



Minutes of **136th OCC Meeting**

Date: 18.09.2017
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 136th OCC Meeting held on 30th August, 2017 at ERPC, Kolkata

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

PART A

Item no. 1: Confirmation of minutes of 135th OCC meeting of ERPC held on 24.07.2017

The minutes of 135th OCC meeting were uploaded in ERPC website and circulated vide letter dated 09.08.2017 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 135th 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 **July, 2017** as follows:

1. 400kV Kolaghat- New Chanditala (LILO of 400kV Jeerat- Kolaghat SC at New Chanditala) charged for the first time at 14:46Hrs of 03.07.17.
2. 400kV Jeerat-New Chanditala (LILO of 400kV Jeerat- Kolaghat SC at New Chanditala) charged for the first time at 16:42Hrs of 03.07.17.
3. New PPSP-Arambag Ckt-1 (LILO of 400kV PPSP-Arambag Ckt-1 at New PPSP) charged for the first time at 19:13Hrs of 15/07/17.
4. PPSP-New PPSP Ckt-1 (LILO of 400kV PPSP-Arambag Ckt-1 at New PPSP) charged for the first time at 18:49Hrs of 15/07/17.
5. 50MVAR Bus Reactor-1 at New PPSP Substation charged for the first time at 19:00Hrs of 15/07/17.
6. 400kV New Ranchi-New PPSP-DC charged for the first time as follows:
 - a. Ckt-1: 20:08Hrs of 24/07/17.
 - b. Ckt-2: 20:50Hrs of 24/07/17.
7. 400kV Gorakhpur-Motihari (DMTCL) ckt-2 (LILO of 400kV Barh-Gorakhpur ckt-2) charged for the first time at 22:54Hrs of 31/07/17.

List of newly commissioned elements of WBSETCL in July 2017 is enclosed at Annexure-B1.

Constituents may update.

Deliberation in the meeting

Members noted.

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 135 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 ERPC, Odisha, Bihar, WBSETCL, Jharkhand and DVC.
5	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharsharif, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone & 132/33 kV GSS Kataiya	11/5/2015	Feb'2017	64.22 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		Tendering in process.
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 Station			1.39 Cr		Award placed to ABB. Material delivery by Dec, 17.
		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.			22.35 Cr		Tendering unde progress.
12a	ERPC	Training for Power System Engineers					<i>The proposal was approved by Appraisal Committee. The approval from MoP, GOI is awaited.</i>
12b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents					

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.

In 135th OCC, 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.

Respective constituents may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

WBSETCL placed the details of two schemes approved by the PSDF monitoring committee as follows:

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 136 th OCC
1	WBSETCL	Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17				
2	WBSETCL	Installation of switchable reactor & shunt capacitors	22-05-17				

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.

In 135th OCC, 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.

Subsequently, PRDC informed that data from DVC and OPTCL has been received however; Powergrid data is yet to be received.

PRDC may update.

Deliberation in the meeting

PRDC informed that the data is still pending from few substations.

OCC advised PRDC to consider SCADA data for pending substations and advised to finalize and submit the report at the earliest.

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

UFR Healthiness Certification for the month of July, 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, Powergrid-Odisha & NTPC (TSTPS) have submitted the healthiness certificate for the month of July, 2017.

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

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

Deliberation in the meeting

OCC advised Teesta-III, Jorethang, Dikchu, Chuzachen, JITPL & Powergrid to submit the healthiness certificate.

OCC felt that healthiness certificate for SPS of 132 kV Muzaffarpur-Dhalkebar D/C line may also be submitted on monthly basis and advised Powergrid to submit the healthiness certificate in every OCC meeting.

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 comply.

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 July, 2017 has been received from CTPS, DVC, NTPC, JUSNL, BkTPS, Tata Power and CESC.

Members may note.

Deliberation in the meeting

Members noted.

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.

In 135th OCC, WBPDC informed that order has been placed to ABB for implementation of Bandel islanding scheme.

WBPDC may update the latest status.

Deliberation in the meeting

Members noted.

Item No. B.8: Request for LILO arrangement in 132kV Lalmatia-Dumka D/C line at loc. 89 for supplying construction power at 132kV level to 2x800 MW Thermal power plant at Godda by M/s Adani power--JUSNL

JUSNL vide letter dated 18-08-2017 informed that M/s Adani Power Jharkhand Ltd. (APJL) is setting up 2x800 MW thermal power plant at Godda. Availing power supply for construction M/s

Adani Power has requested for construction of LILO of 132kV Dumka-Lalmatia D/c line at loc. 89 on cost deposit basis. Details are enclosed at **Annexure-B8**.

132kV Lalmatia-Dumka D/C line is covered under Farakka islanding scheme.

Members may discuss.

Deliberation in the meeting

It was informed that the PLCC of 132kV Lalmatia-Dumka D/C line is being used under Farakka islanding scheme, so the LILO of both ckts might reduce the reliability of PLCC system and hamper the operation of Farakka islanding scheme.

In view of above, OCC decided that LILO of one ckt of 132kV Dumka-Lalmatia D/c line may be done for meeting the requirement of construction power of 2x800 MW power plant of M/s Adani Power.

Item No. B.9: Flexible jumpering arrangement for bypassing substations, prone to inundation during monsoon, for ensuring continuity of important corridors and power evacuation from power stations--ERLDC

During the current monsoon season, quite a few substations in Eastern Region viz. Alipurduar(PG), Kishanganj(PG), Dalkhola(PG) and Motihari(DMTCL) had to be completely shutdown, due to massive waterlogging. Outage of Kishanganj S/Stn posed constraint in power evacuation of Sikkim generators and surplus power of NER while outage of Alipurduar S/stn weakened the inter-regional connectivity between ER and NER. Such substations typically have 2 nos incoming and 2 nos outgoing lines and lie either along a major intra/inter-regional corridor or along the evacuation route of a major power station.

Under the above mentioned situation, it is desirable that continuity of the transmission corridor be maintained by directly connecting the incoming and outgoing lines, bypassing the inundated substation. However, such network re-configuration is possible only if facility for jumpering conductors at appropriate locations is already in place. This practice is already being followed at a number of locations in Western Region.

Members may please identify the substations where the above proposed arrangement can be utilised for maintaining grid security under flood situations.

Members may discuss.

Deliberation in the meeting

*ERLDC explained that the flexible jumpering arrangement may be done for 400 kV Binaguri-Kisheenganj-N.Purnea D/C and 400kV Binaguri-Alipurduar-Bongaigaon D/C lines for bypassing the LILO points i.e. 400kV Kishanganj(PG) and Alipurduar(PG) S/s so that the same lines may be directly connected during the emergencies like flood situations at LILO points. The possibility may be explored as these elements are very important in terms of hydro power evacuation and long outages of these elements may endanger the grid security. The details are enclosed at **Annexure-B9**. The other such elements (LILOed at Dalkhola, Motihari (DMTCL) etc) may also be explored which are under threat during flood and other emergencies.*

OCC felt that such kind of bypassing arrangement will help the grid to improve the reliability during emergencies when substation is not available in service.

OCC advised Powergrid to explore the possibilities of implementing such bypassing arrangement for above elements and for other important elements, if any.

Powergrid agreed to do the survey and explore the possibilities.

Item No. B.10: Concerned members may update the latest status.

B.10.1. 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.

In 135th OCC, 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.

Members may discuss.

Deliberation in the meeting

OPTCL informed that construction of dedicated 400 kV Vedanta- Jharsuguda line has been completed except 800m stringing which involves crossing of two 400 kV lines. The stringing work is being done manually because of severe rains. However, OPTCL assured that the line would be commissioned by September, 2017 in all respects.

OPTCL requested to extend the deadline for removal of LILO till the restoration of 400 kV Vedanta-Meramundali D/C line which is expected by 2nd week of September, 2017.

OCC advised OPTCL not to link the restoration of 400 kV Vedanta-Meramundali D/C line and stressed for early commissioning of 400 kV Vedanta-Jharsuguda line at least by ensuing TCC/ERPC meetings.

With above view OCC referred the issue to TCC for further guidance.

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.

In 135th OCC, OPTCL was advised to submit the present SPS settings to ERPC and ERLDC within a week.

SLDC OPTCL and Vedanta may update.

Deliberation in the meeting

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

B.10.2. 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.

In 135th OCC, 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.

Powergrid may update.

Deliberation in the meeting

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.10.3. Status of Installation of STATCOM in Eastern Region

In the 15th meeting of SCM it was agreed to install STATCOM in combination with mechanically switched Reactors (MSR) and Capacitors (MSC) and co-ordinated control mechanism of MSCs and MSRs at Ranchi, Rourkela, Jeypore and Kishanganj substations in Eastern Region as given below

SI No	Location /Sub-Station of POWERGRID in ER	STATCOM -Dynamic Shunt Controller (MVar)	Mechanically Switched Compensation Sl. (MVar)	
			Reactor (MSR)	Capacitor(MSC)
1	Rourkela	±300	2x125	
2	Kishanganj	±200	2x125	
3	Ranchi(New)	±300	2x125	
4	Jeypore	±200	2x125	2x125

The matter was again discussed in the 28th ERPC/TCC meeting held on 12th -13th September, 2014 at Goa, wherein, it was decided that POWERGRID may go ahead with implementation of the STATCOM project in Eastern Region with debt – equity ratio of 70:30 funding. The debt part should be refunded through PSDF and Equity Component (30%) to be funded by POWERGRID to be recovered through regulated tariff mechanism. CTU should initiate the process of availing fund from PSDF.

POWERGRID may kindly inform tentative dates for commissioning of STATCOMs at the above mentioned locations.

Deliberation in the meeting

Powergrid updated the status as follows:

SI No	Location /Sub-Station of POWERGRID in ER	STATCOM - Dynamic Shunt Controller (MVar)	Mechanically Switched Compensation Sl. (MVar)		Latest status
			Reactor (MSR)	Capacitor (MSC)	
1	Rourkela	±300	2x125		Expected to complete by Mar 2018
2	Kishanganj	±200	2x125		Expected to complete by Jan 2018
3	Ranchi(New)	±300	2x125		
4	Jeypore	±200	2x125	2x125	Expected to complete by Jun 2018

It was informed that Powergrid is not placing any details about PSDF grant taken for this scheme in monthly OCC meetings.

OCC advised Powergrid send the details to ERPC Secretariat within three days so that the same can be placed before 7th NPC meeting scheduled to be held on 8th September, 2017.

Powergrid agreed.

B.10.4. 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 135th 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.10.5. 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 135th 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.10.6. 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj & Dhanbad

In 135th 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	commissioned on 25th 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 mentioned in above table.

B.10.7. 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Alipurduar & 2x500 MVA Rajarhat sub-stations

In 135th 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 (Twin moose)	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

Members noted.

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

I) 220 KV Chandil –Santaldih line

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.

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.

In 135th OCC, OPTCL informed that the auto reclose scheme will be implemented within 10 days.

JUSNL/WBPDCCL/OPTCL may update.

Deliberation in the meeting

It was informed that the PLCC of 220 KV STPS-Chandil line was put into service w.e.f 14.07.2017.

OPTCL informed that the PLCC system has been implemented on 27th July 2017.

Item No. B.12: 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 Bihar Shariff (PG)	Completed on 3 rd November, 2016
21) 220kV Bihar Shariff (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.erpc.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.13: 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	Sep, 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	Oct, 2017	BRS (Liluah S/Stn.) of CESC

Members may decide.

Deliberation in the meeting

Members noted.

Item No. B.14: 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.15: 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
- DGPC units

Members may note and update the status.

Deliberation in the meeting

Members noted.

Item No. B.16: 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 July, 2017 data has been received from OPTCL, CESC, DVC, WBSETCL, BSPTCL.

JUSNL may submit.

Deliberation in the meeting

JUSNL submitted the data.

Item No. B.17: 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 August-2017 is given below:

SI No	State/Utility	TTC import(MW)	RM(MW)	ATC (Import) MW
1	BSPTCL	4395	91	4304
2	JUSNL	842	100	742
3	DVC	603	52	551
4	OPTCL	1000	72	928
5	WBSETCL	3660	300	3360
6	Sikkim			

In 135th OCC, 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 WBSETCL.

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

Members may update.

Deliberation in the meeting

WBSETCL informed that details of inter tripping scheme at Jeerat have been sent to ERLDC. WBSETCL added that inter tripping scheme at Subashgram has been disabled.

OCC advised WBSETCL to share the details of inter tripping schemes at other substations, if any.

WBSETCL informed that they are having one more inter tripping scheme at Arambag the details of the same would be furnished to ERLDC.

Item No. B.18: 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 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.

In 135th OCC, Powergrid informed that they are taking shutdown from today and the reactor will be commissioned by 15th August, 2017.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the reactor will be commissioned by 10th September, 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.

In 135th OCC, Powergrid informed that line will be restored by 15th August, 2017.

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

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the line has been restored on 4th August, 2017.

c) 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 135th OCC, DVC informed that the line will be restored by 20th August, 2017.

DVC may update.

Deliberation in the meeting

DVC informed that because of sever rains and difficult site conditions the restoration of the line would be delayed by another one month.

d) 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.

In 135th OCC, Powergrid informed they are taking shutdown on 31st July 2017 to complete the work.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the reactor has been put in service but differential protection is getting operated because of some problem in the scheme.

Powergrid informed that the reactor would be brought into service after the rectification of the same which is expected by 10th September 2017.

Item No. B.19: 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.

In 135th OCC, ERLDC informed that the second meeting will be held on 4th August 2017 and the report will be placed by 10th August, 2017.

As advised by TCC, a committee with POWERGRID as a nodal agency has been formed in Eastern Region for assessment of old RTUs and further action on replacement. Subsequently, two meetings were held at ERLDC, Kolkata on 09th June 2017 & 04th August 2017.

A report has been finalized based on the suggestions received from the various committee members and the report is available in ERPC website (<http://erpc.gov.in/report/>).

Members may note.

Deliberation in the meeting

Members noted and referred to TCC.

Item No. B.20: 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.

In 135th OCC, 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.

Members may update.

Deliberation in the meeting

*ERLDC placed the details of substations where the communication and telemetry is getting effected due to power supply failures. The list is enclosed at **Annexure-B20**.*

Powergrid agreed to look and resolve.

Item No. B.21: 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.21**.

In 135th OCC, Powergrid agreed to complete the work within a month.

PGCIL may update.

Deliberation in the meeting

*ERLDC has placed the updated status. The status is enclosed at **Annexure-B21**.*

Powergrid agreed to complete the work at the earliest.

Item No. B.22: 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 status of telemetry data availability. The latest status is enclosed at Annexure-B22.

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

a) 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.

In 135th OCC, 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.

JITPL may update about the action plan for restoration of real time SCADA data, route diversion of data flow through POWERGRID Angul pooling station & voice connectivity integration with Orange exchange.

JITPL and ERLDC may update.

Deliberation in the meeting

JITPL informed that presently they are communicating ERLDC with a radio link, which is an interim arrangement and is not reliable and they are trying hard to maintain it. However, they had planned to make PLCC system operational for uninterruptable communication to ERLDC. But Powergrid is not allowing them to shift NSK modem of PLCC system from Bolangir(PG) S/s which is the property of JITPL.

JITPL added that they were in process of settling the commercial issues with Powergrid and requested Powergrid to cooperate.

OCC took serious note of the issue and felt Powergrid should not interrupt in establishing the proper communication system for SCADA/telemetry data to ERLDC. OCC felt that Powergrid

should not take up commercial issue by staking the grid security and advised Powergrid to take up the commercial issue separately.

b) Delay in restoration of 400kV JITPL-Angul line II on 04-08-2017

JITPL vide letter dated 09.08.2017 informed that they have received the charging code from ERLDC at 23:39 hrs on 04.08.2017. But the line could not be charged due to no communication from Angul S/s.

After repeated persuasion the line was charged at 11:19 hrs on 05.08.2017.

JITPL and Powergrid-Odisha may explain.

Deliberation in the meeting

JITPL informed that this is the third time Powergrid has delayed to charge the JITPL line because of pending commercial issues.

ERLDC informed that till date no information was made available by Powergrid on delayed charging of the line. In OCC meeting also Powergrid failed to give satisfactory explanation on delayed charging of the line.

OCC took serious note of delayed charging of the line and endangering the grid security by forcing a 2x600 MW power plant of JITPL connectivity through a single line.

After detailed deliberation, OCC felt that at the stake of grid security, Powergrid should not take up the commercial issues.

Further, OCC advised Powergrid to submit the reason for delayed charging at the earliest and decided to refer the issue to TCC.

Item No. B.23: Less Generation/ Pumping at PPSP, WBSEDCL --ERLDC

Since last few days, two units of PPSP were not running either in PUMP mode or Generation mode due to leakage in pipe lines between upper and lower dams. Due to outage of units of PPSP and lower side generation in other state generator, West Bengal is over drawing around 200 to 300 MW during peak hour.

WBSEDCL, may please inform the status of the PPSP generation revival plan and their planning of load management during PUJA days if PPSP problem would not solved.

Deliberation in the meeting

WBSEDCL informed that the issue has been resolved and PPSP generators are in service.

Item No. B.24: Despatch of power from Farakka-III under RRAS--ERLDC

The matter of participation of Farakka – III under RRAS was deliberated and discussed in 35th Commercial Committee Meeting of ERPC, Where in NTPC, Farakka – III sought some time to sort out the commercial implications with their corporate office.

NTPC, Farakka – III may please update the status.

Deliberation in the meeting

NTPC informed that Farakka Stage-III is ready to participate in RRAS.

OCC advised FSTPS Stage-III to furnish the necessary formats (AS-1, AS-2 & AS-3) at the earliest to commence the participation in RRAS.

Item No. B.25: Trans-National Exchange of Power (NLDC Agenda)

National Load Despatch Centre (NLDC) has been constituted as per Ministry of Power (MOP) notification, New Delhi dated 2nd March 2005 and is the apex body to ensure integrated operation of the national power system. One of the important function of NLDC as per clause 3(2) (i) of NLDC Rules, 2005 is to coordinate for trans-national exchange of power. This coordination function includes following activities:

- 1) First time charging
- 2) Operational Planning
- 3) Outage Coordination
- 4) Real Time Monitoring
- 5) Switching Coordination
- 6) Tripping Analysis
- 7) Maintaining records of power transfer

In this regard, it is to bring to the kind notice of the members that, NLDC is coordinating for trans-national exchange of power with Bhutan, Nepal and Bangladesh for 132 kV and above lines. However, in case of 132 kV lines between India and Nepal which are owned by erstwhile Bihar State Electricity Board (BSEB) are being operated without involving NLDC and ERLDC. These lines include 132 kV Balmiknagar (BSEB)-Surajpura S/C and 132 kV Kataiya (BSEB)-Duhabi S/C. 132 kV Raxaul – Parwanipur D/C is also expected to be commissioned shortly. In this regard, it is pertinent to mention here that 132 kV Rangia (Assam) – Motanga (Bhutan) line owned by AEGCL is also being operated by NLDC in coordination with Bhutan, Assam SLDC and NERLDC.

Therefore, all the states of Eastern Region are requested to take following actions with reference to the 132 kV & above lines with neighbouring countries:

- 1) Provide first time charging documents and take consent from ERLDC/NLDC before first time charging in accordance with NLDC procedure for interconnection of new transmission element.
- 2) Provide real time data of the lines and all other elements impacting power transfer on these lines.
- 3) Take real time code from NLDC/ERLDC for switching.
- 4) Inform NLDC/ERLDC regarding the quantum and limit of power flow.
- 5) Inform OCC and take approval from OCC for all planned outages.
- 6) Inform and take consent/approval from NLDC/ERLDC regarding the planned and emergency outages in accordance with NLDC Outage Planning procedure.
- 7) Inform NLDC/ERLDC regarding the details of tripping (including lines below 132 kV as well).
- 8) Inform NLDC/ERLDC regarding the power transfer on all lines (including lines below 132 kV as well) with neighboring countries on daily basis.

Members may discuss.

Deliberation in the meeting

OCC advised all the respective constituents to comply the above and share the above listed information to ERLDC and NLDC on regular basis.

Item No. B.26: 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.26.

POWERGRID may update the status.

Deliberation in the meeting

Powergrid informed that space provided for PMU installation at Farakka is already occupied and requested NTPC to allot space for installation of PMU.

NTPC agreed to look into.

Powergrid pointed that they are facing some problem at 400 kV FSTPS & Kolaghat S/s for installation of PMUs.

NTPC and WBPDCCL agreed to co-operate with Powergrid for installation of PMUs.

Item No. B.27: 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.27**.

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.28: 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.28**.

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

Members may update the latest status.

Deliberation in the meeting

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

Item No. B.29: 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 performance before constituents and subsequently the decision on replacement of the other time drifted meters will be taken up.

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.29**.*

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

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

In 135th OCC, 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.

Powergrid/ ERLDC may update.

Deliberation in the meeting

Powergrid informed that they will replace all the time drifted SEMs as prepared by ERLDC by September, 2017.

Item No. B.30: 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.

In 135th OCC, 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.

Powergrid may please update the status.

Deliberation in the meeting

Powergrid informed that firmware needs to be upgraded which is under progress. After the firmware upgradation the integration of Genus make meters with AMR will be established by September 2017.

Item No. B.31: 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).

In 35th CCM, It was decided that the drawal of auxiliary power from tertiary winding by Powergrid substations would be treated as state drawl for inter-regional accounting. Powergrid and the states would make back to back commercial arrangements for this power. ERLDC requested Powergrid to submit the requisite information such as meter no, CTR, PTR, etc in respect of those meters and also make meter readings available ontime.

Status of meter details and receipt of their data at ERLDC from Powergrid ER-I, ER-II and Odisha project is as below:

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 & Odisha 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	Balipada	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	Jeyapore		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

Powergrid may update.

Deliberation in the meeting

ERLDC informed that for Ara and Muzaffarpur they have received only two months data thereafter they are not receiving the SEM data.

Powergrid was advised to check and resolve it.

Powergrid updated that tertiary at Birpara and Siliguri were not in charged condition. The meter at Subashgram is defective and the same will be changed.

Item No. B.32: 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 under Electricity Act, 2003, BSPTCL was requested to co-ordinate with ERLDC for scheduling other Eastern Region beneficiaries of MTPS Stage-II.

In 135th OCC, JUSNL was advised to pursue with CTU for issuing the letter for LTA operationalisation for enabling the scheduling of JUSNL share from MTPS Stage-II.

JUSNL and KBUNL may update.

Deliberation in the meeting

It was informed that a petition (Petition No. 20/MP/2017) on a related issue was heard before CERC on 09.05.2017 and the final order is reserved till filling of additional information by the respondents.

Item No. B.33: 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.

In 135th OCC, BSPTCL informed that Samastipur data would be send from tomorrow.

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed that the issue has been resolved. .

Item No. B.34: 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 Measureme nts submitted	3rd set of Measureme nts submitted	4 th set of Measureme nts 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.35: 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 :

Sl 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 January2018	
2	Maithon	1stweek of June 2017	Completed on 04.04.17	1stWeek of February2018	
3	Rengali	2ndweek of June 2017	November 2017	Last week of November 2017	
4	U. Indarvati	3rdweek of June 2017	November 2017	2ndweek of February2018	
5	Subarnarekha	1stweek of October 2017		1stweek of January2018	
6	Balimela	3rdweek of October 2017		1stweek of March 2018	
7	Teesta-V	2ndweek of Nov 2017		Last week of February2018	
8	Chuzachen	Last Week of May2017	May, 2017	January2018	
9	Burla	Last Week of June 2017	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				

Members may update.

Deliberation in the meeting

Members noted.

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.

In 135th OCC, WBSEDCL informed that they have not received any comments from OEM.

ERLDC informed that making black-start functional at PPSP has therefore become uncertain as it is completely dependent on the OEM, who is not responding to the requirement of WBSEDCL. It may be noted that WBSEDCL had already sought 6 month time from CERC and no progress could be made even after expiry of 11 months. Since such delay and uncertainty in execution of the work is ultimately affecting the security of Eastern Regional grid, matter may be escalated to MOP / CEA for hiring the professional service of competent vendors / consultants so that black-start capability at PPSP could be operationalised within a definite target date.

WBSEDCL may update.

Deliberation in the meeting

WBSEDCL informed that they are putting all the efforts to implement the black start facility for PPSP.

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.36: 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 21.07.17, at 21:26 Hrs Generation loss of about 1031 MW Occurred at Korba STPS due to tripping of evacuation lines.*
- (2) On 02-03-17, 01:58 hrs, Unit I & II at Krishnapattanam tripped. Generation loss 1085 MW*

ERLDC may update.

Deliberation in the meeting

*ERLDC informed that as per CERC order dated 31st July 2017 in Petition No. 84/MP/2015, the commission shall closely watch the primary response of ISGSs as reported by POSOCO/NLDCs from September, 2017. ERLDC presented the details, which is enclosed at **Annexure-B36A**.*

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-B36B**. The list is also available in ERPC website.

Members may update.

Deliberation in the meeting

Members noted for compliance.

Item No. B.37: Status of state owned units under long outage --ERLDC

Numbers of units of state sector were decommissioned during recent days/months. As per the letter received from DVC on date 08th August, 2017, CTPC U#2, BTPS U#1&2 are under the process of de-commissioning as they have crossed their useful life and compliance of prevailing pollution norms is not feasible and CTPS U#1 is already de-commissioned.

All state sectors may update the latest status of units under de-commissioned or in the process of de-commissioning.

Deliberation in the meeting

It was informed that DVC has already furnished their status.

OCC advised West Bengal and Odisha generating units to submit their status to ERLDC and ERPC.

Item No. B.38: Reactive Power performance of Generators and optimisation of Transformer tap

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

Power Plant	Max and Min Voltage observed for July 17 (KV)	Date for monitoring (July 17)
Farakka STPS	424,400	1,2
Khalgaon STPS	423,404	9,27
Talcher STPS	409,396	2,21
Teesta	416,393	3,11
Bakreshwar TPS	413,400	2,16
Kolaghat TPS	427,398	2,16
Sagardighi TPS	425,406	2,27
MPL	420,407	1,27
Mejia-B	423,411	1,27
DSTPS	428,412	16,18
Adhunik TPS	426,410	2,21
Barh	439,411	9,27
JITPL	415,404	21,23
GMR	415,405	13,28
HEL	434,397	9,27
Kodarma	425,402	9,27

ERLDC may present the reactive performance.

Deliberation in the meeting

*ERLDC presented the performance of the generators for July, 2017 and informed that the performance of Mejia #7&8, Barh unit #4&5 and Haldia unit #1&2 were not satisfactory. Presentation is enclosed at **Annexure-B38**.*

OCC advised NTPC and CESC to take the corrective actions to improve the performance.

a) Schedule for reactive capability tests

The following was status of regarding reactive capability testing:

- a. Adhunik TPS(both units) –Yet to be confirmed by Adhunik
- b. JITPL(both units) – After the emergent inspection of OEM(BHEL)
- c. Barh TPS – December 2017
- d. Raghunatpur – by December 2017
- e. GMR (Three units)
- f. Haldia TPS

Members may update.

Deliberation in the meeting

Members updated the status as mentioned above.

b) Transformer tap optimisation of Eastern Region :

1. Present tap position of 220/132KV, ICTs at Malda is 10(ten). Based on operational study, the voltage may be optimised by changing transformer tap from 10 to 8.
2. Tap position of 220/132KV, 160MVA ICT at Lalmatia is set to 5(five). For improvement of 132kV voltage, the tap position may be changed from 5 to 7(Seven).

Members may discuss.

Deliberation in the meeting

After detailed deliberation OCC advised to change the tap of 220/132 kV Malda ICTs from 10 to 8 and Lalmatia ICT tap on later stage.

PART C:: OPERATIONAL PLANNING

Item no. C.1: ER Grid performance during July, 2017

The average consumption of Eastern Region for July - 2017 was 394 Mu. Eastern Region has achieved record maximum energy consumption of 429 Mu on 17th July-17. Total Export schedule of Eastern region for July - 2017 was 2529 Mu, whereas actual export was 2399 Mu.

ERLDC may present.

Deliberation in the meeting

*ERLDC has presented the performance of the Eastern Region grid during July 2017. Presentation is enclosed at **Annexure- C1**.*

Item no. C.2: 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.

In 135th OCC, ERLDC presented the performance in peaking mode for hydro generations in Eastern Region.

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

As informed by ERLDC, during review it was observed numbers of hydro units of state sectors were under outage due to various reasons and also some units were running at de-rated capacity compare to their installed capacity.

In this regards, it is requested to all State (through SLDC), ISGS and IPP owned hydro generators to update the status of the hydro units on bar, hydro units under outage along with reason to ERLDC and ERPC on daily basis in the following format. Hydro units which are unable to generate as per installed capacity may be intimated to RLDC and RPC on monthly basis.

Hydro unit outage status:

S.No	Station	Location	Owner	Unit No	Capacity	Reason(s) of Outage	Outage Date	Outage Time	Expected Revival Date
1.									
2.									
n.									

Hydro Units running at De-rated Capacity:

S.No	Station	Location	Owner	Unit No	Capacity	De-Rated capacity	Reason of operation at De-rated
1.							
2.							
n.							

Members may update.

Deliberation in the meeting

*ERLDC presented the performance of Hydro generators for July 2017. Presentation is enclosed at **Annexure-C2**.*

OCC advised all the hydro generators to submit the requisite data to ERLDC and ERPC in the prescribed format on regular basis.

Item no. C.3: Anticipated power supply position during September'17

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of September'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.3.

Members may confirm.

Deliberation in the meeting

*Modified anticipated power supply position for the month of September, 2017 after incorporating constituents' observations is given at **Annexure-C.3**.*

Item no. C.4: Shutdown proposal of transmission lines and generating units for the month of September'17

Members may finalize the Shutdown proposals of transmission lines and generating stations for the month of September'17 as placed at Annexure-C.4.

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

Deliberation in the meeting

*Approved maintenance programme of generators and transmission elements for the month of September, 2017 is given at **Annexure-C.4**.*

As informed by NTPC, unit 5 shutdown of NTPC Barh was scheduled from 17/8/2017. During this shutdown, originally boiler and generator works were to be undertaken. But based on failure experience in some latest 660 MW turbines of BHEL recently, they have recommended for overhauling and inspection of LP turbine also. As this recommendation was received very late, despite our best effort, the necessary logistic arrangement is delayed by 3-4 days. Now we propose to shutdown this unit on 20/08/2017, 24:00 hrs. The shutdown duration will be for one month (30 days). Unit is planned to be brought back on 20/09/2017.

Members may note.

Deliberation in the meeting

Members noted.

Item no. C.5: Prolonged outage of Power System elements in Eastern Region

(i) Thermal Generating units:

Sr No	Generating Station	UNIT NO	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE
1	APNRL	1	270	PA FAN TRIPPED	18-Aug-17
2	JITPL	1	600	COAL SHORTAGE	5-May-17
3	RAGHUNATHPUR	2	600	FURNACE PRESSURE HIGH	9-Aug-17
4	PATRATU TPS	10	110	OVER HAULING	26-Jan-17
5	KOLAGHAT	6	210	STATOR EARTH FAULT	11-Jun-17

6	BOKARO B	3	210	COAL SHORTAGE	24-Jun-17
7	MEJIA	4	210	COAL SHORTAGE	23-Jul-17
8	MEJIA	2	210	COAL SHORTAGE	25-Aug-17
9	BOKARO A	1	500	STATION TRANSFORMER TRIPPED	15-Aug-17
10	TENUGHAT	1	210	COAL SHORTAGE	25-Jul-17
11	SANTALDIH	5	250	ROTOR EARTH FAULT	30-Apr-17
12	DSTPS	1	500	TESTING OF HOUSE LOAD OPERATION	11-Jul-17
13	SAGARDIGHI	4	300	AUXILIARY FAILURE	17-Jul-17

(ii) Hydro Generating units:

Sr No	Generating Station	UNIT NO	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE
1	BALIMELA	2	75	Due to flood	18-08-17
2	BALIMELA	8	75	Due to flood	18.08.2017
3	BALIMELA	7	75	Generator Stator Problem	16.04.2017
4	RENGALI	5	50	Hoist gate problem	21.03.2017
5	U.KOLAB	3	80	Generator interturn fault	19.04.2017
6	TLDP-III	1	33	agitation / law and order issue	12.07.2017
7	TLDP-III	2	33	agitation / law and order issue	12.07.2017
8	TLDP-III	3	33	agitation / law and order issue	12.07.2017
9	TLDP-III	4	33	agitation / law and order issue	12.07.2017
10	TLDP-IV	1	40	agitation / law and order issue	13.07.17
11	TLDP-IV	2	40	agitation / law and order issue	13.07.17
12	TLDP-IV	3	40	agitation / law and order issue	13.07.17
13	TLDP-IV	4	40	agitation / law and order issue	13.07.17

(iii) 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
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
220 KV THERUVALI-INDRAVATI-III	16.07.17	TOWER COLLAPSE At loc 69 and loc70 due to flood
220 KV THERUVALI-INDRAVATI-IV	16.07.17	TOWER COLLAPSE At loc 69 and loc70 due to flood
220 KV Kishanganj(PG)-Kishanganj (B) I	13.08.17	HAND TRIPPED DUE TO FLOOD IN KISHANGANJ SWITCHYARD
220 KV Kishanganj(PG)-Kishanganj (B) IV	13.08.17	HAND TRIPPED DUE TO FLOOD IN KISHANGANJ SWITCHYARD
400KV MOTIHARI-BARH-I & II	14.08.17	24 NO OF TOWERS IN GANDAK RIVER WHERE WATER LEVEL IS HIGH

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

Members may update.

Deliberation in the meeting

Members noted.

Item no. C.6: 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.

PART D:: OTHER ISSUES

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

System frequency touched a maximum of 50.23 Hz at 08:00 Hrs of 06/07/17 and a minimum of 49.69 Hz at 20:56 Hrs of 08/07/17 and 18:59 Hrs of 19/07/17. 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 July'17.

Members may note.

Deliberation in the meeting

Members noted.

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

Sr No	GD/GI	Date	Time	S/S involved	Affected System	Summary	Load loss (MW)	Gen loss (MW)
1	GD-I	03/07/2017	18:32	Lalmatia	JUSNL	Total loss of power supply occurred at Sahebgunj and Lalmatia after hand tripping of all 132 kV & 220 kV lines connected to Lalmatia S/S due to DC failure at Lalmatia.	76	0
2	GD-I	03/07/2017	18:53	Patna	ISTS	On mal-operation of Bucholtz relay due to ingress of moisture through cables during rain, 400/220 kV 500 MVA ICT - I at Patna tripped at 18:53 hrs. Prior to the tripping, total loading of the ICTs was 571 MW. After tripping of ICT - I, loading at other 400/220 kV ICT (315 MVA) at Patna increased to 430 MW. At 19:14 hrs, 400/220 kV ICT - II tripped due to overload resulting load loss at surrounding area.	536	0
3	GD-I	13/07/2017	20:18	Bokaro-B	DVC	At 20:18 hrs, all 220 kV feeders along with 400/220 kV ICTs (connected to 400 kV Bokaro A bus) and 220/132 kV ATRs at Bokaro B tripped due to bus bar protection operated for R phase PT failure at 220 kV Bokaro B main bus. Heavy thundering was reported at Bokaro end.	201	0
4	GD-I	15/07/2017	09:40	Lalmatia	JUSNL	132 kV Kahalgaon(BSPTCL) - Lalmatia S/C tripped at 09:50 hrs on E/F causing load loss of 22 MW at Sahebgunj. 132 kV Kahalgaon(NTPC) - Lalmatia S/C also tripped at the same time from Lalmatia on E/F. 132 kV Kahalgaon(BSPTCL) - Lalmatia S/C & 132 kV Kahalgaon(NTPC) - Lalmatia S/C tripped again at 13:54 hrs on E/F.	22	0
5	GD-I	16/07/2017	00:30	Teesta III	ISTS	400 kV Teesta III - Dikchu S/C (tripped only from Teesta III end) and Unit #1 at Dikchu tripped due to operation of cable differential protection (B phase current 1.1 kA at Teesta III) resulting generation	0	100

						loss at Unit # II at Dikchu due to loss of evacuation path.		
6	GD-I	24/07/2017	15:56	Teesta III	ISTS	400 kV B/C at Teesta III tripped on receipt of SPS signal resulting in tripping of unit I, II & IV. However both circuits of 400 kV Rangpo - Binaguri D/C were in service. Flow in 400 kV Rangpo - Binaguri D/C was around 800 MW/Ckt. Rangpo personnel verbally confirmed non increment of TX counter dedicated for transmitting SPS signal.	0	670
7	GD-I	24/07/2017	19:11	Teesta III	ISTS	Due to Rotor Earth Fault in Unit #5, there was a dip in DC Voltage during Unit 5 Start-up (DC Field Flushing) leading other synchronized units to No Load Operation.	0	420
8	GD-I	27/07/2017	10:08	Teesta III	ISTS	At 10:08 hrs 400 kV Rangpo – Binaguri – II tripped due to B-N fault. (DEF, F/C at Rangpo and DT received at Binaguri). After tripping of circuit – II, power flow in 400 kV Rangpo – Binaguri – I became more than 850 MW (1700 MW approx.) and SPS – I (generation reduction at Teesta III, Dikchu, JLHEP and Chujachen.) got activated resulting tripping of one unit at each power plant at Chujachen, JLHEP and Dikchu. Due to non-tripping of any unit at Teesta III, power flow in 400 kV Rangpo – Binaguri – I remained more than 850 MW for more than 500 ms and SPS – II got activated resulting tripping of 400 kV Teesta III – Rangpo S/C followed by tripping of remaining units at Teesta III and Dikchu due to loss of evacuation path.	0	1070
9	GD-I	31/07/2017	11:24	Tarkera	OPTCL	B phase isolator drop jumper of 220 kV Tarkera - Chandiposh - Rengali snapped at Tarkera end at 11:24 hrs. But relay at Tarkera end failed to operate due to DC failure in relay panel of same line resulting tripping of all elements connected to 220 kV Bus at Tarkera due to LBB operation.	150	0

Multiple elements tripping without load loss

1	GI-I	19/07/2017	10:50	Dalkhola	ISTS	Due to operation of bus bar protection of bus - I, 220 kV Dalkhola - Kishangunj D/C and 220 kV Dalkhola - Purnea D/C tripped.	0	0
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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 July, 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. Sustain Under-injection by ISGS generators during RRAS—ERLDC

During July and August 2017, NLDC triggered RRAS UP for ISGSs generators of Eastern Region on several occasions. However it is observed that some of the ISGS failed to maintain their generation as per schedule and continuous under-injection was observed during the above mentioned period.

As per section 5.4 of Detailed Operating procedure of RRAS, "The continuity of the RRAS shall be ensured by the RRAS provider over the period of the despatch". However, this was continuously violated by ISGS stations of ER.

As per clause 9.13 of Detailed Operating procedure of RRAS

Quote -

Sustained failure, i.e. failure to provide the RRAS (barring unit tripping) by RRAS Provider(s) more than three (3) times during a month shall be brought to the notice of the CERC

- Unquote

Detailed performance of ER ISGS from RRAS point of view would be presented during the meeting.

ISGSs are therefore requested to exercise due care while declaring their respective DCs, so that actual generation as per the total schedule issued, can be maintained by them.

Deliberation in the meeting

*ERLDC presented the performance of the RRAS provider generators during July & August 2017 and informed that in real time Barh, FSTPP stage I & II and KhSTPP stage I & II generators were failed to maintain their generation as per schedule. Presentation is enclosed at **Annexure-D5.1**.*

OCC advised NTPC to follow the RRAS schedule strictly.

OCC advised ERLDC to monitor the status for one week and even if there is no improvement, the action may be initiated as per the provisions of IEGC. Further, OCC advised ERLDC to place the status in next OCC meeting.

2. Delineation of O&M responsibilities of various assets of the ISTS--ERLDC

With opening up of transmission sector for private participation and rapid addition of new ISTS elements through TBCB route, multiple transmission licensees are now involved, in so far as ownership and maintenance of the regional ISTS is concerned. A single transmission line may be partly owned by one licensee and partly by the other, while the bay equipment, panels etc. at each of the ends may be owned / maintained by two different transmission licensees. In the above backdrop, as the apex body to ensure integrated operation of the regional power system, it becomes essential for RLDCs to be accurately aware of the scope

of responsibilities of each of the licensees, in order to discharge its responsibilities in a smooth and efficient manner.

A list of transmission elements in Eastern Region together with their ownerships as per information available with ERLDC is enclosed at **Annexure-D5.2**. It is requested to kindly go through the list and indicate the agencies responsible for maintenance of line, ensuring real time data, furnishing relay indication, DR etc. in respect of each of the elements and inform ERLDC wherever necessary updating / correction is required to be incorporated.

Deliberation in the meeting

OCC advised all the constituents to update the status as given in the annexure and send it to ERPC and ERLDC within a week.

3. Trail operational certificate for underground fiber optic link from Jakkanpur to SLDC, Patna- BSPTCL

End to end testing of UGFO link between Jakkanpur to SLDC, Patna has been carried out on 03-10-16. Route survey with M/S KEC was carried out on 31-05-17. It was observed that no marking to identify route, location of splice chamber and pits. No provision of clause of standard technical specification of UGFO of PGCIL was followed either regarding the route markers, construction of manholes, warning bricks etc. BSPTCL repeatedly requested PGCIL authorities to furnish the technical specification and the SAT procedure of UGFO, but the same has not been provided yet. This may affect the maintenance of UGFO link further. Details are enclosed at **Annexure-D5.3**.

Deliberation in the meeting

It was agreed that Powergrid and BSPTCL will do the joint inspection.

Powergrid agreed to provide the technical specification and SAT procedure of UGFO to BSPTCL.

4. Ethernet link for integration of Kishanganj SAS GSS with SLDC, Patna - BSPTCL

Synchronous Digital Hierarchy (SDH) has been installed in Kishanganj (PG) and approach cable laid out up to connecting SDH for integration of SDH of Kishanganj (New) GSS. Ethernet link for integration of SDH of Kishanganj SAS GSS with SLDC, Patna for monitoring of real time data and voice of 220/132/33 kV Kishanganj (New) GSS as well as connecting GSS for ULDC purpose is required on priority basis. Details are enclosed at **Annexure-D5.4**.

Deliberation in the meeting

Powergrid agreed to resolve the issue.

5. CONSTRUCTION OF BIRPARA GIS UNDER ERSS-XIV --Powergrid

- UNDER ERSS-XIV PACAKAGE, 132 KV AIS PART OF BIRPARA SS HAVING SMT SCHEME IS TO BE UPGRADED TO 132 KV DOUBLE MAIN SCHEME OF GIS SYSTEM.
- PRESENTLY GIS BUILDING WORK COMPLETED AND ALL THE GIS ACCESSORIES ARE ERECTED. NOW WE REQUIRE SHUT DOWN OF INDIVIDUAL FEEDERS OF 132 KV SYSTEM AND ALSO COMPLETE 132 KV SYSTEM (01 DAY) FOR COMMISSIONING OF GIS.

