



Minutes of **135th OCC Meeting**

Date: 09.08.2017
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 135th OCC Meeting held on 24th July, 2017 at ERPC, Kolkata

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

PART A

Item no. 1: Confirmation of minutes of 134th OCC meeting of ERPC held on 23.06.2017

The minutes of 134th OCC meeting were uploaded in ERPC website and circulated vide letter dated 11.07.2017 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 134th OCC meeting.

PART B: ITEMS FOR DISCUSSION

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

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

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

New Generators/Transmission Elements commissioned/charged during **June, 2017** as follows:

1. Unit-2 (195 MW) of Muzaffarpur Thermal Power Station Stage-II (2x195 MW) has been declared under Commercial Operation w.e.f. 00:00 Hrs of 01.07.2017
2. 50 MVA, 132/33kV Transformer-IV at Asansol first time charged at 10:37 hrs on 12.06.2017
3. 31.5 MVA, 132/33kV Transformer-III at Gangarampur first time charged at 09:05 hrs on 09.06.2017
4. 20 MVA, 132/33kV Transformer-III at Balurghat first time charged at 14:58 hrs on 24.06.2017
5. 50 MVA, 132/33kV Transformer-I at Old Bishnupur first time charged at 11:32 hrs on 29.06.2017

Constituents may update.

Deliberation in the meeting

BSPTCL and JUSNL updated the following:

6. 220/132 KV Pusauli (New) S/S with 2X50 MVA Transformer and 132 KV Pusauli (New)-Bhabhua (Mundeshwari) (S/C) line 34 Km first time charged on 12.06.2017

7. 132kV Mango S/s and 132kV Chandil-Mango-Golmuri line first time charged on 30.06.2017

WBSETCL submitted the list of new transmission elements commissioned during April, 2017 to June 2017. The list is enclosed at **Annexure-B1**.

OCC advised WBSETCL to update the status on monthly basis.

Item No. B.2: Status of projects funded under PSDF schemes

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

| SN | Name of Constituent | Name of Project | Date of approval from PSDF | Target Date of Completion | PSDF grant approved (in Rs.) | Amount drawn till date (in Rs.) | Status as updated in 134 th OCC |
|----|---------------------|---|----------------------------|---------------------------|------------------------------|---------------------------------|---|
| 1 | WBSETCL | Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal | 31-12-14 | | 120.67 Cr | 11.04 Cr. | 95 % Supply Completed |
| 2 | WBSETCL | Transmission System improvement of WBSETCL | | | | | |
| 3 | OPTCL | Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies. | 10.05.15 | 10.05.17 | 162.5 Cr. | 16.25 Cr + 8.91 Cr | Total contract awarded for Rs. 51.35 Cr |
| 4 | ERPC | Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid | 17.03.16 | | 20 Cr. | 4.94 Cr. + 9.88 Cr. | 1) Hardware supplied and installed. 2) SAT completed for pilot state 3) Protection database management software (PDMS) put in live w.e.f. 30.03.17. 4) Training on PDMS organised at Odisha, ERPC & Bihar. |
| 5 | BSPTCL | Renovation and up-gradation of 220/132/33 KV GSS Biharsharif, Bodhgaya, Fatuha, Khagaul, Dehri -on-sona & 132/33 kV GSS Kataiya | 11/5/2015 | Feb'2017 | 64.22 crore | 23.68 crore | Project is on going. Contract awarded for Rs.71.37 Cr till date. |
| 6 | | Installation of capacitor bank at different 35 nos. of GSS under BSPTCL | 5/9/2016 | | 18.88 crore | | Approved (triparty agreement among NLDC, Govt. of Bihar & BSPTCL is in under process) |
| 7 | | Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL. | | | | | Recommendation of appraisal committee is awaited. Estimated cost 54.69 crore. |
| 8 | DVC | Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation | | | 25.96 | | Approved by Ministry of Power |
| 9 | | Renovation and upgradation of control & protection system including replacement of substation equipment at Parulia, Durgapur, Kalyaneshwari, Jamshedpur, Giridih, Barjora, Burnpur, Dhanbad and Burdwan Substation of DVC | | | 140 | | Appraisal committee has recommended. It will be placed in next monitoring Committee meeting. |
| 10 | WBPDC | Implementation of Islanding scheme at Bandel Thermal Power | | | 1.39 Cr | | MOP vide letter dated 16.05.17 has issued the |

| | | | | | | | |
|-----|------|--|--|--|---------|--|--|
| | | Station | | | | | <i>sanction for grant of Rs. 1.39 Cr.</i> |
| | | Upgradation of Protection and SAS | | | 26.09 | | Approved by Ministry of Power |
| 11 | OHPC | Renovation and up-gradation of protection and control system of 4 nos OHPC substations. | | | 2.54 Cr | | <i>MOP has issued the sanction letter for PSDF grant.</i> |
| 12a | ERPC | Training for Power System Engineers | | | | | The proposal was examined by the Techno Economic sub group of PSDF and advised to submit revised proposal with consideration of views of the group. |
| 12b | | Training on Integration of Renewable Energy resources | | | | | The proposal was examined by the Techno Economic sub group of PSDF and advised to submit revised proposal only for training at NORD POOL Academy with consideration of views of the group. |
| 12c | | <i>Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents</i> | | | | | |

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

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

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

In 134th OCC, it was informed that MoP has issued the letter for sanction of grant for Bandel islanding scheme and renovation & up-gradation of OHPC substations.

Respective constituents may update.

Deliberation in the meeting

WBPDCCL informed that order has been placed to ABB for implementation of Bandel islanding scheme.

WBSETCL informed that two schemes (installation of switchable reactor & shunt capacitor for improvement of voltage profile and Improvement of State Transmission System by Renovation & Modernisation of Transmission System for relieving congestion) have been approved by the PSDF monitoring committee.

OCC advised WBSETCL to submit the details to ERPC.

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

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

- 13.00 Hrs of 28th December,2016.
- 02:00 Hrs of 29th December,2016

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

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

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

In 133rd OCC, PRDC informed that load flow studies of Summer Peak Condition (4th and 5th May, 2017) for 19:00 and 20:00 hrs, they have received data from BSPTCL and CESC.

In 134th OCC, PRDC informed that as per the data received from ER constituents and ERLDC SCADA snapshot the demand of 20 Hrs of 4th May, 2017 is observed as more appropriate for Peak load flow analysis.

OCC advised PRDC to carry out Peak load flow studies with the above data.

Further, it was informed that the login ID and Password for access of PDMS has been issued to the respective members as nominated by the authorities.

OCC advised constituents to verify their respective data and give their feedback.

PRDC may update.

Deliberation in the meeting

PRDC informed that load flow studies of Summer Peak Condition (4th and 5th May, 2017) for 19:00 and 20:00 hrs, some data is still pending from PGCIL and OPTCL.

OCC advised DVC, PGCIL and OPTCL to submit the pending data to PRDC with a copy to ERPC at the earliest.

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

UFR Healthiness Certification for the month of June, 2017 has been received from OPTCL, CESC, JUSNL, WBSETCL, DVC, and BSPTCL.

Members may note.

Deliberation in the meeting

Members noted.

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

GMR, Vedanta, CESC, Chuzachen & NTPC (TSTPS) have submitted the healthiness certificate for the month of June, 2017.

JITPL, Powergrid (ER-II & Odisha) may submit the healthiness certificate for June 2017.

Teesta-III, Jorethang, Dikchu, Chuzachen & Powergrid may submit the healthiness certificate for Rangpo SPS as decided in special meeting of 21.06.2017.

Deliberation in the meeting

OCC advised JITPL, Powergrid (ER-II & Odisha) to submit the healthiness certificate for June 2017.

OCC advised Teesta-III, Jorethang, Dikchu, Chuzachen & Powergrid to submit the healthiness certificate for Rangpo SPS as decided in special meeting of 21.06.2017.

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

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

In the conference Hon'ble Union Minister for Power requested all the States/UTs to submit the requisite data to CEA immediately.

On this regard, it is to inform that POSOCO has developed the facility for online uploading of monthly & daily data related to Merit Order Dispatch Portal, by the SLDCs. NLDC (POSOCO) has already communicated via email to all the SLDCs, their respective User IDs & Passwords and the procedure for online filling & uploading of data. All the SLDCs to start submitting the above data to NLDC online immediately.

In case of any doubt / clarification, Shri Harish Kr Rathour (NLDC) may be contacted at his Mobile No.9873918443. The procedure for online uploading of data for the portal is available in ERPC website.

Subsequently, CEA vide mail dated 4th July 2017 informed that for the ease of user, import from excel (in a predefined format) facility have also been implemented. Users are requested to follow following steps to upload data through excel:

- 1) Login to MERIT web portal (www.meritindia.in/login).
- 2) Select any date and click on "GO" button. After this, list of all station will be visible for that date with other information's, if already filled.
- 3) Click on "Export Data in Excel" to export the file in excel. ***This would be a template file which is to be used for uploading the data.***
 - a. Once you do not have any changes in the list of plants, this file can be used for data uploading and on daily basis user need not to download excel format again.
 - b. In case updation in list of station is required (State owned stations), same can be modified through monthly page. At present this feature is disabled and very shortly it will be enabled.
 - c. Initial two row has station ID and name of station, which should not be disturbed and data will be uploaded based on these only. Any changes in it may lead to wrong data uploading.
 - d. User can select any file name to save and upload the data.
 - e. Once you filled data click on "If you have data ready in Excel, CLICK HERE to upload", select date for which you want to upload data, browse for the desired file and click on UPLOAD.
 - f. If entire file has not been uploaded, you will get the file which will show list of stations not uploaded.
- 4) If new station to be added for state, user can add through monthly data upload pages. Once, it has added new EXCEL template to be downloaded again in order to fill data for new station.
- 5) User who wants to fill data directly through web-portal, would now have option to sort based on the various fields, which will help in filling data. Users who wants to fill on-line need not to click on "If you have data ready in Excel, CLICK HERE to upload", they only select the date and simply click on "GO" button.

After submission of data, user can check directly on www.meritindia.in. It is once again requested to all to fill the monthly data (variable and fixed cost) because all visualization in first page is based on variable costs of the plants. In case of any doubt / clarification, Shri Harish Kr Rathour (NLDC) may be contacted at his Mobile No.9873918443.

Members may note.

Deliberation in the meeting

Members noted for compliance.

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

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

At present, the following islanding schemes are in service:

1. CESC as a whole Islanding Scheme, CESC
2. BkTPS Islanding Scheme, WBPDC
3. Tata Power Islanding Scheme, Haldia
4. Chandrapura TPS Islanding Scheme, DVC
5. Farakka Islanding Scheme, NTPC

In 108th OCC meeting, respective constituents agreed to certify that the islanding schemes under their control area are in service on monthly basis.

In 134th OCC, JUSNL was advised to submit the healthiness certificate of the UFR and PLCC system related to Farakka islanding scheme at their end.

The healthiness certificate for Islanding Scheme for June, 2017 has been received from CTPS, DVC, NTPC, BkTPS, Tata Power and CESC.

JUSNL may submit the healthiness certificate for FSTPS Islanding Scheme.

Deliberation in the meeting

OCC advised JUSNL to submit the healthiness certificate for FSTPS Islanding Scheme on monthly basis.

B.7.2. Bandel Islanding Scheme, WBPDC

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

In 134th OCC, WBPDC informed that MoP has issued the sanction letter for grant of PSDF.

OCC advised WBPDC to award the contract at the earliest and update the status.

WBPDC may update the latest status.

Deliberation in the meeting

WBPDC informed that order has been placed to ABB for implementation of Bandel islanding scheme.

Item No. B.8: Modification of Annexure B-5 of First time charging of new transmission elements format

As per directive received from CEA, letter No: CEA/PCD/104CLPTC/1415 dated 28/06/2017, for ensuring safe and secure operation of telecom equipment in vicinity of power line, PTCC (Power and telecommunication co-ordination committee) Route Approval (RA) is to be submitted by transmission licensee and others to ERLDC for charging of any new transmission elements.

In line to this, Annexure B5 (Format IIID) of first time charging documents has been revised to take care the above issue and updated in the website. CEA letter and updated Annexure B5

(Format IIID) are attached at **Annexure-B8**. All transmission licensee and others are requested to submit update Annexure B-5 for first time charging of any elements.

Members may note.

Deliberation in the meeting

Members noted.

Item No. B.9: Deviation of generation by Jorethang HEP --ERLDC

For couple of weeks in the month of July'17, it has been observed that Jorethang HEP is bringing down their generation to zero for around 2-3hrs daily during early morning reportedly on account of silt problem. It has also been noticed that this silt cleaning activities is being carried regularly at a particular fixed time. As it is a routine activities during this rainy season, action is required to be taken for bidding in the market accordingly so as to reduce unwanted deviation (during silt cleaning period) in the system.

Members may discuss.

Deliberation in the meeting

ERLDC presented the Jorethang HEP generation during July 2017. Details are enclosed at Annexure-B9.

OCC advised Jorethang to plan for shutdowns in case of routine activities (like silt cleaning etc) in order to avoid the deviation from Schedule.

As no representatives of Jorethang was present in the meeting, OCC requested MS-ERPC to take up the issue with Jorethang HEP.

Item No. B.10: DSM charges due to transmission constraint –Teesta-III

Teesta-III vide mail dated 13th July 2017 informed that

- Teesta-III HEP is presently injecting its power in the Power Exchange (IEX). It is proposed that wherever there is any transmission constraint not attributable to the Generating Station, the transaction already scheduled on day ahead basis may be curtailed by NLDC/ERLDC. This would ensure that the Generating Company does not get unduly penalized under DSM. In this connection, two detailed letters dated 09.06.2017 and 11.07.2017 of TUL may please be considered.
- It is requested that as mentioned in the attached letters, TUL has already been penalised under DSM for transactions pertaining to 06.06.2017 and therefore, it has been requested that ERLDC may kindly rise the schedule for that day and also ensure that no penalty is levied under DSM.

Members may discuss.

Deliberation in the meeting

TUL explained that on 06.06.2017 there was a tripping of 400 kV Teesta-III- Rangpo line, which resulted in generation loss of Teesta-III HEP. Therefore, Teesta-III could not generate the scheduled generation for Power Exchange and liable to pay DSM charges. As the tripping of said ISTS line is beyond the control of TUL the same may be considered as transmission constraint and ERLDC may consider the curtailment of schedule as per the provisions of IEGC.

ERLDC informed that as the generator is connected through a single transmission line, in case of tripping of the same, the tripping could not be construed as transmission constraint. Hence the transactions made through Power Exchange cannot be curtailed.

It was informed that as Teesta-III is selling power through Power Exchange and not in LTA/STOA so once the transactions is finalized cannot be curtailed in case of tripping of 400 kV-Teesta-III- Rangpo S/C line.

Item No. B.11: Registering the Revised Installed Capacity of Chuzachen HEP as 110 MW.

Chuzachen vide mail dated 13th July 2017 informed that Chuzachen HEP - 110 MW (Installed Capacity) located in the East District of Sikkim is an operational project. The approval for 110 MW Chuzachen HEP was accorded by Energy & Power Department, Govt. of Sikkim (vide Letter. No. SPDC/228/2003-04/789, dated 21.05.2015) and MoEF&CC, Government of India (vide Letter.No.J-12011/18/2005-IA-I, dated 08.04.2015).

The installed capacity of Chuzachen HEP was increased from 99 MW to 110 MW during the implementation stage of the project after observing increase in river water availability for power generation. All civil components, hydro mechanical and Electro-mechanical equipments were designed and installed for 110MW (2X55MW) capacity with 10% continuous overloading. The project is in possession of all statutory approvals from Govt. departments, technical design documents, commissioning documents in support of the installed capacity of 110 MW.

A) Chuzachen HEP had already obtained the following necessary statutory and other approvals from concerned Authority in respect of 110 MW installed capacity:

- i) Environmental clearance by MOEF & climate change for revised capacity of 110MW dtd. 8th April 2015.
- ii) Approval of revised capacity by Energy and Power Dept., Sikkim dtd. 21st May 2015.
- iii) Consent to operate for Air by State Pollution Control Board, Govt. of Sikkim for 110MW dtd. 2nd May 2017.
- iv) Consent to operate for Water by State Pollution Control Board, Govt. of Sikkim for 110MW dtd. 2nd May 2017.
- v) Consent on revised capacity/cost from CEA for 110MW dtd. 7th December 2016.

B) The following reports, procedures adopted during commissioning and generation would clearly demonstrate installed capacity in support of 110MW (with 10% OL):

- i) As per commissioning test report dtd. 21-04-2013, the unit was load tested and load rejection test was carried out for rated load of 55MW and 110% load i.e. 60.54MW and same was successfully completed. Accordingly, Unit Commissioning Certificate has been issued to the EPC Contractor i.e. Alstom India Ltd for 110MW Installed capacity.
- ii) Project COD had been declared w.e.f. 18-05-2013 for 110MW and intimated to ERLDC by letter dtd 15-05-2013. The same was duly received/acknowledged by PGCIL-ERLDC.
- iii) Clearance for first time synchronization permission by POSOCO for 2X55MW vide letter message dtd. 19-04-2013.

In view of the above, chuzachen requested OCC forum to review the above and kindly update the actual installed capacity of Chuzachen Hydro Electric Project, Sikkim from 99 MW to 110 MW (2X55MW) in all your records.

Members may discuss.

Deliberation in the meeting

After detailed deliberation, OCC felt that CEA consent letter is required to consider the revised capacity of 110 MW and advised Chuzachen to pursue with CEA.

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

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

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

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

In 133rd OCC, ERLDC informed that DVC has submitted the scheme.

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

Bihar informed that they have not yet decided the feeders.

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

Constituents were advised to share the details of the scheme implemented by them such as logic considered for shedding, feeders along with their voltage levels covered in the scheme and quantum of relief expected from each feeder, communication medium used, device used at sub-station level, whether there is provision for rotational selection of feeders etc.

Subsequently, BSPTCL has submitted the scheme.

*JUSNL vide mail dated 12th July 2017 submitted the scheme placed in **Annexure-B.12**.*

Constituents may note and update.

Deliberation in the meeting

Members noted.

Item No. B.13: Concerned members may update the latest status.**B.13.1. Status of construction of 400 kV Sterlite-Jharsuguda D/C sections**

In 134th OCC, OPTCL updated the status as follows:

| Activities | Nos | Status as updated in 35 th TCC | Status as updated in 134 th OCC | Remarks |
|-----------------------------------|---------|---|--|-----------|
| Tower Foundation | 64 | 64 | 64 | Completed |
| Tower Erection | 64 | 59 | 64 | Completed |
| Stringing /OPGW Cabling & Testing | 20.5 Km | 9 km completed | 16 km completed | |
| Sub station Bay | 2 | Bay construction completed | Testing going on | |

OPTCL informed that the construction of the dedicated line would be completed by 15th July, 2017 in all respects.

Further, GRIDCO/OPTCL added that 7 No. of towers of 400KV Vedanta-Meramundali D/C line have been severely damaged due to whirlwind and cyclonic storm on 15-06-2017 night between Location No.7-0 to 8-0. As a result, GRIDCO could not avail State share of power through the said line and is solely dependent on LILO connectivity to avail IPP power from M/s. Vedanta Limited.

In view of the above, GRIDCO/OPTCL requested that the disconnection of interim LILO connectivity scheduled on 01-07-2017 for M/s. Vedanta Ltd may please be deferred until the restoration work of Vedanta-Meramundali line and commencement of power supply to the State through this line.

After detailed deliberation, OCC agreed to extend the LILO connectivity till 15th July, 2017. It was also decided that the removal of LILO could be reviewed subject to the completion of dedicated line as per the latest schedule i.e. by 15th July, 2017.

Accordingly, a special meeting to review the removal of LILO connectivity was held at ERPC on 14th July 2017 and the minutes are available at ERPC website.

Members may discuss.

Deliberation in the meeting

OPTCL updated the status as follows:

| Activities | Nos | Status as updated in 35 th TCC | Status as updated in 135 th OCC | Remarks |
|-----------------------------------|---------|---|--|-----------|
| Tower Foundation | 64 | 64 | 64 | Completed |
| Tower Erection | 64 | 59 | 64 | Completed |
| Stringing /OPGW Cabling & Testing | 20.5 Km | 9 km completed | 17.8 km completed | |
| Sub station Bay | 2 | Bay construction completed | Testing going on | |

After detailed discussion, it was decided that Vedanta should complete the line construction and bay works by 30th July, 2017. It was also decided that the LILO of Vedanta Ltd may be disconnected from 16th August, 2017.

OCC advised OPTCL to complete the line by 1st week of August 2017.

Special Protection Scheme(SPS) of Sterlite (VAL) –ERLDC

Sterlite has installed capacity of 4X600MW (2400MW) with smelter load of More than 1000MW grid-connected plant. In case of loss of smelter load or evacuation path units might trip due to mismatch of load and generation. Sterlite had already implemented SPS to minimize the impact of such major load generation mismatch on the grid. In an earlier OCC meeting VAL agreed to share their presently implemented SPS details. But thereafter, VAL did not submit anything to ERLDC/ERPC.

SLDC OPTCL and Vedanta may respond.

Deliberation in the meeting

OCC advised OPTCL to submit the present SPS settings to ERPC and ERLDC within a week.

B.13.2. Enabling of 3-Phase Auto Reclose at 132 kV North Bengal and Sikkim areas to minimize element outages due to transient faults -- Powergrid

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

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

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

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

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

In 134th OCC, Powergrid informed that the 3-phase auto-reclosure scheme for 132kV Rangpo-Gantok line will be implemented by July 2017.

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

Powergrid may update.

Deliberation in the meeting

Powergrid informed that Rangpo end relay will be installed within a week and replacing the relay at Gangtok end will take time.

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

B.13.3. Bus Splitting of Kahalgaon STPS Stage I&II, NTPC

In 24th ERPC meeting held on 27.04.2013, ERPC advised NTPC to go ahead with the bus-splitting scheme as it is a technical requirement for safe, secure operation of the grid.

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

In 126th OCC, NTPC has given the present status as follows:

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

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

In 134th OCC, NTPC informed that the bus splitting will be implemented by December, 2018.

NTPC may update.

Deliberation in the meeting

NTPC informed that the bus splitting will be implemented by December, 2018.

B.13.4. 11KV Auxiliary power supply of 400KV Berhampore Powergrid Substation.

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

In 134th OCC, WBSEDCL informed that one testing report is awaited which will be received within a week, on receipt of report line will be commissioned.

WBSEDCL/Powergrid may update.

Deliberation in the meeting

WBSEDCL informed that the line has been commissioned.

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

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

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

| Sl. No. | Name of the transmission line | Completion schedule |
|---------|---|---|
| 1. | 2x315MVA 400/220kV Bolangir S/s | |
| a. | LILo of one circuit of Sadeipalli-Kesinga 220 kV D/C line at Bolangir S/S | Only 7 towers left (Severe ROW problem). By Oct, 2017. |
| 2. | 400/220 kV Keonjhar S/s | |
| a. | Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line | By 2017. |
| b. | Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line | By 2019. |
| 3. | 400/220kV Pandiabil Grid S/s: | |
| a. | Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line | Dec, 2017. |

OPTCL may update.

Deliberation in the meeting

Members noted.

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

In 125th OCC, JUSNL updated the latest status as follows:

| Sl. No. | Name of the transmission line | Completion schedule |
|---------|--|---------------------|
| 1. | Chaibasa 400/220kV S/s | |
| a. | Chaibasa (POWERGRID) – Ramchandrapur (JUSNL) 220kV D/c | August, 2017 |
| 2. | Daltonganj 400/220/132kV S/s: | |
| a. | Daltonganj (POWERGRID) – Latehar 220kV D/c | By Dec, 2017. |
| b. | Daltonganj (POWERGRID) – Garhwa 220kV D/c | May, 2018 |
| C | Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132kV D/c | Dec, 2018 |
| d | Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c | Matching with S/s |

| | | |
|-----------|---|-------------------|
| 3. | Dhanbad 400/220 kV S/s: Awarded under TBCB | |
| a. | Dhanbad – Dhanbad (Govindpur) (JUSNL) 220kV D/c | Matching with S/s |

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as given in above table.

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

In 126th OCC, WBSETCL updated the latest status as follows:

| Sl. No. | Name of the transmission line | Completion schedule |
|-----------|---|---------------------|
| 1. | 2x315MVA, 400/220kV Alipurduar sub-station | |
| a. | Alipurduar (POWERGRID) – Alipurduar (WBSETCL) 220kV D/c (<i>Twin moose</i>) | October 2017 |
| 2. | 2x500MVA, 400/220kV Rajarhat --- | |
| a. | Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line | Matching |
| b. | Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line | June, 2018 |
| c. | Rajarhat- Barasat (WBSETCL) 220 kV D/C line | June, 2018 |

WBSETCL may update.

Deliberation in the meeting

WBSETCL updated the status as given in above table.

Item No. B.14: Restoration of PLCC system of important JUSNL ties

I) 220 KV Chandil –Santaldih line

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

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

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

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

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

In 133rd OCC, WBPDCCL informed that the work is getting delayed as they are not getting proper response from Schnider and GE, however the work will be completed within a week.

In 134th OCC, WBPDCCL informed that the work is getting delayed as they are not getting proper response from Schnider and GE, however the work will be completed within a week.

Deliberation in the meeting

WBPDCCL vide mail dated 24.07.2017 informed that single phase Auto Reclose feature has been put into service at 220 KV STPS-Chandil feeder at STPS end at 14:02 hrs. on 14.07.17.

OCC advised WBPDCCL and JUSNL to co-ordinate with each other and restore the PLCC of 220 kV STPS-Chandil line at the earliest.

II) 220 KV Ramchandrapur-Joda line

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

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

In 131st OCC, WBPDCCL informed that shutdown was proposed on 31st March, 2017 to complete the work.

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

In 133rd OCC, OPTCL informed that the panels will be commissioned by June, 2017.

In 134th OCC, OPTCL informed that the panels will be commissioned by June, 2017.

OCC advised OPTCL and WBPDCCL to take the issue seriously and implement the auto reclose scheme at the earliest as CERC may take some suo motu action against non-completion of said PLCC links.

JUSNL/WBPDCCL/OPTCL may update.

Deliberation in the meeting

OPTCL informed that the auto reclose scheme will be implemented within 10 days.

Item No. B.15: Third Party Protection Audit

1. Status of 1st Third Party Protection Audit:

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

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

The substation wise status of compliance are available at ERPC website (Observations include

PLCC rectification/activation which needs a comprehensive plan).

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

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

Members may comply.

Deliberation in the meeting

Members noted.

2. Schedule for 2nd Third Party Protection Audit:

The latest status of 2nd Third Party Protection audit is as follows:

| | |
|--------------------------------------|---|
| 1) Jeerat (PG) | Completed on 15 th July 2015 |
| 2) Subashgram (PG) | Completed on 16 th July 2015 |
| 3) Kolaghat TPS (WBPDC)- | Completed on 7 th August 2015 |
| 4) Kharagpur (WBSETCL) 400/220kV - | Completed on 7 th August 2015 |
| 5) Bidhannagar (WBSETCL) 400 & 220kV | Completed on 8 th September, 2015 |
| 6) Durgapur (PG) 400kV S/s | Completed on 10 th September, 2015 |
| 7) DSTPS(DVC) 400/220kV | Completed on 9 th September, 2015 |
| 8) Mejia (DVC) TPS 400/220kV | Completed on 11 th September, 2015 |
| 9) 400/220/132kV Mendhasal (OPTCL) | Completed on 2 nd November, 2015 |
| 10) 400/220kV Talcher STPS (NTPC) | Completed on 3 rd November, 2015 |
| 11) 765/400kV Angul (PG) | Completed on 4 th November, 2015 |
| 12) 400kV JITPL | Completed on 5 th November, 2015 |
| 13) 400kV GMR | Completed on 5 th November, 2015 |
| 14) 400kV Malda (PG) | Completed on 23 rd February, 2016 |
| 15) 400kV Farakka (NTPC) | Completed on 24 th February, 2016 |
| 16) 400kV Behrampur(PG) | Completed on 25 th February, 2016 |
| 17) 400kV Sagardighi (WBPDC) | Completed on 25 th February, 2016 |
| 18) 400kV Bakreswar (WBPDC) | Completed on 26 th February, 2016 |
| 19) 765kV Gaya(PG) | Completed on 1 st November, 2016 |
| 20) 400kV Biharsharif(PG) | Completed on 3 rd November, 2016 |
| 21) 220kV Biharsharif(BSPTCL) | Completed on 3 rd November, 2016 |
| 22) 400kV Maithon (PG) | Completed on 18 th May, 2017 |
| 23) 132kV Gola (DVC) | Completed on 17 th May, 2017 |
| 24) 132kV Barhi (DVC) | Completed on 18 th May, 2017 |
| 25) 132kV Koderma (DVC) | Completed on 18 th May, 2017 |
| 26) 132kV Kumardhubi (DVC) | Completed on 19 th May, 2017 |
| 27) 132kV Ramkanali (DVC) | Completed on 19 th May, 2017 |
| 28) 220kV Ramchandrapur (JUSNL) | Completed on 1 st June, 2017 |
| 29) 400kV Jamshedpur (PG) | Completed on 1 st June, 2017 |
| 30) 132kV Patherdih (DVC) | Completed on 31 st May, 2017 |
| 31) 132kV Kalipahari (DVC) | Completed on 30 th May, 2017 |
| 32) 132kV Putki (DVC) | Completed on 31 st May, 2017 |
| 33) 132kV ASP (DVC) | Completed on 30 th May, 2017 |
| 34) 132kV Mosabani (DVC) | Completed on 2 nd June, 2017 |
| 35) 132kV Purulia (DVC) | Completed on 1 st June, 2017 |

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

Members may note.

Deliberation in the meeting

Members noted.

Item No. B.16: Inspection of Under Frequency Relays (UFR)

The proposed UFR audit schedule is placed below:

| SI No | Proposed Date | Substation/feeder inspected by the sub-group |
|-------|---------------|--|
| 1 | Aug, 2017 | 220/132/33 KV Kalyaneswari of DVC |
| 2 | | 220/132/33 KV New Bishnupur of WBSETCL |
| 3 | | 132/33 KV Old Bishnupur of WBSETCL |
| 4 | Sep, 2017 | BRS (Liluah S/Stn.) of CESC |

Members may decide.

Deliberation in the meeting

Members noted.

Item No. B.17: 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 2nd August, 2013.

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

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

Constituents may nominate.

Deliberation in the meeting

Members noted.

Item No. B.18: Certification through BIS as per IS 18001:2007 to all generating/transmission units.

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

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

- All NTPC stations in Eastern Region
- Teesta, NHPC
- All OHPC generating units

- All CESC generating units
- Bandel TPS, WBPDC
- Kolaghat Generating station, WBPDC
- Bakreswar Generating station, WBPDC
- Sagardighi Thermal Power Project, WBPDC

Members may note and update the status.

Deliberation in the meeting

DGPC informed that all their units are certified with IS 18001.

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

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

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

Members may update.

Deliberation in the meeting

Members noted.

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

The peak demand met figure calculated by CEA is a part of the monthly Power Supply 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 110th 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.

OCC advised all constituents to submit the data also to ERLDC (erldcprotection@gmail.com).

For the month of June, 2017 data has been received from OPTCL, CESC, DVC, WBSETCL, BSPTCL.

JUSNL may submit.

Deliberation in the meeting

It was informed that the data has been received from all constituents.

Item No. B.21: Transfer capability determination by the states -- Agenda by NPC

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

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

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

| SI No | State/Utility | TTC import(MW) | RM(MW) | ATC (Import) MW |
|-------|---------------|----------------|--------|-----------------|
| 1 | BSPTCL | 4395 | 91 | 4304 |
| 2 | JUSNL | --- | --- | --- |
| 3 | DVC | 935 | 52 | 883 |
| 4 | OPTCL | 1000 | 72 | 928 |
| 5 | WBSETCL | 3660 | 300 | 3360 |
| 6 | Sikkim | --- | --- | --- |

Members may update.

Deliberation in the meeting

ERLDC informed that the ATC figure of WBSETCL will differ as the RM should be maximum unit size of WBPCL which is 500 MW. Also the TTC figure will depend upon the inter-tripping schemes of Jeerat and Subhasgram S/s of WBSECL.

OCC advised WBSETCL to share the details of inter tripping scheme at Jeerat and Subashgram.

Item No. B.22: Long outage of important transmission elements

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

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

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

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

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

In 133rd OCC, Powergrid informed that the dispatch got delayed due to commercial issues and it will be dispatched by May, 2017 & commissioned by end of June, 2017.

In 134th OCC, Powergrid informed that the reactor is reached at site and will be commissioned by end of July, 2017 subject to availability of shutdown.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that they are taking shutdown from today and the reactor will be commissioned by 15th August, 2017.

b) 400kV Patna-Kishengunj D/C

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

In 134th OCC, Powergrid informed that line will be restored by 15th July, 2017.

OCC advised Powergrid to submit weekly progress to ERPC and ERLDC.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that line will be restored by 15th August, 2017.

OCC advised Powergrid to submit weekly progress to ERPC and ERLDC.

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

Three Nos. Tower (mid river) collapsed.

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

In 134th OCC, ENICL informed that line will be restored by 15th July, 2017.

OCC advised ENICL to submit weekly progress to ERPC and ERLDC.

ENICL may update.

Deliberation in the meeting

ENICL informed that the line has been restored on 21st July, 2017.

d) 220 kV Waria – Bidhannagar-II

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

In 133rd OCC, DVC informed that the line will be restored by 15th June, 2017.

In 134th OCC, DVC informed that the line will be restored by 15th July, 2017.

DVC may update.

Deliberation in the meeting

DVC informed that the line will be restored by 20th August, 2017.

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

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

In 133rd OCC, Powergrid informed that the reactor will be in service by second week of June, 2017.

In 134th OCC, Powergrid informed that the reactor will be in service within a week.

Powergrid may update.

Deliberation in the meeting

Powergrid informed they are taking shutdown on 31st July 2017 to complete the work.

Item No. B.23: Erection and commissioning of 02 nos. of 220 kV line bays at KBUNL

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

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

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

In 133rd OCC, Representative of KBUNL mentioned that contract, for execution of the said job, was awarded to M/S GET Power (Sister concern of M/S Techpro Systems Ltd.). However, due to worsening of financial condition, M/S GET failed to complete the work and left the work in between. KBUNL made all out efforts to get the vendor (M/S GET Power) on job but all its efforts met with little success.

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

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

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

BSPTCL vide mail dated 17th June 2017 informed that BSPTCL has tried but there other major works besides bay construction work. BSPTCL requested KBUNL to take up this work on its own in their own switchyard. Moreover, this bay construction will also remain helpful for KBUNL for evacuation of its generated power.

In 134th OCC, BSPTCL requested KBUNL to take up this work on its own in their own switchyard and complete the work at the earliest.

KBUNL vide mail intimated that they acknowledge BSPTCL's concerns in this regard and is looking forward to take-up the work on its own.

However, KBUNL reiterated its constraints that termination of contract to M/S GET Power as well as awarding fresh contract for remaining work is under progress and the same may take time. Expected date of completion will be communicated after award of the contract.

KBUNL and BSPTCL may update.

Deliberation in the meeting

KBUNL informed that the present contract with M/S GET Power has been terminated and the new contract will be awarded soon and it will take 6 months (approx) to complete the work.

Item No. B.24: Replacement of old RTU in Eastern Region for reporting of RTU / SAS to back-up control centre

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

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

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

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

In 133rd OCC, OCC advised NHPC to submit the nomination list at the earliest.

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

In 134th OCC, ERLDC informed that the next meeting will be held in end of July 2017 and the report will be placed in August, 2017.

Members may update.

Deliberation in the meeting

ERLDC informed that the second meeting will be held on 4th August 2017 and the report will be placed by 10th August, 2017.

Item No. B.25: Failure of RTU data with the outage of ICTs of Patna and Biharshariff station --ERLDC

It has been observed on several occasions that with the tripping of all the ICTs at Patna and Biharshariff station, RTU stopped reporting to ERLDC, after restoring these ICTs, data again started reporting. It is to be appreciated that real time SCADA data should not be getting interrupted for any eventuality of the grid. The same was informed to POWERGRID several times but it is yet to be implemented and confirmed by them. Few incidents, when SCADA data stops reporting are mentioned below:

At Biharshariff:

Event 1: All three 400/220 kV ICTs tripped at 18:46:30 on 09th April, 2017

Event 2: All three 400/220 kV ICTs tripped at 13:25 hrs on 3rd March, 2017

At Patna:

Event 1: Both 400/220 kV ICTs tripped at 18:53 Hrs on 03.07.2017

SCADA data plot for these incidents are mentioned at **Annexure – B25**.

Members may discuss.

Deliberation in the meeting

Powergrid informed that at Biharshariff the ULDC battery bank is under replacement. At Patna, the reason is yet to be identified.

ERLDC informed that the same problem has been observed in other substations also and requested Powergrid to ensure uninterrupted power supply to RTUs.

OCC advised ERLDC to submit the list of such substations to Powergrid.

OCC advised Powergrid to ensure uninterrupted power supply to RTUs and send the updated status to ERPC.

Item No. B.26: Shifting of communication links for PMUs reporting to ERLDC--ERLDC

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

In 134th OCC, ERLDC informed that work is not yet completed.

Powergrid informed that 8 PMUs communication system have been shifted to ULDC network.

OCC advised ERLDC to send the details of requirement to Powergrid.

Accordingly, ERLDC has sent the detailed requirement for shifting of communication link to POWERGRID ULDC on 14-07-2017. The same is attached at **Annexure – B.26**.

PGCIL may update.

Deliberation in the meeting

Powergrid agreed to complete the work within a month.

Item No. B.27: Update on status of telemetry

CERC vide order dated 28.02.2016 on Petition No. 007/SN/2014 directed NLDC and respective RLDCs to update the status of telemetry every month at their respective websites and take up the issue of persistent non-availability of data from Generating Stations/substations at RPC meetings for appropriate action.

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

134th OCC advised all the respective constituents to ensure the availability of telemetry data to ERLDC.

Members may update.

Deliberation in the meeting

ERLDC presented the latest status of data availability. The presentation is enclosed at Annexure-B27.

OCC advised all the constituents ensure 100% data availability to ERLDC.

Frequent failure of JITPL data to ERLDC:

Real time SCADA data from JITPL is frequently failing (*May-17: 24% & June-17 (up to 18th): 62%*). It was observed that

- Microwave terminal equipment at Talcher HVDC end is getting hanged quite frequently causing failure of real time data to ERLDC.
- The direct line from JITPL to Angul 765/400 kV pooling station is available but real time SCADA data is yet to be diverted through this path.
- The voice connectivity from JITPL to ERLDC is yet to be provided / integrated with Hot Line Voice Communication installed by M/s Orange.

The same was informed to JITPL several times verbally and through a letter vide ref no: ERLDC/SL/2017-18/621 dated: 3rd May 2017 but it is yet to be diverted / provided.

In 134th OCC, JITPL representative was not available in the meeting.

ERLDC informed that SCADA data from JITPL is frequently failing and JITPL is not responding even with repeated persuasions.

OCC advised ERLDC to take suitable action against JITPL and stop entertainment of STOA application till SCADA data is restored.

ERLDC informed that they will be constrained to stop all STOA transactions with effective from 00:00 Hrs of 01st August, 2017, upon unavailability of SCADA data at ERLDC.

JITPL and ERLDC may update.

Deliberation in the meeting

It was informed that the data is coming through Powergrid substations via PLCC link. Because of some commercial issues between JITPL and Powergrid the direct link is yet to be restored.

OCC advised JITPL and Powergrid to settle the commercial issues bilaterally and restore the JITPL data availability to ERLDC.

Item No. B.28: Installation of PMUs in Eastern Region under URTDSM project

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

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

In 131st OCC, Powergrid submitted the latest status of PMU installation.

*The updated status as furnished in 132nd OCC by Powergrid is given at **Annexure-B.28**.*

POWERGRID may update the status.

Deliberation in the meeting

*Powergrid informed that the status is same as given in **Annexure-B.28**.*

Item No. B.29: Status of Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipment.

The status of DR/EL and GPS as updated in previous OCCs is enclosed at **Annexure-B.29**.

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

Members may update.

Deliberation in the meeting

Members noted.

Item No. B.30: Status of Emergency Restoration System (ERS Towers) for Eastern Region constituents

The latest status of Emergency Restoration System (ERS towers) as well as the future plan of procurement was given at **Annexure- B.30**.

Members may update the latest status.

Deliberation in the meeting

Members noted.

Item No. B.31: Time correction of SEMs in Eastern Region – Replacement of heavily drifted SEMs

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

35th ERPC advised Powergrid to replace the 10% of the heavily drifted SEMs with new Genus make meters and monitor the performance of the Genus meters. Powergrid should present this Minutes of 135th OCC Meeting

performance before constituents and subsequently the decision on replacement of the other time drifted meters will be taken up.

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

Subsequently, ERLDC has prepared a list of such SEMs.

In 133rd OCC, Powergrid informed that 22 meters were replaced except Purnea.

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

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

*The list as shared by ERLDC is attached at **Annexure-B.31**.*

*In 134th OCC, Powergrid informed that SEM at Purnea has been replaced and the replacement of SEMs as per the **Annexure-B.31** will be completed within 2 months.*

OCC advised Powergrid to give the schedule for replacement of SEMs to ERPC and ERLDC.

Powergrid/ ERLDC may update.

Deliberation in the meeting

Powergrid ER-II, and Powergrid-Odisha informed that they will replace the SEMs by 15th August, 2017.

Powergrid ER-I informed that they are doing the time correction and SEMs are not required to be replaced.

DGPC informed that 5 SEMs are to be replaced by PTC/PGCIL and also annual testing of SEMs to be carried out as per the terms of PPA. However, as per the CEA guidelines the testing frequency of SEMs will be followed after the incorporation of necessary modification in PPA.

OCC advised Powergrid to interact with PTC and resolve the issue at the earliest.

Item No. B.32: Integration of Genus Make meter in AMR-- ERLDC

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

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

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

In 133rd OCC, Powergrid informed that it will take some more time and asserted it will be done by June, 2017.

In 134th OCC, Powergrid informed that TCS is able to read the Genus make meter data however there are some issues related to baud rate of communication. Testing is in progress at Subashgram. It is expected to be completed by July, 2017.

Powergrid may please update the status.

Deliberation in the meeting

Powergrid informed that integration with Genus make meter is successful and some observations were found. TCS has resolved the observations related to software but issues related to Genus are still pending and is expected to be resolved shortly.

Item No. B.33: Accounting of Tertiary Loading Arrangement at PGCIL s/station in ER

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

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

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

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

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

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

Powergrid agreed.

In 132nd OCC, Powergrid ER-I & ER-II submitted the list of substations.OCC advised Powergrid-Odisha to submit the list at the earliest.

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

Details received from Powergrid Odisha are as follows:

| S No | Substation | Transformer Tertiary Charged (Yes/No) | SEM Installed in transformer Tertiary (Yes/No) | SEM meter No. |
|------|---------------------------|---------------------------------------|--|---------------|
| 1 | 765/400KV Angul | Yes | Yes | NP-5942A |
| 2 | 400/220 KV Keonjhar | YES | YES | NP-7921A |
| 3 | 400/220 KV Jeypore | YES | YES | NP5965A |
| 4 | 400/220 KV Rengali | yes | YES | NP0629B |
| 5 | 400/220 KV Pandiabali GIS | YES | YES | NP7462A |
| 6 | 400/220/132 KV Baripada | Yes | Yes | NP-5909A |
| 7 | 400KV Indravati | NA | NA | NA |
| 8 | 765/400KV Sundergarh | NO | NO | NO |
| 9 | 400/220 KV Bolangir | YES | YES | NP-7951A |
| 10 | 400/220 KV Rourkela | NO | NO | NO |

In 133rd OCC, Powergrid was advised to send the readings of SEMs connected to tertiary windings to ERLDC regularly for accounting purpose.

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

In 134th OCC, ERLDC presented the list of substation wise SEM data received from Powergrid as follows:

| List of PGCIL substation with Tertiary Loading in ER | | | | | | | | |
|---|------------------------|---------------|-----------------|-------------|------------|------------|-----------------|---------------------|
| <u>ER-I</u> | | | | | | | | |
| S. No | S/Station | Loc ID | Meter No | Make | CTR | PTR | Remarks | Data Receipt |
| 1 | Gaya(765) | EM-99 | NP-7472-A | L&T | 50 | 33000/110 | | No |
| 2 | Banka | ES-88 | NP-7458-A | L&T | 50 | 33000/110 | | Yes |
| 3 | Kishanganj | ES-90 | NP-8876-A | L&T | 50 | 33000/110 | | No |
| 4 | Lakhisarai | ES-94 | NP-8870-A | L&T | 50 | 33000/110 | | Yes |
| 5 | Patna | ES-89 | ER-1285-A | Genus | 50 | 33000/110 | | Yes |
| 6 | New Ranchi(765) | ES-87 | NP-8752-A | L&T | 50 | 33000/110 | | Yes |
| 7 | Ara(220) | | | | | | Detail not rcvd | No |
| 8 | Biharshariff | | | | | | Detail not rcvd | No |
| 9 | Chaibasa | | | | | | Detail not rcvd | No |
| 10 | Jamshedpur | | | | | | Detail not rcvd | No |
| 11 | Muzaffarpur | | | | | | Detail not rcvd | No |
| 12 | New Purnea | | | | | | Detail not rcvd | No |
| 13 | Pusauli | | | | | | Detail not rcvd | No |
| 14 | Ranchi(400/220) | | | | | | Detail not rcvd | No |
| <u>ER-II & Odhisa Project</u> | | | | | | | | |
| 1 | Angul | ES-95 | NP-5942-A | L&T | 1000 | 415/110 | | Yes |
| 2 | Pandiabili | ES-39 | NP-7462-A | L&T | 1000 | 415/110 | | Yes |
| 3 | Rangpo (33 kv TRF) | ES-96 | NP-7940-A | L&T | 1000 | 415/110 | | Yes |
| 4 | Rangpo (11 KV AUX TRF) | ES-97 | NP-7941-A | L&T | 1000 | 415/110 | | Yes |
| 5 | Sundergarh | ES-93 | ER-1019-A | Genus | 50 | 33000/110 | | Yes |
| 6 | Birpara | | | | | | Detail not rcvd | No |
| 7 | Baripada | | | | | | Detail not rcvd | Yes |
| 8 | Durgapur | | | | | | Detail not rcvd | No |
| 9 | Maithon | | | | | | Detail not rcvd | No |
| 10 | Siliguri | | | | | | Detail not rcvd | No |
| 11 | Subhashgram | | | | | | Detail not rcvd | No |

OCC advised Powergrid to submit the details of pending SEM details connected to tertiary windings and also the SEM readings on regular basis to ERLDC and ERPC for accounting of the tertiary loading arrangement.

Powergrid may update.

Deliberation in the meeting

ERLDC updated the status. Updated status is enclosed at **Annexure-B33**.

OCC advised Powergrid to install SEM wherever the SEMs are not available or not reporting and make the data available to ERLDC.

Item No. B.34: Non scheduling of MTPS Stage-II (2x195 MW)

KBUNL vide letter dated 11-07-2017 informed that in special meeting held on 25.01.2017 at ERPC, Kolkata, it was agreed by all the parties that scheduling of MTPS Stage-II shall be done by SLDC, Patna.

