flashover of insulators.

Powergrid proposed the scheme for new transmission lines as well as the existing ones and at the same time assured that there would be no extra financial burden on the constituents for replacement of the insulators.

Powergrid was advised to submit a detailed roadmap for implementation of this scheme along with other requisite details.

In 110<sup>th</sup> OCC, Powergrid informed that procurement action has been initiated and within two three months it is expected to be completed. It was further informed that as advised by 30<sup>th</sup> ERPC the roadmap for replacement will be placed on ascertaining the exact position of availability of insulators.

OCC advised Powergrid to place the roadmap and tentative shutdown plan in next OCC meeting.

Powergrid may update.

### **Deliberation in the meeting**

*Powergrid informed that the order had been placed for polymer insulator with delivery schedule of four (4) months. The details will be placed shortly.*

## **Item no. B.15: Status of Islanding Schemes of Eastern Region**

### **B.15.1: 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, WBPDC
2. Tata Power Islanding Scheme, Haldia
3. 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.

110<sup>th</sup> OCC advised all the concerned utilities to submit formal healthiness certificate for their respective Islanding Schemes.

WBSETCL has submitted the certificate for UFR healthiness in respect of Tata Power Islanding Scheme, Haldia and BkTPS Islanding Scheme for June, 2015.

DVC has submitted the certificate for UFR healthiness in respect of CTPS Islanding Scheme for June, 2015.

CESC has also submitted the healthiness certificate of their Islanding scheme.

Members may note.

### **Deliberation in the meeting**

*Tata Power informed that after failure of survival of Islanding operation of Tata Power, Haldia on 09.06.15, Over frequency trip settings of TPH units has been increased from 52.5Hz to 53.0Hz after consultation with OEM. Time delays are 2sec for U#3, 4sec for U#1 & 6sec for U#2.*

*Members noted.*

### **B.15.2: FSTPS Islanding Scheme, NTPC**

In 30<sup>th</sup> TCC meeting, NTPC informed that all panels related to the islanding scheme have been commissioned and their part is ready for implementation.

In 110<sup>th</sup> OCC, JUSNL informed that the payment was cleared on 25.06.2015.

Powergrid informed that the payment has been received from JUSNL and JUSNL part will be implemented tentatively within 6 months.

Powergrid/ JUSNL may update the status.

### **Deliberation in the meeting**

*Powergrid informed that the work has been awarded.*

### **B.15.3: Bandel Islanding Scheme, WBPDC**

In 23rd TCC technical feasibility of new Islanding schemes on Bakreswar and Bandel TPS of WBPDC were placed and approved.

Thereafter, it was also decided that implementation of Bandel Islanding scheme will commence after Islanding Schemes for Bakreswar TPS will be in place.

Since, BkTPS islanding scheme is already in operation implementation of Bandel Islanding Scheme could be taken up.

In 30<sup>th</sup> TCC meeting, WBPDC informed that four numbers of old units (each of 60 MW) at Bandel TPS required to be renovated for implementation of islanding scheme. Unit#5 of Bandel TPS is having capacity of HP, LP bypass of 30% and it is under renovation. However, further detail deliberation is required for implementation of the scheme.

TCC advised secretariat to discuss the technical details of the scheme again in the lower forum of ERPC.

In 110<sup>th</sup> OCC, WBPDC informed that their discussions with SLDC, WBSETCL are going on and details will be placed in next OCC meeting.

WBPDC may place their issues. Members may discuss.

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

*WBSLDC informed that a separate meeting is scheduled to be convened by them for detail discussion for Bandel Islanding scheme. The outcome of the meeting will be placed before next OCC.*

### **Item no. B.16: Concerned members may update the latest status.**

#### **B.16.1. Status of construction of 400 kV Sterlite-Jharsuguda D/C sections**

30<sup>th</sup> TCC felt that there is no considerable progress in construction work in last 4 months.

After detail deliberation, TCC felt that Sterlite is not serious about construction of the line & therefore TCC decided to discontinue the LILO on 1st July, 2015 as per ERPC decision.

30<sup>th</sup> ERPC opined that Sterlite may bring the transmission line before March, 2016, if maximum efforts are given. It was felt that discontinuance of LILO may not be a feasible solution as it may result in a loss of significant generation to the grid.

After detail deliberation, ERPC decided that Powergrid, Odisha would chalk out a draft action plan and design suitable target as far as the construction of these lines are concerned. A team may be formed at ERPC to assist Powergrid, Odisha in finalising the draft plan and on finalising the same the ERPC team should exercise stringent monitoring/assessment of monthly progress made by Sterlite. Sterlite was requested to strictly adhere to the action plan.

Sterlite agreed to complete the construction work as per the monthly target fixed by ERPC team.

In 110<sup>th</sup> OCC, Powergrid Odisha projects informed that the tentative action plan is under preparation and it will be placed before OCC shortly.

On receiving of the tentative action plan from Powergrid-Odisha, OCC advised secretariat, to convene a separate meeting for finalization of the targets.

Powergrid vide mail dated 11.07.15 intimated that a meeting has been scheduled for reviewing the targets.

Powergrid/Sterlite may update.

Sterlite may place present the status.

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

*Powergrid informed that during the meeting they have given some formats which needs to be filled by SSL before finalization of targets.*

*SSL informed that they will submit the formats within 3-4 days.*

*OCC advised Powergrid-Odisha to finalize the targets at the earliest.*

#### **B.16.2. Status of construction of Chuzachen bay at Rangpo S/s.**

In 30<sup>th</sup> TCC meeting, Sikkim informed that MOU has been signed with Powergrid on 24th April, 2015 and the advance payment will be released by next week.

Powergrid informed that they will place the order after receipt of advance payment.

In 110<sup>th</sup> OCC, Sikkim informed that payment has been approved by Government of Sikkim and the advance payment will be made to Powergrid by 15<sup>th</sup> July, 2015.

Sikkim may update.

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

*Sikkim informed that the payment will be released by end of July, 2015.*

#### **B.16.3. Non availability of important bays at FSTPP end**

In 109<sup>th</sup> OCC, NTPC informed that 400kV FSTPP-KhSTPP-IV Tie bay will be charged by 1<sup>st</sup> week of June, 2015.

In 110<sup>th</sup> OCC, NTPC informed that shutdown requisition has been placed.

NTPC may update.

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

*NTPC informed that the scheduled Bus shutdown was not availed by them because of heavy rain on the day. They will complete the work within a month.*

#### **B.16.4. Non-availability of Tie bay of 400kV Sagardighi-Behrampore-II**

In 109<sup>th</sup> OCC, WBPDCI informed that all the bay equipments are available and the tie bay will be commissioned by end of June, 2015.

In 110<sup>th</sup> OCC, WBPDCI informed that the tie bay will be commissioned by end of July, 2015.

WBPDCI may update.

### **Deliberation in the meeting**

WBPDCCL informed that they have got the relay settings and waiting for consultants. The tie-bay will be commissioned by August, 2015.

#### **B.16.5. 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s**

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

In 110<sup>th</sup> OCC, OPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
<b>1.</b>	<b>2x315MVA 400/220kV Bolangir S/s</b>	
a.	LILo of one circuit of Sadeipalli-Kesinga 220 kV D/C line at Bolangir S/S	Dec, 2015 (Severe ROW problem)
b.	LILo of one circuit of Katapalli-Sadeipalli 220 kV D/C line at Bolangir S/S	End of July, 2015
<b>2.</b>	<b>400/220 kV Keonjhar S/S</b>	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	Yet to be awarded
b.	Keonjhar (PG)-Turumunga (OPTCL) 220 kV D/C line	Yet to be awarded
<b>3.</b>	<b>400/220kV Pandiabil Grid S/s</b>	
a.	Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C line	It will take 1 year for completion.
b.	LILo of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG)	End of July, 2015.

OPTCL may update.

### **Deliberation in the meeting**

OPTCL updated the following:

Sl. No.	Name of the transmission line	Completion schedule
<b>1.</b>	<b>2x315MVA 400/220kV Bolangir S/s</b>	
a.	LILo of one circuit of Sadeipalli-Kesinga 220 kV D/C line at Bolangir S/S	5 out of 14 completed. Dec, 2015 (Severe ROW problem)
b.	LILo of one circuit of Katapalli-Sadeipalli 220 kV D/C line at Bolangir S/S	One tower left. End of August, 2015
<b>3.</b>	<b>400/220kV Pandiabil Grid S/s</b>	
a.	Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C line	It will take 1 year for completion.
b.	LILo of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG)	Charged on 15.07.2015.

#### **B.16.6. 220 kV inter-connecting lines of BSPTCL with 2x200 MVA, 400/132 kV sub-stations at Lakhisarai & Banka**

In 30<sup>th</sup> TCC, BSPTCL informed that at present they are drawing power from 400/132 kV Lakhisarai S/s through LILO of 132 kV Lakhisarai (BSPTCL)-Jamui S/C at Lakhisarai(PG).

In 110<sup>th</sup> OCC, BSPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
<b>1.</b>	<b>The 2x200 MVA, 400/132 kV Lakhisarai sub-station</b>	
a.	132 kV Lakhisarai (PG)-Lakhisarai (BSPTCL) D/C line	End of July, 2015
b.	132 kV Lakhisarai-Jamui (BSPTCL) D/C line	End of July, 2015
<b>2.</b>	<b>2x200 MVA, 400/132 kV Banka sub-station</b>	
a.	LILO of 1 <sup>st</sup> circuit of Banka (BSPTCL)-Sabour (BSPTCL) 132 kV D/C line at Banka (PG)	Charged.
b.	LILO of 2 <sup>nd</sup> circuit of Banka (BSPTCL)-Sabour (BSPTCL) 132 kV D/C line at Banka (PG)	Mid Aug, 2015
c.	132 kV Banka (PG)-Sultanganj (BSPTCL) line-I	Completed
d.	132 kV Banka (PG)-Sultanganj (BSPTCL) line-II	Powergrid will complete the bay work by June, 2015.

BSPTCL may update.

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

*BSPTCL updated the following:*

Sl. No.	Name of the transmission line	Completion schedule
<b>1.</b>	<b>The 2x200 MVA, 400/132 kV Lakhisarai sub-station</b>	
a.	132 kV Lakhisarai (PG)-Lakhisarai (BSPTCL) D/C line	End of July, 2015
b.	132 kV Lakhisarai-Jamui (BSPTCL) D/C line	End of July, 2015
<b>2.</b>	<b>2x200 MVA, 400/132 kV Banka sub-station</b>	
a.	LILO of 1 <sup>st</sup> circuit of Banka (BSPTCL)-Sabour (BSPTCL) 132 kV D/C line at Banka (PG)	Charged.
b.	LILO of 2 <sup>nd</sup> circuit of Banka (BSPTCL)-Sabour (BSPTCL) 132 kV D/C line at Banka (PG)	Mid Aug, 2015
c.	132 kV Banka (PG)-Sultanganj (BSPTCL) line-I	Completed
d.	132 kV Banka (PG)-Sultanganj (BSPTCL) line-II	Completed

#### **B.16.7. Charging of 132 kV Dalkhola (WB)-Kishanganj(BSPTCL) S/C in radial mode**

In 108<sup>th</sup> OCC, WBSETCL informed that the line is ready for charging. OCC advised to charge the line in radial mode in coordination with BSPTCL.

In 109<sup>th</sup> OCC, WBSETCL and BSPTCL agreed to charge the line in radial mode from June, 2015.

In 110<sup>th</sup> OCC, BSPTCL informed that Kishanganj load demand is more than 30MW and the line will be charged as and when the demand is reduced to less than 30MW.

OCC advised to charge the line once on trail basis.

WBSETCL/BSPTCL may update the status.

### **Deliberation in the meeting**

WBSETCL informed that the line was charged on 29.06.2015 and 20 MW power extended to Bihar in radial mode.

#### **Item no. B.17: Third Party Protection Audit**

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

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

<b>Name of Constituents</b>	<b>Total Observations</b>	<b>Complied</b>	<b>% of Compliance</b>
<b>Powergrid</b>	54	37	68.52
<b>NTPC</b>	16	12	75.00
<b>NHPC</b>	1	1	100.00
<b>DVC</b>	39	19	48.72
<b>WB</b>	68	14	20.59
<b>Odisha</b>	59	12	20.34
<b>JUSNL</b>	34	11	32.35
<b>BSPTCL</b>	16	4	25.00
<b>IPP (GMR, Sterlite and MPL)</b>	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).

Members may comply.

### **Deliberation in the meeting**

*Members noted for compliance.*

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

In 109<sup>th</sup> OCC, it was decided to start the Protection Audit from June, 2015. In first cluster 400 kV Subhasgram and Jeerat S/S will be audited tentatively in last week of June, 2015.

110<sup>th</sup> OCC decided to start the audit from 2<sup>nd</sup> week of July, 2015.

As decided, the audit of Subhasgram and Jeerat S/Stn was completed on 15/16<sup>th</sup> July, 2015.

The audit plan for August, 2015 is placed at **Annexure- B.17**.