1	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	01.09.17	08:00 Hrs	01.09.17	17:00 Hrs	ODB	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA (WBSETCL)-I & BIRPARA(PGCIL)-BIRPARA (WBSETCL)-II
2	160MVA ICT-I (BIRPARA-PGCIL)	02.09.17	08:00 Hrs	02.09.17	15:00 Hrs	ODB	GIS BUSHING ERECTION WORK 132KV SIDE ICT-1 (160MVA ICT-1)

3	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	03.09.17	08:00 Hrs	03.09.17	15:00 Hrs	ODB	GIS BUSHING ERECTION WORK BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II
4	BOTH 132KV BIRPARA (PGCIL)-BIRPARA (WBSETCL) -I & 132KV BIRPARA (PGCIL)-BIRPARA (WBSETCL)-II	04.09.17	08:00 Hrs	04.09.17	12:00 Hrs	ODB	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I
5	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	05.09.17	08:00 Hrs	05.09.17	15:00 Hrs	ODB	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I
6	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	06.09.17	08:00 Hrs	06.09.17	15:00 Hrs	ODB	GIS BUSHING ERECTION WORK OF 132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I
7	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	07.09.17	08:00 Hrs	07.09.17	15:00 Hrs	ODB	GIS DUCT (OUT SIDE) ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)
8	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	08.09.17	08:00 Hrs	08.09.17	15:00 Hrs	ODB	GIS DUCT (OUT SIDE) ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)
9	160MVA ICT-II (BIRPARA-PGCIL)	09.09.17	08:00 Hrs	09.09.17	15:00 Hrs	ODB	GIS BUSHING ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)
10	ALL BAYS OF 132KV SIDE	18.09.17	08:00 Hrs	18.09.17	17:00 Hrs	ODB	FOR HV TESTING & PD TEST
11	160MVA ICT-I (BIRPARA-PGCIL)	20.09.17	07:00 Hrs	20.09.17	11:00 Hrs	ODB	FOR JUMPERING & CHARGING
12	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	20.09.17	12:00 Hrs	20.09.17	16:00 Hrs	ODB	FOR JUMPERING & CHARGING
13	160MVA ICT-II (BIRPARA-PGCIL)	21.09.17	07:00 Hrs	21.09.17	11:00 Hrs	ODB	FOR JUMPERING & CHARGING
14	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	21.09.17	12:00 Hrs	21.09.17	16:00 Hrs	ODB	FOR JUMPERING & CHARGING

Deliberation in the meeting

WBSETCL agreed to allow all the shutdowns during the morning periods and holidays except sl No 4 & 10.

OCC advised Powergrid to take the Shutdowns in consultation with WBSETCL.

6. SHUTDOWN REQUIREMENT FOR COMMISSIONING OF 2ND 500 MVA ICT AT MAITHON -- Powergrid

- EXISTING 500 MVA ICT IS NOW CONNECTED THROUGH ERS WITH 220 KV SIDE BAY NO: 206.
- AFTER FINAL COMMISSIONING OF 2ND 500 MVA ICT THE BAY CONFIGURATION WILL BE AS FOLLOWS:

ICT IDENTIFICATION	BAY NO (400 KV)	BAY NO (220 KV)
500 MVA (EXISTING)	428 & 429	213
500 MVA (UPCOMING)	423 & 424	206

Name of Element	From		To		Reason
	Date	Time	Date	Time	

500MVA ICT-1 Existing	17.09.2017	09:00	19.09.2017	17:30	<ol style="list-style-type: none"> 1. Dismantling of Jumper of 500MVA ICT-1 (Existing) and connection of Jumper of 500MVA ICT(new) in 220kV side, Removal of ERS Tower 2. Shifting of protection scheme for 220kV side for 500MVA ICT (New), since the said bay is being used by existing 500MVA ICT-1. Testing activity like differential stability etc.
315MVA ICT-2	22.09.2017	09:00	24.09.2017	17:30	<ol style="list-style-type: none"> 1. Erection of BPI, Connection of Jumper of 500MVA ICT-1 to 220kV bay of 315MVA ICT-2 (213). After that 315MVA ICT-2 will be taken out of service. 2. Shifting of protection scheme for 220kV side for 500MVA ICT-1, since the said bay is being used by existing 315MVA ICT-2. Testing activity like differential stability etc.

Deliberation in the meeting

OCC advised Powergrid to take the Shutdowns in consultation with DVC.

7. SHUTDOWN REQUIREMENT OF 220 KV ALIPURDUAR-SALAKATI-D/C FOR SHIFTING OF TOWER FROM LOC NO: 196. --Powergrid

220kV D/C Alipurduar-Salakati TL was switched off on 13.08.2017 at 16:58 Hrs due to bending of tower location no.-196 due to extreme flood in **Kaljani** River in an around Alipurduar Area.

Anticipating further tower bending may lead to collapse of tower and may raise safety concern, the line was switched off.

- ☉ FOR RESTORATION OF SUBJECT LOCATION 02 NO'S FOUNDATION WITH 400 KV TOWERS (DD+18) ENVISAGED.
- ☉ TENTATIVE S/D REQUIREMENT FOR RESTORATION OF THE LINE

SL NO	NAME OF ELEMENT	FROM DATE	FROM TIME	TO DATE	TO TIME	NATURE	REMARKS
01.	220 KV APD-SKT-D/C	30.09.17	09:00	20.11.17	15:00	OCB	FOR PERMANENT RESTORATION OF LOC NO: 196.

Deliberation in the meeting

OCC decided to defer this shutdown to winter season.

8. REQUIREMENT FOR SHIFTING OF DAMAGED ANCHOR TOWER-2 (MC) CARRYING: LILO IN & OUT PORTION OF 400 KV BINAGURI-PURNEA (Ckt: 3 & 4) & ANCHOR TOWER-1 (MC) CARRYING LILO IN & OUT PORTION OF 220 KV SILIGURI-DALKHOLA-D/C AT KISHANGANJ. --Powergrid

- ⦿ DURING CONSTRUCTION THE TOWERS ARE ALMOST 250 METERS AWAY FROM RIVER COURSE BUT DUE TO RAPID COURSE CHANGE OF MAHANANDA RIVER ALONG WITH TREMENDOUS SOIL EROSION FROM RIVER BANKS NEAR AREA BARMASIA VILLAGE/BIHAR NEAR POWERGRID KISHANGANJ S/S.
- ⦿ DUE TO RECENT FLOOD IN BIHAR THE SUBJECT TOWERS HAVE BECOME MORE VULNERABLE AND RECENT INSPECTION SHOWS HEAVY SOIL EROSION FROM BOTTOM OF FOUNDATION RESULTING IN SINKING OF EXISTING FOUNDATION (01 LEG).

Deliberation in the meeting

OCC advised Powergrid to keep a close watch in the scenario and take necessary action.

9. SHUTDOWN REQUIREMENT OF 400 KV ANDAL-JAMSHEDPUR-D/C FOR PORCEALIN INSULATOR DAMAGED BY MISCREANTS. --Powergrid

- ⦿ NEAR BORDER AREA OF BENGAL & JHARKHAND, NAMELY "DALMA WILDLIFE SANCTUARY & MANIQUE FOREST" 400 KV ANDAL-JAMSHEDPUR-D/C & MAITHON-MEJIA-D/C PASS THROUGH.
- ⦿ THE AREA CONSISTS OF FORESTS AS WELL AS HILLY AREA CORRIDOR AND ALSO A KNOWN HABITAT FOR LOCAL TRIBALS. WE ARE FACING INSULATOR BROKEN INCIDENTS IN THE SUBJECT CORRIDOR MAY BE DUE TO SOME ACTIVITY BY THE HABITATS.

Deliberation in the meeting

OCC agreed to allow shutdown and advised Powergrid to replace the damaged insulators.

Meeting ended with vote of thanks to the chair

Participants in 136th OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 30.08.2017 (Wednesday)

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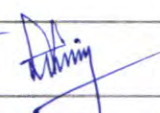
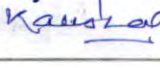


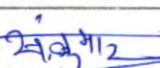
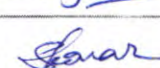
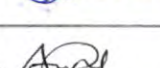
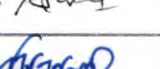
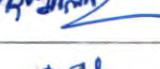
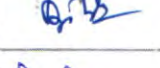

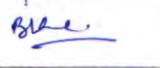
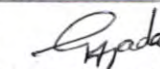
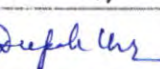
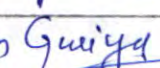
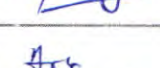

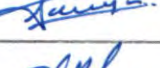


"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

Participants in 136th PCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata

Time: 11:00 hrs

Date: 30.08.2017 (Wednesday)

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39	P. K. Kundu	CE, WBSETCL	9434910030	ce.wbsetcl@gmail.com	
40	N.G. Saha	DGM, WBPDCL	8336903700	ngsaha@wbpdcl.co	

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Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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55	S. P. Moitra	ACE, ALDC WBSLDC	7449300334	shyamamoitra@gmail.com	
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58	R. Biswas	SM/ALDC/DPZ	9434735985	ssldc-dpps@gmail.com	
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60	D. K. Bauri	EE, ERPC	9883618236	eeof.erpc@gov.in	

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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 July 2017 in WBSETCL System.

Sl. No	Name of the Elements	Date	Time	Remarks
1.	400/220 KV New Chanditala S/S: a) 400 kv JRT –N.Chanditala # b) 400 kv M.B -1 c) 400 kv M.B -2 d) 400/220 kv 315 MVA Tr.1 e) 400 kv N.Chanditala –KTPP #	03.07.17	14:44 Hr. 14:46 Hr. 15:03 Hr. 15:28 Hr.(HV only) 16:40Hr.(N.Chand)/ 16:42 Hr.(KTPP)	a) Charged from JRT. b) Via JRT # bay c)Through busccoupler d) Via M.B-1 e)Via M.B-2 at N.Chanditala
2.	Kalyani: 132/33 kv 50MVA Tr.#3	12.07.17 13.07.17	15:47hr(HV) 12:25hr.	No load charge Loaded
3.	Sadaipur: 132/33 kv 50MVA Tr.#1	12.07.17 13.07.17	16:51hr(HV) 12:06hr	No load charge Loaded
4.	400KV New PPSP S/S: a)400 kv PPSP –N.PPSP#1 b)400 kv M.B -2 c) 400 kv 80 MVAR Reactor d) 400 kv M.B-1 e) N.PPSP- Arambag # 1	15.07.17	18:43 Hr. 18:49 Hr. 19:00 Hr. 19:03 Hr. 19:09 Hr.(ARAM)/ 19:13 Hr.(N.PPSP)	a) charged from PPSP . b) via PPSP #1 bay. c) Via Tie Bay. d) through Bus-Coupler. e)Power flow starts via NewPPSP 400kv S/S
5.	400KV New PPSP S/S: a) 400 kv N.PPSP-New Ranchi #1 b) 400 kv N.PPSP- New Ranchi#2	24.07.17	19:39 Hr.(N.Ranchi)/ 20:08 Hr.(N.PPSP) 20:58 Hr.(N.PPSP)	a) at M.B-1 of N.PPSP b) at M.B-1 of N.PPSP

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

WBSETCL

**JHARKHAND URJA SANCHARAN NIGAM LIMITED**

(CIN No. – U40108JH2013SGC001704)

Regd. Office – Engineering Building, H.E.C., Dhurwa, Ranchi – 834 004

Agenda for OCC meeting of ERPC meeting

Sub: Permission for LILO arrangement in 132 kV D/C Lalmatia – Dumka Transmission line at location no. 89 for supply of construction power at 132 kV level to proposed 2x800= 1600 MW Thermal Power Plant at Godda by M/s Adani Power Ltd.

Background

M/s Adani Power Jharkhand Ltd. (APJL) is setting up a 2x800 MW Thermal Power In Godda District for construction work of thermal project M/s Adani Power has submitted the requirement of construction power (5 to 7.5 MVA) as per schedule given below :-

- (i) Below 2 MVA from (August – December 2017)
- (ii) 2 MVA – January to June 2018
- (iii) 3 MVA – July to December 2018
- (iv) 5 MVA – January to December 2019
- (v) 7.5 MVA – January to December 2020

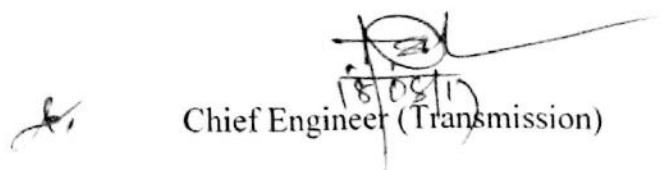
And further requirement for commissioning power up to 40 MW (Peak load) January 2021 to June 2021.

For the fulfillment of above requirement and for availing reliable and un interrupted power supply M/s Adani Power has requested for permission of construction of LILO of 132 kV D/C Dumka – Lalmatia Transmission Line at location no. 89 on cost deposit basis.

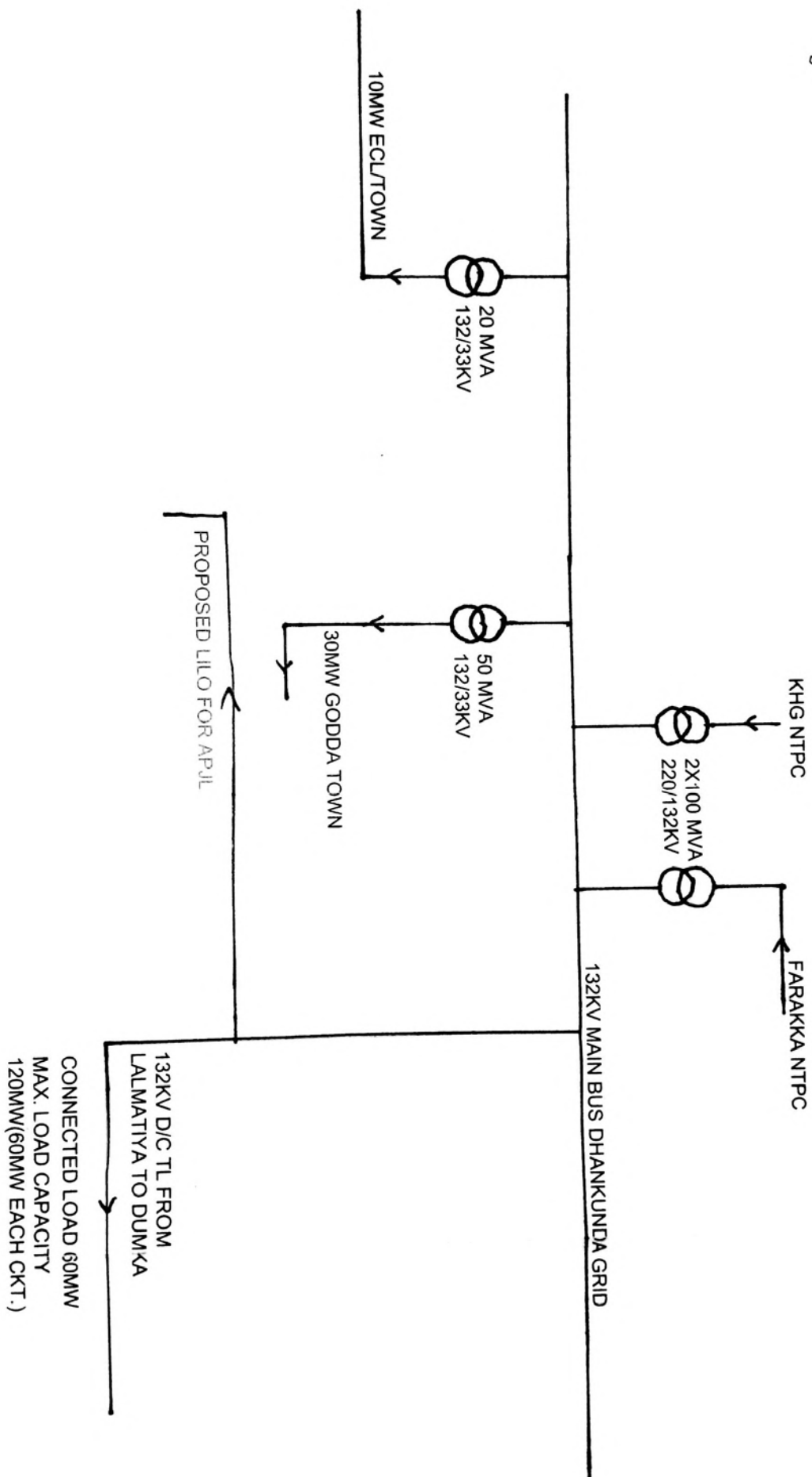
Proposal has been checked and recommended by respective GM-cum-CE, Transmission Zone-II, Dumka. However, proposal was sent to Chief Engineer (SLDC) for their opinion (comment) on this LILO. As per Chief Engineer (SLDC) this 132 kV D/C Lalmatia – Dumka Transmission line has been covered under islanding scheme considering all the route of GSS Lalmatia, Dumka, Deoghar, Jamtara, Sahebganj, Pakur etc. This islanding scheme has been designed by PGCIL in light of direction of ERPC.

Point of Discussion

The matter of LILO of 132 kV D/C Lalmatia – Dumka Transmission line to provide construction power to proposed 2x800 MW Thermal Power Station at Godda by M/s Adani Power may be discussed in OCC meeting of ERPC for decision and approval.


Chief Engineer (Transmission)

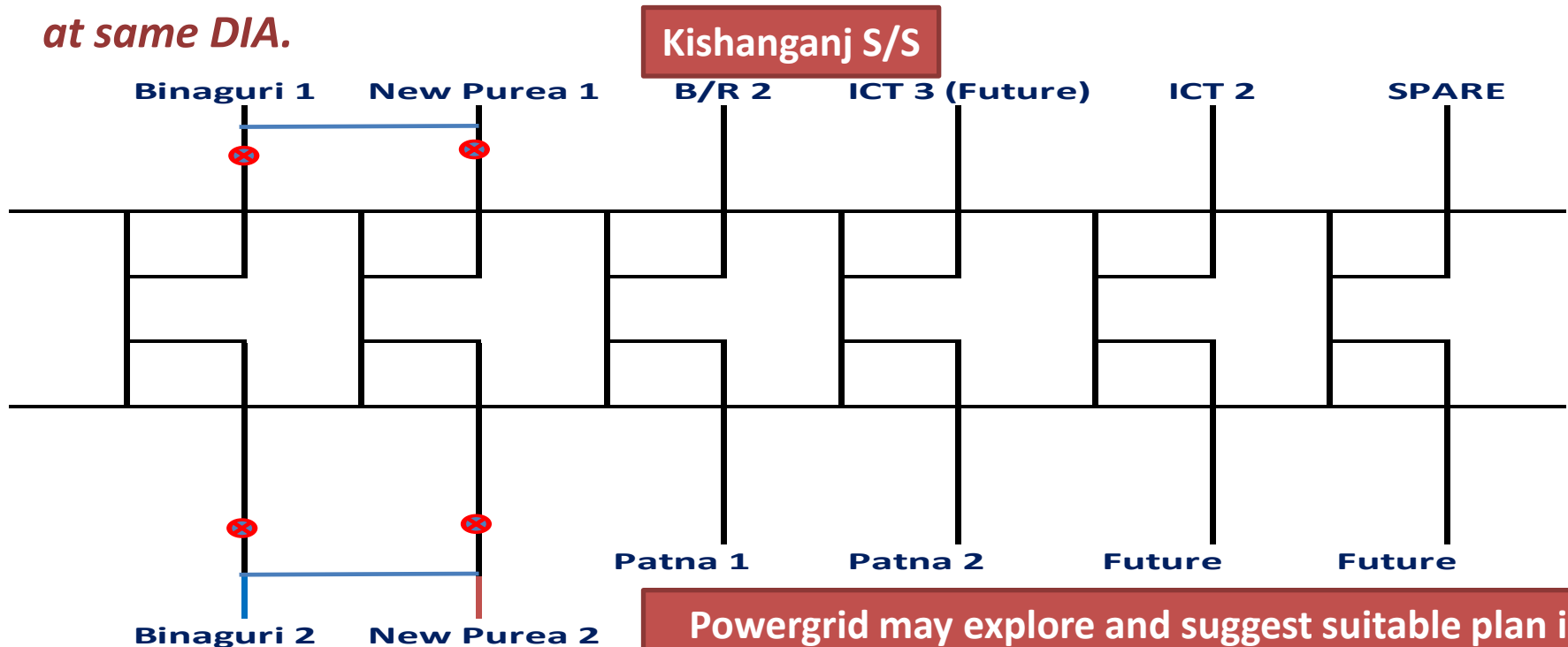
FEASIBILITY DRAWING FOR LILO OPTION



Proposal to avoid difficulties at Kishanganj S/S

Annexure-B9

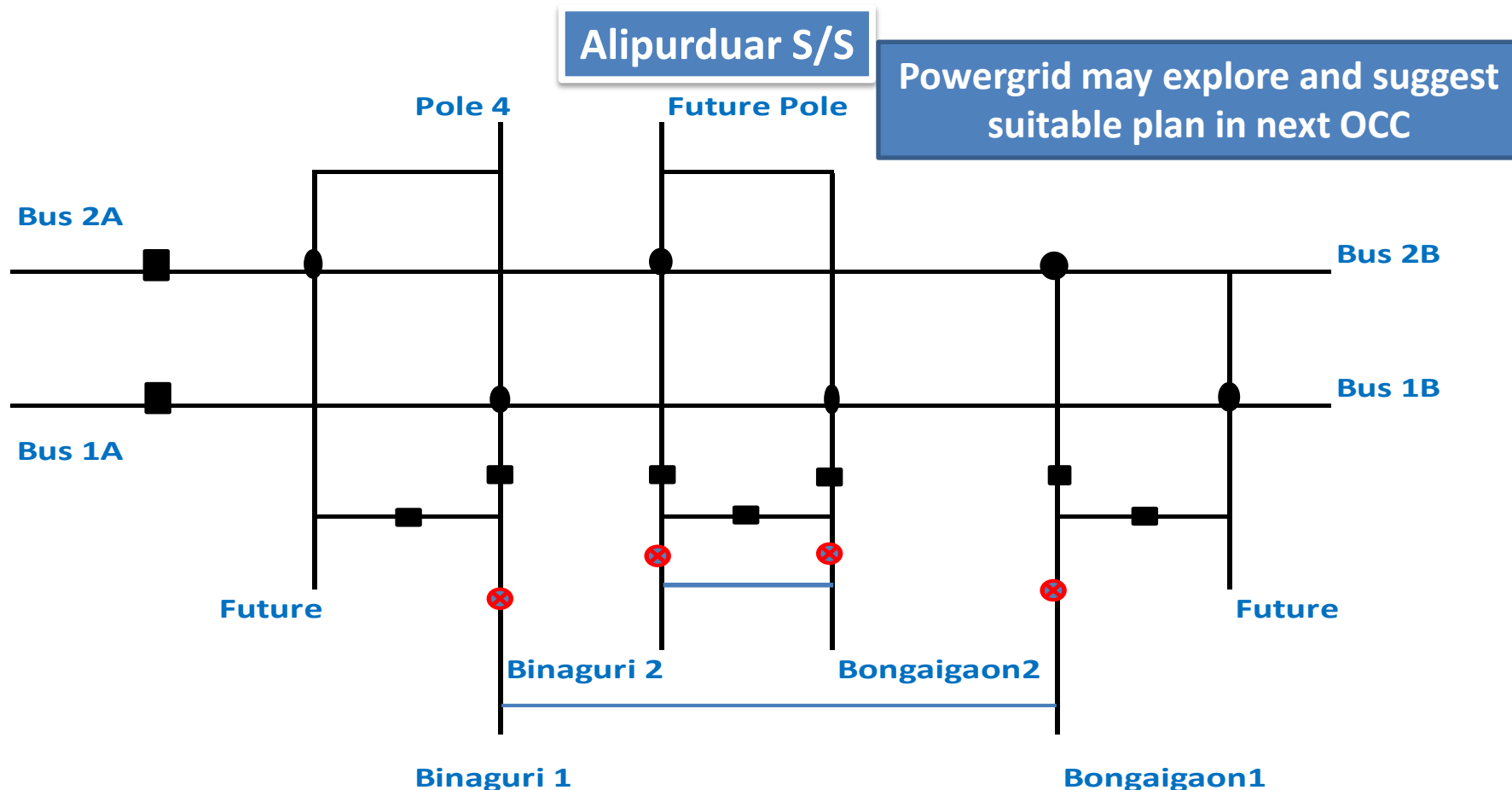
- 400kV Binaguri - Purnea 3 &4 were made LILO in Kishanganj S/S. At Kishanganj S/S both Binaguri – 1&2 and Purnea – 1&2 line are in the same dia.
- In case of the emergency situation as discussed, the continuity Binaguri – Purnea could not be made by suitable switching arrangement at Kishanganj S/S.
- Continuity of 400 kV Binaguri – Purnea direct ckt in case of exigency could be made by *either make a temporary arrangement to directly connecting the incoming and outgoing lines within S/S, bypassing the substation* or *Make suitable bay arrangement at Kishanganj so that Binaguri – Purnea to be located at same DIA.*



Powergrid may explore and suggest suitable plan in next OCC

Proposal to avoid difficulties at Alipurduar S/S

- 400kV Binaguri - Bongaigaon 3 &4 were made LILO in Alipurduar S/S.
- Continuity of 400 kV Binaguri – Bongaigaon direct ckt in case of exigency could be made by *either make a temporary arrangement to directly connecting the incoming and outgoing lines within S/S, bypassing the substation* or *Make suitable bay arrangement at Kishanganj so that Binaguri – Purnea to be located at same DIA.*



Item No:B20 Failure of RTU data with the outage of ICTs of Patna and Biharshariff station

- POWERGRID may update the status of extending UPS to RTUS for Patna and Biharshariff station.
- As per input from POWERGRID ,for following listed 17 nos of stations (having communication equipments) DCPS need to be replaced.

1. RSCC, Kolkata
2. CPCC, Durgapur
3. Kanchanpur
4. Barkot
5. Jamui
6. Maldah
7. Siliguri 400 kV
8. Jamshedpur 400 kV
9. Siliguri 220 kV
10. Rengali
11. Birpara
12. Rourkela
13. Purnea 220 kV
14. Indravati
15. Muzaffarpur 400 kV
16. Biharsharif 400 kV
17. Sasaram HVDC

– The above list is also available in Report of RTU / SAS replacement in Eastern Region dated 10-08-2017.

Item No B21: Shifting of communication links for PMUs reporting to ERLDC

- Updated status as on 29-08-2017

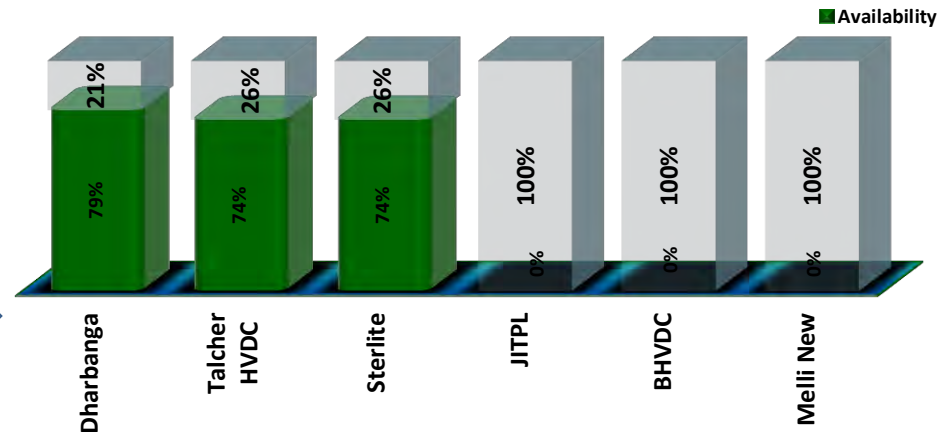
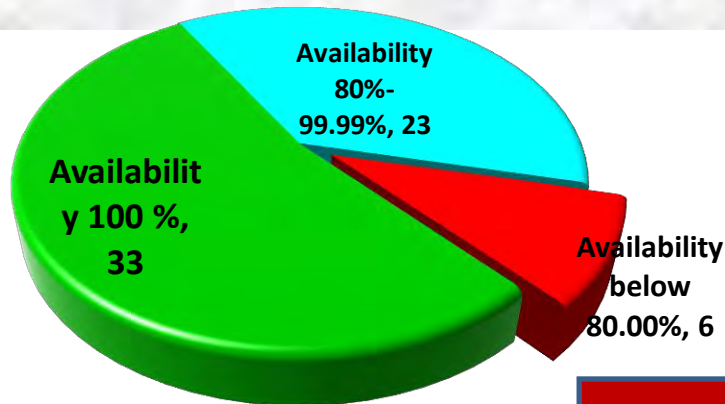
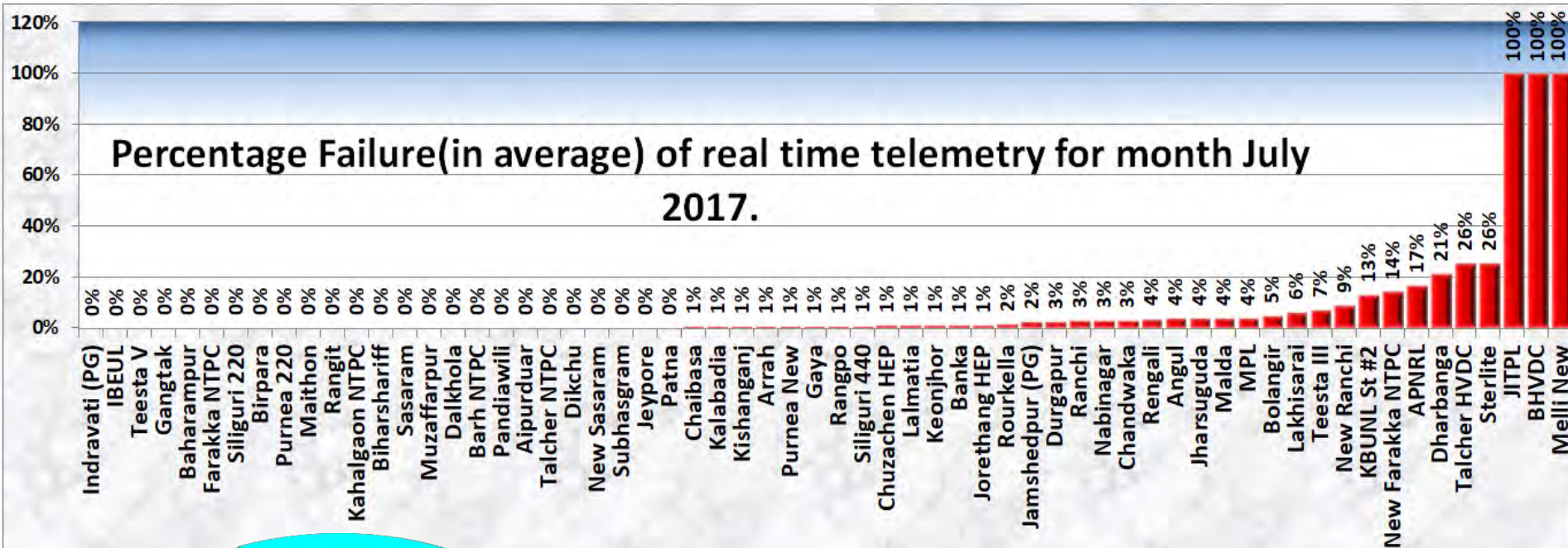
S/N	Location	Station type	Communicatio channel
1	Binaguri	400/220KV Substation	Shifted to POWERGRID ULDC wideband on 16 June,2017
2	Biharshariff	400/220KV Substation	Shifted to POWERGRID ULDC wideband on 24th November ,2015
3	Patna	400/220KV Substation	2 MBPS PDT link from Patna to ERLDC , Kolkata
4	Farakka	400 kV Generating Station.	E1 link
5	Ranchi	400/220KV Substation	E1 link
6	Rourkela	400/220KV Substation	E1 link (In progress)
7	Talcher	400 kV Generating Station.	E1 link
8	Jeypore	400/220KV Substation	E1 link
9	Durgapur	400/220KV Substation	E1 link (In Progress)
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

- POWERGRID is requested to update the status and action plan.

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

Annexure-B22

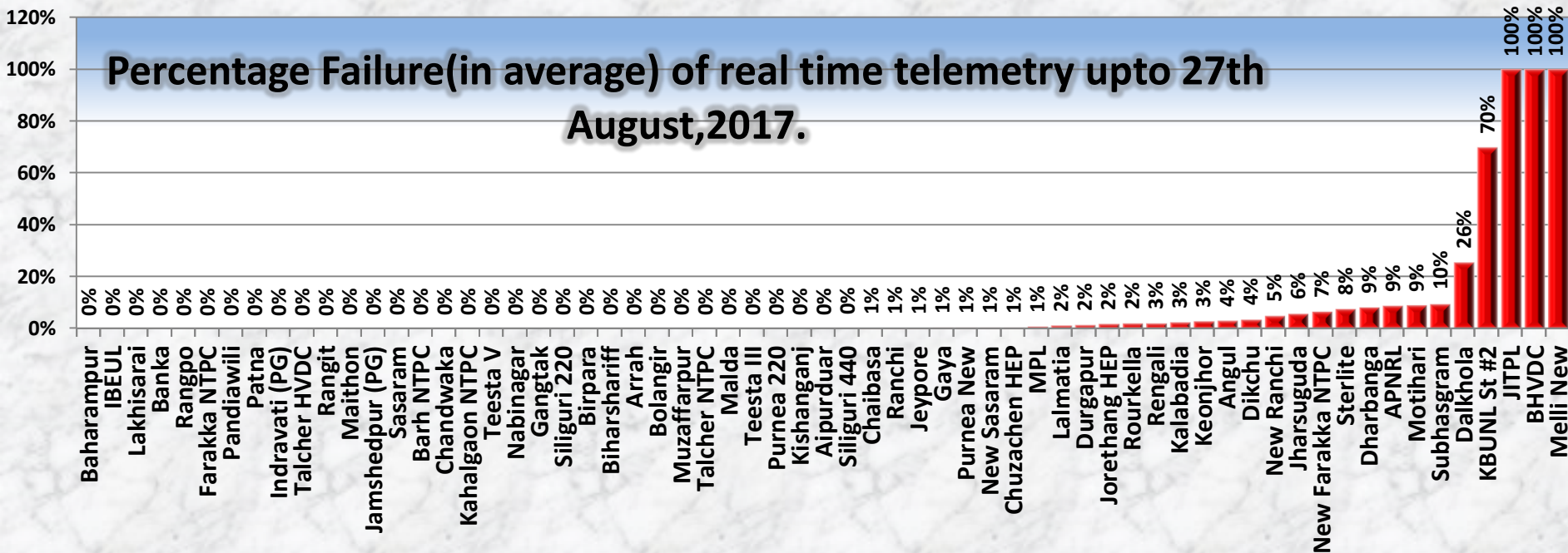
Percentage Failure (in average) of real time telemetry for month July 2017.



Reason for such poor availability:-

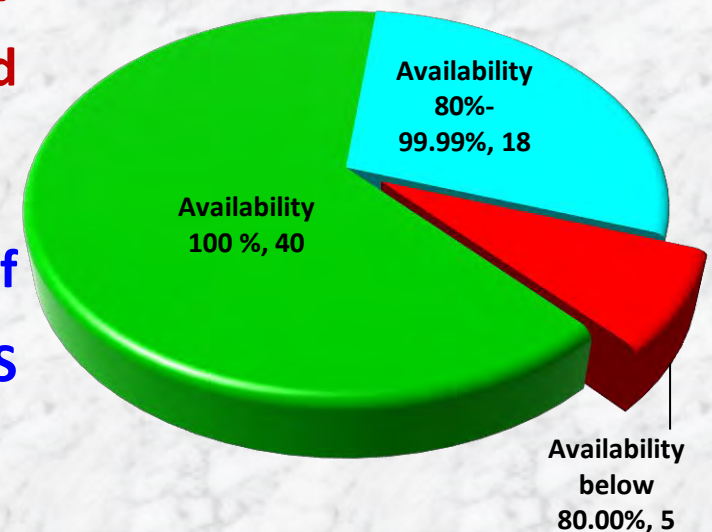
- Non availability of stand by link.
- Melli New, BHVDC not available since 19th June, 17.
- JITPL not reporting since 20th June, 17.

Overview of real time telemetry of Eastern region upto 27th August,2017



➤ All users has to provide stand by communication link to backup ERLDC located at New Delhi at the earliest.

➤ POWERGRID has to restore SCADA data of New Melli (down since 19-06-17, SAS configuration issue at New Melli end).



VOIP Status

Site name	01-Aug	02-Aug	03-Aug	04-Aug	05-Aug	06-Aug	07-Aug	08-Aug	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug
Jaipur	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Daltonganj	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Indrabati	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pandiavil	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Purnia 220	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bolangir	0%	33%	100%	100%	100%	100%	100%	100%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Patna	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	100%	100%	100%	100%	78%	55%	100%	60%	100%	95%	13%
kanthi	100%	99%	100%	100%	77%	97%	36%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	44%	100%	100%	100%
MALDA	0%	0%	0%	0%	0%	0%	0%	0%	55%	100%	99%	98%	97%	100%	98%	91%	100%	100%	99%	100%	73%
Dalkhola	99%	97%	99%	99%	100%	100%	99%	100%	99%	100%	99%	97%	63%	0%	0%	0%	0%	0%	0%	0%	0%
Kisanganj	100%	97%	100%	100%	100%	100%	99%	100%	100%	100%	99%	98%	49%	58%	0%	0%	0%	0%	0%	0%	0%
Kusai Colony	100%	99%	100%	100%	100%	100%	100%	100%	100%	48%	0%	0%	0%	0%	0%	36%	100%	100%	99%	100%	100%
Gangtok	100%	97%	100%	100%	43%	0%	0%	0%	0%	47%	99%	98%	98%	99%	76%	55%	100%	100%	100%	100%	100%
FSTPP	70%	68%	77%	96%	97%	94%	92%	73%	70%	70%	71%	72%	53%	49%	72%	59%	65%	80%	80%	90%	85%
Keonjhar	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	0%	0%	0%	0%	33%	100%	100%	100%	100%	100%
Rengali	0%	0%	23%	100%	100%	100%	100%	74%	64%	100%	67%	100%	100%	100%	77%	53%	100%	99%	100%	100%	100%
Siliguri	90%	85%	89%	90%	90%	92%	90%	94%	91%	85%	85%	85%	85%	90%	67%	45%	87%	90%	90%	89%	89%
SRLDC	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	27%	100%	100%	100%	74%	5%	38%	100%	98%	100%	100%
WRLDC	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	27%	100%	100%	100%	74%	5%	39%	100%	98%	100%	100%
Teesta NHPC	0%	34%	100%	100%	100%	100%	99%	100%	100%	100%	99%	98%	98%	100%	76%	54%	99%	100%	100%	100%	100%
NLDC	100%	100%	100%	100%	100%	100%	100%	100%	98%	99%	100%	100%	100%	99%	75%	5%	38%	100%	98%	100%	100%
Ranchi 765	100%	64%	100%	100%	100%	100%	100%	100%	80%	100%	100%	100%	100%	100%	76%	53%	100%	100%	100%	100%	100%
Angul	100%	91%	69%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	53%	100%	99%	100%	100%	100%
Talcher NTPC	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	47%	53%	100%	99%	100%	100%	89%
Darlipalli	100%	91%	69%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	78%	55%	100%	99%	100%	100%	100%

- Restoration/integration of VOIP for Jeypore, Kishanganj, Indravati, Pandiabili station by POWERGRID at the earliest.

Frequent failure of JITPL SCADA data to ERLDC

- Real time SCADA data from JITPL is frequently failing (**May-17: 24% & June-17 (up to 18th): 62%**).
- JITPL SCADA server stopped reporting to ERLDC since 20th June 2017. 71 days passed but data yet to be restored.
- JITPL is requested to update OCC regarding—
 - Action plan and tentative date of restoration of SCADA data.
 - Route diversion.
 - VOIP integration.
 - Measures being taken to extend SCADA data to Back up ERLDC , New Delhi.

- **Major concern:-**

- Long outage of real time data →

- JITPL
 - New Melli
 - Bheramara HVDC.

- Non availability of VOICE →

- Patna, Jeypore, Kishanganj, Indravati, Pandiabili and Rengali

- Provision of stand by communication link.

- 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)

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.

POWERGRID

➤ **Data Intermittent :**

- Malda,Ranchi 400kV, Baripada, Gaya, Jharsuguda, 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.

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-B29

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

CERC order regarding FGMO/RGMO response of generators

CERC order

- Petition No. 84/MP/2015, Date of order: July 31, 2017 section 23 (a):
 - “... the **Commission**, starting from the month of **September, 2017** shall be closely watching the **primary response of ISGSs** as reported by POSOCO/NLDCs.
 - At the State level, **SLDCs** shall report the frequency response of **intra-State generators** to the **concerned SERCs**.”

Section 23(b)

- “... **SLDCs** through the assistance of POSOCO shall start the process of **selecting independent third parties** capable of undertaking **periodic checkups** to monitor the **RGMO/FGMO response**.
- To start with selected independent third parties shall be sent to the generating stations which are not providing the desired RGMO/FGMO response....”

Section 23(b) contd.

- “...Independent Third Parties shall **ensure** that the generator **has not, in any way, prevented/disabled the governor from providing the desired response.**
- In case, **even after enabling the governors,** units are **not able to provide the desired response** as per the provisions of the Grid Code, third parties, based on the submissions of the generators, shall **bring out the technical constraints,** if any, which limit the primary response of the units.”

Section 23(c)

- “All **ISGSs** are directed to **provide primary response compulsorily** in terms of Regulation 5.2 (f), (g), (h) and (i) of the Grid Code **failing which** we would not hesitate in **initiating action under Section 142** of Electricity Act, 2003 for not providing desired RGMO/FGMO response without any valid reasons.”

N.B. All ISGSs have been communicated about Hon’ble Commission’s order vide letter no ERLDC/SS/FGMO/2017/2505 dated 25-08-17.

Section 24

- “..... The Committee (on implementation of FGMO / primary response) has also recommended that **there is no requirement for granting any exemption even to LMZ units** from operation under RGMO/FGMO with manual intervention
- ... has the **option** of either expediting the R&M of old units which shall include **installation of new EHG governors** capable of providing adequate primary response **or**
- to go in for **retrofit of mechanical governors** for adopting RGMO features **or**
- to operate on **FGMO with manual intervention...**”

- Primary response of ER ISGS units in terms of Regulation 5.2 (f), (g), (h) and (i) of the Grid Code, calculated based on ERLDC SCADA data will be uploaded to a web group called ***https://in.groups.yahoo.com/neo/groups/er_gov_respons/info***
 - Members are requested to validate the response recorded at ERLDC with DCS data and to provide reason for not providing desired FGMO/RGMO response (if any)
 - Request for joining the group can be sent to erldcprotection@gmail.com.