In this regard, KBUNL is sending daily declaration of availability, for MTPS Stage-II, to SLDC, Patna with a specific remark as mentioned below:

"Kindly forward this DC to ERLDC also for scheduling purpose of other eastern region beneficiaries of MTPS Stage-II of KBUNL namely Jharkhand, West Bengal, DVC, GRIDCO & Sikkim".

However, it is learned that SLDC, Patna is not co-ordinating with ERLDC to enable scheduling of other Eastern Region beneficiaries of MTPS Stage-II.

It is also pertinent to mention that JBVNL (Jharkhand) has signed LTA agreement with CTU. Further, JBVNL vide their letter ref. no. 909/ C.E. (C&R)/ Ranchi dtd. 22.06.2017 have contended that even after signing of LTA agreement their power is not getting scheduled i.e. they are not getting intimation from SLDC, Patna/ ERLDC regarding scheduling of MTPS Stage-II. Moreover, other Beneficiaries of MTPS Stage-II have also raised similar issues.

In view of the above, and in order to discharge the functions/duties assigned to SLDC Electricity Act, 2003, you are kindly requested to co-ordinate with ERLDC for scheduling other Eastern Region beneficiaries of MTPS Stage-II.

JUSNL and KBUNL may discuss.

Deliberation in the meeting

OCC advised JUSNL to pursue with CTU for issuing the letter for LTA operationalisation for enabling the scheduling of JUSNL share from MTPS Stage-II.

Item No. B.35: Control area Jurisdiction of Tasiding HEP --ERLDC

Tasiding is an Independent Power Producer (IPP), having only connectivity with STU (Govt. of Sikkim) network and embedded entity of Sikkim so as per IEGC clause 6.4.2.c.ii and CERC order 95 MP 2013, the scheduling responsibility lies with the State Load Despatch Centre, Sikkim.

IEGC 6.4.2. clause states that:

Quote

“The following generating stations shall come under the respective Regional ISTS control area and hence the respective RLDC shall coordinate the scheduling of the following generating stations:

a) Central Generating Stations (excluding stations where full Share is allocated to host state),

b)

c) In other cases, the control area shall be decided on the following criteria:

(i)

(ii) If a generating station is connected only to the State transmission network, the SLDC shall coordinate scheduling, except for the case as at (a) above.

(iii)

(iv)

Member may please discuss.

Deliberation in the meeting

OCC advised to take up the issue with Tasing and Sikkim in a separate meeting.

Item No. B.36: Non Receipt of meter Data -- ERLDC

1. Motipur & Samastipur in BSPTCL

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

In 133rd OCC, ERLDC informed that the Genus meter software is available in ERLDC website and it can be installed in Laptop. The SEM data can be downloaded through Laptop.

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

ERLDC informed that BSPTCL is sending data of Motipur end but Samastipur end data is still pending.

In 134th OCC, BSPTCL requested for a Laptop for downloading the meter data. Powergrid informed that the software can be downloaded in desktop available at Substation.

OCC advised Powergrid to allocate the Laptops to constituents.

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed that Samastipur data would be send from tomorrow.

2. Jeynagar meter data at OPTCL

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

In 133rd OCC, OPTCL & PGCIL were advised to check the SEM and resolve the issue at the earliest.

In 134th OCC, OPTCL informed that they are not able to download the meter data due to some problem in meter.

Powergrid agreed to look into.

OPTCL & PGCIL may please respond.

Deliberation in the meeting

ERLDC informed that the issue has been resolved

3. Chandil meter at JUSNL

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

In 133rd OCC, Powergrid informed that SEM is healthy and there may be connection problem.

OCC advised JUSNL to check the meter connections.

In 134th OCC, JUSNL informed that the line is now charged through tie bus and they will verify the connections after shifting the line to Main bus.

JUSNL may update.

Deliberation in the meeting

ERLDC informed that the issue has been resolved

Item No. B.37: WBSETCL Agenda

1. Replacement of 1000/1A CT by 2000/1A CT at both end of 400kV Baharampur-Jeerat line
2. Shutdown of 400kV Farakka-Baharampur and 400kV Baharampur-Jeerat lines simultaneously from 06:00 to 17:00 Hr. on daily basis on two consecutive days
3. Power assistance to WBSETCL S/s from DVC Kolaghat on daily basis from 07:00 to 15:00hr. during shutdown of 132kv (TPP-Kolaghat D/C line)

Members may discuss.

Deliberation in the meeting

Powergrid informed that they will change the CT ratio at both the ends of 400kV Baharampur-Jeerat line.

OCC agreed for shutdown of 400kV Farakka-Baharampur and 400kV Baharampur-Jeerat lines simultaneously from 06:00 to 17:00 Hr. on 3rd & 4th August 2017.

WBSETCL informed that they need shutdown of 132 kV Kolaghat-KTPP line for OPGW stringing and they need 50 MW power support from DVC, Kolghat.

DVC informed that from DVC, Kolaghat end only 10-15 MW support is possible through Kolaghat tie.

WBSETCL was advised to go for load shedding to complete the above work.

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

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

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

Powergrid updated the latest status as follows:

| | Scope (no. of location s) | Installed Locations | 1st set of Measurements submitted | 2nd set of Measurements submitted | 3rd set of Measurements submitted | 4 th set of Measurements submitted | 5 th set of Measurements submitted |
|---------------------|------------------------------------|------------------------|---|---|---|---|---|
| JUSNL | 67 | 27 | 17 | 17 | 13 | 15 | 24 |
| BSPTCL | 59 | 52 | 40 | 29 | 4 | 3 | 0 |
| WBSETCL | 73 | 68 | 43 | 4 | 3 | 1 | 1 |
| OPTCL | 164 | 102 | 100 | 90 | 79 | 78 | 24 |
| SIKKIM POWER | 12 | 9 | 6 | 6 | 0 | 0 | 9 |
| POWERGRID ER1 | 99 | 99 | 99 | 47 | 0 | 15 | 0 |
| POWERGRID ER2 | 40 | 40 | 40 | 40 | 24 | 0 | 0 |
| POWERGRID ODISHA | 42 | 42 | 42 | 42 | 40 | 40 | 0 |

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

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

1. vbhaskar@powergridindia.com
2. ritesh.kumar@powergridindia.com

Members may update.

Deliberation in the meeting

Members noted.

Item No. B.39: Mock Black start exercises in Eastern Region – ERLDC**i) The status of black start exercises**

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

| SI no | Name of Hydro Station | Schedule | Tentative Date | Schedule | Tentative Date |
|-------|-----------------------|--------------------------|---------------------------|----------------------------|----------------|
| | | Test-I | | Test-II | |
| 1 | U.Kolab | Last week of May, 2017 | 30 th May 2017 | Last Week of January 2018 | |
| 2 | Maithon | 1st week of June 2017 | Completed on 04.04.17 | 1st Week of February 2018 | |
| 3 | Rengali | 2nd week of June 2017 | November 2017 | Last week of November 2017 | |
| 4 | U. Indarvati | 3rd week of June 2017 | November 2017 | 2nd week of February 2018 | |
| 5 | Subarnarekha | 1st week of October 2017 | | 1st week of January 2018 | |

| | | | | | |
|----|------------|-------------------------|------------------------------------|---------------------------|--|
| 6 | Balimela | 3rdweek of October 2017 | | 1stweek of March 2018 | |
| 7 | Teesta-V | 2ndweek of Nov 2017 | | Last week of February2018 | |
| 8 | Chuzachen | Last Week of May2017 | May, 2017 | January2018 | |
| 9 | Burla | Last Week of June 2017 | 1 st week of July, 2017 | Last week of February2018 | |
| 10 | TLDP-III | 1stWeek of June 2017 | After Mansoon | 2ndWeek of January2018 | |
| 11 | TLDP-IV | Last Week of June 2017 | After Mansoon | 1stWeek of February2018 | |
| 12 | Teesta-III | | | | |

Deliberation in the meeting

OHPC informed that due to severe floods in Odisha it is not possible to conduct black start exercise during Monsoon.

OCC deferred the black start exercise of Indravati and Rengali units to November 2017.

Black start and FGMO/RGMO operation of Purulia Pump Storage Project (PPSP) units of WBSEDCL – ERLDC

In the 130th OCC Meeting held on 17th February, 2017 WBSEDCL informed that they had contacted OEM Toshiba for feasibility of black start and OEM required to conduct a simulation with CEA recommendations. OCC advised WBSEDCL to expedite the process as the time extension granted by CERC for making black-start and FGMO/RGMO operational in PPSP units, was going to lapse by March.2017.

WBSEDCL representative assured to appraise the present status at an early date.

WBSEDCL may update.

Deliberation in the meeting

WBSEDCL informed that they have not received any comments from OEM.

Testing of DG sets meant for Black start

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

Constituents may kindly ensure compliance.

Deliberation in the meeting

Members noted.

Item No. B.40: Updated Operating Procedure of Eastern Region

In compliance to section 5.1(f) of the IEGC, the Operating Procedure of Eastern Region has been updated taking into consideration relevant changes in the regional power system as well as that of IEGC and related CERC regulations, till 30-06-2017.

Soft copy of the procedure was emailed to all stakeholders of Eastern Region on 07-07-2017 vide ERLDC letter dated ERLDC/SS/OP/2017/1673.

Main revisions / updating have taken place in the chapters on Frequency Management, Voltage Management, Periodic Reports and Event Information, Network Security and Congestion Management, Scheduling and Despatch Procedure, Metering and Settlement System and in all Annexures.

As no comments / observations have been received till date, the procedure would be finalized and uploaded in ERLDC website by 20-07-17. This is for information of all concerned.

Members may note.

Deliberation in the meeting

*ERLDC presented the changes. Presentation is enclosed at **Annexure-B40**.*

Members noted.

Item No. B.41: Restricted Governor /Free Governor Mode Operation of generators in ER

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

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

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

- (1) On 27.06.17, at 00:15 Hrs load loss of about 1500 MW Occurred due to tripping in Haryana system.*

ERLDC may update.

Deliberation in the meeting

*ERLDC presented the response of ER generators. Presentation is enclosed at **Annexure-B41A**.*

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

134th OCC advised all the constituents to go through the list and update the latest status vide mail to ERPC/ERLDC.

ERPC vide letter dated 6th July 2017 advised all the generators to update the latest status of RGMO/FGMO.

*Updated status of the RGMO/FGMO of ER generators are enclosed in **Annexure-B41**. The list is also available in ERPC website.*

Members may update.

Deliberation in the meeting

NTPC informed that Barh unit 5 and 6 are in RGMO mode.

Teesta III informed that their units could be put in RGMO mode but because of transmission evacuation constraint RGMO/FGMO is disabled for their units.

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

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

| Power Plant | Max and Min Voltage observed for June 17 (KV) | Date for monitoring (June 17) |
|--------------------|--|--------------------------------------|
| Farakka STPS | 420,400 | 1,2 |
| Khalgaon STPS | 422,404 | 9,27 |
| Talcher STPS | 407,395 | 2,21 |
| Teesta | 417,392 | 3,11 |
| Bakreshwar TPS | 412,399 | 2,16 |
| Kolaghat TPS | 423,395 | 2,16 |
| Sagardighi TPS | 423,402 | 2,27 |
| MPL | 419,407 | 1,27 |
| Mejia-B | 422,408 | 1,27 |
| DSTPS | 423,410 | 16,18 |
| Adhunik TPS | 422,406 | 2,21 |
| Barh | 436,410 | 9,27 |
| JITPL | 413,405 | 21,23 |
| GMR | 414,401 | 13,28 |
| HEL | 426,383 | |
| Kodarma | 425,402 | 9,27 |

ERLDC may present the reactive performance.

Deliberation in the meeting

ERLDC presented the performance of the generators. Presentation is enclosed at Annexure-B44.

a) Schedule for reactive capability tests

The following was status of regarding reactive capability testing:

- Adhunik TPS(both units) –Yet to be confirmed by Adhunik
- DSTPS (Unit#2 only pending) – done
- Koderma TPS Unit#1 -- done on 08.08.2016
- JITPL(both units) – Procedure given. Not yet done
- Barh TPS – In June 2016
- Raghunatpur (both units)*
- GMR (Three units)*
- Haldia TPS (Unit #4)*

Members may update.

Deliberation in the meeting

Members noted.

PART C:: OPERATIONAL PLANNING

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

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of August'17 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is at **Annexure-C.1**.

Members may confirm.

Deliberation in the meeting

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

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

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

TSTPS unit #1 from 27.08.2017 to 26.09.2017, 30days for overhauling

Members may confirm.

Deliberation in the meeting

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

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

(i) Generating units:

| Sr No | Generating Station | UNIT NO | CAP(MW) | REASONS FOR OUTAGE | OUTAGE DATE |
|-------|--------------------|---------|---------|---------------------------------|-------------|
| 1 | JITPL | 1 | 600 | COAL SHORTAGE | 05-May-17 |
| 2 | TSTPP | 1 | 500 | BOILER TUBE LEKAGE | 11-July17 |
| 3 | GMR | 1 | 350 | COAL SHORTAGE | 20-Jun-17 |
| 4 | RAGHUNATHPUR | 1 | 600 | LEAKAGE IN FEED WATER VENT LINE | 12-Jun-17 |
| 5 | PATRATU TPS | 10 | 110 | OVER HAULING | 26-Jun-17 |
| 6 | KOLAGHAT | 3 | 210 | DESYN DUE TO POLLUTION ISSUE | 24-Feb-17 |
| 7 | KOLAGHAT | 6 | 210 | STATOR EARTH FAULT | 26-Jun-17 |
| 8 | BOKARO B | 2 | 210 | DESYN DUE to LOW SYSTEM DEMAND | 20-Jun-17 |
| 9 | BOKARO B | 1 | 210 | DESYN DUE to LOW SYSTEM DEMAND | 20-May-17 |
| 10 | BOKARO B | 3 | 210 | DESYN DUE to LOW SYSTEM DEMAND | 24-Jun-17 |
| 11 | CTPS | 2 | 130 | HIGH TURBINE BEARING VIBRATION | 1-Jun-17 |

| | | | | | |
|----|------------|---|-----|---------------------------------|------------|
| 12 | SAGARDIGHI | 4 | 500 | TLR OPERATED | 7-July-17 |
| 13 | MEJIA | 4 | 210 | DESYN FOR LOW SYSTEM DEMAND | 23-Jun-17 |
| 14 | MEJIA | 3 | 210 | DESYN FOR LOW SYSTEM DEMAND | 2-July-17 |
| 15 | GMR | 1 | 350 | COAL SHORTAGE | 13-May-17 |
| 16 | SANTALDIH | 5 | 250 | ROTOR EARTH FAULT | 30-Apr-17 |
| 17 | DSTPS | 1 | 500 | TESTING OF HOUSE LOAD OPERATION | 11-July-17 |
| 18 | MEJIA | 8 | 500 | TURBINE VIBRATION | 10-July-17 |
| 19 | TENUGHAT | 1 | 210 | COAL SHORTAGE | 14-Jun-17 |

(ii) Transmission elements

| Transmission Element / ICT | Outage Date | Reasons for Outage |
|-----------------------------------|-------------|---|
| 220 KV BALIMELA - U' SILERU | 27.04.15 | LINE IDLE CHARGED FROM UPPER SILERU END AT 12:42 HRS OF 25.01.17 |
| 400 KV PATNA-KISHANGANJ D/C | 26.07.16 | TOWER COLLAPSED AT LOC NO 51 |
| 400 KV BIHARSARIFF-PURNEA- I & II | 23.08.16 | THREE NUMBER OF TOWERS ARE BADLY DAMAGED AT LOC, 46/9, 47/0 & 47/1 (In the mid of river Ganga). |
| 220KV WARIA - BIDHANNAGAR-II | 10.09.16 | LINE UNDER B/D, TOWER COLLAPSED AT LOC NO 28 |
| 400 KV STERLITE - MERAMUNDALI D/C | 15.05.17 | TOWER CROSS ARM DAMAGED |

Members may update.

Deliberation in the meeting

Members noted.

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

New generating units:

| S.No. | Power Plant | Plant Size | Expected date |
|-------|-------------|------------|---------------|
| | | | |

New transmission elements:

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

Members may update.

Deliberation in the meeting

Members noted.

Item no. C.5: ER Grid performance during June, 2017

The average consumption of Eastern Region for June-2017 was 416 Mu. Eastern Region has achieved record maximum energy consumption of 438Mu on 14th June-17. Total Export schedule of Eastern region for June-2017 was 2163 Mu, whereas actual export was 1959 Mu.

ERLDC may present.

Deliberation in the meeting

*ERLDC has presented the performance of the Eastern Region grid during June 2017. Presentation is enclosed at **Annexure- C5**.*

PART D:: OTHER ISSUES

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

System frequency touched a maximum of 50.24 Hz at 06:03 Hrs of 07/06/17 and a minimum of 49.72 Hz at 22:11 Hrs of 02/06/17. Hence, 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'17.

Members may note.

Deliberation in the meeting

Members noted.

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

| Sr No | GD/ GI | Date | Time | S/S involved | Affect ed System | Summary |
|-------|--------|------------|-------|---|-----------------------|--|
| 1 | GD-I | 04/06/2017 | 17:28 | Jamui | BSPTC L | 132 KV Jamui-Seikhpur S/C was under shutdown. Transient R-N fault occurred at 132/33 kV transformer I & II at Jamui. To clear the fault 132 kV Lakhisarai - Jamui D/C tripped from Lakhisarai end on Z-III(Jamui was radially connected to Lakhisarai) resulting total power failure at Jamui. Fault distance is 49 km from Lakhisarai. F/C is 1.745kA. |
| 2 | GD-I | 05/06/2017 | 00:05 | CTPS A | DVC | All 132 kV lines connected to CTPS A S/S along with Unit VII & VIII at CTPS B and 220/132 kV ATR - I, II & III (160 x 2 +150) at CTPS A tripped due to CT failure of 132 kV CTPS A-Rajbera-II at CTPS A end. |
| 3 | GD-I | 05/06/2017 | 20:27 | Hatia, Biharshariff, Fatuah , Begusarai | JUSNL, BSPTC L & ISTS | At 20:27 hrs 220 kV Ranchi – Hatia D/C tripped due to Y-N fault in Circuit I. After tripping of 220 kV Ranchi – Hatia D/C, both ICTs at Biharshariff tripped due to high loading and 220 kV TVNL – Biharshariff S/C tripped only from TVNL end in Y-N, Z-II (F/D 164 km). After tripping of 220 kV TVNL – Biharshariff S/C & 400/220 kV ICTs at Biharshariff, supply to Hatia, Patratu and its surrounding area was lost. 220 kV Patna – Fatuah S/C tripped on overload and 220 kV Darbhanga – Ujiarpur S/C was manually switched off to control line loading. |
| 4 | GD-I | 06/06/2017 | 03:27 | Teesta III | ISTS | At 03:27 hrs 400 kV Teesta III – Rangpo S/C tripped from both ends on Y-B-N fault, which resulted tripping of all running units (#I, #II, #IV, #V & #VI) at Teesta III and Dikchu (unit #I & II) due to loss of evacuation path. At same time, 400 kV Teesta III – Dikchu S/C tripped from both ends due to O/V. |
| 5 | GD-I | 06/06/2017 | 14:05 | PTPS | JUSNL | At 14:05 hrs 220 kV PTPS - Hatia - I tripped from both ends (PTPS end: Z-I & Hatia end: Z-II). At same time 220 kV Tenughat - PTPS S/C tripped from PTPS end on Overload and 220/132 kV ATR - I, II & III at PTPS tripped on operation of E/F, differential protection and master trip relay |
| 6 | GD-I | 11/06/2017 | 11:39 | Hazipur | BSPTC L | At 11:39 hrs 220 KV Muzaffarpur-Hazipur-D/C tripped due to Y-B fault (F/D-69.89 Km, F.C- 2.75 KA and 2.45 KA at Muzaffarpur; Y-B, F/C 4.6 kA at Hazipur) resulting total power failure at Hazipur. 220 KV HJP-Amnour - I tripped at same time. |

| | | | | | | |
|----|------|------------|-------|------------|--------|---|
| 7 | GD-I | 15/06/2017 | 06:23 | Fatuah | BSPTCL | At 06:23 hrs 220 kV Patna - Fatuah S/C (tripped from Patna), 220 kV Sipara - Fatuah S/C (idle charged portion tripped from Fatuah, Y-N, Z-I, 16.5 km from Fatuah, 2.5 kA), 220 kV Biharshariff - Fatuah - I (tripped from Fatuah, Non Dir. O/C& E/F. IY-2.53 kA, IB-2.4 kA) & 220 kV Biharshariff - Fatuah - II (tripped from Biharshariff, Z-II, 58.47 km, IY-2.75 kA, IB-2.564kA) tripped resulting total loss of supply to Fatuah S/S |
| 8 | GD-I | 17/06/2017 | 16:14 | Teesta III | ISTS | 400 kV Teesta III - Rangpo S/C tripped during SPS testing at Teesta III. Unit #1, #2, #4, #5 & #6 at Teesta III & Unit #1 & #2 at Dikchu tripped due to loss of evacuation path. DT was received at Rangpo |
| 9 | GD-I | 18/06/2017 | 06:15 | Arrah | BSPTCL | 132/33 kV ATR - I & II at Arrah (BSPTCL) tripped due to operation of overflux operation. |
| 10 | GD-I | 18/06/2017 | 13:42 | Purnea | ISTS | 132 kV Purnea (PG) - Purnea (BSPTCL) - I tripped due to falling of jack bus jumper on Main Bus at Purnea(BSPTCL). At same time 220/132 kV ICT I, II & III at Purnea(PG) & 220KV New Purnea-Purnea D/C line tripped on backup overcurrent. |
| 11 | GD-I | 18/06/2017 | 22:37 | Birpara | ISTS | 220 kV Chukha-Malbase was out of service. As per SOE, 220kV Birpara-Malbase S/C, 220kV Birpara-Alipurduar - II & 220kV Birpara-Chukha - II along with 220 kV B/C tripped from Birpara at 22:37:34:680 hrs. Then 220kV Birpara-Alipurduar - I, 220kV Birpara-Binaguri D/C, 220kV Birpara-Chukha - I, 132 kV Birpara - Birpara D/C along with 220/132 kV ATR - I & II tripped from Birpara (PG) within 100 ms. Operation of bus bar protection at Birpara has been reported. Both bus I & II became dead. |
| 12 | GD-I | 19/06/2017 | 14:35 | Hazipur | BSPTCL | 220 KV Muzaffarpur-Hazipur-D/C tripped due to Y-B fault. As Hazipur was radially fed from Muzaffarpur, load loss occurred at surrounding area. In PMU data, two Y-B fault have been observed within 1 sec. |
| 13 | GD-I | 23/06/2017 | 19:20 | Hazipur | BSPTCL | 220 KV Muzaffarpur-Hazipur D/C are out due to tower collapse. Hazipur was supplied through 132 KV Samastipur-Hazipur S/C. 132 kV Hazipur - Shetalpur - Chapra link (Shetalpur supplied from Vaishali & Chapra supplied from Siwan) and 132 kV Hazipur - Jandaha link was open from Hazipur to control loading at upstream network. At 19:20 hrs, 132 KV Samastipur-Hazipur S/C tripped due to R phase drop jumper snapping at Samastipur S/S. |
| 14 | GD-I | 24/06/2017 | 14:25 | Arrah | BSPTCL | 132/33 kV ATR - I & II at Arrah (BSPTCL) tripped due to operation of overflux operation. |

| | | | | | | |
|----|------|------------|-------|------------|--------|---|
| 15 | GD-I | 24/06/2017 | 15:49 | Teesta III | ISTS | 400 kV Teesta III - Rangpo S/C tripped on O/C from Teesta III end. DT received at Rangpo. Delayed fault clearance has been observed |
| 16 | GD-I | 28/06/2017 | 15:02 | Nandokhar | BSPTCL | 220 KV Ara-Nandokhar S/C was opened due to O/V. Nandokhar was radially connected to Sasaram. Total power failure at Nandokhar occurred after tripping of 220 kV Sasaram - Nandokhar S/C due to DT received at Nandokhar end. 220KV Ara-Khagaul D/C were opened due to O/V prior due to disturbance. |
| 17 | GD-I | 28/06/2017 | 15:52 | Nandokhar | BSPTCL | 220 KV Ara-Nandokhar S/C was opened due to O/V. Nandokhar was radially connected to Sasaram. Total power failure at Nandokhar occurred after tripping of 220 kV Sasaram - Nandokhar S/C due to DT received at Nandokhar end. 220KV Ara-Khagaul D/C were opened due to O/V prior due to disturbance. |
| 18 | | 7.06.2017 | 11:44 | Khagaul | BSPTCL | Ara PG-Khagaul line tripped in zone1 from Khagaul end, and 100 MVA ICT tripped in overcurrent earth fault |

Multiple elements tripping without load loss

| | | | | | | |
|---|-------|------------|-------|---------------|-------|---|
| 1 | GI-II | 01/06/2017 | 22:00 | RTPS | DVC | At 22:00 hrs main breakers of all elements connected to 400 kV main bus – I at RTPS tripped due to LBB initiation and subsequent operation for the fault in idle charged portion of 400 kV Ranchi – RTPS – III. As per ERLDC SCADA data, power flow in 400 kV DSTPS – RTPS – I & 400 kV Ranchi – RTPS – I became zero. |
| 2 | GI-I | 06/06/2017 | 16:30 | Tarkera | OPTCL | At 16:30 hrs 220 kV Tarkera - Budhipadar D/C tripped due to Y-N fault (Relay Indication at Budhipadar Y-N, Z-I). At 16:31 hrs 220 kV Tarkera - Rourkela D/C tripped due to Back up O/C & E/F protection at Rourkela. In Rourkela PMU data, R phase voltage dip observed at 16:30:10 hrs. Fault duration is around 6000 ms Same type of voltage dip has been observed in Ranchi PMU data also. Another voltage dip has been observed at 16:30:80 hrs in R phase. Fault clearing time is 600 ms |
| 3 | GI-II | 15/06/2017 | 14:23 | Dharamjaigarh | ISTS | At 14:23:12.417, distance protection of Dharamjaigarh-Jabalpur Ckt-3 issued trip command on R-Y fault at both ends. At Dharamjaigarh end, main CB tripped, however, none of the poles of Tie CB tripped, thus all the connected lines tripped on Zone-3 from remote end. LBB did not operate at Dharamjaigarh due to failure in DC supply. Fault was cleared after tripping of 765kV Dharamjaigarh-Ranchi - II after 4 minutes from the fault. |

| | | | | | | |
|---|-------|------------|-------|--------------|-------|---|
| 4 | GI-II | 15/06/2017 | 15:53 | Meeramundali | OPTCL | 400 kV Meeramundali - Mendasal S/C, 400 kV GMR - Meeramundali S/C, 400 kV Meeramundali - Duburi - I, 400 kV Meeramundali - Angul - II, 400 kV Meeramundali - SEL D/C, 400/220 kV ICT - I at Meeramundali tripped due to LBB operation of bus - I at Meeramundali. |
|---|-------|------------|-------|--------------|-------|---|

Members may note.

Deliberation in the meeting

Members noted.

Item no. D.4: Reporting of voltage deviation indices (VDI) for select S/Stns in ER

ERLDC submitted the Voltage Deviation Index (VDI) of selected 400 kV Sub-stations for June, 2017 of Eastern Region which is enclosed at **Annexure- D.4**.

Members may note.

Deliberation in the meeting

Members noted.

Item no. D.5: Additional agenda

1. OPERATION OF HYDRO POWER PROJECTS IN PEAKING MODE

CEA vide letter dated 18.07.17 informed that POSOCO has carried out operational analysis of various hydro stations in the country and observed that despite 40.6 GW of peaking hydro capacity only about 33 GW peak generation is carried out on all India basis. According to POSOCO, this is on account of a number of hydro stations, particularly in state sector, which are not being operated in peaking mode. In order to examine the above observation, a Sub-committee has been constituted by the MoP under Chairperson, CEA with heads of POSOCO, NHPC, SJVN & THDC as members and Director (H), MoP as the Member Convenor. The Sub-Committee has held three meetings with the concerned hydro generating stations and concluded that there is scope for about 2000 MW additional power generation from hydro stations during peak hours.

It has been desired by the Chairperson that the matter of utilization of hydro stations in peaking mode be made a regular agenda item for discussion at the monthly OCC meetings while discussing operational planning for the month ahead and analyzing the operation in the previous month.

Members may note.

Deliberation in the meeting

ERLDC presented the performance in peaking mode for hydro generations in Eastern Region. Details are enclosed at Annexure-D5.1.

OCC decided to review the performance of hydro generators in peaking mode in monthly OCC meetings.

2. Frequent Power failures of Chakradharpur division TSS of South Eastern Railways

SER vide letter dated 19.07.17 intimated that Railway draws traction power from Rajkarwan, Kendposi and Gaoikera Traction substations from JUSNL and feeds major portion of Chakradharpur division. Rajkarwan sub-station is getting power at 132kV from Chandil Grid sub-station of JUSNL and thereafter feeds to the other traction substations viz. Kendposi, Chakradharpur and Goikera through tie lines. Failure of feed from Chandil GSS to Rajkarwan, results in failure of power supply to all the four TSSs which are adjacent to each other thereby causing a total suspension of Railway operation over Chakradharpur division. Chakradharpur being the major loading division of Indian Railways contributes substantially to the national economy which gets severely affected during such failures.

During the period April, 2017 till date, there have been 27 incidences of such power interruption over four substations wherein in one case the interruption extended upto 2 hrs 22 minutes. These failures have resulted in total disruption of train movement over Chakradharpur division and its subsequent cascading effects over adjacent divisions and Railways.

There exists a tie line between Joda GSS of OPTCL and Kendposi TSS of JUSNL which can be utilized for providing power to the substations over Chakradharpur division during such interruptions. Only in one incidence of interruption on 05.04.2017, power supply was extended from Joda GSS to Kendposi GSS at 17:35 hrs, after an interval of 1 hr, 42 minutes. However in that case power supply to Goikera, Chakradharpur and Rajkarwan was restored only at 18:15 Hrs i.e. after 2 hrs. 22 minutes.

Since the failure of power supply, even for one minute, cause serious repercussion in train movement, Railways requested for extending power supply to Kendposi during such failures for arranging power supply at least to the traction substations, without any delay as a standard operating procedure.

Members may discuss.

Deliberation in the meeting

JUSNL informed that 132kV Joda-Kendposi line is generally kept charged from Kendposi end and open from Joda(OPTCL) end. They avail power from Joda end only in case of emergency by closing the line from Joda end however, extending of power from Joda(OPTCL) end is time consuming as it involves the consent from SLDC, Odisha and their advice to Joda.

After detailed discussion, OCC requested OPTCL/GRIDCO to keep the 132 kV Joda-Kendposi line charged from Joda end and open from Kendposi end so that in case of any power failure at 132kV Rajkarwan/ Kendposi S/s the power can be extended immediately by closing at Kendposi end after taking the consent from SLDC Odisha.

OPTCL/GRIDCO and JUSNL agreed to the above proposal.

Meeting ended with vote of thanks to the chair

Participants in 135th OCC Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 24.06.2017 (Monday)

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Participants in 135th OCC Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 24.06.2017 (Monday)

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Participants in 135th OCC Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 24.06.2017 (Monday)

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| 56 | G. Pal | SSF/S.ERly | 8016080361 | trdsengrc@gmail.com | |
| 57 | Rajesh Yadav | Manager/DML | 8750804676 | Rajesh.yadav@infra.esselgroup.com | |
| 58 | SANDIPAN MUKHERJEE | Asst. Manager DPL | 9831716992 | Sandi-dpl@rediffmail.com | |
| 59 | N. G. Saha | DGM (OS) WBPDCL | 8336903700 | ngsaha@wbpdcl.co.in | |
| 60 | SANTJAY BESRA | Electrical Executive Engineer (C&T) JBNCL | 9430159882 | sanjaybesra@gmail.com | |

Participants in 135th OCC Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 24.06.2017 (Monday)

| Sl No | Name | Designation/ Organization | Contact Number | Email | Signature |
|-------|---------------------|------------------------------|-------------------|---------------------------------|-----------|
| 61 | Pankaj Kumar Bhagat | Accountant TUVNL | 9481382451 | ddahgjeeb@gmail.com | |
| 62 | A. Bandhan Roy | ACE SLDC/WBSETC | 9434910302 | abandhanroy_84@rediffmail.com | |
| 63 | C. K. Halder | ACE WB SLDC | 9434910379 | | |
| 64 | P. Banerjee | WBSEDC | 943214076 | prebn7@gmail.com | |
| 65 | S. P. Moitra | ACE WBSEDC | 7449300334 | shyama moitra@gmail.com | |
| 66 | Nadim Hossain | ERLDC | 9432357831 | nadim@posoco.in | |
| 67 | Partha Ghosh | ER-IT | 9434748263 | partha.ghosh@powergridindia.com | |
| 68 | RAS PROTIM KUNDU | ERLDC | 9903329591 | rajpratin@posoco.in | |
| 69 | S. K. MISHRA | EE-EEH NTPC | 9438233267 | skmishra05@adpc.co.in | |
| 70 | B. K. Shukla | POWERLINKS | 9800013837 | bkrishna.shukla@tata-power.com | |
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WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LTD.

(A Government of West Bengal Enterprise)
Office of the Chief Engineer, State Load Despatch Centre

From: A.C.E., SLDC, WBSETCL
To: Member Secretary, ERPC
Copy To: The G.M., ERLDC

Sub :- Newly Commissioned data regarding STU Network

Sir,

Please find the following list of transmission elements which were newly commissioned in April, May and June 2017 in WBSETCL System.

| Sl. No | Name of the Elements | Date | Time | Remarks |
|--------|--|--|---|---|
| 1. | India Power Corporation (Haldia) Limited: 150MW unit#1 | 01/04/17 | 10:02Hr | Test synchronization done with grid at WBSETCL NewHaldia 220kv bus |
| 2. | Raina:132/33kv 50 MVA TR.3 | 07/04/17 | 17:02Hr. | Loaded. |
| 3. | Barasat:132/33 KV 50 MVA TR.4 | 11/04/17 | 15:25Hr. | Loaded |
| 4. | Raghunathganj: 132/33kv 50 MVA Tr.3 | 18.04.17 | 22:55Hr. | Loaded |
| 5. | 220/132kv Sadaipur S/S: a) 220 kv Gkrn- Sadaipur #1 b) 220 kv M.B 1 c) 220 kv M.B 2 d) 220 kv Bktp -Sadaipur#1 e) 220/132kv 160 MVA Tr.2 f) 132 kv M.B 1 g) 132/33kv,50 MVA Tr. h) 220 kv GKRN-Sadaipur#2 i) 220 kv Sadaipur -BKTPP#2 | 20/4/17 20/4/17 20/4/17 20/04/17 21/4/17 21/4/17 21/4/17 25/4/17 25/4/17 | 18:15Hr. 19:37 Hr.. 19:57Hr. 22:25Hr.(Sadaipur) / 22:26(BkTPP)Hr 15:54Hr.(HV)/ 16:30Hr.(LV) 16:30 Hr. 16:54Hr.(HV)/ 17:25Hr.(LV) 17:18Hr. 18:27Hr. | a) Charged from GKRN b) via GKRN#1 bay c) through buscoupler d) GKRN-Sadaipur-BkTPP#1 loaded e)132kv bus charged f) via 160 MVA Tr2 g) 33kv bus charged h) Loaded i) Loaded |
| 6 | Hizli: 132/33 kv 50 MVA Tr. | 25/04/17 | 15:15Hr.. | Loaded (Augmentation of 31.5 MVA Tr.) |

❖ ANDUL ROAD ❖ P.O. DANESH SEIKH LANE ❖ HOWRAH - 711109

❖ TELEPHONE : 2688-7697 ❖ FAX NO.2688-5417 / 2688-6232

WBSETCL

Aruldas

| | | | | |
|-----|--|----------------------|------------------------------|--|
| 7. | Chalsa: 33/11 kv 10 MVA Tr.2 33/11 kv 10 MVA Tr.1 | 7/5/17 14/5/17 | 16:42Hr. 13:40Hr. | Loaded & made parallel. 66/11kv system will be abolished. |
| 8. | Krishnanagar: 220/132 kv 160 MVA Tr.2 | 15/05/17 16/05/17 | 17:25Hr.(HV) 16:28Hr.(LV) | Noload charging. Loaded. |
| 9. | Midnapur: 132/33 kv 50 MVA Tr.3 | 28/5/17 | 13:18 Hr. | Loaded. |
| 10. | Rampurhat: 132/33 kv 31.5 MVA Tr. 3 | 30/5/17 | 17:10Hr. | Loaded |
| 11. | Asansol: 132/33 kv 50 MVA Tr.4 | 12/6/17 | 10:37Hr. | Loaded |
| 12. | Gangarampur: 132/33 kv 31.5 MVA Tr.3 | 9/6/17 | 9:05 Hr. | Loaded. |
| 13. | Balurghat: 132/33 kv 20 MVA Tr.3 | 24/6/17 | 14:58 Hr. | Loaded |
| 14. | Old.Bishnupur: 132/33 kv 50 MVA Tr.1 | 29/6/17 | 11:32Hr. | Loaded (Augmentation of 31.5MVA Tr) |

Halder
07.07.17
(C.K.HALDAR)

❖ ANDUL ROAD ❖ P.O. DANESH SEIKH LANE ❖ HOWRAH - 711109
❖ TELEPHONE : 2688-7697 ❖ FAX NO.2688-5417 / 2688-6232

WBSECL

Annexure B5**Format III D**

< Name and Address of Transmission Licensee>

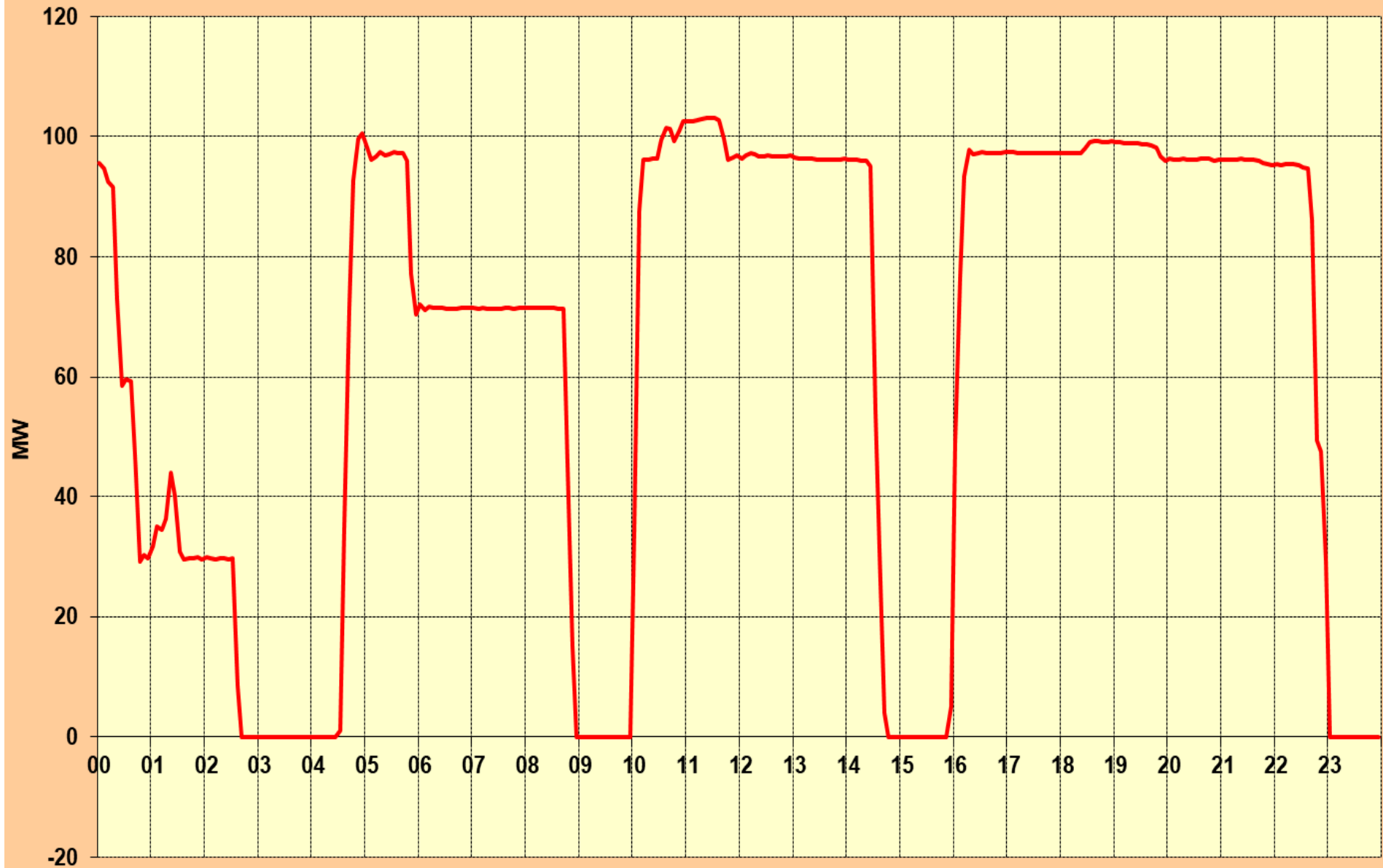
Undertaking by transmission licensee in respect of statutory clearances

It is hereby certified that all statutory clearances in accordance with relevant CERC Regulations / CEA standards / CEA regulations and PTCC route approval for charging of _____ have been obtained from the concerned authorities.

Place:

Date:

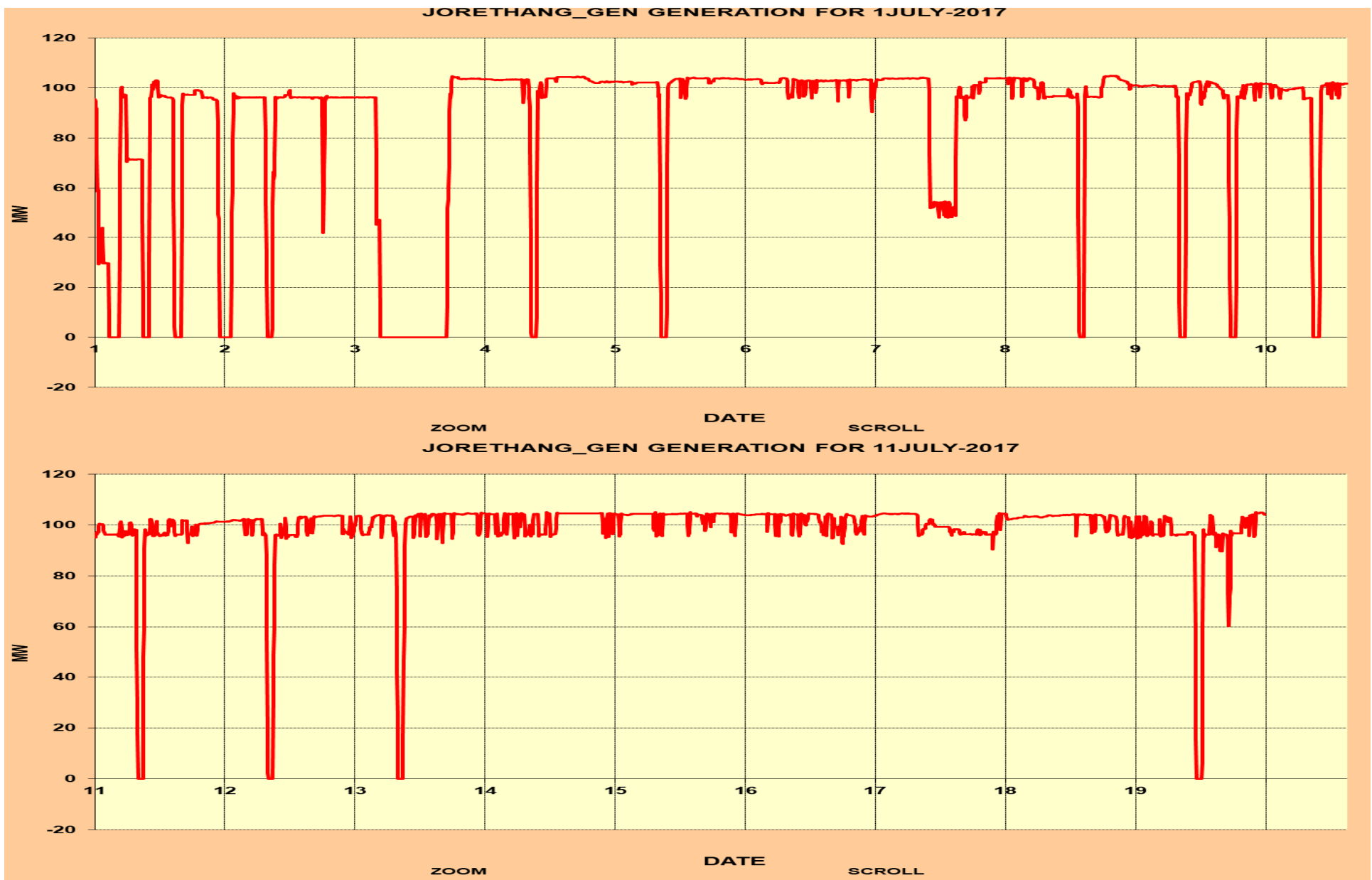
(Name and Designation of the authorized person with official seal)



ZOOM

TIME

SCROLL



Total number of unit outage due to SILT flushing/ Trash cleaning during 01/07/17 to 20/07/17 were around 16 Times

Reason for frequent unplanned unit outage for trash cleaning may be informed by JLHEP!!!!



JHARKHAND URJA SANCHARAN NIGAM LIMITED

Office of the
Chief Engineer, SLDC/ULDC, Computer System & Telecom
Kusai Colony, Doranda, Ranchi

Phone: 0651-2490090, Fax: 0651-2490486, Email: sldcbranchi@gmail.com

Letter No. _____ SLDC/ULDC, Ranchi

Date _____

From,

Er, Akshay Kumar
Chief Engineer, SLDC/ULDC,
Ranchi

To,

Mr. Anirudhya saha
Manager
29, B. Lake temple road,
Kolkata-29

Sub: Implementation of ADMS scheme through SCADA software in JUSNL system.

Dear Sir,

The ADMS scheme has to be implemented presently through the 33 KV feeders connected with chemtrol make RTU installed in 15 nos. of Grid Sub Station. The logic for implementation of scheme will be as mentioned below.

- i) **Condition-I**:-If $f < 49.90$, and $\{(excess\ drawl\ above\ schedule\ power + 12\% \text{ of schedule power})$ is less than 25 MW} then (Block-I)—33 KV feeders will be selected for load shedding.
- ii) **Condition II** :-If $f < 49.90$ & (excess drawl above scheduling power+12% of Schedule power) greater than 25 but less than 50 MW, then (Block I + Block II) will be selected for load shedding.
- iii) **Condition III** :- $f < 49.90$ & (excess drawl above schedule power+12% of schedule power) is greater than 50 MW & less than 75 MW then (Block I+ Block II+ Block III) will be selected for load shedding.
- iv) Each block will contain a list of 10 feeders.
- v) Each block feeders will rotate in order to Keep on changing Cyclically.

List of feeders of each block for rotation is enclosed separately.

So, you are requested to submit the feasibility of implementation of ADMS scheme based on above logic. Further, following information may be taken into consideration while formulating feasibility.