Members may decide the schedule for August, 2015.

### **Deliberation in the meeting**

*Members agreed for audit of sub-station as given in **Annexure-B.17** during August, 2015.*

#### **Item no. B.18: Handing over of 400 kV LILO of Farakka-Subhasgram at SgTPP & 400 kV D/C SgTPP- Parulia line – WBPDC**

During deliberation in 30<sup>th</sup> TCC held on 19.06.15, Powergrid informed that

1. LILO portion will be maintained as per the agreement with WBPDC.



2. Regarding 400kV Sg TPP-Parulia D/C line, the AMC contract will be extended up to December, 2015 and in the meantime WBPDCCL has to plan for alternate arrangement for O&M of this line.

But TCC felt that since 400kV Sg TPP-Parulia D/C line is important element in view of power export to Bangladesh, the line should be maintained by CTU. TCC advised Powergrid to continue the O&M of this line as per the existing commercial arrangement till alternative arrangements are formalised.

Powergrid agreed to extend the maintenance contract for SgTPP-Parulia by 400KV D/C line by another one year.

Further, TCC decided to place the issue again in next standing committee meeting of ER along with the issue of strengthening of transmission network for power export to Bangladesh. ERPC concurred.

WBPDCCL vide mail dated 10.07.15 intimated that Powergrid was requested to submit the draft Agreement for the AMC of the 400 kV SgTPP- Parulia D/C line and 400 kV LILO lines of the Farakka-Subhasgram line for a period of one year from 1/7/15 as per advice of the 30th TCC meeting held on 19/6/15 at Shimla. It was also pointed out that since the last AMC was already expired on 30/6/15, the matter may be put up as early possible.

Powergrid/WBPDCCL may update.

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

*Powergrid informed that internal approval for said agreement has been taken and the same will be forwarded to WBPDCCL shortly.*

#### **Item no. B.19: 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.

Members may note and comply.

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

*Members noted for compliance.*

#### **Item no. B.20: 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, WBPDCCL 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.

Members may note and update the status.

### **Deliberation in the meeting**

*Members noted for compliance.*

### **Item no. B.21: Energy Generation data management from Renewable Energy Sources**

As per Electricity Act, 2003, CEA has been entrusted with the task of collecting electricity generation data. CEA is monitoring all the existing generating stations with capacity more than 25 MW (Conventional sources only). In recent years there has been appreciable growth in generation from Renewable Energy Sources (RES).

In view of above it was decided to monitor all the generating stations under RES connected to the grid and also to bring out month wise, state wise and sector wise report on RES generation in MU including peak generation from RES.

CEA already requested to nominate Nodal officers at the level of SLDC for the above purpose. However, only few states have responded.

Those SLDCs who have not yet nominated the nodal officers for Energy Generation Data management from RES are requested to furnish the details at following email/Fax:

Email: ceaopmwind@gmail.com with a copy to rishika.engineer@gmail.com and s.sewak@cea.nic.in

Nodal officers from CEA: Mrs. Rishika Sharan, Director, CEA, 011-26732663 and 26102263(Fax), Mobile: 9868021299, Mrs. Sarita Sewak, Dy. Director, 011-26732656

SLDCs may note and comply.

### **Deliberation in the meeting**

*Members noted for compliance.*

### **Item no. B.22: Data of Peak Demand**

The peak demand met figure calculated by CEA is a part of the monthly Power Supply Position 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 108<sup>th</sup> OCC, only DVC submitted the data. OCC advised all constituents to submit the data on first week of every month. All constituents agreed.

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.

DVC has submitted the data for the month of June, 2015.

BSPTCL, JUSNL, OPTCL, WBSETCL and Sikkim may submit the data.

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

*BSPTCL and OPTCL submitted the data for June, 2015.*

*OCC advised JUSNL, WBSETCL and Sikkim to submit the data on regular basis.*

#### **Item no. B.23: Restricted Governor Mode of Operation**

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

In 108<sup>th</sup> OCC, ERLDC informed that the RGMO/FGMO response of the generators needs monitoring on continuous basis.

OCC advised ERLDC to intimate the event of sudden drop in frequency to the generators and requested all generators to provide the RGMO/FGMO response data to ERLDC during the said incidents.

In 110<sup>th</sup> OCC, ERLDC informed that there was a generation loss of 1100MW at 19:25hrs on 16<sup>th</sup> June, 2015 and subsequent response of most of the generators were not satisfactory. FRC calculation for Eastern Region was circulated.

OCC advised all the generators to go through and place the response for this event in next OCC meeting.

All generators agreed.

Members may update.

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

*ERLDC gave presentation on FRC response for Talcher- Kolar HVDC tripping at 13:16 Hrs on 26.06.15 and generation loss of 1800MW due to Phagi tripping at 16:26 hrs on 10.07.15. It was informed that subsequent responses of most of the generators were not satisfactory. The FRC response is enclosed at **Annexure- B.23**.*

OCC advised all the generators to go through and submit the response for this event to ERLDC for FRC response.

#### **Item no. B.24: Pollution mapping for Eastern Region**

The Pollution Mapping work in ER was started with on-site measurement of ESDD and NSDD. The latest available status is as follows:

Utility	Scope	Installed Locations	no. of locations where 1st set of Measurements Completed	Remarks
JUSNL	67	27	0	Work is yet to be started.
BSPTCL	59	52	0	Will be started within a week.
WBSETCL	73	70	34	Rest will be completed within a week.
OPTCL	164	102	39	Work is in progress.
Sikkim	12	9	2	No status available.

In 110<sup>th</sup> OCC, Powergrid informed that the 1<sup>st</sup> set of measurements should have been completed by 30<sup>th</sup> June, 2015 however very few measurements were received from the constituents.

OCC advised all constituents to complete the 1<sup>st</sup> set of measurements by 15<sup>th</sup> July, 2015 and send to Powergrid.

All constituents agreed.

Powergrid may update.

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

*Members updated the latest status as given below:*

Utility	Scope	Installed Locations	no. of locations where 1st set of Measurements Completed	Remarks
JUSNL	67	27	0	From 5.6.15, 5 persons entrusted. Sample collection done, measurement yet to be done.
BSPTCL	59	52	0	Will be started from next month.
WBSETCL	73	70	43	Work is in progress.
OPTCL	164	102	82	Work is in progress.
Sikkim	12	9	8	Work is in progress.
Powergrid	40	40	16	Work is in progress.

**Item no. B.25: Mock Black start exercises in Eastern Region – ERLDC****i) The status of black start exercises**

*The schedule of the proposed black-start exercises for F.Y 2015-16 is as follows:*

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		<b>Test-I</b>			
1	U.Kolab	Last week of May, 2015	<b>Done on 16/07/15</b>	Last Week of January 2016	
2	Maithon	1 <sup>st</sup> week of June 2015	<b>Next week</b>	1 <sup>st</sup> Week of October 2015	
3	Rengali	2 <sup>nd</sup> week of June 2015	<b>August, 2015</b>	Last week of November 2015	
4	U. Indravati	3 <sup>rd</sup> week of June 2015	<b>Done on 16/07/15</b>	2 <sup>nd</sup> week of February 2016	
5	Subarnarekha	2 <sup>nd</sup> week of October 2015		1 <sup>st</sup> week of January 2016	
6	Balimela	1 <sup>st</sup> week of November 2015		1 <sup>st</sup> week of March 2016	
7	Teesta-V	2 <sup>nd</sup> week of November 2015		Last week of February 2016	
8	Chuzachen	1 <sup>st</sup> week of May, 2015		2 <sup>nd</sup> week of January, 2016	
9	Sikidri	Done on 9 <sup>th</sup> June, 2015			
10	Burla				

In 110<sup>th</sup> OCC, JUSNL informed that Black Start exercise for SRHP, Sikideri was successfully carried out on 09.06.2015.

OPTCL informed that Black start restoration facility at Burla Hydro station has been restored and it may be included in the schedule.

ERLDC informed that black start exercise of Chuzachen HEP will be conducted in 1st week of July, 2015 with Melli load of Sikkim.

Sikkim agreed to cooperate on getting the confirmation of the exact date of black start exercise.

ERLDC may update.

**Deliberation in the meeting**

*Members updated the status as given above table.*

**ii) 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 for compliance.*

**Item no. B.26: Restoration of SCADA data**

Updated latest status is circulated in the meeting. During deliberations in 99<sup>th</sup> OCC it was pointed out by most of the constituents that SCADA problem in many locations are due to behind the schedule progress of work on the part of CTU/PGCIL. OCC advised Powergrid/CTU to expedite and restore at least the priority RTUs by 31<sup>st</sup> July, 2014.

Updated status as updated in SCADA meeting which was held on 28<sup>th</sup> January, 2015 is circulated in the meeting.

Updated status is enclosed at Annexure-B.26.

CTU/ERLDC may update.

**Deliberation in the meeting**

*Members update the status. Updated status is enclosed at **Annexure-B.26**.*

**Item no. B.27: Reactive Power performance of Generators and GT tap position optimization**

Following is the list of generating station where substation voltage is beyond IEGC range for most of the times. Maximum and minimum voltage was observed (data taken from SCADA)

Power Plant	Max and Min Voltage observed for June 2015 (KV)	Date for monitoring (June 15)
Farakka STPS	423,409	04,25
Khalgaon STPS	424,404	04,25
Talcher STPS	408,396	--
Teesta	417,399	--
Bakreshwar TPS	411,385	--
Kolaghat TPS	424,391	04,12
Sagardighi TPS	--	--
MPL	--	--
Mejia-B	424,414	06,12
DSTPS	425,414	04,28
Adhunik TPS	--	--
Sterlite	413,418	--

ERLDC may update.

**Deliberation in the meeting**

*ERLDC informed that in absence of data from APNRL, MPL, SSL and Sagardighi their performance cannot be verified. However, the performance of rest of the generators were satisfactory.*

**a) Schedule for reactive capability tests**

In 110<sup>th</sup> OCC, the tentative schedule of testing was updated as follows:

- Adhunik TPS(both units) –Yet to be confirmed by Adhunik
- DSTPS(Unit#2 only pending) –To be done in July/August15
- Mejia#7(only U#7 pending) – To be confirmed by DVC
- Koderma TPS(both units) –To be done in July15
- JITPL(both units) –July15
- Barh Unit#6 –To be confirmed by NTPC

Members may update.

### **Deliberation in the meeting**

*Members noted.*

#### **b) Optimization of GT tap position at Adhunik, Mejia-B and DSTPS**

In 97<sup>th</sup> OCC, members requested ERPC Secretariat to convene a special meeting for detail deliberation on tap changing proposal before next OCC.

Accordingly, a special meeting was convened on 27<sup>th</sup> June, 2014. During the meeting following tap position was agreed:

Sl. No.	Utility	Present GT tap position	Agreed tap position in the meeting
1	APNRL: GT-1	8	9
	APNRL: GT-2	3	4
2	Mejia-B, DVC	4	5
3	DSTPS, DVC	5	6

Subsequently, DVC vide mail dated 3<sup>rd</sup> July, 2014 informed that GT tap position of MTPS units U#7&8 has been changed from Tap no. 4 to Tap no. 5.

In 101<sup>st</sup> OCC, ERLDC informed that MPL should also reduce the GT tap from tap position 5 to 6.

In 102<sup>nd</sup> OCC, APNRL informed that they have changed the GT tap position of both the GTs as per agreed settings.

DVC vide letter No.LD/25/ERPC/640 dated 03.01.2015 informed that the tap position of DSTPS GT #1 was changed from 5 to 6.

ERLDC assured that they will take care of the voltage problem during synchronization of their generator and advised to change the GT tap position.

In 109<sup>th</sup> OCC, MPL informed that they were having following constraints in raising the GT tap position from 5 to 6 i.e. reducing voltage from 420 kV to 409.5 kV.

1. MPL 400 kV bus average voltage is varying from 412 to 416 kV, sometime it goes up to 420 kV also. If we reduce voltage to 409.5 kV MPL generator has to always run in under excited condition.
2. During synchronization, MPL has to excite its generator more than its rated voltage (21 kV) as system voltage will be more than GT output voltage.
3. If MPL generating voltage will be more than 21 kV then unit auxiliary motor will be more voltage stressed. This will also lead to frequent tap changer operation of UAT.

In view of that request for providing the tap wise GT output voltage of other generating plant for better analysis in overcoming grid system overvoltage issue.

OCC advised ERLDC to provide the necessary details to MPL.

110<sup>th</sup> OCC opined that fixing uniform GT tap position for all the generators does not solve the high voltage problem and it will be decided on requirement of VAR absorption.

OCC advised MPL to change the GT tap position and depending on level of voltage further corrective actions such as increasing GT tap position at Mejia-B, DVC or any other generator will be initiated.

MPL agreed to change the GT tap position by one step on next opportunity shutdown.

ERLDC and MPL may update the status.