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		CS	Maithon	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	
			CS	Panchet	1	40	No	RGMO mode of operation would not be possible for
			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	Kahalgaoan STPP	1	210	Yes	
			CS		2	210	Yes	
			CS		3	210	Yes	
			CS		4	210	Yes	
			CS		5	500	Yes	
			CS		6	500	Yes	
			CS		7	500	Yes	
			CS	Talcher STPP Stg-I	1	500	Yes	
			CS		2	500	Yes	
			CS	Barh	5	660	Yes	
			CS	Barh	6	660	Yes	
	Hydro	NHPC	CS	* 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	
			50					
			PS	Maithon RB TPP	1	525	Yes	
			PS		2	525	Yes	
			PS		1	600	Yes	

IPP	Thermal	IPP	PS	Sterlite	2	600	Yes	
			PS		3	600	Yes	
			PS		4	600	Yes	
			PS	Adhunik Power	1	270	Yes	
			PS		2	270	Yes	
	Hydro	IPP	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	No	could be put in RGMO mode but because of transmission evacuation constraint RGMO/FGMO is disabled
			PS		2	200	No	
			PS		3	200	No	
			PS		4	200	No	
			PS		5	200	No	
			PS		6	200	No	
			PS	Dikchu	1	48	No	(RoR project with 3 hours pondage)
			PS		2	48	No	

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

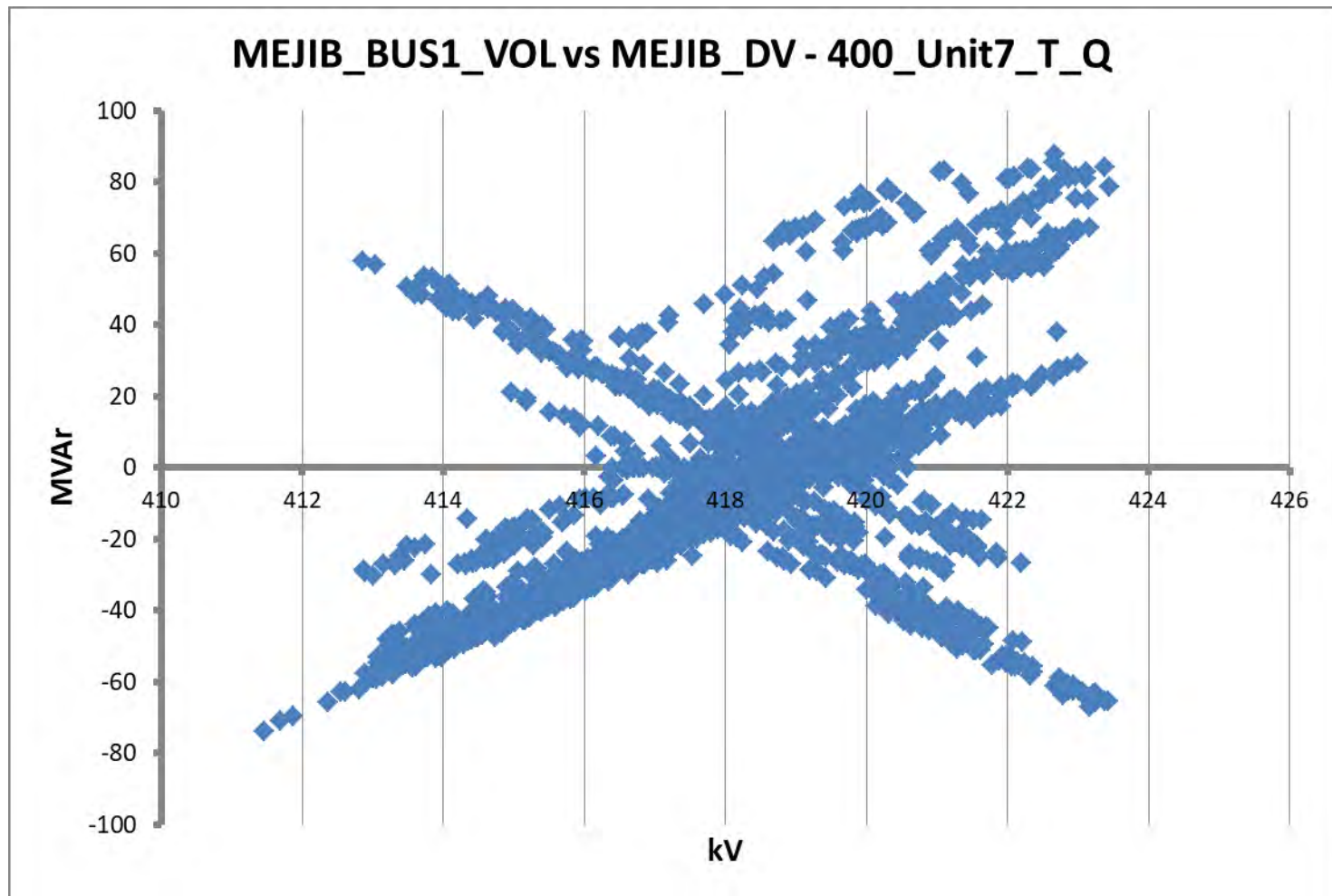
Voltage & reactive power injection (Unit MVar injection-MVar absorption in GT) at terminal point of generating units are compared for various generating units in ER.

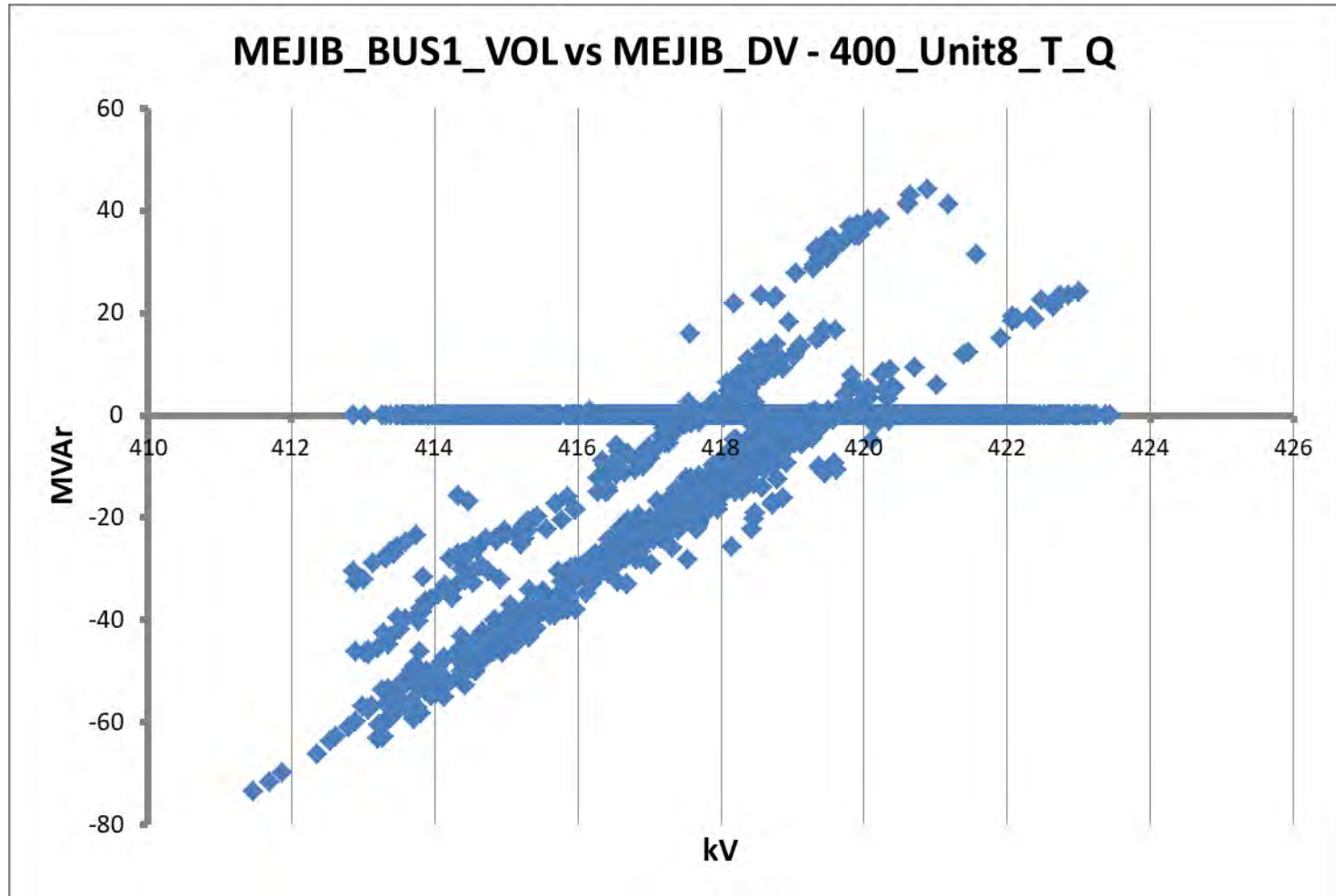
- Scatter plot is plotted with taking
 - Terminal voltage across x axis
 - Reactive power injection across y axis
 - (Nominal terminal voltage (kV), 0 MVar) as origin
- MVar injection should reduce with increase in terminal voltage

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

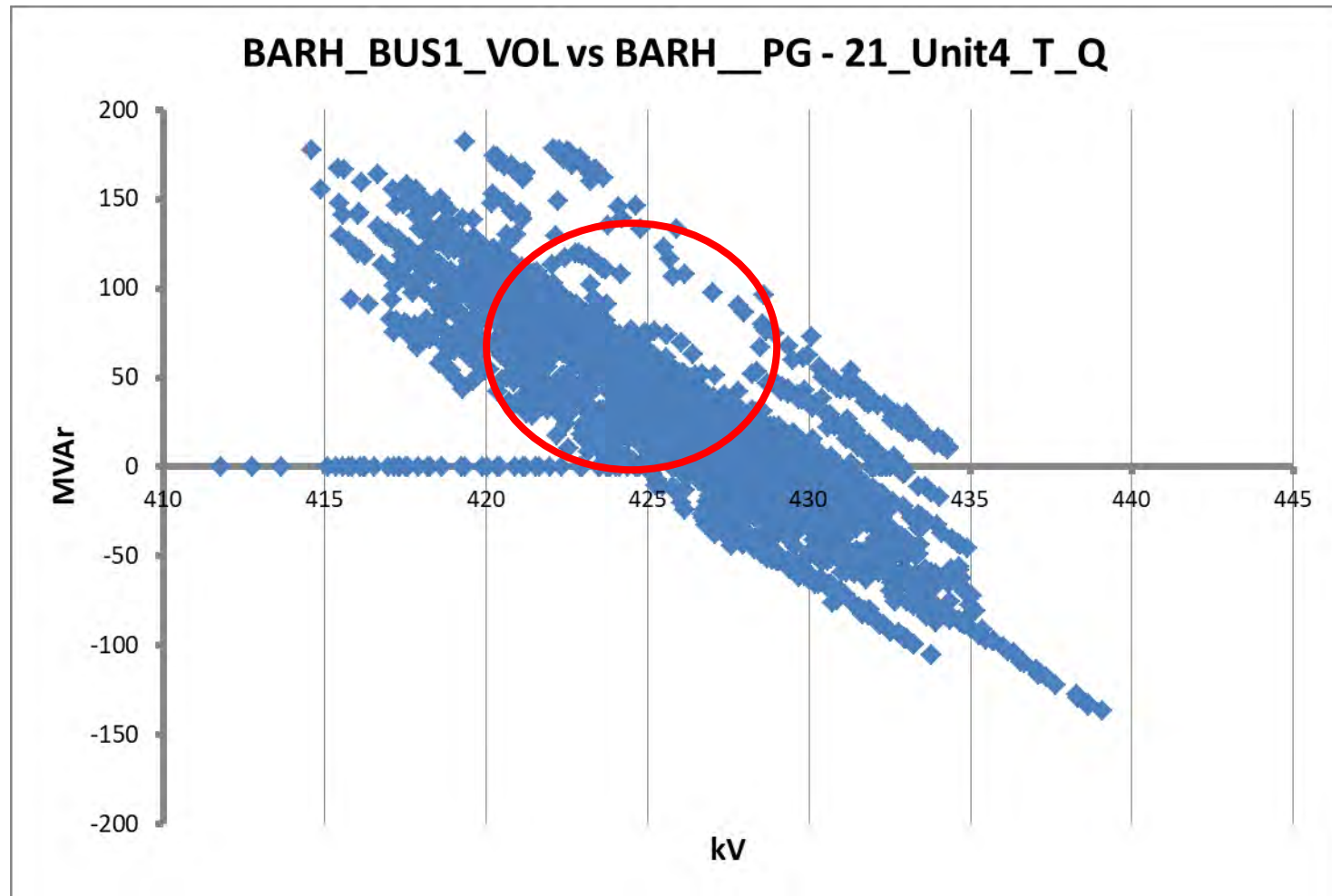
The units whose MVAr injection increases with increase in voltage

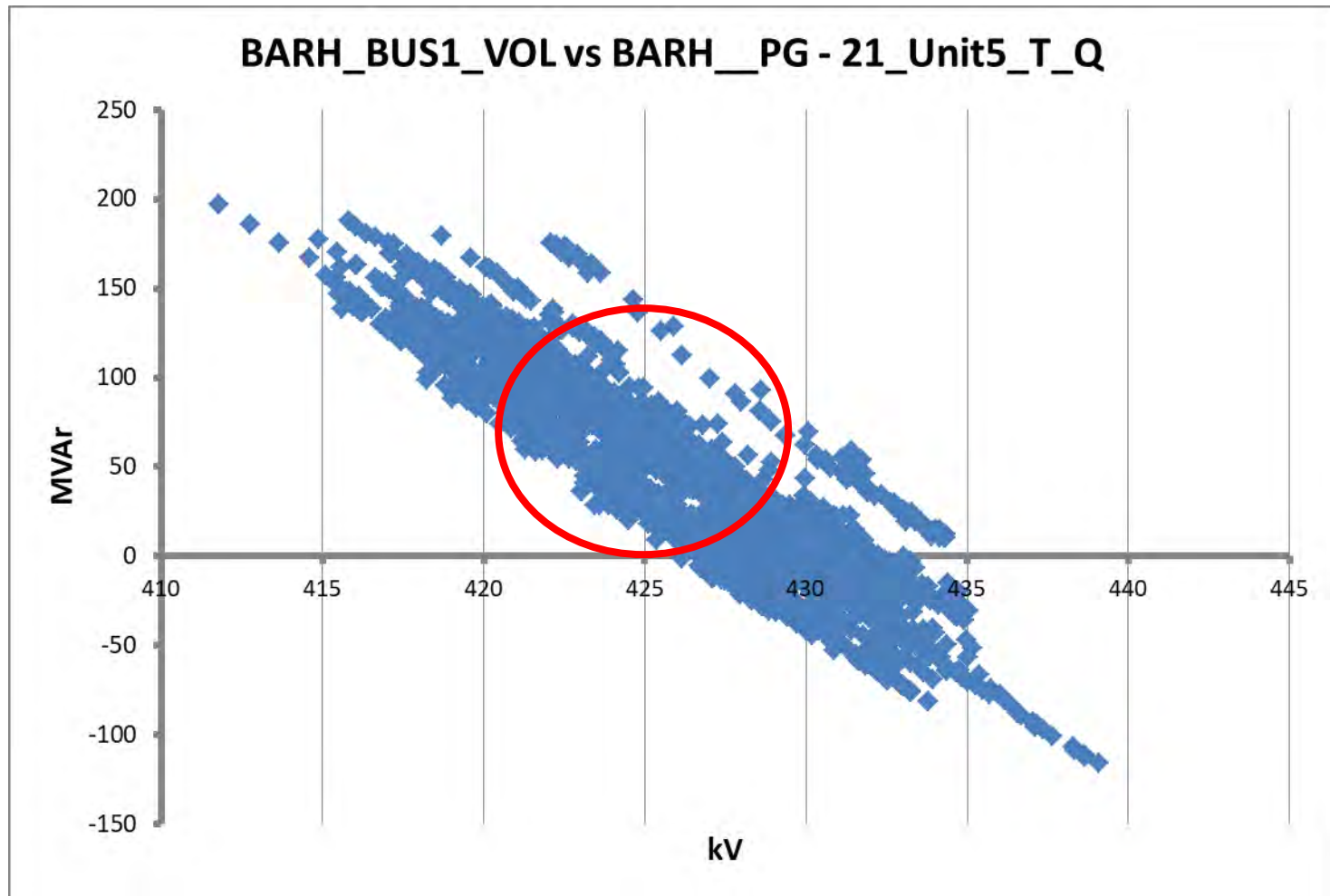
- Mejia B #7 & #8

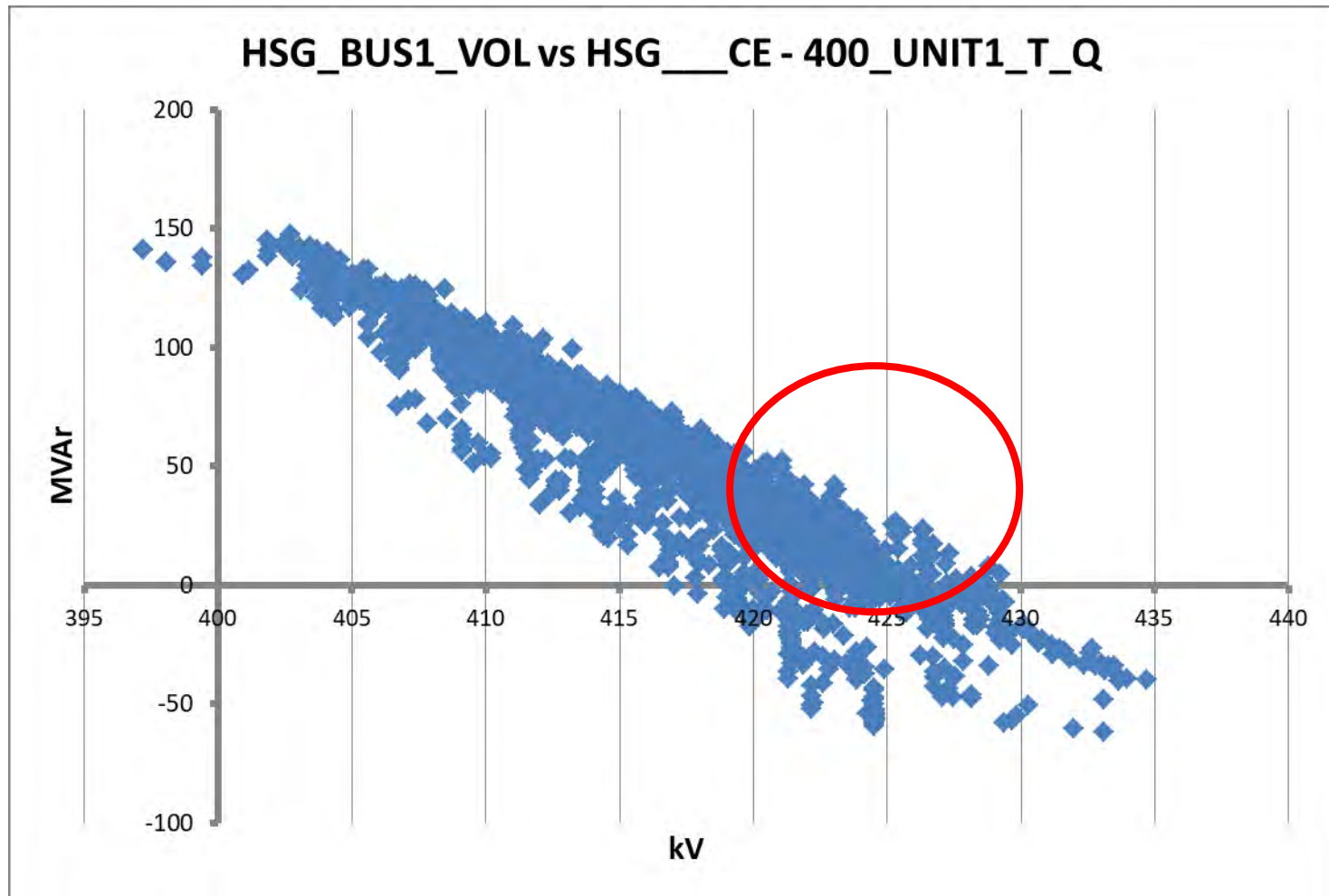


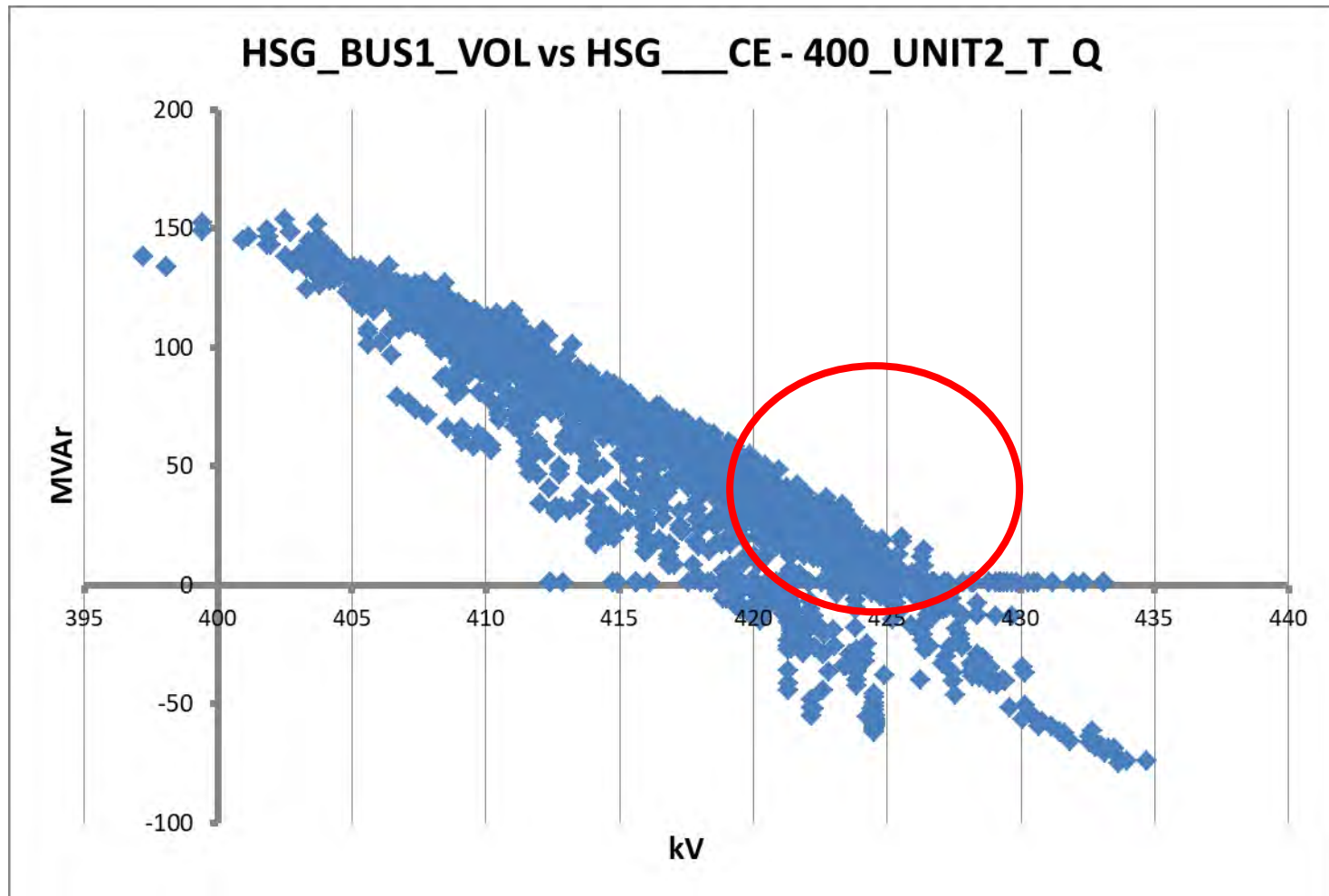


Response of the units whose MVAr injection decreases with increase in voltage but does not absorb reactive power even in high voltage period









Power System Operation Corporation Ltd.



136th OCC Meeting



At ERPC, Kolkata

30th August, 2017

ER Grid Performances

Highlights for the month of July-17

Frequency Profile

Average Freq:- 50.00 Hz

Avg FVI: - 0.0376

Lowest FVI:- 0.023

Max- 50.23Hz on 06th
July 17

Min- 49.69 Hz on 08th &
19th July 17

76.15% of the time freq
was with in IEGC Band

On 17/07/17 frequency
within IEGC band was
88.18 % which was
maximum so far.

Peak Demand

ER: 20274 MW on 17th July

2017 at 21:30 hrs

% Growth in Average Demand

Met w.r.t. last year- 4.26%

BSPHCL : 4132 MW ; ON 17/07/17

JUVNL: 1222 MW; ON 21/07/17

DVC: 2765 MW; ON 21/07/17

GRIDCO: 4246 MW; ON 05/07/17

WB: 8282 MW; ON 18/07/17

SIKKIM: 108 MW; ON 22/07/17

Energy met

Max. 429 MU on 17th July 2017

%Growth w.r.t. last year on Max
energy – 4.6%

Avg. 394 MU in July 2017

%Growth w.r.t. last year on Avg.
energy – 1.8%

New Element

Generating Units- 195
MW

Transmission Lines-15
CKM

Open Access

STOA transactions
approved -347 nos.

Energy Approved-
881.41 MUs

1. Achievements during the month

a. New generating units synchronized:

1) MTPS Unit#2 (Stage-II) of 195 MW has been declared under COD w.e.f 01/07/17

b. New transmission elements charged:

1. 400kV Kolaghat- New Chanditala (LILLO of 400kV Jeerat- Kolaghat SC at New Chanditala) charged for the first time at 14:46Hrs of 03/07/17.

2. 400kV Jeerat-New Chanditala (LILLO of 400kV Jeerat- Kolaghat SC at New Chanditala) charged for the first time at 16:42Hrs of 03/07/17.

3. New PPSP-Arambag Ckt-1 (LILLO of 400kV PPSP-Arambag Ckt-1 at New PPSP) charged for the first time at 19:13Hrs of 15/07/17.

4. PPSP-New PPSP Ckt-1 (LILLO of 400kV PPSP-Arambag Ckt-1 at New PPSP) charged for the first time at 18:49Hrs of 15/07/17.

5. 50MVAR Bus Reactor-1 at New PPSP Substation charged for the first time at 19:00Hrs of 15/07/17.

6. 400kV New Ranchi-New PPSP-I & II charged for the first time at 20:08 hrs and at 20:50 hrs respectively of 24/07/17.

7. 400kV Gorakhpur-Motihari (DMTCL) ckt-2 (LILLO of 400kV Barh-Gorakhpur ckt-2) charged for the first time at 22:54Hrs of 31/07/17.

Elements charged for the first time in the month of August 2017

- 80MVAR Bus Reactor at New Chanditala SS charged for the first time at 19:07Hrs of 18/08/17.
 - 400kV Gorakhpur- Motihari ckt-2 (LILLO of 400kV Barh GorakhPur 2 at Motihari) charged for the first time at 22:54Hrs of 31/07/17
 - 400kV Barh- Motihari ckt-2 (LILLO of 400kV Barh GorakhPur 2 at Motihari) charged for the first time at 19:20Hrs 01/08/17.
 - 315MVA ICT I at Motihari SS Charged for the first time at 20:52Hrs of 01/08/17.
 - 315MVA ICT II at Motihari SS Charged for the first time at 18:09Hrs of 06/08/17.
 - Bus Reactor I at Motihari SS Charged for the first time at 00:08Hrs of 02/08/17.
 - Bus Reactor II at Motihari SS Charged for the first time at 16:35Hrs of 03/08/17.
-

Elements charged for the first time in the month of August 2017

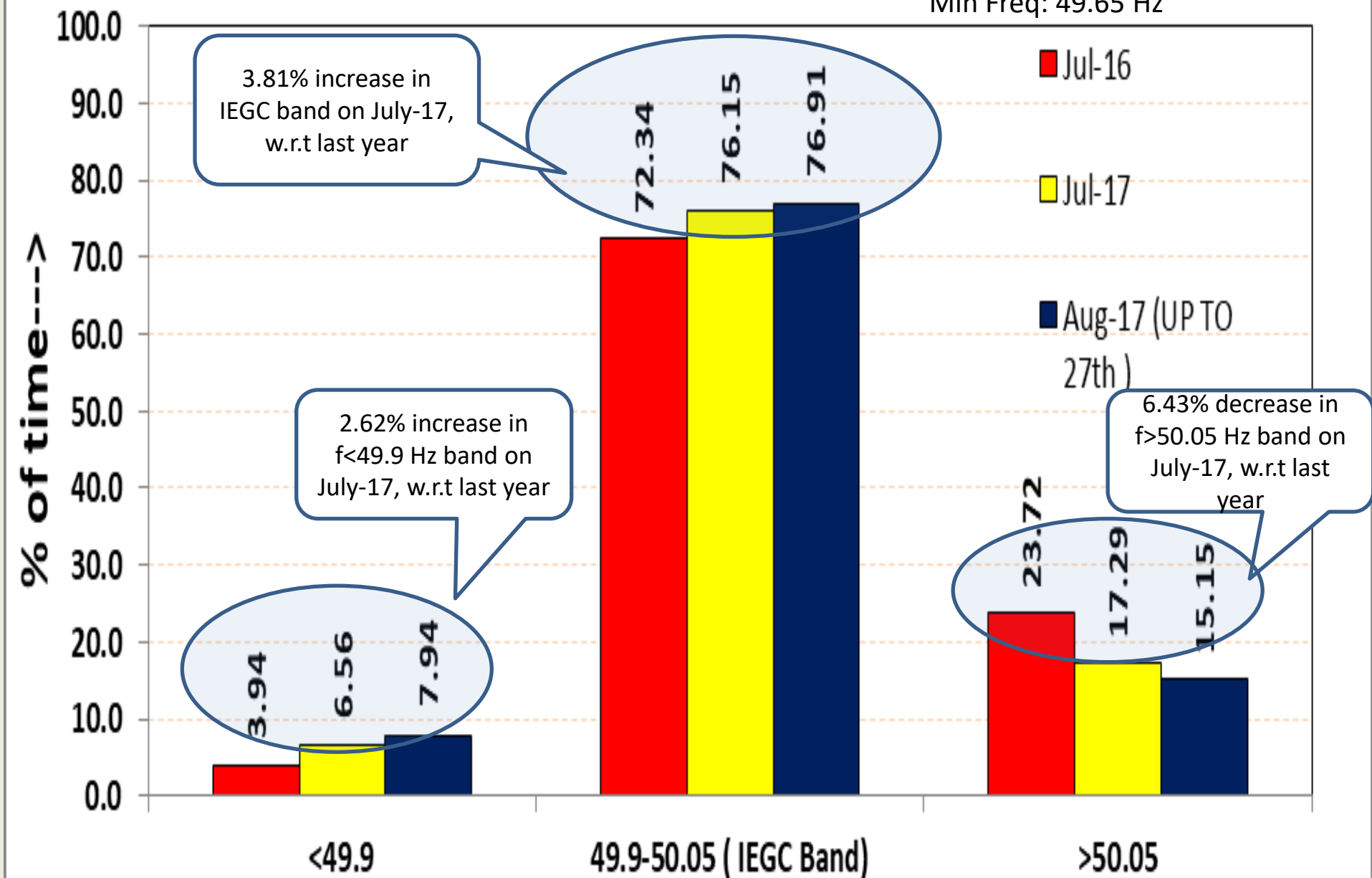
- 125 MVAR BR I & II at Rengali Charged for the first time at 20:40Hrs and 21:12Hrs respectively of 01/08/17.
 - 132kV Motihari-bettiah I & II Charged for the first time at 12:20Hrs and 12:21Hrs of 04/08/17.
 - 132Kv Motihari-Motihari(BSEB) II Charged for the first time at 15:41hrs of 04/08/17.
 - 400kV Gorakhpur- Motihari ckt-1 (LILLO of 400kV Barh GorakhPur 1 at Motihari) charged for the first time at 12:14Hrs of 07/08/17
 - 400kV Barh- Motihari ckt-2 (LILLO of 400kV Barh GorakhPur 2 at Motihari) charged for the first time at 15:55hrs of 07/08/17.
 - 80MVAR Bus Reactor at New Chanditala SS charged for the first time at 19:07Hrs of 18/08/17.
 - 400kV DC RTPS-Ranchi DC (Ckt.- II & III) from DVC-RTPS to PGCIL Ranchi SS charged for the first time at 19:37hrs and 19:40Hrs of 28/08/17.
-

Monthly Frequency Profile of Grid

In Aug-17 (Up to 27th):

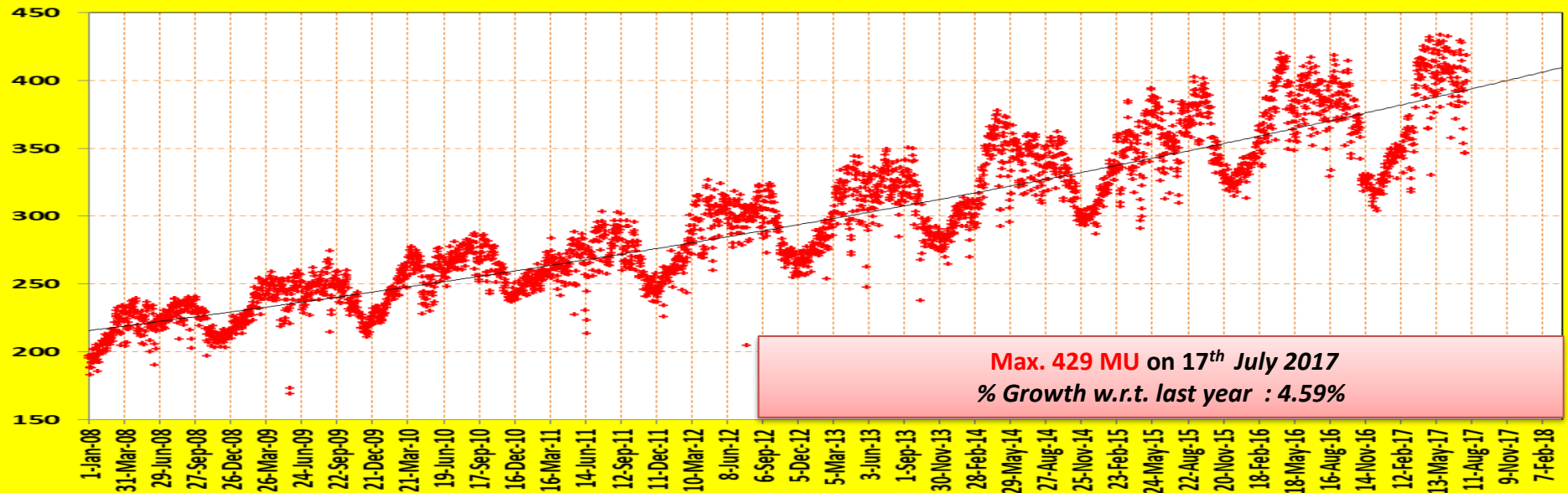
Max Freq: 50.20 Hz

Min Freq: 49.65 Hz

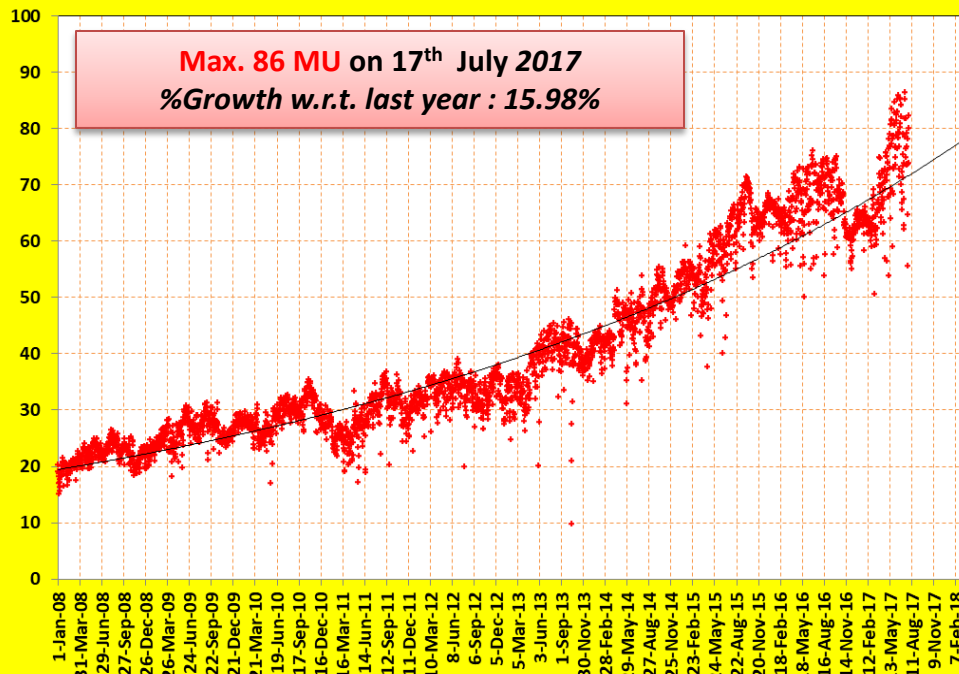


So Far Highest Demand				
Constitute	Demand (in MW)	Date	Time	Dmd met on 21 st Aug'17(max dmd met day)
Bihar	4238	23-Aug-17	20:30	4172
DVC	3333	10-Apr-16	20:57	2569
Jharkhand	1262	10-Jun-17	19:54	1203
Odisha	4412	22-Aug-17	19:37	4282
W. Bengal	8605	12-Apr-17	19:56	7818
Sikkim	117	28-Oct-16	18:59	83
ER	20621	28-Apr-17	19:36	20164
So Far Highest Energy Consumption				
Constitute	Energy consumption (in MUs)	Date		Dmd met on 21 st Aug'17(max dmd met day)
Bihar	85.8	18-June-17		78.6
DVC	75	23-Mar-17		57
Jharkhand	26	20-Apr-16		23.5
Odisha	88.5	23-May-17		84.5
West Bengal	181	27-Apr-16		151.4
Sikkim	2	24-Mar-17		1.3
ER	434	25-May-17		412