Drawl of schedule power through 7 nos. AREVA make Tie points RTU are being reported, rest 6 nos. of RTU of the points are not reporting at JUSNL end. However, other ends are reporting. we are under process of replacement of all the AREVA make RTUs as well as non-functional RTUs of the tie point feeders.

Therefore, you are requested to check the logic & ascertain feasibility. Further course of action will follow the feasibility report.

With regards!

Yours faithfully,

Sd/-

(Akshay Kumar)
C.E, SLDC/ULDC, Ranchi

Date 11-07-2017

No 297 'SLDC/ULDC, Ranchi

Copy forwarded to Member secretary, ERPC, Kolkata for kind information.

Encl:- Annexure, I, II & III.

(Akshay Kumar)
C.E., SLDC/ULDC, Ranchi

Details of blocks-III

| Sr. No. | Name of GSS | Name of 33 KV Feeders | Load (MW) | Voltage Level |
|---------|-------------|-----------------------|-----------|---------------|
| 1 | Namkum | Tatisilway | 13 | 33 KV |
| 2 | Manique | Chandil I | 15 | 33 KV |
| 3 | Adityapur | K. Basti | 11 | 33 KV |
| 4 | Adityapur | RKSF | 16 | 33 KV |
| 5 | Namkum | Vikas | 16 | 33 KV |
| 6 | Namkum | Kokar (Rural) | 17 | |
| 7 | Adityapur | ADP I | 17 | 33 KV |
| 8 | Kanke | Kanke | 16 | 33 KV |
| 9 | Adityapur | NIT | 12 | 33 KV |
| 10 | Adityapur | RF II | 12 | 33 KV |

Details of blocks-II

| Sr. No. | Name of GSS | Name of 33 KV Feeders | Load (MW) | Voltage Level |
|---------|-------------|-----------------------|-----------|---------------|
| 1 | Daltonganj | Dariya | 16 | 33 KV |
| 2 | Dumka | Dumka | 22 | 33 KV |
| 3 | Dumka | Basukinath | 12 | 33 KV |
| 4 | Pakur | Pakur | 14 | 33KV |
| 5 | Daltonganj | Redma | 17 | 33 KV |
| 6 | Adityapur | ADP II | 10 | 33 KV |
| 7 | Namkum | Namkum | 11 | 33 KV |
| 8 | Manique | NIPL | 24 | 33 KV |
| 9 | Golmuri | Jugsalai | 19 | 33 KV |
| 10 | Sahebganj | Sahebganj | 10 | 33 KV |
| 11 | Golmuri | Karnadih | 18 | 33 KV |

2

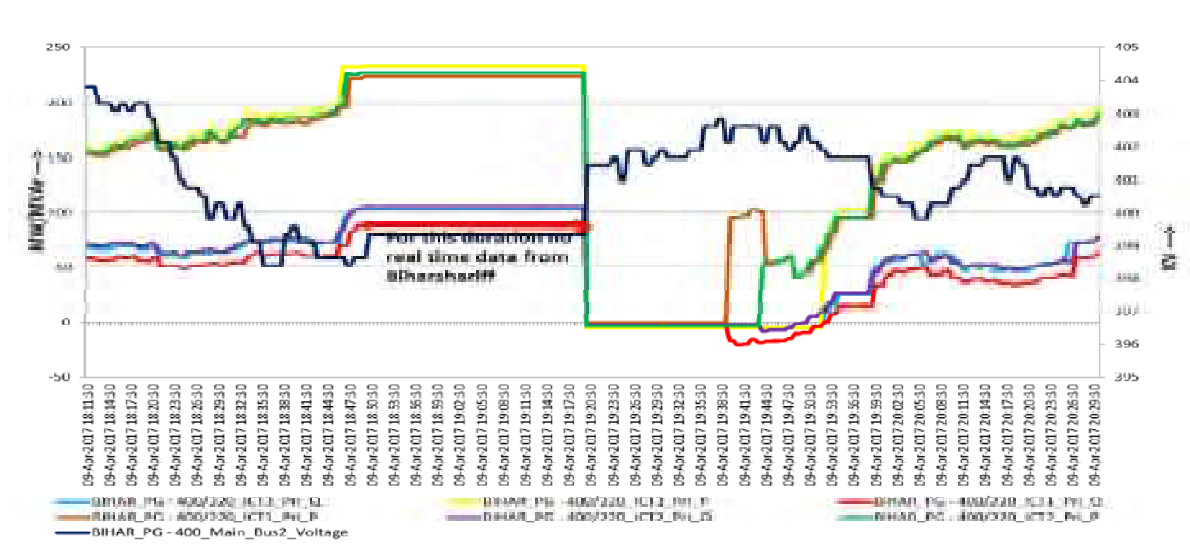
Details of blocks-I

| Sr. No. | Name of GSS | Name of 33 KV Feeders | Load (MW) | Voltage Level |
|---------|-------------|-----------------------|-----------|---------------|
| 1 | Dumka | Sariyahat | 13 | 33 KV |
| 2 | Tamar | Bundu | 16 | 33 KV |
| 3 | Kamdara | Kolibera | 13 | |
| 4 | Pakur | Patharia | 11 | 33KV |
| 5 | Golmuri | Birsanagar | 12 | 33 KV |
| 6 | CKP | CKP | 14 | 33 KV |
| 7 | Tamar | Bundu | 16 | 33 KV |
| 8 | Golmuri | Govindpur | 16 | 33 KV |
| 9 | Japla | Japla | 14 | 33 KV |
| 10 | Kamdara | Torpa | 13 | 33 KV |

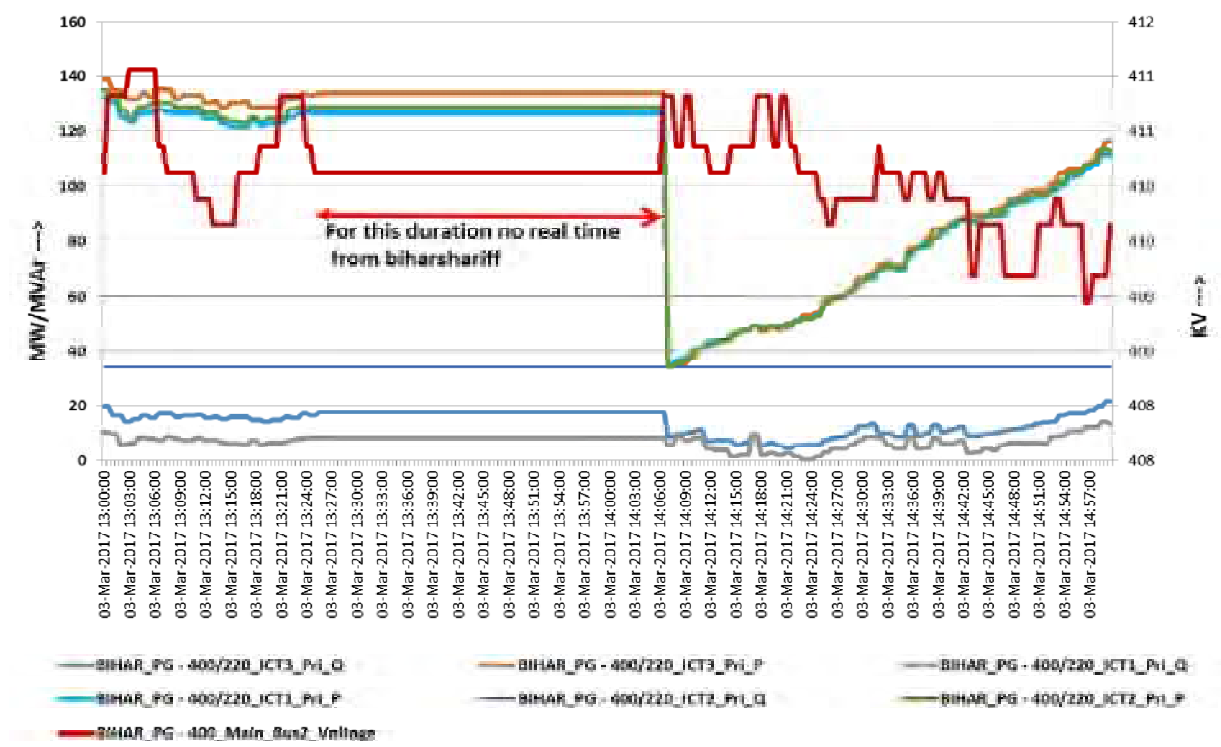
Annexure – B25

Outage of real time SCADA data during ICTs tripping in ER

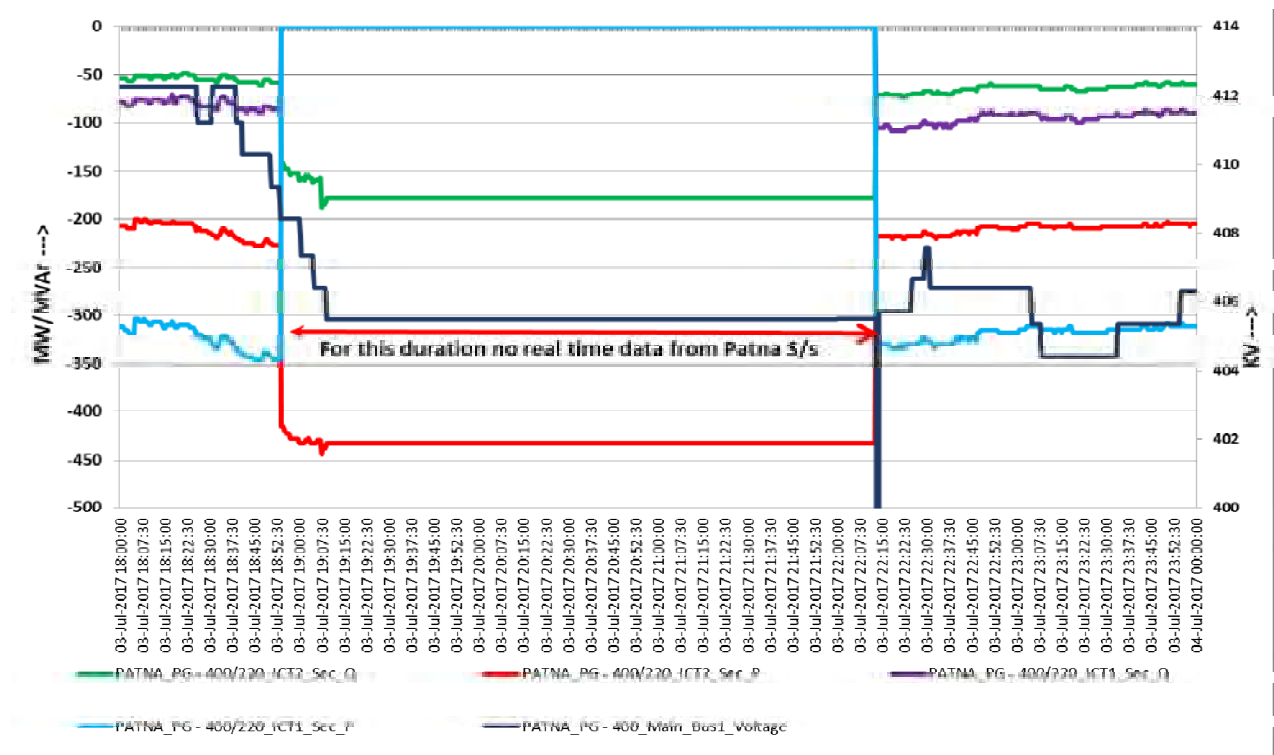
Event 1: 400/220 kV ICT I,II and III of Biharshariff S/s tripped at 18:46:30 on 09th April, 2017



Event 2: 400/220 kV ICT I,II and III of Biharshariff tripped at 13:25 hrs on 3rd March, 2017



Event 3: 400/220 kV ICT I and II tripped at Patna at 18:53 Hrs on 03.07.2017



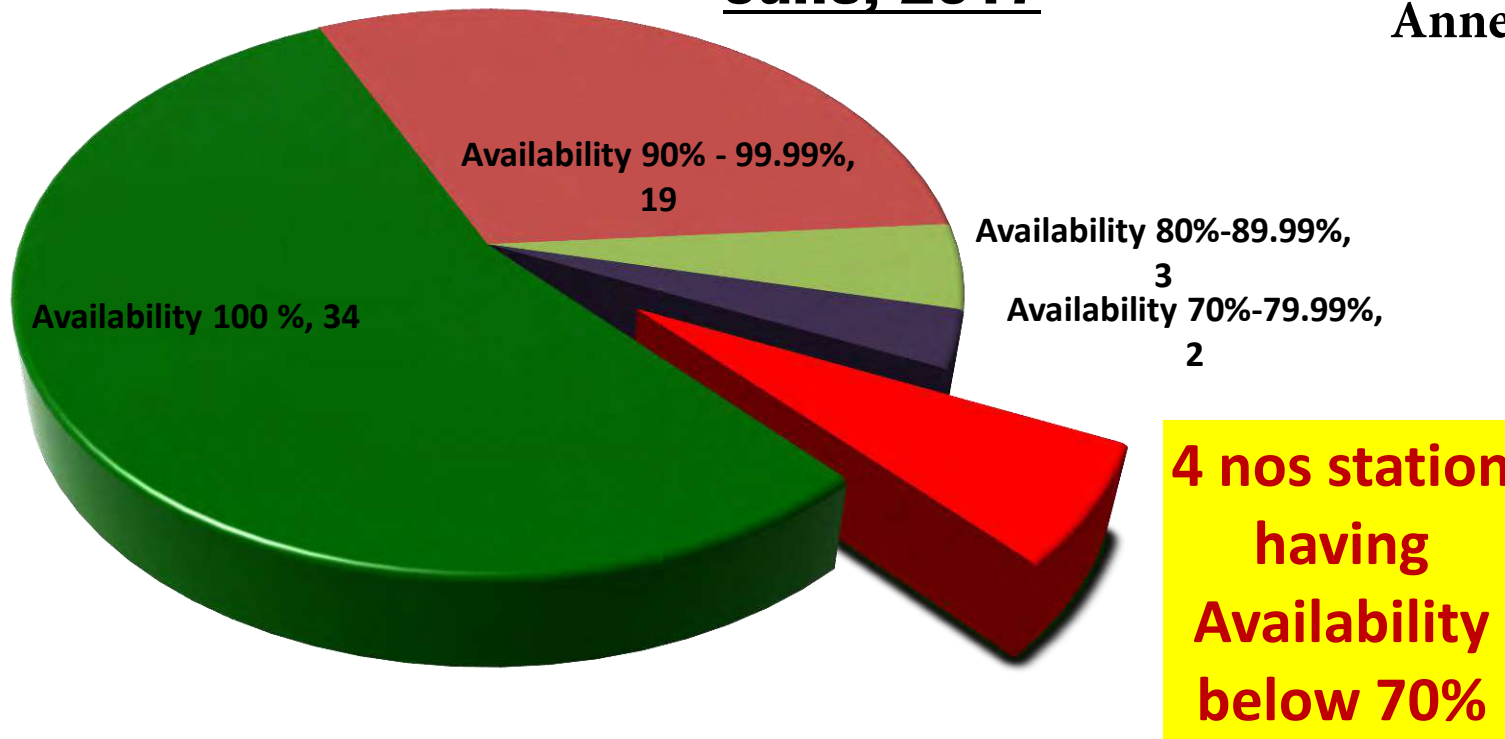
Annexure – B26

| S/N | Location | Station type | Communicatio channel |
|-----|--------------|----------------------------|---|
| 1 | Binaguri | 400/220KV Substation | Shifted to POWERGRID ULDC wideband on 16 June,2017 |
| 2 | Biharshariff | 400/220KV Substation | Shifted to POWERGRID ULDC wideband on 24th November ,2015 |
| 3 | Patna | 400/220KV Substation | 2 MBPS PDT link from Patna to ERLDC , Kolkata |
| 4 | Farakka | 400 kV Generating Station. | E1 link |
| 5 | Ranchi | 400/220KV Substation | E1 link |
| 6 | Rourkela | 400/220KV Substation | E1 link |
| 7 | Talcher | 400 kV Generating Station. | E1 link |
| 8 | Jeypore | 400/220KV Substation | E1 link |
| 9 | Durgapur | 400/220KV Substation | E1 link |
| 10 | Jamshedpur | 400/220KV Substation | E1 link |
| 11 | Sasaram | 765/400/220 kV SubStation | Shifted to POWERGRID ULDC wideband on 24th November ,2015 |
| 12 | Rengali | 400/220KV Substation | Shifted to POWERGRID ULDC wideband on 17 April,2017 |

| | |
|--|-----------------|
| | SEL Make PMU |
| | Siemens MakePMU |

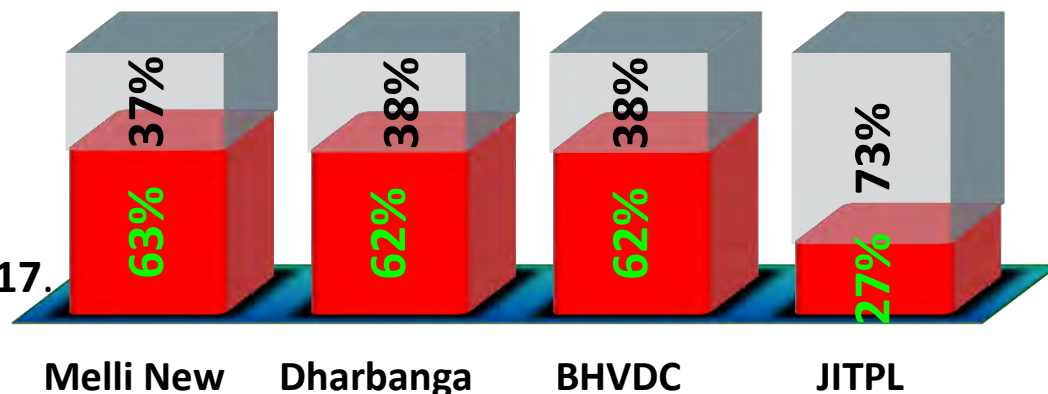
Overview of real time telemetry of Eastern region for month June, 2017

Annexure-B27



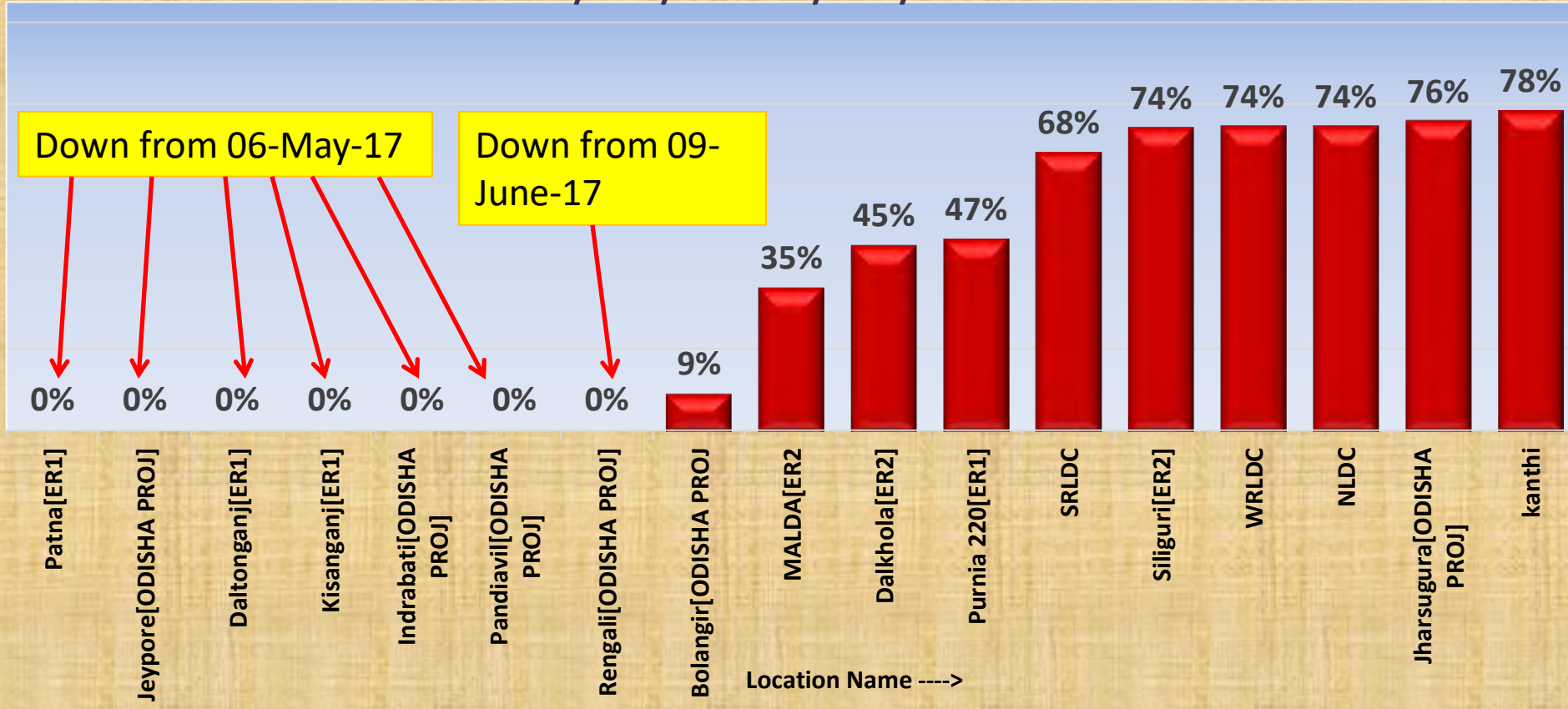
Reason for such poor availability:-

- A) Non availability of stand by link.
- B) Melli New, BHVDC not available since 19th June.
- C) JITPL not reporting since 20th June,17.



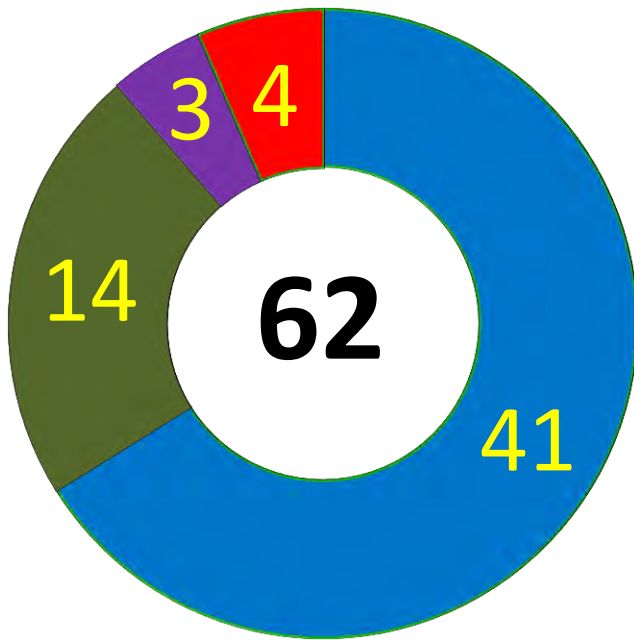
Hot Line Voice Communication (% Availability)

01/JULY/17 to 21/JULY/17



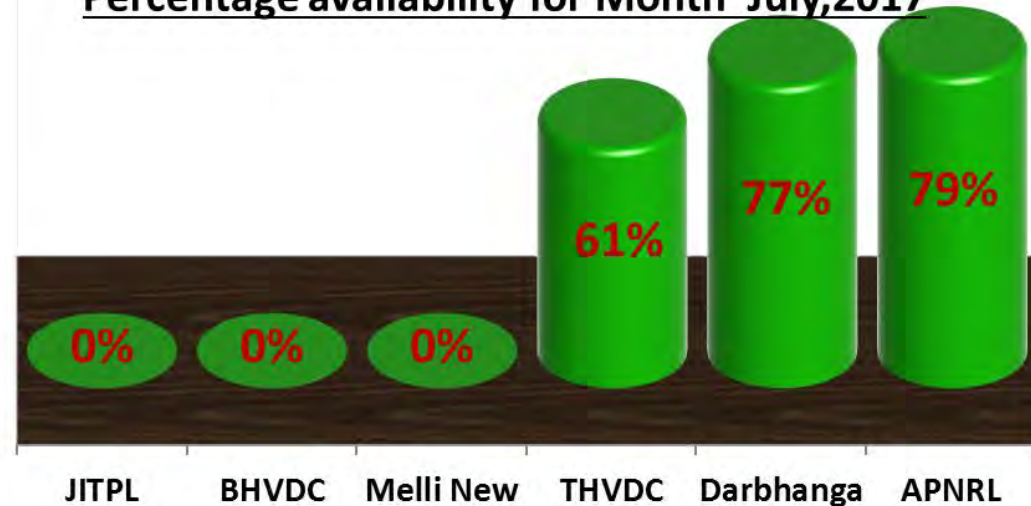
- ❖ VOIP of **Patna, Jeypore, Kishanganj, Indrabati, Pandiabili, Daltonganj** and **Rengali** is down since long.
- ❖ VOIP availability of **Bolangir, Malda, Dalkhola, Purnea 220** and for other **RLDC** and **NLDC** is very poor.
- ❖ **Nabinagar, GMR, JITPL stations are yet to provide VOIP.**

Overview of real time telemetry of Eastern region upto 20th July,2017



- No of Station having 100% Availability
- No of Station having availability between 90% to 99.9 %
- No of Station having availability between 70% to 89.9 %
- No of Station having availability below 70%

Percentage availability for Month July,2017



- **All users has to provide stand by communication link at the earliest.**
- **POWERGRID has to restore SCADA data of New Melli (down since 19-06-17) , BHVDC (down since 19-06-17).**
- **Restoration/integration of VOIP for Patna, Jeypore, Kishanganj, Indravati, Pandiabili and Rengali station by POWERGRID at the earliest.**

Elementary Data non availability at 400 kV Level:

➤ WBSETCL

- Kolaghat TPS: Kharagpur #1 MW/MVAR not available since 06-07-2016.

➤ OPTCL

- MW/MVAr flow of Meeramandali – GMR line at Meeramundali end since 29-11-2016.

Non availability of Unit side data

- Farakka STPS (Unit #6).
- Teesta V HPS all unit (LV).
- IBEUL (Unit #1 and Unit #2).
- Rangit HPS (GT i.e. HV side data)

POWERGRID

➤ **Data Intermittent :**

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

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

- Indravati , Jeypore, Bolangir

➤ **VOIP not Working:**

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

IPP

- **IBEUL** : Stand by channel upto Back up ERLDC not yet provided.
- **JITPL** : No voice communication available between JITPL and ERLDC.

OLTC

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

OLTC

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

Important Stations with out real time telemetry:

➤ WBSETCL

- Dharampur 220, Krishnanagar 220, Hura 220, Foundry Park, 220 Dalkhola, Bantala, Lakshmikantapur, New Town.

➤ DVC:

- 220 kV Giridhi, 132 kV Kolaghat.

➤ OPTCL:

- 220kV Samangara, 220 kV Lapanga.

➤ JSUNL:

- Hatia New 220, Patratu, Deoghar, Garwh, Goelkera, Jamtarta, Kendoposi.

| S.No | Region | State | Sub-Station | Owner/ Utility | S/S type | PMU | TOTAL PANEL QTY | PMU Delivery status | Cable Delivery status | Erection | Cable laying | CT/PT/DI termination | Commiss ioning | Integration | SAT | Remarks |
|------|--------|-------------|-------------------|-------------------|----------|------------|-----------------------|---------------------------|-----------------------------|-----------|-----------------|-------------------------|-------------------|-------------|-----------|--|
| | | | 78 | | | 286 | 175 | 73 | 61 | 51 | 45 | 40 | 40 | 24 | 37 | |
| 1 | ER-II | West Bengal | Arambagh | WBSETCL | CR | 3 | 1 | Yes | Yes | done | done | pending | pending | Pending | pending | CT/ PT/ DI interfacing pending due to permission issue. |
| 2 | ER-II | West Bengal | BAKRESHWAR TPS | WBSETCL | CR | 4 | 1 | Yes | Yes | done | pending | pending | pending | Pending | pending | Panel erected. Cable laying pending due to permission issue. |
| 3 | ER-II | West Bengal | Bidhannagar | WBSETCL | CR | 3 | 1 | Yes | Yes | done | done | pending | pending | Pending | pending | Panel erected. Cable laying and termination at PMU panel completed. CT/ PT/ DI interfacing pending due to permission issue. |
| 4 | ER-II | West Bengal | JEERAT | WBSETCL | CR | 2 | 1 | Yes | Yes | done | done | done | done | done | pending | SAT pending as customer didn't agree to witness SAT. |
| 5 | ER-II | West Bengal | Kolaghat TPS | WBSETCL | CR | 4 | 1 | Yes | Yes | N/A | N/A | N/A | N/A | N/A | N/A | |
| 6 | ER-II | West Bengal | KASBA | WBSETCL | CR | 3 | 1 | Yes | Yes | done | done | done | done | done | pending | SAT pending as customer didn't agree to witness SAT. |
| 7 | ER-II | DVC | DSTPS | DVC | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | Communication Link not available. |
| 8 | ER-II | DVC | Kodarma TPS | DVC | CR | 3 | 1 | Yes | Yes | done | done | done | done | Pending | done | Communication panel does not exist. |
| 9 | ER-II | DVC | MEJIA-B | DVC | CR | 2 | 1 | Yes | Yes | done | done | done | done | done | done | Integrated on 07.12.2016 |
| 10 | ER-II | DVC | Maithon RB TPS | DVC | CR | 2 | 1 | Yes | Yes | pending | pending | pending | pending | Pending | pending | Work started on 04.07.2016. Panel shifted. Team demobilised due to access issue and panel location issue. |
| 11 | ER-II | DVC | Raghunathpur TPS | DVC | CR | 3 | 1 | Yes | Yes | done | done | done | done | Pending | done | Communication link was not available during work. |
| 12 | ER-II | DVC | MEJIA | DVC | CR | 5 | 2 | Yes | Yes | done | done | done | done | Pending | done | S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Will be integrated on Mar 2017. |
| 13 | ER-II | DVC | Bokaro | DVC | CR | 2 | 1 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 24.06.2016 |
| 14 | ER-II | DVC | CTPS(Chanderpura) | DVC | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | S/S couldn't be integrated because distance between PMU panel and SDH is more than 100 mtrs. Will be integrated on Mar 2017. |
| 15 | Odisha | Orissa | Budhipadar | OPTCL | CR | 0 | 0 | No | No | N/A | N/A | N/A | N/A | N/A | N/A | BOQ not finalized. |
| 16 | Odisha | Orissa | MENDHASAL | OPTCL | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | OPTCL is not providing CT/ PT connection for Meeramundali-2 feeder. |
| 17 | Odisha | Orissa | MERAMANDALI | OPTCL | CR | 6 | 2 | Yes | Yes | done | under progress | pending | pending | Pending | pending | |
| 18 | Odisha | Orissa | RENGALI | OPTCL | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | Integration delayed because CAT-6 cable is faulty. |
| 19 | Odisha | Orissa | U.KOLAB | OPTCL | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | |
| 20 | Odisha | Orissa | BALIMELA(H) | OPTCL | CR | 3 | 1 | Yes | Yes | done | done | partially done | pending | Pending | done | OPTCL denied to provide DC connection. CT/PT/DI interfacing pending due to permission issue. |
| 21 | ER-II | West Bengal | Durgapur | Powergrid | CR | 5 | 2 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 30.05.2016. |
| 22 | ER-II | West Bengal | FARRAKA | NTPC | CR | 5 | 2 | Yes | Yes | N/A | N/A | N/A | N/A | N/A | N/A | |
| 23 | Odisha | Orissa | Indrawati | Powergrid | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | Communication Link not available. |
| 24 | Odisha | Orissa | Indrawati HPS | OPTCL | CR | 1 | 1 | Yes | Yes | N/A | N/A | N/A | N/A | N/A | N/A | OPTCL denied to provide DC connection. |
| 25 | Odisha | Orissa | JEYPORE | Powergrid | CR | 2 | 1 | Yes | Yes | done | done | done | done | Pending | done | Communication Link not available. |
| 26 | ER-II | West Bengal | MAITHON | Powergrid | CR | 7 | 2 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 21.06.2016. |
| 27 | ER-II | West Bengal | MALDA | Powergrid | CR | 2 | 1 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 24.06.2016 |
| 28 | Odisha | Orissa | Rengali | Powergrid | Kiosk | 2 | 1 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 04.05.2016 |
| 29 | Odisha | Orissa | ROURKELA | Powergrid | Kiosk | 5 | 2 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 21.04.2016 |
| 30 | ER-II | West Bengal | Binaguri | Powergrid | CR | 7 | 2 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 28.07.2016 |
| 31 | ER-II | West Bengal | SUBHASHGRAM | Powergrid | Kiosk | 2 | 1 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 22.06.2016 |
| 32 | Odisha | Orissa | Baripada | Powergrid | CR | 3 | 1 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 30.01.2017. |
| 33 | Odisha | Orissa | Bolangir | Powergrid | CR+Kiosk | 2 | 3 | Yes | Yes | done | done | done | done | Pending | done | Communication Link not available. |
| 34 | Odisha | Orissa | ANGUL | Powergrid | Kiosk | 10 | 11 | Yes | Yes | done | done | done | done | done | done | PMU integrated on 24.03.2017. |

PMU Installation and commissioning status of ER as on 20.04.2017

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

PMU Installation and commissioning status of ER as on 20.04.2017

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

ER PMU site activity Summary:

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

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

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

AVAILABILITY STATUS OF EVENT LOGGER, DISTURBANCE RECORDER & GPS

| Sl. NO | Substation | Protection & Control System | | | | | | Remarks |
|--------|-------------------|-----------------------------|-----|-----|----------------------|-----|-----|--|
| | | Availability | | | Time Synchronization | | | |
| | | EL | DR | GPS | Relay | DR | EL | |
| 1 | Subhasgram | Yes | Yes | Yes | Yes | Yes | Yes | |
| 2 | Maithon | Yes | Yes | Yes | Yes | Yes | Yes | |
| 3 | Durgapur | Yes | Yes | Yes | Yes | Yes | Yes | |
| 4 | Malda | Yes | Yes | Yes | Yes | Yes | Yes | |
| 5 | Dalkhola | Yes | Yes | Yes | Yes | Yes | Yes | |
| 6 | Siliguri | Yes | Yes | Yes | Yes | Yes | Yes | |
| 7 | Binaguri | Yes | Yes | Yes | Yes | Yes | Yes | |
| 8 | Birpara | Yes | Yes | Yes | Yes | Yes | Yes | |
| 9 | Gangtok | Yes | Yes | Yes | Yes | Yes | Yes | |
| 10 | Baripada | Yes | Yes | Yes | Yes | Yes | Yes | |
| 11 | Rengali | Yes | Yes | Yes | Yes | Yes | No | New EL would be implemented in BCU under NTAMC project by March'2015 |
| 12 | Indravati (PGCIL) | Yes | Yes | Yes | Yes | Yes | No | EL is old one(model-PERM 200), provision for time synchronisation is not available. New EL would be implemented in BCU under NTAMC project by March'2015 |
| 13 | Jeypore | Yes | Yes | Yes | Yes | Yes | Yes | EL is old and not working satisfactorily. New EL would be implemented in BCU under NTAMC project by March, 2015 |
| 14 | Talcher | Yes | Yes | Yes | Yes | Yes | Yes | |
| 15 | Rourkela | Yes | Yes | Yes | Yes | Yes | Yes | |
| 16 | Bolangir | Yes | Yes | Yes | Yes | Yes | Yes | |
| 17 | Patna | Yes | Yes | Yes | Yes | Yes | Yes | |
| 18 | Ranchi | Yes | Yes | Yes | Yes | Yes | Yes | |
| 19 | Muzaffarpur | Yes | Yes | Yes | Yes | Yes | Yes | |
| 20 | Jamshedpur | Yes | Yes | Yes | Yes | Yes | Yes | |
| 21 | New Purnea | Yes | Yes | Yes | Yes | Yes | Yes | |
| 22 | Gaya | Yes | Yes | Yes | Yes | Yes | Yes | |
| 23 | Banka | Yes | Yes | Yes | Yes | Yes | Yes | |
| 24 | Biharsariif | Yes | Yes | Yes | Yes | Yes | Yes | |
| 25 | Barh | Yes | Yes | Yes | Yes | Yes | Yes | |
| 26 | Sagardighi | No | Yes | Yes | Yes | Yes | No | EL is under process of restoration with help from OEM, China |
| 27 | Kahalgaon | Yes | Yes | Yes | Yes | Yes | Yes | |
| 28 | Farakka | Yes | Yes | No | No | No | No | Time synchronization available for Farakka-Kahalgaon line-III & IV. The same will be implemented in rest of the lines by December, 2014. |
| 29 | Meramundali | Defunct | Yes | Yes | Yes | Yes | Yes | |
| 30 | Tisco | Yes | Yes | Yes | Yes | Yes | Yes | |
| 31 | Bidhannagar | No | Yes | Yes | No | No | No | Using DR & EL available in Numerical |

| | | | | | | | | |
|----|------------------|------------|------------|------------|------------|------------|------------|--|
| | | | | | | | | relays. GPS will be put in service by January, 2015. |
| 32 | Indravati (OHPC) | Yes | Faulty | No | No | No | No | Time synchronization will be done by Feb, 2015. ICT-I feeders using DR & EL available in Numerical relays. 400 kV ICT-II feeder is being maintained by PGCIL, Mukhiguda. Status may confirm from PGCIL |
| 33 | Kharagpur | No | Yes | Yes | No | No | No | Using DR & EL available in Numerical relays. |
| 34 | DSTPS | Yes | Yes | Yes | Yes | Yes | Yes | |
| 35 | Sterlite | Yes | Yes | Yes | Yes | Yes | Yes | |
| 36 | Mejia 'B' | Yes | Yes | Yes | Yes | Yes | Yes | |
| 37 | Mendhasal | Defunct | Yes | Yes | Yes | Yes | No | EL will be restored by March, 2015. |
| 38 | Arambagh | No | Yes | Yes | No | No | No | Using DR & EL available in Numerical relays |
| 39 | Jeerat | No | Yes | No | No | No | No | Using DR & EL available in Numerical relays. Procurement of new GPS is in progress. |
| 40 | Bakreswar | Yes | Yes | Yes | Yes | Yes | Yes | |
| 41 | GMR | Yes | Yes | Yes | Yes | Yes | Yes | |
| 42 | Maithon RB | Yes | Yes | Yes | Yes | Yes | Yes | |
| 43 | Raghunathpur | Yes | Yes | Yes | Yes | Yes | Yes | |
| 44 | Kolaghat | Yes | Yes | Yes | Yes | Yes | Yes | |
| 45 | Teesta V | Yes | Yes | Yes | Yes | Yes | Yes | |
| 46 | Koderma | Yes | Yes | Yes | Yes | Yes | Yes | |
| 47 | Sasaram | Yes | Yes | Yes | Yes | Yes | Yes | |
| 48 | Rangpo | Yes | Yes | Yes | Yes | Yes | Yes | |
| 49 | Adhunik | Yes | Yes | Yes | Yes | Yes | Yes | |
| 50 | JITPL | Yes | Yes | Yes | Yes | Yes | Yes | |
| 51 | 765kV Angul | Yes | Yes | Yes | Yes | Yes | Yes | |
| 52 | Chuzachen | Yes | Yes | Yes | No | Yes | Yes | |
| 53 | New Ranchi 765kV | Yes | Yes | Yes | Yes | Yes | Yes | |
| 54 | Lakhisarai | Yes | Yes | Yes | Yes | Yes | Yes | |
| 55 | Chaibasa | | | | | | | |
| 56 | 765kV Jharsuguda | Yes | Yes | Yes | Yes | Yes | Yes | All are in working condition. However a dedicated DR for 765KV Lines; make TESLA is not working. M/s Siemens has assured to commission the same by 31.01.15 |
| 57 | Beharampur | Yes | Yes | Yes | Yes | Yes | Yes | |
| 58 | Keonjhar | Yes | Yes | Yes | Yes | Yes | Yes | |

Eastern Regional Power Committee

The status of ERS towers in Eastern Region as submitted during ERS meeting held on 10.11.14 taken by Member (Power System), CEA is given below:

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

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

- 2) As informed by OPTCL, the present status of ERS towers in OPTCL system is as follows:

- 220 kV ERS towers: 42 nos located at Mancheswar, Chatrapur & Budhipadar
- 400 kV ERS towers: 2 nos located at Mancheswar.
- 12 nos. of new 400 kV ERS towers have been approved by Board of Director for procurement in the current financial year. Purchase Order has been placed.
- Another, 16 nos of 400 kV towers accompanied with 6 sets of T&P are required.

- 3) WBSETCL informed that they have placed order for 2 sets of ERS towers on 31.10.2014 and expected by June, 2015.

- 4) The 25th ERPC meeting held on 21.09.2014, the board concurred to the proposal of procurement of four sets of ERS and it was also informed that, the proposed four sets of ERS will be kept at Sikkim, Siliguri, Ranchi and Gaya and will be used by all constituents of ER during emergencies.

Powergrid informed that four sets of ERS for Eastern Region will be procured.

- 5) Bihar informed that they have 10 sets of 220 kV ERS towers and 2 sets are under process of procurements.
- 6) DVC informed that they are in process of procuring two (2) sets of 400 kV ERS towers.

Annexure-B31

List of drifted meters to be replaced in Phase-II

| SNO | LOCATION | METER SNO | FEEDER NAME |
|-----|--------------------|-----------|--|
| 1 | MUZAFFARPUR(PG) | NP-5074-A | 400 KV MUZAFARPUR (PG)-GORAKHPUR(NR)-1 |
| 2 | MUZAFFARPUR(PG) | NP-9981-A | 400 KV MUZAFARPUR (PG)-GORAKHPUR(NR)-2 |
| 3 | MEJIA(DVC) | NP-5226-A | MEJIA END OF MAITHON(PG)-1 |
| 4 | MEJIA(DVC) | NP-5227-A | MEJIA END OF MAITHON(PG)-2 |
| 5 | RANCHI(PG) | NP-5835-A | 400 KV RANCHI-SIPAT-1 (WR) |
| 6 | RANCHI(PG) | NP-5836-A | 400 KV RANCHI-SIPAT-2 (WR) |
| 7 | BINAGURI(PG) | NP-5884-A | BINAGURI END OF BONGAIGAON (NER)-1 |
| 8 | BINAGURI(PG) | NP-5885-A | BINAGURI END OF BONGAIGAON (NER)-2 |
| 9 | ROURKELLA(PG) | NP-5933-A | ROURKELA END OF TARKERA (GRIDCO)-2 |
| 10 | KHARAGPUR(PG) | NP-7563-A | 400 KV KHARAGPUR -BARIPADA(PG) |
| 11 | MPL | NP-7970-A | MAITHON RB END OF RANCHI (PG)-1 (MAIN) |
| 12 | MPL | NP-7971-A | MAITHON RB END OF RANCHI (PG)-2 (MAIN) |
| 13 | MPL | NP-7564-A | MAITHON RB END OF MAITHON (PG)-1 (MAIN) |
| 14 | MPL | NP-6518-A | MAITHON RB END OF MAITHON (PG)-2 (MAIN) |
| 15 | RANCHI NEW(PG) | NP-7847-A | 765 KV RANCHI NEW -DHARAMJAYGARH-1 |
| 16 | RANCHI NEW(PG) | NP-8753-A | 765 KV RANCHI NEW -DHARAMJAYGARH-2 |
| 17 | STERLITE | NP-7572-A | 400 KV STERLITE - RAIGARH(WR)-II(MAIN) |
| 18 | STERLITE | NP-7372-A | 400 KV STERLITE - ROURKELLA(PG)-II(MAIN) |
| 19 | ROURKELLA(PG) | NP-5928-A | 400 KV ROURKELLA(PG)-RAIGARH(WR) |
| 20 | MIRAMUNDALI(OPTCL) | NP-5977-A | 400 KV MIRAMUNDALI-ANGUL-1 |
| 21 | MIRAMUNDALI(OPTCL) | NP-5976-A | 400 KV MIRAMUNDALI-ANGUL-2 |
| 22 | SUNDERGARH(PG) | NP-7634-A | 765 KV SUNDERGARH-DHARAMJAYGARH-1 |
| 23 | SUNDERGARH(PG) | NP-7638-A | 765 KV SUNDERGARH-DHARAMJAYGARH-2 |

| List of PGCIL substation with Tertiary Loading in ER | | | | | | | | |
|--|------------------------|--------|-----------|--------|------|-----------|-----------------|--------------|
| ER-I | | | | | | | | |
| S. No | S/Station | Loc ID | Meter No | Make | CTR | PTR | Remarks | Data Receipt |
| 1 | Banka | ES-88 | NP-7458-A | L&T | 50 | 33000/110 | | Yes |
| 2 | Lakhisarai | ES-94 | NP-8870-A | L&T | 50 | 33000/110 | | Yes |
| 3 | New Ranchi(765) | ES-87 | NP-8752-A | L&T | 50 | 33000/110 | | Yes |
| 4 | Ara(220) | ES-99 | NP-8893-A | L&T | 50 | 33000/110 | | Yes |
| 5 | Muzaffarpur | ET-02 | NP-5231-A | L&T | 1000 | 415/110 | | Yes |
| 6 | New Purnea | ES-98 | NP-5249-A | L&T | 50 | 33000/110 | | Yes |
| 7 | Pusauli | ET-06 | NP-8646-A | L&T | 50 | 33000/110 | | Yes |
| 8 | Gaya(765) | EM-99 | NP-7472-A | L&T | 50 | 33000/110 | | No |
| 9 | Kishanganj | ES-90 | NP-8876-A | L&T | 50 | 33000/110 | | No |
| 10 | Patna | ES-89 | ER-1285-A | Genus | 50 | 33000/110 | | No |
| 11 | Biharshariff | ET-01 | NP-2355-A | SECURE | 1000 | 415/110 | | No |
| 12 | Chaibasa | | | | | | Detail not rcvd | No |
| 13 | Jamshedpur | | | | | | Detail not rcvd | No |
| 14 | Ranchi(400/220) | | | | | | Detail not rcvd | No |
| ER-II & Odhisa Project | | | | | | | | |
| 1 | Angul | ES-95 | NP-5942-A | L&T | 1000 | 415/110 | | Yes |
| 3 | Pandiabili | ES-39 | NP-7462-A | L&T | 1000 | 415/110 | | Yes |
| 4 | Rangpo (33 kv TRF) | ES-96 | NP-7940-A | L&T | 1000 | 415/110 | | Yes |
| 5 | Rangpo (11 KV AUX TRF) | ES-97 | NP-7941-A | L&T | 1000 | 415/110 | | Yes |
| 8 | Sundergarh | ES-93 | ER-1019-A | Genus | 50 | 33000/110 | | Yes |
| 9 | Baripada | EM-69 | NP-5909-A | L&T | 1200 | 400/110 | | Yes |
| 2 | Bolangir | ET-03 | NP-7951-A | L&T | 50 | 33000/110 | | No |
| 6 | Durgapur | ET-04 | NP-6024-B | L&T | 200 | 400/110 | | No |
| 7 | Rengali | ET-05 | NP-0629-B | Secure | 200 | 415/110 | | No |
| 10 | Jeypore | | NP-5695-A | L&T | | | Detail not rcvd | No |
| 11 | Keonjhar | | NP-7921-A | L&T | | | Detail not rcvd | No |
| 12 | Maithon | | | | | | Detail not rcvd | No |
| 13 | Birpara | | | | | | Detail not rcvd | No |
| 14 | Siliguri | | | | | | Detail not rcvd | No |
| 15 | Subhashgram | | | | | | Detail not rcvd | No |

Operating Procedure of
Eastern Region updated
2017

- Draft updated procedure emailed to regional entities of ER vide ERLDC/SS/OP/2017/1673 dated 7th July, 2017
- Comments / views of stakeholders were solicited.