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

*MPL informed that they will change the GT tap position in December, 2015 during their Annual Overhaul.*

### **PART C:: OPERATIONAL PLANNING**

#### **Item no. C.1: Shutdown proposal of transmission lines and generating units for the month of August' 15**

Members may finalize the Shutdown proposals of the generating stations and transmission lines for the month of August' 15 as given at Annexure- C.1.

Members may confirm.

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

*The maintenance programme of generators and transmission elements as approved by OCC for the month of August, 2015 is at Annexure-C.1.*

#### **Item no. C.2: Anticipated power supply position during August'15**

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of August'15 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16, keeping in view that the units are available for generation and expected load growth etc. is given at Annexure- C.2.

Members may confirm.

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

*The anticipated power supply position by agreed in OCC for the month of August, 2015 after incorporating constituents' observations is given at Annexure-C.2.*

#### **Item no. C.3: Prolonged outage of power system elements in Eastern Region**

##### **(i) Generating units:**

<b>Generating Station</b>	<b>UNIT NO</b>	<b>CAP(MW)</b>	<b>REASONS FOR OUTAGE</b>	<b>DATE</b>	<b>Date of restoration</b>
MEJIA	5	250	OVERHAULING	1-Jun-15	
BANDEL	5	210	LONG	16-Nov-13	
BOKARO 'B'	1	210	BOILER TUBE	9-Jul-15	
BOKARO 'B'	3	210	C & I PROBLEM	20-Apr-15	
MEJIA	4	210	TUBE LEAKGE	10-May-15	
KODERMA	1	500	ASH POND	11-Nov-14	
DSTPS(ANDAL)	2	500	TUBE LEAKGE	4-Jul-15	
WARIA	4	210	COAL SHORTAGE	18-Jun-15	
MUZAFFARPUR	1	110	COAL SHORTAGE	15-Jun-15	
BAKRESHWAR	4	210	COAL SHORTAGE	30-Jun-15	
KOLAGHAT	4	210	LOW DEMAND	9-Jul-15	



KOLAGHAT	1	210	TUBE LEAKGE	9-Jul-15	
KOLAGHAT	3	210	FOR MAINTENANCE	3-Jul-15	
IB TPS	2	210	FOR MAINTENANCE	10-Jul-15	
SAGARDIGHI	2	300	BOILER TUBE	22-Jun-15	
CHANDRAPURA	7	250	BOILER TUBE	7-Jul-15	
BAKRESHWAR	5	210	COAL SHORTAGE	9-Jul-15	
STERLITE	2	600	ASH HANDLING	11-Jul-15	
ADHUNIK	1	270	BOILER TUBE	28-May-15	
GMR	1	350	DESYN. DUE TO LOW SCHEDULE	1-Jul-15	
STERLITE	4	600	DESYN. DUE TO LOW SCHEDULE	2-Jul-15	
JITPL	2	600	DESYN. DUE TO LOW SCHEDULE	11-Jul-15	

## (ii) Transmission elements

Name of the Line/Element	Outage	Reason	Date of restoration
220 KV BUDIPADAR-RAIGARH	21.05.15	CT BURST AT BUDIPADAR END	
315 MVA ICT-I AT BIHARSHARIFF	08.06.15	FIRE HAZARD	

Members may update.

### Deliberation in the meeting

Members noted.

### Item no. C.4: Information regarding commissioning of new transmission element

- 400kV Barh-Gorakhpur-I was charged for the first time at 20:30hrs of 01/06/15.
- 160 MVA ICT-II at Purnea was charged for the first time on no load at 17:31hrs of 09/06/15. Subsequently the same was loaded for the first time at 17:36hrs of 10/06/15.
- 80 MVAR spare L/R of 765kV Angul-Jharsuguda-II at Angul was charged for the first time in R-ph at 23:58 hrs of 29/06/15.

Members may update.

### Deliberation in the meeting

OPTCL updated the list from Sl. No 4 to 7 as given below:

- 160 MVA, 220/132 kV Grid S/s at Puri (Samangara) S/s was commissioned on 14.07.2015 at 14:14 Hrs.
- 132 kV LILO of Nimapara-Puri line to Puri (Samangara) S/s charged on 15.07.2015
- 100 MVA Auto-I at Mendhasal charged on 17.07.2015 at 21:43 Hrs.
- 132 kV Mandhasal-Khurda ckt charged on 17.07.2015 at 23:05 Hrs.

Members noted.

### Item no. C.5: Status of commissioning of generating station and transmission elements

#### New generating units:

S.No.	Power Plant	Plant Size	Expected date
1	Raghunathpur Unit#1	2x600MW	
2	Sagardighi Unit #5	500 MW	

**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	LILO of Baripada-Mendhasal D/C at New Duburi	
8	765kv Anugul-Srikakulum D/C	
9	400kV Sasaram-Daltonganj D/C &Daltonganj S/Stn	
10	400 kV Ranchi-Raghunathpur D/C	
11	400 kV Meramandali-Dubri D/C	
12	400 kV IB-Meramandali D/C	
13	220 kV TLDP-IV – NJP ckt-2	
14	220 kV Bidhansai-Cuttack D/C	
15	220 kV Girdih-Koderma D/C	

Members may update.

**Deliberation in the meeting**

*Members noted.*

**PART D:: OTHER ISSUES****Item no. D.1: UFR operation during the month of June'15**

System frequency touched a minimum of 49.56Hz in June'15 on 26/06/15 at 19:15Hrs. Accordingly, no report of operation of UFR has been received from any of the constituents.

Members may note.

**Deliberation in the meeting**

*Members noted.*

**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 June'15.

Members may note.

### **Deliberation in the meeting**

*Members noted.*

#### **Item no. D.3: Grid incidences during the month of June, 2015**

Sl No	Disturbance Place	Date & Time	Generation loss (MW)	Load loss (MW)	Remark	Category
1	OPTCL(Meramundali, Duburi, N.Duburi, Bhadrak )	01/06/15 at 12:15hrs.	0	370	Various 220kV, 132kV and ICTs at Meramundali S/s tipped due to operation of bus bar protection in 220kV MB-II at Meramundali.	-
2	JUSNL (Lalmatia)	03/06/15 at 16:50hrs.	0	118	Total power failure occurred at Lalmatia S/s due to bursting of Y-Phase CT of 132kV Lalmatia-Kahalgaon (NTPC) line at Lalmatia.	GD-1
3	BSHPC (Biharsarif)	08/06/15 at 15:24 & 23:58hrs.	0	410 & 140	Total power failure occurred at 400/220kV Biharsarif S/s due to fire hazard occurred in 315MVA ICT-I at Biharsarif.	GD-1
4	JSEB (Hatia)	14/06/15 at 07:28hrs	165	280	Total power failure occurred at 220/132kV Hatia S/s due to jumper snapping of 132kV Patraru-Hatia-D/C	GD-1
5	DVC (Kalyaneswari, Maithon HS, Panchet HS, Kumardubi and Patherdih)	21/06/15at 07:12 hrs.	0	330	Total power failure occurred at 220/132kV Kalyaneswari S/S due to bursting of R-Ø CT of 220kV bus coupler bay at Kalyaneswari.	GD-1

Members may note.

### **Deliberation in the meeting**

*Members noted.*

#### **Item no. D.4: Any other items.**

##### **1. Curtailment of JITPL schedule by ERLDC without information to GRIDCO-- GRIDCO**

GRIDCO informed that in the month of May & June, 2015 the schedule from JITPL to GRIDCO had been curtailed (from 100 MW to 50 MW) without any information to GRIDCO. GRIDC also submitted the details of the curtailments done during May & June, 2015.

GRIDCO requested to review the reasons behind.

### **Deliberation in the meeting**

*ERLDC informed that they will study the details as submitted by GRIDCO and revert back by next OCC.*

Meeting ended with vote of thanks to the chair.

\*\*\*\*\*

Participants in the 111<sup>th</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 24.07.2015 (Friday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
1	A.K. Bandyopadhyay	MS ERPC	9433068533	mserpc-power@nic.in	Handytm
2	U.K. Verma	GM/ERLDC	08902496220	ujwalkumar.verma@gmail.com	U.K. Verma
3	P.P. BANDYOPADHYAY	DGM(SO), ERLDC	07044083323	porth_bandyay@yahoo.co.in	P.P. Bandyopadhyay
4	P.S. Das	Asst. GM/ERLDC	9433041837	psdas-psd@yahoo.co.in	P.S. Das
5	S. BANERJEE	Asst. GM, ERLDC	9433041823	surenb@ gmail.com	S. Banerjee
6	S. P. DASH	DGM / POWER & S&T	9433051661	spdash99@gmail.com	S.P. Dash
7	B. Pan	CE (DVC)	9903247102	brahmananda.pan@dvcsoc.in	B. Pan
8	RAKESH KUMAR	NTPC, PATNA Agm (DS)	9431011344	rakesh.kumar12@ntpc.co.in	Rakesh Kumar
9	R.V. Pattnaik	NTPC, Bhubaneswar Agm (OS)	9438233243	rvpattnaik@ntpc.co.in	R.V. Pattnaik
10	SANJEEB BAGI	ENGINEER (E) NHPC	9800003885	sanjeeb_bagi@rediffmail.com	S. Bag
11	Ravi Pradhan	Energy & Power Dept. Bikrampur	9635314410	ravi.pradhan@gmail.com	Ravi Pradhan
12	TASHI TSHERING	EXECUTIVE ENGINEER, DCPC, THIMPHU	947517117166	508.tashi@gmail.com	Tashi Tsering
13	SAMIR PANDAB	Head-Opn. MPL	9031000323	spandab@tatapower.com	Samir Pandab
14	RAN BIR CHHETRI	AE/THP	0097517655278	rbirce@hotmail.com	Ran Bir Chhetri
15	Oma Nath	JE/CHP	0097517688335	Kuikerkkr@gmail.com	Oma Nath
16	Abir Sarki	SD/THP	009751773381	abamski@gmail.com	Abir Sarki
17	Zangpo.	EE/KHP	0097517469033	zangpo.dgpc@gmail.com	Zangpo
18	Pohit Kumar	Sr. Engr/ POWER CREDO, OR	9431815114	oandment@gmail.com	Pohit Kumar
19	T.R. Mohapatra	DM/ERLDC	9433041873	tushar.mohapatra@gmail.com	T.R. Mohapatra
20	S.K. Sahay	88 Brig/uc/ERLDC	9432013193	Sahay.Saurabh@gmail.com	S.K. Sahay



### Participants in the 111<sup>th</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 24.07.2015 (Friday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
21	S. Chowdhury	Resenter Ltd.	9937294388	shoupi.chowdhury@resenter.co.in	
22	K. Rajen	PowerGrid	9434740014	KRajen@powergrid.co.in	
23	A. Pani	GMR	7752020444	arabinda.pani@gmrgroup.in	
24	J. Mohapatra	Director Ind-Barrath	9717212999	mohapatra.j6@gmail.com	
25	Madhusudan Sahoo	AGM (E&C) GRIDCO, BBSR	9692427876	gridco.ebc@gmail.com	
26	Zamanta Sahoo	GM (GO) ELDC, Odisha	9438907403	zle.umakantsahoo@sedconissa.org.in	
27	M.L. Mohanty	Sr. G-M (E) SLDC, Odisha	9438907310	mumukshu113@gmail.com	
28	R. Biswas	SM / DPL SLDC, Odisha	9434735985	ranjanbiswas1@gmail.com	
29	R. Chakravarty	DGM (P-S/C) CEB	98310-54679	rahul.chakravarty@cp-sg.in	
30	T.K. DE	ACB / ALDC WBSECL	9433870748	kumartapande@gmail.com	
31	A. Reichardhoni	C.E. / SLDC WBSECL	9434910030	reichardhoni2013@gmail.com	
32	P.K. Banerjee	S. Manager KTP WBSECL	8336905891	pk.banerjee@wbsecl.co.in	
33	A.K. Mishra	A.EE / SLDC JUSNL Ramkali	9263296228	email@sldc-bihar.in	
34	D.K. Singh	EEE (SLDC) Patna, BSECL	7763817716	sldc.bseb@gmail.com	
35	A. Ghosh	C.E. (CPD) WBSECL	9434910019	arundhati.ghosh@wbsecl.in	
36	S. KETRIWAL	EE, ERPC			
37	D.K. Banerji	EE (W), ERPC	9853617236	eeop.erpc@gov.in	
38	B. SARKHEL	SE (PS), ERPC	9433065724		
39	P. K. DE	EE, ERPC	9433125844	rpc.erpc@gov.in	
40	Lenin B	AEE, ERPC	8335905973	lenin.nitc@gmail.com	

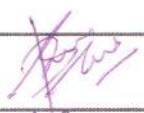
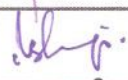
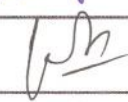
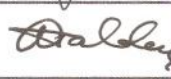
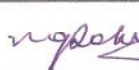
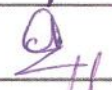
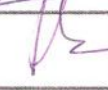