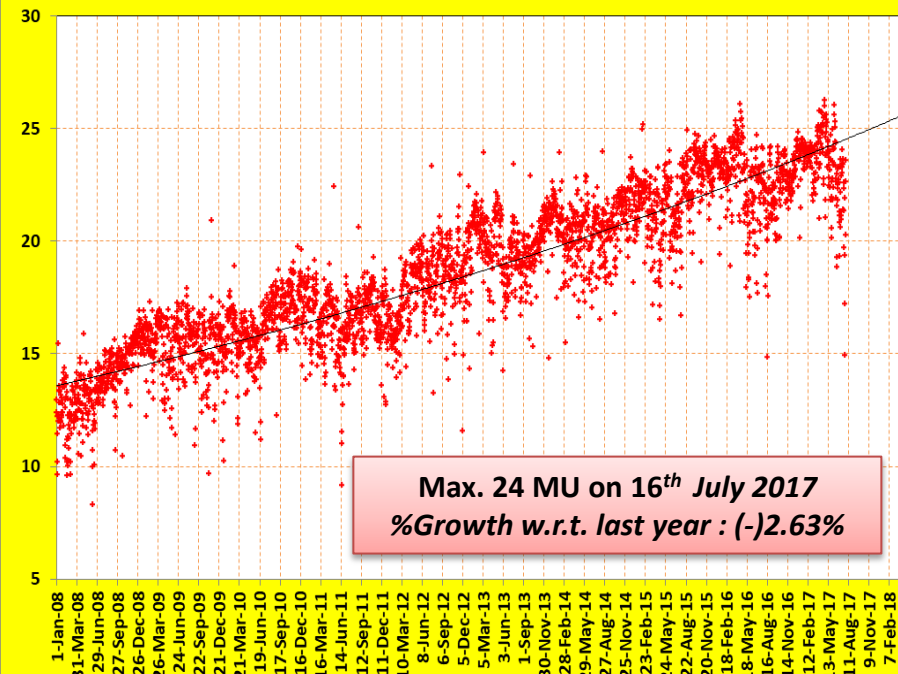
ER Energy met in MU



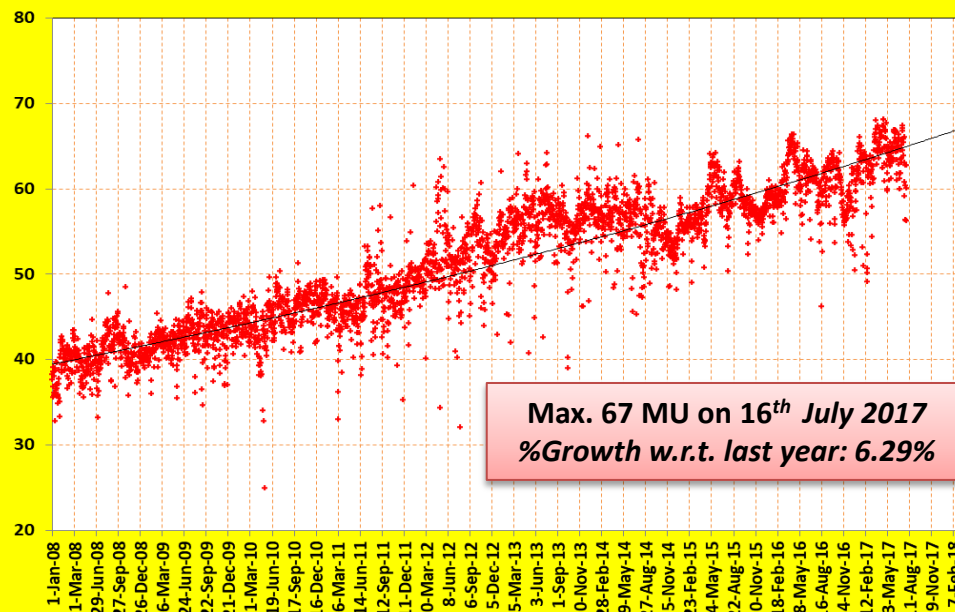
BSPHCL Energy met in MU



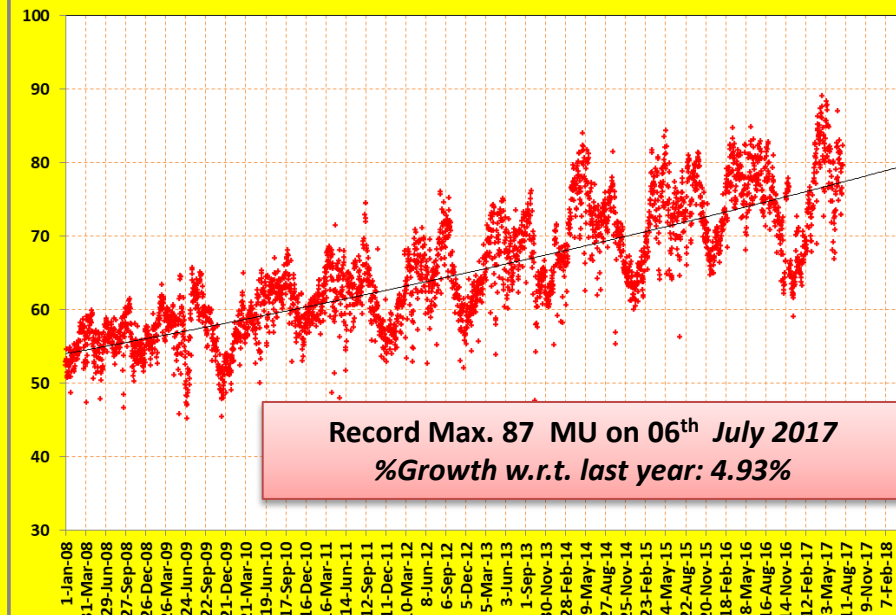
JUVNL Energy met in MU



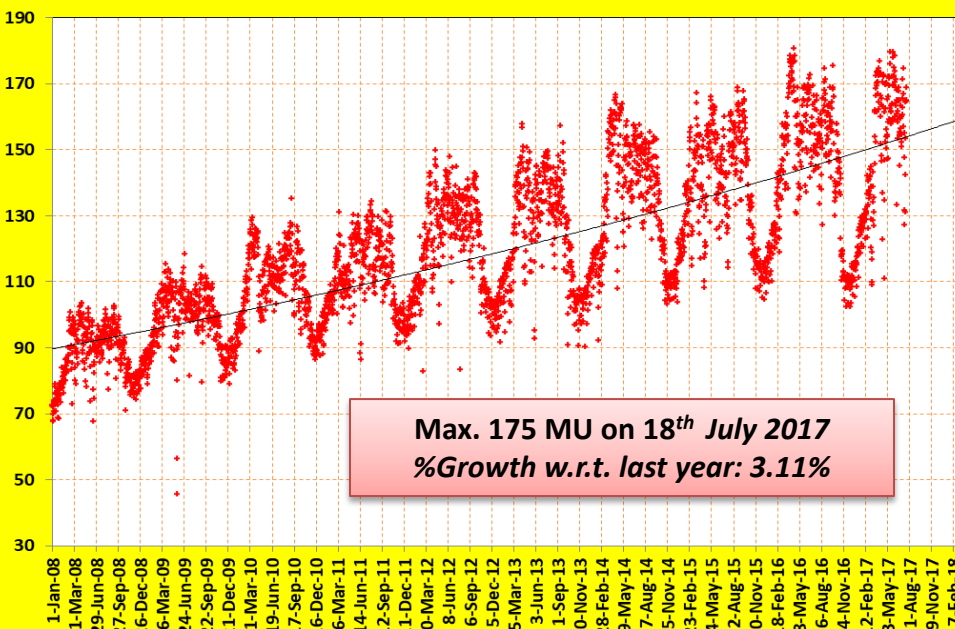
DVC Energy met in MU



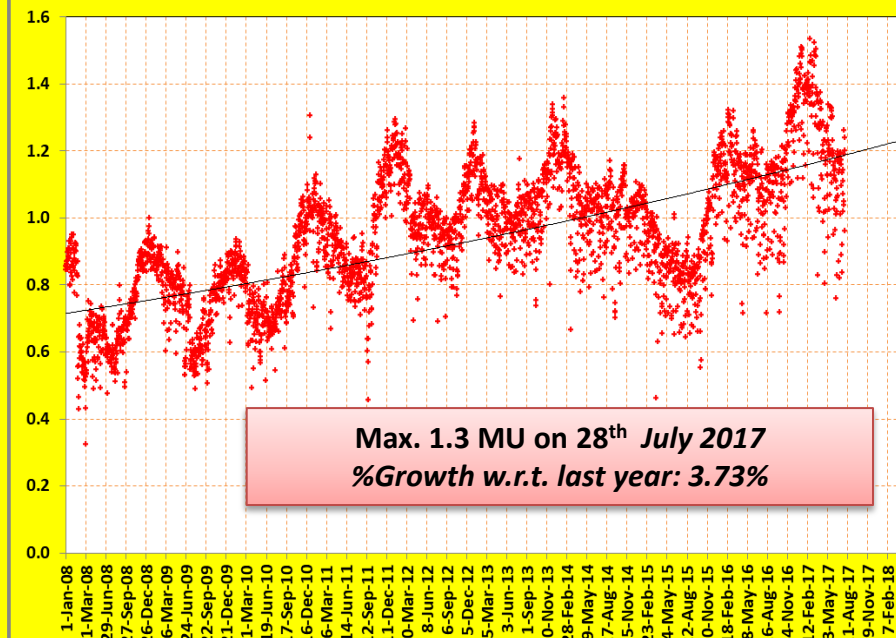
GRIDCO Energy met in MU



WB Energy met in MU



SIKKIM Energy met in MU

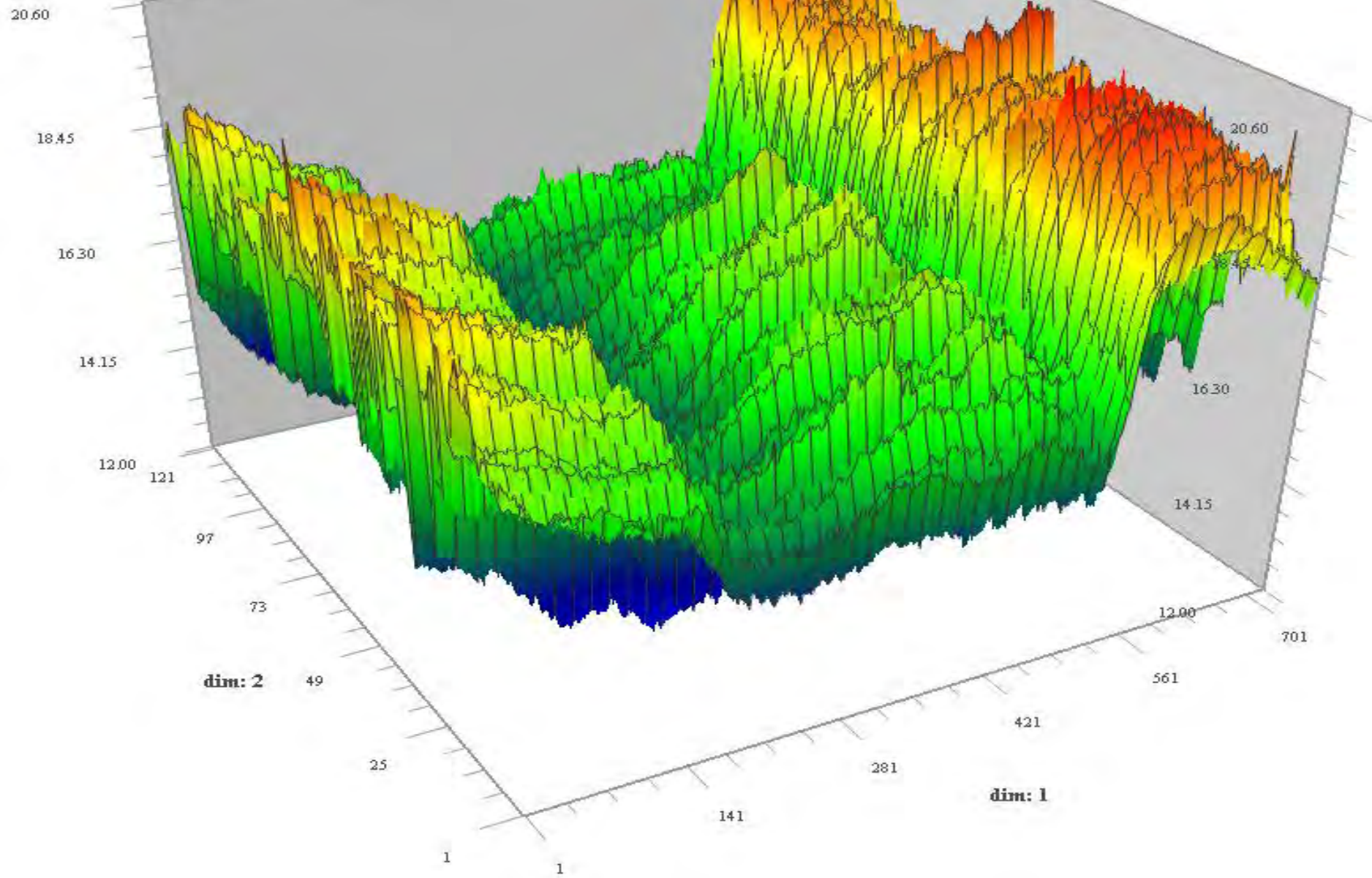


3D VIEW OF ER DEMAND PATTERN (APR-17 TO JUL-17)

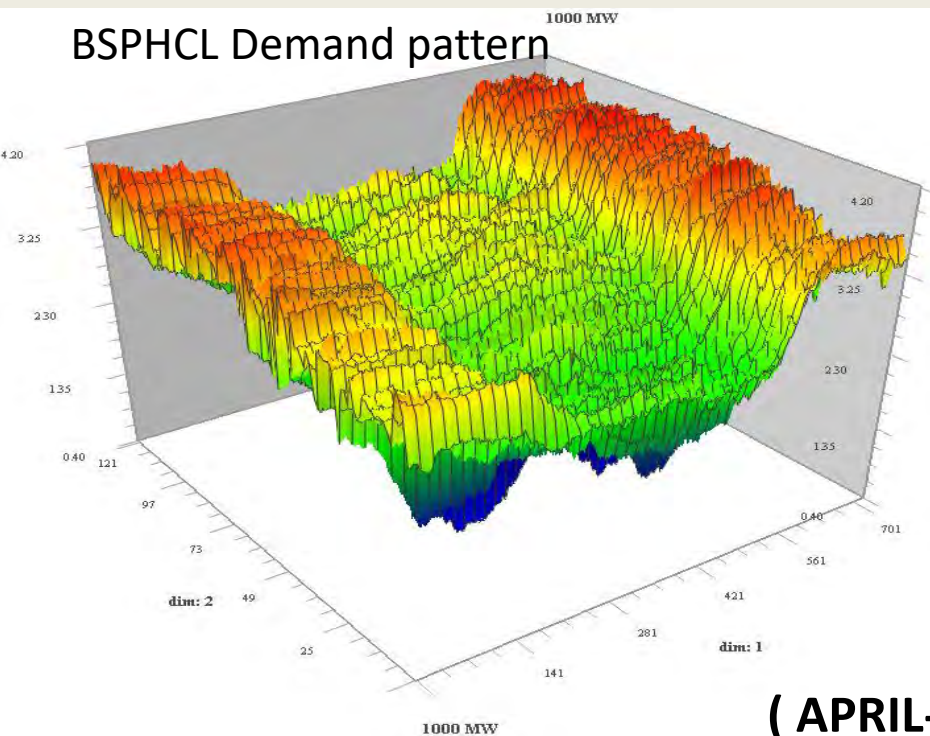
1000 MW

EASTERN REGION DEMAND

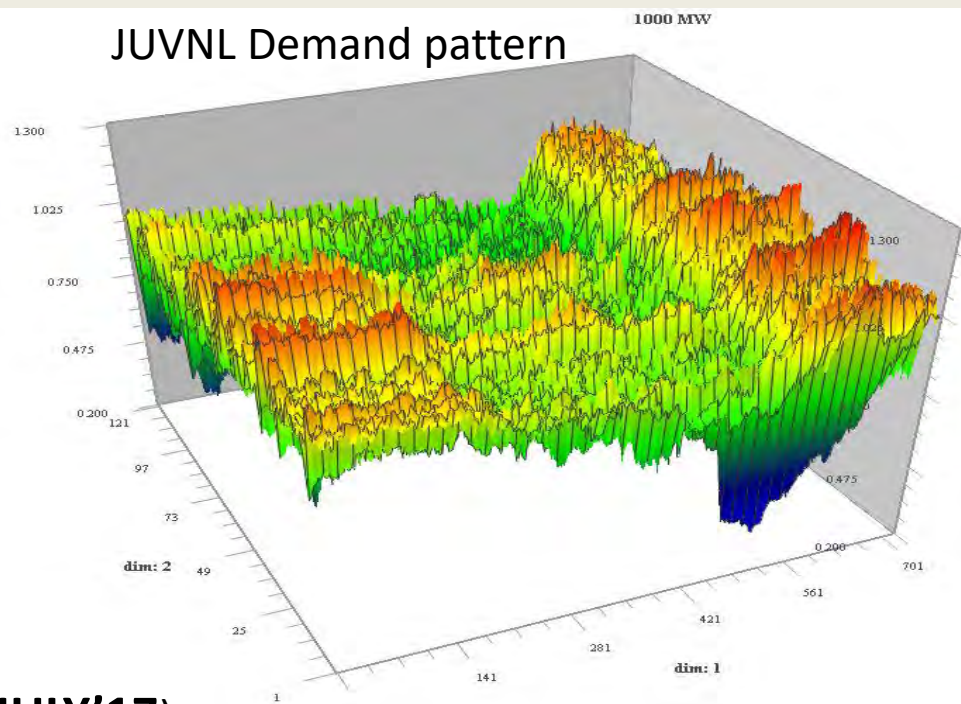
3D CURVES (APRIL-JULY'17)



BSPHCL Demand pattern

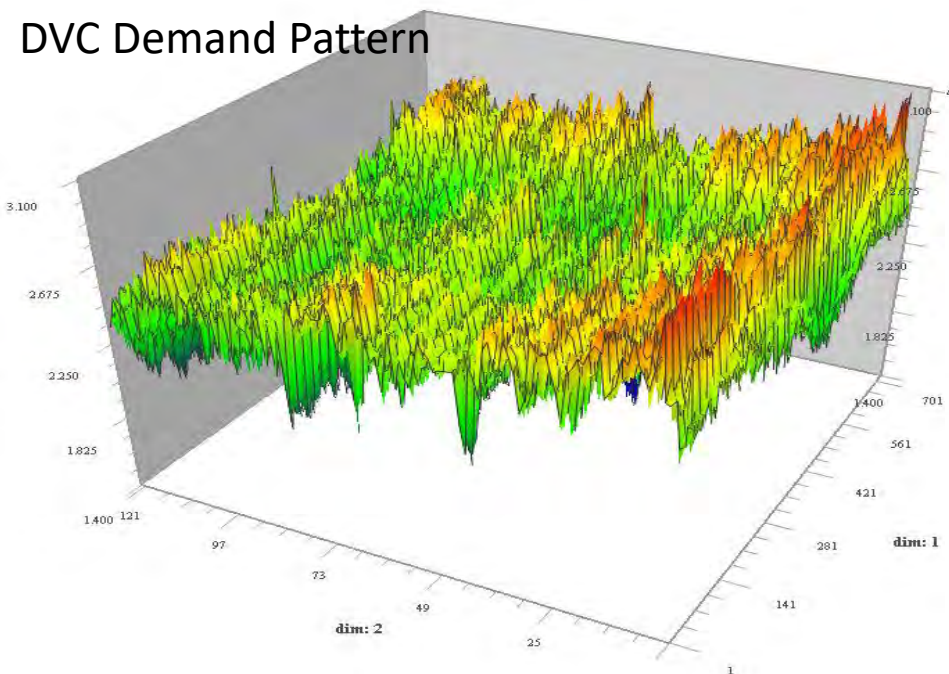


JUVNL Demand pattern

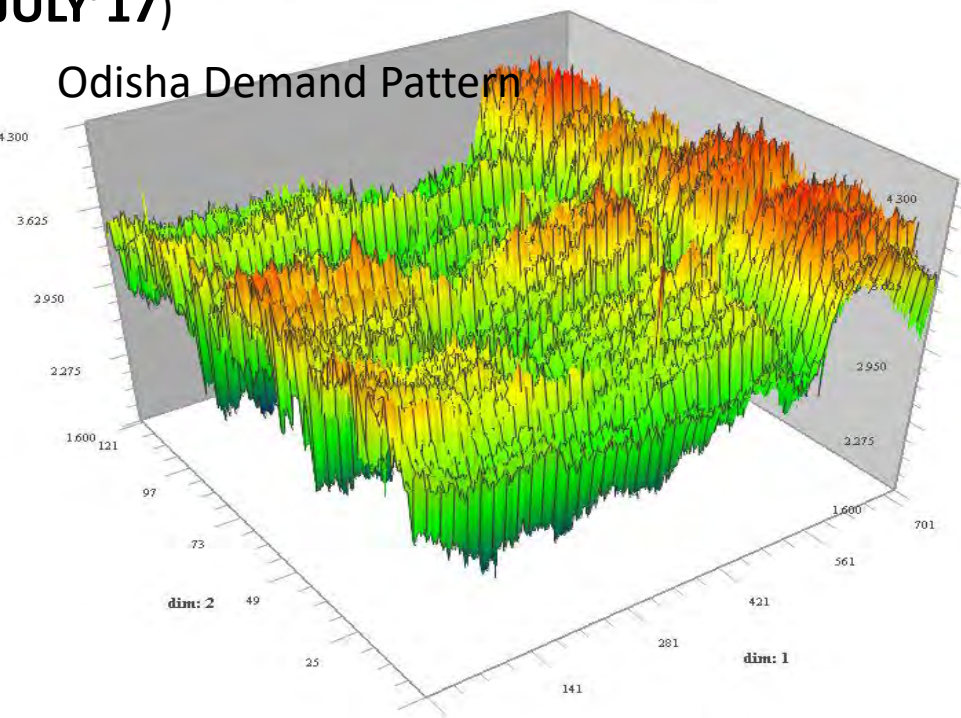


(APRIL-JULY'17)

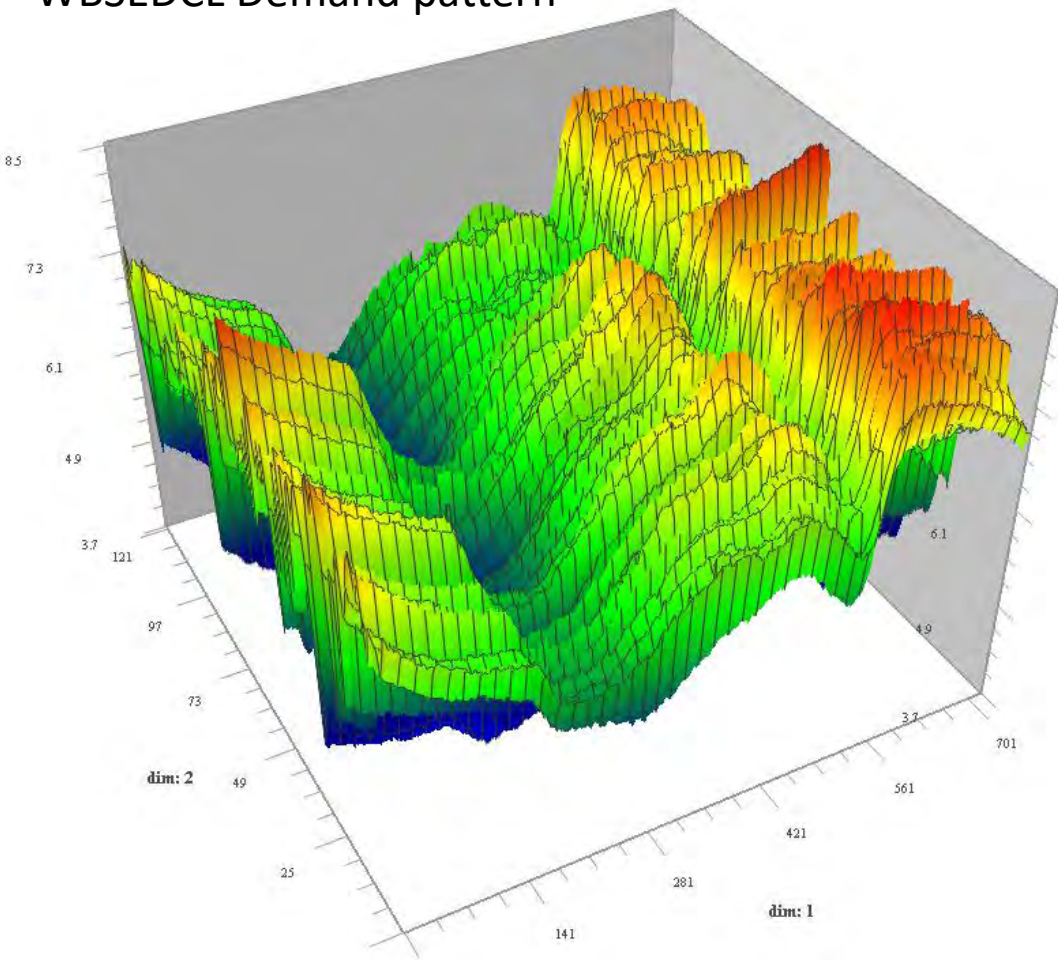
DVC Demand Pattern



Odisha Demand Pattern

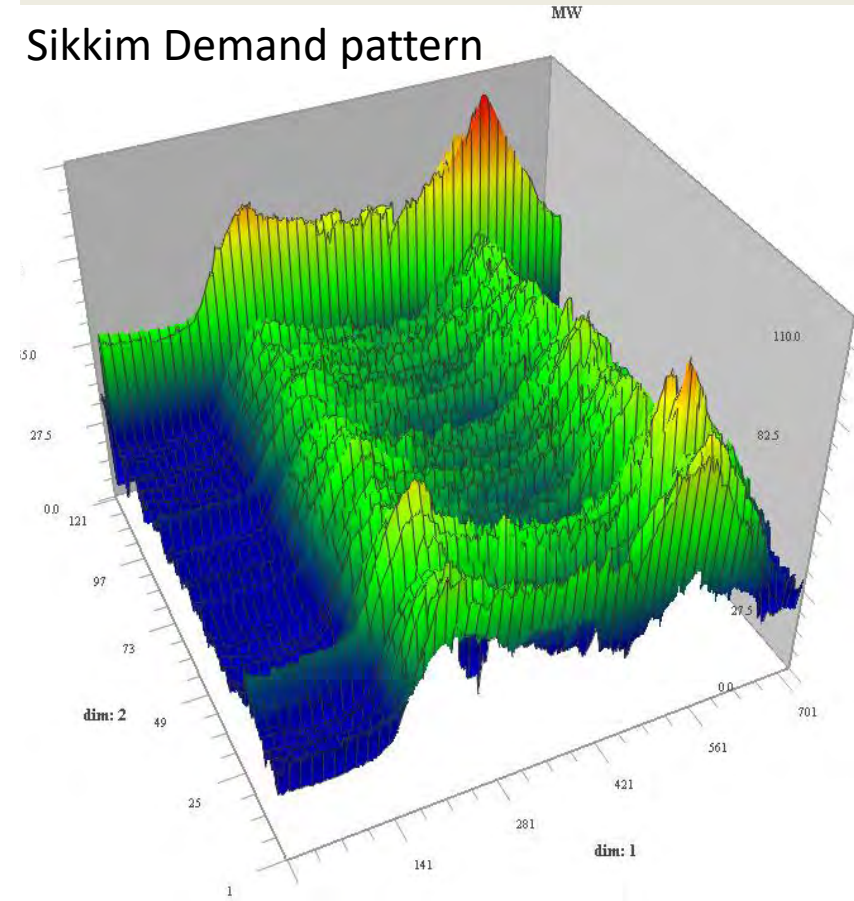


WBSEDCL Demand pattern

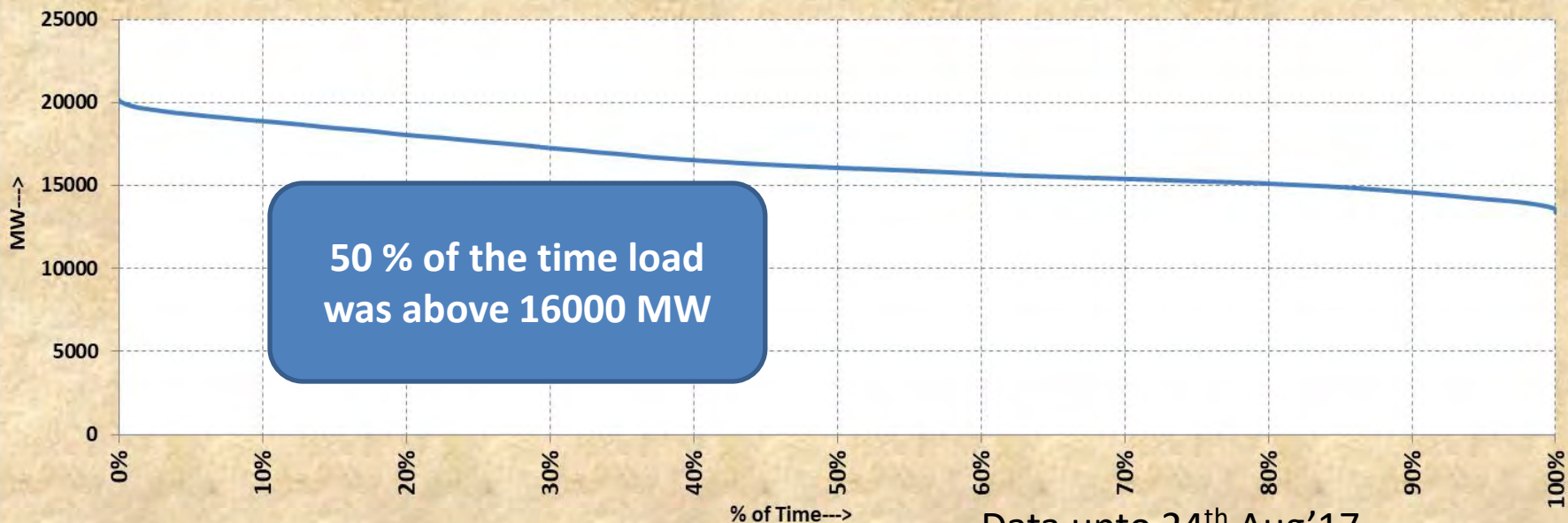


(APRIL-JULY'17)

Sikkim Demand pattern

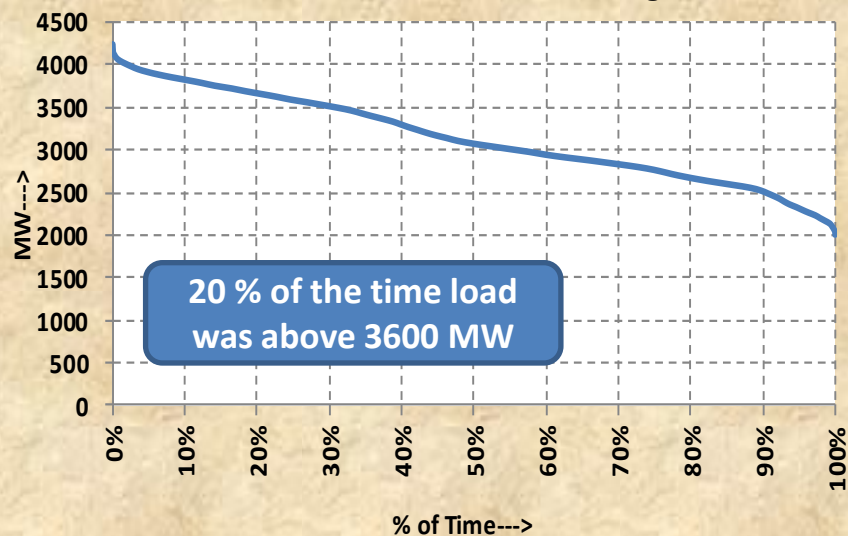


ER Load duration curve -Aug-17

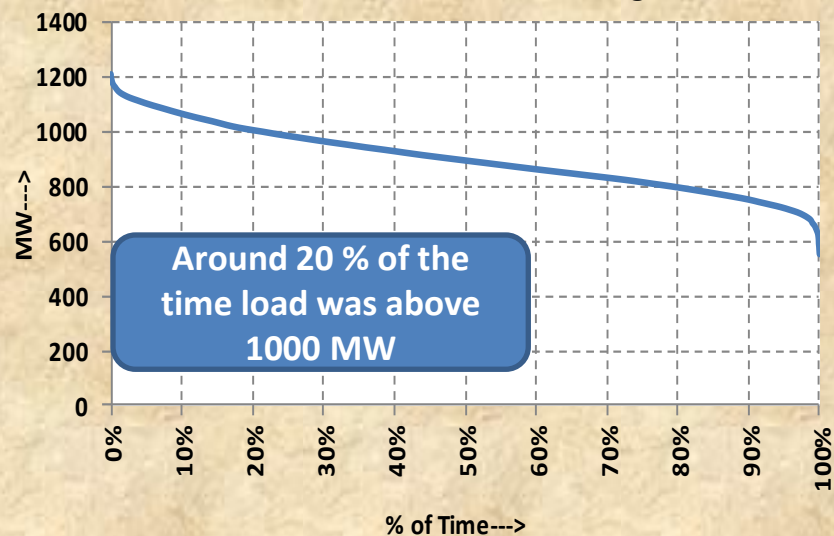


Data upto 24th Aug'17

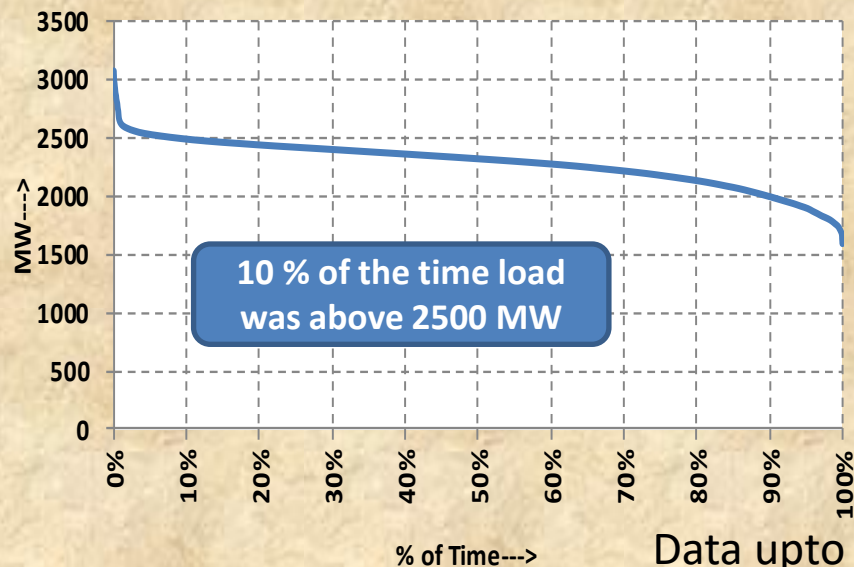
BSPHCL Load duration curve -Aug-17



JUVNL Load duration curve -Aug-17

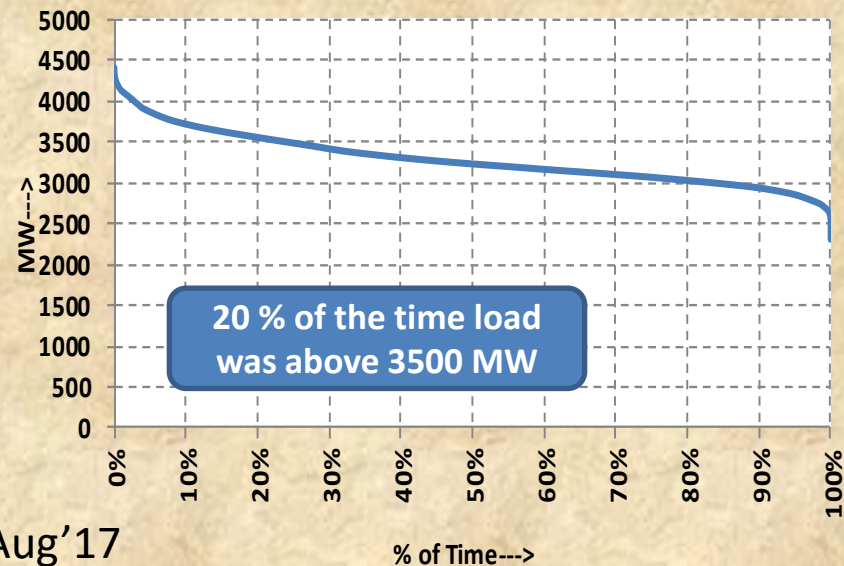


DVC Load duration curve -Aug-17

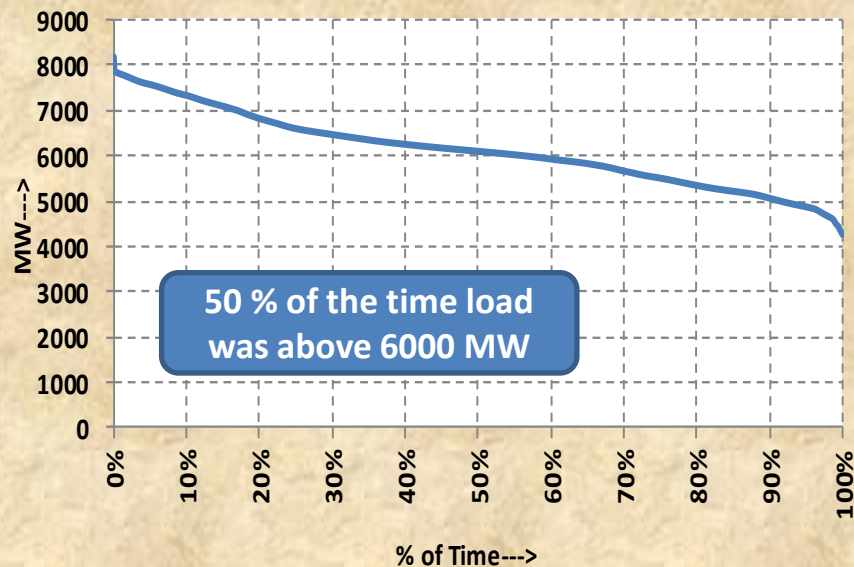


Data upto 24th Aug'17

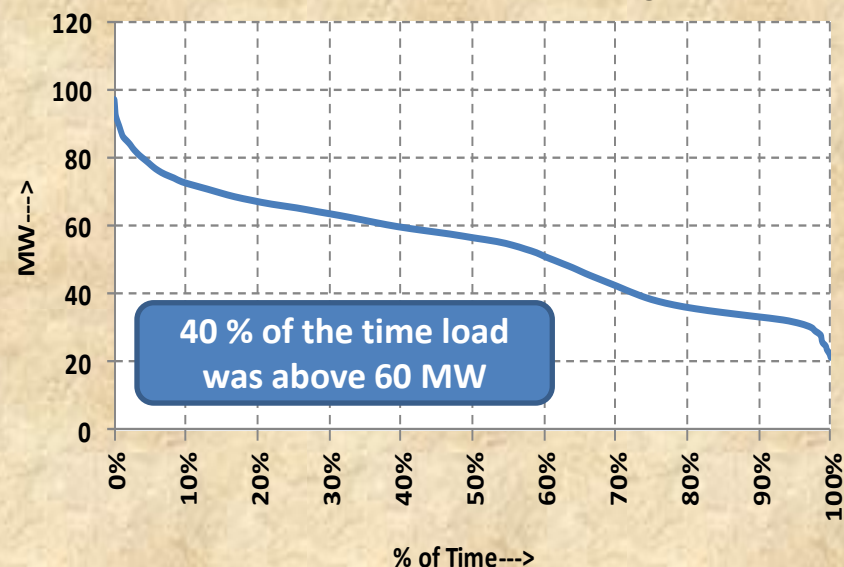
Gridco Load duration curve -Aug-17



WB Load duration curve -Aug-17



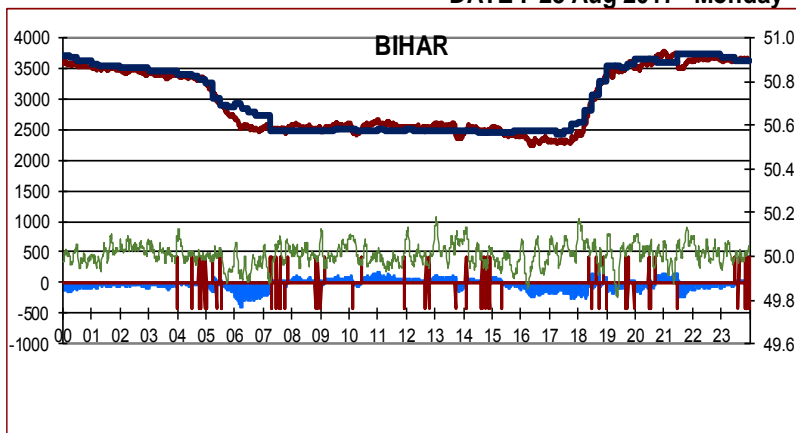
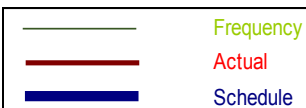
Sikkim Load duration curve -Aug-17



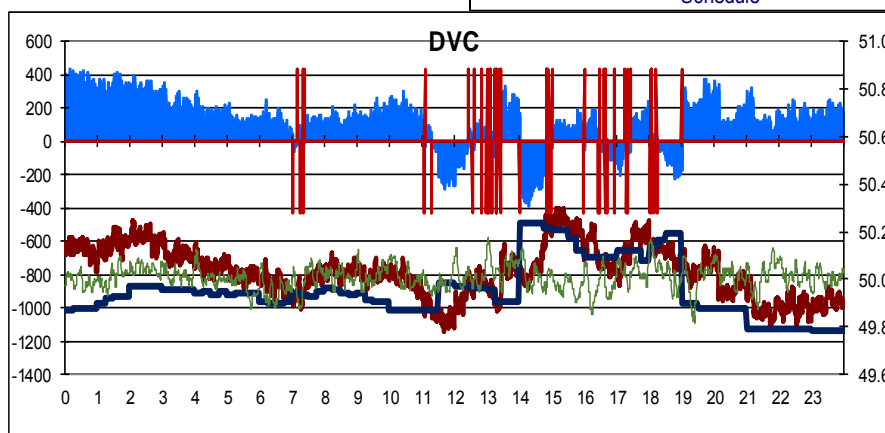


CONSTITUENTWISE SCHEDULE & ACTUAL EXCHANGE

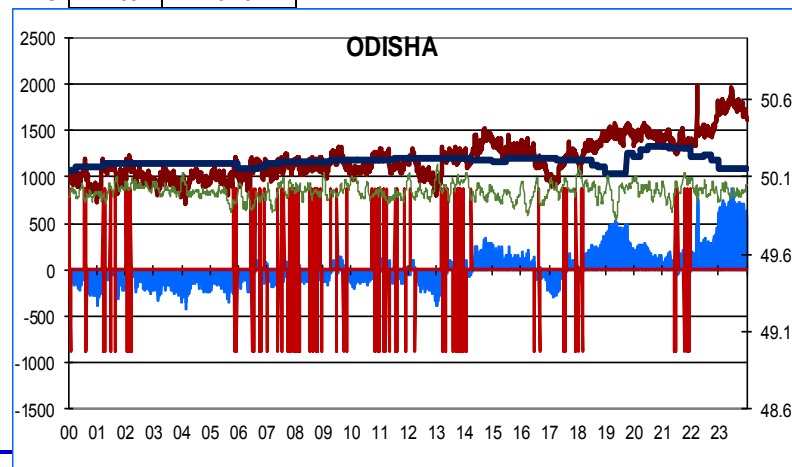
DATE : 28 Aug 2017 Monday



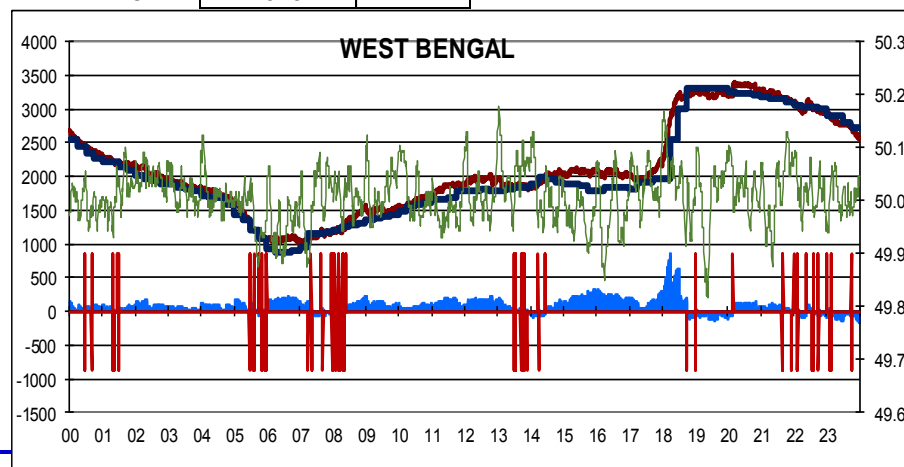
Act MU	MAX	MIN	Min/Max	UI	SCHEDULE
71.0	3767	2246	0.60	-0.95	71.99
Time:	21:00	16:26			



Act MU	MAX	MIN	Min/Max	UI	SCHEDULE
-18.7	-404	-1140	0.35	2.75	-21.42
Time:	15:13	11:41			



Act MU	MAX	MIN	Min/Max	UI	SCHEDULE
28.8	1987	714	0.36	0.67	28.11
Time:	22:14	4:08			

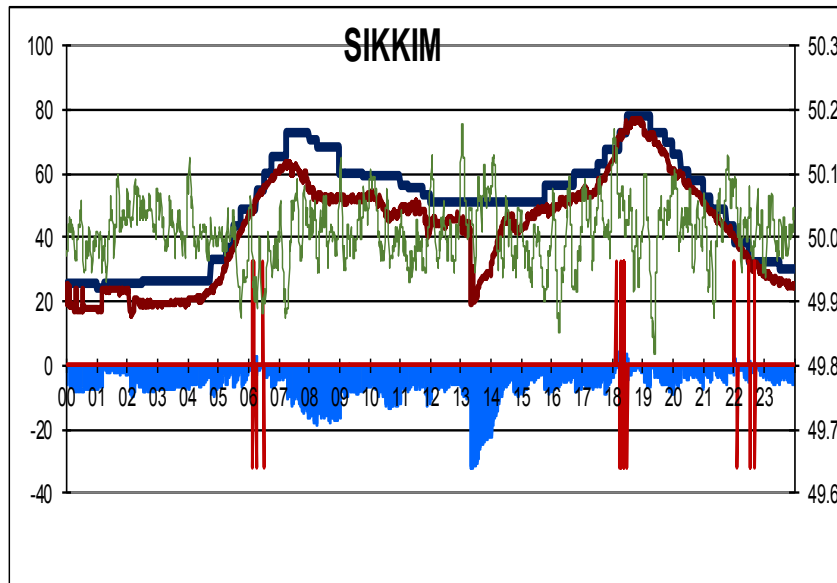
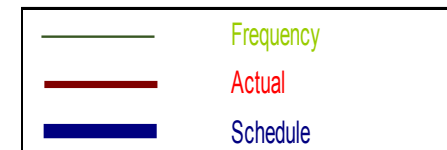


Act MU	MAX	MIN	Min/Max	UI	SCHEDULE
50.7	3388	1017	0.30	2.02	48.66
Time:	20:12	7:08			