Following chapters updated

- Chapter-2, Frequency Management
 - As per IEGC updated.
- Chapter-3, Voltage Management
 - tap positions for 765/400KV and 400/220kV ICTs / as on 30.06.17 is updated in Annexure VI.
 - List of a Bus reactors /line reactors updated in Annexure VII
- Chapter-5, Switching Coordination
 - Procedure for certifying successful trial operation of new transmission/Thermal Generator/Hydro Generator included.
- Chapter-8, Scheduling and Despatch Procedure
 - Web based Scheduling included

Annexures updated (As on 30.06.17)

- Annexure: I Generation capacities in Eastern Region
- Annexure: II List of Generating Units and their Capacities
- Annexure :III Captive Power Stations in Eastern Region and their capacities
- Annexure: VI List of 765/400kV & 400/220kV ICTs and their tap Positions
- Annexure: VII Reactive Compensation Details
- Annexure: IX New transmission element charging and issue of certificate of successful trial run operation
- Annexure :XIV List of Important Elements
- Annexure: XX Meter Locations
- Annexure :XXI Grid Maps

Annexure-B41A

Governor response observed at
generating units in Eastern Region
for the load loss event at 00:15 hrs
on 27-06-17

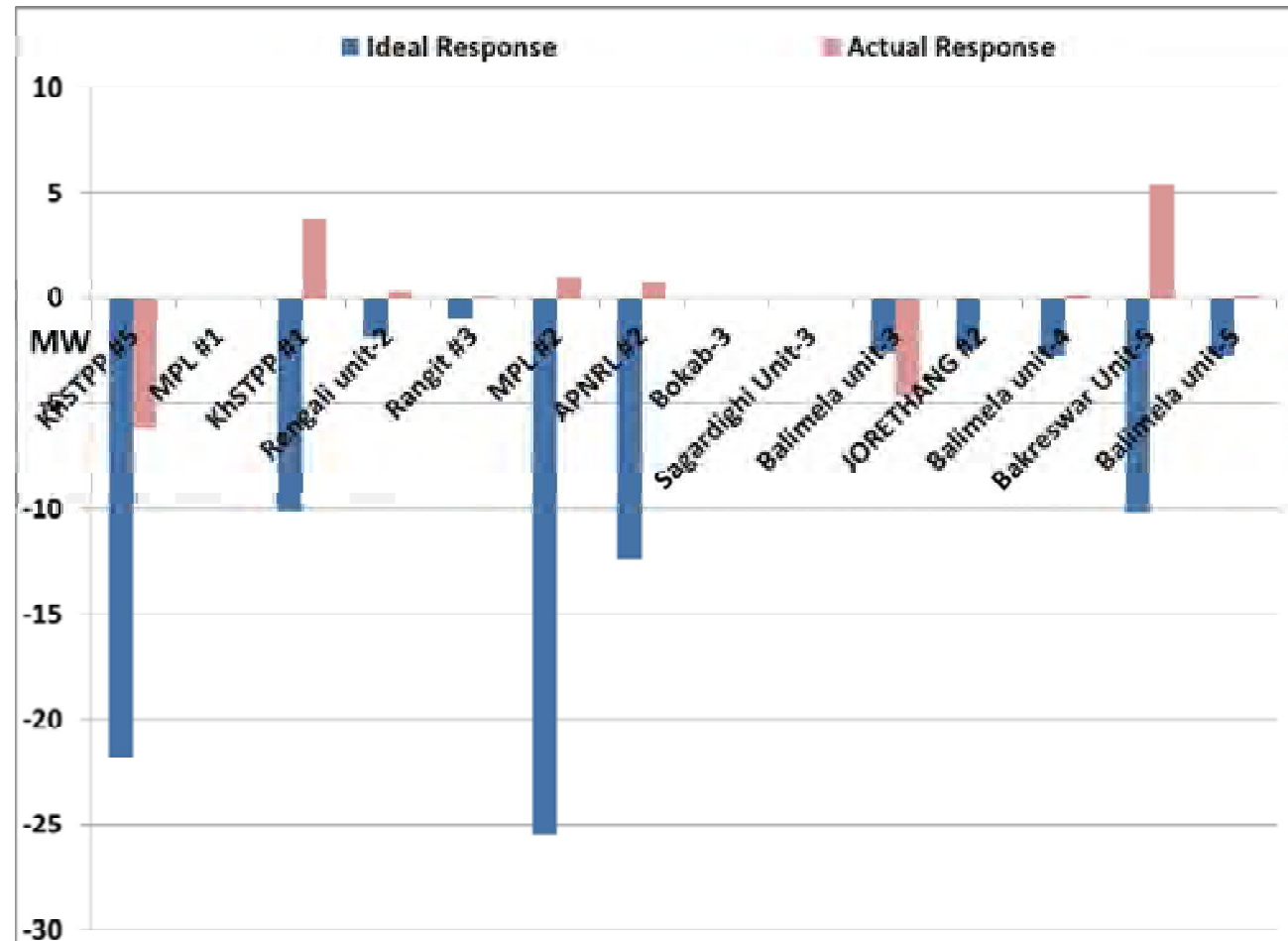


Summary

- 1500 MW load loss in Haryana system at 00:15 hrs on 27-06-17
 - Frequency rose up to 50.12 Hz from 49.93 Hz
- Expected generation reduction in Eastern Region: 600 MW*
- Actual generation reduction in Eastern Region:
 - 16 MW*

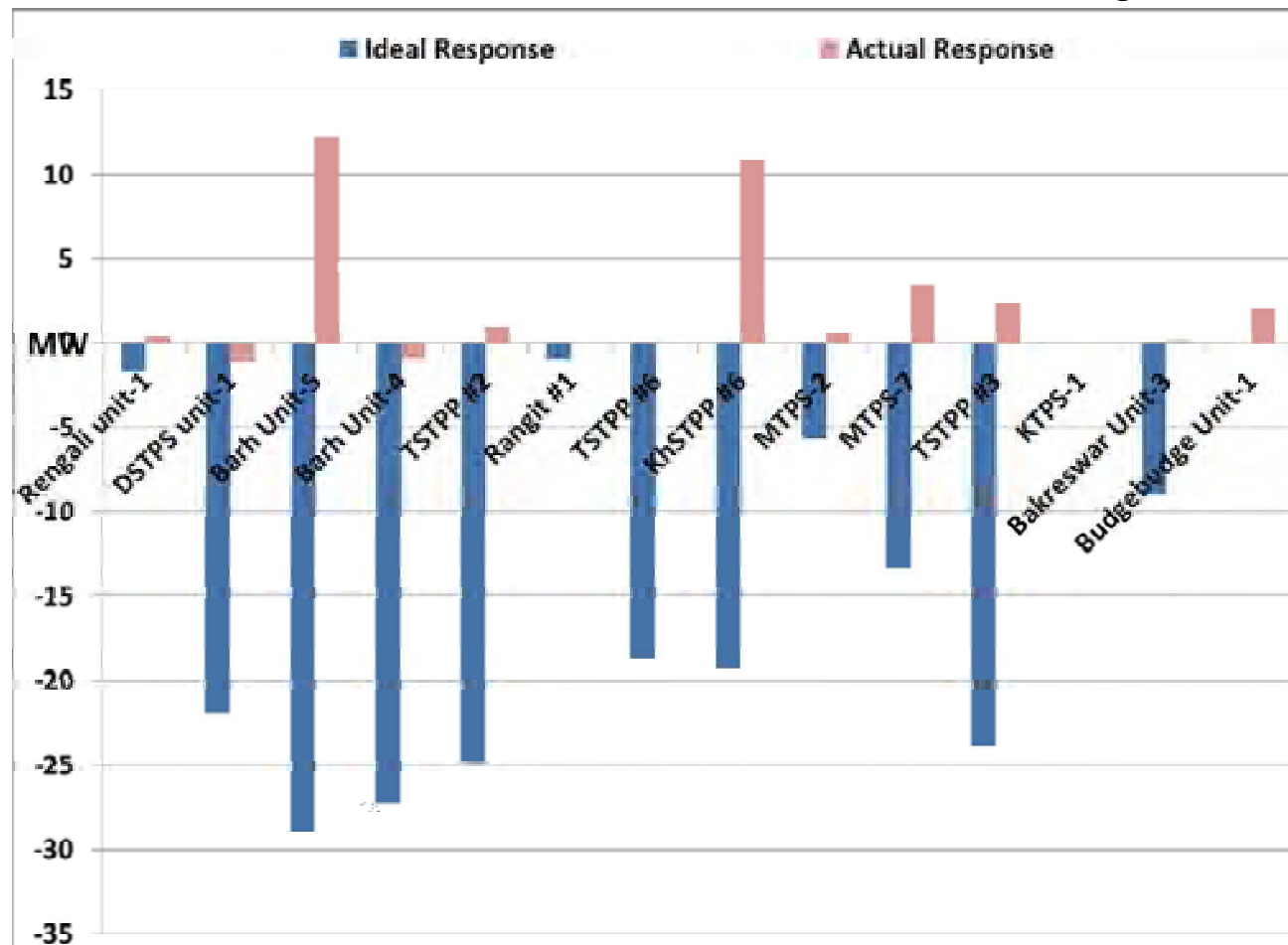
*For the units which are in service and whose SCADA data were available

Units having satisfactory response most of the time for the events of May, 2017



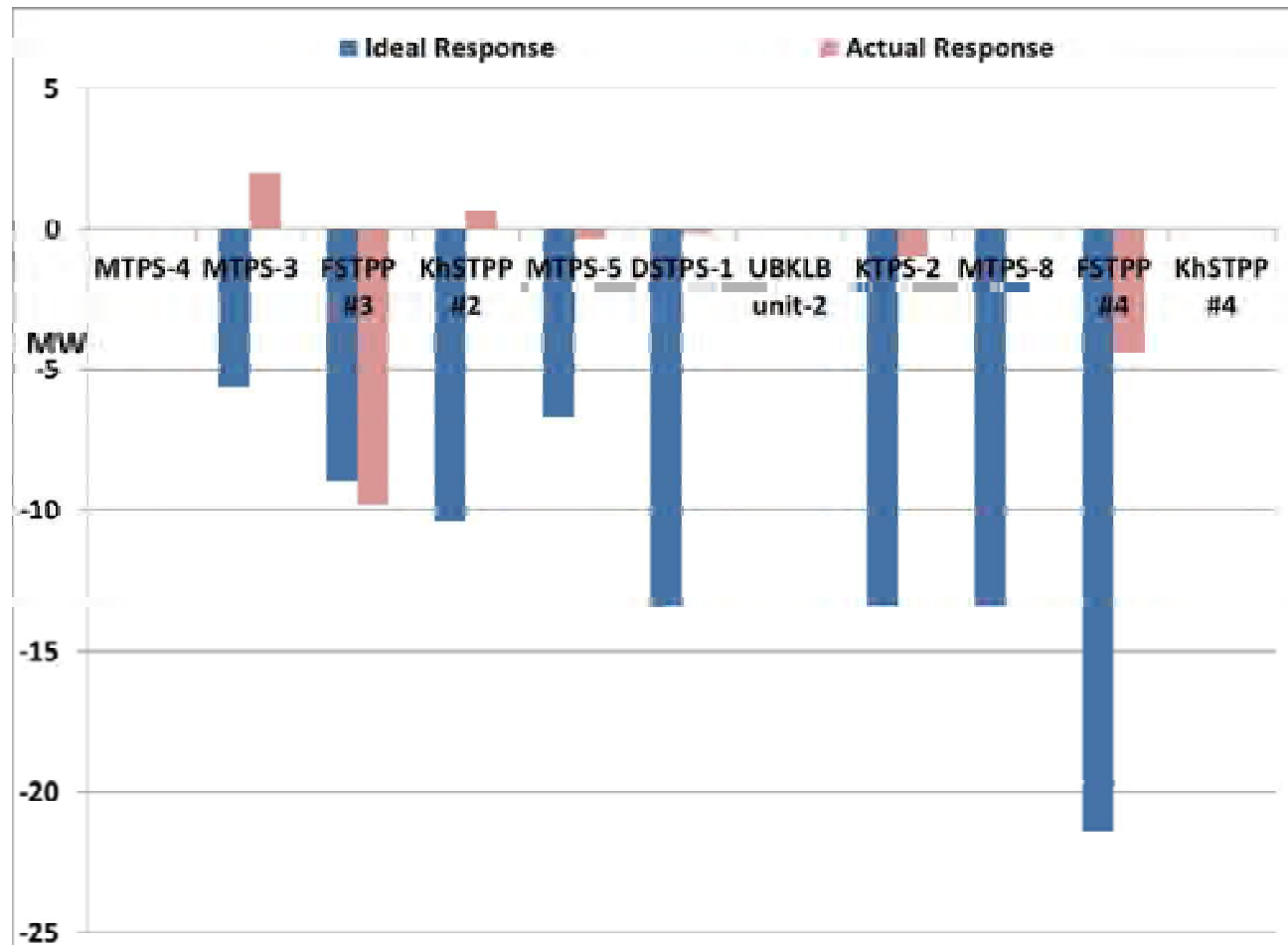
MPL #1, Bokaro B #3, Sagardighi #3 unit generation was zero or SCADA data was not available

Units having below satisfactory response most of the time for the events of May, 2017



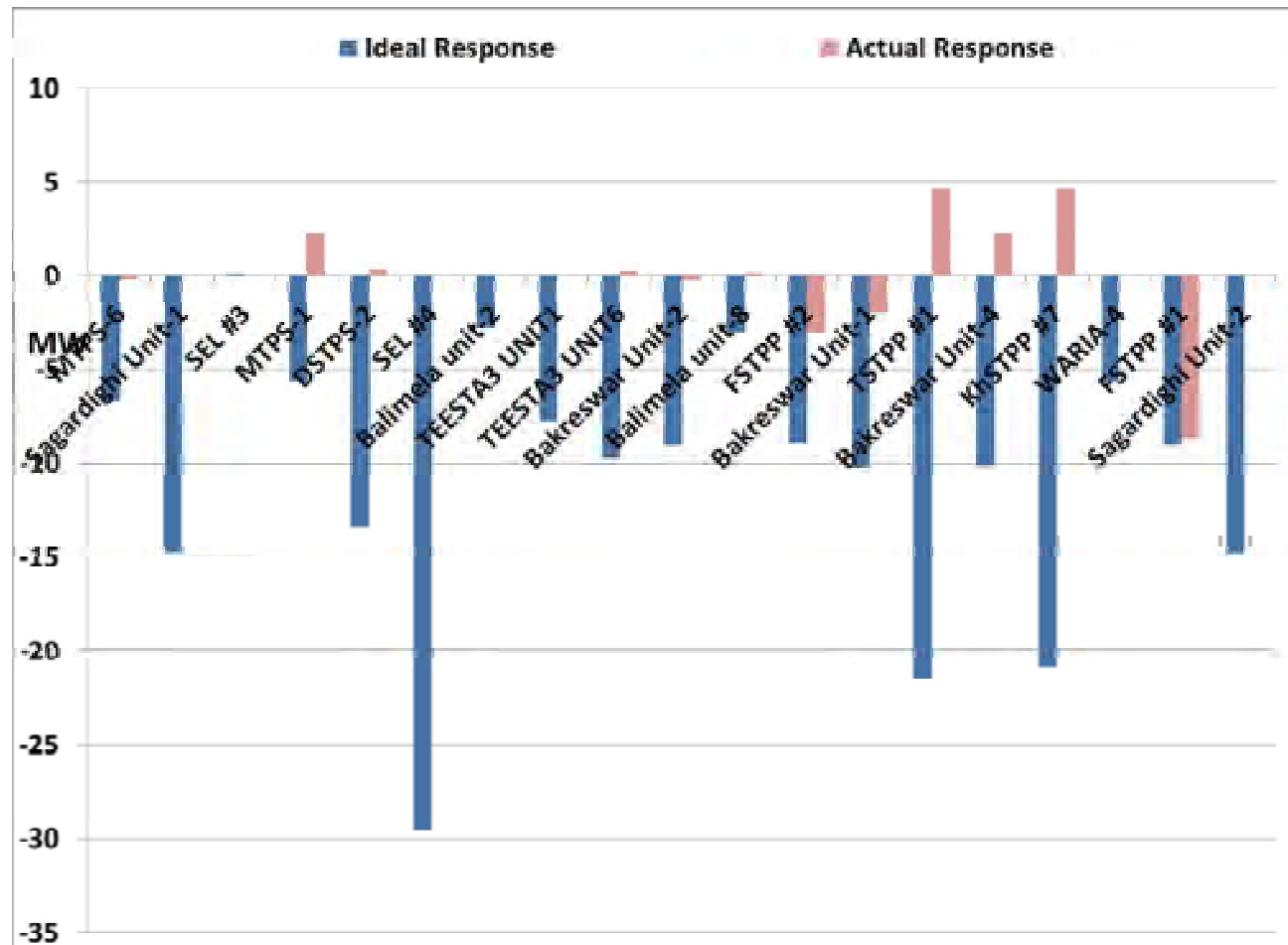
Koderma #1, TSTPP #6 unit generation was zero or SCADA data was not available

Units having both satisfactory & unsatisfactory response for the events of May, 2017

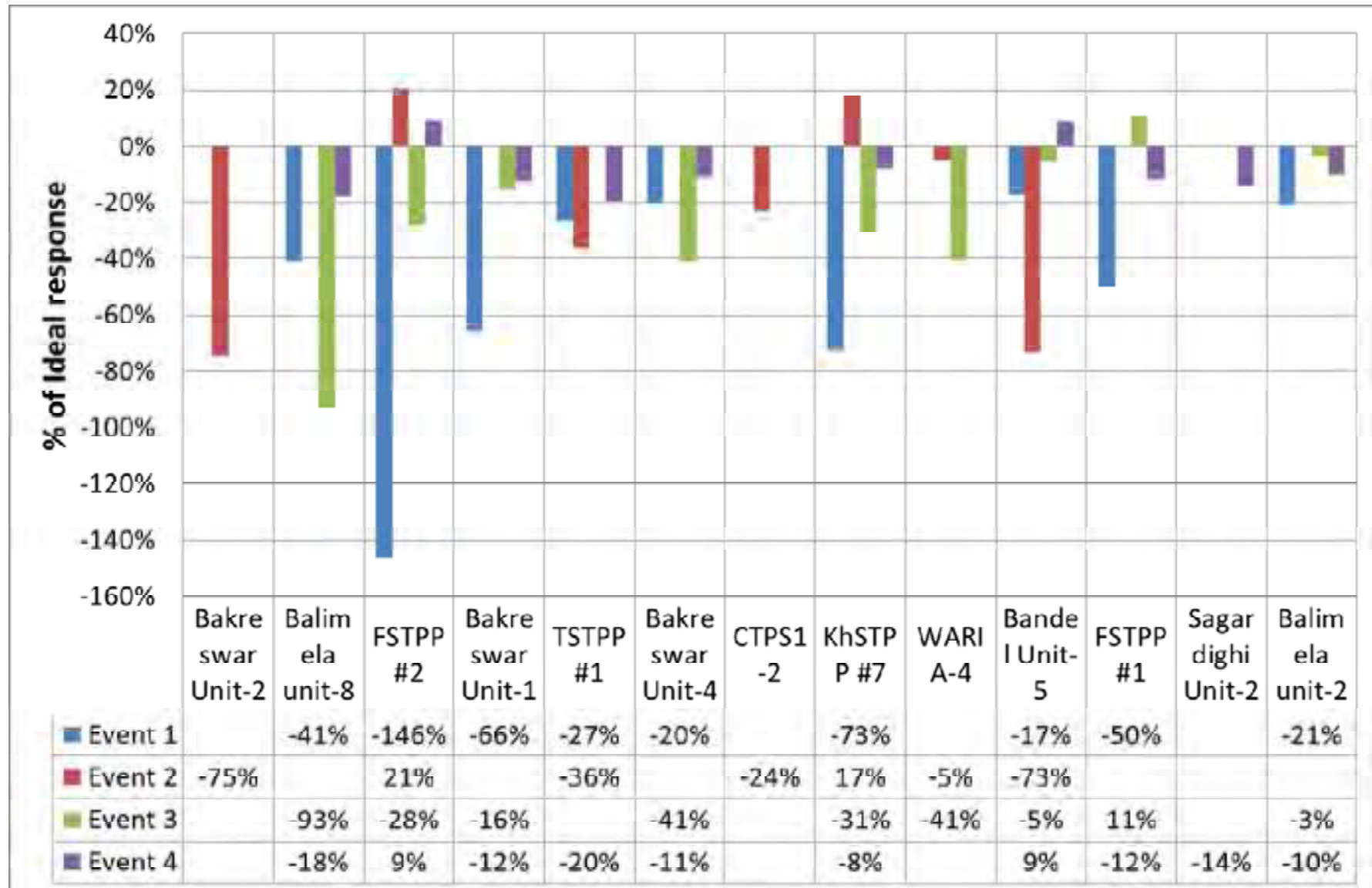


Mejia #4, UP Kolab #2 and KhSTPP #4 unit generation was zero or SCADA data was not available

Units having unsatisfactory response most of the time for the events of May, 2017



Units having unsatisfactory response most of the time



| Details of stations/Units required to operate under RGMO/FGMO as per IEGC | | | | | | | Whether operating under RGMO | indicate in case of status is not available |
|---|---------|-----------------|------------------------|-----------------|---------------------|-------------------------|------------------------------|---|
| Name of State | Type | Name of Utility | Sector (CS/SS/Private) | Name of Station | Name of Stage/ Unit | Installed capacity (MW) | | |
| JHARKHAND | Thermal | TVNL | SS | Tenughat | 1 | 210 | No | Difficulties in implementing RGMO & exemption not |
| | | | SS | | 2 | 210 | No | |
| | Hydro | JSEB | SS | Subarnrekha | 1 | 65 | Yes | |
| | | | SS | | 2 | 65 | Yes | |
| WEST BENGAL | Thermal | WBPDC | SS | Bandel TPS | 1 | 82.5 | No | |
| | | | SS | | 2 | 82.5 | No | |
| | | | SS | | 3 | 82.5 | No | |
| | | | SS | | 4 | 82.5 | No | |
| | | | SS | | 5 | 210 | No | |
| | | | SS | Santalidih | 5 | 250 | No | Unit#6 could not be implemented because of some technical problem |
| | | | SS | | 6 | 250 | No | |
| | | | SS | Kolaghat | 1 | 210 | No | Nil |
| | | | SS | | 2 | 210 | No | Nil |
| | | | SS | | 3 | 210 | No | Nil |
| | | | SS | | 4 | 210 | No | Nil |
| | | | SS | | 5 | 210 | No | Nil |
| | | | SS | | 6 | 210 | No | Nil |
| | | | SS | Bakreshwar | 1 | 210 | Yes | |
| | | | SS | | 2 | 210 | Yes | |
| | | | SS | | 3 | 210 | Yes | |
| | | | SS | | 4 | 210 | Yes | |
| | | | SS | | 5 | 210 | Yes | |
| | | | SS | Sagardighi | 1 | 300 | No | Without OEM support it is not possible to put in FGMO/RGMO. At present OEM support is not |
| | | | SS | | 2 | 300 | No | |
| | Hydro | | SS | Raman Hydel | 1 | 12.5 | No | Station is not in RGMO. WBSETCL is pursuing with Rammam |
| | | | SS | | 2 | 12.5 | No | |
| | | | SS | | 3 | 12.5 | No | |
| | | | SS | | 4 | 12.5 | No | |
| | | | SS | PPSP | 1 | 225 | Yes | In 134th OCC WBPDCCL informed that the units are in RGMO/FGMO mode |
| | | | SS | | 2 | 225 | Yes | |
| | | | SS | | 3 | 225 | Yes | |
| | | | SS | | 4 | 225 | Yes | |
| | Thermal | CESC | SS | Budge-Budge | 1 | 250 | Yes | |
| | | | SS | | 2 | 250 | Yes | |
| | | | SS | Haldia | 3 | 250 | Yes | |
| | | | SS | | 1 | 300 | Yes | |
| | Thermal | DPL | SS | DPL | 2 | 300 | Yes | |
| | | | SS | | 7 | 300 | Yes | |
| Orissa | | OPGC | SS | IB TPS | 1 | 210 | No | Not adequate response in RGMO |
| | | | SS | | 2 | 210 | No | |
| | Hydro | OHPC | SS | Burla | 1 | 49.5 | No | |
| | | | SS | | 2 | 49.5 | No | |
| | | | SS | | 3 | 32 | No | |
| | | | SS | | 4 | 32 | No | |
| | | | SS | | 5 | 37.5 | No | |
| | | | SS | | 6 | 37.5 | No | |
| | | | SS | | 7 | 37.5 | No | |
| | | | SS | Chiplima | 1 | 24 | No | |
| | | | SS | | 2 | 24 | No | |
| | | | SS | | 3 | 24 | No | |
| | | | SS | Balimela | 1 | 60 | No | |
| | | | SS | | 2 | 60 | No | |
| | | | SS | | 3 | 60 | No | |
| | | | SS | | 4 | 60 | No | |
| | | | SS | | 5 | 60 | No | |
| | | | SS | | 6 | 60 | No | |
| | | | SS | | 7 | 75 | No | |
| | | | SS | | 8 | 75 | No | |
| | | | SS | | 1 | 50 | No | |
| | | | SS | | 2 | 50 | No | |

| | | | | | | | | |
|--|--|--|----|-------------|---|-----|----|--|
| | | | SS | Rengali | 3 | 50 | No | |
| | | | SS | | 4 | 50 | No | |
| | | | SS | | 5 | 50 | No | |
| | | | SS | Upper Kolab | 1 | 80 | No | |
| | | | SS | | 2 | 80 | No | |
| | | | SS | | 3 | 80 | No | |
| | | | SS | | 4 | 80 | No | |
| | | | SS | Indravati | 1 | 150 | No | |
| | | | SS | | 2 | 150 | No | |
| | | | SS | | 3 | 150 | No | |
| | | | SS | | 4 | 150 | No | |
| | | | 71 | | | | | |

| | | | | | | | | | |
|----------------|---------|--------------------|-------|----------------|-----------------|-----|------|--|--|
| Central Sector | Thermal | DVC | CS | Bokaro-B | 1 | 210 | No | RGMO mode of operation would not be possible for units1, 2 and 3. Because of non-availability of electro-hydraulic governor, digital voltage recorder and CMC. | |
| | | | CS | | 2 | 210 | No | | |
| | | | CS | | 3 | 210 | No | | |
| | | | CS | | CTPS | 2 | 140 | No | Machines are very old (under consideration for phase wise decommissioning) |
| | | | CS | 3 | | 140 | No | | |
| | | | CS | 7 | | 250 | Yes | | |
| | | | CS | 8 | | 250 | Yes | | |
| | | | CS | DTPS | 4 | 210 | No | | |
| | | | CS | Mejia | 1 | 210 | No | there is no DCS for SG/TG package the possibility of implementing RGMO is to be explored | |
| | | | CS | | 2 | 210 | No | | |
| | | | CS | | 3 | 210 | No | | |
| | | | CS | | 4 | 210 | No | Final tuning of RGMO is in progress | |
| | | | CS | Mejia - B | 5 | 250 | Yes | | |
| | | | CS | | 6 | 250 | Yes | | |
| | | | CS | | 7 | 500 | Yes | | |
| | | | CS | | 8 | 500 | Yes | | |
| | | | CS | DSTPS | 1 | 500 | Yes | | |
| | | | CS | | 2 | 500 | Yes | | |
| | | | CS | KODERMA | 1 | 500 | Yes | | |
| | | | CS | | 2 | 500 | Yes | | |
| | | | CS | RTPS | 1 | 600 | Yes | | |
| | | | CS | | 2 | 600 | Yes | | |
| | | | Hydro | Maithon | CS | 1 | 20 | No | RGMO mode of operation would not be possible for units1, 2 and 3. Because of |
| | | | | | CS | 2 | 20 | No | |
| | | | | | CS | 3 | 23.2 | No | |
| | | | | | Panchet | CS | 1 | 40 | No |
| | CS | 2 | | | | 40 | No | | |
| | CS | | | | | | | | |
| | Thermal | NTPC | | CS | Farakka STPP-I | 1 | 200 | Yes | |
| | | | | CS | | 2 | 200 | Yes | |
| | | | | CS | | 3 | 200 | Yes | |
| | | | | CS | Farakka STPP-II | 1 | 500 | Yes | |
| | | | | CS | | 2 | 500 | Yes | |
| | | | | CS | Farakka-U#6 | | 500 | Yes | Kept in RGMO mode from April, 2014 |
| | | | CS | Kahalgoan STPP | 1 | 210 | Yes | | |
| | | | CS | | 2 | 210 | Yes | | |
| | | | CS | | 3 | 210 | Yes | | |
| | | | CS | | 4 | 210 | Yes | | |
| | | | CS | | 5 | 500 | Yes | | |
| | | | CS | | 6 | 500 | Yes | | |
| | CS | 7 | 500 | | Yes | | | | |
| | CS | Talcher STPP Stg-I | 1 | 500 | Yes | | | | |
| | CS | | 2 | 500 | Yes | | | | |
| | Hydro | NHPC | CS | * Rangit | 1 | 20 | No | Pondage capacity is to generate power upto 3 hours only.Hence not under | |
| | | | CS | | 2 | 20 | No | | |
| | | | CS | | 3 | 20 | No | | |
| | | | CS | Teesta HEP | 1 | 170 | Yes | | |
| | | | CS | | 2 | 170 | Yes | | |
| CS | | | 3 | | 170 | Yes | | | |

| | | | | | | | |
|--|--|--|----|--|--|--|--|
| | | | 48 | | | | |
|--|--|--|----|--|--|--|--|

| | | | | | | | | |
|--|---------|-----|----|----------------|---|-----|-----|--|
| | Thermal | IPP | PS | Maithon RB TPP | 1 | 525 | Yes | |
| | | | PS | | 2 | 525 | Yes | |
| | | | PS | Sterlite | 1 | 600 | Yes | |
| | | | PS | | 2 | 600 | Yes | |
| | | | PS | | 3 | 600 | Yes | |

| | | | | | | | | |
|-----|-------|-----|----|---------------|---|------|-----|------------------------------------|
| IPP | Hydro | IPP | PS | | 4 | 600 | Yes | |
| | | | PS | Adhunik Power | 1 | 270 | Yes | |
| | | | PS | | 2 | 270 | Yes | |
| | | | PS | JLHEP | 1 | 48 | No | (RoR project with 3 hours pondage) |
| | | | PS | | 2 | 48 | No | |
| | | | PS | Chujachen HEP | 1 | 49.5 | No | (RoR project with 3 hours pondage) |
| | | | PS | | 2 | 49.5 | No | |
| | | | PS | Teesta Urja | 1 | 200 | Yes | |
| | | | PS | | 2 | 200 | Yes | |
| | | | PS | | 3 | 200 | Yes | |
| | | | PS | | 4 | 200 | Yes | |
| | | | PS | | 5 | 200 | Yes | |
| | | | PS | | 6 | 200 | Yes | |
| | | | PS | Dikchu | 1 | 48 | No | (RoR project with 3 hours pondage) |
| | | | PS | | 2 | 48 | No | |

Annexure-B44

Reactive power performances of
various units in the month of June,
2017

Voltage & reactive power injection (Unit MVAR injection-MVAR absorption in GT) at terminal point of generating units are compared for various generating units in ER.

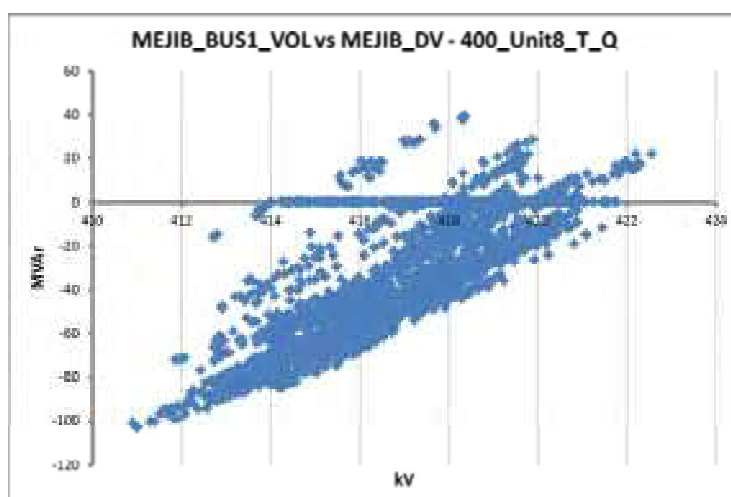
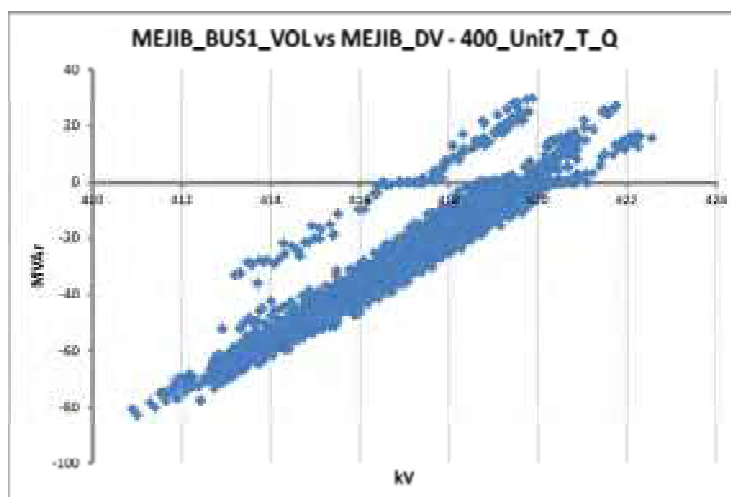
- Scatter plot is plotted with taking
 - Terminal voltage across x axis
 - Reactive power injection across y axis
 - (Nominal terminal voltage (kV), 0 MVAR) as origin
- MVAR injection should reduce with increase in terminal voltage

The units whose MVAR injection increases with increase in voltage

- Mejia B #7 & #8

*Based on available SCADA data at ERLDC

Response of the units whose MVAR injection increases with increase in voltage



**Anticipated Power Supply Position for the month of
Aug-17**

| SL.NO | PARTICULARS | PEAK DEMAND MW | ENERGY MU |
|------------|--|-------------------|--------------|
| 1 | BIHAR | | |
| i) | NET MAX DEMAND | 4200 | 2250 |
| ii) | NET POWER AVAILABILITY- Own Source (including bilateral) | 620 | 143 |
| | - Central Sector | 2806 | 1750 |
| iii) | SURPLUS(+)/DEFICIT(-) | -774 | -356 |
| 2 | JHARKHAND | | |
| i) | NET MAX DEMAND | 1150 | 770 |
| ii) | NET POWER AVAILABILITY- Own Source (including bilateral) | 350 | 277 |
| | - Central Sector | 700 | 368 |
| iii) | SURPLUS(+)/DEFICIT(-) | -100 | -126 |
| 3 | DVC | | |
| i) | NET MAX DEMAND (OWN) | 2640 | 1634 |
| ii) | NET POWER AVAILABILITY- Own Source | 4842 | 2686 |
| | - Central Sector | 453 | 339 |
| | Long term Bi-lateral (Export) | 1300 | 967 |
| iii) | SURPLUS(+)/DEFICIT(-) | 1356 | 424 |
| 4 | ORISSA | | |
| i) | NET MAX DEMAND | 4250 | 2567 |
| ii) | NET POWER AVAILABILITY- Own Source | 3450 | 2054 |
| | - Central Sector | 1161 | 751 |
| iii) | SURPLUS(+)/DEFICIT(-) | 361 | 238 |
| 5 | WEST BENGAL | | |
| 5.1 | WBSEDCL | | |
| i) | NET MAX DEMAND (OWN) | 6160 | 3535 |
| ii) | CESC's DRAWAL | 0 | 0 |
| iii) | TOTAL WBSEDCL's DEMAND | 6160 | 3535 |
| iv) | NET POWER AVAILABILITY- Own Source | 3311 | 1880 |
| | - Import from DPL | 166 | 0 |
| | - Central Sector | 2919 | 1734 |
| v) | SURPLUS(+)/DEFICIT(-) | 236 | 79 |
| vi) | EXPORT (TO B'DESH & SIKKIM) | 10 | 7 |
| 5.2 | DPL | | |
| i) | NET MAX DEMAND | 260 | 171 |
| ii) | NET POWER AVAILABILITY | 426 | 187 |
| iii) | SURPLUS(+)/DEFICIT(-) | 166 | 16 |
| 5.3 | CESC | | |
| i) | NET MAX DEMAND | 1895 | 1040 |
| ii) | NET POWER AVAILABILITY - OWN SOURCE | 750 | 489 |
| | FROM HEL | 530 | 339 |
| | FROM CPL/PCBL | 40 | 0 |
| | Import Requirement | 575 | 212 |
| iii) | TOTAL AVAILABILITY | 1895 | 1040 |
| iv) | SURPLUS(+)/DEFICIT(-) | 0 | 0 |
| 6 | WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area) | | |
| i) | NET MAX DEMAND | 8315 | 4746 |
| ii) | NET POWER AVAILABILITY- Own Source | 4487 | 2557 |
| | - Central Sector+Others | 4064 | 2073 |
| iii) | SURPLUS(+)/DEFICIT(-) | 236 | -116 |
| 7 | SIKKIM | | |
| i) | NET MAX DEMAND | 85 | 33 |
| ii) | NET POWER AVAILABILITY- Own Source | 10 | 7 |
| | - Central Sector+Others | 154 | 103 |
| iii) | SURPLUS(+)/DEFICIT(-) | 79 | 77 |
| 8 | EASTERN REGION | | |
| | At 1.03 AS DIVERSITY FACTOR | | |
| i) | NET MAX DEMAND | 20039 | 12000 |
| | Long term Bi-lateral by DVC | 1300 | 967 |
| | EXPORT BY WBSEDCL | 10 | 7 |
| ii) | NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION) | 23097 | 13106 |
| iii) | PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i) | 1749 | 133 |

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

| System | Station | Unit | Size (MW) | Period | | No. of Days | Reason |
|--------|------------|------|-----------|----------|----------|-------------|--|
| | | | | From | To | | |
| ODISHA | IB TPS | 2 | 210 | 15.08.17 | 19.09.17 | 35 | COH (Tentative) |
| WBPDCL | Bakreswar | 5 | 210 | 13.08.17 | 02.09.17 | 21 | Boiler Overhauling |
| | Santalalih | 5 | 250 | 01.08.17 | 25.08.17 | 25 | Boiler + LTP + Generator OH |
| | Barh | 5 | 660 | 16.08.17 | 14.09.17 | 30 | Boiler |
| NTPC | TSTPS | 3 | 500 | 01.08.17 | 14.09.17 | 45 | Boiler Mod.+Capital+Gen.+ESP R&M+Boiler RLA |
| IPP | MPL | 1 | 525 | 14.08.17 | 14.09.17 | 32 | Not Specified |
| NTPC | Farakka | 3 | 200 | 01.08.17 | 30.08.17 | 30 | Boiler, ESP R&M |
| NTPC | KhSTPS | 6 | 500 | 15.08.17 | 18.09.17 | 35 | Boiler, Turbine, Gen. |

**EASTERN REGIONAL LOAD DESPATCH CENTRE
KOLKATA**

TRANSMISSION ELEMENTS OUTAGE APPROVED IN 135TH 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 | 765 KV BUS-I at Gaya S/S | 26/07/17 | 08:00 | 26/07/17 | 18:00 | ODB | ER-1 POWERGRID | For isolator rectification work under S/S extn. Package | NLDC |
| 2 | 400KV BARH-GORAKHPUR-II | 26/07/17 | 08:00 | 29/07/17 | 20:00 | OCB | DMTCL | LILO of both the circuits of 400kV Barh to Gorakhpur Transmission Line at Motihari GIS Sub-station | NLDC/AFTER RETURN OF 400KV GRK-MZF-DC |
| 3 | 765 KV BUS-II at Gaya S/S | 27/07/17 | 08:00 | 27/07/17 | 18:00 | ODB | ER-1 POWERGRID | For isolator rectification work under S/S extn. Package | NLDC |
| 4 | 400KV ROURKELA-SUNDARGARH-II | 28/07/17 | 08:00 | 30/07/17 | 18:00 | ODB | VEDANTA LTD | For overhead hot line stringing O/C 400KV D/C Vedanta-Sundargarh Line at Location No.AP09/0 -AP10/0 (PGCIL Loc. No.14-15) | |
| 5 | 400KV RAIGARH-SUNDARGARH-II | 28/07/17 | 08:00 | 30/07/17 | 18:00 | ODB | VEDANTA LTD | For overhead hot line stringing O/C 400KV D/C Vedanta-Sundargarh Line at Location No.AP09/0 -AP10/0 (PGCIL Loc. No.14-15) | NLDC |
| 6 | 400KV ROURKELA-SUNDARGARH-I | 31/07/17 | 08:00 | 02/08/17 | 18:00 | ODB | VEDANTA LTD | For overhead hot line stringing O/C 400KV D/C Vedanta-Sundargarh Line at Location No.AP10/0 -AP11/0 (PGCIL Loc.No.15-16) | |
| 7 | 400KV RAIGARH-SUNDARGARH-I | 31/07/17 | 08:00 | 02/08/17 | 18:00 | ODB | VEDANTA LTD | For overhead hot line stringing O/C 400KV D/C Vedanta-Sundargarh Line at Location No.AP10/0 -AP11/0 (PGCIL Loc.No.15-16) | NLDC |
| 8 | 315MVA ICT-II at Patna | 01/08/17 | 08:00 | 01/08/17 | 18:00 | ODB | ER-1 POWERGRID | Application of insulation sleeve on tertiary | Bihar |
| 9 | 132 KV MAIN BUS AT PURNEA | 01/08/17 | 09:00 | 01/08/17 | 10:00 | ODB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 10 | 132 KV PURNEA - PURNEA BSPTCL#1 LINE | 01/08/17 | 09:00 | 15/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 11 | 160 MVA ICT#3 AT PURNEA | 01/08/17 | 09:00 | 15/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 12 | 132 KV PURNEA - PURNEA BSPTCL#2 LINE | 01/08/17 | 09:00 | 15/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 13 | 405 Bay(Tie bay of Mejia & Durgapur) AT JSR | 01/08/17 | 09:30 | 08/08/17 | 17:30 | OCB | ER-1 POWERGRID | Tie bay CB (40552) Replacement work | |
| 14 | A/R of 400 kV Bsf - Muzaffarpur - I | 01/08/17 | 06:00 | 30/08/17 | 17:00 | ODB | ER-1 POWERGRID | for OPGW installation work | |
| 15 | A/R of 400 kV Bsf - Banka - II | 01/08/17 | 06:00 | 01/08/17 | 17:00 | ODB | ER-1 POWERGRID | for OPGW installation work | |
| 16 | 400KV CHAIBASA-KHARAGPUR-2 | 01/08/17 | 08:00 | 01/08/17 | 17:00 | ODB | ER-1 POWERGRID | Checking of Autoreclose and CSD | West Bengal |
| 17 | 400KV Kharagpur-Chaibasa#1 | 01/08/17 | 06:00 | 01/08/17 | 15:00 | ODB | WB | PrePuja Bay Maintenance | |
| 18 | 50MVAR BUS REACTOR at Rourkela | 01/08/17 | 09:00 | 31/10/17 | 18:00 | OCB | ER-II/Odisha/ROURKELA | Replacement of existing 50MVAR Bus Reactor by 125MVAR Bus Reactor for extension of 400KV Rourkela S/S under ERSS-IX Package. | After commissioning of 125MVAR BR at JMS S/s |
| 19 | 765/400kV ICT-1 at Angul | 01/08/17 | 10:00 | 01/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | CSD commissioning at 400kV side of ICT. | NLDC |
| 20 | Main Bay-706 of 765/400KV ICT-II at Sundargarh | 01/08/17 | 08:00 | 01/08/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh | AMP Work | NLDC |
| 21 | 400KV Bus I at bolangir | 01/08/17 | 08:00 | 07/08/17 | 18:00 | ODB | ER-II/Odisha/BOLANGIR | BPI Erection and Stringing in Reactor Bay construction ERSS-XIV | |
| 22 | 400KV Sundergarh-Raigarh-I | 01/08/17 | 08:00 | 02/08/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh TLM | For replacement of Porcelain Insulator at various crossing span by CLR polymer (proposed crossing span 624-625 & 675-676) | NLDC |
| 23 | Auto Reclose to be kept in Manual mode400 KV Renglai Indravati Line | 01/08/17 | 08:00 | 31/08/17 | 18:00 | ODB | ER-II/Odisha/BOLANGIR | Fpr PID of 400 KV Rengali - Indravati Line, noPower Interruption of line will be there. | |
| 24 | 132 KV Main bus at Baripada | 01/08/17 | 09:00 | 03/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | Test of bus bar stability for commision ofnew bay | GRIDCO |
| 25 | 400KV BARH-GORAKHPUR-I | 01/08/17 | 08:00 | 03/08/17 | 20:00 | OCB | DMTCL | LILO of both the circuits of 400kV Barh to Gorakhpur Transmission Line at Motihari GIS Sub-station | NLDC |
| 26 | 132 kV LKR-LKR (BSPTCL) Line-1 | 02/08/17 | 10:00 | 02/08/17 | 14:00 | ODB | ER-1 POWERGRID | AMP | Bihar |
| 27 | 220 KV BUS -1 at MZF | 02/08/17 | 09:00 | 03/08/17 | 18:00 | ODB | ER-1 POWERGRID | Erection of BPI & IPS tube for GIS bay extension work at Muzaffarpur substation. | Bihar |