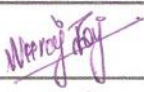
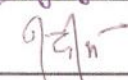
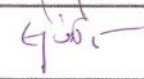
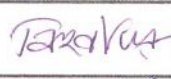



### Participants in the 111<sup>th</sup> OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 24.07.2015 (Friday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
41	S.R. Tudu	AE, ERPC	9734907623		
42	RAJDEEP BHATTACHARJEE	RE, BSBPHCL, KOLKATA	9830380689	rekolbsphcl@gmail.com	
43	P. K. Kundu	ACE, SLDC WBSETCL	9934910263	pkundu_1961@yahoo.co.in	
44	C. K. Halder	- do -	9934910379	-	
45	N. Saha	SM (PS) / WBPDCL	8886703700	ngsaha@wbpdcl.co.in	
46	A. Sen Gupta	DGM CESC	9831802682	asunava.gupta@np-sg.in	
47	P. Banerji	SE / WBSED CL	9432140745	preelan72@gmail.com	
48	A. Sathy	D.M / GRIDCO	9488506364	ele.asethi@gridco-co.in	
49	R. P. Kundu	Engr / ERLDC	9903329591	rajpratin@gmail.com	
50	Neeraj Raj	Lead Engineer / MPL	9263635334	neeraj.raj@tatapower.com	
51	Nadim Ahmed	Dy. Mgr. / ERPC	9432351831	nadim.pgail@gmail.com	
52	S.K. Chandrakar	Engr / ERPC	9433041800	Sanjeev.Chandrakar@gmail.com	
53	Biswajit Mandal	Engr / ERLDC	9903329241	biswajit.mandal91@gmail.com	
54	M.N. SITU	Sr. Supdt / NTPC Kolkata	9487564432	mnsitu@ntpc.co.in	
55					
56					
57					
58					
59					
60					

# Annexure-B.1

## FORMAT FOR MONITORING OF PPA's /CAPACITY CONTRACTED BY DISCOM, STATE FOR THE PERIOD DURING 31.03.2015

Name of the State \_\_\_\_\_ Name of the DISCOM \_\_\_\_\_

SI No.	Capacity Contracted (MW)	Type of Load Requirement (Base/ peaking)	Mode of Contract (Case-I/ Case-II / Shortterm / MoU)	Contract Period (Long/ Medium/ Short term)	Date of Commencement of Supply	Date of end of Supply	Rate Rs./ Unit	Name of Contracted Power Station	Capacity of Power Station ( MW) Unit wise	State Location of Power Station	Name of Developer of Power Station	Sector of Power Station (C/S/P)	COD	Scheduled COD	Power Station Fuel Type (Coal/ Lignite/ Gas/ Hydro/ Nuclear/ NCES)	Power Station Fuel (Indigenous/ Imported)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

### Please Note:

1. All the dates are to be given in the dd-mmmm-yyyy ( eg.31-Oct- 2009) especially columns 6,7,14
2. Data should be furnished for PPAs in force as on date.
3. Data on PPAs signed by the DISCOMs or signed by the other holding companies on behalf of DISCOMS also to be furnished.
4. Data relating to all the sectors i.e. Central, State and private should be furnished.
5. Data must be furnished in Excel Sheet and e-mailed.
6. In Column 5, please mention like long, medium and short only for easy analysis.

### Third Party Protection Schedule

Group-I			
Date of Audit	Substations	Lodging and Boarding	Transport
July, 15 (Completed)	Subhasgram (PG) & Jeerat (WBSETCL)		
Aug, 2015	Bidhannagar (WBSETCL) & Durgapur (PG)	Stay at DVC guest house	Transportation will be arranged by Powergrid
Aug, 2015	DSTPS(DVC) & Mejia (DVC)		
Aug, 2015	Kolaghat (WBPDCCL) & Kharagpur (WBSETCL)	Stay at Kolaghat Guest House, if required	Transportation arrangement will be done by Powergrid
September, 2015	Mendhasal (OPTCL)	Stay at Talcher, NTPC guest house	Transportation from Kolkata to Bhubaneswar & back will be arranged individual by organizations and rest of the transportations arrangement will be done by Powergrid
September, 2015	Talcher STPS (NTPC)		
September, 2015	Angul & GMR		
	Bakreswar (WBPDCCL) & Sagardighi (WBPDCCL)	Stay at Sagardighi Guest House	Transportation will be arranged by Powergrid
	Farakka (NTPC) & Malda (PG)	Stay at NTPC, Farakka Guest House	Transportation will be arranged by Powergrid
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		



Group-I			
Date of Audit	Substations	Lodging and Boarding	Transport
	PPSP (WBSETCL) & Maithon (PG)	Stay at Maithon PGCIL guest house	Transportation will be arranged by Powergrid
	Maithon RB (MPL) & Raghunathpur (DVC) (Audit only up to the commercially installed elements)	Stay at Santladihi(WBPDCL) guest house	
	Santladihi(WBPDCL) & Arambagh (WBSETCL)	If required, stay at Santladihi(WBPDCL) guest house	
	Tisco(DVC)	Stay at Jamshedpur, PGCIL guest house	Audit team will reach Jamshedpur on their own transportation arrangement and rest of the transportation arrangement will be done by Powergrid
	Jamshedpur (PG) & Ramchandrapur (JSEB)	Stay at Jamshedpur, PGCIL guest house	Transportation will be arranged by Powergrid
	Chandil(JSEB) & Ranchi(PG)	Stay at Ranchi, PGCIL guest house	Transportation will be arranged by Powergrid
	Koderma (DVC) PTPS		Audit team will return back from Koderma on their own transportation arrangement
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		

Group-II			
Date of Audit	Substations	Lodging and Boarding	Transport
	Rourkela (PG) & Tarkera (OPTCL)	Stay at Rourkela PGCIL guest house	Audit team will reach Rourkela on their own transportation arrangement and rest of the transportation arrangement will be done by Powergrid
	Joda(OPTCL)	Stay at Baripada PGCIL guest house	Transportation will be arranged by Powergrid
	Baripada (PG)	If required, stay at Baripada PGCIL guest house	Audit team will return back from Baripada on their own transportation arrangement
	Jaypore(PG)	Stay at Jaypore, PGCIL Guest House	Audit team will reach Jaypore on their own transportation arrangement and rest of the transportation arrangement will be done by

			Powergrid
	Indravati (PG), & Indravati (OHPC)	Stay at Indravati, PGCIL Guest House	Transportation will be arranged by Powergrid
	Jharsuguda	Stay at PGCIL Guest House	Transportation will be arranged by Powergrid
	Bolangir (PG) & Rengali (PG)	If required, stay at Rengali, PGCIL Guest House	Audit team will return back from Rengali on their own transportation arrangement
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		
	Barh(NTPC) (Audit only up to the commercially installed elements)	Stay at Kahalgaon, NTPC Guest House	Audit team will reach Barh(NTPC) on their own transportation arrangement and rest of the transportation arrangement will be done by Powergrid
	Kahalgaon (NTPC)	Stay at Kahalgaon, NTPC Guest House	Transportation will be arranged by Powergrid
	Banka (PG) & Purnea (PG)	Stay at Purnea, PGCIL Guest House	Transportation will be arranged by Powergrid
	Dalkhola(PG)		Audit team will return back from Dalkhola on their own transportation arrangement
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		

Date of Audit	Substations	Lodging and Boarding	Transport
	Parulia (DVC)	Stay at Durgapur, PG guest house.  Stay at Mejia, DVC guest house	Audit team will reach Durgapur on their own transportation arrangement and rest of the transportation arrangement will be done by Powergrid
	Mejia (DVC) & Kalyaneswari (DVC)	Stay at Maithon, PGCIL guest house.	Transportation will be arranged by Powergrid
	Bokaro (DVC)	Stay at TVNL guest house.	Transportation will be arranged by Powergrid
	TVNL	Stay at TVNL guest house.	Audit team will return back from Bokaro on their own transportation arrangement
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		

Group-II			
Date of Audit	Substations	Lodging and Boarding	Transport
	Jamshedpur (DVC)	Stay at Jamshedpur PGCIL guest house.	Audit team will reach Jamshedpur on their own transportation arrangement and rest of the transportation arrangement will be done by Powergrid
	Budipadar(OPTCL)	Guest house will be arranged by OPTCL/OPGC.	Transportation will be arranged by Powergrid
	IB TPS (OPGC)	If required, stay at OPGC guest house.	Audit team will return back from IB TPS on their own transportation arrangement
Team member	One representative from ERPC One representative from ERLDC One representative from PGCIL One representative from auditee utilities		

## Frequency Response Characteristic Calculation in Eastern Region

EVENT:

On 26.06.15 at 13:16hrs, Talcher-Kolar HVDC Pole – II tripped and Talcher – Kolar Pole – I went into metallic return mode

S No	Particulars	Dimension	FSTPP I	FSTPP II	KhSTPP I	KhSTPP II	TSTPS-I	TSTPS-II(SR)	BARH	Sterlite	MPL	Adhunik	RHEP	Teesta V	TALA	CHUKHA	Bihar	Jharkhand	DVC	OPTCL	WB	SIKKIM	JITPL	ER-IR total
1	Actual Net Interchange before the Event (13:19:30)	MW	-1012	-327	-538	-987	-711	-1372	-403	-548	-900	-192	-62	-518	-1105	-265	2109	391	-840	923	1513	55	-389	-5322
2	Actual Net Interchange after the Event (13:21:30)	MW	-1010	-327	-528	-992	-724	-1377	-403	-275	-900	-191	-62	-498	-1106	-265	2118	415	-904	844	1535	55	-386	-4798
3	Change in Net Interchange (2 - 1)	MW	1.8	0.0	10.8	-4.7	-12.9	-4.7	-0.3	272.8	0.0	1.4	0.1	20.6	-1.4	0.2	8.9	23.3	-64.7	-78.9	21.9	-0.3	2.5	524.3
4	Generation Loss (+) / Load Throw off (-) during the Event	MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200.0
5	Control Area Response (3 - 4)	MW	1.8	0.0	10.8	-4.7	-12.9	-4.7	-0.3	72.8	0.0	1.4	0.1	20.6	-1.4	0.2	8.9	23.3	-64.7	-78.9	21.9	-0.3	2.5	324.3
6	Frequency before the Event	HZ	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04
7	Frequency after the Event	HZ	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19	50.19
8a	Change in Frequency (7 - 6)	HZ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
8	Effective change in Frequency considering RGMO *	HZ	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
9	Frequency Response Characteristic (5 / 8)	MW/HZ	13	0	76	-33	-90	-33	-2	509	0	9	0	144	-9	1	62	163	-452	-552	153	-2	17	2268
10	Net System Demand met before the Event	MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2109	700	2304	3108	5242	55	0	13518
11	Internal Generation before the Event (10 - 1)	MW	1012	327	538	987	711	1372	403	548	900	192	62	518	1105	265	0	309	3144	2185	3729	0	389	18840
12	Ideal load response assuming 4% per Hz (0.04*Row 10)	MW/Hz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.4	28.0	92.2	124.3	209.7	2.2	0.0	540.7
13	Ideal generator response assuming 5% droop.....40% per Hz (40% of Row 11)	MW/Hz	404.8	131.0	215.4	394.9	284.3	548.7	161.2	219.2	360.0	76.9	24.9	207.2	441.9	106.0	0.0	123.4	1257.5	874.0	1491.5	0.0	155.4	7536.0
14	Composite ideal response (12 + 13)	MW/Hz	404.8	131.0	215.4	394.9	284.3	548.7	161.2	219.2	360.0	76.9	24.9	207.2	441.9	106.0	84.4	151.4	1349.7	998.3	1701.2	2.2	155.4	8076.7
15	Percentage of Ideal response ((8/14)x100)	%	3.1%	0.0%	35.2%	-8.4%	-31.6%	-6.0%	-1.2%	232.3%	0.0%	12.3%	1.4%	69.5%	-2.1%	1.4%	73.8%	107.8%	-33.5%	-55.3%	9.0%	-93.4%	11.2%	28.1%

\* In RGMO mode, generation should not be reduced for load throw off when freq &lt;= 50.05 Hz

Note: +ve exchange=&gt; import; (-)ve exchange =&gt; export

Talcher Stage II generation is considered inside ER for calculating Regional FRC.