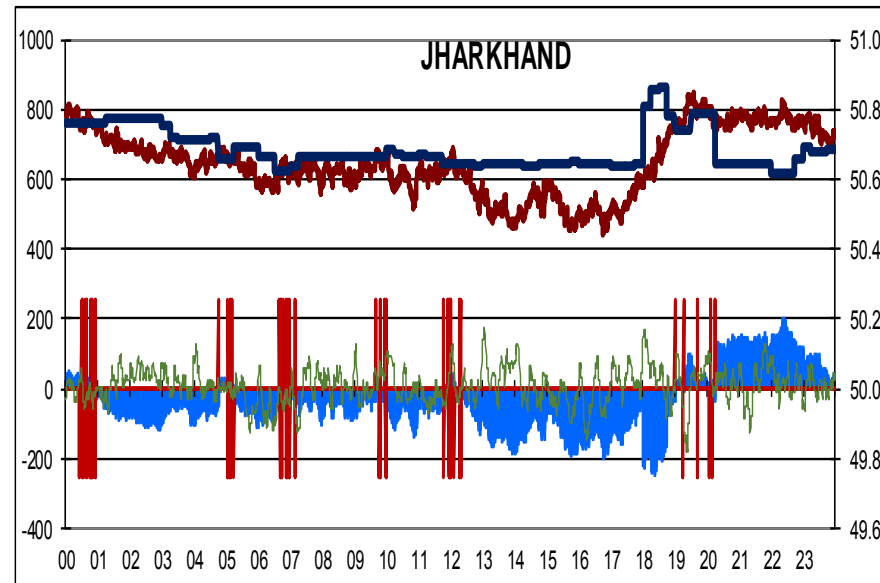
CONSTITUENTWISE SCHEDULE & ACTUAL EXCHANGE

DATE : 28 Aug 2017 Monday



MU	MAX	MIN	Min/Max	UI	SCHEDULE
1.0	77	16	0.20	-0.16	1.19

Time: 18:54 2:07



Act MU	MAX	MIN	Min/Max	UI	schd MU
15.53	843	443	0.53	-0.93	16.46

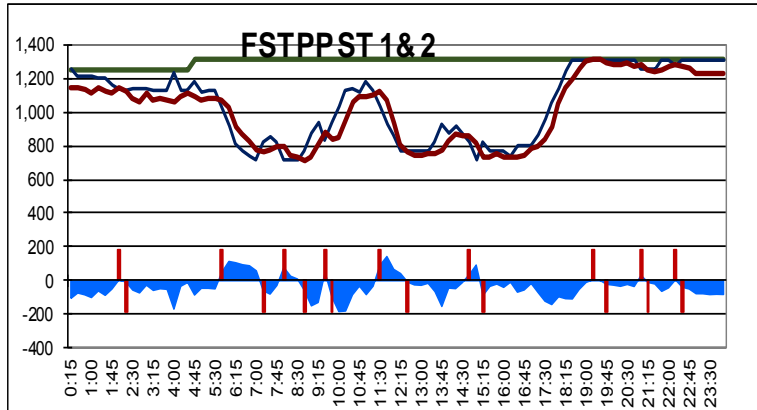
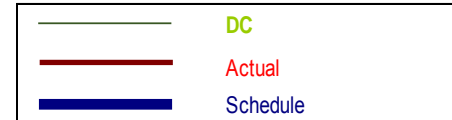
Time: 19:35 16:45



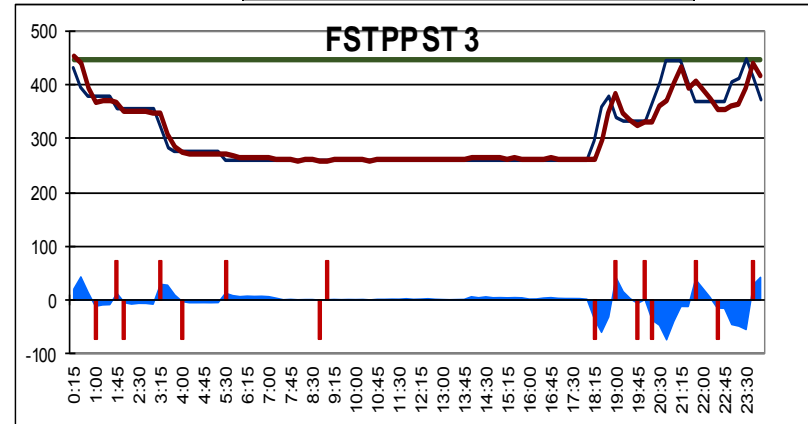
ISGS (THERMAL) DC, SCHEDULE & ACTUAL GENERATION

DATE : 28 Aug 2017

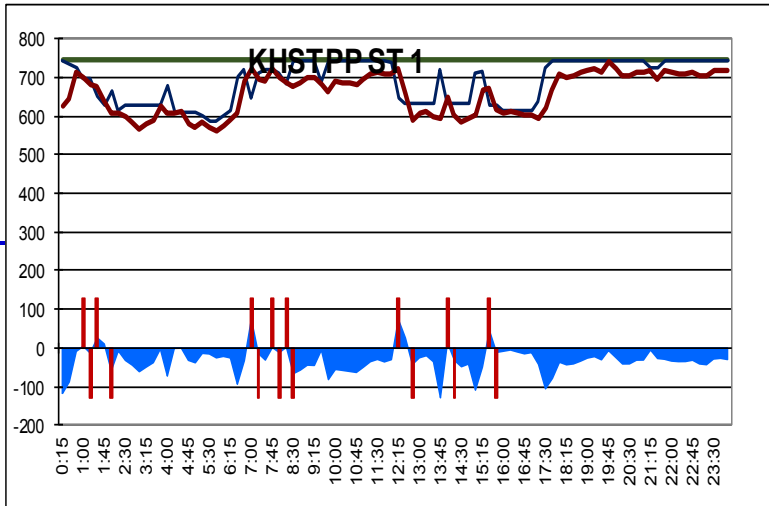
Monday



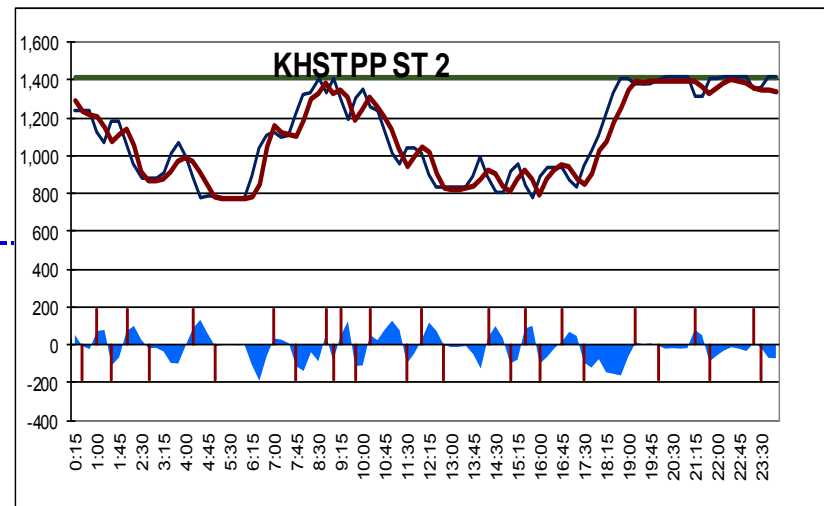
Act MU	MAX	MIN	Min/Max	UI	schd MU
24.21	1315	714	0.54	-0.87	25.07
Time:	19:15	8:45			



Act MU	MAX	MIN	Min/Max	UI	schd MU
7.3	453	259	0.57	-0.03	7.33
Time:	0:15	8:45			

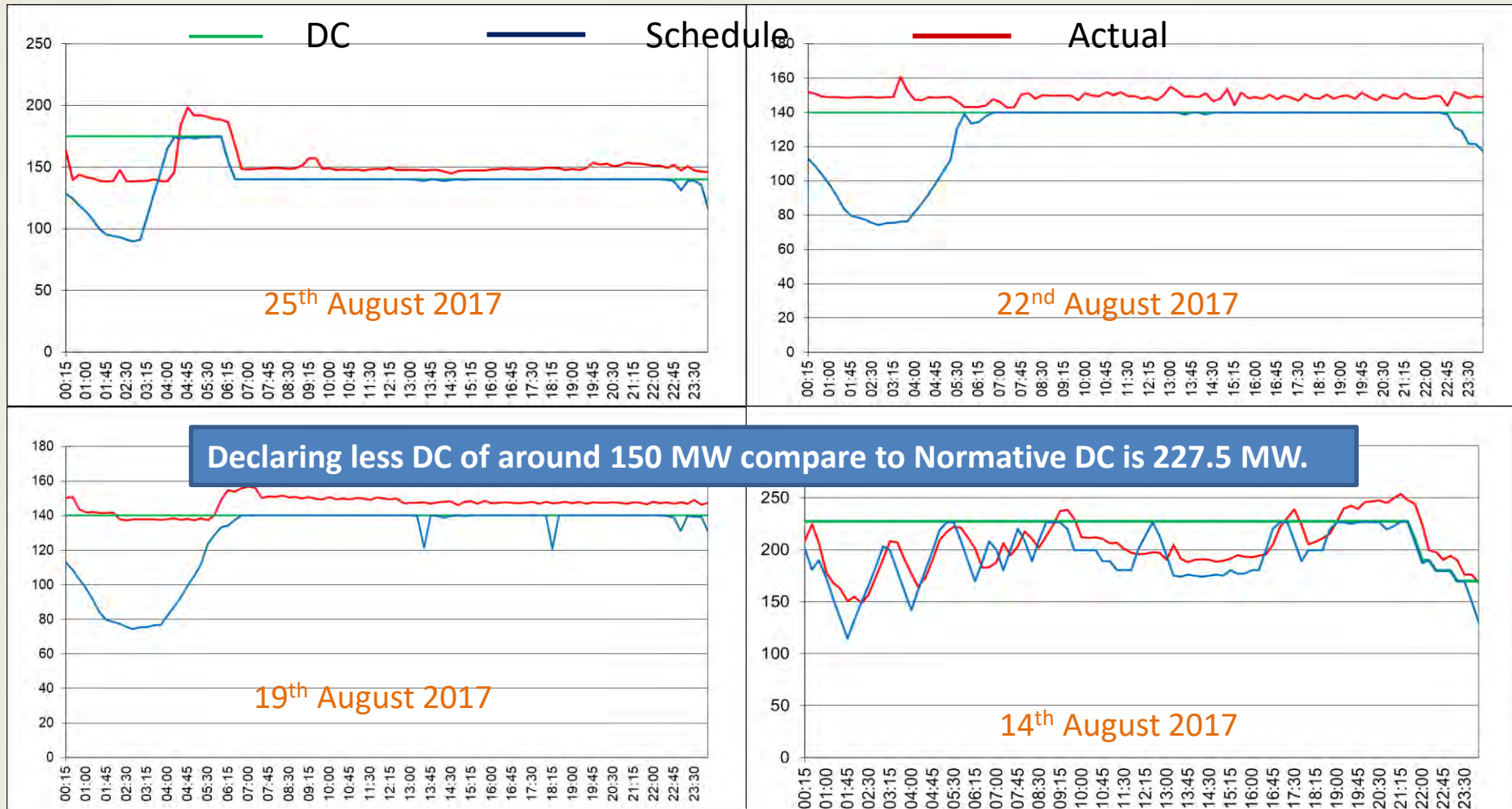


Act MU	MAX	MIN	Min/Max	UI	schd MU
15.8	738	562	0.76	-0.74	16.56
Time:	19:45	5:45			



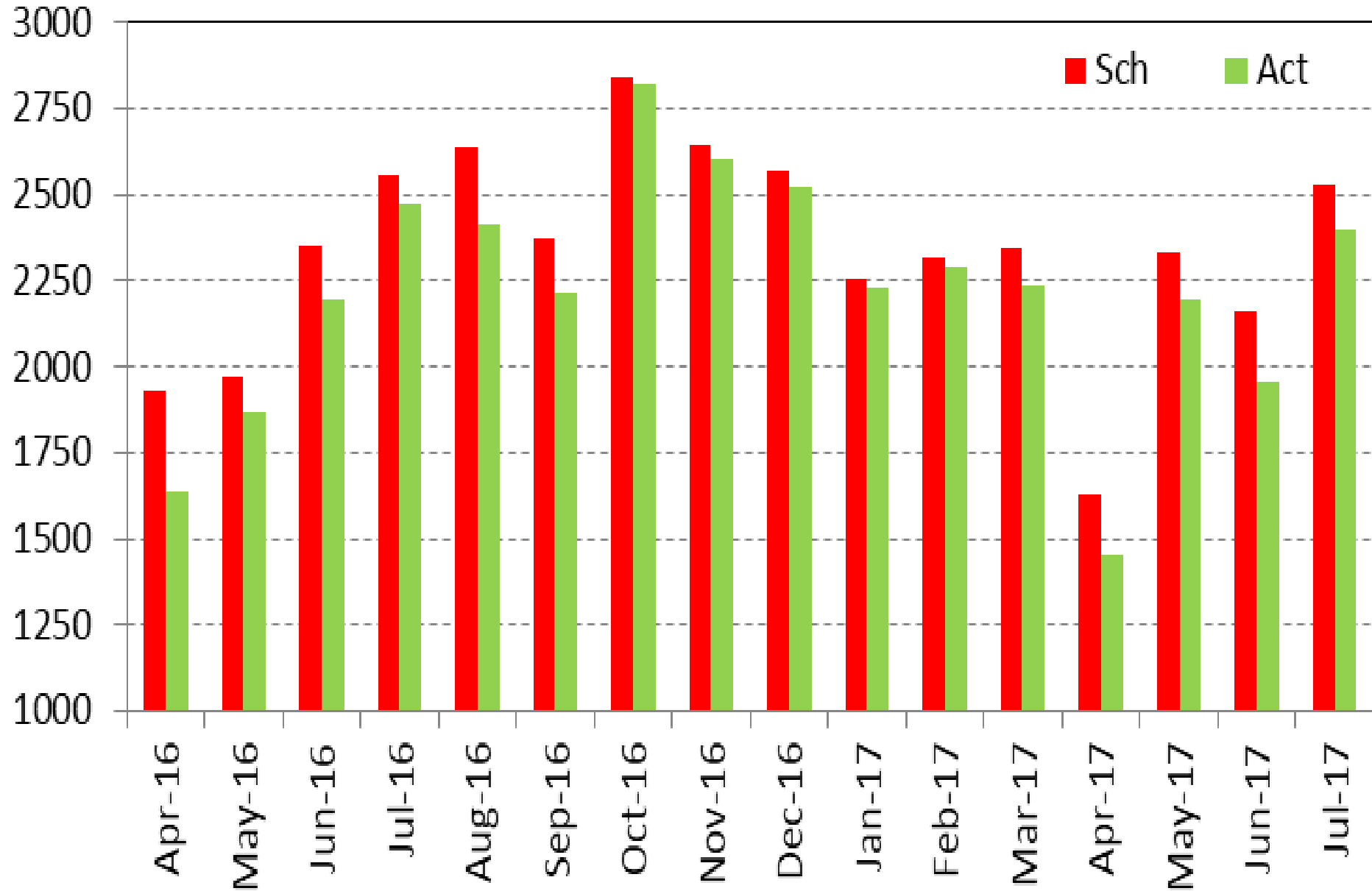
Act MU	MAX	MIN	Min/Max	UI	schd MU
26.2	1401	775	0.55	-0.34	26.53
Time:	22:30	5:45			

DC vs Schedule vs Actual of Nabinagar



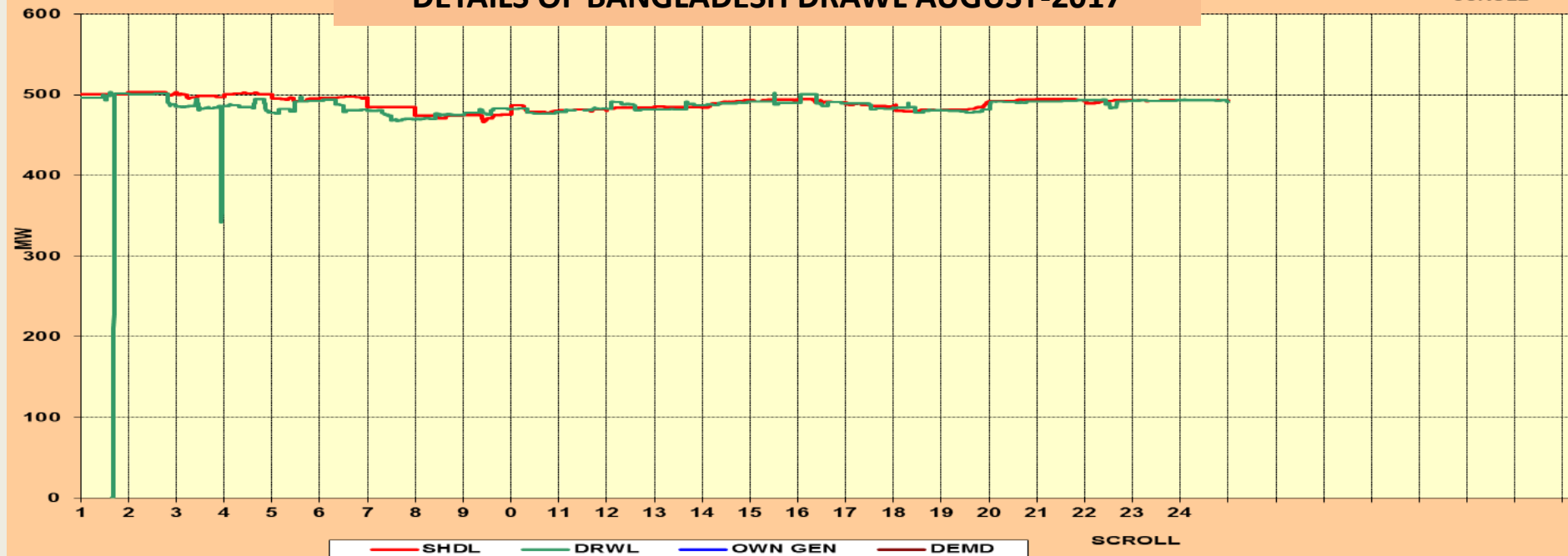
- Nabinagar U-1(250 MW) scheduling start from 00:00 Hr of 02/08/17.
- Beneficiaries are Eastern Railway through DVC (75 MW), Western Railway through Maharashtra(120 MW), BSPHCL (25 MW:10 % share allocation).
- All contract amount are maximum schedule limit to beneficiary at generator Ex-bus boundary.

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



DETAILS OF BANGLADESH DRAWL AUGUST-2017

TIME ZOOM
SCROLL

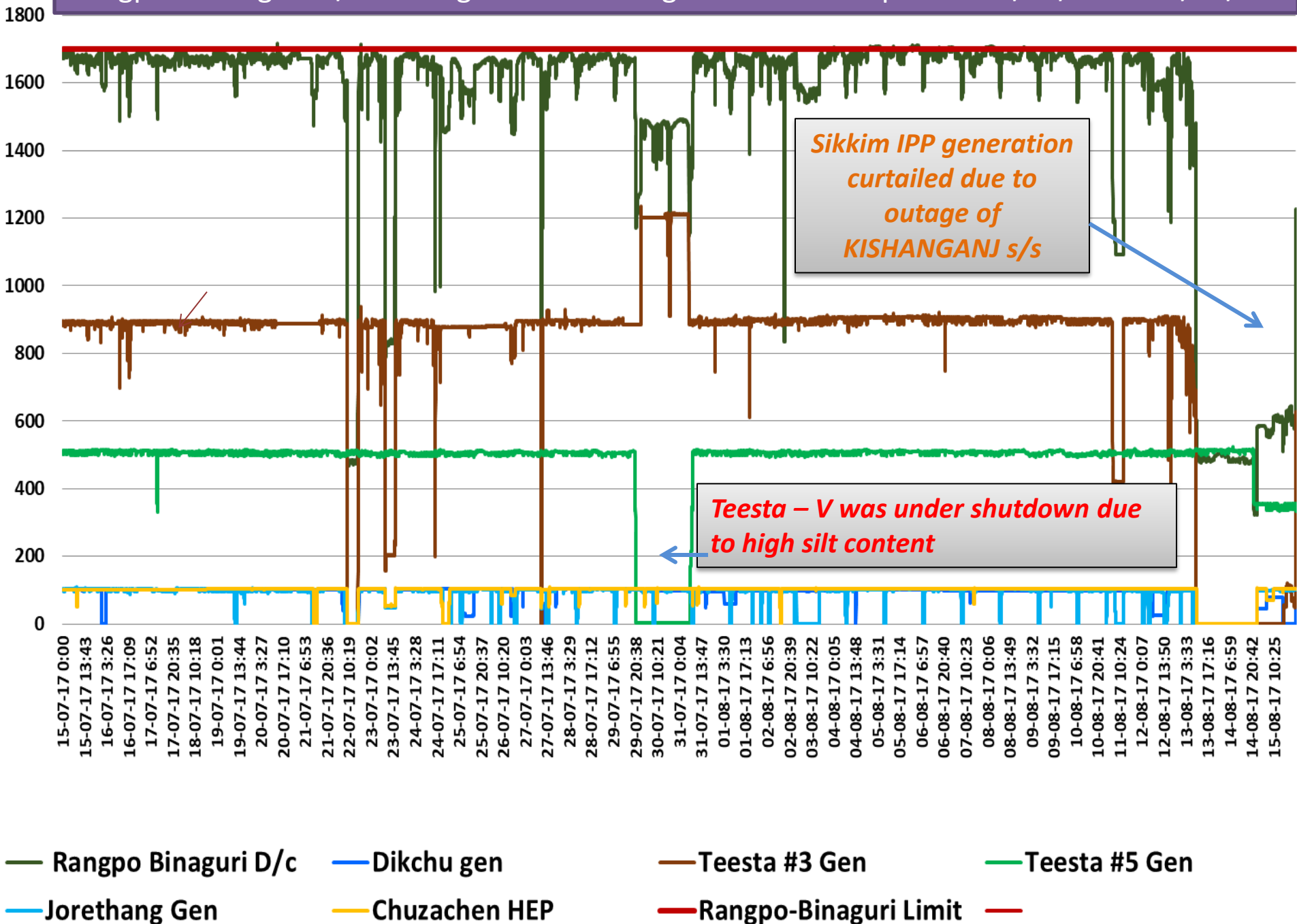


DETAILS OF TALA + CHUKHA Generation AUGUST-2017

TIME ZOOM
SCROLL

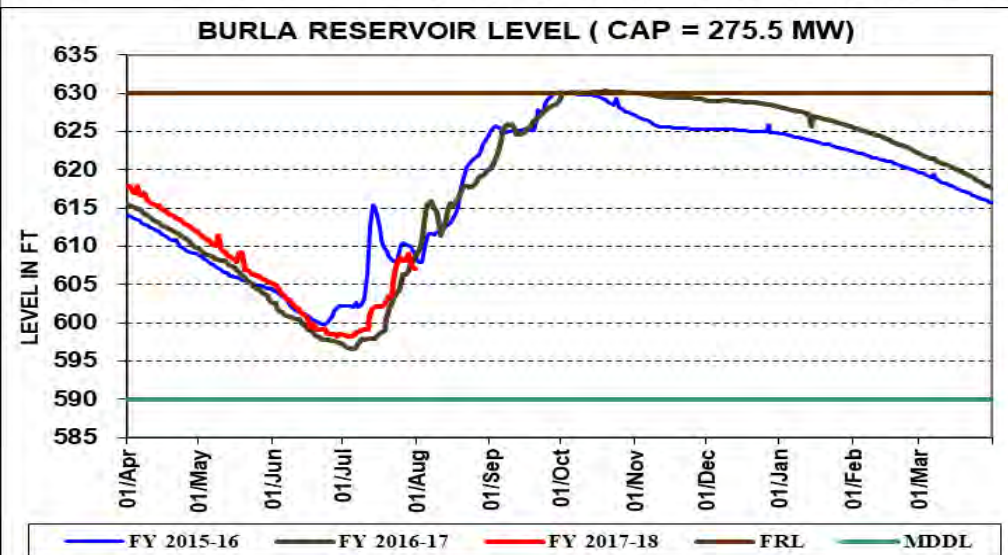
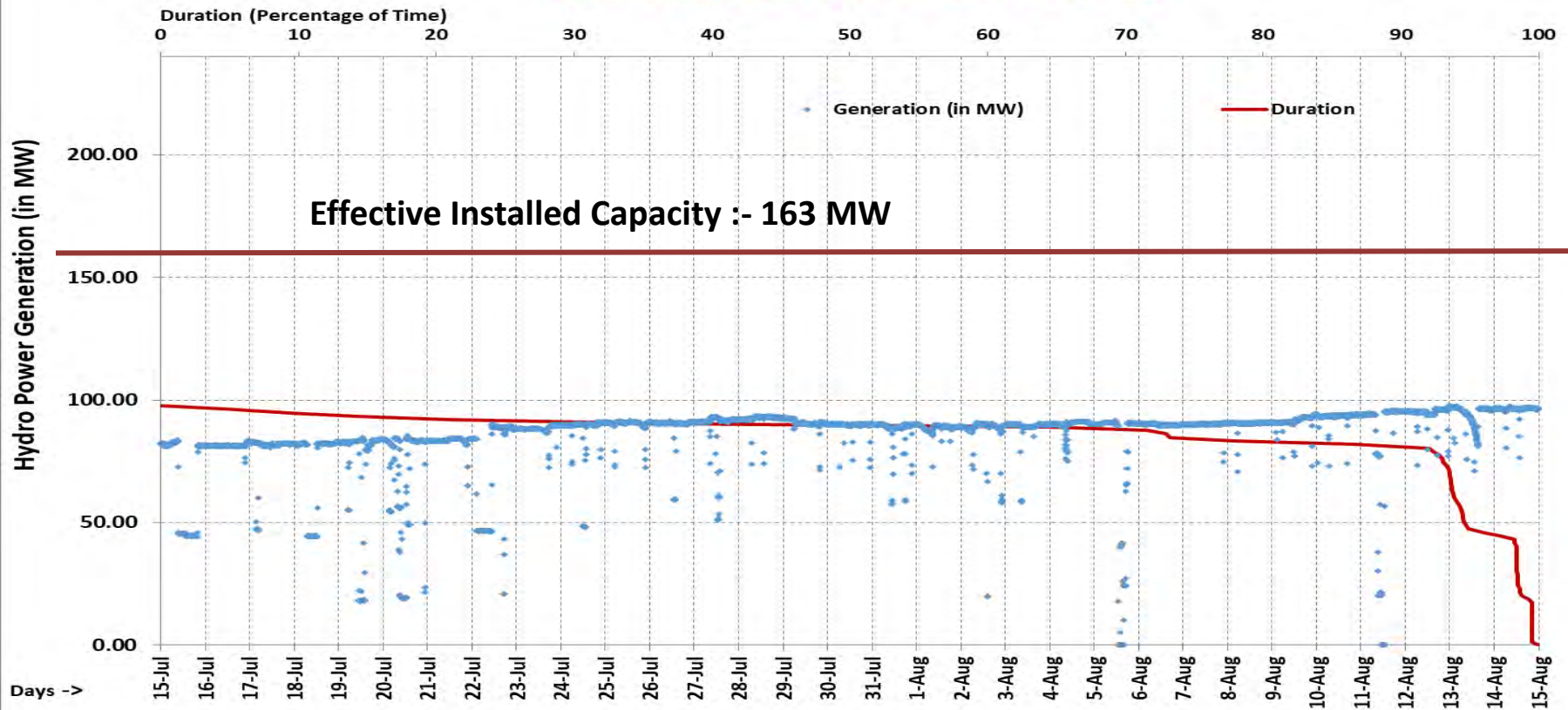


Rangpo – Binaguri D/C loading & Sikkim IPP generators Gen. pattern 15/07/17 to 15/08/17



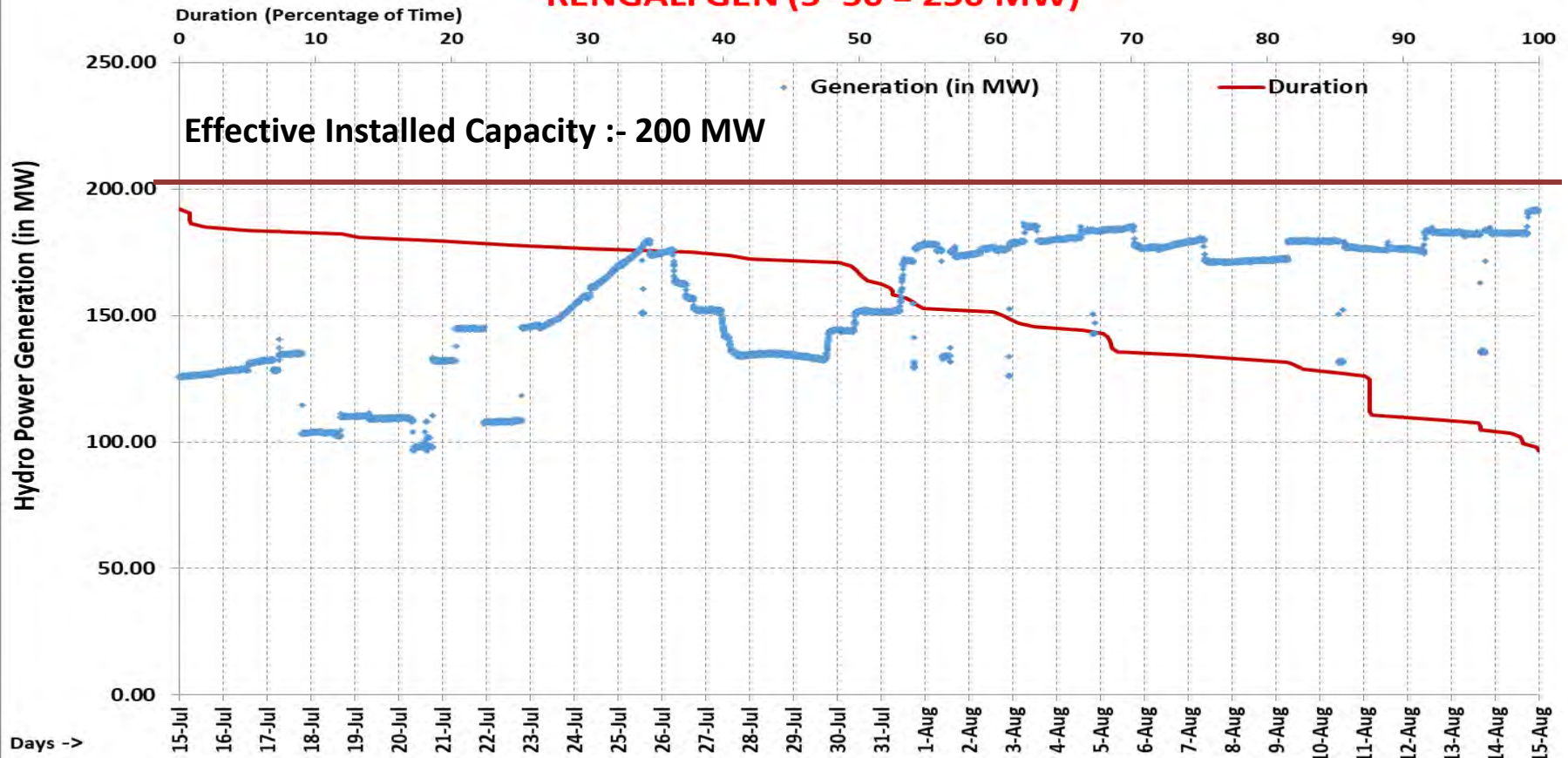
State Hydro Generators Performance

$$\text{BURLA GEN}(49.5 * 2 + 32 * 2 + 37.5 * 3 = 237.5)$$

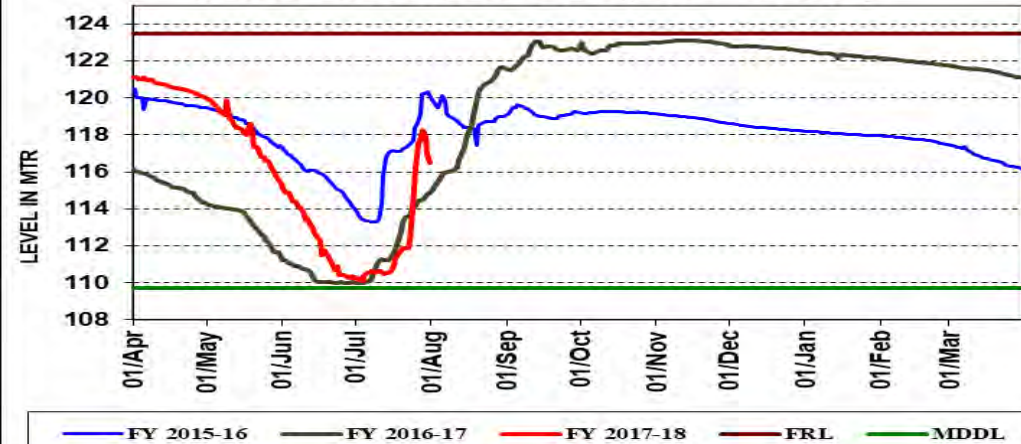


Unit No	Date of Outage	Reason
U - 5	25.10.2016	R & M Work
U - 6	16.10.2015	R & M Work
U - 7	21.02.2017	GT Problem

RENGALI GEN (5*50 = 250 MW)

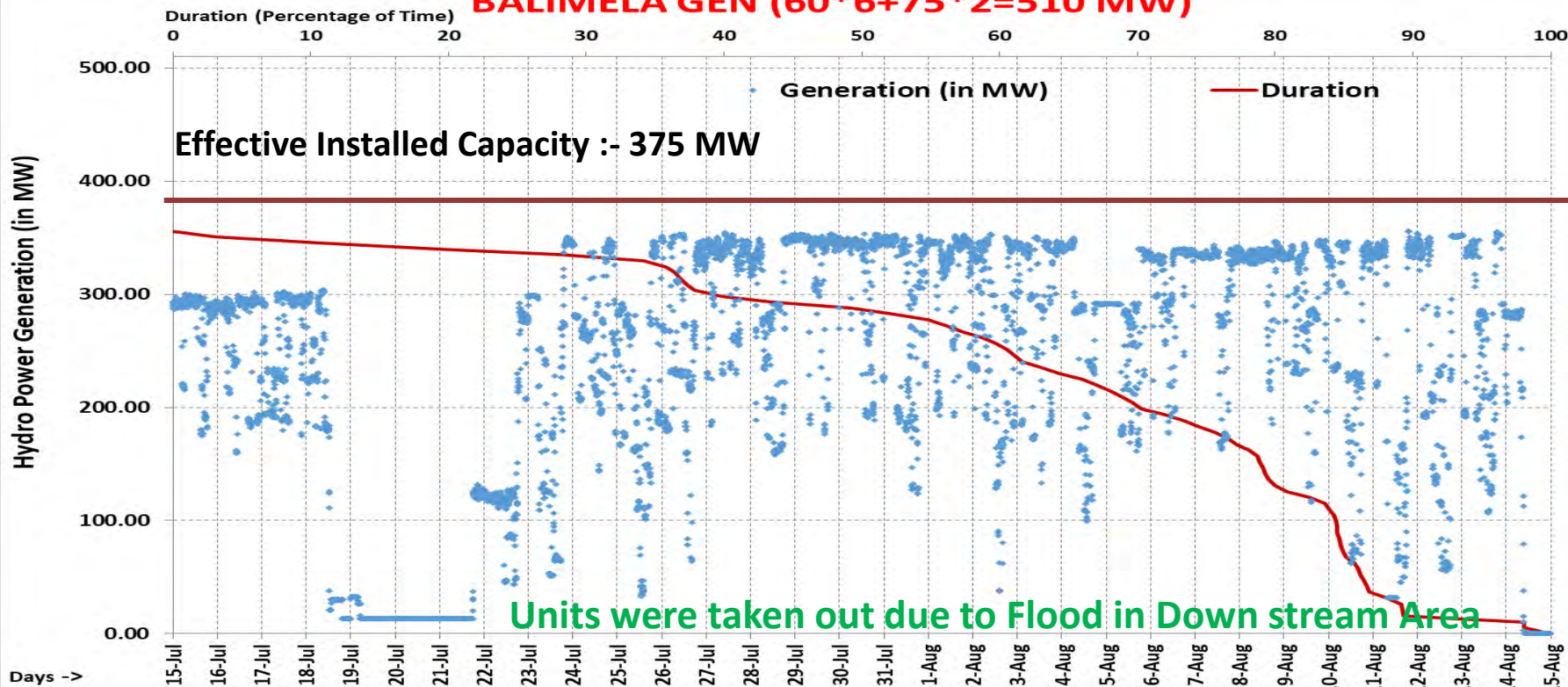


RENGALI RESERVOIR LEVEL (CAP= 250 MW)

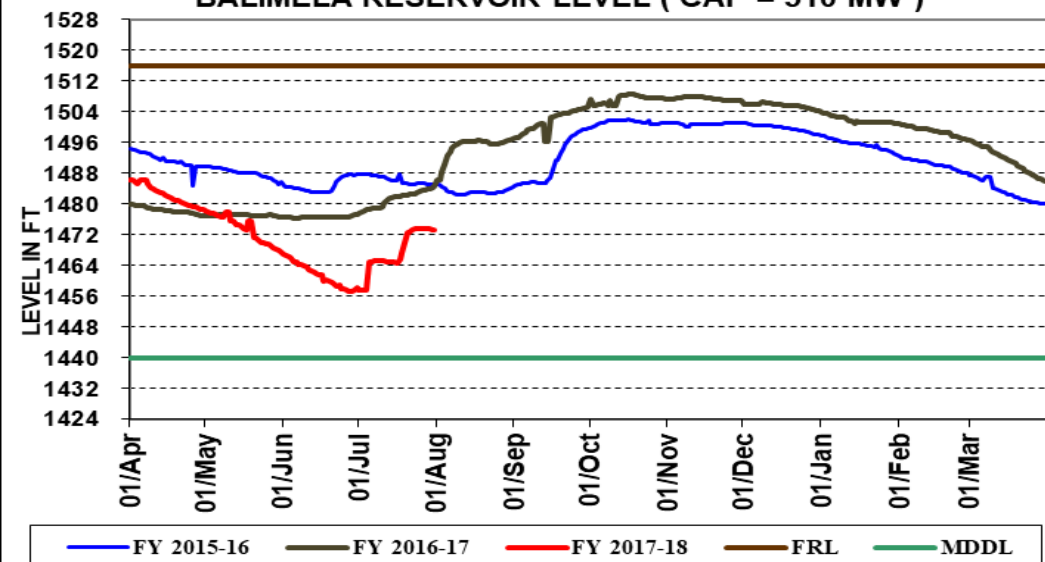


Unit No	Date of Outage	Reason
U - 5	21.03.2017	Hoist Gate Problem

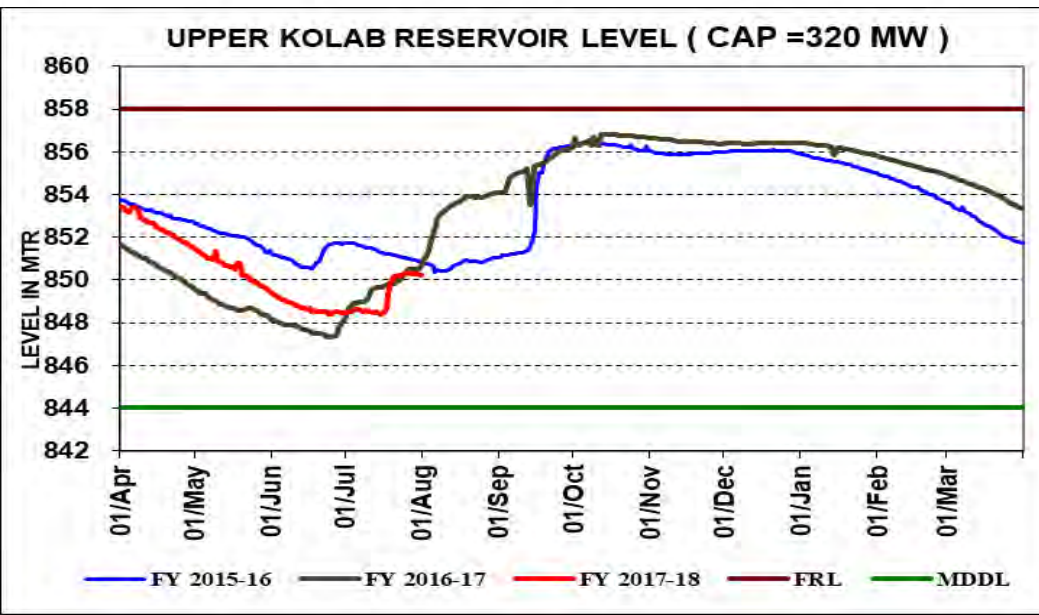
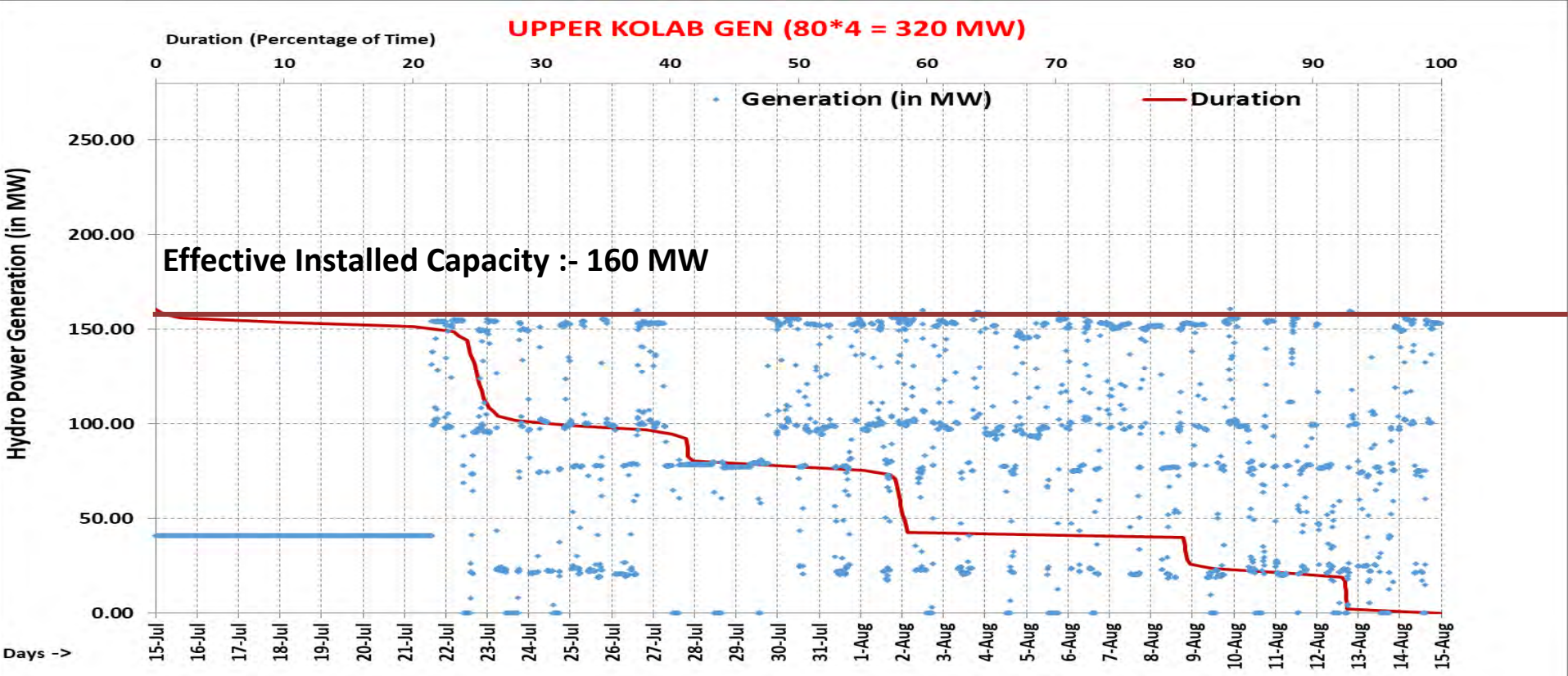
BALIMELA GEN (60*6+75*2=510 MW)