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|----|---|----------|-------|----------|-------|-----|-----------------------------|---|-----------------|
| 28 | 400KV Kharagpur-Chaibasa#2 | 02/08/17 | 06:00 | 02/08/17 | 15:00 | ODB | WB | PrePuja Bay Maintenance | |
| 29 | Main Bay-710 of 765KV Sundargarh-Angul Line-I at Sundargarh | 02/08/17 | 08:00 | 02/08/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh | AMP Work | NLDC |
| 30 | 765/400KV ICT-2 at Angul | 02/08/17 | 10:00 | 02/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | CSD commissioning at 400kV side of ICT. | NLDC |
| 31 | 315MVA ICT-I at Bolangir | 02/08/17 | 08:00 | 31/08/17 | 18:00 | OCB | ER-II/Odisha/BOLANGIR | Construction works of Firewall for Reactor package ERSS-XIV (on continuous basis) | GRIDCO |
| 32 | 400Kv Sundargarh-Raigarh -II | 02/08/17 | 09:00 | 20/08/17 | 18:00 | OCB | ER-II/Odisha/Sundergarh TLM | Dismantling of Tower Loc 375 and erection of New Tower in place of NEW foundation and Stringing through Multi Ckt with 220kv Budhi Padhar Korba Line .(Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | NLDC |
| 33 | 400kV Bus-II at Rengali | 02/08/17 | 09:00 | 02/08/17 | 17:00 | ODB | ER-II/Rengali/Odisha | For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work at Rengali. | |
| 34 | 400 KV Farakka-Berhampur | 02/08/17 | 08:00 | 02/08/17 | 16:00 | ODB | ER-II | Shut down required for insulator replacement damaged due to miscreants. | |
| 35 | 500MVA ICT-I at Patna | 03/08/17 | 08:00 | 03/08/17 | 18:00 | ODB | ER-1 POWERGRID | Attending commissioning punch point & Pre-warranty Test | Bihar |
| 36 | BSF-Banka-1 main Bay No-428 AT BSF | 03/08/17 | 10:00 | 07/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Overhauling Work | |
| 37 | 220 KV BUS-I at Gaya S/S | 03/08/17 | 08:00 | 03/08/17 | 18:00 | ODB | ER-1 POWERGRID | For KHIJARSARAI bay commissioning work | Bihar |
| 38 | 400kV Bus-I at Rengali | 03/08/17 | 09:00 | 03/08/17 | 17:00 | ODB | ER-II/Rengali/Odisha | For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work at Rengali. | |
| 39 | 315MVA ICT #3 at Baripada | 03/08/17 | 09:00 | 01/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | CSD Commissioning,amp work & calibration of OTI&WTI | GRIDCO |
| 40 | 765/400kV ICT-3 at Angul | 03/08/17 | 10:00 | 03/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | Quarterly changeover of Spare phase ICT with ICT-3 & CSD commissioning at 400kV side of ICT. | NLDC |
| 41 | 400 kV Bus-I at Jeypore | 03/08/17 | 09:30 | 03/08/17 | 13:30 | ODB | ER-II/Odisha/Jeypore | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | |
| 42 | 400 kV Bus-II at Jeypore | 03/08/17 | 14:00 | 03/08/17 | 18:00 | ODB | ER-II/Odisha/Jeypore | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | |
| 43 | 765 KV Bus-II at Sundargarh | 03/08/17 | 08:00 | 05/08/17 | 18:00 | OCB | ER-II/Odisha/Sundergarh | Extension of 4.5" Al Tube & stability checking for commissioning of 765KV Angul Line-3&4 main bay(713 & 716)for new bays construction work | NLDC |
| 44 | 765 KV D/C Jharsuguda- Dharamjaygarh Transmission line (Ckt-I & II) | 03/08/17 | 08:00 | 05/08/17 | 17:00 | OCB | ER-II/Odisha/Sundergarh TLC | Swapping arrangement : Stringing work of 765KV Jharsuguda - Dharamjaygarh TL, Ckt-III & IV with Ckt-I & II | NLDC |
| 45 | 400 KV MALDA-FARAKKA-I | 03/08/17 | 08:00 | 05/08/17 | 16:00 | ODB | ER-II | FOR BALANCE CONSTRUCTION PUNCH POINT | NLDC |
| 46 | 400 KV MALDA-PURNEA-I | 03/08/17 | 08:00 | 04/08/17 | 16:00 | ODB | ER-II | For jumper tightness. | NLDC |
| 47 | 400 KV BINAGURI-PURNEA-I | 03/08/17 | 08:00 | 03/08/17 | 16:00 | ODB | ER-II | For jumper tightness. | |
| 48 | 315MVA ICT-II AT ALIPURDUAR | 03/08/17 | 09:00 | 03/08/17 | 16:00 | OCB | ER-II | TO ATTEND PROBLEM IN AIRCELL IN ICT | |
| 49 | Sagardighi - ICT#1 Tie bay (402) | 03/08/17 | 08:00 | 05/08/17 | 17:30 | OCB | ER-II | Yph Interrupter Unit replacement for SF6 Leakage | West Bengal |
| 50 | 400KV Malthon-Durgapur I&II | 03/08/17 | 08:00 | 18/08/17 | 16:00 | OCB | ER-II | Diversion of MD Line by M/S Suhara Power | After DurgaPuja |
| 51 | 220 kV Patna -Sipara-1 | 04/08/17 | 10:00 | 05/08/17 | 18:00 | ODB | ER-1 POWERGRID | Isolator alignment work & other AMP works | Bihar |
| 52 | 132 kV LKR-LKR (BSPTCL) Line-2 | 04/08/17 | 10:00 | 04/08/17 | 14:00 | ODB | ER-1 POWERGRID | AMP | Bihar |
| 53 | 220 KV BUS-II at Gaya S/S | 04/08/17 | 08:00 | 04/08/17 | 18:00 | ODB | ER-1 POWERGRID | For KHIJARSARAI bay commissioning work | Bihar |
| 54 | Main Bay-403 of 765/400KV ICT-I at Sundargarh | 04/08/17 | 08:00 | 31/07/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh | AMP Work | NLDC |
| 55 | 220 kV Bus-I at Jeypore | 04/08/17 | 09:30 | 04/08/17 | 13:30 | ODB | ER-II/Odisha/Jeypore | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | GRIDCO |
| 56 | 220 kV Bus-II at Jeypore | 04/08/17 | 14:00 | 04/08/17 | 18:00 | ODB | ER-II/Odisha/Jeypore | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | GRIDCO |
| 57 | 765/400KV ICT-4 at Angul | 04/08/17 | 10:00 | 04/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | CSD commissioning at 400kV side of ICT. | NLDC |
| 58 | 400KV Rourkela-Sundergarh-II | 04/08/17 | 08:00 | 04/08/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh TLM | For replacement of Porcelain Insulator at single crossing span (317-318) by CLR polymer | |
| 59 | 63 MVAR L/R OF 400 KV BINAGURI-TALA-IV LINE | 04/08/17 | 08:00 | 04/08/17 | 16:00 | ODB | ER-II | Circuit breaker replacement work ADD Cap | NLDC |
| 60 | 400 KV BINAGURI-PURNEA-II | 04/08/17 | 08:00 | 04/08/17 | 16:00 | ODB | ER-II | For jumper tightness. | |
| 61 | 400kv Farakka-Baharampur & 400kv Jeerat -Baharampur | 05/08/17 | 06:00 | 06/08/17 | 15:00 | ODB | WB | For stringing of conductor i.r.o. 400kv Gokarna-Sagardighi D/C | NLDC |
| 62 | 160 MVA ICT#1 at Baripada | 05/08/17 | 09:00 | 05/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | GRIDCO |
| 63 | 400KV Rourkela-Sterlite-II | 05/08/17 | 08:00 | 05/08/17 | 18:00 | ODB | ER-II/Odisha/Sundergarh TLM | For replacement of Porcelain Insulator at single crossing span (317-318) by CLR polymer | GRIDCO |
| 64 | 765kV, 80*3 MVAR Line Reactor-1 at Angul | 05/08/17 | 08:00 | 05/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | For attending Oil Leakage problem under TBEA Punch Points. | NLDC |
| 65 | 220KV OPTCL 2 Line | 05/08/17 | 10:00 | 05/08/17 | 13:00 | ODB | ER-II/Rengali/Odisha | For attending hotspot in Line isolator | GRIDCO |
| 66 | 220 KV BINAGURI-BINAGURI-BUS SECTION-I | 05/08/17 | 08:00 | 05/08/17 | 16:00 | ODB | ER-II | AMP WORK. | West Bengal |

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| 67 | 132 KV MAIN BUS OF BIRPARA SS | 05/08/17 | 08:00 | 05/08/17 | 16:00 | OCB | ER-II | Circuit breaker repalcement work ADD Cap | West Bengal |
| 68 | 220 KV BINAGURI-SILIGURI-II | 05/08/17 | 08:00 | 05/08/17 | 16:00 | ODB | ER-II | For providing insulation sleeves to low clearance area. | |
| 69 | 400kv Kharagpur-Baripada line | 06/08/17 | 06:00 | 06/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 70 | 400 KV MALDA-FARAKKA-II | 06/08/17 | 08:00 | 08/08/17 | 16:00 | OCB | ER-II | FOR BALANCE CONSTRUCTION PUNCH POINT | NLDC |
| 71 | 220 KV SILIGURI-KISHANGANJ-I | 06/08/17 | 08:00 | 06/08/17 | 16:00 | ODB | ER-II | FOR INSULATOR REPLACEMENT BALANCE WORK. | |
| 72 | 400 KV MALDA-PURNEA-II | 06/08/17 | 08:00 | 08/08/17 | 16:00 | ODB | ER-II | For jumper tightness. | NLDC |
| 73 | 400 KV Subhasgram- Jeerat Line | 06/08/17 | 08:00 | 08/08/17 | 17:30 | ODB | ER-II | PID test Insulator replacement work at Line | West Bengal |
| 74 | 765/400 KV ICT-I at New Ranchi | 07/08/17 | 08:00 | 12/08/17 | 18:00 | ODB | ER-1 POWERGRID | Erection of Gantry tower under STATCOM project | NLDC |
| 75 | 200 MVA ICT-1 AT LAKHISARAI | 07/08/17 | 08:00 | 08/08/17 | 18:00 | ODB | ER-1 POWERGRID | Checking of Air Cell. | Bihar |
| 76 | TIE BAY OF 400KV KISHANGANJ-II & MUZ-I (BAY NO-411) | 07/08/17 | 10:00 | 09/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Operating Mech.Overhauling | |
| 77 | 125MVAR B/R - UIHEP Tie Bay (411) at Indravati | 07/08/17 | 09:00 | 07/08/17 | 16:00 | ODB | ER-II/Odisha/Indravati | Installation of CSD & online testing in Tie CB | |
| 78 | ICT-I (3x 105 MVA) at Jeypore | 07/08/17 | 10:30 | 07/08/17 | 11:30 | ODB | ER-II/Odisha/Jeypore | For changing ICT-I combination form Unit-I,II,III, to Unit-II , III & IV for charging Unit-IV after Oil Refilling Works due to H2 violation | GRIDCO |
| 79 | 315MVA ICT#1 at Rourkela | 07/08/17 | 09:00 | 11/08/17 | 18:00 | OCB | ER-II/Odisha/ROURKELA | For attending the oil mix up problem of OLTC in 315 MVA ICT#1 and to arrest oil leakage problem from tan delta test tap assemblies of its bushings. | GRIDCO |
| 80 | 765 KV Bus-I at Sundargarh | 07/08/17 | 08:00 | 08/08/17 | 18:00 | OCB | ER-II/Odisha/Sundergarh | Changing of Bus CVT connectors to reduce the load of CVT under system improvement scheme and checking of Bus bar stability. | NLDC |
| 81 | 765 KV D/C Jharsuguda - Dharamjaygarh trans line (CKT - I & II, Both Ckts together) | 07/08/17 | 08:00 | 09/08/17 | 17:00 | OCB | ER-II/Odisha /Sundergarh TLC | for swapping arrangement of Ckt- III & IV (2 nd transmission line)(Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | NLDC |
| 82 | 220 KV SILIGURI-KISHANGANJ-II | 07/08/17 | 08:00 | 07/08/17 | 16:00 | ODB | ER-II | FOR INSULATOR REPLACEMENT BALANCE WORK. | |
| 83 | 220 kv Patna - Sipara-2 | 08/08/17 | 10:00 | 09/08/17 | 18:00 | ODB | ER-1 POWERGRID | Isolator alignment work & other AMP works | Bihar |
| 84 | Banka-1 & 2 Tie Bay No.-429 AT BSF | 08/08/17 | 10:00 | 12/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Overhauling Work | |
| 85 | 400kV East Side Main Bus @ Pusauli | 08/08/17 | 0900 | 08/08/17 | 1800 | ODB | ER-I | AMP | |
| 86 | 220 kV Jeypore-Jayanagar-2 Line | 08/08/17 | 09:30 | 08/08/17 | 15:30 | ODB | ER-II/Odisha/Jeypore | For Changing B-Ph CVT of Jayanagar-II Line due to Oil Leakage (If Not available in the month of July 2017) | GRIDCO |
| 87 | 765kV Main Bus-I at Angul | 08/08/17 | 08:00 | 09/08/17 | 18:00 | OCB | ER-II/Odisha/Angul SS | Checking of Bus-bar Stability of 765kV Angul-Sundargarh Line-3&4 for connection with existing system under Construction Head. | NLDC |
| 88 | 160 MVA ICT #2 at Baripada | 08/08/17 | 09:00 | 08/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | GRIDCO |
| 89 | 400KV Bus II at bolangir | 08/08/17 | 08:00 | 14/08/17 | 18:00 | ODB | ER-II/Odisha/BOLANGIR | BPI Erection and Stringing in Reactor Bay construction ERSS-XIV | |
| 90 | 400KV ROURKELA-SUNDARGARH#2 | 08/08/17 | 09:00 | 08/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | Insulator replacement at Location No.- 7 & 236. (Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | |
| 91 | 500MVA ICT-I at MTN | 08/08/17 | 08:00 | 08/08/17 | 16:00 | ODB | ER-II | Erection of LM Tower near 500MVA ICT, Erection of CB, CT for tertiary transformer | DVC |
| 92 | 220kV NSLG-BRP Ckt-II | 08/08/17 | 08:00 | 08/08/17 | 16:00 | ODB | ER-II | Relay retrofitting / AMP / hot spot rectification in WT | |
| 93 | 200MVA ICT-1 AT BANKA | 09/08/17 | 10:00 | 09/08/17 | 18:00 | ODB | ER-1 POWERGRID | Providing insulation sleeves on tertiary conductor | Bihar |
| 94 | 400 KV BUS-I at Gaya S/S | 09/08/17 | 08:00 | 09/08/17 | 18:00 | ODB | ER-1 POWERGRID | Bay extension work for Gaya Navinagar Line | |
| 95 | At KGP:315MVA TR#1 | 09/08/17 | 06:00 | 09/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 96 | 400KV Bus-1 (Connected line -Jeypore Line and UIHEP Line) at Indravati | 09/08/17 | 09:00 | 09/08/17 | 18:00 | ODB | ER-II/Odisha/Indravati | For retrofitting of Bus Bar Protection panel at Indravati ss. | |
| 97 | Tie Bay- 711 of 765KV Sundargarh-Angul Line-I at Sundargarh | 09/08/17 | 08:00 | 09/08/17 | 16:00 | ODB | ER-II/Odisha/Sundergarh | Polymer anchoring in Jack Bus side Isolator under system improvement scheme | NLDC |
| 98 | 400 KB Rourkela-Sterlite-II & Rourkela - Sundargarh- II (both circuits together) | 09/08/17 | 08:00 | 10/08/17 | 17:00 | OCB | ER-II/Odisha/Sundergarh TLC | Stringing work of 765KV Angul-Jharsuguda D/C (Ckt- III & IV) transmission line | GRIDCO |
| 99 | 132 KV Main Bus at Birpara | 09/08/17 | 08:00 | 09/08/17 | 16:00 | ODB | ER-II | FOR CONSTRUCTION WORK UNDER ERSS-XIV. | West Bengal |
| 100 | 400 KV BSF - Varanasi Ckt. I | 09/08/17 | 07:00 | 09/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | NLDC |
| 101 | 220 kV Patna-Khagaul | 10/08/17 | 10:00 | 11/08/17 | 18:00 | ODB | ER-1 POWERGRID | Isolator alignment work & other AMP works | Bihar |
| 102 | 200 MVA ICT-2 AT LAKHISARAI | 10/08/17 | 08:00 | 11/08/17 | 18:00 | ODB | ER-1 POWERGRID | Checking of Air Cell. | Bihar |
| 103 | 200MVA ICT-2 AT BANKA | 10/08/17 | 10:00 | 10/08/17 | 12:00 | ODB | ER-1 POWERGRID | Providing insulation sleeves on tertiary bushing | Bihar |
| 104 | Jsr- Mejia line | 10/08/17 | 14:30 | 10/08/17 | 18:30 | ODB | ER-1 POWERGRID | Mejia Main Bay CB (40652) Replacement work | DVC |
| 105 | 406 Bay (Mejia Main bay) AT JSR | 10/08/17 | 09:30 | 15/08/17 | 17:30 | OCB | ER-1 POWERGRID | Mejia Main Bay CB (40652) Replacement work | |
| 106 | 400 KV BUS-II at Gaya S/S | 10/08/17 | 08:00 | 10/08/17 | 18:00 | ODB | ER-1 POWERGRID | Bay extension work for Gaya Navinagar Line | |
| 107 | MAIN BAY OF KISHANGANJ-I (BAY NO-407) | 10/08/17 | 10:00 | 12/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Operating Mech.Overhauling | |
| 108 | North Side HVDC Filter CWC15Q50 @ Pusauli | 10/08/17 | 0900 | 10/08/17 | 1800 | ODB | ER-I | AMP | NLDC |
| 109 | At KGP:315MVA TR#2 | 10/08/17 | 06:00 | 10/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |

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| 110 | 400KV ROURKELA-SEL#2 | 10/08/17 | 09:00 | 10/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | Insulator replacement at Location No.- 57 & rectification of bundle spacer in span 195-196.(Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | GRIDCO |
| 111 | 401 BAY(keonjhar line main bay) at Baripada | 10/08/17 | 09:00 | 10/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | SF6 Gas leakage rectification | |
| 112 | 765KV 240 MVAR Bus reactor-II at Sundargarh | 10/08/17 | 08:00 | 10/08/17 | 13:00 | ODB | ER-II/Odisha/Sundergarh | Shifting of spare Reactor to B-Ph reactor of 765KV B/R-II after attending oil leakage of the Reactor. | NLDC |
| 113 | 765kV Main Bus-II at Angul | 10/08/17 | 08:00 | 11/08/17 | 18:00 | OCB | ER-II/Odisha/Angul SS | Checking of Bus-bar Stability of 765kV Angul-Sundargarh Line-3&4 for connection with existing system under Construction Head. | NLDC |
| 114 | 400KV ROURKELA-TALCHER#2 | 10/08/17 | 09:00 | 12/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | Replacement of insulators at different locations. | |
| 115 | 400KV Talcher -II ine | 10/08/17 | 10:00 | 10/08/17 | 12:00 | ODB | ER-II/Rengali/Odisha | For attending hotspot in Line isolator | |
| 116 | 400kV MALDA-NEW PURNEA-I | 10/08/17 | 08:00 | 10/08/17 | 16:00 | ODB | ER-II | Insulator change due to damage by miscreant, Jumper tightness work | NLDC |
| 117 | 400kV Bus-II at Binaguri | 10/08/17 | 08:00 | 10/08/17 | 16:00 | ODB | ER-II | AMP / Isolator hot spot rectification | |
| 118 | 400 KV Sagardighi-Parulia-1 | 10/08/17 | 08:00 | 10/08/17 | 16:00 | ODB | ER-II | For correction of idenfied defects. | West Bengal |
| 119 | 132kV Siliguri-Kurseong | 10/08/17 | 08:00 | 14/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | West Bengal |
| 120 | 80Mvar Reeactor Bay (403R) | 10/08/17 | 08:00 | 10/08/17 | 16:00 | ODB | ER-II | Rectification of LA position | |
| 121 | 400KV Fkk-Kahalgaon Line-1 | 10/08/17 | 09:30 | 11/08/17 | 17:30 | OCB | FARAKKA | CVT replacement | |
| 122 | 400KV ROURKELA-RAIGARH – II(DIRECT) | 10/08/17 | 08:00 | 10/08/17 | 18:00 | ODB | VEDANTA LTD | TO MAKE DIRECT BY REMOVING JUMPERS | NLDC |
| 123 | 400 KV BSF - Varanasi Ckt. II | 10/08/17 | 07:00 | 10/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | NLDC |
| 124 | 400KV Bus-2 (Connected line -Rengali Line and 125MVAR Bus reactor) at Indravati | 11/08/17 | 09:00 | 11/08/17 | 18:00 | ODB | ER-II/Odisha/Indravati | For retrofitting of Bus Bar Protection panel at Indravati ss. | |
| 125 | 765KV 240 MVAR Bus reactor-I at Sundargarh | 11/08/17 | 08:00 | 11/08/17 | 13:00 | ODB | ER-II/Odisha/Sundergarh | To attend oil leakage in Y-Ph Reactor. | NLDC |
| 126 | 400 KV Sagardighi-Parulia-2 | 11/08/17 | 08:00 | 11/08/17 | 16:00 | ODB | ER-II | For correction of idenfied defects. | West Bengal |
| 127 | 400 KV Jeerat- Baharampur Line | 11/08/17 | 08:00 | 11/08/17 | 17:30 | ODB | ER-II | For increasing CT Ratio as requested by SLDC (WBSETCL Jeerat) | West Bengal |
| 128 | 132 KV WBSETCL# 1 AT MALDA | 11/08/17 | 08:00 | 11/08/17 | 16:00 | ODB | ER-II | FOR ISOLATOR REPLACEMENT WORK | West Bengal |
| 129 | 80 MVAR Bus Reactor AT LAKHISARAI | 12/08/17 | 08:00 | 13/08/17 | 18:00 | ODB | ER-1 POWERGRID | For checking/rectification of alignment of Bus Reactor Isolator | |
| 130 | Jsr- Mejia line | 12/08/17 | 09:30 | 12/08/17 | 13:30 | 4 hrs | ER-1 POWERGRID | Main bay CB 40652 CB Replacement work | DVC |
| 131 | 400KV BUS-II AT CHAIBASA | 12/08/17 | 08:00 | 12/08/17 | 17:00 | ODB | ER-1 POWERGRID | Bay Extension work under ERSS-XIV | |
| 132 | 132KV D/C Lalmatia – Sahibganj (JUSNL) Tr. Line | 12/08/17 | 08:00 | 13/08/17 | 16:00 | ODB | ER-1 POWERGRID | Stringing of 400KV D/c Rajarhat Purnea Line | JUSNL |
| 133 | At KGP:315MVA TR#3 | 12/08/17 | 06:00 | 12/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 134 | 80MVAR Switchable LR at 400KV Angul-Meramundali-1 at Meramundali SS | 12/08/17 | 08:00 | 12/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | For attending Oil Leakage problem. | GRIDCO |
| 135 | 210 BAY(220kv side 160MVA ICT#1) at Baripada | 12/08/17 | 09:00 | 12/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |
| 136 | 132 KV BIRPARA-BIRPARA-II | 12/08/17 | 08:00 | 12/08/17 | 16:00 | ODB | ER-II | AMP WORK. | West Bengal |
| 137 | 500MVA ICT-I at MTN | 12/08/17 | 08:00 | 12/08/17 | 16:00 | ODB | ER-II | Erection of LM Tower near 500MVA ICT, Erection of CB, CT for tertiary transformer | DVC |
| 138 | 132kV Kurseong - Rangit | 12/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | West Bengal |
| 139 | 400KV JEERAT-BERHAMPORE LINE | 12/08/17 | 08:00 | 12/08/17 | 16:00 | ODB | ER-II | For increasing CT Ratio as requested by SLDC (WBSETCL Jeerat) | West Bengal |
| 140 | 315MVA, ICT-2 at Maithon SS | 12/08/17 | 08:00 | 12/08/17 | 16:00 | ODB | ER-II | Replacement of Y ph LA of 400kV side | DVC |
| 141 | 400 KV Jeerat-Subhasgram | 12/08/17 | 08:00 | 12/08/17 | 16:00 | ODB | ER-II | Shut down required for insulator replacement damaged due to miscreants. | West Bengal |
| 142 | 125 MVAR Bus reactor-I at Maithan | 12/08/17 | 10:00 | 12/08/17 | 17:30 | ODB | ER-II | Oil leakage arresting of reactor and construction of Fire wall | |
| 143 | 500MVA ICT-I at MTN | 13/08/17 | 08:00 | 13/08/17 | 16:00 | ODB | ER-II | Erection of LM Tower near 500MVA ICT, Erection of CB, CT for tertiary transformer | DVC |
| 144 | 400kV Subhasgram- Sagardighi Line | 13/08/17 | 08:00 | 15/08/17 | 17:30 | ODB | ER-II | PID test Insulator replacement work at Line | West Bengal |
| 145 | 220 kV Kalyaneswari-2 | 13/08/17 | 08:00 | 13/08/17 | 16:00 | ODB | ER-II | Replacement of B-Ph CVT | DVC |
| 146 | 400 KV Sagardighi-Subhasgram | 13/08/17 | 08:00 | 13/08/17 | 16:00 | ODB | ER-II | Shut down required for insulator replacement damaged due to miscreants. | West Bengal |

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| 147 | 160 MVA ICT#1 AT PURNEA | 14/08/17 | 09:00 | 15/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 148 | BSF-Banka-2 main Bay No-430 AT BANKA | 14/08/17 | 10:00 | 19/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Overhauling Work | |
| 149 | 400/220kV, 315MVA ICT-1 AT JSR | 14/08/17 | 09:30 | 14/08/17 | 17:30 | 8 hrs | ER-1 POWERGRID | Differential relay replacement work + CT oilsampling work | JUSNL |
| 150 | 400 KV BUS -2 AT MUZ | 14/08/17 | 09:00 | 14/08/17 | 18:00 | ODB | ER-1 POWERGRID | STABILITY TEST OF DARBHANGA LINE -1 | |
| 151 | At KGP:80MVAR Bus Reactor | 14/08/17 | 06:00 | 14/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 152 | 104 BAY(132kv side 160MVA ICT#1) at Baripada | 14/08/17 | 09:00 | 14/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |
| 153 | 400 kV Jeypore-Gajuwaka-I Line | 14/08/17 | 09:30 | 14/08/17 | 13:30 | ODB | ER-II/Odisha/Jeypore | For Relay testing after Retrofitting of Main-II Relay of Gajuwaka-I Line (If Not completed in the month of July 2017) | NLDC |
| 154 | 400 kV Jeypore-Gajuwaka-II Line | 14/08/17 | 13:30 | 14/08/17 | 17:30 | ODB | ER-II/Odisha/Jeypore | For Relay testing after Retrofitting of Main-II Relay of Gajuwaka-II Line (If Not completed in the month of July 2017) | NLDC |
| 155 | 400 KV ROURKELA-CHAIBASA#1 | 14/08/17 | 09:00 | 14/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 156 | 400kV Bus-II at Rengali | 14/08/17 | 09:00 | 14/08/17 | 17:00 | ODB | ER-II/Rengali/Odisha | For Relay Testing after Retrofitting of BusBar Protection System at Rengali. | |
| 157 | 220 KV BINAGURI-BINAGURI-BUS SECTION-II | 14/08/17 | 08:00 | 14/08/17 | 16:00 | OCB | ER-II | AMP WORK. | West Bengal |
| 158 | 400 KV BINAGURI-KISHANGANJ-I | 14/08/17 | 08:00 | 14/08/17 | 16:00 | ODB | ER-II | For jumper tightness. (LILO PORTION). | |
| 159 | 400 KV Maithon-Kalelgoan I&II | 14/08/17 | 08:00 | 14/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | |
| 160 | 400kv Maithon-Ranchi | 14/08/17 | 08:00 | 14/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | |
| 161 | 400 KV PPSP-DURGAPUR | 14/08/17 | 08:00 | 14/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | West Bengal |
| 162 | 132kV Melli-Rangit | 14/08/17 | 08:00 | 18/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | Sikkim |
| 163 | 125 MVAR Bus reactor-II at Maithan | 14/08/17 | 10:00 | 14/08/17 | 17:30 | ODB | ER-II | Oil leakage arresting work of reactor | |
| 164 | 400kV Bus-I at Rengali | 15/08/17 | 09:00 | 15/08/17 | 14:00 | ODB | ER-II/Rengali/Odisha | For Relay Testing after Retrofitting of BusBar Protection System at Rengali | |
| 165 | 132 KV BIRPARA-BIRPARA-I | 15/08/17 | 08:00 | 15/08/17 | 16:00 | OCB | ER-II | AMP WORK. | West Bengal |
| 166 | 400 KV BINAGURI-KISHANGANJ-II | 15/08/17 | 08:00 | 15/08/17 | 16:00 | ODB | ER-II | For jumper tightness. (LILO PORTION). | |
| 167 | 220kv Maithon-Dumka I&II | 15/08/17 | 08:00 | 15/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | JSEB |
| 168 | 400kV NSLG-Tala Ckt-1 | 15/08/17 | 08:00 | 15/08/17 | 16:00 | ODB | ER-II | Insulator replacement in crossings | NLDC |
| 169 | 400 KV BERHAMPUR-BHERAMA-I | 15/08/17 | 08:00 | 15/08/17 | 16:00 | ODB | ER-II | PLCC COMMUNICATION CHECKING (FOX-515 MODULE) THROUGH OEM. | NLDC |
| 170 | 400kV Bus-I at Binaguri | 15/08/17 | 08:00 | 15/08/17 | 16:00 | ODB | ER-II | To facilitate hot spot rectification in Purnea-3 & 4 Line and Rangpo-1 & 2 Line | |
| 171 | 132 KV PURNEA - PURNEA BSPTCL#3 LINE | 16/08/17 | 09:00 | 31/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 172 | 132 KV PURNEA - KISHANGANJ(BSPTCL) LINE | 16/08/17 | 09:00 | 31/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 173 | 160 MVA ICT#2 AT PURNEA | 16/08/17 | 09:00 | 31/08/17 | 16:00 | OCB | ER-1 POWERGRID | GIS CONSTRUCTION WORK | After mutual between Bihar & ER-I. |
| 174 | 200 MVA ICT-2 & 80 MVAR Bus Reactor AT LAKHISARAI | 16/08/17 | 08:00 | 19/08/17 | 18:00 | ODB | ER-1 POWERGRID | Fire wall Construction. | Bihar |
| 175 | 400 KV MUZ-DARBHANGA LINE-2 | 16/08/17 | 09:00 | 16/08/17 | 18:00 | ODB | ER-1 POWERGRID | FOR ATTENDING MISALIGNMENT OF LINE ISOLATOR | |
| 176 | 400KV ROURKELA-CHAIBASA#1 L/R BAY AT ROURKELA(BAY NO.-416LR). | 16/08/17 | 09:00 | 16/08/17 | 14:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 177 | 400kV Angul-Bolangir Line. | 16/08/17 | 08:00 | 16/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work | NLDC |
| 178 | 400 KV Indravati-Jeypore Main Bay at Indravati | 16/08/17 | 09:00 | 20/08/17 | 18:00 | OCB | ER-II/Odisha/Indravati | Overhauling of Main Bay (401) CB Mechanism | |
| 179 | 406 BAY (315MVA ICT#2 main bay) at Baripada | 16/08/17 | 09:00 | 16/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |

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|-----|---|----------|-------|----------|-------|-------|-------------------------|--|-------|
| 180 | 400KV ROURKELA-TALCHER#2 | 16/08/17 | 09:00 | 18/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | Replacement of insulators at locations 281, 362, 452, 343 , 261, 429, 430, 443. (Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | |
| 181 | 400 KV Rengali Indravati Line (Rescheduled Shutdown proposal, already approved in 134th OCC) | 16/08/17 | 07:00 | 26/08/17 | 18:00 | ODB | ER-II/Odisha /Bolangir | (Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) Replacement of Porcelain insulators with Polymer insulators in major crossings at Locations 1121-1122,929-930,773-774,931-932,1078-1079,1081-1082,913-914,1036-1037,1061-1062,1074-1075,1090-1091-1092. (It is incuded both Rengali portion i.e 931-1124 and Kishorenagar portion i.e 754-930) Bolangir- 538,539,564,565,590,591,676,677,681,682,741,742,743,747,748,749,750,751,752,753 Bhawanalpatna-201, 202, 247, 248, 258, 259, 333, 334, 338, 339,355, 356, 374, 375, 386, 387, 392, 393, 423, 424, 435, 436, 455, 456, 511, 512 & 538 (Total 27 nos towers) | NLDC |
| 182 | 400kV MTN Mejia-I line | 16/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | AMP & Tie CT replacement work | DVC |
| 183 | 220kV Birpara-Salakati-I | 16/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | AMP work | NLDC |
| 184 | 220 KV BIRPARA-ALIPURDUAR-II | 16/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | FOR DROPPER CONNECTION OF 220 KV GANTRY TO WBSETCL LINE. | |
| 185 | 400KV Maithon-Jamshedpur | 16/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | |
| 186 | 400KV Berhampore Bheramara Ckt-I Line(404 bay) | 16/08/17 | 08:00 | 16/08/17 | 16:00 | ODB | ER-II | Replacement of Line isolator PAD (89L)and fixing of isolator alingment. | NLDC |
| 187 | 220 kV Ptana-Fatuha | 17/08/17 | 10:00 | 18/08/17 | 18:00 | ODB | ER-1 POWERGRID | Isolator alignment work & other AMP works | Bihar |
| 188 | 400 kV Patna- Barh-1 | 17/08/17 | 08:00 | 18/08/17 | 18:00 | ODB | ER-1 POWERGRID | For replacement of porcelain insulator awith polymer insulator. | |
| 189 | 765 KV New Ranchi - DMG Circuit-2 | 17/08/17 | 09:00 | 17/08/17 | 18:00 | ODB | ER-1 POWERGRID | For replacement of porcelain insulator awith polymer insulator. | NLDC |
| 190 | 400 KV BSF - BALIA Ckt. I | 17/08/17 | 08:00 | 17/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | NLDC |
| 191 | 765 KV GAYA-BALLIA LINE Reactor | 17/08/17 | 08:00 | 17/08/17 | 18:00 | ODB | ER-1 POWERGRID | HVV Spray system final commisioning and Testing work | NLDC |
| 192 | East Side HVDC Filter CWC54Q50 @ Pusauli | 17/08/17 | 0900 | 17/08/17 | 1800 | ODB | ER-I | AMP | |
| 193 | 765kV Angul-Srikakulam Line-1 | 17/08/17 | 08:00 | 17/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work (In case non-availability of the S/D in Juy'17, it will be taken in the month of Aug-17) | NLDC |
| 194 | 765kV, 80*3 MVAR Srikakulam Line Reactor-1 at Angul | 17/08/17 | 08:00 | 17/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | For commissioning of Spare Reactor with Line Reactor-1 under construction head. | NLDC |
| 195 | 400 kV Jeypore-Indravati S/C Line | 17/08/17 | 06:00 | 18/08/17 | 18:00 | ODB | ER-II/Odisha/Jeypore | For Replacement of PID Defective Insulators in Jey-Ivt Line (If Not available in the month of June 2017) at Locations Loc.No. 27,34,48,71,107,109,111,121, 124,125,126,127,128,129,130, 131,135,139,144,145,147,148. of (7 tension towers replacement of 8 nos Double Strings) & (15 Suspension towers replacement of 20 nos.Single Strings). (If Not available in the month of July 2017) | NLDC |
| 196 | 400KV ROURKELA-TALCHER#1 MAIN BAY (BAY NO.-406) at Rourkela | 17/08/17 | 09:00 | 17/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 197 | 400KV Bus-I at Sundargarh | 17/08/17 | 08:00 | 19/08/17 | 18:00 | OCB | ER-II/Odisha/Sundergarh | Extension of Bus bar for GIS extn work under construction head. | |
| 198 | 220kV Bus-I at Rengali | 17/08/17 | 09:00 | 17/08/17 | 14:00 | ODB | ER-II/Rengali/Odisha | For Relay Testing after Retrofitting of BusBar Protection System at Rengali | NLDC |
| 199 | 400KV Fkk-Kahalgaon Line-2 | 17/08/17 | 09:30 | 17/08/17 | 17:30 | ODB | FARAKKA | CVT replacement | |
| 200 | 400 KV BSF - BALIA Ckt. II | 18/08/17 | 08:00 | 18/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | NLDC |
| 201 | 400/220kV, 315MVA ICT-2 AT JSR | 18/08/17 | 14:30 | 18/08/17 | 18:30 | 4 hrs | ER-1 POWERGRID | ICT-2 Main Bay CB (40352) Replacement work+ Differential relay replacement work | JUSNL |
| 202 | Main Bay (403) 315MVA ICT-2 AT JSR | 18/08/17 | 09:30 | 24/08/17 | 17:30 | OCB | ER-1 POWERGRID | ICT-2 Main Bay CB (40352) Replacement work | |
| 203 | 765 KV GAYA-VNS-II LINE Reactor | 18/08/17 | 08:00 | 18/08/17 | 18:00 | ODB | ER-1 POWERGRID | HVV Spray system final commisioning and Testing work | NLDC |
| 204 | 400KV KGP-KTPP#1 | 18/08/17 | 06:00 | 18/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 205 | 220kV Bus-II at Rengali | 18/08/17 | 09:00 | 18/08/17 | 14:00 | ODB | ER-II/Rengali/Odisha | For Relay Testing after Retrofitting of BusBar Protection System at Rengali | NLDC |

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| 206 | 765 KV Angul-Srikakulam TL CKT-II | 18/08/17 | 07:00 | 19/08/17 | 17:00 | ODB | ER-II/Odisha /Berhampur | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. (Already approved in 134th OCC, in case of non availability, the S/D will be taken in the month of Aug-17) | NLDC |
| 207 | 400KV ROURKELA-TALCHER#1 TIE BAY (BAY NO.- 405) at Rourkela | 18/08/17 | 09:00 | 18/08/17 | 16:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 208 | 220 kV Jeypore-Jayanagar-I Line | 18/08/17 | 09:30 | 18/08/17 | 17:30 | ODB | ER-II/Odisha/Jeypore | For Changing R & Y-Ph CT of Jayanagar-I Line due to H2 Violation (If Not available in the month of July 2017) | GRIDCO |
| 209 | 765kV, 80*3 MVAR Srikakulam Line Reactor-2 at Angul | 18/08/17 | 08:00 | 18/08/17 | 18:00 | ODB | ER-II/Odisha/Angul SS | For commissioning of Spare Reactor with Line Reactor-2 under construction head. | NLDC |
| 210 | 765kV Angul-Srikakulam Line-2 | 18/08/17 | 08:00 | 18/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation Work | NLDC |
| 211 | 403 BAY(315MVA ICT#1 main bay) at Baripada | 18/08/17 | 09:00 | 18/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |
| 212 | 132 KV TBC BAY AT MALDA | 18/08/17 | 08:00 | 18/08/17 | 16:00 | ODB | ER-II | FOR ISOLATOR REPLACEMENT WORK | West Bengal |
| 213 | 220 KV MAIN BUS-II AT DALKHOLA | 18/08/17 | 08:00 | 18/08/17 | 16:00 | ODB | ER-II | FOR NTAMC ADAPTATION WORK OF ISOLATORS. | West Bengal |
| 214 | 400 KV BERHAMPUR-BHERAMA-II | 18/08/17 | 08:00 | 18/08/17 | 16:00 | ODB | ER-II | PLCC COMMUNICATION CHECKING (FOX-515 MODULE) THROUGH OEM. | NLDC |
| 215 | 400kV Tala Ckt-I | 18/08/17 | 08:00 | 18/08/17 | 16:00 | ODB | ER-II | Relay retrofitting | NLDC |
| 216 | 400KV Fkk-Malda Line-1 | 18/08/17 | 09:30 | 19/08/17 | 17:30 | ODB | FARAKKA | CB & Relay testing | NLDC |
| 217 | 765 KV GAYA-VNS-II LINE | 19/08/17 | 08:00 | 19/08/17 | 18:00 | ODB | ER-1 POWERGRID | Replacement of damaged Insulator | NLDC |
| 218 | 220KV D/C Farakka-Lalmatia Tr. Line | 19/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-1 POWERGRID | Stringing of 400KV D/c Rajarhat Purnea Line | JUSNL |
| 219 | North Side HVDC Filter CWC14Q50 @ Pusaui | 19/08/17 | 0900 | 19/08/17 | 1800 | ODB | ER-I | AMP | NLDC |
| 220 | 408 BAY(dubari & jamshedpur line tie bay) at Baripada | 19/08/17 | 09:00 | 19/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |
| 221 | 400KV ROURKELA-TALCHER#2 MAIN BAY (BAY NO.- 407) at Rourkela | 19/08/17 | 09:00 | 19/08/17 | 14:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 222 | 765kV Angul-Sundargarh Line-1 | 19/08/17 | 08:00 | 19/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability. And NTAMC Validation work | NLDC |
| 223 | 220kV S'gram-CESC-Ckt _I | 19/08/17 | 08:00 | 19/08/17 | 16:00 | ODB | ER-II | AMP | West Bengal |
| 224 | 400kV MTN Mejia-1 line | 19/08/17 | 08:00 | 19/08/17 | 16:00 | ODB | ER-II | AMP & Tie CT replacement work | DVC |
| 225 | 400kV D/C Sagardighi-Parulia | 19/08/17 | 08:00 | 19/08/17 | 16:00 | ODB | ER-II | AMP Works | West Bengal |
| 226 | 132kV Rangpo-Melli | 19/08/17 | 08:00 | 23/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | Sikkim |
| 227 | 132kV Rangpo-Gangtok | 19/08/17 | 08:00 | 21/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | Sikkim |
| 228 | Tie bay of S'gram-S'dighi & ICT-I (402) at Subhasgram | 19/08/17 | 08:00 | 19/08/17 | 16:00 | ODB | ER-II | Y-phase interrupter unit replacement for SF6 leakage | West Bengal |
| 229 | 400/220kV, 315MVA ICT-2 AT JSR | 20/08/17 | 09:30 | 20/08/17 | 13:30 | 4 hrs | ER-1 POWERGRID | ICT-2 Main Bay CB (40352) Replacement work | JUSNL |
| 230 | 220kV S'gram-KLC Bantala Line | 20/08/17 | 08:00 | 20/08/17 | 17:30 | ODB | ER-II | AMP | West Bengal |
| 231 | 220kV Birpara-Chukha-II | 20/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-II | AMP work | NLDC |
| 232 | 400KV Berhampore Sagardighi Ckt-II Main Bay(409 bay) | 20/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-II | Fixing of SCADA operation of CB | |
| 233 | 132 KV RANGPO-RANGIT | 20/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-II | FOR AMP WORK | |
| 234 | 400kV NSLG-Tala Ckt-4 | 20/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-II | Insulator replacement in crossings | NLDC |
| 235 | 400KV Farakka-Durgapur Ckt-2 | 20/08/17 | 08:00 | 20/08/17 | 16:00 | ODB | ER-II | Replacement of defective Insulator string having defective disc >=3 (as per PID test results) and replacement of porcelain insulator string with glass string at major crossing | |
| 236 | 220KV Ranchi Chandil-I | 21/08/17 | 10:00 | 21/08/17 | 17:00 | ODB | ER-1 POWERGRID | For attending hot spot at 20289L Rph | JUSNL |
| 237 | ICT-3 Main bay no.-410 AT BSF | 21/08/17 | 10:00 | 25/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Overhauling Work | |
| 238 | 500 MVA ICT-3 AT MUZ | 21/08/17 | 09:00 | 26/08/17 | 18:00 | OCB | ER-1 POWERGRID | REPLACEMENT OF GASKET/ORINGS OF ALL TURRET BUSHINGS FOR ARRESTING LEAKAGE & ATTENDING COMMISSIONING PUNCH POINT. LOAD TO BE RESTRICTED ON OTHER ICTs. | After commissioning of Motipur S/s |
| 239 | 765 KV Angul-Srikakulam TL CKT-I | 21/08/17 | 07:00 | 22/08/17 | 17:00 | ODB | ER-II/Odisha /Berhampur | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728.(Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) | NLDC |
| 240 | 765kV Angul-Sundargarh Line-2 | 21/08/17 | 08:00 | 21/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation Work | NLDC |
| 241 | 400KV SUNDARGARH#2-RANCHI#1 TIE BAY (BAY NO.- 429) at Rourkela | 21/08/17 | 09:00 | 21/08/17 | 16:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 242 | 400 KV Indravati-Jeypore Tie Bay at Indravati | 21/08/17 | 09:00 | 25/08/17 | 18:00 | OCB | ER-II/Odisha/Indravati | Overhauling of Tie Bay (402) CB Mechanism | |