As ISGS is generating Power (Hence Export), -Ve value is shown for their power exchange

### Frequency Response Characteristic Calculation in Eastern Region

**EVENT:** On 10.07.2015 at 16:26hrs, 400kV Chabra-Hindaun line reportedly tripped on Power Swing after deblocking time of 2000ms from Hindaun end. After 400ms of tripping of Chabra-Hindaun line 765/400kV 1500MVA ICT-2 tripped on unbalance current resulting around 1800 MW generation loss

S No	Particulars	Dimension	FSTPP I	FSTPP II	KhSTPP I	KhSTPP II	TSTPS-I	TSTPS-II(SR)	BARH	Sterlite	MPL	Adhunik	RHEP	Teesta V	TALA	CHUKHA	Bihar	Jharkhand	DVC	OPTCL	WB	SIKKIM	ER-IR total
1	Actual Net Interchange before the Event (16:29:30)	MW	-658	-123	-520	-1007	-816	-1400	-409	-266	-850	-223	-60	-503	-1109	-279	965	393	-747	710	1873	50	-5274
2	Actual Net Interchange after the Event (16:31:00)	MW	-654	-123	-530	-1003	-803	-1379	-409	-260	-837	-223	-60	-509	-1111	-280	973	371	-752	717	1887	50	-5270
3	Change in Net Interchange (2 - 1)	MW	3.3	0.0	-10.2	4.1	13.5	21.0	0.0	6.0	12.8	0.0	0.2	-5.7	-2.0	-0.8	7.6	-21.8	-5.2	7.2	14.1	0.0	4.4
4	Generation Loss (+) / Load Throw off (-) during the Event	MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Control Area Response (3 - 4)	MW	3.3	0.0	-10.2	4.1	13.5	21.0	0.0	6.0	12.8	0.0	0.2	-5.7	-2.0	-0.8	7.6	-21.8	-5.2	7.2	14.1	0.0	4.4
6	Frequency before the Event	HZ	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03
7	Frequency after the Event	HZ	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95	49.95
8a	Change in Frequency (7 - 6)	HZ	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
8	Effective change in Frequency considering RGMO *	HZ	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
9	Frequency Response Characteristic (5 / 8)	MW/HZ	-42	0	130	-52	-173	-268	0	-77	-164	0	-2	73	26	11	-98	279	66	-93	-180	0	-56
10	Net System Demand met before the Event	MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1065	770	2066	2578	5038	50	11567
11	Internal Generation before the Event (10 - 1)	MW	658	123	520	1007	816	1400	409	266	850	223	60	503	1109	279	100	378	2812	1868	3165	0	16841
12	Ideal load response assuming 4% per Hz (0.04*Row 10)	MW/Hz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.6	30.8	82.6	103.1	201.5	2.0	462.7
13	Ideal generator response assuming 5% droop.....40% per Hz (40% of Row 11)	MW/Hz	263.1	49.0	208.1	402.8	326.5	559.9	163.7	106.4	340.0	89.1	24.0	201.1	443.5	111.7	40.0	151.1	1124.9	747.2	1265.9	0.0	6736.3
14	Composite ideal response (12 + 13)	MW/Hz	263.1	49.0	208.1	402.8	326.5	559.9	163.7	106.4	340.0	89.1	24.0	201.1	443.5	111.7	82.6	181.9	1207.5	850.3	1467.4	2.0	7199.0
15	Percentage of ideal response {(9/14)x100}	%	-16.0%	0.0%	62.4%	-12.9%	-53.0%	-47.9%	0.0%	-72.1%	-48.3%	0.0%	-9.8%	36.3%	5.9%	9.6%	-118.2%	153.6%	5.5%	-10.9%	-12.3%	0.0%	-0.8%

\* In RGMO mode, generation should not be reduced for load throw off when freq <= 50.05 Hz

Note: +ve exchange=> import; (-)ve exchange => export

Talcher Stage II generation is considered inside ER for calculating Regional FRC.

As ISGS is generating Power (Hence Export), -Ve value is shown for their power exchange

### **Latest status on non-availability of SCADA data**

It was informed by ERLDC that some constituents are not updating single line diagram in SCADA as per actual real time network and same is causing lack of network visibility.

All constituents agreed to update SCADA single line diagram as per real network time to time and will furnished the same to ERLDC also.

The status as updated in the SCADA meeting is as given below:

- i) List of additional elements/feeders whose data is not available – station under ULDC project:

SL no	Name of Utility	KV	Name of station	Reason for non reporting	Latest status
1	OPTCL	220	Vedanta (9x135 MW)	No status points are available.	No isolators status are available. MW/ MVAR not available for sterlite 1/2 line, station transformer / Smelter. CBs of Bus coupler not available. Bus-1 KV/ HZ not available.  <b>Problem still not resolved</b>

- ii) The List of RTU supplied under BSEB ULDC Project but data is faulty/ intermittent:

S/n	Name of RTU locations	Latest status	Remarks
1	Jakkanpur, Khagaul RTU, Dumraon, Karmnasha, Sitamarhi, , Purnea & Koshi	Data is reporting intermittently.	1) Data integrated through GPRS will be intermittent till Final communication packages is implemented ( Already awarded to PGCIL for execution ). 2) ALL RTU will be report to SLDC patna subject to availability of communication system ( Already Awarded to PGCIL ) 3) New RTU is being integrated with OSI systems and this RTU will report to ERLDC once ERLDC OSI system is ready.  <b>Problem still not resolved</b>
2	Hathidah, Lakhisarai & Darbhanga	Data is reporting intermittently.. Due to re-conductoring work in Darbhanga-Samastipur T/L, Darbhanga is not reporting temporarily.	
3	BTPS	RTU dismantled. Renovation/overhauling work is going on. SAS is expected to be operational by the November, 2014.	
4	220 kV Hajipur	<i>Hajipur is temporarily down, BSPTCL working to restore it.</i>	
5	Jagdishpur, Sipara, Madhepura	RTU has been supplied by PGCIL under Sub-transmission project of Bihar but commissioning is left out. Now, it will be done in ULDC upgradation scheme.	
6	Siwan, Valmikinagar, Gopalganj, Kisanganj and Arrah	RTU along with communication has been included in the scope of work of Powergrid under up gradation/ replacement scheme of ULDC. It was scheduled to be completed by Oct'14. <i>RTU supplied by M/s. Chemtrols except Darbhanga. RTU reached site.</i>	

## Annexure- B.26

iii) The updated status of telemetry of JSEB Sub-Stations under ULDC project is as given below:

Sl. No.	Name of the RTU location	Latest status	Remarks
1	Ramchandrapur	Reporting is interrupted because of problem in PLCC link between Candil & Ramchandrapur. CVT brusted at Ramchandrapur bay and requires replacement. Arrangement in being done for its replacement.	1) RTU's CPU Card sent to Bhubaneswar for repairing . 2) All RTU will restored by Mid March 2015.  <b>Problem still not resolved. None of real time data available since 15/06/15.</b>
2	Jamtara	Jamtara RTU has been shifted in new control room. POWER GRID has been requested to reintegrate the feeders in RTU as integration of additional feeder (new element) in the existing RTU. <i>Powergrid informed that Advance Payment towards new element integration is pending since long. After payment, M/s. ALSTOM will give the schedule of site visit for feeder integration.</i>	
3	Deoghar	Both LMU & LMDU rusted at Jamtara. Arrangement inbeing done for its replacement. Deoghar-Jamtara-Maithon link is interrupted also because of snatching of patching cable at Maithon (G) and Maithon (SLDC). This was found during survey of sites with M/s PUNCOM which will be corrected by the agency under AMC. AMC by PUNCOM has been started.	
4	Garawah	Garawah RTU will be restored when it will be connected from Ranchi end through Hatia-Loherdaga-Latehar-Daltonganj –Garwah Transmission lie.	
5	Kendposi	Reporting is interrupted because of shifting of Chandil bay at Rajkharsawan. PLCC outdoor equipment has been shifted recently to new location of Chandil bay at RKSJ. Some work like termination of co-axial cable will be done soon.	
6	Goelkera		
7	Jadugoda	Co-axial cable faulty at Golmuri (Chandil bay)	

iv) The updated status of telemetry of OPTCL Sub-Stations under ULDC project is project as given below:

S/n	Name of RTU Locations	Latest status
1	Nalco	OPTCL informed that RTU is reporting but intermittent since it was not configured properly. The issue was already taken up with Nalco and it will be resolved soon.  OPTCL has resolved the issue. Some Unit generation polarity will be resolved by Feb 2015.  <b>Problem still not resolved</b>

## v) RTU telemetry provided but data are intermittent / new element not wired.

SL No	Name of station/ Utility	Reason for non reporting	Latest status
I	Lalmatia JSEB	MW / MVAR/ OLTC tap of 220/132 KV ICT –II not available	MW/MVAR/OLTC tap of 220/132 KV ICT-II not available. Will be complete during additional feeder integration, no time frame. <b>Problem still not resolved</b>
II	JSPL (Meramundali - 400)	Most of the data not available .	OPTCL informed that they are taking matter with JSPL. <b>Problem still not resolved</b>
IV	DVC		
	Patherdiah,		RTU reached site. commissioned within Feb 2015. <b>(RTU Commissioned but not integrated with SLDC.)</b>
	Kalipahari		RTU reached site.  <b>(RTU Commissioned but not integrated with SLDC.)</b>

## vi) Sub - Stations (220 &amp; 132 kV) Telemetry not provided :

SL No	Name of station/ Utility	Reason for non reporting	Latest status
I	WBSETCL		
	Krishna Nagar	RTU not provided for data telemetry	RTU integrated .
	Kalingpong		RTU is reporting.
	Karseong		RTU commissioned. Communication link to be provided by WBSETCL.  WBSETCL requested M/s PGCIL to commissioned one Mux ( to be provided by M/s WBSETCL ) at Siliguri (220) S/s (PGCIL) for integration of the voice and data of Kurseong substation .  POWERGRID agreed for the same and subject to technical feasibility.  <b>( Data reporting )</b>
	CESC S/s: EM 220 kV		CESC control centre ICCP will be integrated with WB's new OSI system by April 2015.
	CESC : Kasba-132 kV, EM-132 kV Jadavpur, Chakmir, Majerhat and CESC Belur		<b>WBSETCL confirmed that same will available TO OSI system by 31<sup>st</sup> July 2015.</b>
II	JSEB		
	Hatia New	<b>RTU not provided for data telemetry</b>	Hatia SAS to be integrated with SLDC. No time frame. By Feb 2015 all RTUs will be supplied. No commissioning time frame. <b>Problem still not resolved</b>
	Manique (Chandil)		



## Annexure- B.26

	Japla	By Feb 2015 all RTUs will be supplied. No commissioning time frame.  <b>Problem still not resolved</b>
--	-------	--

### Unavailability Of Critical Real Time data :

Name of station/ Utility	Not reporting since	ERLDC Remarks
MPL	20/03/15	In-between reported for 15 days and again down.
SEL	24/06/15	Status and CBs, SOE point of Old switch yard not available since 01/05/15
APNRL	1/5/2015	<i>No response</i>
Sasaram ( 765)	13/05/15	
GMR	Since Generation	None of Unit side data and protection signal available
Gaya ( 765)	23/05/15	<i>Data started coming.</i>
Lakhisarai (400)	22/05/15	
Sagardighi (400)	28/04/15	
Maithon (400)	01/06/15	<i>Data started coming.</i>
Nabinagar (400)	28/12/14	
JUSNL (JSEB ): None of data is available	15/06/15	