BALIMELA RESERVOIR LEVEL (CAP = 510 MW)

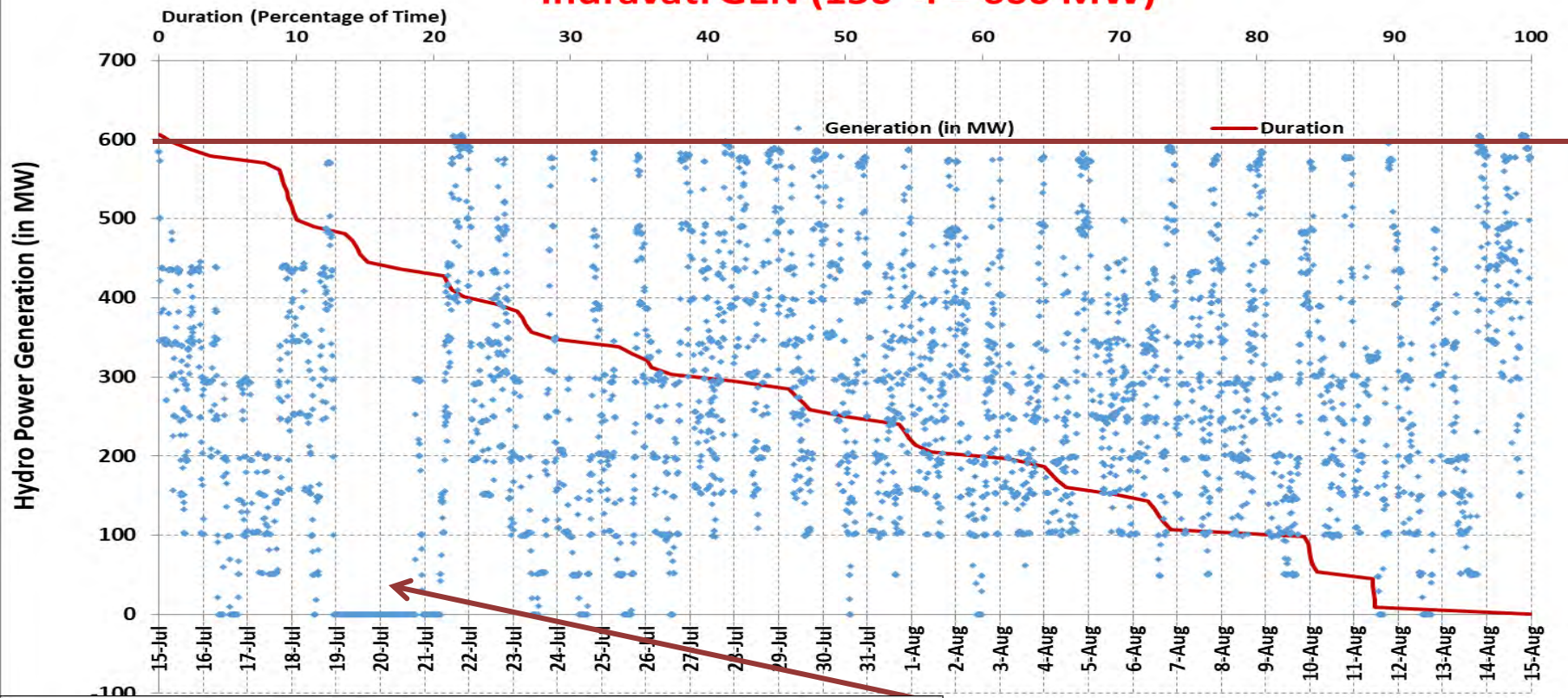


Unit No	Date of Outage	Reason of Outage
U – 1 (60)	05.08.2016	R & M Work
U – 7 (75)	16.04.2017	Gen. Stator Problem

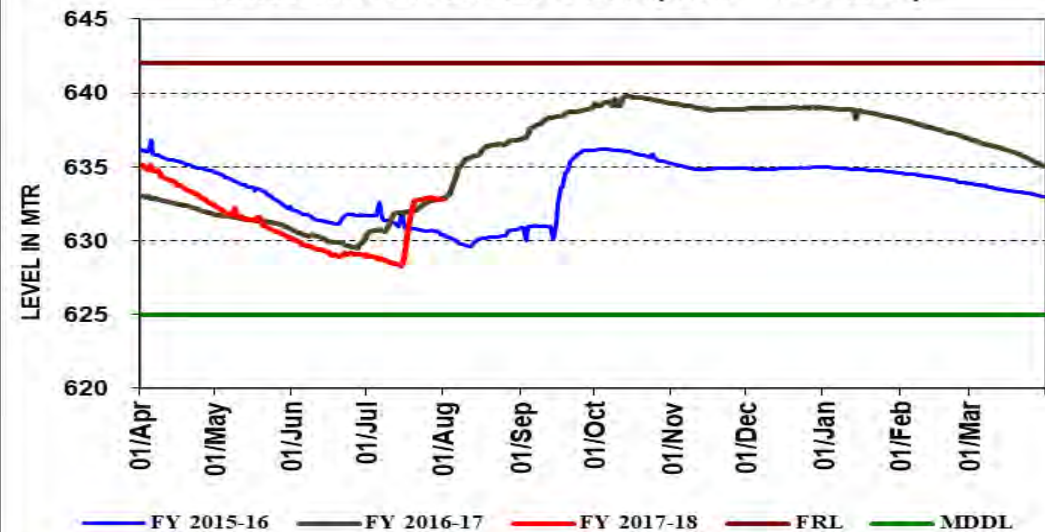


Unit No	Date of Outage	Reason of Outage
U – 2 (80)	22.06.2017	Annual Maintenance
U – 3 (80)	19.04.2017	Gen. Internal fault

Indravati GEN (150*4 = 600 MW)

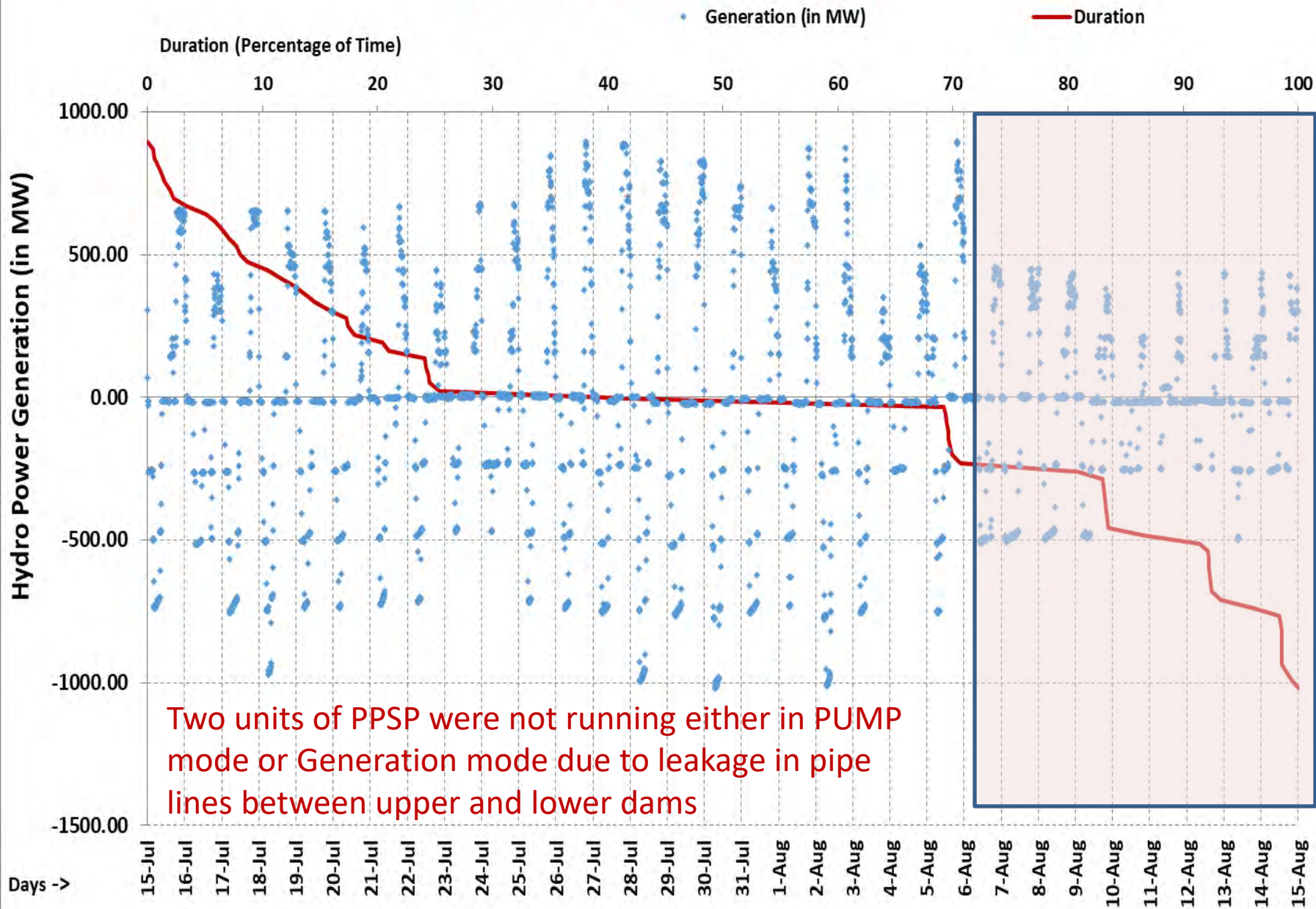


INDRAVATI RESERVOIR LEVEL (CAP = 600 MW)



Units were taken out due to Flood in Down stream Area

PPSP GEN (4*225 = 900 MW)



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

SL.NO	PARTICULARS	PEAK DEMAND MW	ENERGY MU
1	BIHAR		
i)	NET MAX DEMAND	4300	2250
ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	700	158
	- Central Sector	2835	1710
iii)	SURPLUS(+)/DEFICIT(-)	-765	-382
2	JHARKHAND		
i)	NET MAX DEMAND	1200	760
ii)	NET POWER AVAILABILITY- Own Source (including bilateral)	450	287
	- Central Sector	700	357
iii)	SURPLUS(+)/DEFICIT(-)	-50	-116
3	DVC		
i)	NET MAX DEMAND (OWN)	2720	1631
ii)	NET POWER AVAILABILITY- Own Source	4822	2599
	- Central Sector	473	342
	Long term Bi-lateral (Export)	1500	936
iii)	SURPLUS(+)/DEFICIT(-)	1075	374
4	ORISSA		
i)	NET MAX DEMAND	4100	2484
ii)	NET POWER AVAILABILITY- Own Source	3350	2212
	- Central Sector	1215	748
iii)	SURPLUS(+)/DEFICIT(-)	465	476
5	WEST BENGAL		
5.1	WBSEDCL		
i)	NET MAX DEMAND (OWN)	6225	3423
ii)	CESC's DRAWAL	0	0
iii)	TOTAL WBSEDCL's DEMAND	6225	3423
iv)	NET POWER AVAILABILITY- Own Source	3566	1980
	- Import from DPL	-64	0
	- Central Sector	2732	1626
v)	SURPLUS(+)/DEFICIT(-)	9	182
vi)	EXPORT (TO B'DESH & SIKKIM)	10	7
5.2	DPL		
i)	NET MAX DEMAND	490	178
ii)	NET POWER AVAILABILITY	426	181
iii)	SURPLUS(+)/DEFICIT(-)	-64	3
5.3	CESC		
i)	NET MAX DEMAND	1990	1027
ii)	NET POWER AVAILABILITY - OWN SOURCE	750	473
	FROM HEL	540	328
	FROM CPL/PCBL	0	0
	Import Requirement	700	226
iii)	TOTAL AVAILABILITY	1990	1027
iv)	SURPLUS(+)/DEFICIT(-)	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)		
i)	NET MAX DEMAND	8705	4628
ii)	NET POWER AVAILABILITY- Own Source	4742	2634
	- Central Sector+Others	3972	1954
iii)	SURPLUS(+)/DEFICIT(-)	9	-40
7	SIKKIM		
i)	NET MAX DEMAND	85	34
ii)	NET POWER AVAILABILITY- Own Source	10	7
	- Central Sector+Others	152	99
iii)	SURPLUS(+)/DEFICIT(-)	78	72
8	EASTERN REGION		
	At 1.03 AS DIVERSITY FACTOR		
i)	NET MAX DEMAND	20495	11787
	Long term Bi-lateral by DVC	1500	936
	EXPORT BY WBSEDCL	10	7
ii)	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)	23421	13107
iii)	PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)	1416	377

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

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	KTPS	2	500	15.09.17	10.10.17	26	AOH (Blr, TG Brgs, LPT Gen), deferred to Nov 2017
ODISHA	TTPS	4	60	05.09.17	19.09.17	15	Boiler Overhaul
		5*	110	22.09.17	26.10.17	35	Boiler Overhaul + HPT + IPT

* Odisha requested Talcher to take the shutdown after Puja

EASTERN REGIONAL LOAD DESPATCH CENTRE

KOLKATA

TRANSMISSION ELEMENTS OUTAGE APPROVED IN 136TH 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	400KV Berhampore Bheramara Ckt-II Main Bay (401 bay)	01/09/17	09:00	01/09/17	16:00	ODB	ER-II	AMP works	
2	400 KV Maithon-Durgapur I & II	01/09/17	08:00	12/09/17	18:00	OCB	ER-II	Diversion of MD Line by M/S Suhara Power for dedicated freight coridor.	
3	z	01/09/17	09:00	01/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	JSEB
4	50 MVAR Line Reactor AT SUBHASGRAM	01/09/17	08:00	30/09/17	17:30	OCB	ER-II	Implementation of Switching Scheme in existing 50 MVAR Sgram-S'dighi Line Reactor at Subhasgram	
5	220kv SLG-Kishanganj Ckt-I	01/09/17	9.00 hrs	01/09/17	17.00 hrs	ODB	ER-II	Jumper tightening & defect insulator replacement	
6	132kv Rangpo-Melli	01/09/17	09:00	05/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	SIKKIM
7	50 MVAR X 2 BUS REACTOR AT JEERAT	01/09/17	09:00	01/09/17	17:00	ODB	ER-II	FOR FREQUENCY DOMAIN SPECTROCHEM MEASURMENT.	WB
8	315MVA ICT-II AT PATNA	01/09/17	08:00	01/09/17	18:00	ODB	POWERGRID ER-I	Application of insulation sleeve on tertiary	BSEB
9	220 KV MAIN BAY OF ICT#1 AT PURNEA	01/09/17	09:00	02/09/17	17:00	OCB	POWERGRID ER-I	DEW POINT MEASUREMENT DONE OF Y & B POLE. RESULT IS BELOW EXPECTED LEVEL, POLE RECONDITIONING TO BE DONE.	BSEB
10	132 KV PURNEA - PURNEA(BSPTCL)#3 LINE	01/09/17	09:00	23/09/17	17:00	OCB	POWERGRID ER-I	GIS WORK	BSEB
11	132kv NBU-Siliguri(PGCL)	01/09/17	09:00	02/09/17	15:00	ODB	WB	PrePuja Maintenance	
12	400 KV Bus-II at Baripada	01/09/17	08:30	01/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for isolation of GIS Bus-II)	
13	400 kV Bay 415 CB(GIS) at Baripada	01/09/17	08:30	06/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For GIS Bus-II ext. works	
14	50MVAR BUS REACTOR at Rourkela	01/09/17	09:00	30/11/17	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 RETURN OF JAMSHEDPUR BR
15	Auto Reclose to be kept in Manual mode 400 KV Rengali-Indravati Line	01/09/17	08:00	30/09/17	18:00	ODB	ER-II/Odisha/BOLANGIR	For Carrying out PID of line , No Power Interruption will be there.	
16	400 kV JSR-mejia Line	01/09/17	08:00	01/09/17	18:00	ODB	POWERGRID ER-I	Fo rmain bay CB replacement work under Addcap	

17	50 MVAR BR-I at JSR	01/09/17	08:00	11/09/17	18:00	ODB	POWERGRID ER-I	Bus Reactor-III bay construction work.	
18	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	01/09/17	08:00	01/09/17	17:00	ODB	ER-II	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I & BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	WB
19	400 KV Maithon-Kahalgoan I & II	02/09/17	09:00	03/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	
20	ICT-IV AT SUBHASGRAM & Haldia Line -1	02/09/17	08:00	02/09/17	17:30	ODB	ER-II	Joint Inspection of POWERGRID & CESC for simultaneous Tripping	WB
21	220kv SLG-Kishanganj Ckt-II	02/09/17	9.00 hrs	02/09/17	17.00 hrs	ODB	ER-II	Jumper tightening & defect insulator replacement	
22	80 MVAR Alipurduar-I L/R AT BONGAIGAON	02/09/17	9.00 hrs	02/09/17	17.00 hrs	ODB	ER-II	AMP	
23	132kV Siliguri-Kurseong	02/09/17	09:00	06/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	WB
24	132 kV LKR-LKR (BSPTCL) Line-1	02/09/17	10:00	02/09/17	14:00	ODB	POWERGRID ER-I	AMP	BSEB
25	400KV ABG-KTPP#	02/09/17	06:00	02/09/17	15:00	ODB	WB	PrePuja Maintenance	
26	160MVA ICT-I (BIRPARA-PGCIL)	02/09/17	08:00	02/09/17	15:00	ODB	ER-II	GIS BUSHING ERECTION WORK 132KV SIDE ICT-1 (160MVA ICT-1)	WB
27	315MVA ICT-I AT PATNA	03/09/17	08:00	03/09/17	18:00	ODB	POWERGRID ER-I	Attending commissioning punch point & Pre-warranty Test	BSEB
28	400KV ABG-PPSP#	03/09/17	06:00	03/09/17	15:00	ODB	WB	PrePuja Maintenance	
29	220KV Birpara-Birpara(PG)#1	03/09/17	07:00	03/09/17	15:00	ODB	WB	PrePuja Maintenance	
30	132kv NJP-Siliguri(PGCL)#	03/09/17	07:00	04/09/17	15:00	ODB	WB	PrePuja Maintenance	
31	315MVA ICT #3 at Baripada	03/09/17	00/01/1900	03/09/17	00/01/1900	ODB	ER-II/Odisha/BARIPADA S/S	CSD Commissioning, amp work & calibration of OTI&WTI	GRIDCO
32	220KV BUS COUPLER BAY (BAY NO.- 202) at Rourkela	03/09/17	09:00	03/09/17	18:00	ODB	ER-II/Odisha/ROURKELA	AMP	
33	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	03/09/17	08:00	03/09/17	15:00	ODB	ER-II	GIS BUSHING ERECTION WORK BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	WB
34	400KV Berhampore Bheramara Ckt-II Line	04/09/17	09:00	05/09/17	16:00	ODB	ER-II	FOX-515 COMMUNICATION CHECKING WITH BANGLADESH.	NLDC
35	125 MVAR BR#2 at DURGAPUR	04/09/17	10:00hrs	04/09/17	17:00hrs	ODB	ER-II	for fire fighting commissioning of BR#2	
36	400 KV Maithon-Jamshedpur	04/09/17	09:00	05/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	
37	220 kv Maithon-Kalyanswari I&II	04/09/17	09:00	04/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	DVC
38	220 kv Maithon-Dhanbad I&II	04/09/17	09:00	04/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	DVC
39	Sagardighi - ICT#1 Tie bay (402) AT SUBHASGRAM	04/09/17	08:00	06/09/17	17:30	OCB	ER-II	Yph Interrupter Unit replacement for SF6 Leakage	WB

40	400KV ICT-I main Bay(BAY NO.-407)	04/09/17	9.00 hrs	09/09/17	17.00 hrs	OCB	ER-II	CB (BHEL make) overhauling	
41	400 KV ANDAL-JAMSHEDPUR-I	04/09/17	09:00	06/09/17	17:00	ODB	ER-II	FOR DAMAGED INSULATOR REPLACEMENT BY MISCREANTS.	DVC
42	132 kV LKR-LKR (BSPTCL) Line-2	04/09/17	10:00	04/09/17	14:00	ODB	POWERGRID ER-I	AMP	BSEB
43	765/400 KV ICT-I AT NEW RANCHI	04/09/17	08:00	09/09/17	18:00	ODB	POWERGRID ER-I	Erection of Gantry tower under STATCOM project	NLDC
44	Main bay 400KV 125MVA B/R-2	04/09/17	08:00	04/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	
45	BSF-Banka-1 main Bay No-428 at Biharsarif	04/09/17	10:00	08/09/17	18:00	OCB	POWERGRID ER-I	CB Overhauling Work	
46	220 kV Patna-Sipara-1	04/09/17	10:00	05/09/17	18:00	ODB	POWERGRID ER-I	Isolator alignment work & other AMP works	BSEB
47	400 kV PTN-BRH CKT – I	04/09/17	08:00	04/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator at varoius locations	
48	220 KV BUS -1 AT MUZ	04/09/17	09:00	04/09/17	18:00	ODB	POWERGRID ER-I	Erection of BPI & IPS tube for GIS bay extension work at Muzaffarpur substation.	BSEB
49	400KV ABG-NEW PPSP#	04/09/17	06:00	04/09/17	15:00	ODB	WB	PrePuja Maintenance	
50	765kv ICT-2 Main Bay (707) at Angul	04/09/17	10:00	04/09/17	18:00	ODB	ER-II/Odisha/Angul SS	C & Tan delta testing of Grading Capacitor of 707CB.	NLDC
51	400 KV Indravati-Rengali Main Bay at Indravati	04/09/17	09:00	04/09/17	16:00	ODB	ER-II/Odisha/Indravati	AMP Work	
52	220 kV Jeypore-Jayanagar-2 Line	04/09/17	09:30	04/09/17	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 Aug 2017)	GRIDCO
53	765 KV Bus-II at Sundargarh	04/09/17	08:00	05/09/17	18:00	OCB	ER-II/Odisha/Sundergarh	Extension of 4.5" AI Tube & stability checking for commissiiong of 765KV Angul Line-3&4 main bay(713 & 716)for new bays construction work.	NLDC
54	315MVA ICT-II at Keonjhar	04/09/17	09:00	30/09/17	18:00	OCB	ER-II/Odisha/Keonjhar	Construction of Firewall for 125MVAR Reactor	
55	400KV Keonjhar- Rengali line	04/09/17	09:00	04/09/17	18:00	ODB	ER-II/Odisha/Keonjhar	01 no. bundle spacer and VD tightening work.	
56	400Kv Rourkela-Raigarh -II line (direct)	04/09/17	08:00	14/09/17	18:00	OCB	ER-II/Odisha/Sundergarh TLM	Erection and stringing of 400kv Rourkela-Raigarh Fdr - II (direct) and Sundargarh -Raigarh fdr-I due to diversion Railway line on behalf of OPCC	NLDC
57	400Kv Sundargarh- Raigarh-I	04/09/17	08:00	14/09/17	18:00	OCB	ER-II/Odisha/Sundergarh TLM	Erection and stringing of 400kv Rourkela-Raigarh Fdr - II (direct) and Sundargarh -Raigarh fdr-I due to diversion of Railway line on behalf of OPCC	NLDC
58	400KV Sundergarh-Raigarh-I	04/09/17	08:00	05/09/17	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
59	400KV Bus I at bolangir	04/09/17	08:00	11/09/17	18:00	ODB	ER-II/Odisha/BOLANGIR	BPI Erection and Stringing in Reactor Bay construction ERSS-XIV	
60	BOTH 132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I & 132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	04/09/17	08:00	04/09/17	12:00	ODB	ER-II	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	WB
61	400/220/33kV, 315MVA ICT - 1 at ALIPURDUAR	05/09/17	09:00	07/09/17	18:00	OCB	ER-II	Rectification work of ICT - I 220kV side CB alignment problem.	
62	125 MVAR Bus Reactor-1 AT MAITHON	05/09/17	09:00	10/09/17	17:30	ODB	ER-II	Construction of Fire wall under ERSS-IX	

63	400 KV PPSP-DURGAPUR	05/09/17	09:00	05/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	WB
64	160 MVA ICT-1 220/132 KV AT MALDA	05/09/17	8-00 A.M.	05/09/17	4-00 P.M.	ODB	ER-II	AMP	WB
65	132kv Siliguri - Melli	05/09/17	09:00	13/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	SIKKIM
66	400 kV PTN-BRH CKT – II	05/09/17	08:00	05/09/17	18:00	ODB	POWERGRID ER-I	for replacement of prcelain insulator with polymer insulator at varoius locations	
67	400kv DGP: 400KV Reactor Bay	05/09/17	09:00	05/09/17	15:00	ODB	WB	PrePuja Maintenance	
68	400KV ABG-BKTPP#	05/09/17	06:00	05/09/17	15:00	ODB	WB	PrePuja Maintenance	
69	765kV Bus Reactor-2 Main Bay (715) at Angul	05/09/17	10:00	05/09/17	18:00	ODB	ER-II/Odisha/Angul SS	C & Tan delta testing of Grading Capacitor of 715CB.	NLDC
70	160 MVA ICT#1 at Baripada	05/09/17	09:00	05/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	GRIDCO
71	400KV D/C IB-Meramundali TL (OPTCL)	05/09/17	08:00	06/09/17	18:00	OCB	ER-II/Odisha/Sambalpur TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	GRIDCO
72	400KV GT # 4 Bay No:29 Main Bay	05/09/17	09:30hrs	07/09/17	18:00 hrs	OCB	BARH	PM Job of Bay & relay test	
73	400KV GT # 5 TIE Bay No:28 TIE Bay	05/09/17	09:30hrs	07-Sep-17	18:00 hrs	OCB	BARH	PM Job of Bay & relay test	
74	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	05/09/17	08:00	05/09/17	15:00	ODB	ER-II	GIS DUCT (OUT SIDE) ERECTION WORK OF BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	WB
75	400 KV S/C Farakka-Durgapur-II TL	06/09/17	11:00	06/09/17	15:00	ODB	ER-II	For replacement of Insulator due to damage by miscreant	
76	400KV Bus-I AT BINAGURI	06/09/17	07.00 hrs	06/09/17	17.00 hrs	ODB	ER-II	To facilitate hot spot rectification in Purnea-3 & 4 Line.	
77	50MVAR L/R OF 400KV Maithan RB AT RANCHI	06/09/17	10:00	06/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	
78	Tie bay of 400KV B/R-2 & NRNC-RNC Ckt-1 AT NRNC	06/09/17	08:00	06/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	
79	400/220 kV ICT- 1 AT GAYA	06/09/17	10:00	06/09/17	14:00	ODB	POWERGRID ER-I	AMP work	BSEB
80	400 kV PTN-BRH CKT – III	06/09/17	08:00	07/09/17	18:00	ODB	POWERGRID ER-I	for replacement of prcelain insulator with polymer insulator at varoius locations	
81	400KV DGP-Arambag#	06/09/17	09:00	06/09/17	15:00	ODB	WB	PrePuja Maintenance	
82	400 kV Bus-II at Baripada	06/09/17	08:30	06/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for recoonecting jumpers to GIS Bus-II)	
83	765/400kV ICT-1 at Angul	06/09/17	10:00	06/09/17	18:00	ODB	ER-II/Odisha/Angul SS	CSD commissioning at 400kV side of ICT.	NLDC
84	125MVAR B/R - UIHEP Tie Bay (411) at Indravati	06/09/17	09:00	06/09/17	16:00	ODB	ER-II/Odisha/Indravati	Installation of CSD & online testing in Tie CB	
85	220KV Rengali(PG)- Rengali(OPTCL)-2 Line	06/09/17	10:00	06/09/17	13:00	ODB	ER-II/Odisha/Rengali	For attending hotspot in Line isolator	GRIDCO

86	400KV Kahalgaon-Banka Line-1	06/09/17	09:30hrs	06-Sep-17	17:30 hrs	ODB	KAHALGAON	PM works & relay testing	
87	400 kV JSR-mejia Line	06/09/17	08:00	06/09/17	18:00	ODB	POWERGRID ER-I	For main bay CB replacement work under Addcap	DVC
88	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	06/09/17	08:00	06/09/17	15:00	ODB	ER-II	GIS BUSHING ERECTION WORK OF 132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	WB
89	400KV Berhampore Bheramara Ckt-I Line	07/09/17	09:00	08/09/17	16:00	ODB	ER-II	FOX-515 COMMUNICATION CHECKING WITH BANGLADESH.	NLDC
90	132kV Melli-Rangit	07/09/17	09:00	14/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	SIKKIM
91	400 KV ANDAL-JAMSHEDPUR-II	07/09/17	09:00	09/09/17	17:00	ODB	ER-II	FOR DAMAGED INSULATOR REPLACEMENT BY MISCREANTS.	DVC
92	200 MVA ICT-1 AT LAKHISARAI	07/09/17	08:00	08/09/17	18:00	ODB	POWERGRID ER-I	Checking of Air Cell.	BSEB
93	400 KV NEW RANCHI -RANCHI Ckt - 1	07/09/17	09:00	07/09/17	18:00	ODB	POWERGRID ER-I	TL Maintenance works	
94	400 KV BSF - BALIA Ckt. I	07/09/17	08:00	08/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator	
95	400/220 kV ICT- 2 AT GAYA	07/09/17	10:00	07/09/17	18:00	ODB	POWERGRID ER-I	Bay extension work for Gaya Navinagar Line	BSEB
96	400KV Ranchi -Rourkela Ckt-I	07/09/17	09:00	07/09/17	17:00	8 hrs	POWERGRID ER-I	Insulator replacement at Location no 333 & 332 damage by miscreants	
97	400KV DGP-PPSP#2	07/09/17	09:00	07/09/17	15:00	ODB	WB	PrePuja Maintenance	
98	JEERAT: 400/220KV 315MVA TR#1	07/09/17	07:00	07/09/17	15:00	ODB	WB	PrePuja Maintenance	
99	765/400kV ICT-2 at Angul	07/09/17	10:00	07/09/17	18:00	ODB	ER-II/Odisha/Angul SS	CSD commissioning at 400kV side of ICT.	NLDC
100	765KV 240 MVAr Bus reactor-II at Sundargarh	07/09/17	09:00	07/09/17	12:00	ODB	ER-II/Odisha/Sundargarh	Shifting of spare Reactor to B-Ph reactor of 765KV B/R-II after attending oil leakage of the Reactor.	NLDC
101	400 kV Bus-I at Baripada	07/09/17	08:30	07/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for isolation of GIS Bus-I)	
102	400 kV Bay 413CB(GIS) at Baripada	07/09/17	08:30	12/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For GIS Bus-I ext. works	
103	315MVA ICT#1 at Rourkela	07/09/17	09:00	11/09/17	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
104	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	07/09/17	08:00	07/09/17	15:00	ODB	ER-II	GIS DUCT (OUT SIDE) ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)	WB
105	160 MVA ICT-2 220/132 KV AT MALDA	08/09/17	8-00 A.M.	08/09/17	4-00 P.M.	ODB	ER-II	AMP	WB
106	132kV Kurseong - Rangit	08/09/17	09:00	14/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	WB
107	Main bay 765/400 KV ICT-2 AT NRNC	08/09/17	08:00	08/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	NLDC
108	400 KV NEW RANCHI -RANCHI Ckt - 2	08/09/17	09:00	08/09/17	18:00	ODB	POWERGRID ER-I	TL Maintenance works	

109	400 kV PTN-BRH CKT – IV	08/09/17	08:00	09/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator at varolus locations	
110	400kV BUS - 1 AT JSR	08/09/17	09:30	08/09/17	17:30	8 hrs	POWERGRID ER-I	Bay construction work of 125 MVAR B/R	
111	400KV DGP-PPSP#1	08/09/17	09:00	08/09/17	15:00	ODB	WB	PrePuja Maintenance	
112	220KV DGP-Waria#1	08/09/17	09:00	08/09/17	15:00	ODB	WB	PrePuja Maintenance	DVC
113	765KV 240 MVAR Bus reactor-I at Sundargarh	08/09/17	09:00	08/09/17	12:00	ODB	ER-II/Odisha/Sundergarh	Shifting of Y-Ph Reactor to Spare Reactor to attend oil leakage in Y-Ph Reactor.	NLDC
114	765/400kV ICT-3 at Angul	08/09/17	10:00	08/09/17	18:00	ODB	ER-II/Odisha/Angul SS	CSD commissioning at 400kV side of ICT.	NLDC
115	132KV S/C Sambalpur-Rairakhol TL (OPTCL)	08/09/17	08:00	09/09/17	18:00	OCB	ER-II/Odisha/Sambalpur TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	GRIDCO
116	400KV GT # 5	08/09/17	09:30hrs	15-Sep-17	18:00 hrs	OCB	BARH	PM job of Generator Transformer	
117	400KV Fkk-Kahalgaoon Line-4	08/09/17	09:30hrs	08-Sep-17	17:30 hrs	OCB	FARAKKA	CB testing	
118	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	08/09/17	08:00	08/09/17	15:00	ODB	ER-II	GIS DUCT (OUT SIDE) ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)	WB
119	160MVA ICT-II OF BIRPARA.	09/09/17	07:00 Hrs	09/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
120	500MVA ICT# V AT SUBHASGRAM	09/09/17	08:00	09/09/17	17:30	ODB	ER-II	PSD Commissioning work	WB
121	400kV Tala-I L/R along with Line	09/09/17	9.00 hrs	09/09/17	17.00 hrs	ODB	ER-II	Repeat tan delta of 400kV R Phase Bushing & Neutral Bushing.	NLDC
122	BSF-Banka-2 main Bay No-430 at Biharsarif	09/09/17	10:00	13/09/17	18:00	OCB	POWERGRID ER-I	CB Overhauling Work	
123	220 kV Patna-Sipara-2	09/09/17	10:00	09/09/17	18:00	ODB	POWERGRID ER-I	Isolator alignment work & other AMP works	BSEB
124	400kV BUS -2 AT JSR	09/09/17	09:30	09/09/17	17:30	8 hrs	POWERGRID ER-I	Bay construction work of 125 MVAR B/R	
125	400KV DGP-PGCIL#1	09/09/17	09:00	09/09/17	15:00	ODB	WB	PrePuja Maintenance	
126	Arambag: 400/220KV 315MVA TR#1	09/09/17	06:00	09/09/17	15:00	ODB	WB	PrePuja Maintenance	
127	765/400kV ICT-4 at Angul	09/09/17	10:00	09/09/17	18:00	ODB	ER-II/Odisha/Angul SS	CSD commissioning at 400kV side of ICT.	NLDC
128	160MVA ICT-II (BIRPARA-PGCIL)	09/09/17	08:00	09/09/17	15:00	ODB	ER-II	GIS BUSHING ERECTION WORK OF 132KV SIDE ICT-2 (160MVA ICT-2)	WB
129	400 kv Maithon-Mejia 3	10/09/17	09:00	11/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	DVC
130	132 KV RANGPO-RANGIT	10/09/17	09:00	14/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	
131	220 KV MALDA-DALKHOLA-I	10/09/17	09:00	10/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	

132	400 KV MALDA-PURNEA-I & II	10/09/17	09:00	10/09/17	17:00	ODB	ER-II	FOR LINE IMPEDANCE MEASURMENT.	
133	220 kV Patna-Khagaul	10/09/17	10:00	11/09/17	18:00	ODB	POWERGRID ER-I	Isolator alignment work & other AMP works	BSEB
134	132 KV PURNEA - KISHANGANJ LINE	10/09/17	09:00	23/09/17	16:00	OCB	POWERGRID ER-I	GIS WORK	BSEB
135	400KV BUS-II AT CHAIBASA	10/09/17	08:00	10/09/17	17:00	ODB	POWERGRID ER-I	FOR BAY EXTENSION WORK UNDER ERSS-14	
136	400KV JRT-NewChanditala	10/09/17	07:00	10/09/17	15:00	ODB	WB	PrePuja Maintenance	
137	220KV Birpara-Birpara(PG)#2	10/09/17	07:00	10/09/17	15:00	ODB	WB	PrePuja Maintenance	
138	400KV Talcher -II ine	10/09/17	10:00	10/09/17	12:00	ODB	ER-II/Odisha/Rengali	For attending hotspot in Line isolator	
139	400 kv Tie bay og Mejia Durgapur Line at JSR	10/09/17	08:00	17/09/17	18:00	OCB	POWERGRID ER-I	For CB replacement work under Addcap	
140	125MVAR Bus Reactor - 2 at ALIPURDUAR	11/09/17	09:00	11/09/17	18:00	ODB	ER-II	Oil leakage rectification of Radiator Tank (Gasket replacement)	
141	400KV Berhampore Jeerat Line	11/09/17	09:00	11/09/17	16:00	ODB	ER-II	Earthwire rectification work required for POWERLINE crossing of 400 KV Sagrdighi-Gokarna-D/C.	WB
142	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	11/09/17	07:00 Hrs	11/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
143	400 KV Subhasgram- Jeerat Line	11/09/17	08:00	13/09/17	17:30	ODB	ER-II	PID test & Insulator replacement work at Line	WB
144	220kv NSLG-BRP Ckt-I	11/09/17	9.00 hrs	11/09/17	17.00 hrs	ODB	ER-II	Jumper tightening & defect insulator replacement	
145	400KV ICT-I & Tala-I Tie Bay(BAY NO.-408)	11/09/17	9.00 hrs	16/09/17	17.00 hrs	OCB	ER-II	CB (BHEL make) overhauling	
146	132kV Rangit -Ramnam	11/09/17	09:00	20/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	WB
147	220 KV MALDA-DALKHOLA-II	11/09/17	09:00	11/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	
148	200 MVA ICT-2 AT LAKHISARAI	11/09/17	08:00	12/09/17	18:00	ODB	POWERGRID ER-I	Checking of Air Cell.	BSEB
149	Main bay 400KV 125MVAR B/R-1 AT NRNC	11/09/17	08:00	11/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	NLDC
150	400 kV PTN-BAL CKT I	11/09/17	08:00	11/09/17	18:00	ODB	POWERGRID ER-I	for replacement of prcelain insulator with polymer insulator at varoius locations	NLDC
151	50 MVAR BR1 AT JSR	11/09/17	09:30	11/09/17	17:30	8 hrs	POWERGRID ER-I	Bay construction work of 125 MVAR B/R	
152	400KV DGP-PGCIL#2	11/09/17	09:00	11/09/17	15:00	ODB	WB	PrePuja Maintenance	
153	Arambag: 400/220KV 315MVA TR#2	11/09/17	06:00	11/09/17	15:00	ODB	WB	PrePuja Maintenance	
154	765kV, 80*3 MVAR Line Reactor-1 at Angul	11/09/17	08:00	11/09/17	18:00	ODB	ER-II/Odisha/Angul SS	For attending Oil Leakage problem under TBEA Punch Points.	NLDC

155	400 KV Indravati-Jeypore Main Bay at Indravati	11/09/17	09:00	14/09/17	18:00	OCB	ER-II/Odisha/Indravati	Overhauling of Main Bay (401) CB Mechanism	
156	400KV Bus-I at Sundargarh	11/09/17	08:00	11/09/17	18:00	ODB	ER-II/Odisha/Sundergarh	Erection of SF6 to AIS Bushing for extension of Bus bar for GIS extn work under construction head.	
157	400KV ROURKELA-SEL#2 by RKL	11/09/17	09:00	11/09/17	18:00	ODB	ER-II/Odisha/ROURKELA	For fixing of Counter weight at loc 193 & fixing of Dislocated VD ,spacers at other locations.	GRIDCO
158	765 KV Angul-Srikakulam TL CKT-II	11/09/17	07:00	12/09/17	17:00	ODB	ER-II/Odisha/Berhampur	Replacement of Glass Insulatos by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728. (Already approved in 135th OGC in case of pcc availability, the C/D will be taken in the month	NLDC
159	765kV Angul-Srikakulam Line-2	11/09/17	08:00	11/09/17	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
160	400KV Fkk-Sagardighi Line	11/09/17	09:30hrs	12-Sep-17	17:30 hrs	ODB	FARAKKA	CT & Relay testing	WB
161	50 MVAR BR-I at BSF	11/09/17	08:00	13/09/17	18:00	OCB	POWERGRID ER-I	For commissioning of 125 mVAR BR-I in parallel with existing BR	
162	400KV TIE BAY OF MAITHON(RB)-I & Future Bay (408) AT RANCHI	12/09/17	10:00	12/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	
163	765kV Gaya-Balia line	12/09/17	08:00	12/09/17	18:00	ODB	POWERGRID ER-I	For replacement of insulators at loc 135 & 169	NLDC
164	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	12/09/17	07:00 Hrs	12/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
165	400kV D/C Siliguri-Purnea T/L	12/09/17	09:00	15/09/17	17:00	ODB	ER-II	For line maintenance work	
166	220kV NSLG-BRP Ckt-II	12/09/17	9.00 hrs	12/09/17	17.00 hrs	ODB	ER-II	Jumper tightening & defect insulator replacement	
167	220 KV B/C BAY AT MALDA	12/09/17	8-00 A.M.	12/09/17	4-00 P.M.	ODB	ER-II	AMP	
168	400/220KV 315MVA ICT-II 220KV side Bay (209) AT RANCHI	12/09/17	10:00	12/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	JSEB
169	200MVA ICT-1 AT BANKA	12/09/17	10:00	12/09/17	18:00	ODB	POWERGRID ER-I	Providing insulation sleeves on tertiary conductor	BSEB
170	400 KV BSF - BALIA Ckt. II	12/09/17	08:00	12/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator	
171	400 kV PTN-BAL CKT II	12/09/17	08:00	12/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator at varoius locations	NLDC
172	400 KV Chandwa-Ranchi -I	12/09/17	09:00	12/09/17	18:00	ODB	POWERGRID ER-I	To replace LA in R-ph	
173	HVDC Back to Back System including AC Bypass@ Pusauli	12/09/17	09:00 Hrs	15/09/17	18:00Hrs	HVDC system will be out on 12.09.17 and 15.09.17 on daily basis only for O2		To carry out following activities (i) Faulty Thyristor Replacement, (ii) LVT Detector Cleaning	NLDC
174	400KV JEERAT-BKTPP	12/09/17	07:00	12/09/17	15:00	ODB	WB	PrePuja Maintenance	