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| 243 | 400KV Bus-II at Sundargarh | 21/08/17 | 08:00 | 23/08/17 | 18:00 | OCB | ER-II/Odisha/Sundergarh | Extension of Bus bar for GIS extn work under construction head. | |
| 244 | 410 BAY(pandiabilili line main bay) at Baripada | 21/08/17 | 09:00 | 21/08/17 | 17:30 | ODB | ER-II/Odisha/BARIPADA S/S | AMP work | |
| 245 | 132kV Rangpo-Rangit | 21/08/17 | 08:00 | 23/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | |
| 246 | 400 kV Patna-Barh-2 | 22/08/17 | 08:00 | 23/08/17 | 18:00 | ODB | ER-1 POWERGRID | For replacement of porcelain insulator awith polymer insulator. | |
| 247 | 400 kV LKR-BSF Line-2 | 22/08/17 | 08:00 | 22/08/17 | 18:00 | ODB | ER-1 POWERGRID | For Jumper Modification | |
| 248 | 220 KV GAYA -SONENAGAR -I LINE | 22/08/17 | 10:00 | 22/08/17 | 14:00 | ODB | ER-1 POWERGRID | Repclment of GD from CB | Bihar |
| 249 | 132kV Dehri -Pusali | 22/08/17 | 0900 | 22/08/17 | 1800 | ODB | ER-I | AMP | Bihar |
| 250 | 400KV KGP-KTPP#2 | 22/08/17 | 06:00 | 22/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 251 | 400kv Angul-Meramundali Line-1 | 22/08/17 | 08:00 | 22/08/17 | 18:00 | ODB | ER-II/Odisha/Angul TLAM | Improvement & strenghthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work | GRIDCO |
| 252 | 220KV BUS-I at Rourkela | 22/08/17 | 09:00 | 22/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | GRIDCO |
| 253 | 220 KV MALDA-DALKHOLA-I | 22/08/17 | 08:00 | 22/08/17 | 16:00 | ODB | ER-II | AMP works | |
| 254 | 400KV Berhampore Farakka Bay (406) | 22/08/17 | 08:00 | 22/08/17 | 16:00 | ODB | ER-II | Attending leakage of Circuit Breaker | |
| 255 | 400KV Berhampore Sagardighi Ckt-II Tie Bay(410 bay) | 22/08/17 | 08:00 | 22/08/17 | 16:00 | ODB | ER-II | Fixing of SCADA operation of CB | |
| 256 | 132kV Siliguri - Melli | 22/08/17 | 08:00 | 25/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | Sikkim |
| 257 | 400KV/132KV ICT#1 at KhSTPP | 22/08/17 | 09:30 | 26/08/17 | 17:30 | OCB | KAHALGAON | CT replacemnt and Relay Retrofitting | Bihar |
| 258 | 400KV Fkk-Malda Line-2 | 22/08/17 | 09:30 | 23/08/17 | 17:30 | ODB | FARAKKA | CB & relay testing | NLDC |
| 259 | 220KV Bus-I AT RANCHI | 23/08/17 | 10:00 | 23/08/17 | 17:00 | ODB | ER-1 POWERGRID | For attending hot spot at 20589A Rph & Bph(220KV Side of ICT-I) | JUSNL |
| 260 | 400 KV BSF - MUZ Ckt. I | 23/08/17 | 08:00 | 23/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | |
| 261 | 220 KV GAYA -SONENAGAR-II LINE | 23/08/17 | 10:00 | 23/08/17 | 14:00 | ODB | ER-1 POWERGRID | Repclment of GD from CB | Bihar |
| 262 | Lines- 132 kV LKR-LKR-2 & 132 kV LKR-Jamul-1 | 23/08/17 | 08:00 | 27/08/17 | 18:00 | ODB | ER-I | For Erection of LM Tower-1 | Bihar |
| 263 | 220KV BUS-II at Rourkela | 23/08/17 | 09:00 | 23/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | GRIDCO |
| 264 | 220kV Bus Coupler at Rengali | 23/08/17 | 09:00 | 23/08/17 | 17:00 | ODB | ER-II/Rengali/Odisha | Replacement of Tan delta violated CT (R&B Ph.) | |
| 265 | 220kV Birpara-Salakati-II | 23/08/17 | 08:00 | 23/08/17 | 16:00 | ODB | ER-II | AMP work | NLDC |
| 266 | 132kV Rangpo-Chuzachen | 23/08/17 | 08:00 | 25/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | Sikkim |
| 267 | 125 MVAR Bus reactor-II | 23/08/17 | 08:00 | 23/08/17 | 16:00 | ODB | ER-II | Oil leakage arresting work of reactor | |
| 268 | 400 KV BSF - KOD Ckt. I | 24/08/17 | 08:00 | 24/08/17 | 18:00 | | POWERGRID ER-I | For replacement of porcelain insulator at polymer. | DVC |
| 269 | East Side HVDC Filter CWC56Q050 @ Pusauli | 24/08/17 | 0900 | 24/08/17 | 1800 | ODB | ER-I | AMP | |
| 270 | At KGP:400KV Bus-1 & B/C | 24/08/17 | 06:00 | 24/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 271 | 400KV ROURKELA-SEL#2 MAIN BAY AT ROURKELA (BAY NO.- 426) at Rourkela | 24/08/17 | 09:00 | 24/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 272 | 500MVA ICT# V AT SUBHASGRAM | 24/08/17 | 08:00 | 24/08/17 | 17:30 | ODB | ER-II | PSD Commissioning work | West Bengal |
| 273 | 400KV Bus Reactor-2 | 24/08/17 | 09:30 | 25/08/17 | 17:30 | ODB | FARAKKA | Reactor & Relay testing | |
| 274 | 400 kV Patna- Ballia-1 | 25/08/17 | 08:00 | 26/08/17 | 18:00 | ODB | ER-1 POWERGRID | For replacement of porcelain insulator awith polymer insulator. | NLDC |
| 275 | At KGP:400KV Bus-2 & B/C | 25/08/17 | 06:00 | 25/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 276 | 220kv Maithon-Kalyanswari I&II | 25/08/17 | 08:00 | 25/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | DVC |
| 277 | 400kV MTN Mejia-3 line | 25/08/17 | 08:00 | 25/08/17 | 16:00 | ODB | ER-II | Repalcement of Isolator Arm (41189B) and Insulator Replacement at MD Line | DVC |
| 278 | 400kV MTN Mejia-2 line | 25/08/17 | 08:00 | 25/08/17 | 16:00 | ODB | ER-II | Replacement of Y & B ph LA | DVC |
| 279 | 400KV GT#5 Main Bay at Barh | 25/08/17 | 09:30 | 27/08/17 | 18:00 | OCB | BARH | PM job of Bay & relay test | |
| 280 | 400KV GT#5 TIE Bay at Barh | 25/08/17 | 09:30 | 27/08/17 | 18:00 | OCB | BARH | PM job of Bay & relay test | |
| 281 | 400KV GT#5 at Barh | 25/08/17 | 09:30 | 31/08/17 | 18:00 | OCB | BARH | PM job of Generator Transformer | |
| 282 | ICT-3 & BR-2 Tie bay no.-411 AT BSF | 26/08/17 | 10:00 | 30/08/17 | 18:00 | OCB | ER-1 POWERGRID | CB Overhauling Work | |
| 283 | At KGP:400KV Bus Transfer Bay | 26/08/17 | 06:00 | 26/08/17 | 15:00 | ODB | WB | PrePuja Maintenance | |
| 284 | 400KV SEL#2 - 125MVAR B/R TIE BAY AT ROURKELA(BAY NO.- 427) at Rourkela | 26/08/17 | 09:00 | 26/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 285 | 400 KV Indravati-Jeypore Main Bay at Indravati | 26/08/17 | 09:00 | 30/08/17 | 18:00 | OCB | ER-II/Odisha/Indravati | Overhauling of Main Bay (403) CB Mechanism | |
| 286 | 400KV Berhampore Sagardighi Ckt-I Main Bay(407 bay) | 26/08/17 | 08:00 | 26/08/17 | 16:00 | ODB | ER-II | Fixing Alingment of isolator (89A) and AMP | West Bengal |
| 287 | 132kV Rangit -Rammam | 26/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | Insulator replacement work | West Bengal |
| 288 | 220KV Ranchi-Hatia-1 | 28/08/17 | 10:00 | 28/08/17 | 17:00 | ODB | ER-1 POWERGRID | For attending hot spot at 20689L Rph | JUSNL |
| 289 | Bay No.- 106 & 132 kV Main Bus | 28/08/17 | 08:00 | 30/08/17 | 18:00 | ODB | ER-I | For Erection of LM Tower-3 | Bihar |
| 290 | 220KV BUS COUPLER BAY ROURKELA (BAY NO.- 202) at Rourkela | 28/08/17 | 09:00 | 28/08/17 | 18:00 | ODB | ER-II/Odisha/ROURKELA | AMP Work. | |
| 291 | 220 KV MALDA-DALKHOLA-II | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | AMP works | |
| 292 | 400KV Berhampore Farakka Tie Bay (405) | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | Fixing of Isolator alingment | |
| 293 | 400kv Maithon-RTPS | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | DVC |
| 294 | 220kv Maithon-Dhanbad I&II | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | Insulator Replacement at MD Line | DVC |

| | | | | | | | | | |
|-----|--|----------|-------|----------|-------|-----|-----------------------|--|-------------|
| 295 | 400KV Berhampore Bheramara Ckt-II Main Bay (401 bay) | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | AMP works | |
| 296 | 400KV Berhampore Sagardighi Ckt-I Tie Bay(408 bay) | 28/08/17 | 08:00 | 28/08/17 | 16:00 | ODB | ER-II | Fixing of SCADA operation of CB | |
| 297 | 400 kV Patna-Ballia-2 | 29/08/17 | 08:00 | 30/08/17 | 18:00 | ODB | ER-1 POWERGRID | For replacement of porcelain insulator awith polymer insulator. | NLDC |
| 298 | 400/220kV 315 MVA ICT-II @ Pusauli | 29/08/17 | 0900 | 29/08/17 | 1800 | ODB | ER-I | AMP | Bihar |
| 299 | 220KV ICT#1 INCOMER BAY AT ROURKELA (BAY NO.- 211) at Rourkela | 29/08/17 | 10:00 | 29/08/17 | 12:00 | ODB | ER-II/Odisha/ROURKELA | Jumper Tightening. | |
| 300 | 400KV Fkk-Kahalgaon line-3 | 29/08/17 | 09:30 | 29/08/17 | 17:30 | ODB | FARAKKA | CB testing | |
| 301 | 220KV Bus-II at RANCHI | 30/08/17 | 10:00 | 30/08/17 | 17:00 | ODB | ER-1 POWERGRID | For attending hot spot at 20989B Rph (220KV Side of ICT-II) . ICT-II remain charge through TBC | JUSNL |
| 302 | 315 MVA ICT-I AT SUBHASGRAM | 30/08/17 | 08:00 | 30/08/17 | 17:30 | ODB | ER-II | Tertiary CT-B-phase replacement work | West Bengal |

Outages proposed in other RPCs requiring ERPC approval

| SI No | Name of Elements | From | | To | | Basis | outages proposed in | Reason | Name of Requesting Agency |
|-------|--|-------------|-------|-------------|-------|-------|---------------------|---|---------------------------|
| | | Date | Time | Date | Time | | | | |
| 1 | Barh Gorakhpur Ckt- I(400 kV) | 03-Aug-17 | 08:00 | 03-Aug-17 | 18:00 | Daily | NRPC | Replacement of terminal connector of line Isolator as per head office instructions. , at Gorakhpur | POWERGRID |
| 2 | Barh Gorakhpur Ckt- I(400 kV) | 04-Aug-17 | 08:00 | 04-Aug-17 | 18:00 | Daily | NRPC | Replacement of terminal connector of line Isolator as per head office instructions. , at Gorakhpur | POWERGRID |
| 3 | Gaya-Varanasi-2 line | 02-Aug-17 | 14:00 | 02-Aug-17 | 17:00 | Daily | NRPC | Bushing Oil sampling for DGA , at Varanasi | POWERGRID |
| 4 | 500KV HVDC Talcher-Kolar I&II | 12-Aug-2017 | 7:00 | 14-Aug-2017 | 17:00 | D | SRPC | Construction Works: For carrying power line crossing works of 765 KV LILO of Kurnool-Thiruvallam line,765 KV C'peta-Kadapa line,765 KV Vemagiri -C'peta line, 400KV Kadapa - NP Kunta Line. | POWERGRID |
| 5 | 400 RANCHI-SIPAT I | 21-Aug-17 | 08:00 | 26-Aug-17 | 18:00 | Cont. | WRPC | For Rectification of Bend C-leg at Tower No 664, on permanent basis | POWERGRID |
| 6 | 400 RANCHI-SIPAT II | 21-Aug-17 | 08:00 | 26-Aug-17 | 18:00 | Cont. | WRPC | For Rectification of Bend C-leg at Tower No 664, on permanent basis | POWERGRID |
| 7 | 765 KV Angul-Srikakulam TL CKT-I | 23-Jul-2017 | 7:00 | 23-Jul-2017 | 17:00 | Daily | ERPC | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. REMARKS: ER-SR TTC May be reduced by 800 MW | dates Approved by SRPC |
| 8 | 400 kV Jeypore-Indravati S/C Line | 24-Jul-2017 | 6:00 | 25-Jul-2017 | 17:00 | D | ERPC | For Replacement of PID Defective Insulators in Jey-Ivt Line (If Not available in the month of June 2017)REMARKS: ER-SR TTC May be reduced by 300 MW subjected to real time Grid condition | dates Approved by SRPC |
| 9 | Pole 2 @ Gajuwaka | 24-Jul-2017 | 8:00 | 25-Jul-2017 | 17:00 | C | SRPC | Busbar Integration works-New 125 MVAR Reactor-Construction | POWERGRID |
| 10 | 765 KV Angul-Srikakulam TL CKT-II | 29-Jul-2017 | 7:00 | 30-Jul-2017 | 17:00 | D | ERPC | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. REMARKS: ER-SR TTC May be reduced by 800 MW | dates Approved by SRPC |
| 11 | 400 KV Rengali-Indravati Line Auto Reclose | 1-Aug-2017 | 8:00 | 31-Aug-2017 | 18:00 | D | ERPC | Fpr PID of 400 KV Rengali - Indravati Line, noPower Interruption of line will be there. | dates Approved by SRPC |
| 12 | 400kV Bus-II at Rengali | 2-Aug-2017 | 9:00 | 2-Aug-2017 | 17:00 | D | ERPC | For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work at Rengali. | dates Approved by SRPC |
| 13 | 400 kV Bus-I at Jeypore | 3-Aug-2017 | 9:30 | 3-Aug-2017 | 13:30 | D | ERPC | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | dates Approved by SRPC |
| 14 | 400 kV Bus-II at Jeypore | 3-Aug-2017 | 14:00 | 3-Aug-2017 | 18:00 | D | ERPC | For Relay Testing after Retrofitting of BusBar Protection System (If Not available in the month of July 2017) | dates Approved by SRPC |
| 15 | 400kV Bus-I at Rengali | 3-Aug-2017 | 9:00 | 3-Aug-2017 | 17:00 | D | ERPC | For connecting of Bus Bar Pipe of New 2 x 125 MVAR Bus Reactor Bay extension work at Rengali. | dates Approved by SRPC |
| 16 | 400KV Bus II at bolangir | 8-Aug-2017 | 8:00 | 14-Aug-2017 | 18:00 | D | ERPC | BPI Erection and Stringing in Reactor Bay construction ERSS-XIV | dates Approved by SRPC |
| 17 | 400 kV Jeypore-Gajuwaka-I Line | 14-Aug-2017 | 9:30 | 14-Aug-2017 | 13:30 | D | ERPC | For Relay testing after Retrofitting of Main-II Relay of Gajuwaka-I Line (If Not completed in the month of July 2017)REMARKS: ER-SR TTC May be reduced by 300 MW | dates Approved by SRPC |
| 18 | 400 kV Jeypore-Gajuwaka-II Line | 14-Aug-2017 | 13:30 | 14-Aug-2017 | 17:30 | D | ERPC | For Relay testing after Retrofitting of Main-II Relay of Gajuwaka-II Line (If Not completed in the month of July 2017)REMARKS: ER-SR TTC May be reduced by 300 MW | dates Approved by SRPC |
| 19 | 400kV Bus-II at Rengali | 14-Aug-2017 | 9:00 | 14-Aug-2017 | 17:00 | D | ERPC | For Relay Testing after Retrofitting of BusBar Protection System at Rengali. | dates Approved by SRPC |
| 20 | 400kV Angul-Bolangir Line. | 16-Aug-2017 | 8:00 | 16-Aug-2017 | 18:00 | D | ERPC | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation workREMARKS: ER-SR TTC May be reduced by 300 MW | dates Approved by SRPC |
| 21 | 400 KV Rengali Indravati Line | 16-Aug-2017 | 7:00 | 22-Aug-2017 | 18:00 | D | ERPC | Replacement of Porcelain insulators with Polymer insulators in major crossings REMARKS: ER-SR TTC May be reduced by 300 MW May be completed by 4/5 days | dates Approved by SRPC |
| 22 | 400kV Bus-I at Rengali | 17-Aug-2017 | 9:00 | 17-Aug-2017 | 14:00 | D | ERPC | For Relay Testing after Retrofitting of BusBar Protection System at Rengali | dates Approved by SRPC |

| | | | | | | | | | |
|----|---|-------------|-------|-------------|-------|---|------|--|------------------------|
| 23 | 765kV Angul-Srikakulam Line-1 | 17-Aug-2017 | 8:00 | 17-Aug-2017 | 18:00 | D | ERPC | Improvement & strengthening of line jumpers to prevent swing during high speed wind to avoid tripping in future & improvement of line availability & reliability and NTAMC Validation work (In case non-availability of the S/D in July'17, it will be taken in the month of Aug-17) REMARKS: ER-SR TTC May be reduced by 800 MW | dates Approved by SRPC |
| 24 | 765kV, 80*3 MVAR Srikakulam Line Reactor-2 at Angul | 18-Aug-2017 | 8:00 | 18-Aug-2017 | 18:00 | D | ERPC | For commissioning of Spare Reactor with Line Reactor-2 under construction head. | dates Approved by SRPC |
| 25 | 765 KV Angul-Srikakulam TL CKT-II | 18-Aug-2017 | 7:00 | 19-Aug-2017 | 17:00 | D | ERPC | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. (Already approved in 134th OCC, in case of non availability, the S/D will be taken in the month of Aug-17)REMARKS: ER-SR TTC May be reduced by 800 MW | dates Approved by SRPC |
| 26 | 765 KV Angul-Srikakulam TL CKT-I | 21-Aug-2017 | 7:00 | 22-Aug-2017 | 17:00 | D | ERPC | Replacement of Glass Insulators by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. (Already approved in 134th OCC, in case of non availability the S/D will be taken in the month of Aug-17) REMARKS: ER-SR TTC May be reduced by 800 MW | dates Approved by SRPC |
| 27 | HVDC GAZUWAKA POLE-II | 25-Aug-2017 | 08:00 | 26-Aug-2017 | 17:00 | C | ERPC | FOR BUS BAR INTEGRATION WORKS-NEW 125 MVAR REACTOR-CONSTRUCTION AND REQUIRES TTC CURTAILMENT. | SRPC |

Annexure-C5 **Power System Operation Corporation Ltd.**



135th OCC Meeting

At ERPC, Kolkata

24th July, 2017

ER Grid Performances

Highlights for the month of June-17

Frequency Profile

Average Freq:- 50.00 Hz

Avg FVI:- 0.037

Lowest FVI:- 0.023

Max- 50.24Hz on 07th &
19th June 17

Min- 49.72 Hz on 02nd
June 17

75.55% of the time freq
was with in IEGC Band

On 17/07/17 frequency
within IEGC band was
88.18 % and **Record**
FVI of 0.02 was
achieved.

Peak Demand

ER: 20326 MW on 04th June
2017 at 23:00 hrs

% Growth in Average Demand
Met w.r.t. last year- 3.96%

BSPHCL : 4183 MW ; ON 27/06/17

JUVNL: 1262 MW; ON 10/06/17

DVC: 2892 MW; ON 26/06/17

GRIDCO: 3870 MW; ON 05/06/17

WB: 8323 MW; ON 04/06/17

SIKKIM: 75 MW; ON 06/06/17

Energy met

Max. 432 MU on 14th June 2017
%Growth w.r.t. last year on Max
energy – 3.7%

Avg. 410 MU in June 2017
%Growth w.r.t. last year on Avg.
energy – 4.1%

New Element

Generating Units- Nil
Transmission Lines- Nil

Open Access

STOA transactions
approved -263 nos.

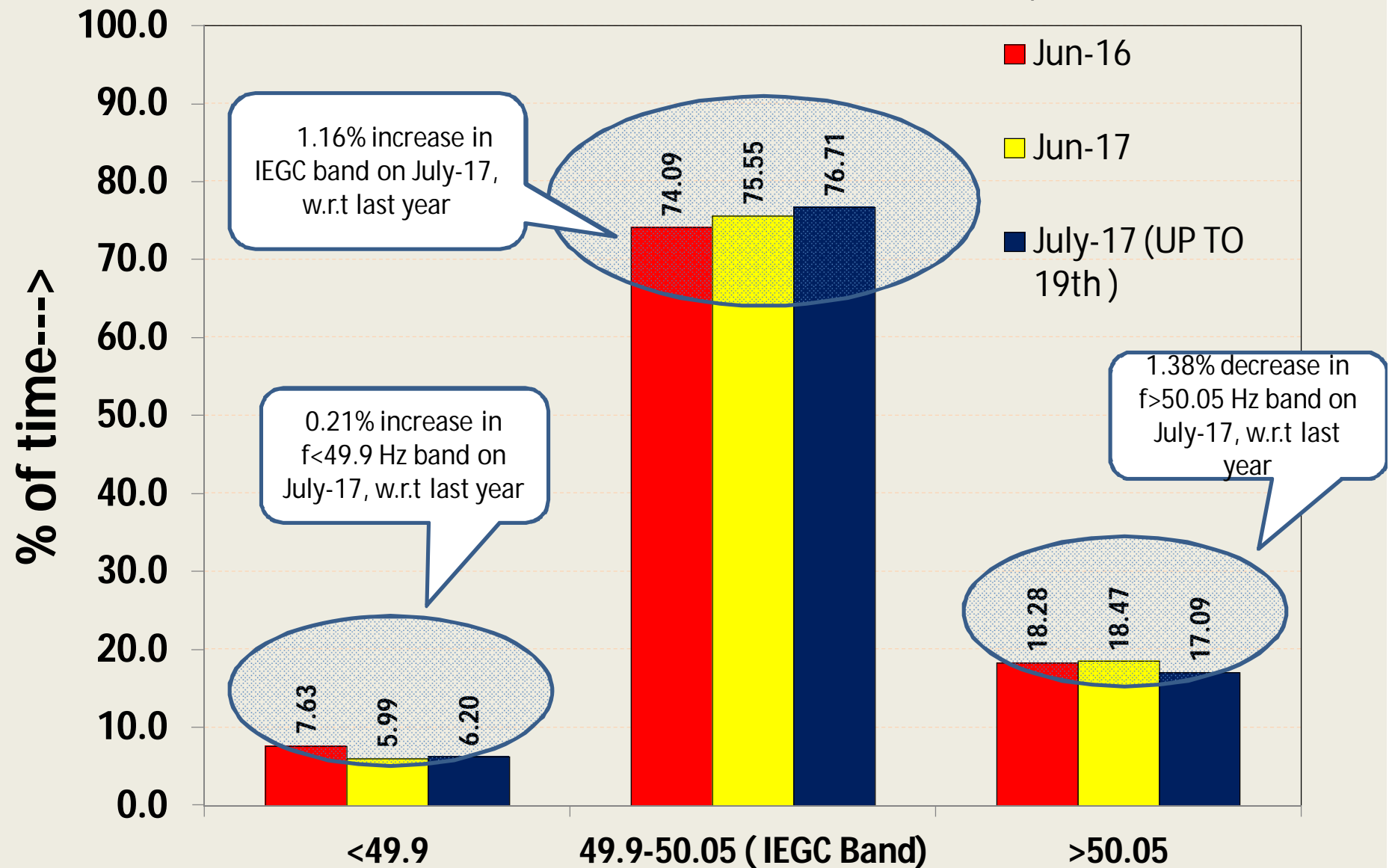
Energy Approved-
887.75 MUs

Monthly Frequency Profile of Grid

In Jul-17 (Up to 19th):

Max Freq: 50.23 Hz

Min Freq: 49.69 Hz

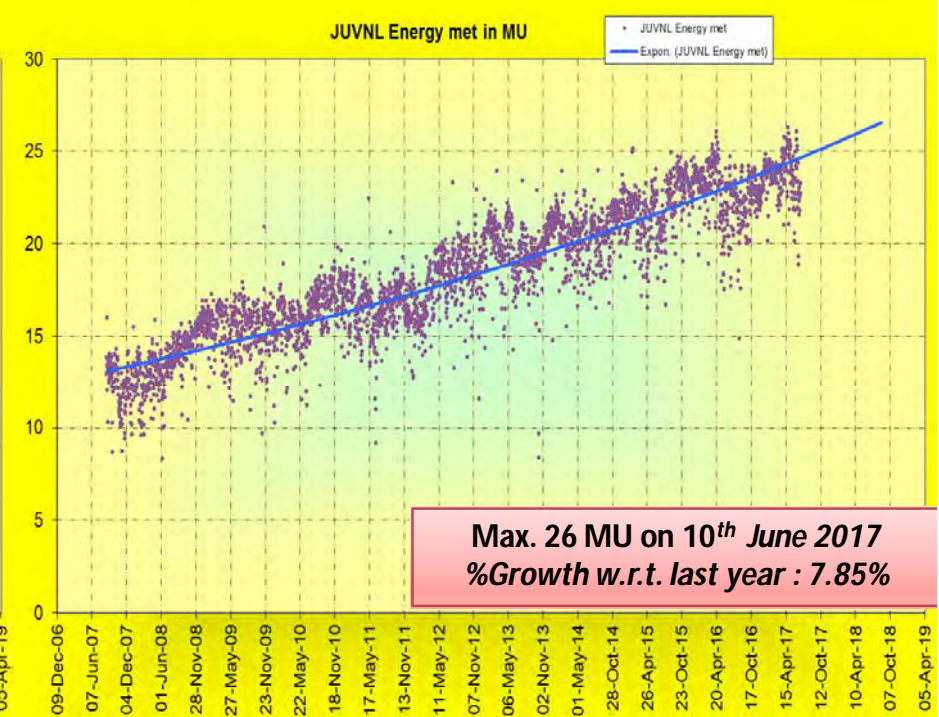
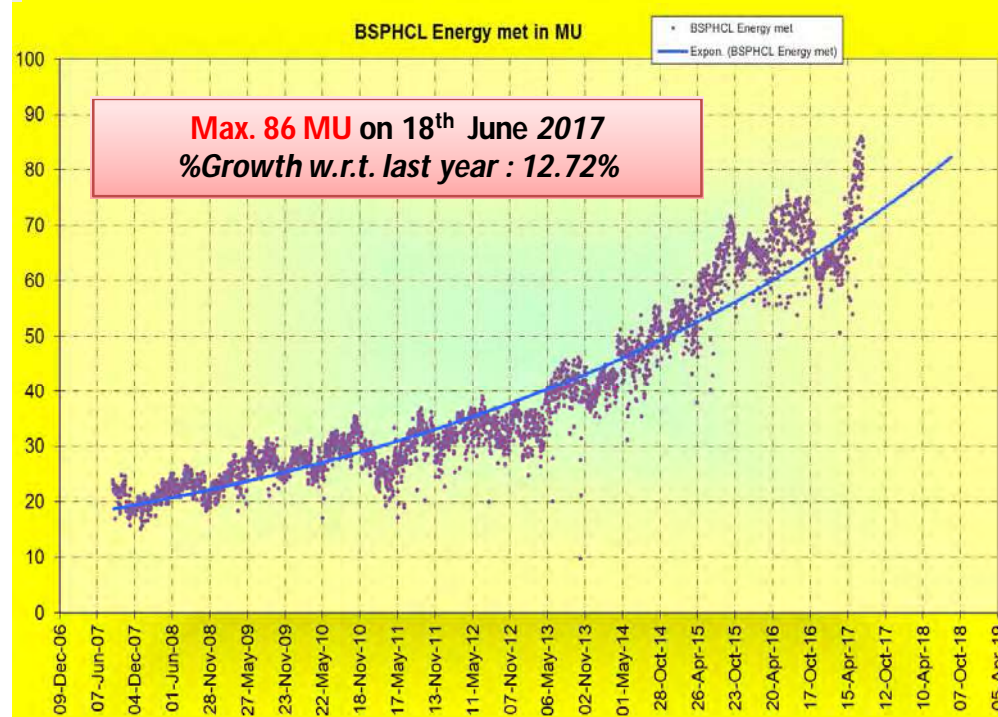
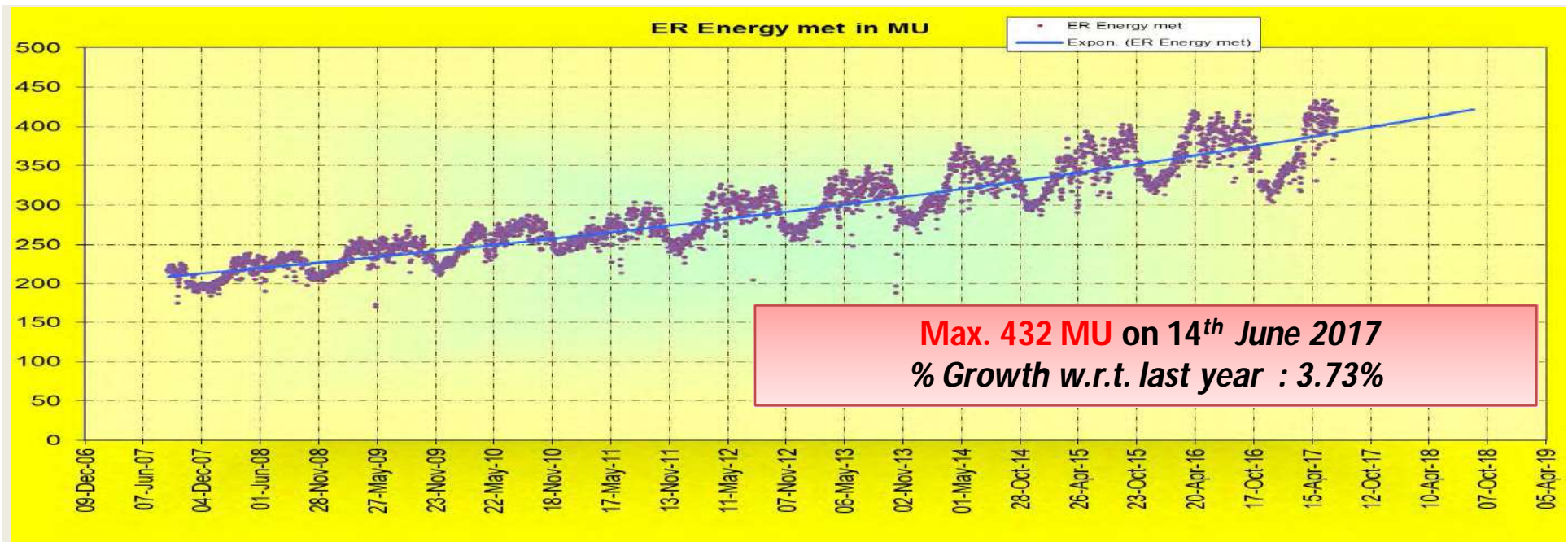


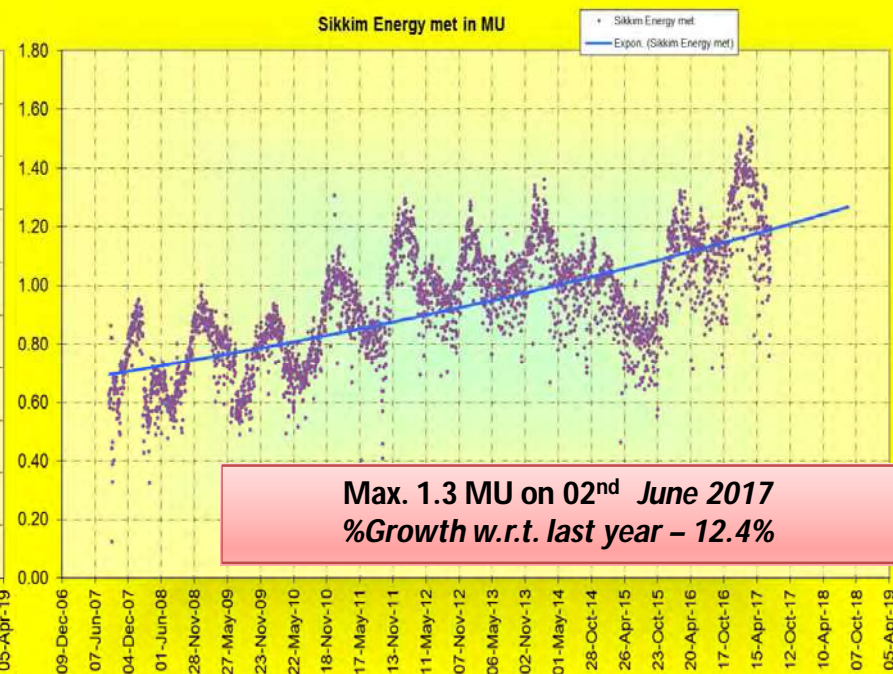
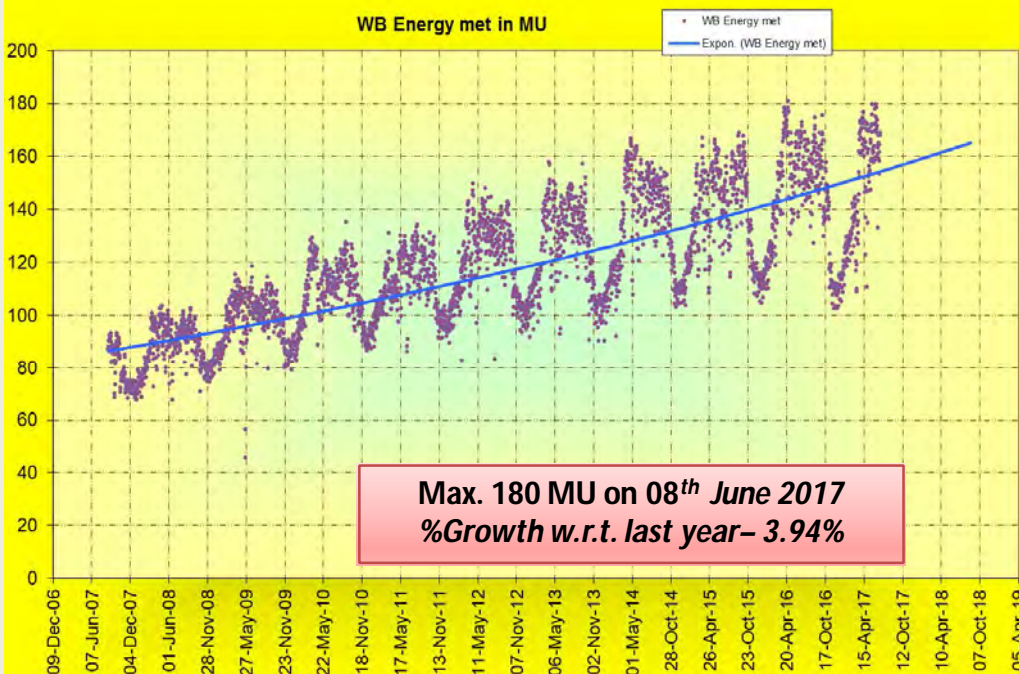
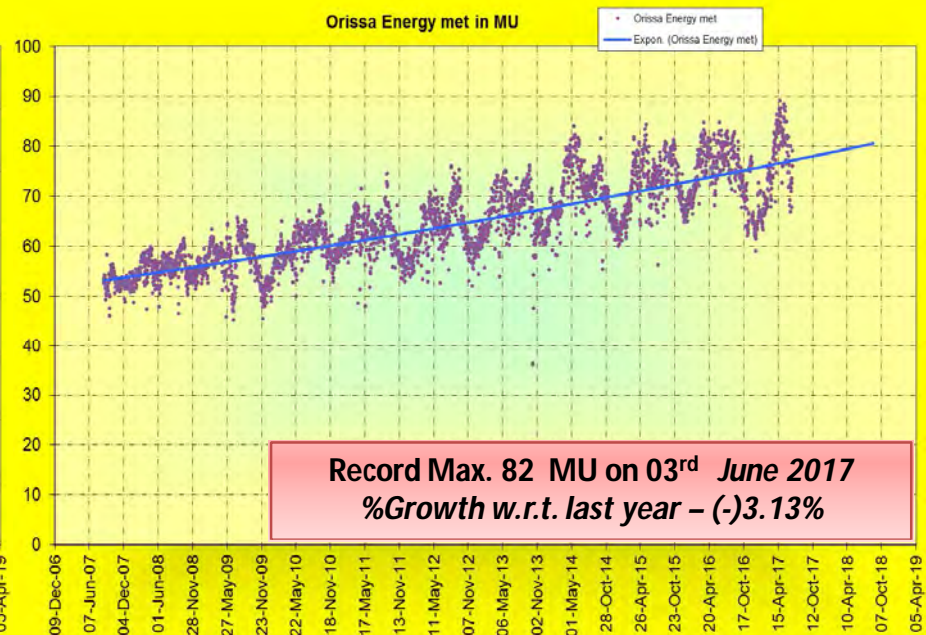
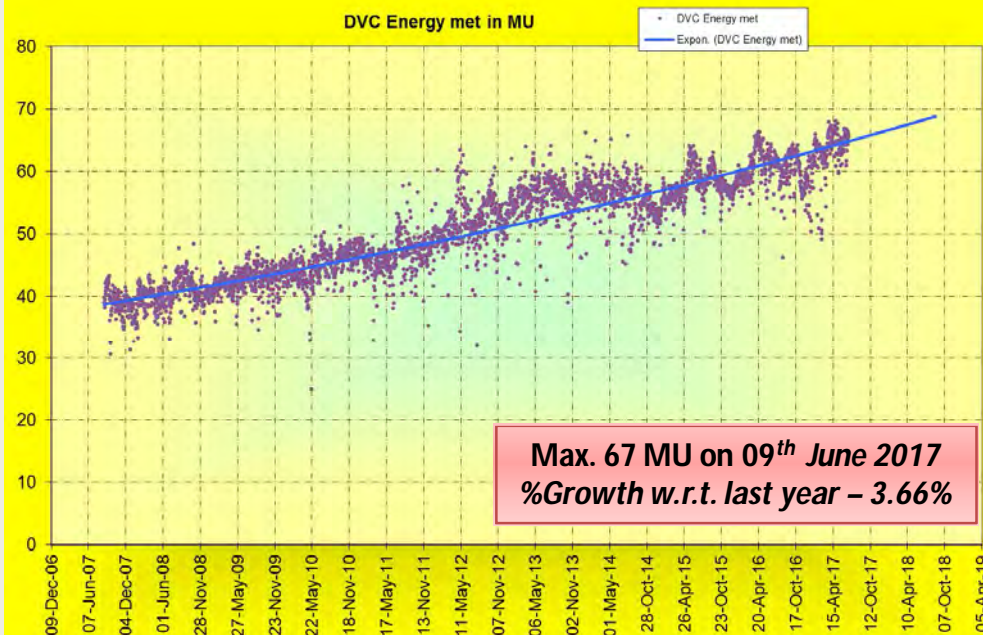
So Far Highest Demand

| Constitute | Demand (in MW) | Date | Time | Dmd met on 17 th July'17(max dmd met day) |
|------------|----------------|-----------|-------|--|
| Bihar | 4196 | 18-Jun-17 | 20:30 | 4097 |
| DVC | 3333 | 10-Apr-16 | 20:57 | 2851 |
| Jharkhand | 1262 | 10-Jun-17 | 19:54 | 1117 |
| Odisha | 4406 | 05-Jun-17 | 19:37 | 4029 |
| W. Bengal | 8605 | 12-Apr-17 | 19:56 | 7891 |
| Sikkim | 117 | 28-Oct-16 | 18:59 | 63 |
| ER | 20621 | 28-Apr-17 | 19:36 | 20325 |

So Far Highest Energy Consumption

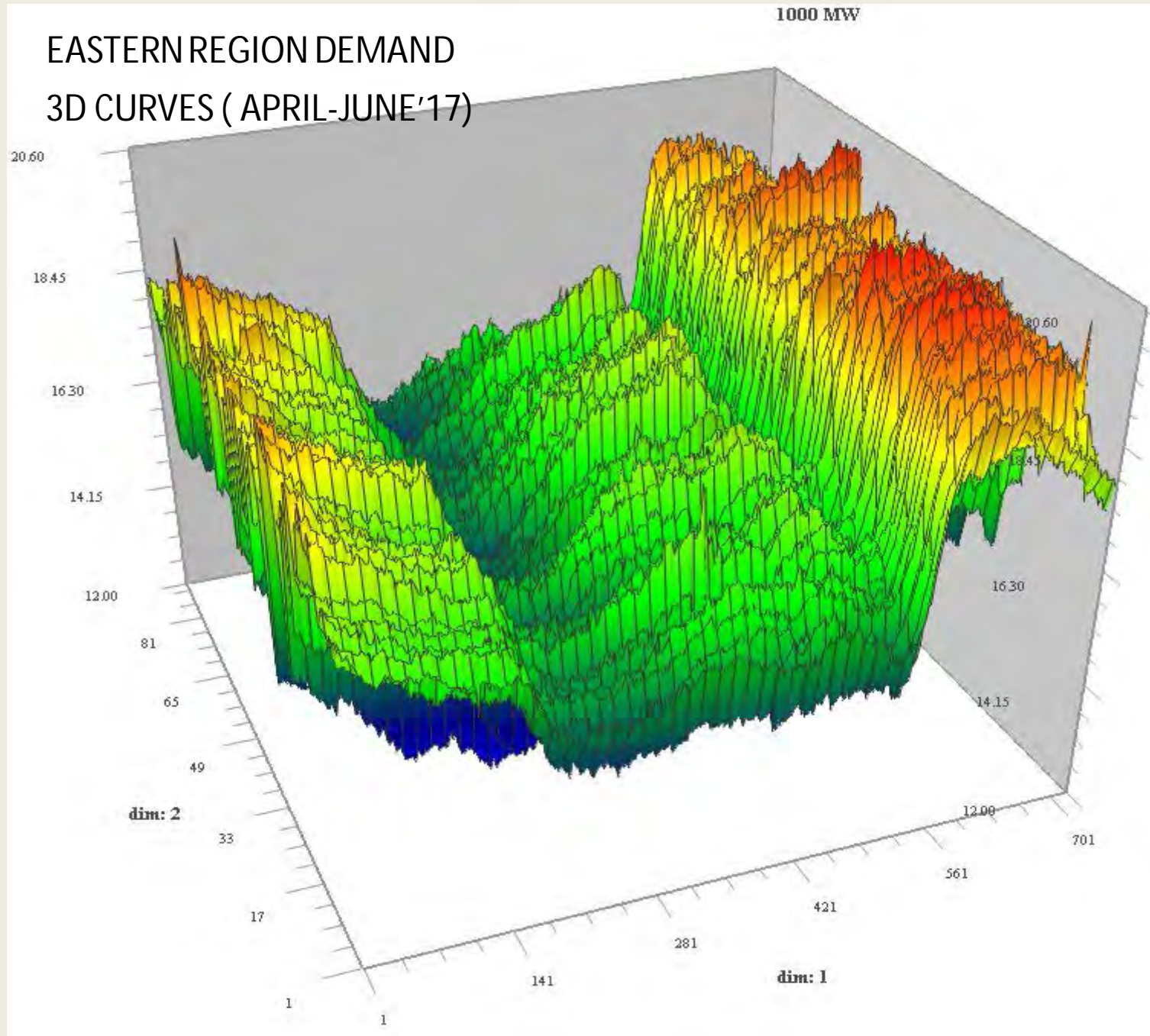
| Constitute | Energy consumption (in MUs) | Date | Dmd met on 17 th July'17(max dmd met day) |
|-------------|-----------------------------|------------|--|
| Bihar | 85.8 | 18-June-17 | 84.6 |
| DVC | 75 | 23-Mar-17 | 61 |
| Jharkhand | 26 | 20-Apr-16 | 20.9 |
| Odisha | 88.5 | 23-May-17 | 79.4 |
| West Bengal | 181 | 27-Apr-16 | 157.8 |
| Sikkim | 2 | 24-Mar-17 | 1 |
| ER | 434 | 25-May-17 | 416 |



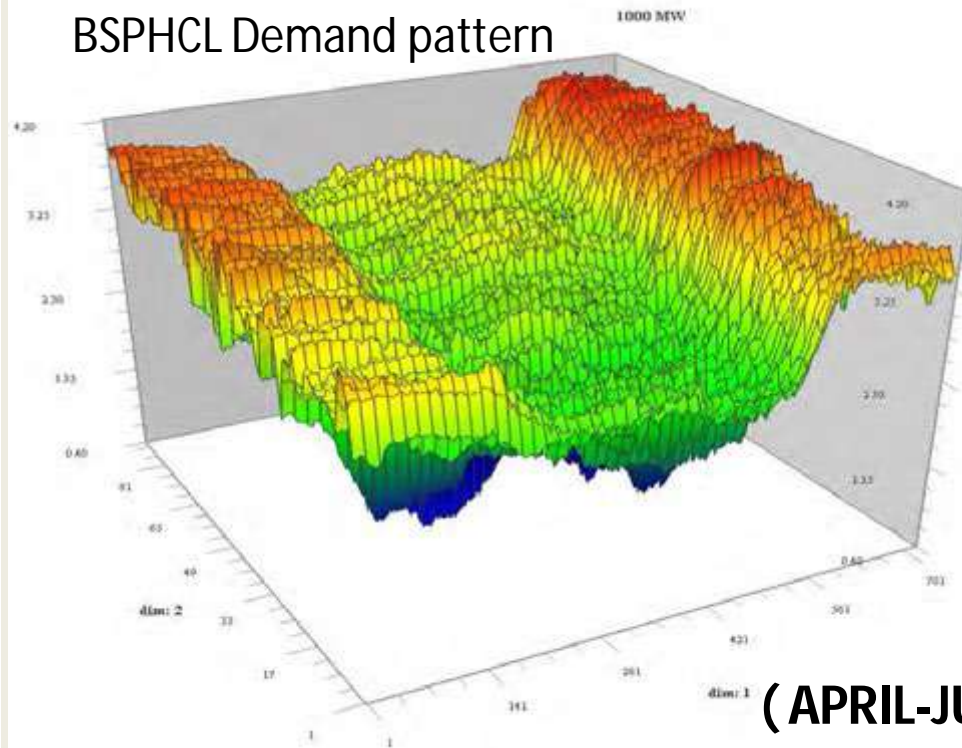


3D VIEW OF ER DEMAND PATTERN (APR-17 TO JUN-17)

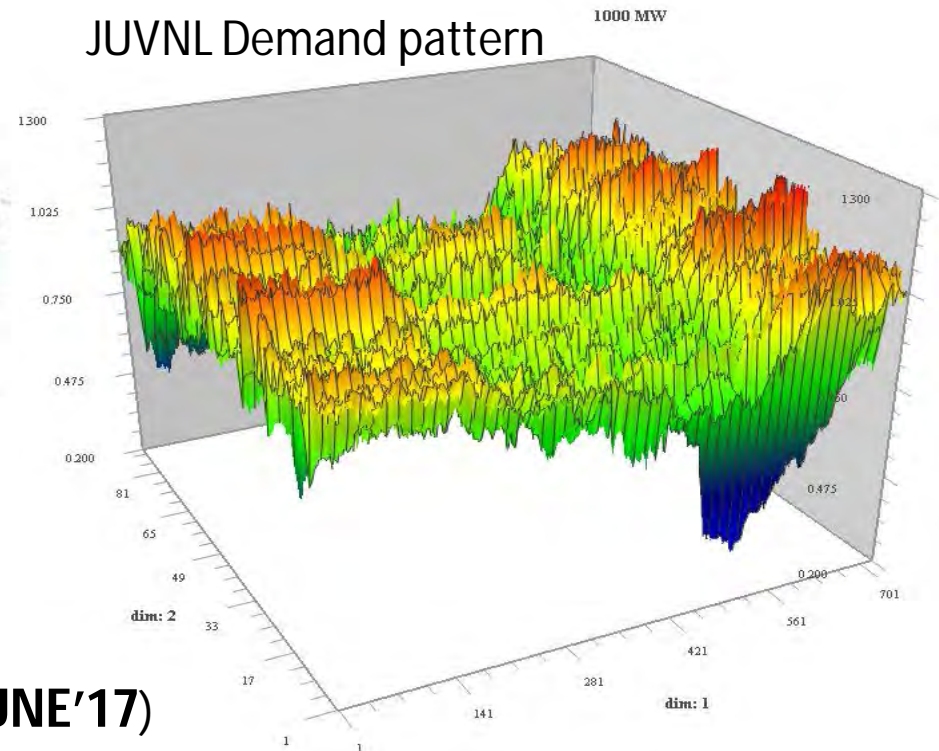
EASTERN REGION DEMAND 3D CURVES (APRIL-JUNE '17)