**EASTERN REGIONAL LOAD DESPATCH CENTRE  
KOLKATA**

**TRANSMISSION ELEMENTS OUTAGE APPROVED IN 111TH OCC MEETING OF ERPC**

Sr. No	NAME OF THE ELEMENTS	DATE	TIME	DATE	TIME	REMARKS	S/D availed BY	Reason	SUBJECT TO CONSENT FROM AGENCY
1	132KV Siliguri - Kurseong	24/07/15	08:00	24/07/15	16:00	ODB	ER-II	Bay Maintenance	WBSETCL
2	132KV Siliguri - Melli	25/07/15	08:00	25/07/15	16:00	ODB	ER-II	Bay Maintenance	SIKKIM
3	125 MVAR B/R - 3 AT BSF	25/07/15	10:00	25/07/15	14:00	ODB	ER - I	TO ATTEND OIL LEAKAGE	
4	Berhampore-Sagardighi Ckt-II Line	26/07/15	10:00	26/07/15	12:00	ODB	ER-II	CT oil sample for DGA after 06 month for Sagardighi Ckt-II main bay at Sagardighi end. Tie bay not available at Sagardighi.	WBSETCL
5	400 KV SEL - Raigarh # 2	27/07/15	09:00	28/07/15	17:00	ODB	ER- II/ BBSR	For Jumpers tightening works at various locations	NLDC
6	Berhampore-Sagardighi Ckt-I Main Bay	27/07/15	10:00	27/07/15	13:00	ODB	ER-II	CT oil sample for DGA after 06 month	WBSETCL
7	Berhampore-Sagardighi Ckt-I Tie Bay	27/07/15	14:00	27/07/15	17:00	ODB	ER-II	CT oil sample for DGA after 06 month	WBSETCL
8	100 MVA ICT-I at Birpara	27/07/15	07:00	05/08/15	15:30	ODB	ER-II	Isolator retrofitting (Isolator No.204-89 L, T, & 104-89 L, T) under ADCAP.	WBSETCL
9	132KV Siliguri - Siliguri-1	27/07/15	08:00	27/07/15	16:00	ODB	ER-II	Bay Maintenance	WBSETCL
10	400 kV Durgapur Bus - I	27/07/15	09:00	28/07/15	17:00	ODB	ER-II	BUS SPLITTING AT DURGAPUR	
11	315 MVA ICT-II at Indravati	27/07/15	09:00	27/07/15	18:00	ODB	ER- II/ BBSR	Tan delta measurement with variable frequency	ODISHA
12	315 MVA ICT -2 AT GAYA	28/07/15	11:00	28/07/15	17:00	ODB	ER-I	FOR AMP WORK.	
13	765/400 KV 1500 MVA ICT - I AT NRNC	28/07/15	09:00	28/07/15	18:00	ODB	ER-I	CONSTN. WORK RELATED TO DAHARAMJAYGARH -2 LINE	NLDC
14	400 KV FKK - KHLG - 3	28/07/15	08:00	28/07/15	18:00	ODB	ER-I	FOR REPLACEMENT OF INSULATORS DAMAGED BY MISCREANTS	
15	100 MVA ICT -1 AT 220/132 KV PURNEA S/S	28/07/15	08:00	04/11/15	18:00	OCB	ER-I	RETROFITING OF OLD 100 MVA ICT - 1 BY NEW 160 MVA ICT. THE S/D OF THE SAID ICT -1 ALONGWITH 220 KV BAY EQUIPMENTS EXPECTED TO BE TAKEN FROM 20.07.15 FOR 100 DAYS IN REFERENCE TO 110 TH OCC MEETING.	BIHAR
16	220 KV BUS -1 AT PRN	28/07/15	10:00	28/07/15	18:00	ODB	ER-I	FOR DISMANTLING OF ICT -1 BAY , 220 KV MAIN BUS -1 ISOLATORS. S/D INVOLVES NO POWER INTERUPPTION.	BIHAR
17	Berhampore-Bheramara Ckt-I Main Bay	28/07/15	10:00	28/07/15	12:00	ODB	ER-II	CT oil sample for DGA	
18	Berhampore-Bheramara Ckt-II Main Bay	28/07/15	12:00	28/07/15	14:00	ODB	ER-II	CT oil sample for DGA	
19	220 KV BRP-NSLG-I	28/07/15	09:00	28/07/15	17:00	ODB	ER-II	Insulator replacement at loc. No. 130.	
20	315MVA ICT at Farakka	28/07/15	09:00	29/07/15	17:00	ODB	ER-II	ICT and Bay AMP.	JHARKHAND
21	132KV Siliguri - Siliguri Ckt-2	28/07/15	08:00	28/07/15	16:00	ODB	ER-II	Bay Maintenance	WBSETCL
22	315 MVA ICT-I at Baripada	28/07/15	09:00	28/07/15	15:00	ODB	ER- II/ BBSR	Tan delta measurement with variable frequency	ODISHA
23	220 KV BUDHIPADAR - KORBA - 3	28/07/15	09:00	28/07/15	17:00	ODB	IND BHARAT	CROSSING WORK OF 400 KV IND BHARAT - JHARSUGUDA D/C.	NLDC
24	315 MVA ICT-II at Baripada	29/07/15	09:00	29/07/15	15:00	ODB	ER- II/ BBSR	Tan delta measurement with variable frequency	ODISHA
25	400 KV Sundargarh - Raigarh # 2	29/07/15	09:00	30/07/15	17:00	ODB	ER- II/ BBSR	For Jumpers tightening works at various locations	NLDC
26	765 KV BUS - I AT GAYA	29/07/15	10:00	29/07/15	17:00	ODB	ER-I	FOR 765 KV BUS -1 EXTENSION WORK	NLDC
27	765/400 KV 1500 MVA ICT - 2 AT NRNC	29/07/15	09:00	29/07/15	18:00	ODB	ER-I	CONSTN. WORK RELATED TO DAHARAMJAYGARH -2 LINE	NLDC
28	TIE BAY OF KAHALGAON - BANKA -1 & 80 mvar B/R AT BANKA	29/07/15	10:30	29/07/15	17:30	ODB	ER-I	FOR COMMISSIONING OF CSD DEVICE IN TIE BREAKER OF B/R	
29	400 KV FKK - KHLG - 4	29/07/15	08:00	29/07/15	18:00	ODB	ER-I	FOR REPLACEMENT OF INSULATORS DAMAGED BY MISCREANTS	
30	220 KV BUS - 2 AT PRN	29/07/15	10:00	29/07/15	18:00	ODB	ER-I	FOR DISMANTLING OF ICT -1 BAY , 220 KV MAIN BUS - 2 ISOLATORS.S/D INVOLVES NO POWER INTERUPPTION.	BIHAR
31	400KV RANGPO- NSLG, CKT-1	29/07/15	08:00	30/07/15	18:00	OCB	ER-II	FOR attending CB GAS LEAKAGE.	TEESTA
32	400 KV Rourkela - Jamshedpur # 2	29/07/15	09:00	29/07/15	18:00	ODB	ER- II/ BBSR	For converting the Electrical gang operated mechanism of its S&S make Line Isolator into individual operated mechanism.& NGR By-pass Commissioning	
33	765 KV BUS - II AT GAYA	30/07/15	10:00	30/07/15	17:00	ODB	ER-I	FOR 765 KV BUS -2 EXTENSION WORK	NLDC
34	765KV BUS-1 AT NRNC	30/07/15	09:00	30/07/15	18:00	ODB	ER-I	FOR JUMPERING OF 765KV BUS-I EXTENSION	NLDC
35	80 MVAR B/R AT BANKA	30/07/15	11:00	30/07/15	14:00	ODB	ER-I	FOR COMMISSIONING OF CSD DEVICE IN TIE BREAKER OF B/R	
36	400 KN NSLG-NPRN Ckt.III & IV (POWERLINK)	30/07/15	09:00	31/07/15	17:00	ODB	ER-II	Stringing of LILO of 220KV D/C Siliguri-Dalkhola Line at Kisanganj for over- crossing	SHUTDOWN CAN NOT BE ALLOWED DUE TO HIGH LOADING IN SAID LINE. MAY BE RESCHEDULE TO OCTOBER.
37	160MVA ICT#2 at Siliguri	30/07/15	09:00	30/07/15	17:00	ODB	ER-II	Tan delta of bushing in variable frequency / other bay maintenance	WBSETCL
38	220 KV Rourkela - Tarkera # 1	30/07/15	09:00	30/07/15	18:00	ODB	ER- II/ BBSR	AMP Work	ODISHA
39	400KV BUS-2 AT NRNC	31/07/15	09:00	31/07/15	18:00	ODB	ER-I	FOR JUMPERING OF 400KV BUS-II EXTENSION	
40	100MVA ICT#1 at Siliguri	31/07/15	09:00	31/07/15	17:00	ODB	ER-II	ICT / Bay Maintenance	WBSETCL
41	220 KV Rourkela - Tarkera # 2	31/07/15	09:00	31/07/15	18:00	ODB	ER- II/ BBSR	AMP Work	ODISHA
42	400 KV BARUPADA - MENDHASAL - II	31/07/15	09:00	03/08/15	17:00	OCB	ER- II/ BBSR	PLCC PANEL DISMANTLING AND ERECTION ATBARIPDA REGARDING LILO OF SAME AT NEW DUBURI	ODISHA
43	A/R OF 400KV KHLG-MTN-2	01/08/15	07:00	31/08/15	18:00	ODB	ER-I	FOR INSTALLATION OF OPGW WORK	
44	A/R OF 400KV KHLG-BARH-2	01/08/15	07:00	31/08/15	18:00	ODB	ER-I	FOR INSTALLATION OF OPGW WORK	

45	315MVA ICT-III at Malda	01/08/15	09:00	01/08/15	18:00	ODB	ER-II	AMP	WBSETCL
46	400 KV Maithon - Mejia 1 LR	01/08/15	09:00	01/08/15	17:00	ODB	ER-II	Reactor AMP	DVC
47	315MVA ICT-V at Malda	02/08/15	09:00	02/08/15	18:00	ODB	ER-II	AMP	WBSETCL
48	400 KV RANCHI - MTN - I & 400 KV MTN - RTPS	02/08/15	09:00	02/08/15	17:00	ODB	ER-I	RECTIFICATION OF EARTH WIRE PEAK AND SNAPPED OPGW	DVC
49	125 MVAR B/R -1 AT PATNA	02/08/15	09:00	06/08/15	17:30	ODB	ER-I	FOR ERECTION OF FIREWALL	
50	400 KV BUS - 1 AT GAYA	03/08/15	10:00	04/08/15	17:00	ODB	ER-I	FOR BAY EXTN. WORKS.	
51	400 KV RANCHI - MTN - I & 400 KV DURGAPUR - RTPS D/C LINE OF DVC	03/08/15	09:00	03/08/15	17:00	ODB	ER-I	RECTIFICATION OF EARTH WIRE PEAK AND SNAPPED OPGW	DVC
52	132 KV BUS at Birpara	03/08/15	08:00	03/08/15	10:00	ODB	ER-II	opening of isolator drop-out of Isolator no. 102-89 M1. There will be interruption of power at Birpara.	WBSETCL
53	132KV Birpara - Birpara - I	03/08/15	08:00	05/08/15	17:00	OCB	ER-II	Isolator retrofitting (Isolator No. 102 -89M1) under ADCAP. No power interruption. The bay will be charged through transfer bus.	WBSETCL
54	220 KV BUS-1 at Durgapur	03/08/15	08:00	08/08/15	18:00	OCB	ER-II	Dismantling , erection & commissioning of (4 NO BUS ISOLATOR) 20189A,20289A,20389A,20489A Isolator under add cap. During the period 315 MVA ICT#1, 220 KV DVC#1 & 220 KV BUS SECTIONALIZER WILL BE OUT OF SERVICE	DVC
55	400KV MTN-KHG-II Line with LR	03/08/15	09:00	03/08/15	14:00	ODB	ER-II	NGR by pass implementaion	
56	132 KV RANGPO-CHUZACHEN	03/08/15	08:00	03/08/15	19:00	ODB	ER-II	AMP WORK	
57	220 KV Main Bus-II at Siliguri	03/08/15	09:00	04/08/15	17:00	OCB	ER-II	Busbar scheme implementation	
58	400 KV Rourkela - Raigarh # 2 L/R	03/08/15	08:00	08/08/15	18:00	OCB	ER- II/ BBSR	Off-line Dry Out of Reactor &NGR By-pass Commissioning	NLDC
59	765/400kv 1500MVA ICT-1 at Sundergarh	03/08/15	08:00	03/08/15	17:00	ODB	ER- II/ BBSR	Fire fighting testing and attaining defects in fire fighting system.	NLDC
60	L/R OF 400 KV KHLG - LAKHISARAI - I AT LAKHISARAI	03/08/15	09:00	03/08/15	17:00	ODB	ER-I	FOR TESTING BEFORE WARRANTY. S/D OF 400 KV KHLG - LKR - I WILL BE REQUIRED FOR 10 MTS. EACH TIME FOR ITS ISOLATION AND WHILE TAKING INTO SERVICE.	
61	80 MVAR B/R -II AT BSF	04/08/15	09:00	04/08/15	15:00	ODB	ER-I	FOR AMP WORK	
62	400 KV JSR - APNRL -1	04/08/15	09:30	04/08/15	17:30	ODB	ER-I	FOR AMP WORK AT JSR END.	
63	315 MVA ICT -2 AT NPRN	04/08/15	10:00	04/08/15	13:00	ODB	ER-I	REMOVAL OF TERTIARY CONNECTION	BIHAR
64	315 MVA ICT -1 AT NPRN	04/08/15	14:00	04/08/15	17:00	ODB	ER-I	CONNECTION OF TERTIARY JUMPERS.	BIHAR
65	400 KV RANCHI - MAITHON , 400 KV RANCHI - RAGHUNATHPUR AND 220 KV SANTHALDIH - CHANDIL ( OF WBSETCL )	04/08/15	10:00	04/08/15	17:00	ODB	ER-I	RECTIFICATION OF CLEARANCE PROBLEM BETWEEN 400 KV RNC - MTN / 400 KV RNC - RAGHUNATHPUR AND 220 KV SANTALDIH - CHANDIL LINE OF WBSETCL BETWEEN LOC. NO. 196-197 OF POWERGRID T/L	DVC
66	125MVAR Bus Reactor-I at New Siliguri	04/08/15	09:00	04/08/15	17:00	ODB	ER-II	CSD COMMISSIONING & Tan Delta Measurement of Bushing at Variable Frequency	
67	220 KV Siliguri -Dalkhola Ckt. I & II	04/08/15	08:00	14/08/15	17:00	OCB	ER-II	Erection of Towers & Stringing of both CKT. LILO of 2200 KV D/C Siliguri - Dalkhola (CKT. I & II) at Kisangnaj S/s.	SUBJECT TO SYSTEM CONDITION.
68	400KV MTN-RTPS(DVC)	04/08/15	09:00	09/08/15	17:00	ODB	ER-II	PIR removal of main Bay CB .S/D required for crane movement. Line will be charged through TIE bay when crane movement is not required during PIR removal work	DVC
69	315MVA ICT-I AT Maithon	04/08/15	09:00	04/08/15	17:00	ODB	ER-II	42389 Tie bay isolator ICT side isolator arm replacement (R-Ph)	DVC
70	50MVA ICT-IV at Malda	04/08/15	09:00	04/08/15	18:00	ODB	ER-II	Testing of bushing with variable freq. Kit.	WBSETCL
71	133 KV RANGPO-GANGTOK-1	04/08/15	08:00	04/08/15	19:00	ODB	ER-II	AMP WORK	SIKKIM
72	400KV S/C Rengali-Indravati	04/08/15	07:00	05/08/15	18:00	ODB	ER- II/ BBSR	For completion of stringing for the power line crossing span 95/0-96/0 of 765kv Angul-Jharsuguda Line-I (Part-I) under construction	NLDC
73	400KV ICT-I TIE Bay(Bay No-408)	04/08/15	09:00	08/08/15	17:30	OCB	ER- II/ BBSR	PIR removal works.	
74	Baripada-Keonjhar line Main CB at Baripada	04/08/15	09:00	10/08/15	17:00	OCB	ER- II/ BBSR	PIR Removal. No power interruption, power flow through TIE CB.	
75	400 KV KAHALGAON - BARH -1	04/08/15	09:00	04/08/15	17:30	ODB	ER-I	REPLACEMENT OF DAMAGED INSULATORS (DAMAGED BY MISCREIENTS)	NLDC
76	TIE BAY OF INDRVATI - RENGALI AT RENGALI	04/08/15	09:00	04/08/15	18:00	ODB	ER- II/ BBSR	CT REPLACEMENT	
77	JRT:400KV MB#2 & diversion of HV side of 315MVA TR#3	04/08/15	06:00	04/08/15	17:00	ODB	WBSETCL	MAINTENANCE WORK	
78	400 KV BUS - 2 AT GAYA	05/08/15	10:00	06/08/15	17:00	ODB	ER-I	FOR BAY EXTN. WORKS.	
79	400 KV BSF - LAKHISARAI- I & II	05/08/15	07:00	10/08/15	18:00	ODB	ER-I	FOR CONSTRUCTION OF M/C PORTION OF T/L FOR SWAPPING OF BAYS AT BSF	NLDC
80	220KV GAYA(PGCIL) - DEHRI(BSPTCL) - I & II	05/08/15	08:00	05/08/15	16:00	ODB	ER-I	FOR CROSSING OF of 765 KV GAYA - VARANASI T/L	BIHAR
81	400KV NSLG-Bongaigaon-I	05/08/15	08:00	05/08/15	16:00	ODB	ER-II	CVT Replacement of 400KV Bongaigaon-NSLG Line-i	NLDC
82	132 KV BUS at Birpara	05/08/15	15:30	05/08/15	17:00	ODB	ER-II	Reconnection of isolator drop-out of Isolator no. 102-89 M1. There will be interruption of power to WB at Birpara.	WBSETCL
83	315MVA ICT-II AT Maithon	05/08/15	09:00	05/08/15	17:00	ODB	ER-II	220KV R-Pole Line isolator replacementin the presence of OEM	DVC
84	400KV BUS-II AT FKK(NTPC) along with 400KVMLD FKK-II	05/08/15	08:00	05/08/15	18:00	ODB	ER-II	For connection of Malda-II with Bus-II	
85	400 kv Farakka - Malda-i tie bay at Farakka	05/08/15	08:00	05/09/15	08:00	OCB	ER-II	For replacement of by equipments.a	
86	400 kv Durgapur Bus - I	05/08/15	09:00	06/08/15	17:00	ODB	ER-II	BUS SPLITTING AT DURGAPUR	
87	3 x 105 MVA ICT-I at Jaypore	05/08/15	09:00	05/08/15	12:00	ODB	ER- II/ BBSR	Unloading of 125 MVAR Reactor at site.	ODISHA
88	765/400kv 1500MVA ICT-2 at Sundergarh	05/08/15	08:00	05/08/15	17:00	ODB	ER- II/ BBSR	Fire fighting testing and attaining defects in fire fighting system.	NLDC
89	JRT: 315MVA TR#1	05/08/15	07:00	05/08/15	16:00	ODB	WBSETCL	MAINTENANCE WORK	
90	400 KV NPRN -PRN -2	06/08/15	09:00	06/08/15	15:00	ODB	ER-I	FOR TRANSFER ISOLATOR INSULATOR REPLACEMENT WORK.	