175	DGP: 400/220KV 315MVA ICT#1	12/09/17	09:00	12/09/17	15:00	ODB	WB	PrePuja Maintenance	
176	Arambag: 400KV BUS Transfer Bay	12/09/17	06:00	12/09/17	15:00	ODB	WB	PrePuja Maintenance	
177	400KV ROURKELA-RAIGARH#2 by RKL	12/09/17	09:00	12/09/17	18:00	ODB	ER-II/Odisha/ROURKELA	For fixing of Counter weight at loc 1013 & fixing of Dislocated VD spacers at other locations	NLDC
178	765kV Angul- Srikakulam Line-1 with LR at Angul	12/09/17	08:00	12/09/17	18:00	ODB	ER-II/Odisha/Angul SS	For commissioning of Spare Reactor with Line Reactor-1. Isolator switching needs to be done for CB selection scheme checking. During the operation of CB at the time of scheme checking. Reactor	NLDC
179	220 kV Jeypore-Jayanagar-I Line	12/09/17	09:30	12/09/17	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 Aug 2017)	GRIDCO
180	400 kV Bus-I at Baripada	12/09/17	08:30	12/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for reconnecting jumpers to GIS Bus-I)	
181	210 BAY(220kv side 160MVA ICT#1) at Baripada	12/09/17	09:00	12/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	GRIDCO
182	400KV Bus II at bolangir	12/09/17	08:00	19/09/17	18:00	ODB	ER-II/Odisha/BOLANGIR	BPI Erection and Stringing in Reactor Bay construction ERSS-XIV	
183	765kV Gaya-VNS-II line	13/09/17	08:00	13/09/17	18:00	ODB	POWERGRID ER-I	For attending Line Defects	NLDC
184	160MVA ICT-I OF BIRPARA	13/09/17	07:00 Hrs	13/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
185	125 MVAR BR#3 at DURGAPUR	13/09/17	10:00hrs	13/09/17	17:00hrs	ODB	ER-II	for fire fighting commissioning of BR#3	
186	MAIN BAY OF 400KV Ranchi- Rourkela-II AT RANCHI	13/09/17	10:00	13/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	
187	Main bay 765/400 KV ICT-1AT NRNC	13/09/17	08:00	13/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	NLDC
188	200MVA ICT-2 AT BANKA	13/09/17	10:00	13/09/17	12:00	ODB	POWERGRID ER-I	Providing insulation sleeves on tertiary bushing	BSEB
189	400 kV 125 MVAR Bus Reactor-1 AT GAYA	13/09/17	10:00	13/09/17	18:00	ODB	POWERGRID ER-I	Bay extension work for Gaya Navinagar Line	
190	400 kV PTN-BAL CKT III	13/09/17	08:00	13/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator at varoius locations	NLDC
191	400/220kv, 315MVA ICT-1 AT JSR	13/09/17	09:30	13/09/17	17:30	8 hrs	POWERGRID ER-I	Differential relay replacement work	JSEB
192	400 KV Chandwa-Ranchi -II	13/09/17	09:00	13/09/17	18:00	ODB	POWERGRID ER-I	To replace LA in Y-ph	
193	DGP: 400/220KV 3*105 MVA TR#2	13/09/17	09:00	13/09/17	15:00	ODB	WB	PrePuja Maintenance	
194	Arambag: 400KV Main Bus- 2	13/09/17	06:00	13/09/17	15:00	ODB	WB	PrePuja Maintenance	
195	765kV Angul- Srikakulam Line-2 with LR at Angul	13/09/17	08:00	13/09/17	18:00	ODB	ER-II/Odisha/Angul SS	For commissioning of Spare Reactor with Line Reactor-2. Isolator switching needs to be done for CB selection scheme checking. During the operation of CB at the time of scheme checking. Reactor	NLDC
196	765 KV Angul-Srikakulam TL CKT-I	13/09/17	07:00	14/09/17	17:00	ODB	ER-II/Odisha/Berhampur	Replacement of Glass Insulatos by Long Rod Polymer Insulators at loc no. 681, 715, 722,723, 727 and 728.(Already approved in 135th OGC. In case of non availability the S/D will be taken in the month of	NLDC
197	765kV Angul-Srikakulam Line-1	13/09/17	08:00	13/09/17	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 MTATAC Validation work.	NLDC

198	400KV Bus-II at Sundargarh	13/09/17	08:00	13/09/17	18:00	ODB	ER-II/Odisha/Sundergarh	Erection of SF6 to AIS Bushing for extension of Bus bar for GIS extn work under construction head.	
199	400KV Kahalgaon-Banka Line-2	13/09/17	09:30hrs	13-Sep-17	09:30 hrs	ODB	KAHALGAON	PM works & relay testing	
200	400KV Fkk-Bahrapore Line	13/09/17	09:30hrs	14-Sep-2017	17:30 hrs	ODB	FARAKKA	CVT Replacement, CB & Relay Testing	
201	765kV Gaya-VNS-I line	14/09/17	08:00	14/09/17	18:00	ODB	POWERGRID ER-I	For replacement of insulators at loc 181 & 183	NLDC
202	400 KV BSF - KOD Ckt. I	14/09/17	08:00	14/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator	DVC
203	ICT-3 Main bay no.-410 at Biharsarif	14/09/17	10:00	18/09/17	18:00	OCB	POWERGRID ER-I	CB Overhauling Work	
204	400 kV 125 MVAR Bus Reactor-2 AT GAYA	14/09/17	10:00	14/09/17	18:00	ODB	POWERGRID ER-I	Bay extension work for Gaya Navinagar Line	
205	400 kV PTN-BAL CKT IV	14/09/17	08:00	14/09/17	18:00	ODB	POWERGRID ER-I	for replacement of pcelain insulator with polymer insulator at varoius locations	NLDC
206	400/220kV, 315MVA ICT-2 AT JSR	14/09/17	09:30	14/09/17	17:30	8 hrs	POWERGRID ER-I	Differential relay replacement work	JSEB
207	Arambag: 400/220KV 315MVA TR#3	14/09/17	06:00	14/09/17	15:00	ODB	WB	PrePuja Maintenance	
208	DGP: 400KV BUS Transfer Bay	14/09/17	09:00	14/09/17	15:00	ODB	WB	PrePuja Maintenance	
209	765kV Main Bus-I at Angul	14/09/17	08:00	15/09/17	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
210	400 kV Jeypore-Gajuwaka-I Line	14/09/17	09:30	14/09/17	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 Aug 2017)	NLDC
211	400 kV Jeypore-Gajuwaka-II Line	14/09/17	13:30	14/09/17	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 Aug 2017)	NLDC
212	104 BAY(132kv side 160MVA ICT#1) at Baripada	14/09/17	09:00	14/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	
213	500MVA ICT-1 AT MAITHON	15/09/17	09:00	16/09/17	17:30	OCB	ER-II	1. Dismantling of Jumper of 500MVAV ICT-1 and connection of Jumper of 500MVA ICT(new) in 220kV side and other work related to commissioning & first time charging of 500MVA ICT.	DVC
214	132kV Rangpo-Gangtok	15/09/17	09:00	20/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	SIKKIM
215	132kV Rangpo-Chuzachen	15/09/17	09:00	20/09/17	17:00	ODB	ER-II	PORCEALIN INSULATOR REPLACEMENT BY POLYMER INSULATOR.	SIKKIM
216	Main bay 400KV RNC-Chadwa ckt-II AT NRNC	15/09/17	08:00	15/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	
217	160 MVA ICT#2 AT PURNEA	15/09/17	09:00	23/09/17	16:00	OCB	POWERGRID ER-I	GIS WORK	BSEB

218	500 MVA ICT-3 AT MUZ	15/09/17	09:00	20/09/17	18:00	OCB	POWERGRID ER-I	REPLACEMENT OF GASKET/ORINGS OF ALL TURRET BUSHINGS FOR ARRESTING LEAKAGE & ATTENDING COMMISSIONING PUNCH POINT	BSEB CONSENT REQUIRED
219	DGP: 400KV Bus-Coupler Bay	15/09/17	09:00	15/09/17	15:00	ODB	WB	PrePuja Maintenance	
220	JEERAT: 400/220KV 315MVA TR#2	15/09/17	07:00	15/09/17	15:00	ODB	WB	PrePuja Maintenance	
221	400 KV Rourkela-Sterlite-II & Rourkela - Sundargarh-II (both circuits together)	15/09/17	08:00	16/09/17	17:00	OCB	ER-II/Odisha/Sundargarh TLC	Stringing work of 765KV Angul-Jharsuguda D/C (Ckt-III & IV) transmission line	GRIDCO
222	400KV Rourkela-Sundergarh-II	15/09/17	08:00	15/09/17	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Porcelain Insulator at single crossing span (317-318, 7 & 236:) by CLR polymer (Already approved in 135th OCC, in case of non availability the S/D will be taken in the month of Sept	
223	220 KV S/C Budhipada-Korba Line	15/09/17	08:00	31/10/17	18:00	OCB	ER-II/Odisha/Sundergarh TLM	Erection and stringing of M/C (Multi Ckt) tower of diversion work	NLDC
224	400 KV BSF-Sasaram -II Line	15/09/17	08:00	15/09/17	18:00	ODB	POWERGRID ER-I	For rectification of Y-phaseline isolator at BSF.	
225	765 KV BUS-I at Gaya S/S	16/09/17	08:00	16/09/17	18:00	ODB	POWERGRID ER-I	For isolator rectification work under S/S extn. Package	NLDC
226	400 KV Subhasgram-Haldia Line-1	16/09/17	08:00	16/09/17	17:30	ODB	ER-II	Jumper Tightning of Haldia Line-1	WB
227	200 MVA ICT-2 & 80 MVAR Bus Reactor AT LAKHISARAI	16/09/17	08:00	19/09/17	18:00	ODB	POWERGRID ER-I	Fire wall Construction.	BSEB
228	400kV JSR- Andol-II	16/09/17	09:30	16/09/17	17:30	8 hrs	POWERGRID ER-I	AMP Work	DVC
229	JEERAT: 400/220KV 315MVA TR#3	16/09/17	07:00	16/09/17	15:00	ODB	WB	PrePuja Maintenance	
230	Arambag: 400KV Main Bus- 1	16/09/17	06:00	16/09/17	15:00	ODB	WB	PrePuja Maintenance	
231	400KV Rourkela-Sterlite-II	16/09/17	08:00	16/09/17	18:00	ODB	ER-II/Odisha/Sundergarh TLM	For replacement of Porcelain Insulator at single crossing span (317-318) by CLR polymer . Insulator replacement at Location No. - 57 & rectification of bundle spacer in span 105-106. (Already approved in 135th OCC)	GRIDCO
232	400KV Angul-Bolangir Line.	16/09/17	08:00	16/09/17	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
233	400 KV Indravati-Jeypore Tie Bay at Indravati	16/09/17	09:00	20/09/17	18:00	OCB	ER-II/Odisha/Indravati	Overhauling of Tie Bay (402) CB Mechanism	
234	401BAY (Keonjhar main Bay) at Baripada	16/09/17	09:00	16/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gas arresting works	
235	400KV ROURKELA-TACHER#2	16/09/17	09:00	18/09/17	18:00	ODB	ER-II/Odisha/ROURKELA	For replacement of disc insulators with polymer insulators (Already approved in 135th OCC, in case of non availability, the S/D will be taken in the month of Sept-17)	
236	400 KV Rengali Indravati Line (Rescheduled Shutdown proposal, already approved in 135th OCC)	16/09/17	07:00	26/09/17	18:00	ODB	ER-II/Odisha/Bolangir	Replacement of Porcelain insulators with Polymer insulators in major crossings at Locations 1121-1122,929-930,773-774,931-932,1070-1070,1081-1082,912-914,1036-1037,1041-1042,1074	NLDC

237	220 kV Patna- Fatuha	17/09/17	10:00	18/09/17	18:00	ODB	POWERGRID ER-I	Isolator alignment work & other AMP works	BSEB
238	765 KV BUS-II at Gaya S/S	18/09/17	08:00	18/09/17	18:00	ODB	POWERGRID ER-I	For isolator rectification work under S/S exIn. Package	NLDC
239	400/220/33kV, 315MVA ICT - 2 at ALIPURDUAR	18/09/17	09:00	20/09/17	18:00	OCB	ER-II	Air cell replacement (Aircell found defective)	
240	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	18/09/17	10:00 Hrs	18/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
241	160MVA ICT-I OF BIRPARA	18/09/17	10:00 Hrs	18/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
242	400 KV Jeerat- Baharampur Line	18/09/17	08:00	20/09/17	17:30	ODB	ER-II	For increasing CT Ratio as requested by SLDC (WBSETCL Jeerat)	WB
243	132kV Siliguri - Melli	18/09/17	9.00 hrs	18/09/17	17.00 hrs	ODB	ER-II	Jumper tightening	SIKKIM
244	400KV TALA-I main Bay(BAY NO.-409)	18/09/17	9.00 hrs	23/09/17	17.00 hrs	OCB	ER-II	CB (BHEL make) overhauling	
245	L/R OF 765KV Dharamjaygarh -1 AT NEW RANCH	18/09/17	08:00	19/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	NLDC
246	400KV Tie Bay of ICT2 & B/R2 AT JSR	18/09/17	09:30	19/09/17	17:30	8 hrs	POWERGRID ER-I	Pnumatic Drive unit overhauling work	
247	Arambag: 400/220KV 315MVA TR#4	18/09/17	06:00	18/09/17	15:00	ODB	WB	PrePuja Maintenance	
248	765kV Main Bus-II at Angul	18/09/17	08:00	19/09/17	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
249	403 BAY(315MVA ICT#1 main bay) at Baripada	18/09/17	09:00	18/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	
250	ALL BAYS OF 132KV SIDE	18/09/17	08:00	18/09/17	17:00	ODB	ER-II	FOR HV TESTING & PD TEST	WB
251	500 MVA ICT-I OF MAITHON SS	18/09/17	08:00	20/09/17	17:00	OCB	ER-II	FOR COMMISSIONING OF 2ND 500 MVA ICT	DVC
252	220 KV BUS-I at Gaya S/S	19/09/17	08:00	19/09/17	18:00	ODB	POWERGRID ER-I	For KHIJARSARAI bay commisioning work	BSEB
253	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	19/09/17	10:00 Hrs	19/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
254	160MVA ICT-II OF BIRPARA	19/09/17	10:00 Hrs	19/09/17	14:00 Hrs	ODB	ER-II	132KV GIS DUCT (OUT SIDE) ERECTION WORK under ERSS-XIV Pacakage.	WB
255	315MVA ICT-2 AT MAITHON	19/09/17	09:00	20/09/17	17:30	OCB	ER-II	Erection of BPI, Connection of Jumper of 500MVA ICT-1 to existing 220kV bay of 315MVA ICT-2. After that 315MVA ICT-2 will be taken out of service.	DVC
256	132kV Siliguri - Kurseong	19/09/17	9.00 hrs	19/09/17	17.00 hrs	ODB	ER-II	Jumper tightening	WB
257	400KV Tie BAY OF RKL-I & RGP-2 AT RANCHI	19/09/17	10:00	19/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	
258	Main Bay of 400 KV Ranchi-NPPSP-I AT NRCN	19/09/17	08:00	19/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	
259	ICT-3 & BR-2 Tie bay no.-411 at Biharsarif	19/09/17	10:00	23/09/17	18:00	OCB	POWERGRID ER-I	CB Overhauling Work	

260	408 BAY(dubari &jamshedpur line tie bay) at Baripada	19/09/17	09:00	19/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	
261	220 KV BUS-II at Gaya S/S	20/09/17	00/01/1900	20/09/17	00/01/1900	ODB	POWERGRID ER-I	For KHIJARSARAI bay commisioning work	BSEB
262	400KV Tie of RKL-II & RGP-3 AT RANCHI	20/09/17	10:00	20/09/17	17:00	ODB	POWERGRID ER-I	AMP WORK	
263	Main Bay of 400 KV Ranchi-NPPSP-II AT NRCN	20/09/17	08:00	20/09/17	18:00	ODB	POWERGRID ER-I	AMP (17-18)	
264	400KV Tie Bay of ICT2 & B/R2 AT JSR	20/09/17	09:30	21/09/17	17:30	8 hrs	POWERGRID ER-I	Pnumatic Drive unit overhauling work	
265	132 KV MAIN BUS AT 220/132 KV PURNEA SS	20/09/17	09:00	20/09/17	10:00	ODB	POWERGRID ER-I	GIS WORK	BSEB
266	160 MVA ICT#1 AT PURNEA	20/09/17	09:00	23/09/17	16:00	OCB	POWERGRID ER-I	GIS WORK	BSEB
267	400kV, 125MVAR Bus Reactor-3 at Angul	20/09/17	10:00	20/09/17	18:00	ODB	ER-II/Odisha/Angul SS	AMP work.	
268	400 kV Jeypore-Indravati S/C Line	20/09/17	06:00	21/09/17	18:00	ODB	ER-II/Odisha/Jeypore	For Replacement of PID Defective Insulators in Jey-Ivt Line (If Not available in the month of Aug 2017) at Locations Loc.No. 93, 94, 10, 71, 103, 106, 111, 121, 124, 125, 127, 133, 136, 138, 139	NLDC
269	400 KB Rourkela-Raigarh -I & Rourkela - Sundargarh-I (both circuits together)	20/09/17	08:00	24/09/17	17:00	OCB	ER-II/Odisha/Sundargarh TLC	Erection of tower under line and Stringing work of LILO of 400 KV D/C Rourkela-Raigarh (Ckt- I)	NLDC
270	765 KV D/C Jharsuguda- Dharamjaygarh Transmission line (Ckt-I & II)	20/09/17	08:00	22/09/17	17:00	OCB	ER-II/Odisha/Sundargarh TLC	Swapping arrangement :Stringing work of 765KV Jharsuguda - Dharamjaygarh TL, Ckt-III & IV with Ckt-I & II	NLDC
271	400 kV Bus-I at Baripada	20/09/17	08:30	20/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for isolation of GIS Bus-I)and HV testing	
272	400 kV Bay 413 CB(GIS) at Baripada	20/09/17	08:30	25/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For GIS Bus-II ext. works	
273	400KV Kahalgaon-Barh Line-2	20/09/17	09:30hrs	20-Sep-2017	17:30 hrs	ODB	KAHALGAON	PM works & relay testing	
274	400KV Fkk-Durgapur Line-2	20/09/17	09:30hrs	21-Sep-2017	17:30 hrs	ODB	FARAKKA	CVT Replacement, CB & Relay Testing	
275	400 kV main bay of BR-II	20/09/17	08:00	21/09/17	18:00	OCB	POWERGRID ER-I	For Pneumatic drive Overhauling work.	
276	160MVA ICT-I (BIRPARA-PGCIL)	20/09/17	07:00	20/09/17	11:00	ODB	ER-II	FOR JUMPERING & CHARGING	WB

277	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-I	20/09/17	12:00	20/09/17	16:00	ODB	ER-II	FOR JUMPERING & CHARGING	WB
278	125MVAR Bus Reactor - 1 at ALIPURDUAR	21/09/17	09:00	23/09/17	18:00	OCB	ER-II	Change of Radiator (01 no) - Oil leakage from radiator	
279	125 MVAR B/R -1 AT PATNA	21/09/17	09:00	31/09/17	18:00	ODB	POWERGRID ER-I	Fire fighting work , construction activity	
280	400 KV Indravati-Jeypore Main Bay at Indravati	21/09/17	09:00	25/09/17	18:00	OCB	ER-II/Odisha/Indravati	Overhauling of Main Bay (403) CB Mechanism	
281	410 BAY(pandiabilli line main bay) at Baripada	21/09/17	09:00	21/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP work	
282	400KV BUS-I AT GAYA	21/09/17	08:00	21/09/17	18:00	ODB	POWERGRID ER-I	Bay extension work for Gaya Navinagar Line	
283	160MVA ICT-II (BIRPARA-PGCIL)	21/09/17	07:00	21/09/17	11:00	ODB	ER-II	FOR JUMPERING & CHARGING	WB
284	132KV BIRPARA(PGCIL)-BIRPARA(WBSETCL)-II	21/09/17	12:00	21/09/17	16:00	ODB	ER-II	FOR JUMPERING & CHARGING	WB
285	400 KV Subhasgram-Haldia Line-2	22/09/17	08:00	22/09/17	17:30	ODB	ER-II	Jumper Tightning of Haldia Line-2	WB
286	MAIN BAY OF JSR -II AT CHAIBASA	22/09/17	08:00	22/09/17	17:00	ODB	POWERGRID ER-I	AMP	
287	BKTPP: Diversion of 400KV JEERAT Bay	22/09/17	08:00	22/09/17	12:00	ODB	WB	Thermography survey	
288	400KV Fkk-Durgapur Line-1	22/09/17	09:30hrs	23-Sep-2017	17:30 hrs	ODB	FARAKKA	CB & Relay Testing	
289	400KV BUS-II AT GAYA	22/09/17	08:00	22/09/17	18:00	ODB	POWERGRID ER-I	Bay extension work for Gaya Navinagar Line	
290	220 Kv bus-I AT Ramchandrapur	22/09/17	08:00	22/09/17	18:00	ODB	POWERGRID ER-I	For commissioning of 315 MVA Ict-III at Jamshedpur	JSEB
291	400kv JSR-Maithon Line	22/09/17	08:00	22/09/17	18:00	OCB	POWERGRID ER-I	Fror line bay AMP	
292	315 MVA ICT-II OF MAITHON	22/09/17	08:00	24/09/17	17:00	OCB	ER-II	FOR CHARGING OF 1ST 500 MVA ICT IN PLACE OF EXISTING 315 MVA ICT.	DVC
293	132 kV LKR-LKR-II	23/09/17	08:00	27/09/17	18:00	ODB	POWERGRID ER-I	For Erection of LM Tower-1	BSEB
294	132 kV LKR-Jamui-1	23/09/17	08:00	27/09/17	18:00	ODB	POWERGRID ER-I	For Erection of LM Tower-2	BSEB
295	132KV BAY OF 400/132KV 200MVA ICT-I AT LAKHISARAI	23/09/17	08:00	27/09/17	18:00	ODB	POWERGRID ER-I	For Erection of LM Tower-3	BSEB
296	220 Kv bus-II AT Ramchandrapur	23/09/17	08:00	23/09/17	18:00	ODB	POWERGRID ER-I	For commissioning of 315 MVA Ict-III at Jamshedpur	JSEB

297	400 kv Maithon-Ranchi	24/09/17	09:00	24/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	
298	400 kv Maithon-RTPS	25/09/17	09:00	25/09/17	17:30	ODB	ER-II	Insulator Replacement at MD Line	DVC
299	400kV Subhasgram- Sagardighi Line	25/09/17	08:00	27/09/17	17:30	ODB	ER-II	PID Test & Insulator replacement work at Line	WB
300	400kV NSLG-Purnea Ckt-1	25/09/17	07.00 hrs	26/09/17	17.00 hrs	ODB	ER-II	Defect Insulator replacements & jumper tightening	
301	400KV RANGPO-I & BONG-I Tie Bay(BAY NO.-411)	25/09/17	9.00 hrs	30/09/17	17.00 hrs	OCB	ER-II	CB (BHEL make) overhauling	
302	400 KV BUS COUPLER AT MALDA	25/09/17	09:00	25/09/17	17:00	ODB	ER-II	AMP	
303	765kV Angul-Sundargarh Line-1 by Angul TLM	25/09/17	08:00	25/09/17	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
304	400KV Bus-I at Sundargarh	25/09/17	08:00	26/09/17	18:00	OCB	ER-II/Odisha/Sundergarh	For Jumping, Checking of Bus stability, Busbar & LBB Protection for 400KV GIS extn work under construction head.	
305	400 kV Bus-I at Baripada	25/09/17	08:30	25/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For reconnection of jumpers of GIS BUS-I	
306	132 KV PURNEA - PURNEA BSPTCL#2 LINE	26/09/17	09:00	08/10/17	16:00	OCB	POWERGRID ER-I	GIS WORK	BSEB
307	400 kV Bus-II at Baripada	26/09/17	08:30	26/09/17	17:30	ODB	ER-II/Odisha/BARIPADA S/S	For GIS bay EXTN works(for isolation of GIS Bus-II)and HV testing	
308	400 kV Bay 415 CB(GIS) at Baripada	26/09/17	08:30	30/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For GIS Bus-1ext. Works	
309	765kV Angul-Sundargarh Line-2	26/09/17	08:00	26/09/17	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
310	3X105MVA ICT #1 & 125MVAR Reactor TIE Bay (408) at Jeypore	26/09/17	09:30	26/09/17	17:30	ODB	ER-II/Odisha/Jeypore	AMP of TIE Bay (408)	NLDC
311	400kV NSLG-Purnea Ckt-2	27/09/17	07.00 hrs	28/09/17	17.00 hrs	ODB	ER-II	Defect Insulator replacements & jumper tightening	
312	400kV Angul-Meramundali Line-1	27/09/17	08:00	27/09/17	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.	GRIDCO
313	400KV Bus-II at Sundargarh	27/09/17	08:00	28/09/17	18:00	OCB	ER-II/Odisha/Sundergarh	For Jumping, Checking of Bus stability, Busbar & LBB Protection for 400KV GIS extn work under construction head.	
314	132KV TBC & 132 kV Main Bus AT LAKHISARAI	28/09/17	08:00	30/09/17	18:00	ODB	POWERGRID ER-I	For Erection of LM Tower-3	BSEB
315	ICT-I (3x 105 MVA) at Jeypore	28/09/17	10:30	28/09/17	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
316	315 MVA ICT-I AT SUBHASGRAM	30/09/17	08:00	30/09/17	17:30	ODB	ER-II	Tertiary CT- Bph Replacement Work	WB CONSENT REQUIROED
317	400 kV Bus-II at Baripada	30/09/17	08:30	30/09/17	17:30	OCB	ER-II/Odisha/BARIPADA S/S	For reconnection of jumpers of GIS BUS-II	
318	220 KV ALIPURDUAR-SALAKATI-D/C	30/09/17	09:00	15/11/17	17:00	OCB	ER-II	FOR SHIFTING OF EXISTING TOWER LOC: 196 TO UPCOMING DD+18 TOWERS, DUE TO RECENT FLOOD AT NORTH BENGAL	NLDC
319	220kV Bus Coupler at Rengali	30/09/17	09:00	30/09/17	17:00	ODB	ER-II/Odisha/Rengali	Replacement of Tan delta violated CT (R&B Ph.)	

[illegible]

पावर सिस्टम ऑपरेशन कॉर्पोरेशन लिमिटेड
(भारत सरकार का उद्यम)

POWER SYSTEM OPERATION CORPORATION LIMITED

(A Government of India Enterprise)



पूर्वी क्षेत्रीय भार प्रेषण केन्द्र, 14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता - 700 033
दूरभाष : 033 2423 5867/5875, फैक्स : 033 2423 5809/5704/5029, ई-मेल : erlde@posoco.in / www.erlde.org
EASTERN REGIONAL LOAD DESPATCH CENTRE, 14, Golf Club Road, Tollygunge, Kolkata - 700 033
Tel. : 033 2423 5867/5875, Fax : 033 2423 5809/5704/5029, E-mail : erlde@posoco.in / www.erlde.org

ERLDC/SS & MIS/2017/VDI/ 2215

Date: 04/08-17

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 July 2017.

विषय: July 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 July, 2017, for deliberation in next OOC meeting of ERPC.

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

आपको धन्यवाद,

आपका विश्वस्त / Yours faithfully,


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

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

Ranchi New			Jamshedpur			Muzaffarpur		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
800	766	0.00	434	415	90.87	412	6	0.16

Bihar Sariff			Binaguri			Jeerat		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
420	393	0.00	420	394	0.00	428	384	3.11

Rourkela			Jeypore			Koderma		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
420	407	0.00	422	383	0.06	424	402	2.60

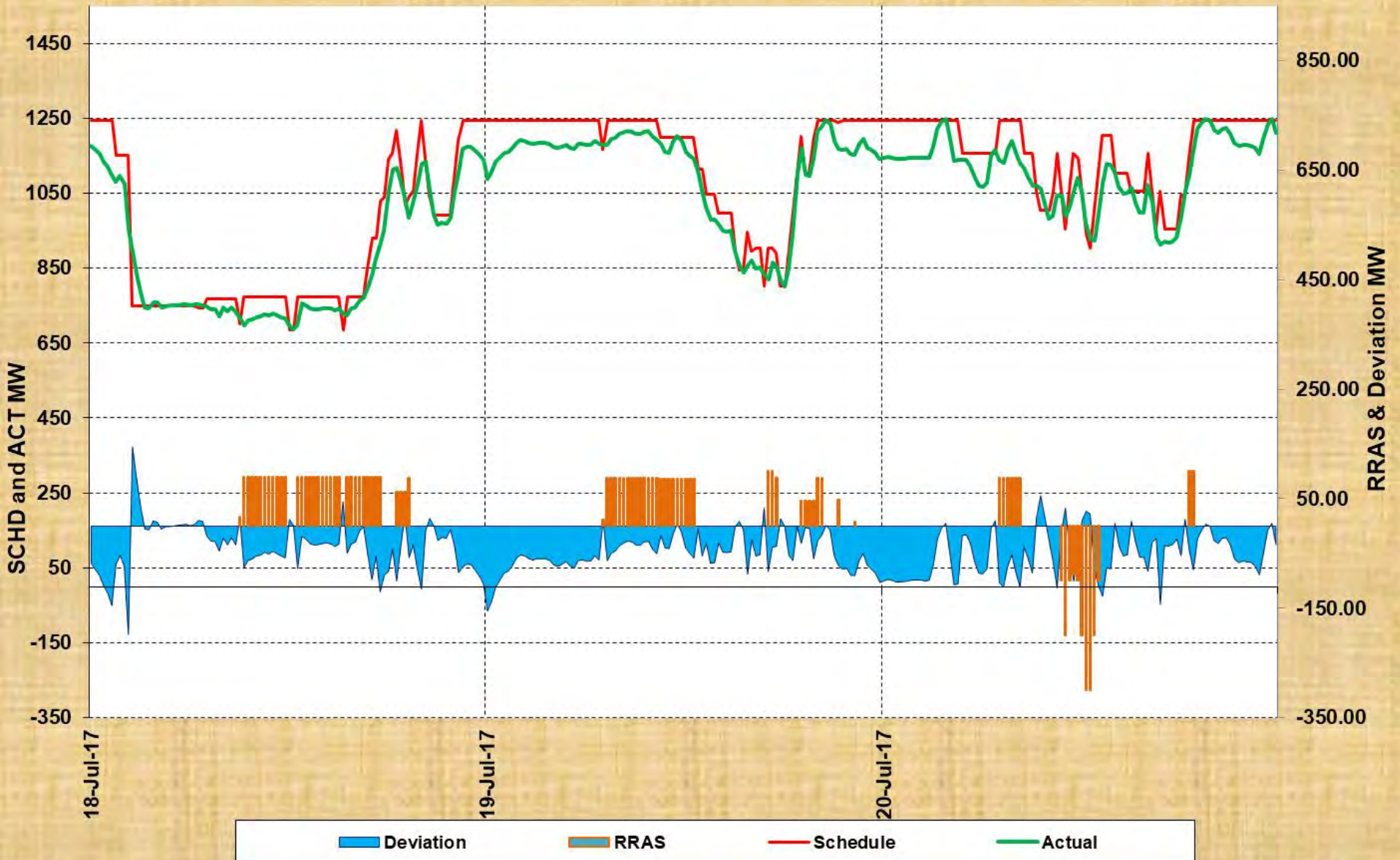
Maithon			Teesta			Rangpo		
MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)	MAX	MIN	VDI (% of Time)
420	404	0.00	419	393	0.00	417	390	0.00

UNDER-INJECTION OF RRAS PROVIDER DURING RRAS UP PERIOD

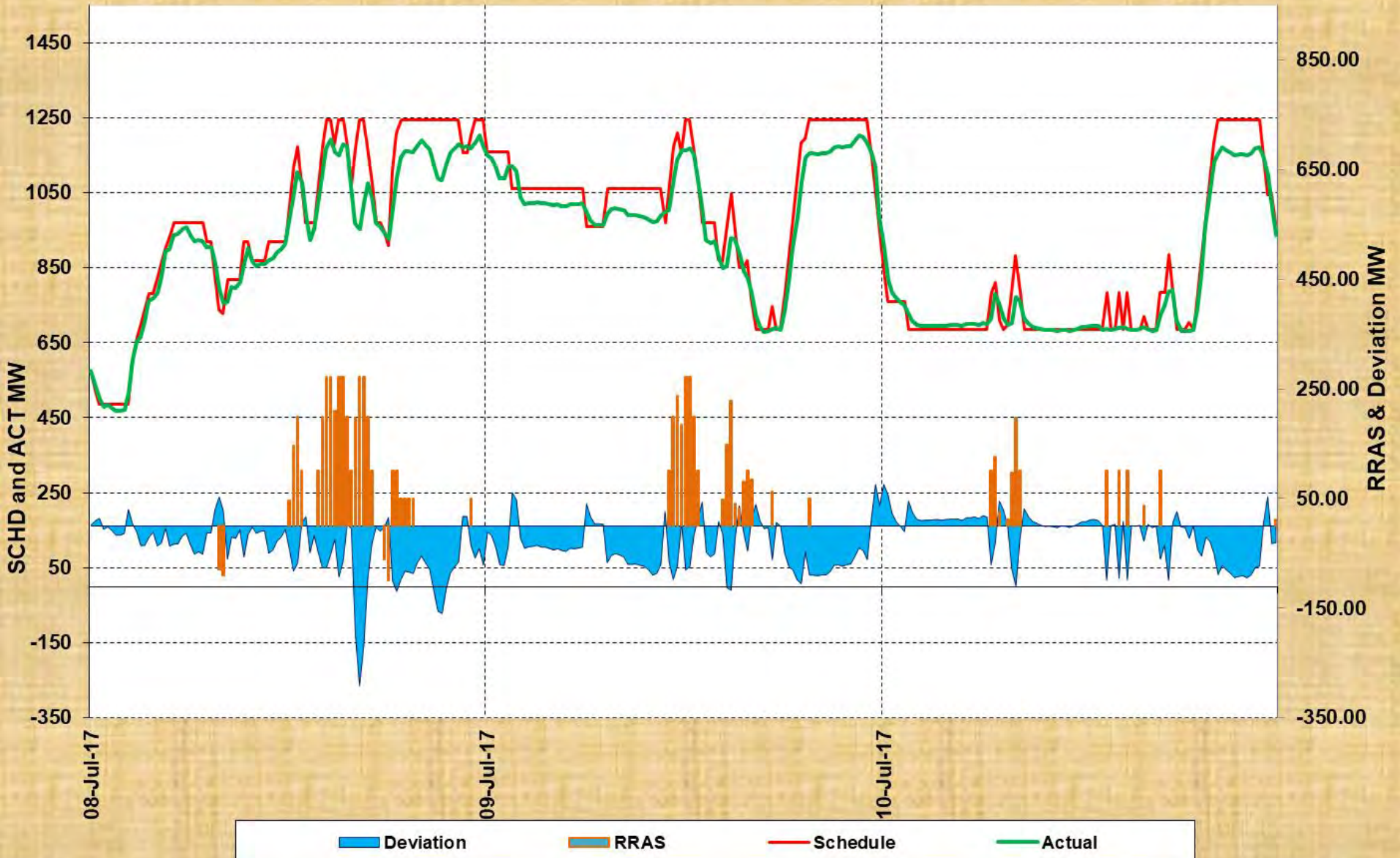
RRAS DEVIATION CLAUSE

- As per CERC Ancillary Services Operations Regulation 2015, clause no 7.2
“The RRAS Provider shall inject or back down generation as per the instruction of the Nodal Agency for Regulation Up and Regulation Down respectively”
- As per clause 5.3 of DOP of RRAS
“The RRAS Provider shall increase or decrease the generation as per the instruction of the Nodal Agency given through the respective RLDC for Regulation Up and Regulation Down respectively.”
- As per clause 5.4 of DOP of RRAS
“The continuity of the RRAS shall be ensured by the RRAS provider over the period of the despatch.”
- Above mentioned clause clearly mentioned that RRAS provider have to maintain their generation as per schedule during RRAS period, however in real time It is observed that Maximum ER RRAS provider failed to maintain their generation as per schedule.