BSPHCL Demand pattern

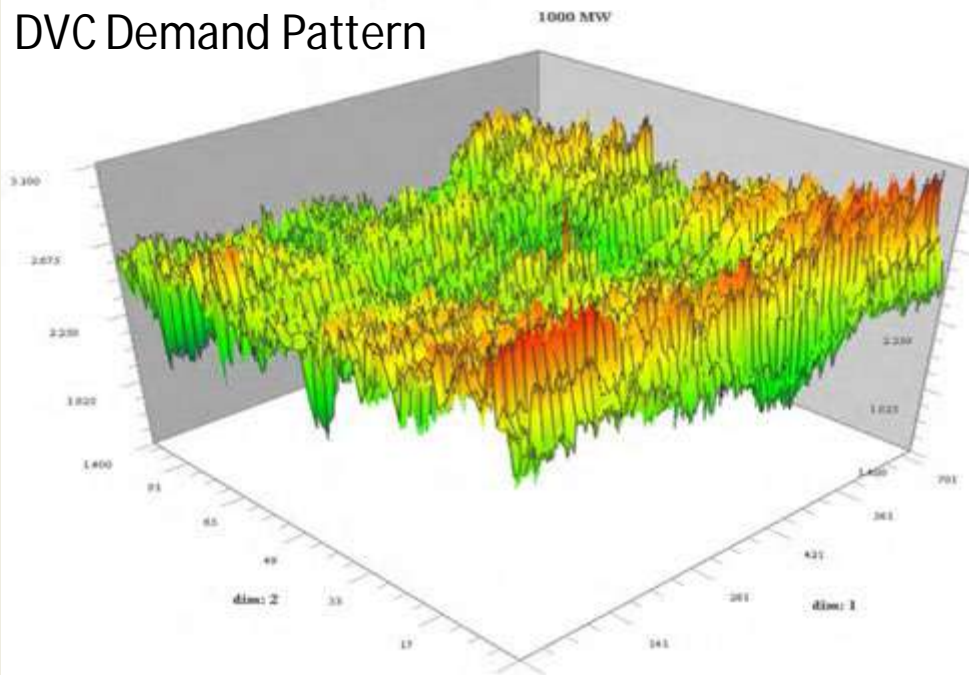


JUVNL Demand pattern

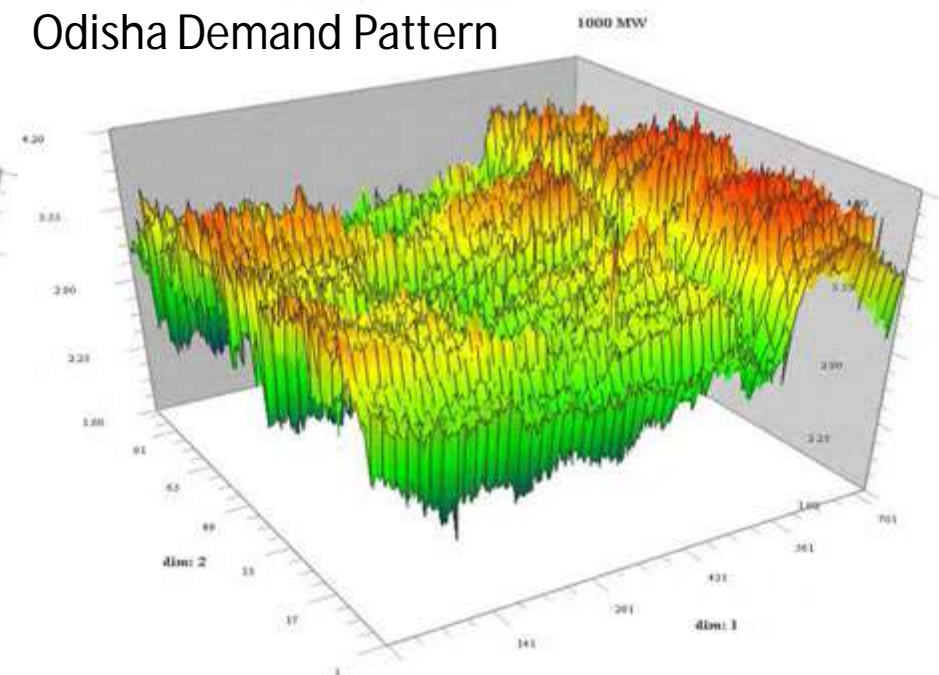


(APRIL-JUNE'17)

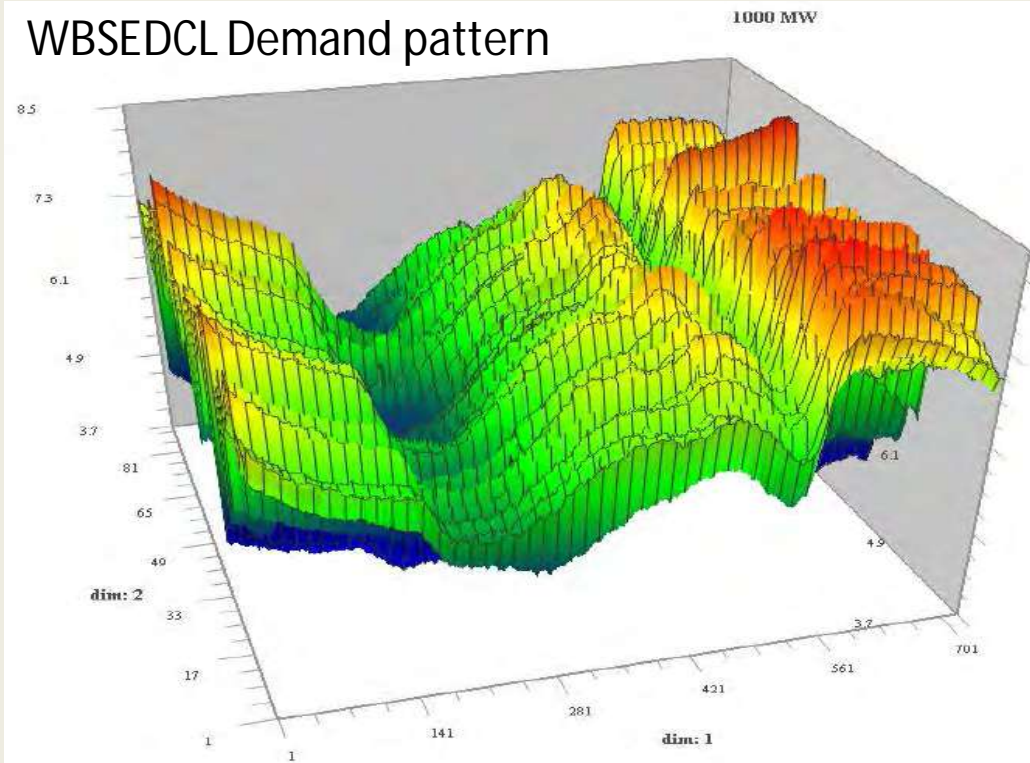
DVC Demand Pattern



Odisha Demand Pattern

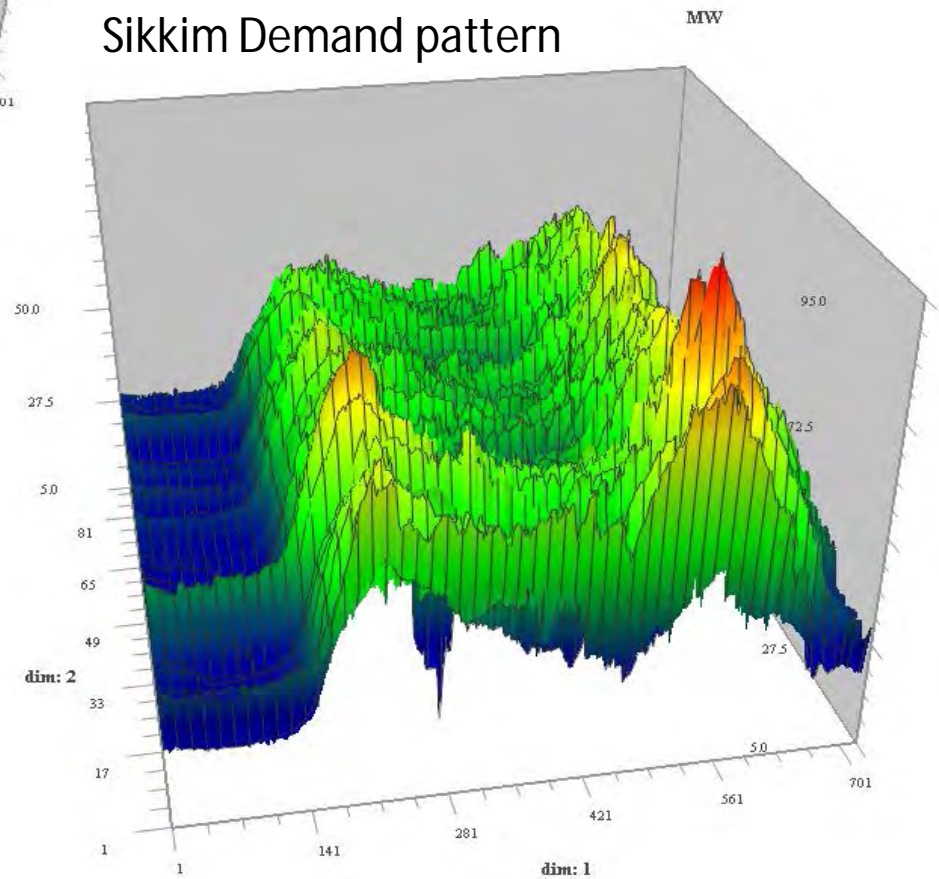


WBSEDCL Demand pattern

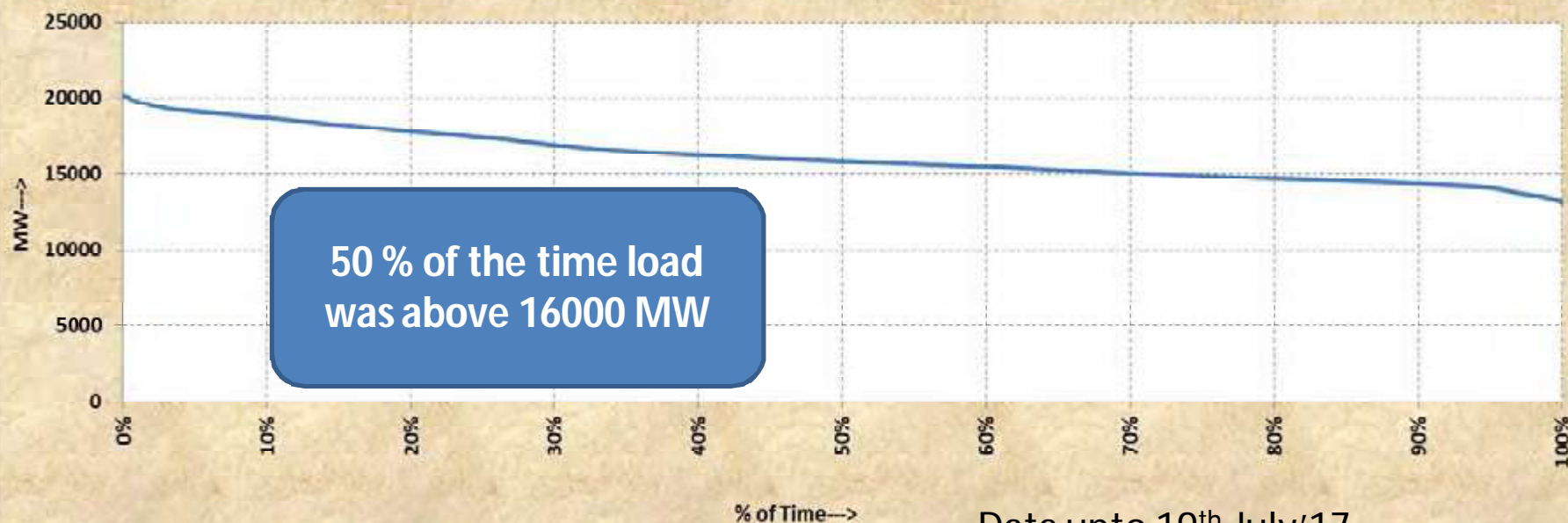


(APRIL-JUNE'17)

Sikkim Demand pattern

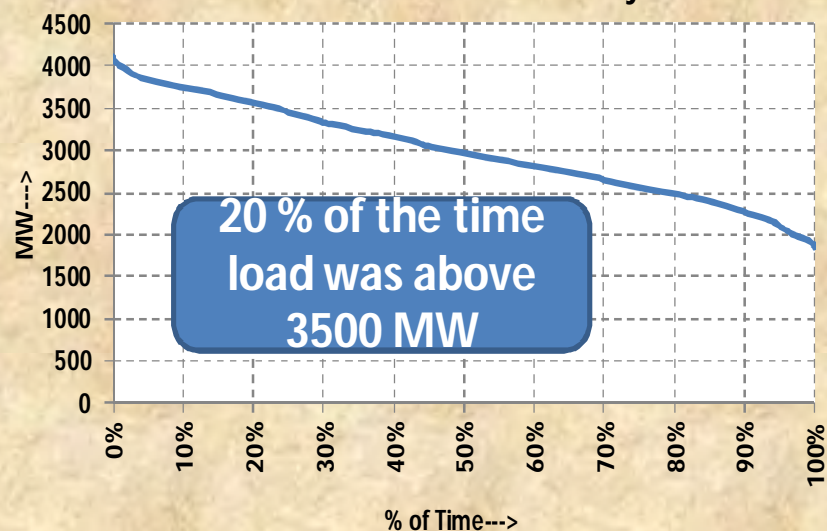


ER Load duration curve -July-17

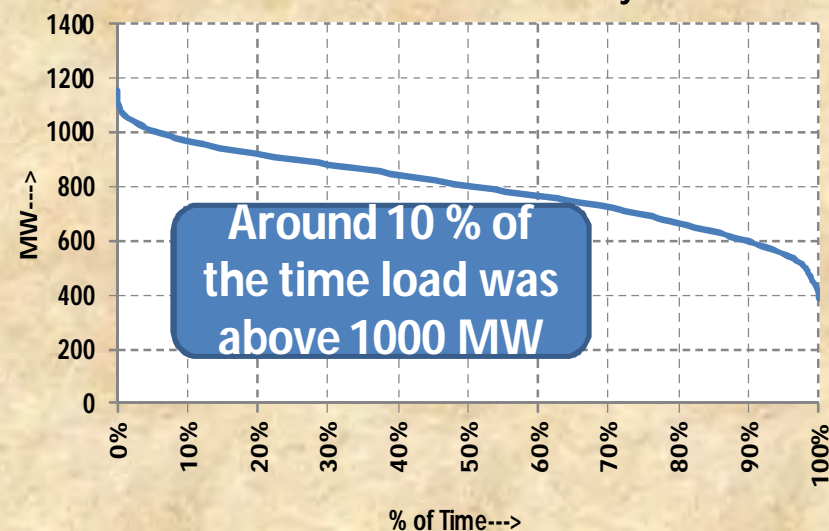


Data upto 19th July'17

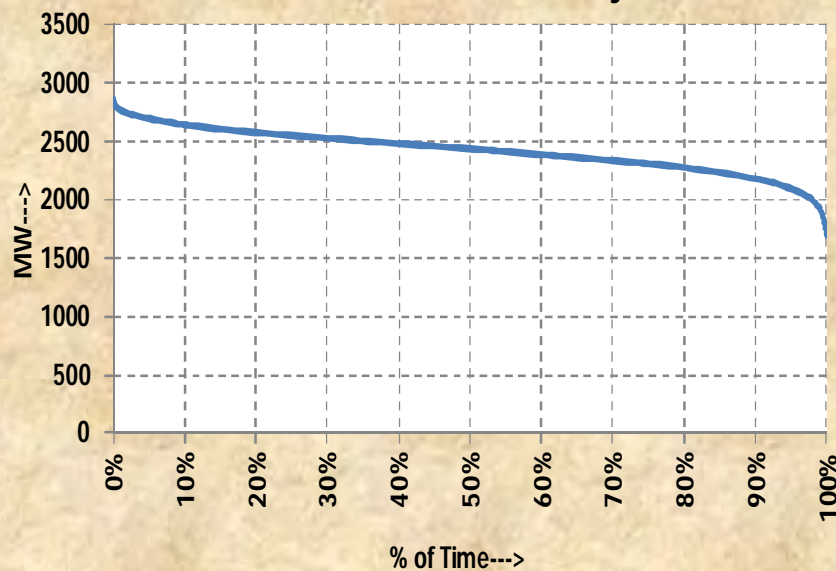
BSPHCL Load duration curve -July-17



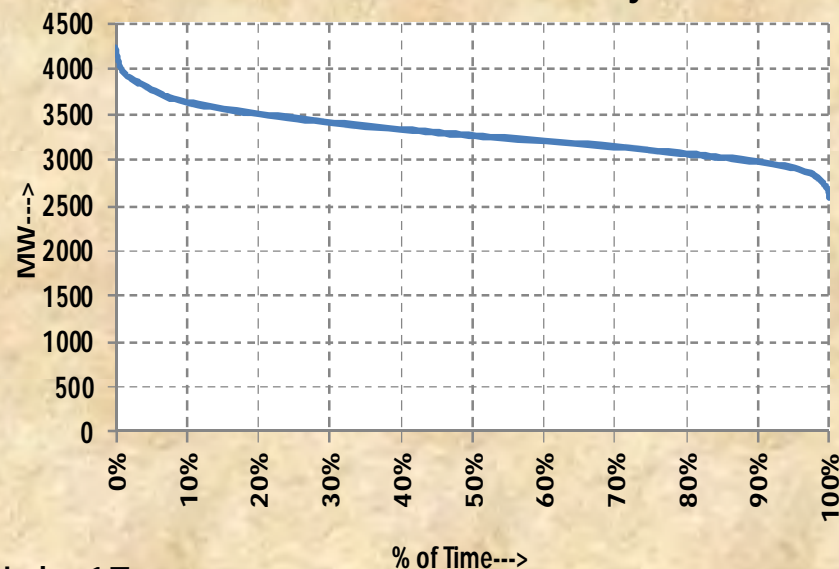
JUVNL Load duration curve -July-17



DVC Load duration curve - July-17

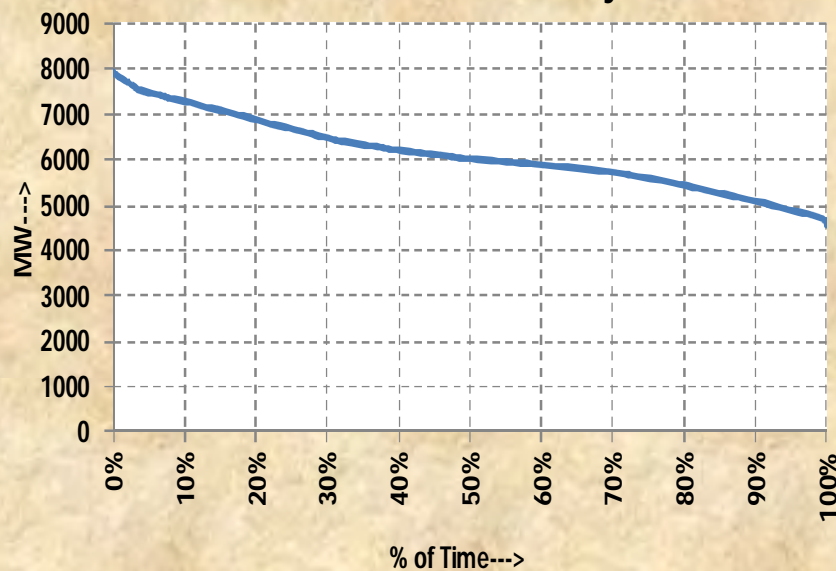


Gridco Load duration curve - July-17

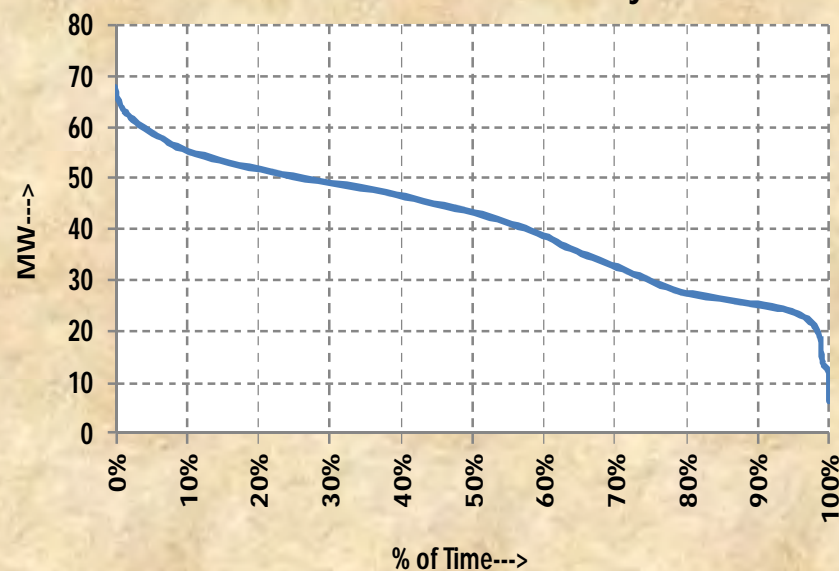


Data upto 19th July'17

WB Load duration curve - July-17



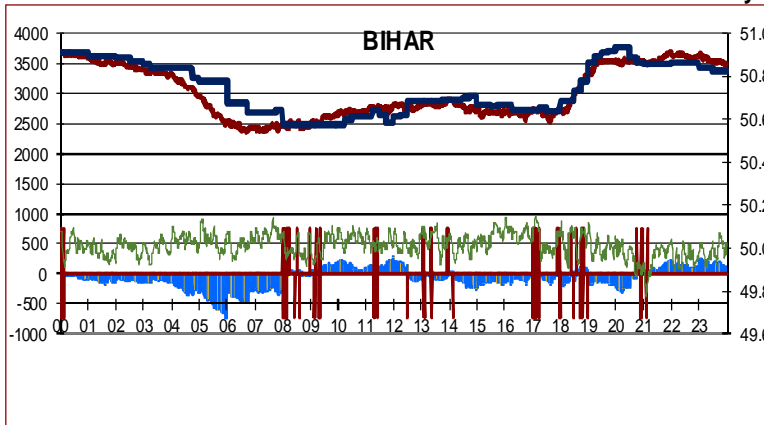
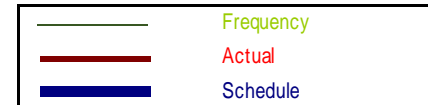
Sikkim Load duration curve - July-17





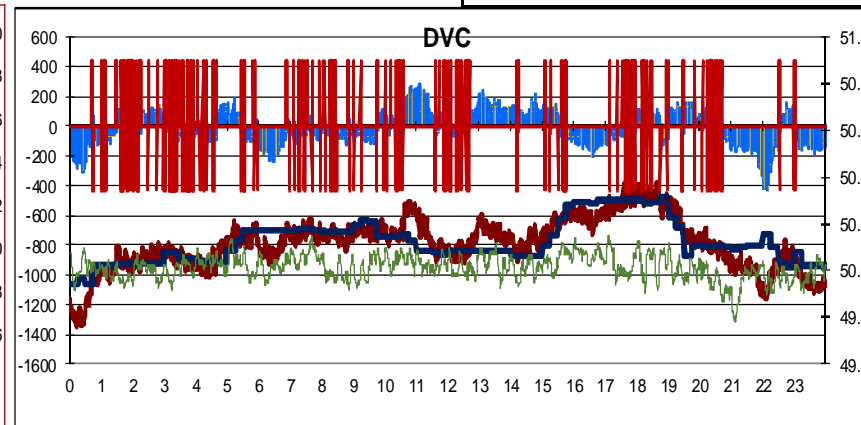
CONSTITUENTWISE SCHEDULE & ACTUAL EXCHANGE

DATE : 23 Jul 2017 Sunday



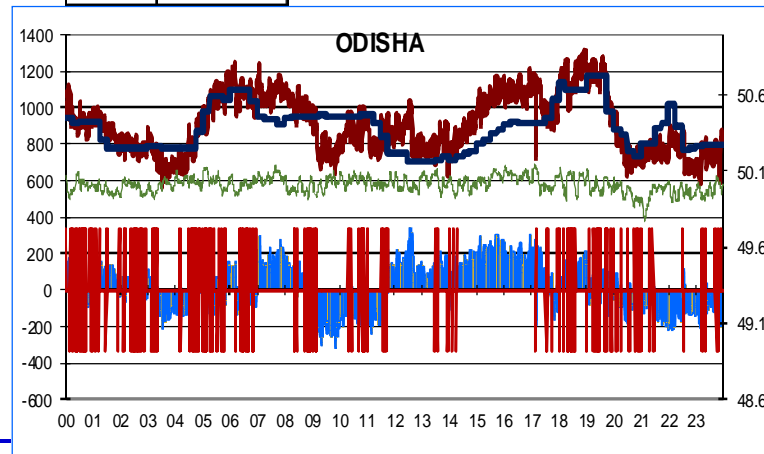
| Act MU | MAX | MIN | Min/Max | UI | SCHEDULE |
|--------|------|------|---------|-------|----------|
| 72.3 | 3702 | 2364 | 0.64 | -1.73 | 74.07 |

Time: 0:03 6:41



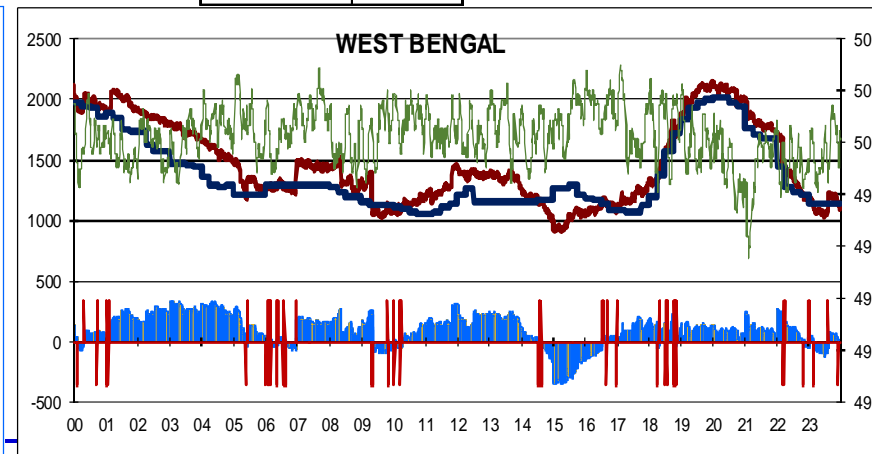
| Act MU | MAX | MIN | Min/Max | UI | SCHEDULE |
|--------|------|-------|---------|-------|----------|
| -18.9 | -384 | -1345 | 0.29 | -0.31 | -18.63 |

Time: 18:38 0:13



| Act MU | MAX | MIN | Min/Max | UI | SCHEDULE |
|--------|------|-----|---------|------|----------|
| 21.9 | 1315 | 564 | 0.43 | 0.50 | 21.36 |

Time: 18:54 3:32



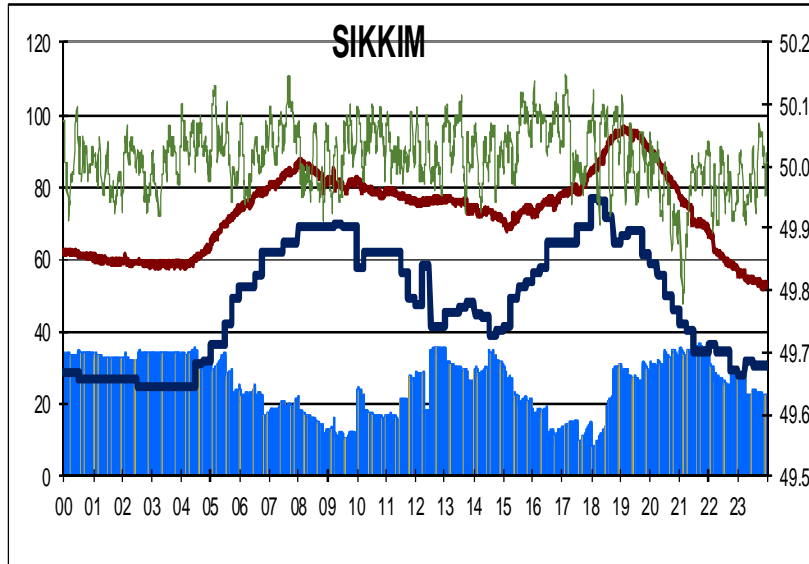
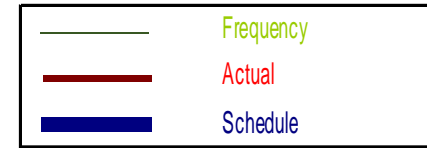
| Act MU | MAX | MIN | Min/Max | UI | SCHEDULE |
|--------|------|-----|---------|------|----------|
| 35.3 | 2149 | 917 | 0.43 | 2.28 | 33.00 |

Time: 20:00 15:03

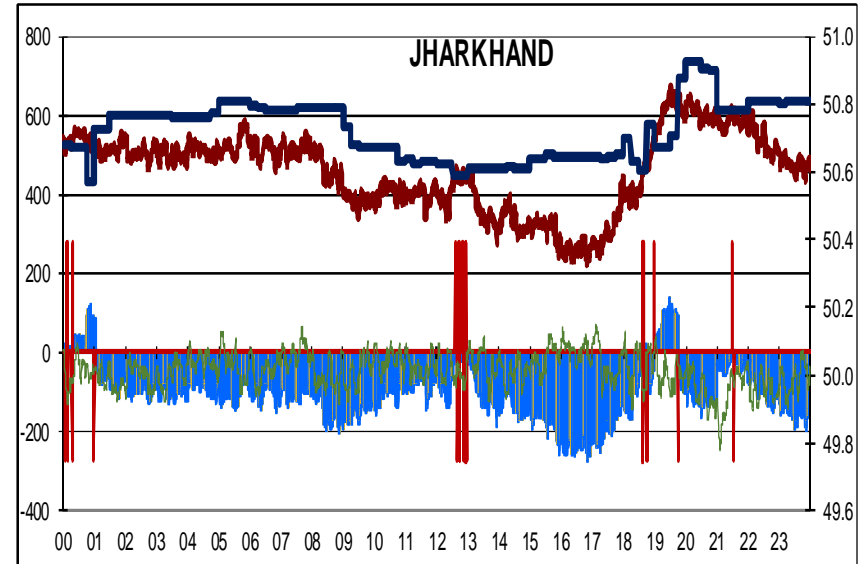


CONSTITUENTWISE SCHEDULE & ACTUAL EXCHANGE

DATE : 23 Jul 2017 Sunday



| MU | MAX | MIN | Min/Max | UI | SCHEDULE |
|-------|-------|-------|---------|------|----------|
| 1.8 | 96 | 52 | 0.54 | 0.60 | 1.16 |
| Time: | 19:04 | 23:52 | | | |



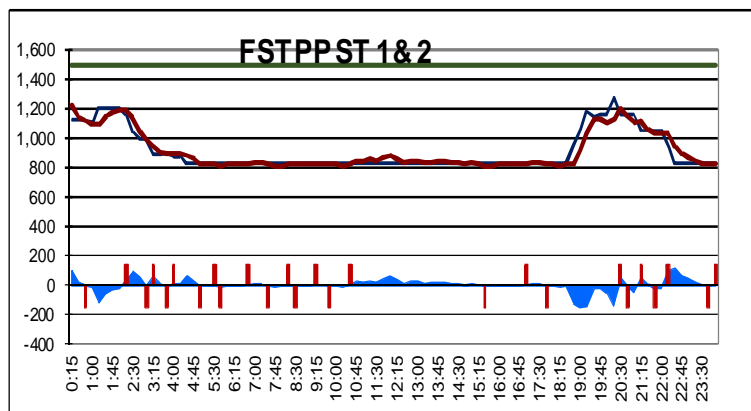
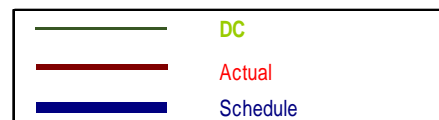
| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|-------|-------|---------|-------|---------|
| 11.02 | 671 | 221 | 0.33 | -2.43 | 13.45 |
| Time: | 19:30 | 16:50 | | | |



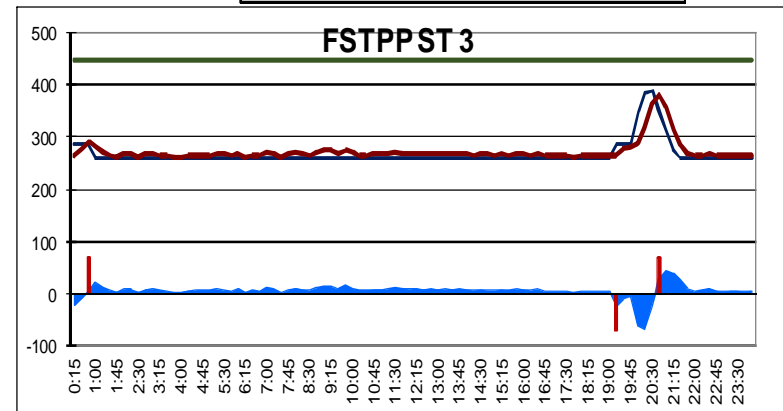
ISGS (THERMAL) DC, SCHEDULE & ACTUAL GENERATION

DATE : 23 Jul 2017

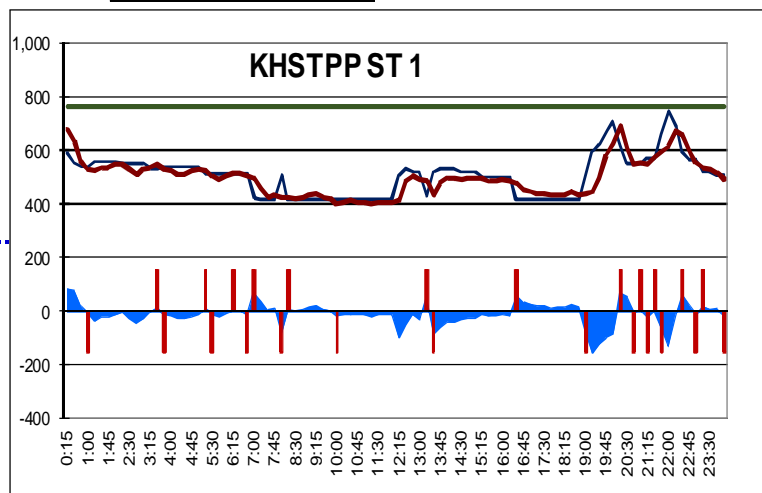
Sunday



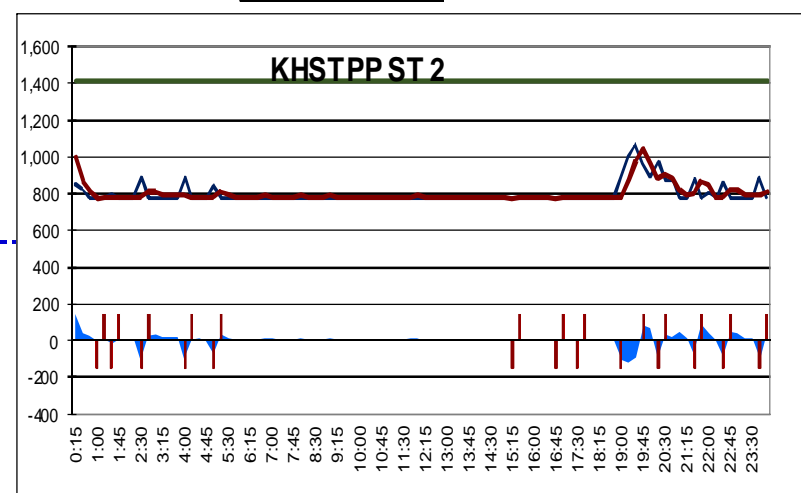
| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|------|-------|---------|------|---------|
| 21.86 | 1220 | 811 | 0.67 | 0.08 | 21.78 |
| Time: | 0:15 | 10:15 | | | |



| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|-------|------|---------|------|---------|
| 6.5 | 381 | 261 | 0.68 | 0.13 | 6.39 |
| Time: | 20:45 | 2:30 | | | |



| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|-------|-------|---------|-------|---------|
| 12.0 | 689 | 402 | 0.58 | -0.24 | 12.22 |
| Time: | 20:15 | 11:15 | | | |



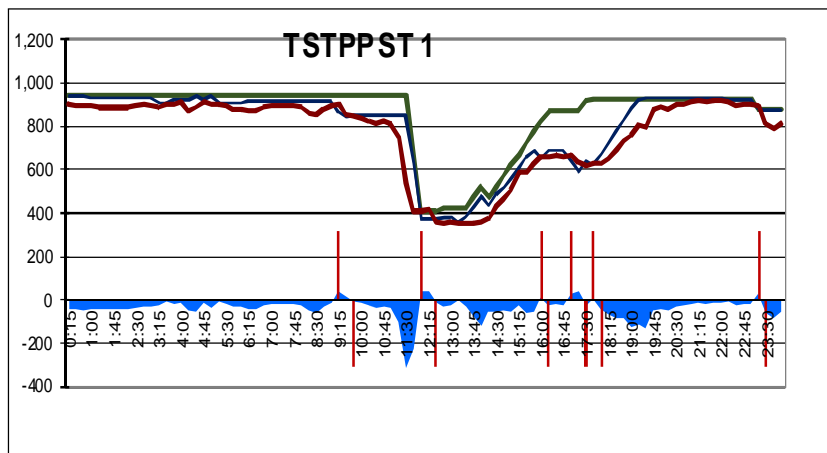
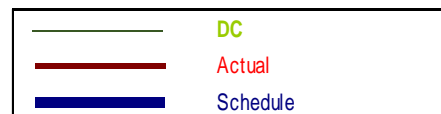
| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|-------|-------|---------|------|---------|
| 19.2 | 1042 | 776 | 0.74 | 0.05 | 19.18 |
| Time: | 19:45 | 16:45 | | | |



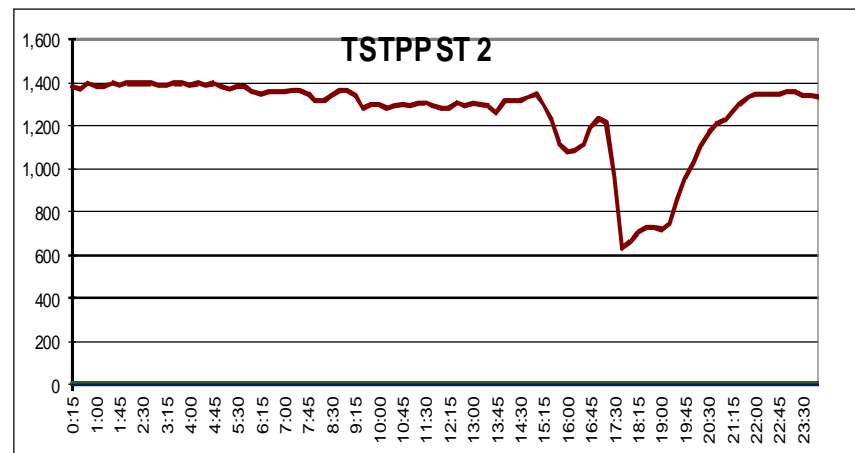
ISGS (THERMAL)DC, SCHEDULE & ACTUAL GENERATION

DATE : 23 Jul 2017

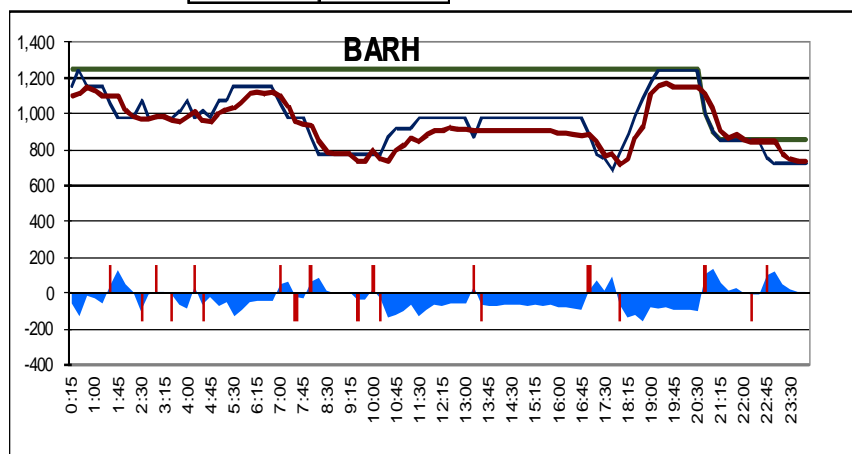
Sunday



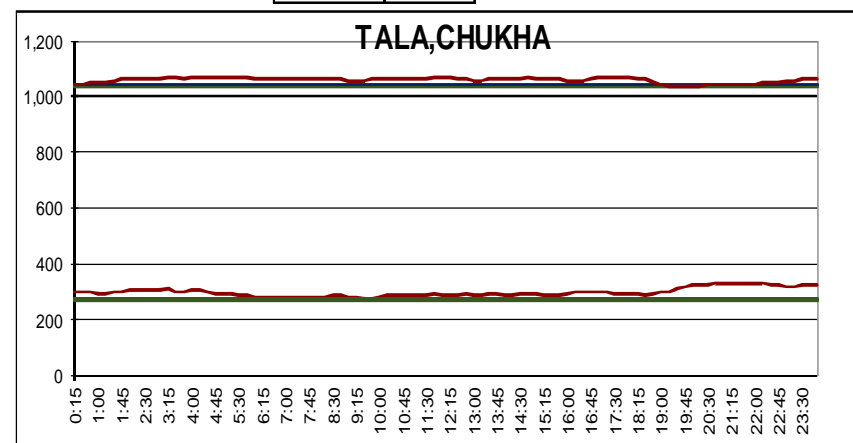
| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|-----|-------|---------|-------|---------|
| 18.4 | 918 | 349 | 0.38 | -0.94 | 19.31 |
| Time: | | 21:45 | 13:30 | | |



| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|------|------|---------|-------|---------|
| 30.2 | 1402 | 629 | 0.45 | 30.20 | 0.00 |
| Time: | | 3:30 | 17:45 | | |



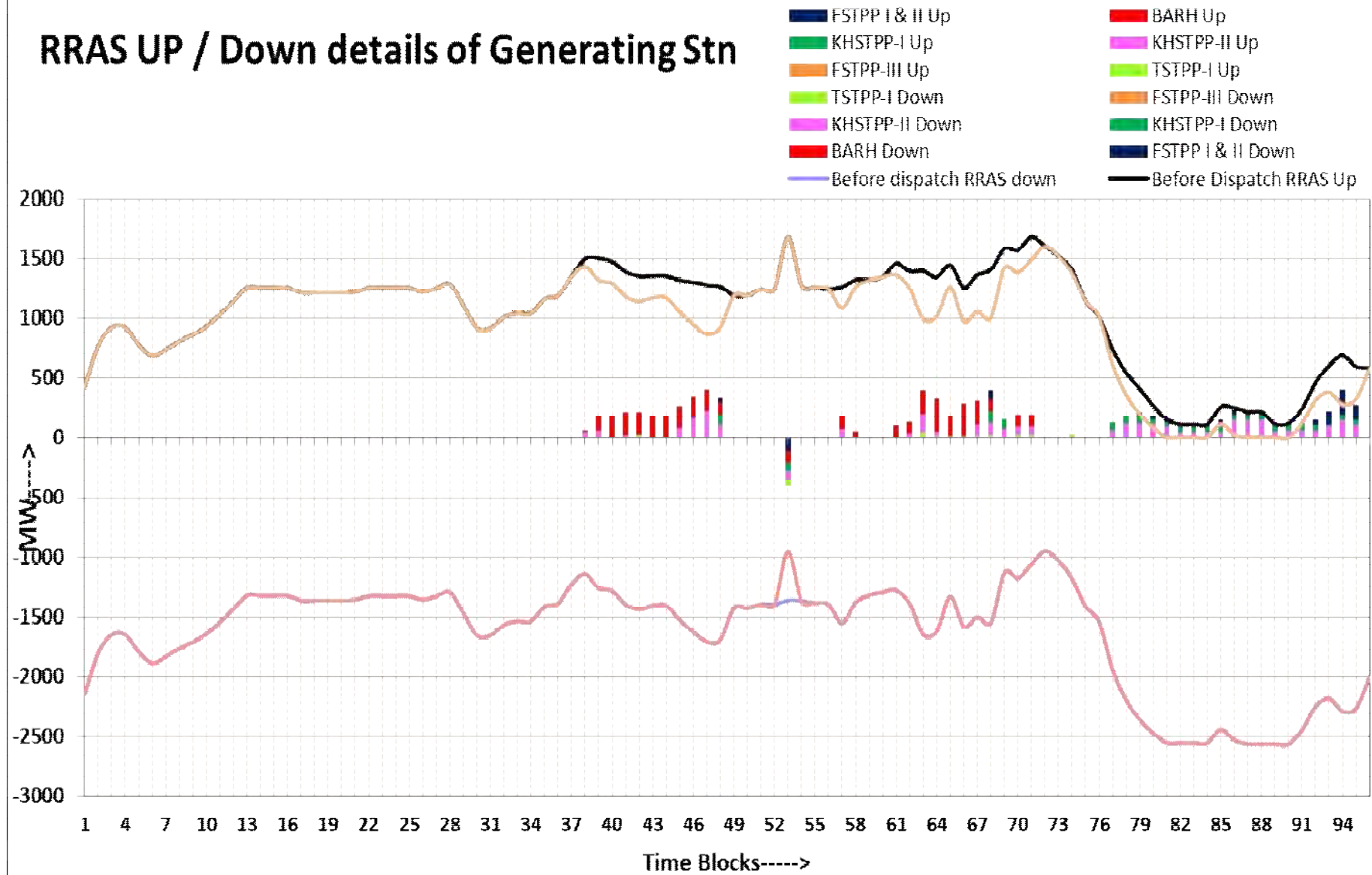
| Act MU | MAX | MIN | Min/Max | UI | schd MU |
|--------|------|-------|---------|-------|---------|
| 22.4 | 1164 | 721 | 0.62 | -0.72 | 23.11 |
| Time: | | 19:30 | 18:00 | | |



| Tala Hydro | SCHD MU | ACT MU |
|------------|---------|--------|
| | 25 | 25 |

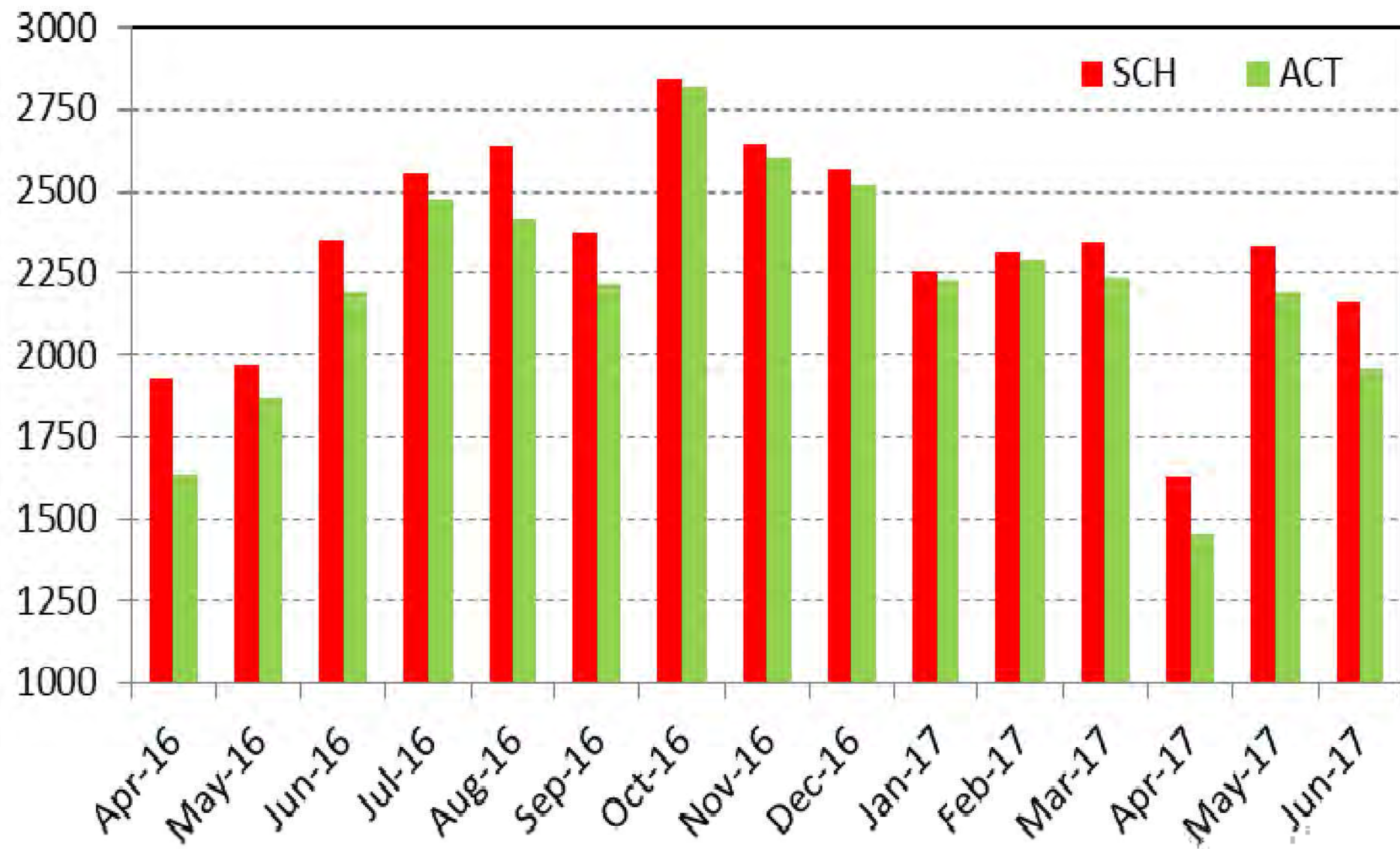
| Chukha Hydro | SCHD MU | ACT MU |
|--------------|---------|--------|
| | 7 | 7 |