91	400 KV BOKARO - KODERMA - I & II AND 220 KV BSF - TENUGHAT	06/08/15	07:00	06/08/15	18:00	ODB	ER-I	TO SET RIGHT THE CLEARANCE BETWEEN BOKARO - KODERMA AND 220 KV BSF - TENUGHAT	DVC
92	132 KV DEHRI - KUDRA OF BSPTCL	06/08/15	08:00	06/08/15	16:00	ODB	ER-I	FOR CROSSING OF of 765 KV GAYA - VARANASI T/L	BIHAR
93	125MVAR Bus Reactor-II at New Siliguri	06/08/15	09:00	06/08/15	17:00	ODB	ER-II	CSD COMMISSIONING & Tan Delta Measurement of Bushing at Variable Frequency	
94	132KV Birpara - Birpara - I	06/08/15	08:30	11/08/15	17:00	ODB	ER-II	Isolator retrofitting (Isolator No. 102 -89 L & T). UndeP. Power flow will be there through feeder-II.	WBSETCL
95	400KV MTN-RB-II	06/08/15	08:00	08/08/15	17:00	ODB	ER-II	1. Isolator Arm Replacement, Strung bus repair,oil sampling of Y-Ph line CT (Alstom make) & Insulator Replacement.	MPL
96	220 KV Main Bus-I at Siliguri	06/08/15	09:00	07/08/15	17:00	OCB	ER-II	Busbar scheme implementation	
97	Line Reactor of Jeypore - Bolangir	06/08/15	09:00	06/08/15	18:00	ODB	ER- II/ BBSR	AMP Work and rectification on NGR By Pass arrangement.	
98	125 MVAR B/R -2 AT PATNA	07/08/15	09:00	10/08/15	17:30	ODB	ER-I	FOR ERECTION OF FIREWALL	
99	132 KV SASARAM - KUDRA RLY SECTION OF 132 KV DEHRI -SASARAM -KUDRA RLY - KARAMNASHA LINE OF BSPTCL	07/08/15	08:00	07/08/15	16:00	ODB	ER-I	FOR CROSSING OF of 765 KV GAYA - VARANASI T/L	BIHAR
100	220KV Subhasgram - Subhasgram # 1 (207)	07/08/15	09:00	07/08/15	16:00	ODB	ER-II	AMP of CB. No power interruption. Line will be charged through TBC.	WBSETCL
101	400 kv Durgapur Bus - II	07/08/15	09:00	08/08/15	17:00	ODB	ER-II	BUS SPLITTING AT DURGAPUR	
102	Balangir-Angul line Main Bay(401) at Bolangir	07/08/15	09:00	07/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
103	765kV, 240MVAR Bus Reactor-1 at Sundergarh	07/08/15	08:00	07/08/15	17:00	ODB	ER- II/ BBSR	Fire fighting testing and attaining defects in fire fighting system.	NLDC
104	220 KV BUS -2 AT NPRN	08/08/15	09:00	08/08/15	15:00	ODB	ER-I	FOR CVT RELACEMENT WORK.	BIHAR
105	220KV Subhasgram - Subhasgram # 2 (209)	08/08/15	09:00	08/08/15	16:00	ODB	ER-II	AMP of bay. No power interruption. Line will be charged through TBC.	WBSETCL
106	400 KV Rourkela - Raigarh # 2	08/08/15	09:00	08/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	NLDC
107	Balangir- Jeypore line Main Bay(403) at Bolangir	08/08/15	09:00	08/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
108	ICT-II Main bay(404) at Bolangir	09/08/15	09:00	09/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
109	125 MVAR B/R -I AND 63 MVAR KISHANGANJ -2 L/R AT PATNA	10/08/15	09:00	15/08/15	17:30	ODB	ER-I	FOR ERECTION OF TIE BAY OF 125 MVAR B/R - I & 63 MVAR L/R OF KISHANGANJ -2 AT PATNA	
110	315 MVA ICT#1 at Durgapur	10/08/15	08:00	12/08/15	18:00	OCB	ER-II	Dismantling , erection & commissioning of 20189B, 20189T isolator under add cap	DVC
111	400KV Maithon-Jamshedpur	10/08/15	08:00	17/08/15	17:00	ODB	ER-II	Insulator replacement	
112	400KV MLD PRN-I	10/08/15	08:00	13/08/15	18:00	ODB	ER-II	Replacement of CB interruptor. No power interruption. Ckt will be charged through TBC.	NLDC
113	220KV ICT # 1 Subhasgram (210)	10/08/15	09:00	10/08/15	16:00	ODB	ER-II	AMP of bay. No power interruption. Line will be charged through TBC.	WBSETCL
114	125 MVAR Bus Reactor AT Rourkela	10/08/15	10:00	10/08/15	17:00	ODB	ER- II/ BBSR	Replacement of defective REF relay and its testing.	
115	400KV Indravati Main Bay(Bay no-410) at Jaypore	10/08/15	09:00	15/08/15	17:30	OCB	ER- II/ BBSR	PIR removal works.	
116	ICT-II - Jeypore line tie bay(40304) at Bolangir	10/08/15	09:00	10/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
117	765kV, 240MVAR Bus Reactor-2 at Sundergarh	10/08/15	08:00	10/08/15	17:00	ODB	ER- II/ BBSR	Fire fighting testing and attaining defects in fire fighting system.	NLDC
118	50 MVAR Indravati - Rengali LR at Rengali	10/08/15	09:00	17/08/15	18:00	OCB	ER- II/ BBSR	Offline filtration	
119	400KV Rengali - Indravati Line	10/08/15	09:00	10/08/15	18:00	ODB	ER- II/ BBSR	To isolate Indravati LR	NLDC
120	400 KV KAHALGAON - BARH -2	11/08/15	09:00	11/08/15	17:30	ODB	ER-I	REPLACEMENT OF DAMAGED INSULATORS (DAMAGED BY MISCREIENTS)	NLDC
121	400 KV CHAIBASA - RKL -1	11/08/15	09:00	11/08/15	17:00	ODB	ER-I	FOR BAY CONSTRUCTION WORK OF B/R AT CBS	
122	132 KV BUS at Birpara	11/08/15	15:15	11/08/15	17:00	ODB	ER-II	Isolator retrofitting (Isolator No. 104 -89M1) under ADCAP. During this period no power flow will be there to WB.	WBSETCL
123	132 KV SIDE OF ICT-I at Birpara	11/08/15	15:15	14/08/15	15:00	OCB	ER-II	Isolator retrofitting (Isolator No. 104 -89 M). No power Interruption. ICT-I will be connected through transfer bus.	WBSETCL
124	221 KV MTN-DHANBAD-II	11/08/15	09:00	11/08/15	17:00	ODB	ER-II	CVT Inspection/replacement	DVC
125	400 KV Rourkela - Chaibasa # 1	11/08/15	09:00	12/08/15	18:00	ODB	ER- II/ BBSR	Removal of PIR in 400 KV Rourkela - Chaibasa # 1 Main Bay ( Bay No.- 416)	
126	400KV Barh-Patna LINE#3	11/08/15	09:30	12/08/15	17:30	OCB	NTPC	PM of CTs, ,LAs, Isolator, CB of Main and tie bay.	
127	400 KV Kh- Lakhisarai#2	12/08/15	09:00	12/08/15	17:30	ODB	NTPC	PM works & relay testing	
128	400 KV BSF - SASARAM- 3 & 4	12/08/15	07:00	30/08/15	18:00	OCB	ER-I	FOR CONSTRUCTION OF M/C PORTION OF T/L FOR SWAPPING OF BAYS AT BSF	SHUTDOWN CAN NOT BE ALLOWED. MAY BE RESCHEDULE TO OCTOBER.
129	400 KV BSF - PURNEA - I & II	12/08/15	07:00	25/08/15	18:00	OCB	ER-I	FOR CONSTRUCTION OF M/C PORTION OF T/L FOR SWAPPING OF BAYS AT BSF	SHUTDOWN CAN NOT BE ALLOWED. MAY BE RESCHEDULE TO OCTOBER.
130	765KV/400 KV, 1500 MVA ICT AT PUSAULI	12/08/15	08:00	12/08/15	18:00	ODB	ER-I	OIL SAMPLING OF ABB MAKE 765 AND 400 KV BUSHINGS AND REPLACEMENT OF 390 KV LA WITH 336 KV LA. DURING THE S/D THERE WILL NOT BE ANY POWER FLOW IN 765 KV PUSAULI -FATEHPUR.	NLDC
131	400 KV PATNA - BARH - 1	12/08/15	09:00	12/08/15	17:30	ODB	ER-I	REPLACEMENT OF DAMAGED INSULATORS (DAMAGED BY MISCREIENTS)	NLDC
132	220KV Maithon - Kalyaneshwari-1	12/08/15	09:00	12/08/15	17:00	ODB	ER-II	Alignment adjustment of line isolator	DVC
133	220KV ICT # 3 Subhasgram(211)	12/08/15	09:00	12/08/15	16:00	ODB	ER-II	AMP of bay. No power interruption. Line will be charged through TBC.	WBSETCL
134	765kV Sundargarh- Angul Line-2 with 240MVAR L/R at Sundergarh	12/08/15	08:00	13/08/15	17:00	OCB	ER- II/ BBSR	Fire fighting testing and attaining defects in fire fighting system.	NLDC