RRAS UP / Down details of Generating Stn

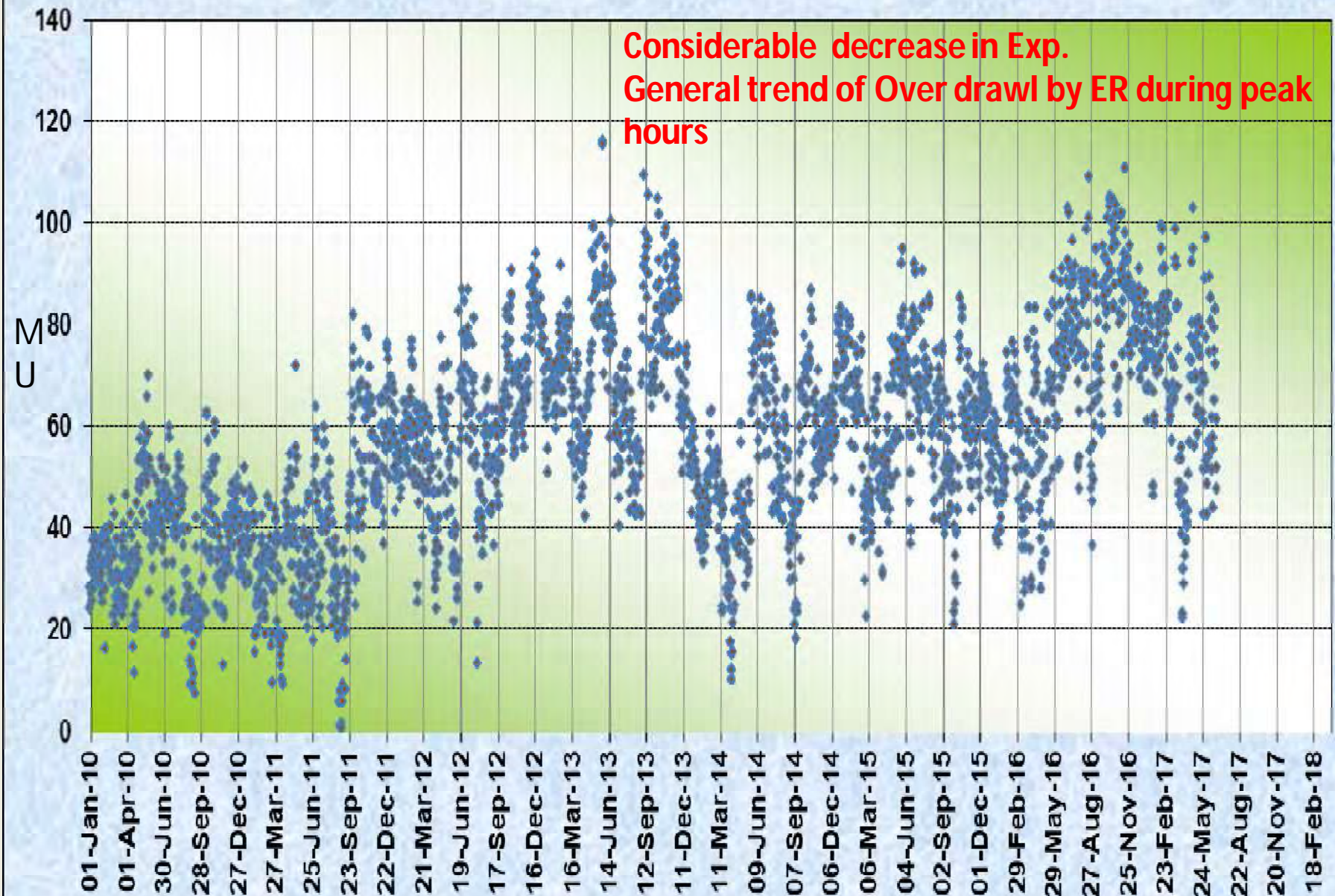


MU

Monthly Net Export (In MU) from Eastern Region to Other Regions



NET EXPORT FROM ER



DETAILS OF BANGLADESH DRAWL JULY-2017

TIME ZOOM
SCROLL

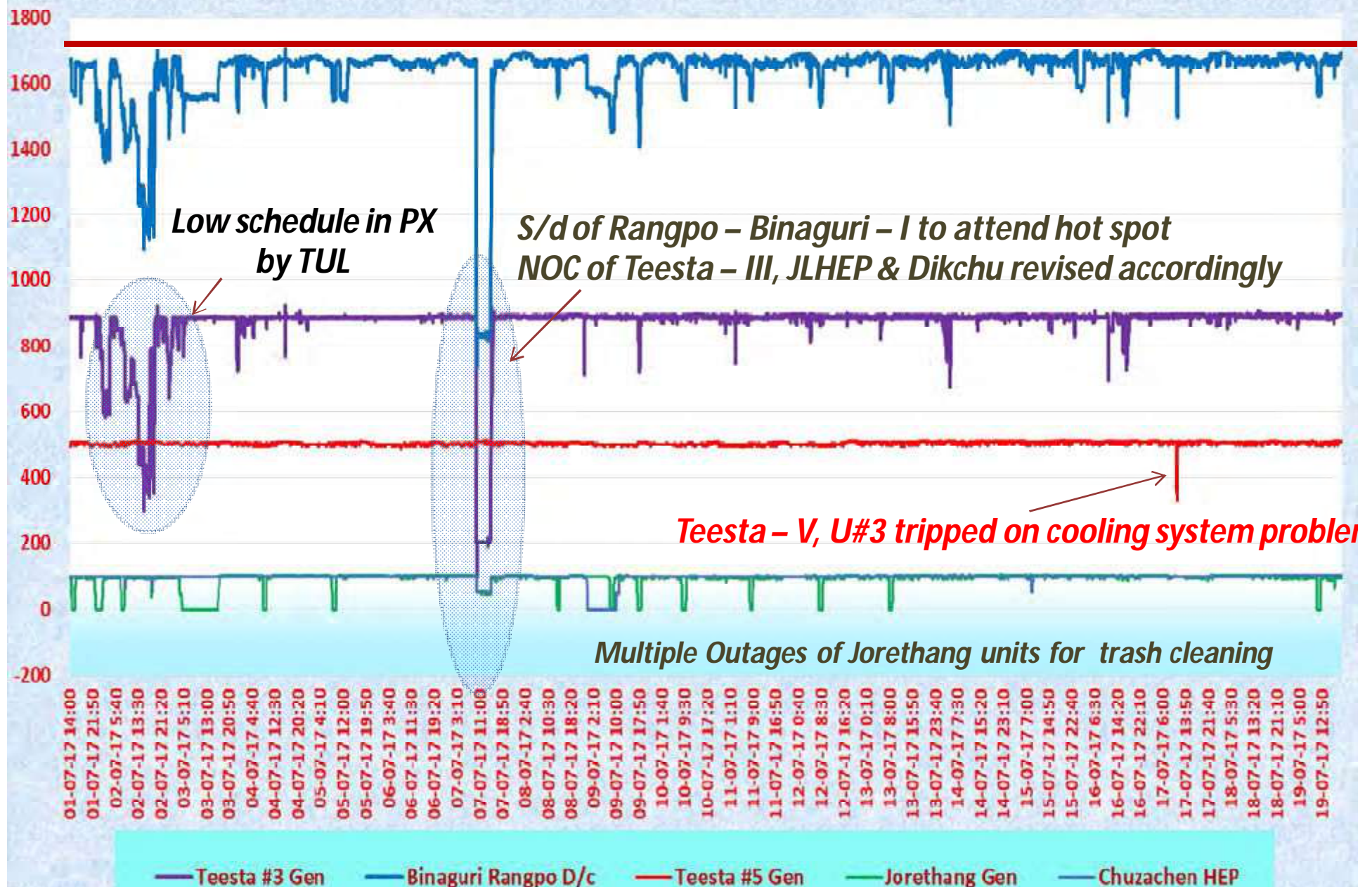


DETAILS OF TALA + CHUKHA Generation JULY-2017

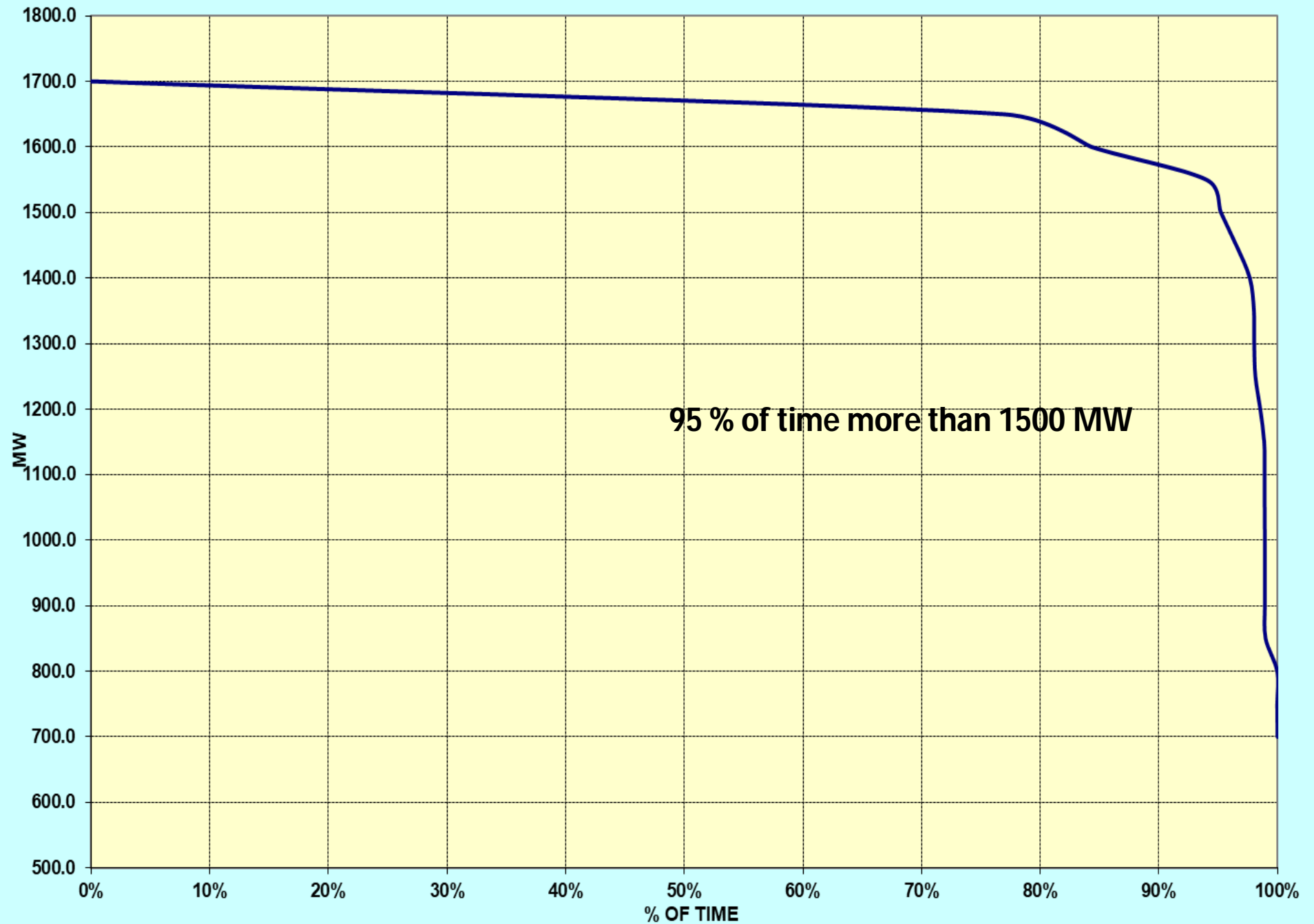
TIME ZOOM
SCROLL



SCADA data plot from 01/07/17 to 19/07/17



400 kV Rangpo - Binaguri - D/C Loading pattern

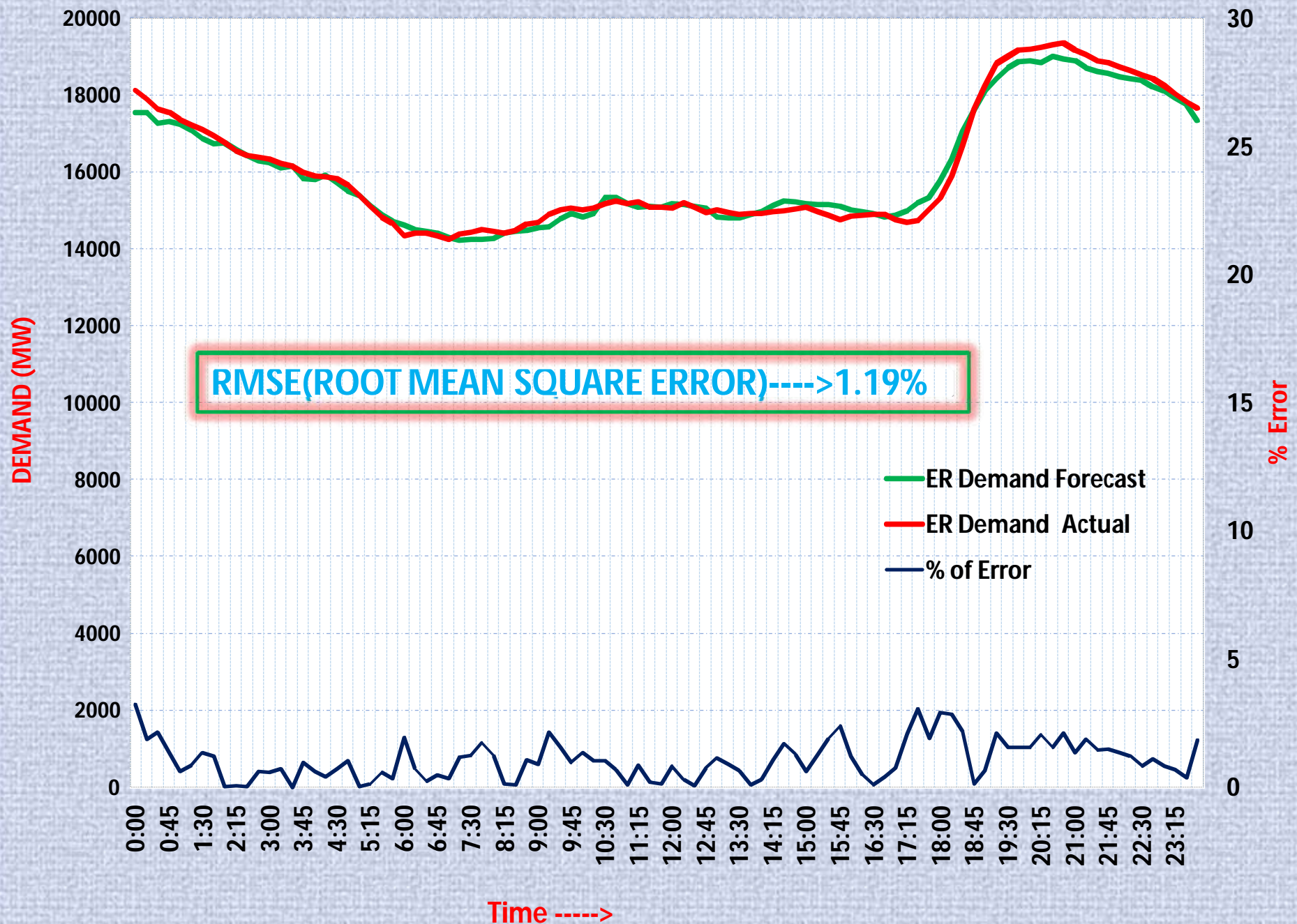


Load Forecast using SCADA EMS

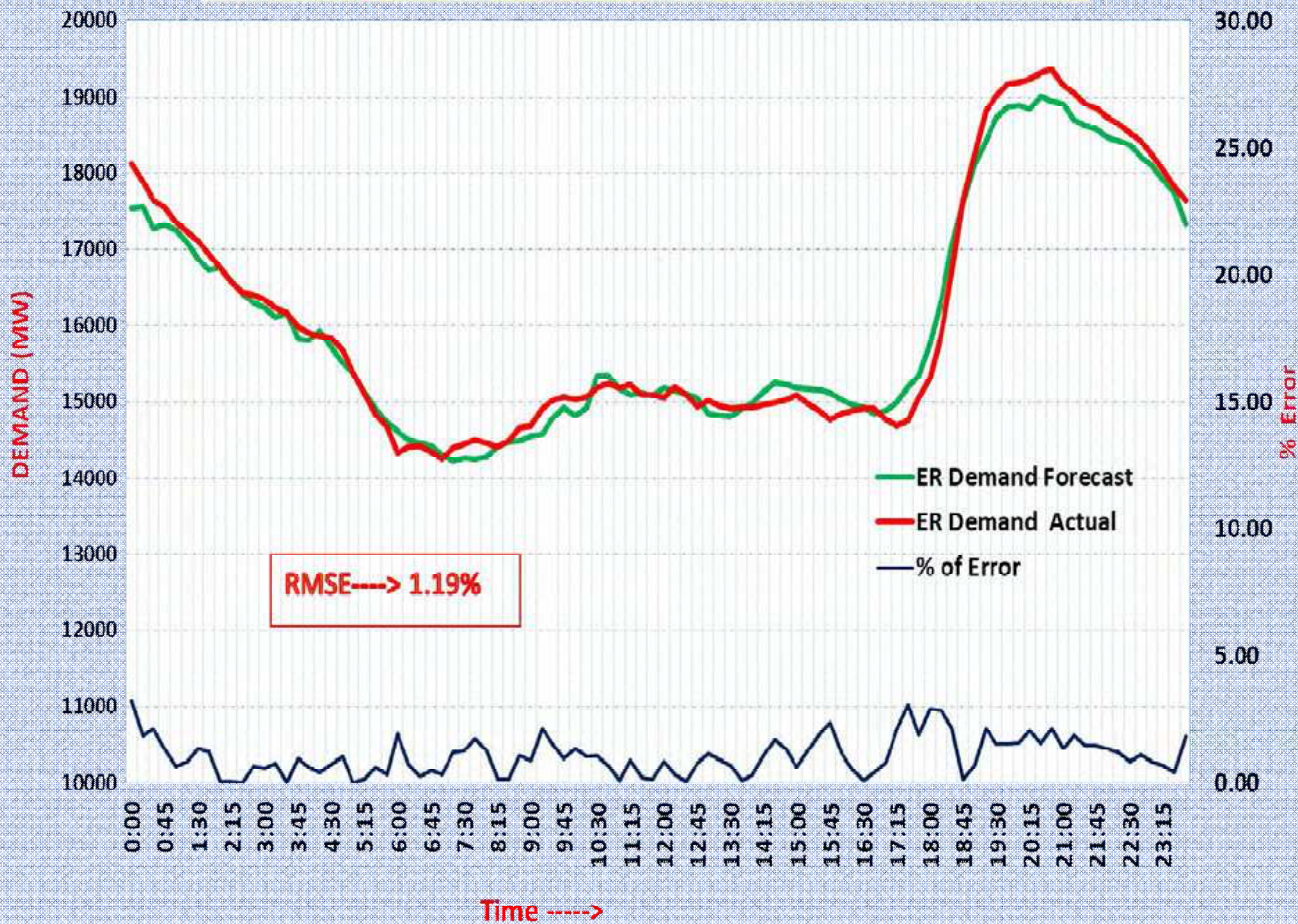
SHORT TERM LOAD FORECASTING (SCADA)

- ❑ *ONLINE LOADFORECASTING TOOL EMBEDDED IN ERLDC SCADA SYSTEM.*
- ❑ *FORECAST INPUTS: LAST 100 DAYS DEMAND DATA ,WEATHER DATA.*
- ❑ *WEATHER DATA: TEMPERATURE,WIND VELOCITY,HUMIDITY,RAINFALL.*
- ❑ *WEIGHTAGE CAN BE GIVEN TO WEATHER PARAMETERS AS PER REQUIREMENT.(HERE TEMPERATURE HAS GIVEN HIGHEST WEIGHTAGE).*
- ❑ *WEEKENDS AND HOLIDAYS IN A CALENDER YEAR ARE PREDEFINED IN THE FORECAST DATABASE FOR BETTER FORECASTING ON HOLIDAYS.*
- ❑ *FORECAST TECHNIQUE : REGRESSION METHOD,SIMILAR DAY FORECAST.*
- ❑ *DYNAMIC ADJUSTMENT FEATURE: WHENEVER ERROR EXCEEDS 5% STLF ENGINE AUTOMETICALLY ADJUSTS FORECAST DATA FOR NEXT 6 BLOCKS(CONFIGURABLE),THEREBY GIVES A BETTER IDEA ABOUT THE DEMAND IN NEXT FEW HOURS.*

Eastern Region Demand Actual Vs Forecast For 20-Jul-2017



Eastern Region Demand Actual Vs Forecast For 21-Jul-2017



Role of SLDCs in demand forecasting

- As per section 5.3 of the IEGC, all SLDCs are required to estimate their respective demands on daily/weekly/monthly /yearly basis for current year for load - generation balance planning. The SLDC shall carry out system studies for operational planning purposes using this demand estimate.
- All SLDCs may therefore utilize their EMS for forecasting their respective demands together with forecasting of their own generation for proper planning of power procurement / sales and arriving at realistic assessment of net interchange schedule
- Historical load data and weather forecast data to be used for forecasting demand. All distribution licensees and other concerned persons shall provide relevant data and other information as required by SLDC for demand estimate.
- The monthly demand estimated by SLDC, shall be provided to RLDC and RPC for better operation planning

राष्ट्रिय सिस्टम ऑपरेशन कॉर्पोरेशन लिमिटेड

REGIONAL/ ZONAL/ INTERNATIONAL COOPERATION COMMITTEE



पूनी प्रोडिक्ट्स एवं कंसायनेंट्स, 14, गोल्फ क्लब रोड, कोलकाता - 700 032
 Phone : 033-2424 5099/5091/5092, Fax : 033-2424 5093/5094/5095, E-mail : erpc@erpc.co.in, erpc@vsnl.com
 EASTERN REGIONAL POWER COMMITTEE (ENRPC), 14, Golf Club Road, Ballygunge, Kolkata - 700 032
 Tel. : 033-2424 5099/5091/5092, Fax : 033-2424 5093/5094/5095, E-mail : erpc@erpc.co.in / erpc@vsnl.com

ERLDC/SS & MIS/2017/VDI/1621

Date: 04-07-17

To,

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

Sub: Reporting of voltage deviation indices (VDI) for selected Substations in ER, for June 2017.

विषय: June 2017 के लिए पूर्वी क्षेत्र में चयनित सबस्टेशन के लिए वोल्टेज विचलन सूचकांक (VDI) की रिपोर्टिंग

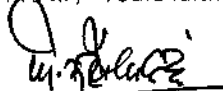
Sir/ महोदय,

Enclosed please find VDI for selected 765 & 400kV buses of Eastern Region, computed for the month of June, 2017, for deliberation in next OOC meeting of ERPC.

संलग्न ERPC की अगली OCC बैठक में विचार विमर्श के लिए, June, 2017 के लिए गणना की गई पूर्वी क्षेत्र के चयनित 765 और 400 केवी बसों के लिए VDI को ढूंढें।

आपको धन्यवाद,

आपका विश्वस्त / Yours faithfully,


 (पी मुखोपाध्याय) / (P Mukhopadhyay)
 महाप्रबन्धक / General Manager

VDI of Selected 765 kV & 400 kV in Eastern Region in the month of Jun - 2017

| Ranchi New | | | Jamshedpur | | | Muzaffarpur | | |
|------------|-----|-----------------|------------|-----|-----------------|-------------|-----|-----------------|
| MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) |
| 804 | 744 | 0.18 | 428 | 410 | 74.20 | 417 | 382 | 0.00 |

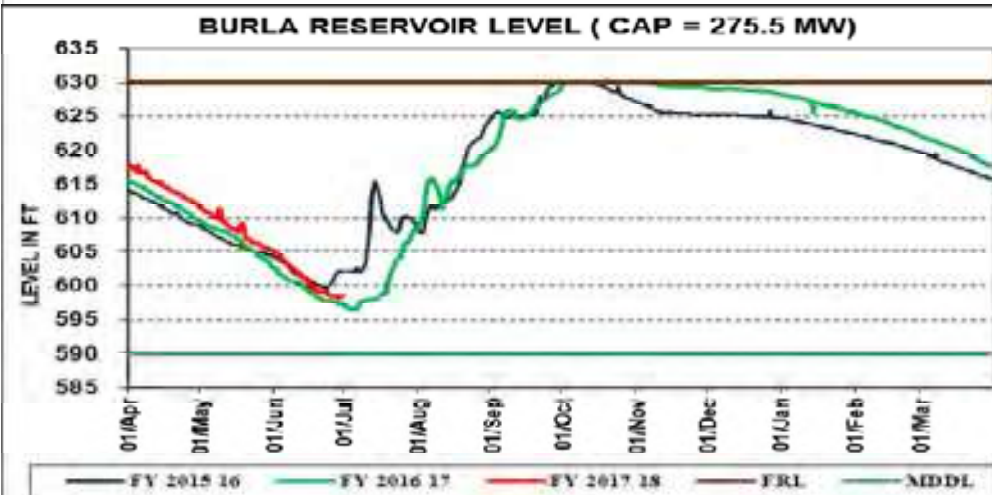
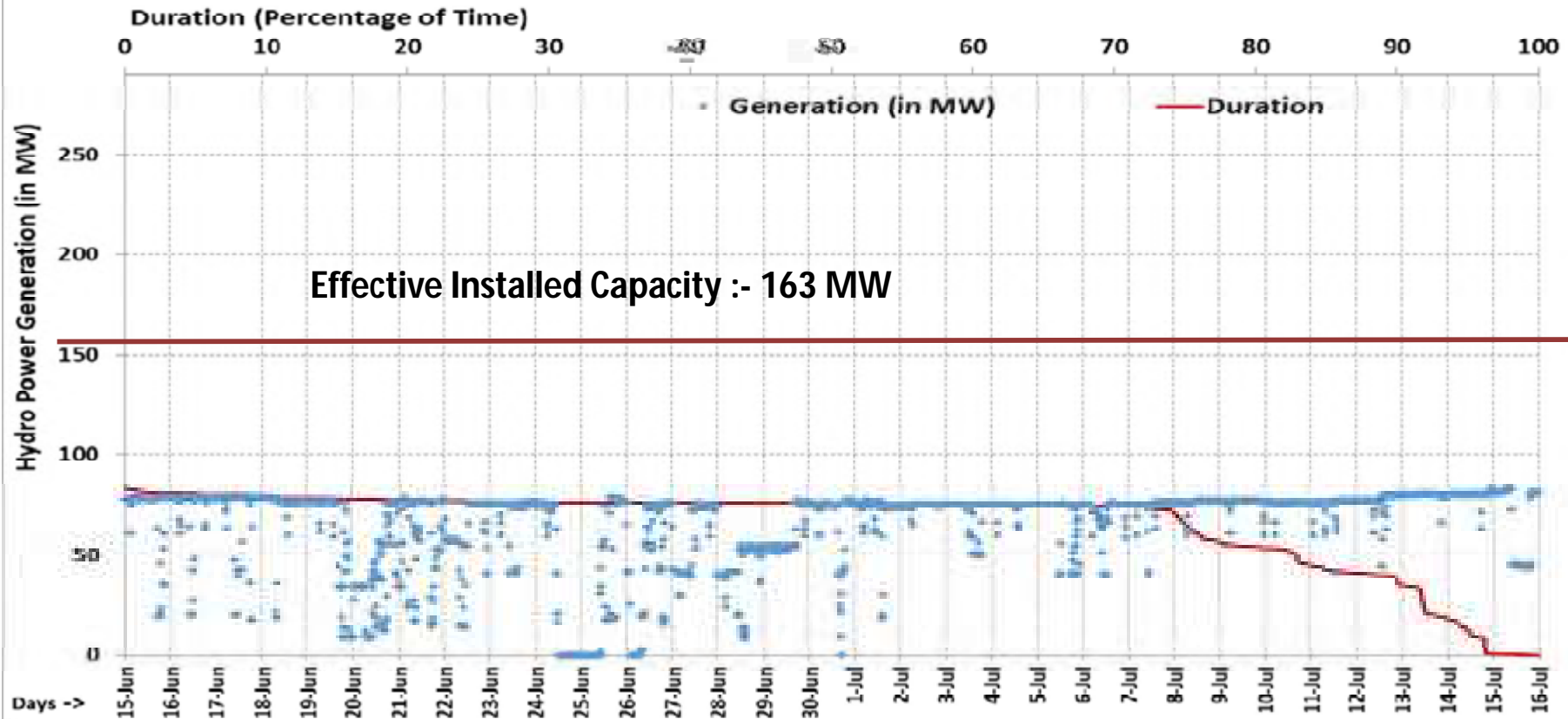
| Bihar Sariff | | | Binaguri | | | Jeerat | | |
|--------------|-----|-----------------|----------|-----|-----------------|--------|-----|-----------------|
| MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) |
| 421 | 394 | 0.05 | 420 | 392 | 0.00 | 425 | 379 | 0.93 |

| Rourkela | | | Jeypore | | | Koderma | | |
|----------|-----|-----------------|---------|-----|-----------------|---------|-----|-----------------|
| MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) |
| 418 | 394 | 0.00 | 425 | 381 | 0.43 | 425 | 402 | 2.81 |

| Maithon | | | Teesta | | | Rangpo | | |
|---------|-----|-----------------|--------|-----|-----------------|--------|-----|-----------------|
| MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) | MAX | MIN | VDI (% of Time) |
| 418 | 396 | 0.00 | 418 | 393 | 0.00 | 416 | 392 | 0.00 |

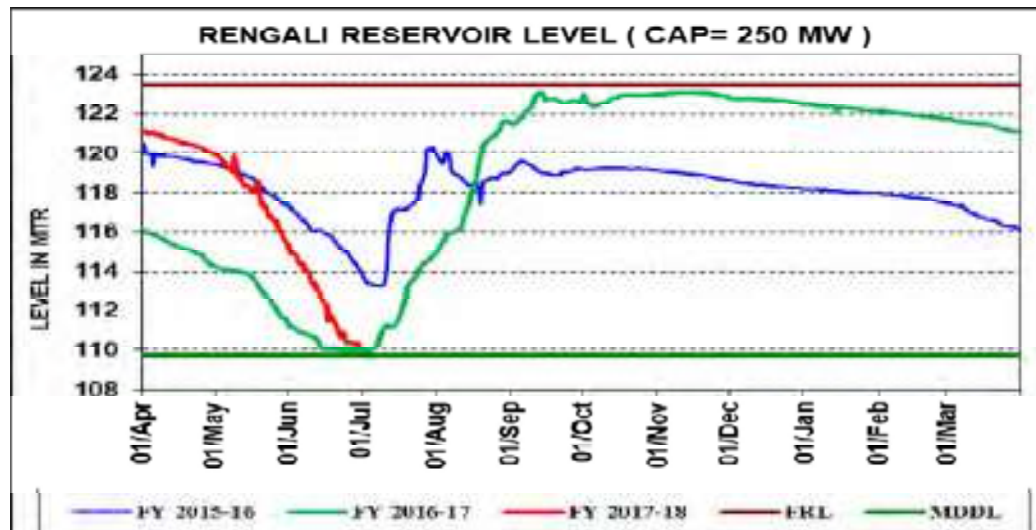
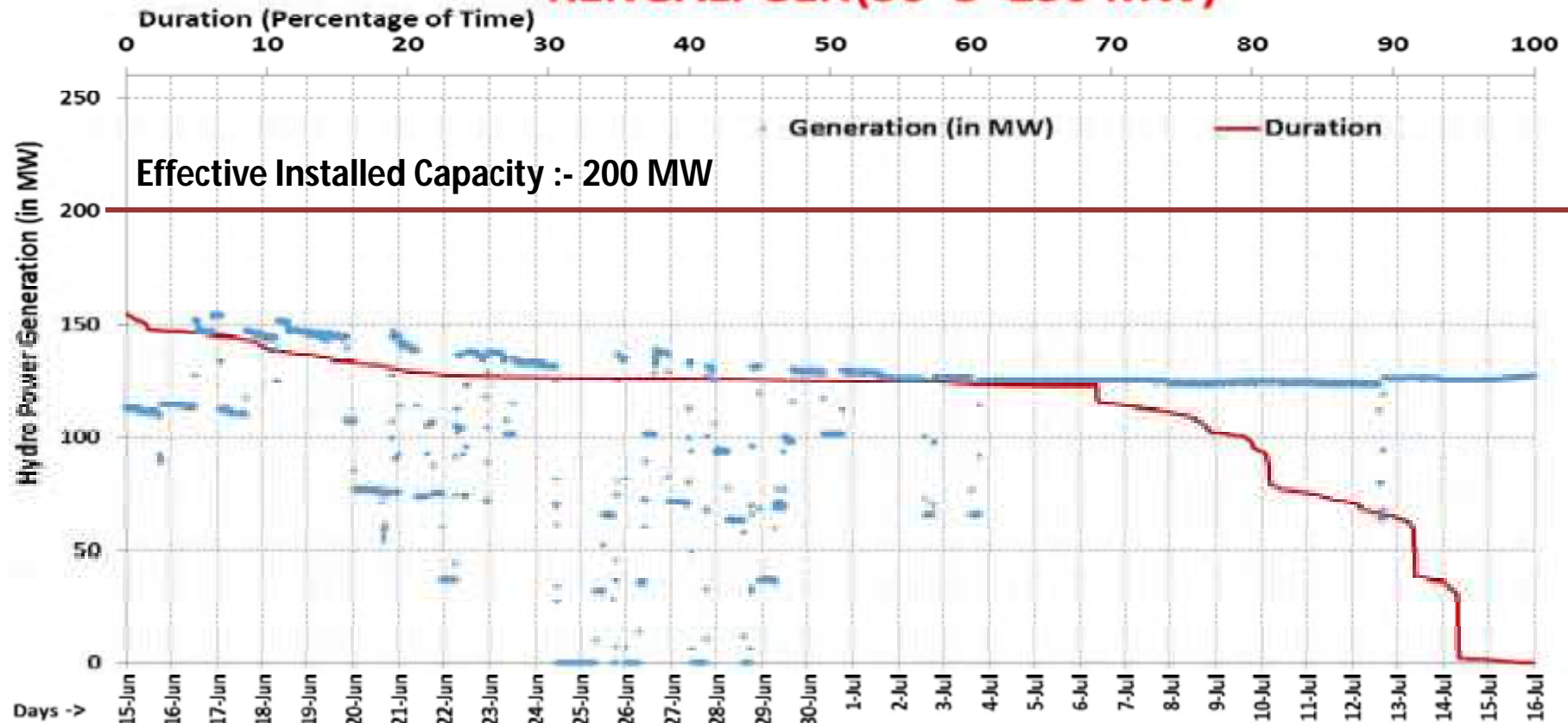
State Hydro Generators Performance

BURLA GEN(49.5*2+32*2+37.5*3=275.5 MW)



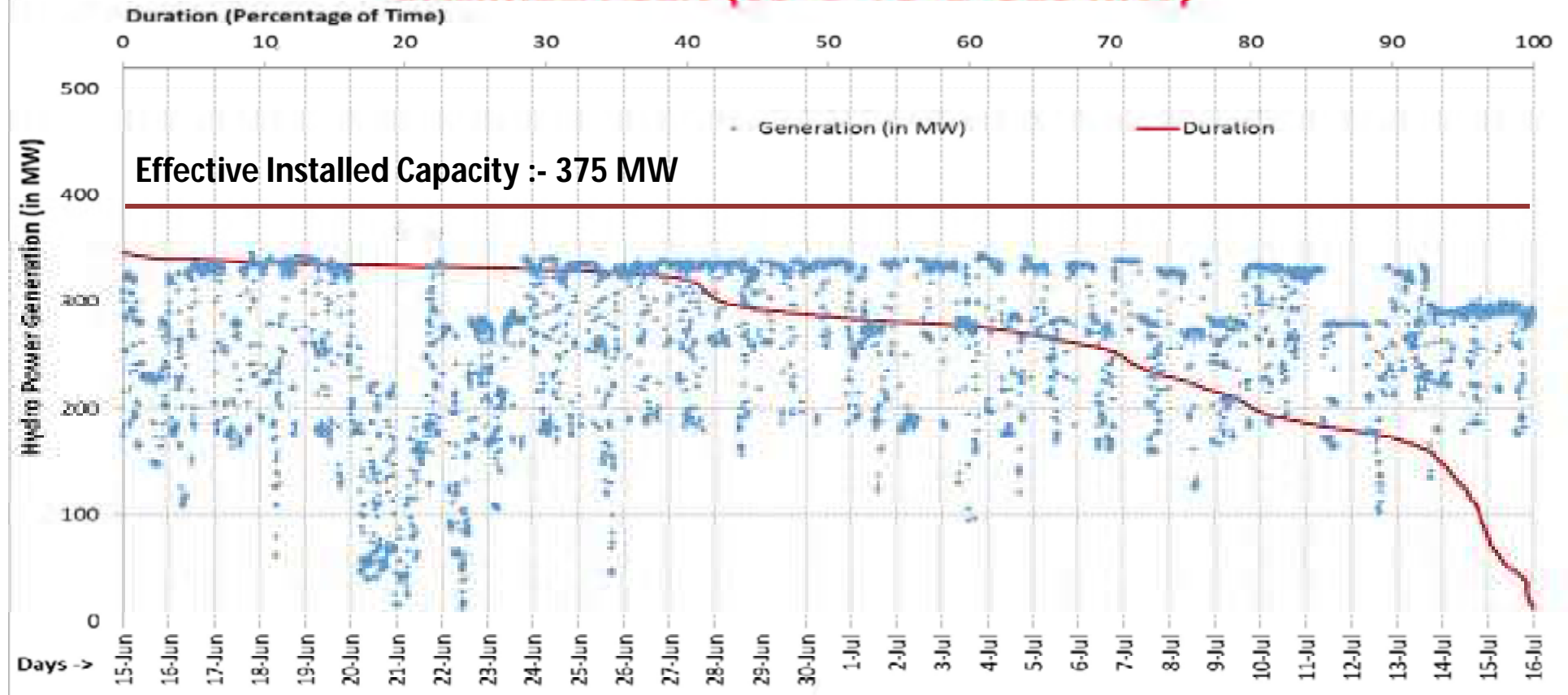
| Unit No | Date of Outage | Reason |
|---------|----------------|------------|
| U - 5 | 25.10.2016 | R & M Work |
| U - 6 | 16.10.2015 | R & M Work |
| U - 7 | 21.02.2017 | GT Problem |

RENGALI GEN(50*5=250 MW)

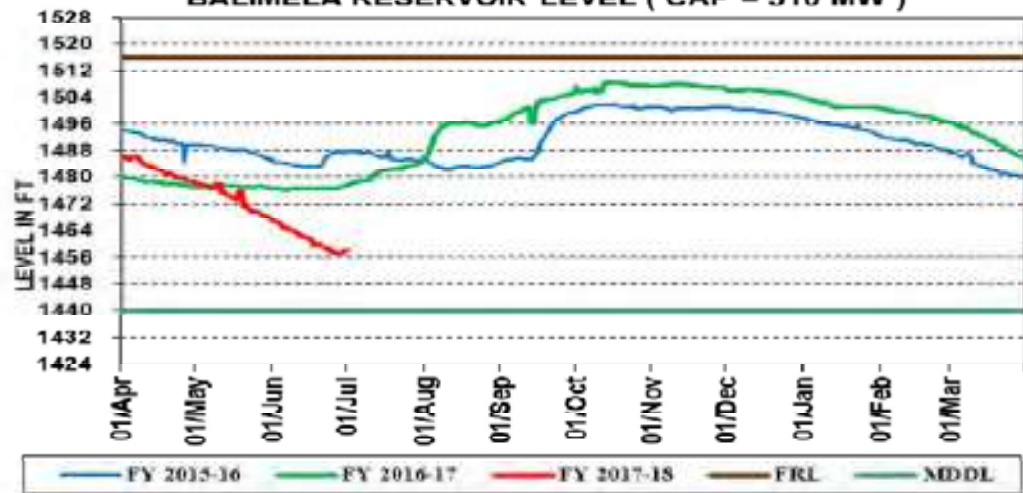


| Unit No | Date of Outage | Reason |
|---------|----------------|--------------------|
| U - 5 | 21.03.2017 | Hoist Gate Problem |

BALIMELA GEN (60*6+75*2=510 MW)

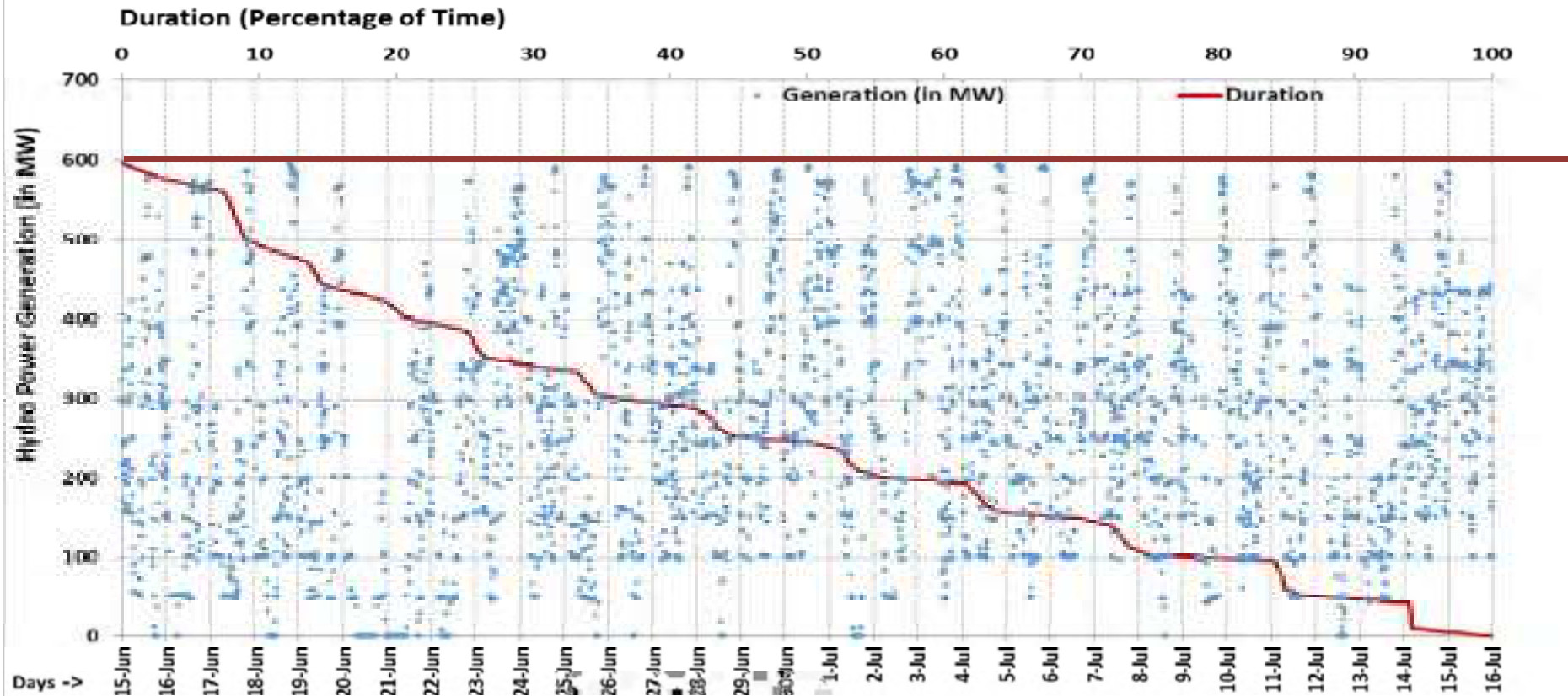


BALIMELA RESERVOIR LEVEL (CAP = 510 MW)

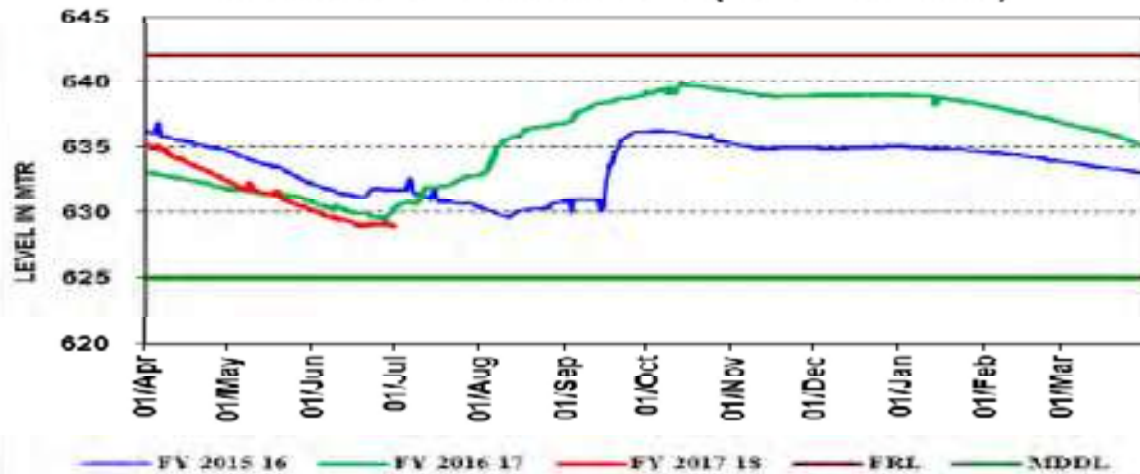


| Unit No | Date of Outage | Reason of Outage |
|------------|----------------|---------------------|
| U – 1 (60) | 05.08.2016 | R & M Work |
| U – 7 (75) | 16.04.2017 | Gen. Stator Problem |

INDRAVATI GEN (150*4=600 MW)



INDRAVATI RESERVOIR LEVEL (CAP = 600 MW)



PPSP ($225 \times 4 = 900 \text{ MW}$)