135	MAIN BAY ICT AT RENGALI	12/08/15	09:00	12/08/15	18:00	ODB	ER- II/ BBSR	CT REPLACEMENT	
136	400KV JRT-BKTPP	12/08/15	07:00	12/08/15	16:00	ODB	WBSETCL	MAINTENANCE WORK	
137	400 KV JSR - BARIPADA LINE	13/08/15	08:30	13/08/15	17:00	ODB	ER-I	REPLACEMENT OF INSULATOR DAMAGED BY MISCREANTS	
138	400 KV PATNA - BARH - 2	13/08/15	09:00	13/08/15	17:30	ODB	ER-I	REPLACEMENT OF DAMAGED INSULATORS (DAMAGED BY MISCREANTS)	NLDC
139	400 KV Rourkela - Sundergarh # 1	13/08/15	09:00	14/08/15	18:00	ODB	ER- II/ BBSR	Removal of PIR in 400 KV Rourkela - Sundergarh # 1 Main Bay ( Bay No.- 418)	NLDC
140	132 KV BUS at Birpara	14/08/15	13:00	14/08/15	15:00	ODB	ER-II	RE-connection of isolator drop-out of Isolator no. 104-89 M1. No power flow to WB during the said period.	WBSETCL
141	63 MVAR KISHANGANJ - 2 L/R AT PATNA	16/08/15	09:00	20/08/15	17:30	ODB	ER-I	FOR ERECTION OF LINE SIDE EQUIPMENT OF KISHANGANJ - 2 AT PATNA.	
142	132 KV BUS at Birpara	16/08/15	08:00	16/08/15	10:00	ODB	ER-II	Isolator retrofitting (Isolator No. 103 -89M1) under ADCAP. There will be no power flow to WB during the said period.	WBSETCL
143	132KV Birpara - Birpara - II	16/08/15	08:00	18/08/15	17:00	OCB	ER-II	Isolator retrofitting (Isolator No. 103 -89M1) under ADCAP. There will be no power interruption and the ckt will be charged through transfer bus.	WBSETCL
144	400 kv bus-2 at Durgapur	16/08/15	10:00	17/08/15	14:00	#REF!	ER-II	For construction activities related to bus split at Durgapur.	
145	400 kv Durgapur Bus - II	16/08/15	09:00	17/08/15	17:00	ODB	ER-II	BUS SPLITTING AT DURGAPUR	
146	400KV Subhasgram - Haldia Line #1 (416)	17/08/15	09:00	17/08/15	16:00	ODB	ER-II	AMP of bay. No power interruption. Line will be charged through tie bay.	WBSETCL
147	220 KV Bus - I Rourkela	17/08/15	09:00	17/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
148	400KV ICT-I Main Bay(Bay No-407) at Jaypore	17/08/15	09:00	23/08/15	17:30	OCB	ER- II/ BBSR	PIR removal works.	
149	400 / 220 KV 315 MVA ICT -1 AT JSR	18/08/15	09:30	20/08/15	17:30	OCB	ER-I	1) 02 NO BUSHING REPLACEMENT -- 01 NO OF 220 KV AND 01 NO OF 52 KV 2) TAN DELTA TEST TAP POSITION REPLACEMENT IN 02 no. 400 KV BUSHING	JHARKHAND
150	132 KV BUS at Birpara	18/08/15	15:30	18/08/15	17:00	ODB	ER-II	Re-connection of isolator dropper, There will be power interruption to WB side.	WBSETCL
151	400KV Maithon-Meija 3	18/08/15	08:00	21/08/15	17:00	ODB	ER-II	Insulator replacement	DVC
152	400KV Subhasgram - Haldia Line #2 (416)	18/08/15	09:00	18/08/15	16:00	ODB	ER-II	AMP of bay. No power interruption. Line will be charged through tie bay.	WBSETCL
153	220 KV Bus - II Rourkela	18/08/15	09:00	18/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
154	400kv Bus-I at Bolangir	18/08/15	09:00	18/08/15	18:00	ODB	ER- II/ BBSR	AMP Work	
155	765KV Sundargarh-Dharamjaygarh Line-1 at Sundergarh	18/08/15	08:00	18/08/15	17:00	ODB	ER- II/ BBSR	Attaining constructional punch points.	NLDC
156	220 KV RENGALI - RENGALI	18/08/15	09:00	18/08/15	18:00	ODB	ER- II/ BBSR	BURNT ISOLATOR REPLACEMENT	
157	400 KV CHAIBASA - JSR - 1	19/08/15	09:00	19/08/15	17:00	ODB	ER-I	FOR BAY CONSTRUCTION WORK OF B/R AT CBS	
158	132KV Birpara - Birpara - II	19/08/15	09:30	24/08/15		ODB	ER-II	Isolator retrofitting (Isolator No. 103 -89 L & T) under ADCAP. There will be power interruption to WB . However CKT-I will be in charged condition.	WBSETCL
159	160MVA ICT-I at Malda	19/08/15	08:00	19/08/15	18:00	ODB	ER-II	NIFS comm.	WBSETCL
160	400 KV Bus#1 at KHSTPP	19/08/15	07:30	19/08/15	19:00	ODB	NTPC	CVT replacement & Bus Bar differential relay testing by OEM	
161	JRT: 315MVA TR#2	19/08/15	07:00	19/08/15	16:00	ODB	WBSETCL	MAINTENANCE WORK	
162	400 KV Bus Reactor -2 at FSTPP	20/08/15	09:00	20/08/15	17:30	ODB	NTPC	Bay Maintenance	
163	63 MVAR KISHANGANJ -1 L/R AT PATNA	21/08/15	09:00	29/08/15	17:30	ODB	ER-I	FOR ERECTION OF LINE SIDE EQUIPMENT OF KISHANGANJ - 1 AT PATNA.	
164	160MVA ICT-II at Malda	21/08/15	08:00	22/08/15	16:00	OCB	ER-II	NIFS comm.	WBSETCL
165	765KV Sundargarh-Dharamjaygarh Line-2 at Sundergarh	21/08/15	08:00	22/08/15	17:00	OCB	ER- II/ BBSR		NLDC
166	400 KV Bus#2 at KHSTPP	21/08/15	07:30	21/08/15	19:00	ODB	NTPC	CVT replacement & Bus Bar differential relay testing by OEM	
167	400KV Meija Jamshedpur	22/08/15	08:00	27/08/15	17:00	ODB	ER-II	Insulator replacement	DVC
168	400KV Kh-Barh#1line	22/08/15	09:00	22/08/15	17:30	ODB	NTPC	Relay testing by OEM	NLDC
169	132 KV TBC at Birpara	25/08/15	09:00	30/08/15	17:00	ODB	ER-II	Isolator retrofitting (Isolator No. 143 -89M1, T)	WBSETCL
170	400KV Barh-Patna LINE#4	25/08/15	09:30	26/08/15	17:30	OCB	NTPC	PM of CTs, ,LAs, Isolator, CB of Main and tie bay	
171	400 KV Jeypore-Gazuwaka-I Main Bay(Bay no-412) at Jaypore	26/08/15	09:00	26/08/15	17:30	ODB	ER- II/ BBSR	AMP works	
172	JRT: 315MVA TR#3	26/08/15	07:00	26/08/15	16:00	ODB	WBSETCL	MAINTENANCE WORK	
173	400 KV Fkk Behrampore line	27/08/15	09:00	27/08/15	17:30	ODB	NTPC	Relay and CT testing	NLDC
174	400KV MTN-RB-I	28/08/15	08:00	31/08/15	17:00	ODB	ER-II	1. Isolator Arm Replacement and AMP of Line Bay. 2. Isolator Replacement work in Line	MPL
175	400 KV Jeypore-Gazuwaka-II Main Bay(Bay no-413) at Jaypore	28/08/15	09:00	28/08/15	17:30	ODB	ER- II/ BBSR	AMP works	
176	80 MVAR LR BAY AT MERAMUNDALI	28/08/15	09:00	28/08/15	18:00	ODB	ER- II/ BBSR	CSD TESTING WORK	

<b>Maintenance Schedule of Thermal Generating Units for August, 2015 as approved in 111th OCC</b>
---

System	Station	Unit	Size (MW)	period		No. of Days	Reason
				From	To		
JUSNL	TVNL, Tenughat	2	210	01.08.15	31.08.15	31	Unit Overhauling
DVC	MTPS	7	500	06.08.15	31.08.15	26	AOH
	CTPS	1	130	16.08.15	31.08.15	16	Burner Replacement
ODISHA	TTPS	2	60	20.08.15	03.09.15	15	Boiler Overhaul
WBPDC	Bakreswar TPS	4	210	23.07.15	12.08.15	21	Boiler Overhauling + TG Balancing
NTPC	KhSTPS	6	500	08.08.15	11.09.15	35	Boiler+ Gen.+Turbine
	TSTPS	1	500	23.08.15	26.09.15	35	Boiler+ DDCMIS
IPP	MPL	1	525	06.09.15	10.10.15	30	Annual maintenance

<b>Additional Maintenance Schedule as requested by constituents</b>
---

NTPC	FSTPS	4	500	15.08.15	25.09.15	40	Annual Overhaul/Maintenance (Shutdown deferment from earlier plan i.e. from 30.07.15 to 02.09.15)
WBPDC	STPS	5	250	14.08.15	31.08.15	18	Boiler Overhauling

**Annexure-C.2**

**Anticipated Power Supply Position for the month of  
Aug-15**

SL.NO	PARTICULARS	PEAK DEMAND MW	ENERGY MU
1	<b>BIHAR</b>		
i)	NET MAX DEMAND	2950	1592
ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	621	323
	- Central Sector	2255	1521
iii)	SURPLUS(+)/DEFICIT(-)	-74	252
2	<b>JHARKHAND</b>		
i)	NET MAX DEMAND	1100	745
ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	672	230
	- Central Sector	518	319
iii)	SURPLUS(+)/DEFICIT(-)	90	-197
3	<b>DVC</b>		
i)	NET MAX DEMAND (OWN)	2713	1610
ii)	NET POWER AVAILABILITY- Own Source	4386	2266
	- Central Sector	409	293
	Long term Bi-lateral (Export)	1250	930
iii)	SURPLUS(+)/DEFICIT(-)	832	18
4	<b>ORISSA</b>		
i)	NET MAX DEMAND	3950	2278
ii)	NET POWER AVAILABILITY- Own Source	3350	1964
	- Central Sector	992	672
iii)	SURPLUS(+)/DEFICIT(-)	392	358
5	<b>WEST BENGAL</b>		
5.1	<b>WBSEDCL</b>		
i)	NET MAX DEMAND (OWN)	5610	3369
ii)	CESC's DRAWAL	180	45
iii)	TOTAL WBSEDCL's DEMAND	5790	3413
iv)	NET POWER AVAILABILITY- Own Source	3991	2166
	- Import from DPL	140	24
	- Central Sector	1723	1233
v)	SURPLUS(+)/DEFICIT(-)	64	10
5.2	<b>DPL</b>		
i)	NET MAX DEMAND	260	230
ii)	NET POWER AVAILABILITY	400	254
iii)	SURPLUS(+)/DEFICIT(-)	140	24
5.3	<b>CESC</b>		
i)	NET MAX DEMAND	1800	1031
ii)	NET POWER AVAILABILITY - OWN SOURCE	1050	657
	FROM HEL	525	329
	FROM CPL/PCBL	45	15
	Import Requirement	180	45
iii)	TOTAL AVAILABILITY	1800	1031
iv)	SURPLUS(+)/DEFICIT(-)	0	0
6	<b>WEST BENGAL (WBSEDCL+DPL+CESC)</b> (excluding DVC's supply to WBSEDCL's command area)		
i)	NET MAX DEMAND	7670	4630
ii)	NET POWER AVAILABILITY- Own Source	5441	3077
	- Central Sector	2248	1562
iii)	SURPLUS(+)/DEFICIT(-)	19	10
7	<b>SIKKIM</b>		
i)	NET MAX DEMAND	85	33
ii)	NET POWER AVAILABILITY- Own Source	16	5
	- Central Sector	137	94
iii)	SURPLUS(+)/DEFICIT(-)	68	67
8	<b>EASTERN REGION</b>		
	At 1.03 AS DIVERSITY FACTOR		
i)	NET MAX DEMAND	17930	10887
	Long term Bi-lateral	1250	930
ii)	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)	21044	12326
iii)	PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)	1864	509