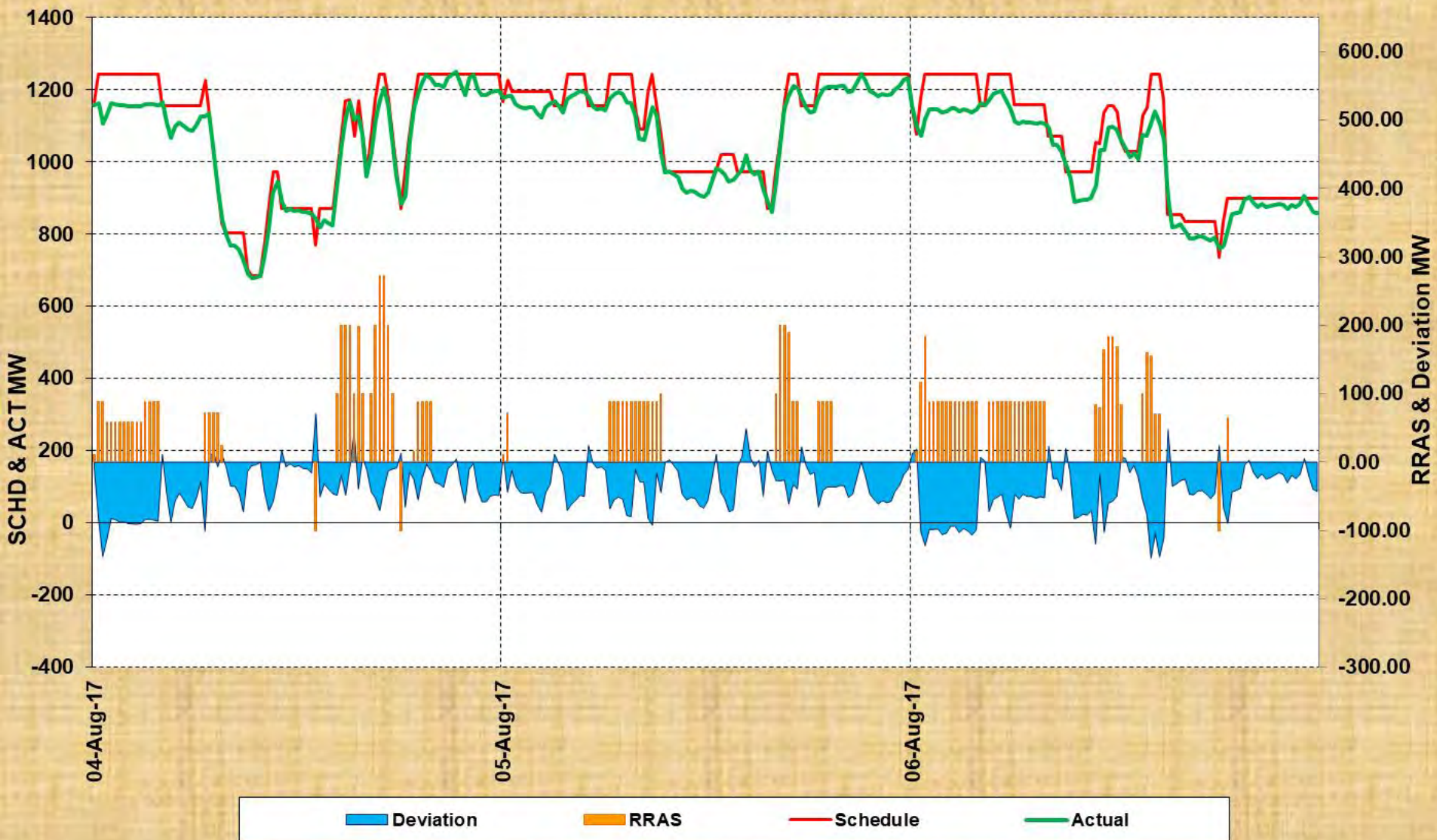
Performance of Barh



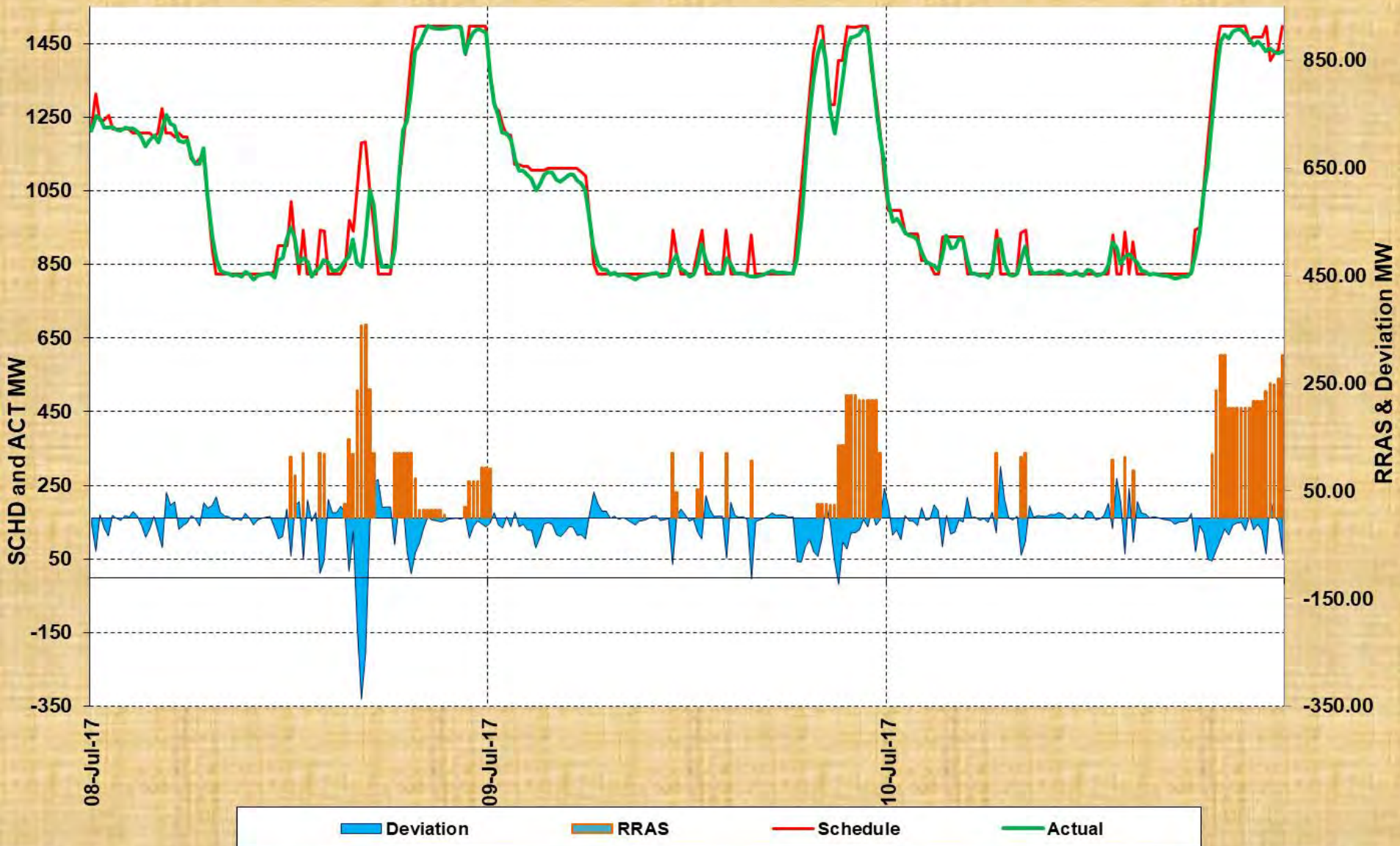
Performance of Barh



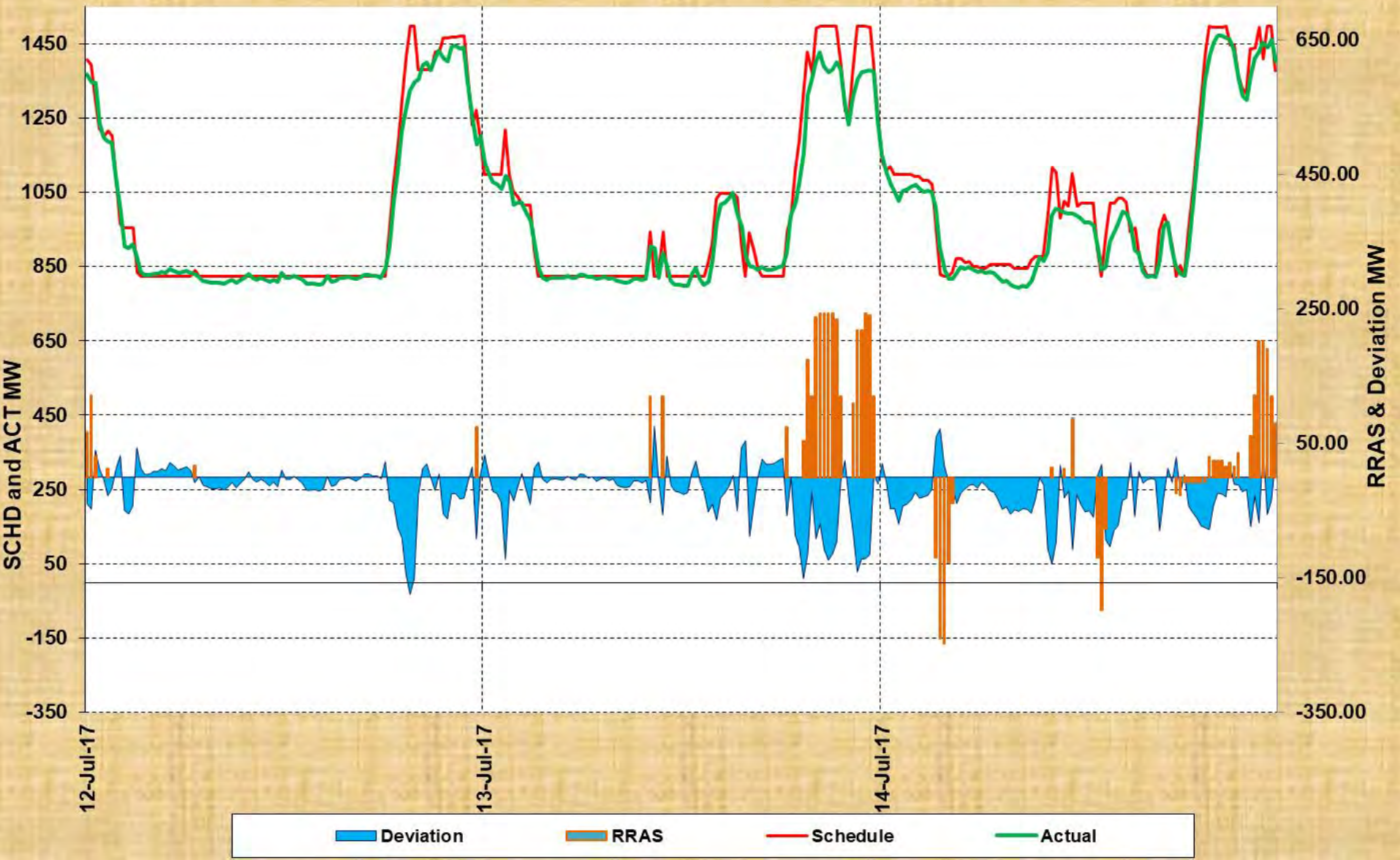
Performance of Barh



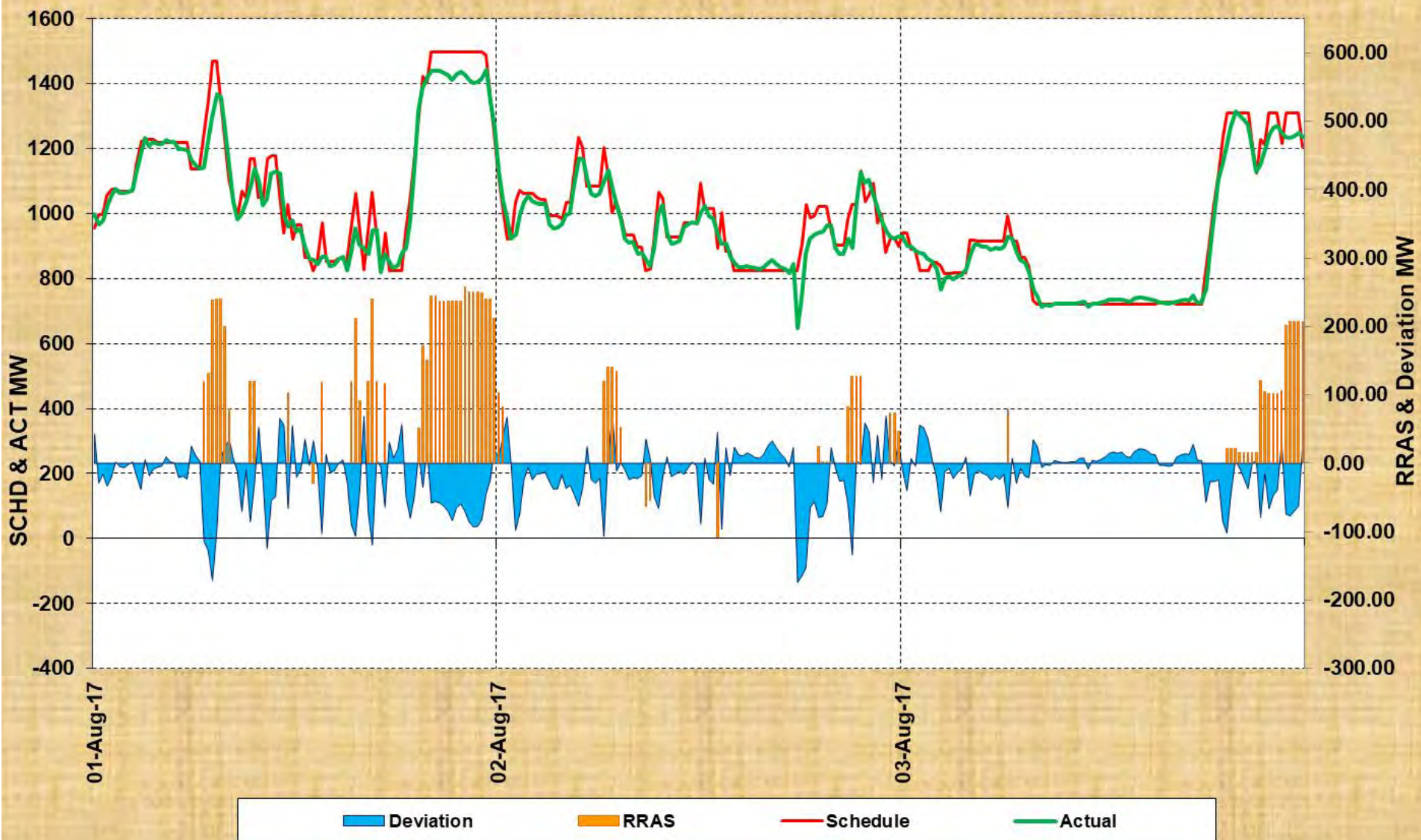
Performance of FSTPP I & II



Performance of FSTPP I & II



Performance of FSTPP I & II



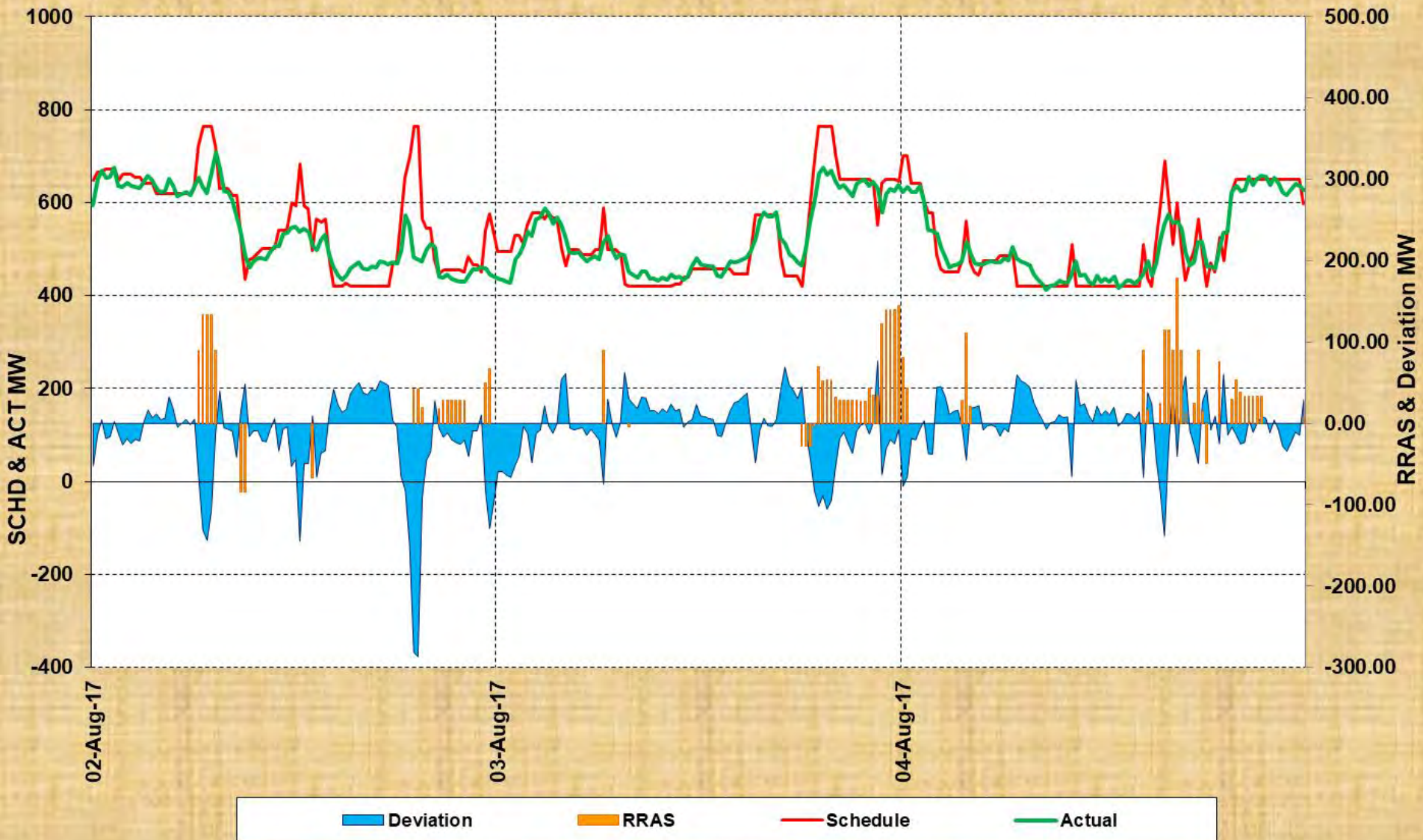
Performance of KHSTPP I



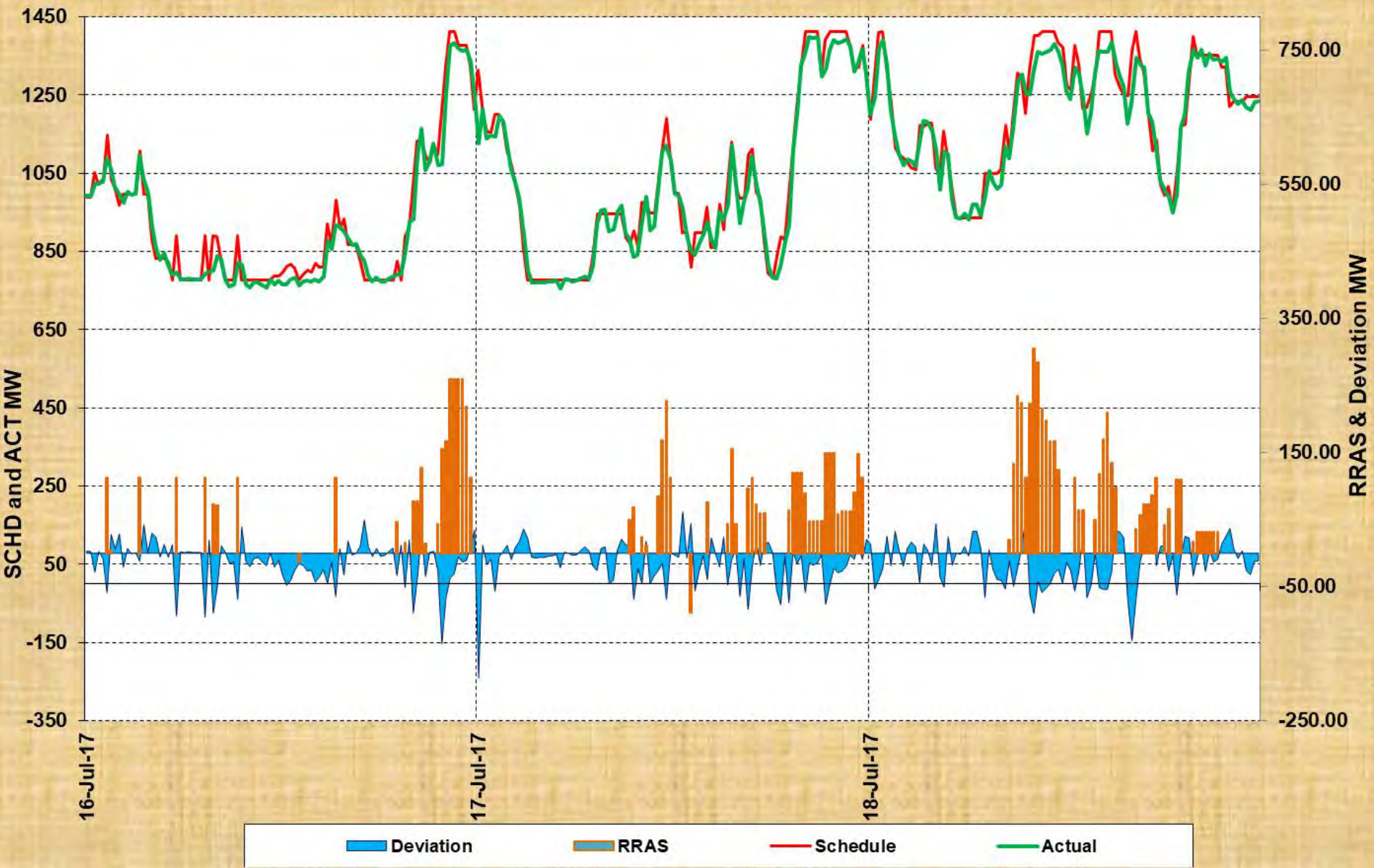
Performance of KHSTPP I



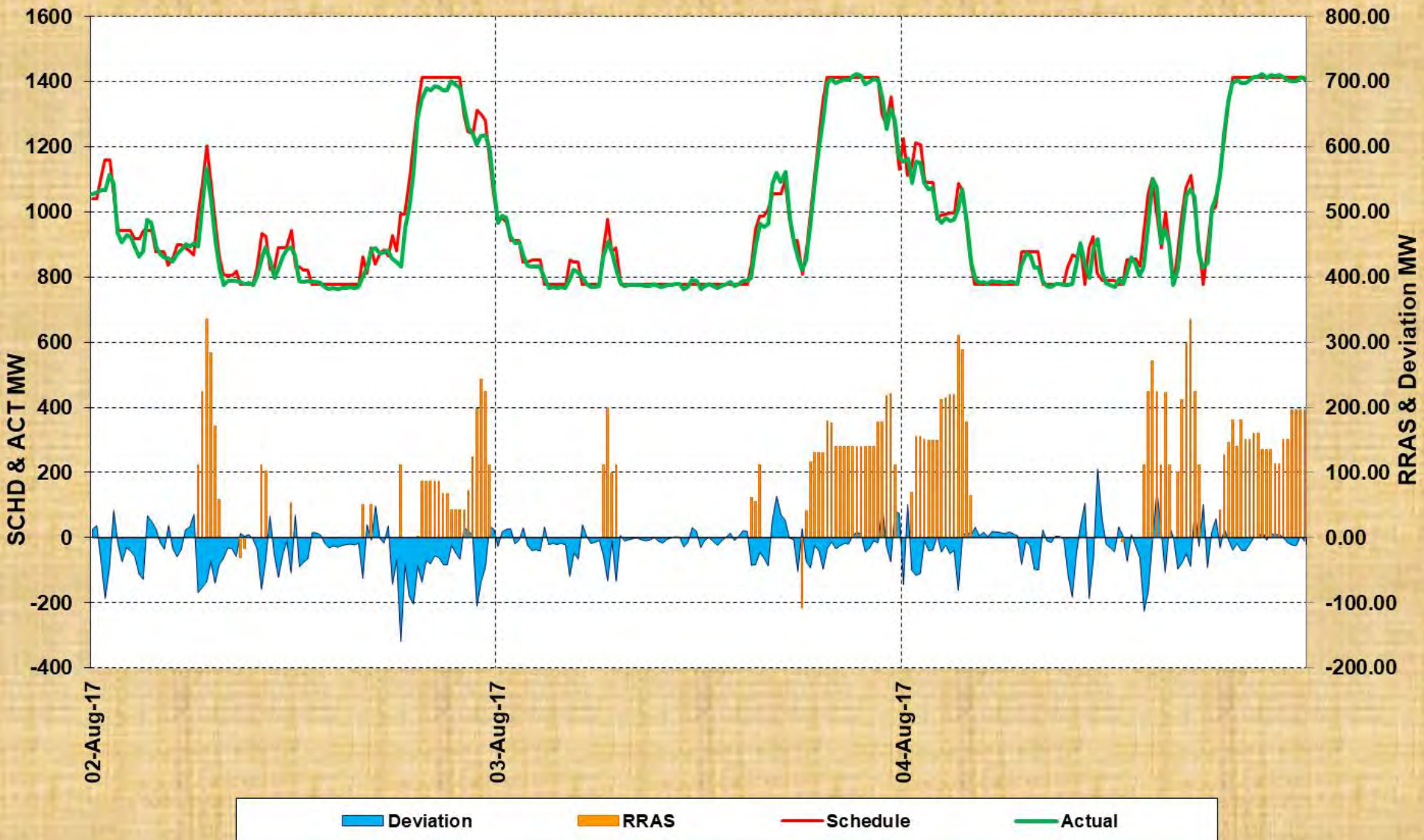
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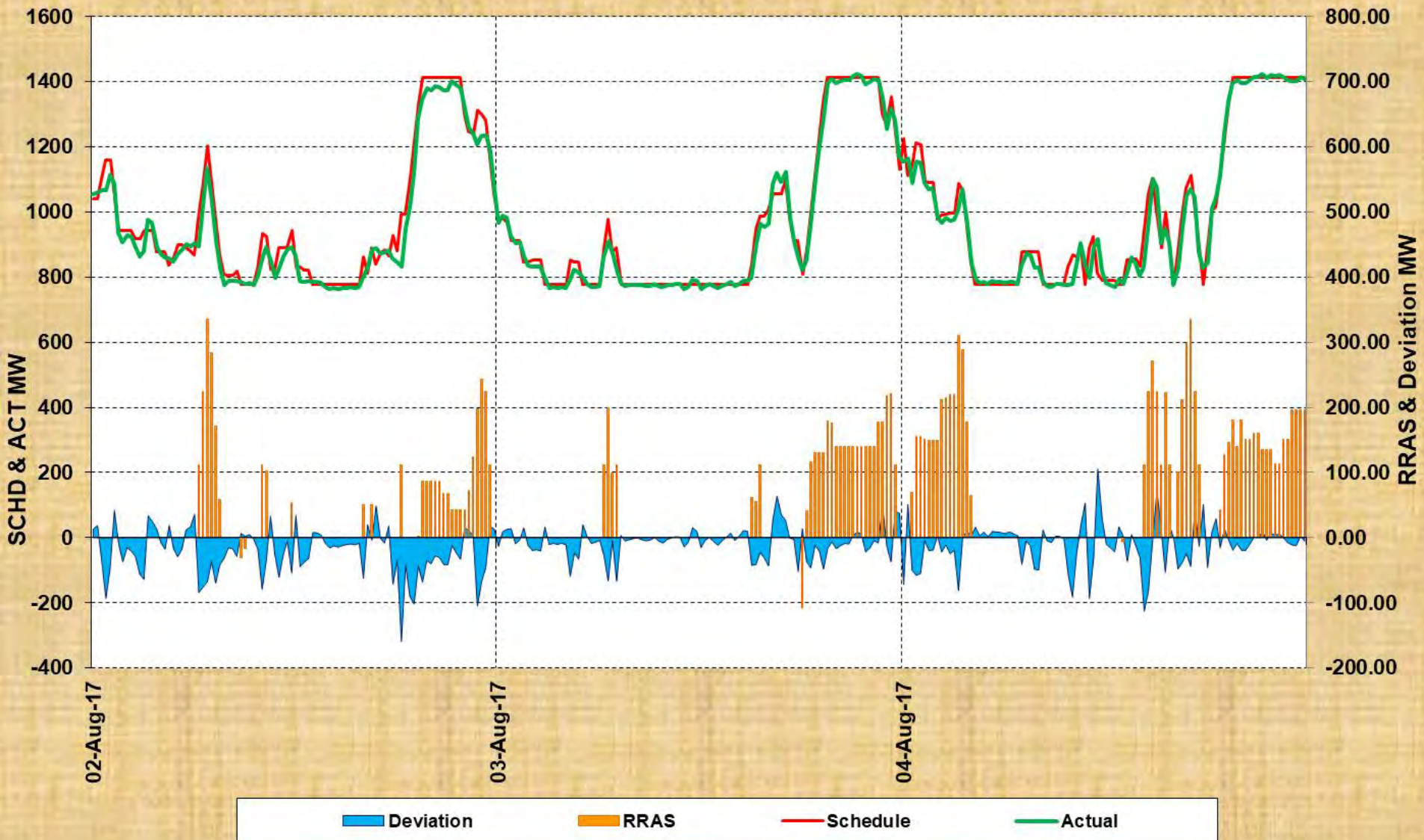
Performance of KHSTPP II



Performance of KHSTPP II



Performance of KHSTPP II



- As per CERC Ancillary Services Operations Regulation 2015, clause no 13.7

“Sustained failure to provide the RRAS (barring unit tripping) by RRAS Provider(s) shall attract penalties on account of gaming. Violation of directions of RLDC for RRAS shall also make the RRAS Provider(s) liable for penalties in terms of section 29 of the Act.”

- As per 9.13 clause of Detail Operating Procedure of RRAS

“Sustained failure, i.e., failure to provide the RRAS (barring unit tripping) by RRAS Provider(s) more than three (3) times during a month shall be brought to the notice of the CERC.”

OWNERSHIP DETAILS							Annexure-D5.2			
SL. NO	TIE-LINE	LINE OWNED BY	FROM END				TO END			
			Bay equip Ownership	Responsibility of maintaining bay eqp.	Responsibility of ensuring Real Time data	Responsibility of sending RI/DR/EL	Bay equip Ownership	Responsibility of maintaining bay eqp.	Responsibility of ensuring Real Time data	Responsibility of sending RI/DR/EL
A) 765 KV LINES										
1	GAYA-VARANASI	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
2	GAYA-BALIA	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
3	PUSAULI-FATEHPUR	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
4	RANCHI(NEW)-DHARAMJAYGARH	POWERGRID	POWERGRID(ER)				POWERGRID(WR)			
5	JHARSUGUDA-DHRAMJAYGARH	POWERGRID	POWERGRID(ER)				POWERGRID(WR)			
6	ANGUL-SRIKAKULAM	POWERGRID	POWERGRID(ER)				POWERGRID(SR)			
7	ANGUL-JHARSUGUDA	POWERGRID	POWERGRID				POWERGRID			
B) 400 KV LINES										
7	MUZZFARPUR-GOROKHPUR	POWERLINKS	POWERGRID(ER)				POWERGRID(NR)			
8	PATNA-BALIA	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
9	BIHARSHARIFF-BALIA	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
10	BIHARSHARIFF-VARANASI	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
	BARH-MOTIHARI	L(LILO)	POWERGRID(ER)				DMTCL			
	MOTIHARI-GOROKHPUR	L(LILO)	DMTCL				POWERGRID(NR)			
12	SASARAM(N) -SARNATH	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
14	SASARAM(N) -ALLAHABAD	POWERGRID	POWERGRID(ER)				POWERGRID(NR)			
15	BINAGURI-BONGAIGAON-I, II	POWERGRID	POWERGRID(ER)				POWERGRID(NER)			
16	AILPURDUAR-BONGAIGAON-I, II	PGCIL(LILO)	POWERGRID(ER)				POWERGRID(NER)			
20	TEESTA V-RANGPO	POWERGRID	NHPC				POWERGRID			
21	SEL-RAIGARH	POWERGRID & SEL	SEL				POWERGRID(WR)			
22	JHRASUGUDA-IBEUL	IBEUL	POWERGRID				IBEUL			
23	JHRASUGUDA-RAIGARH	IBEUL	POWERGRID(ER)				POWERGRID(WR)			
24	ROURKELA-RAIGARH	POWERGRID	POWERGRID(ER)				POWERGRID(WR)			
25	ROURKELA-SEL	POWERGRID & SEL	POWERGRID				SEL			
26	RANCHI -SIPAT	POWERGRID	POWERGRID(ER)				POWERGRID(WR)			
28	FARAKKA-BEHRAMPUR	POWERGRID	NTPC				POWERGRID			
29	FARAKKA-SAGARDIGHI	POWERGRID	NTPC				WBPDC			
30	FARAKKA - MALDA	POWERGRID	NTPC				POWERGRID			
31	FARAKKA - PARULIA	POWERGRID	NTPC				POWERGRID			
32	KAHALGAON -BANKA	POWERGRID	NTPC				POWERGRID			
34	SAGARDIGHI-BEHRAMPUR	POWERGRID	WBPDC				POWERGRID			
35	SAGARDIGHI-SUBHASGRAM	POWERGRID	WBPDC				POWERGRID			
36	SAGARDIGHI-PARULIA	WBSETCL	WBPDC				POWERGRID(ER)			
38	JEERAT-SUBHASGRAM	POWERGRID	WBSETCL				POWERGRID			
39	SUBHASGRAM(PG)-HALDIA	HEL	POWERGRID				HEL			
40	PARULIA-BIDHANAGAR	WBSETCL	POWERGRID				WBSETCL			
41	KHARAGPUR-BARIPADA	WBSETCL & OPTCL	WBSETCL				POWERGRID(ER)			
45	DSTPS - JAMSHEDPUR	POWERGRID	DVC				POWERGRID			
46	KODERMA-BIHARSARIFF	POWERGRID	DVC				POWERGRID			
51	RAGUNATHPUR-MAITHON	POWERGRID	DVC				POWERGRID			
52	JAMSEDPUR-AHUNIK	APNRL	POWERGRID				APNRL			
53	JAMSHEDPUR-TISCO	POWERGRID	DVC				POWERGRID			
55	JEYPORE-GAZUWAKA	POWERGRID	POWERGRID(ER)				POWERGRID(SR)			

58	INDRAVATI-INDRAVATI	OPTCL	POWERGRID(ER)				OPTCL			
59	TSTPP-MERAMUNDALI	POWERGRID	NTPC				OPTCL			
61	BARIPADA-NEW DUBURI	POWERGRID	POWERGRID(ER)				OPTCL			
62	MENDHASAL-NEW DUBURI	OPTCL	POWERGRID(ER)				OPTCL			
64	TSTPP - RENGALI	POWERGRID	NTPC				POWERGRID			
65	KHARAGPUR-CHAIBASA	PKTCL	WBSETCL				POWERGRID			
66	MENDHASAL-PANDIABILI	POWERGRID	OPTCL				POWERGRID			
67	BARIPADA - PANDIABILI	POWERGRID	WBSETCL				POWERGRID			
	NEW RANCHI-NEW PPSP	PKTCL	POWERGRID				WBSETCL			
71	FARAKKA-GOKARNO	POWERGRID	NTPC				WBSETCL			
72	DIKCHU-TEESTA-III	SKPPL+TPTL	DIKCHU				TEESTA-III			
73	RANGPO-TEESTA-III	POWERGRID+TPTL	POWERGRID				TEESTA-III			
2	BANKA-BIHARSARIFF	POWERGRID	POWERGRID				POWERGRID			
3	LAKHISARAI-BIHARSARIFF	POWERGRID	POWERGRID				POWERGRID			
4	KAHALGAON -LAKHISARAI	POWERGRID	NTPC				POWERGRID			
5	BIHARSHARIFF-PURNEA	ENICL	POWERGRID				POWERGRID			
6	MAITHON-GAYA	POWERGRID	POWERGRID				POWERGRID			
7	KAHALGAON -BARH	POWERGRID	NTPC				NTPC			
8	BARH -PATNA	POWERGRID	NTPC				POWERGRID			
9	PATNA- KISHANGANJ	POWERGRID	POWERGRID				POWERGRID			
10	PURNEA - BINAGURI I & II	POWERGRID	POWERGRID				POWERGRID			
11	PURNEA-KISHANGANJ	POWERGRID	POWERGRID				POWERGRID			
12	BINAGURI-KISHANGANJ	POWERGRID	POWERGRID				POWERGRID			
13	PURNEA - MUZAFFARPUR	POWERLINKS	POWERGRID				POWERGRID			
14	BIHARSHARIFF-MUZAFFARPUR	POWERGRID	POWERGRID				POWERGRID			
15	BIHARSHARIFF- PUSAULI	POWERGRID	POWERGRID				POWERGRID			
16	FARAKKA - KAHALGAON I & II	POWERGRID	NTPC				NTPC			
17	FARAKKA-KAHALGAON III & IV	POWERGRID	NTPC				NTPC			
18	BOKARO-KODERMA	POWERGRID	DVC				DVC			
19	MALDA - PURNEA	POWERGRID	POWERGRID				POWERGRID			
20	MERAMUNDALI - MENDASAL	OPTCL	OPTCL				OPTCL			
21	RENGALI-KEONJHAR	OPTCL	POWERGRID				OPTCL			
22	KEONJHAR- BARIPADA	OPTCL	POWERGRID				POWERGRID			
23	JEYPORE - INDRAVATI	POWERGRID	POWERGRID				POWERGRID			
24	INDRAVATI - RENGALI	POWERGRID	POWERGRID				POWERGRID			
25	TSTPP - ROURKELA	POWERGRID	NTPC				POWERGRID			
26	ROURKELA- JHARSIGUDA	POWERGRID	POWERGRID				POWERGRID			
27	JAMSHEDPUR - CHAIBASA	POWERGRID	POWERGRID				POWERGRID			
28	CHAIBASA- ROURKELA	POWERGRID	POWERGRID				POWERGRID			
29	KTPS - CHANDITALA	WBSETCL	WBPDC				WBSETCL			
29	CHANDITALA - JEERAT	WBSETCL	WBSETCL				WBSETCL			
30	BAKRESWAR - JEERAT	WBSETCL	WBPDC				WBSETCL			
31	BAKRESWAR - ARAMBAGH	WBSETCL	WBPDC				WBSETCL			
	NEW PPSP - ARAMBAGH	WBSETCL	WBSETCL				WBSETCL			
	NEW PPSP - PPSP	WBSETCL	WBSETCL				WBSEDCL			
33	PPSP - BIDHANAGAR	WBSEDCL	WBPDC				WBSETCL			
34	KTPS - ARAMBAGH	WBSETCL	WBPDC				WBSETCL			
35	KTPS-KHARGPUR	WBSETCL	WBPDC				WBSETCL			
36	KTPS-KHARGPUR	WBSETCL	WBPDC				WBSETCL			
37	PARULIA - JAMSHEDPUR	POWERGRID	POWERGRID				POWERGRID			
38	MAITHON - JAMSHEDPUR	POWERGRID	POWERGRID				POWERGRID			
39	MAITHON - RANCHI	POWERGRID	POWERGRID				POWERGRID			
40	DSTPS-RAGHUNATHPUR I & II	DVC	DVC				DVC			
41	JAMSHEDPUR-BARIPADA	POWERGRID	POWERGRID				POWERGRID			
42	RANCHI-RANCHI NEW	POWERGRID	POWERGRID				POWERGRID			
43	RANCHI-ROURKELA-I&II	POWERGRID	POWERGRID				POWERGRID			
44	BINAGURI-RANGPO	POWERGRID	POWERGRID				POWERGRID			

45	NEW RANCHI-CHANDWA	POWERGRID	POWERGRID				POWERGRID			
46	GAYA- CHANDWA	POWERGRID	POWERGRID				POWERGRID			
47	AILPURDUAR-BINAGURI-I,II	PGCIL(LILO)	POWERGRID(ER)				POWERGRID(ER)			
48	MUZAFFARPUR-DARBHANGA	DMTCL	POWERGRID(ER)				DMTCL			
49	SEL- MEERAMANDALI	POWERLINKS	SEL				OPTCL			
50	BARIPADA-PANDIABILI	POWERGRID	POWERGRID				POWERGRID			
51	MEERAMUNDALI- NEW DUBURI	POWERGRID	OPTCL				POWERGRID			
C) 220 KV LINES										
74	PATNA-SIPARA	BSPHCL	POWERGRID				BSPHCL			
76	PUSUALI-SAHUPURI	BSPHCL & UPPCL	POWERGRID				UPPCL			
78	PATNA-KHAGUAL	BSPHCL	POWERGRID				BSPHCL			
80	NEW SASARAM- ARRAH	POWERGRID	BSPHCL				POWERGRID			
81	BODHGAYA-GAYA(PG)	BSPHCL & PG	BSPHCL				POWERGRID			
82	DEHRI-GAYA(PG)	BSPHCL & PG	BSPHCL				POWERGRID			
83	MUZZFARPUR-KANTI	POWERLINKS	POWERGRID				BSPHCL			
84	MUZZAFFARPUR-HAZIPUR-I & II	BSPTCL	POWERGRID				BSPTCL			
87	BALIMELA-U.SILLERU	APTRANSCO	OPTCL				APTRANSCO			
88	JINDAL-JAMSHEDPUR	OPTCL & DVC	OPTCL				DVC			
89	JODA-RAMCHANDRAPUR	OPTCL & JUSNL	OPTCL				JUSNL			
90	BUDHIPADAR-KORBA II & III	OPTCL & CSEB	OPTCL				CHATTISGARH			
91	BUDHIPADAR-RAIGARH I	POWERGRID	OPTCL				CHATTISGARH			
92	TSTPP-MERAMUNDALI	OPTCL	NTPC				OPTCL			
93	TSTPP-RENGALI HPS	OPTCL	NTPC				OPTCL			
94	BISRA(PG)-TARKERA(OPTCL)	OPTCL	POWERGRID				OPTCL			
95	JEYPORE(PG)-JAYNAGAR(OPTCL)	OPTCL	POWERGRID				OPTCL			
96	TSTPP-TALCHER	OPTCL	NTPC				OPTCL			
97	FARAKKA-LALMATIA	ECL	NTPC				NTPC			
98	RENGALI-RENGALI	OPTCL	POWERGRID				OPTCL			
99	BARIPADA-BALASORE	OPTCL	POWERGRID				OPTCL			
100	MAITHON(PG)-K'SWARI(DVC)	DVC	POWERGRID				DVC			
102	CHANDIL-SANTALDIH	WBSETCL & JUSNL	JUSNL				WBSETCL			
103	RANCHI-HATIA	JUSNL	POWERGRID				JUSNL			
105	TENUGHAT-BIHARSHARIF	BSPHCL & JUSNL	JUSNL				BSPHCL			
106	JAMSHEDPUR-RAMCHANDRAPUR	-POWERGRID	POWERGRID				JUSNL			
107	MAITHON(PG)-DHANBAD(DVC)	DVC	POWERGRID				DVC			
108	PARULIA(PG)-PARULIA(DVC)	DVC	POWERGRID				DVC			
109	WARIA-BIDHANNAGAR	DVC & WBSETCL	DVC				WBSETCL			
112	SUBH'GRM(PG) - NEWTOWN	WBSETCL	POWERGRID				WBSETCL			
113	SUBH'GRM(PG) - SUBH'GRM (WB)	WBSETCL	POWERGRID				WBSETCL			
114	SUBH'GRM(PG) - EMSS(CESC)	CESC	POWERGRID				CESC			
115	SUBH'GRM(PG) - BANTALA	WBSETCL	POWERGRID				WBSETCL			
118	BIRPARA- CHUKHA	POWERGRID	POWERGRID				POWERGRID			
119	BIRPARA-MALBASE	POWERGRID	POWERGRID				POWERGRID			
120	ALIPURDUAR-SALAKATI	POWERGRID	POWERGRID(ER)				POWERGRID(NER)			
122	NEW MELLI- JIHEP	DANS	POWERGRID				DANS			
124	DARBHANGA-MOTIPUR	BSPTCL	DMTCL				BSPTCL			
125	DARBHANGA-SAMASTIPUR(UJIYARPUR)	BSPTCL	DMTCL				BSPTCL			
127	BOLANGIR-KATAPALLI	OPTCL	POWERGRID				OPTCL			
128	BOLANGIR-SADHEPALLI	OPTCL	POWERGRID				OPTCL			
129	PANDIABILI-ATRI	OPTCL	POWERGRID				OPTCL			
130	PANDIABILI-SAMANGARA	OPTCL	POWERGRID				OPTCL			
52	BIHARSHARIFF-FATUAH	BSPHCL	BSPHCL				BSPHCL			
53	BIHARSHARIFF-BODHAGYA	BSPHCL	BSPHCL				BSPHCL			
54	BIHARSHARIFF-BEGUSARAI	BSPHCL	BSPHCL				BSPHCL			
55	MTPS-BEGUSARAI	BSPHCL	BSPHCL				BSPHCL			
56	MTPS-DARBHANGA	BSPHCL	BSPHCL				BSPHCL			
57	MTPS-GOPALGANJ	BSPHCL	BSPHCL				BSPHCL			

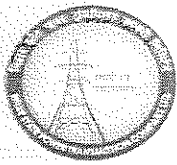
58	SASARAM-ARRAH	POWERGRID	POWERGRID				POWERGRID			
60	WARIA-PARULIA	DVC	DVC				DVC			
61	WARIA-MEJIA	DVC	DVC				DVC			
62	CTPS A-DHANBAD	DVC	DVC				DVC			
63	CTPS B-DHANBAD	DVC	DVC				DVC			
64	DHANBAD-GIRIDIH	DVC	DVC				DVC			
65	BOKARO-JAMSHEDPUR	DVC	DVC				DVC			
66	KASBA-EMBYPASS	CESC	WBSETCL				CESC			
67	KASBA-SUBHASGRAM(WB)	WBSETCL	WBSETCL				WBSETCL			
69	BOKARO-CTPS B	DVC	DVC				DVC			
70	KALYANESHWARI-MEJIA	DVC	DVC				DVC			
71	KALYANESHWARI-BURNPUR	DVC	DVC				DVC			
72	BURNPUR-MEJIA	DVC	DVC				DVC			
73	MEJIA-MUCHIPARA	DVC	DVC				DVC			
74	MEJIA-BARJORA	DVC	DVC				DVC			
75	PARULIA-MUCHIPARA	DVC	DVC				DVC			
76	BOKARO-RAMGARH	DVC	DVC				DVC			
77	PTPS -TENUGHAT	JUSNL	JUSNL				TVNL			
78	PATRATU-HATIA	JUSNL	JUSNL				JUSNL			
79	CHANDIL-RAMCHANDRAPUR	JUSNL	JUSNL				JUSNL			
80	JEYANAGAR-U.KOLAB	OPTCL	OPTCL				OHPC			
81	MERAMUNDALI-NALCO	OPTCL	NTPC				NALCO			
82	MERAMUNDALI - BIDANASI	OPTCL	OPTCL				OPTCL			
83	MERAMUNDALI - DUBURI(OLD)	OPTCL	OPTCL				OPTCL			
84	KATAPALLI-BUDHIPADAR	OPTCL	OPTCL				OPTCL			
85	IBTPS - BUDHIPADAR	OPTCL	OPGC				OPTCL			
86	TARKERA-BUDHIPADAR	OPTCL	OPTCL				OPTCL			
87	TARKERA-CHANDIPOSH	OPTCL	OPTCL				OPTCL			
88	TARKERA-BARKOT	OPTCL	OPTCL				OPTCL			
89	RENGALI-CHANDIPOSH	OPTCL	OPTCL				OPTCL			
90	RENGALI-BARKOT	OPTCL	OPTCL				OPTCL			
91	U. KOLAB-THERUVALI	OPTCL	OHPC				OPTCL			
92	U. KOLAB-JAYANAGAR	OPTCL	OHPC				OPTCL			
93	BALIMELA-JEYNAGAR	OPTCL	OHPC				OPTCL			
94	TALCHER-MERAMUNDALI	OPTCL	NTPC				OPTCL			
95	MERAMUNDALI - BHANJNAGAR	OPTCL	OPTCL				OPTCL			
96	MENDHASAL -BHANJNAGAR	OPTCL	OPTCL				OPTCL			
97	MENDHASAL - NAYAGARH	OPTCL	OPTCL				OPTCL			
98	NAYAGARH - BHANJNAGAR	OPTCL	OPTCL				OPTCL			
99	THERUVALLI - BHANJNAGAR	OPTCL	OPTCL				OPTCL			
100	THERUVALLI - LAXMIPUR	OPTCL	OPTCL				OPTCL			
101	THERUVALLI - NARENDRAPUR	OPTCL	OPTCL				OPTCL			
102	MENDHASAL - NARENDRAPUR	OPTCL	OPTCL				OPTCL			
103	MENDHASAL - CHANDAKA	OPTCL	OPTCL				OPTCL			
104	JAYANAGAR - LAXMIPUR	OPTCL	OPTCL				OPTCL			
105	UIHEP-THERUVALI	OPTCL	OHPC				OPTCL			
106	KTPS-HOWRAH	WBSETCL	WBPDC				WBSETCL			
107	BISHNUPUR-SANTALDIH	WBSETCL	WBSETCL				WBPDC			
108	SANTALDIH-BIDHANNAGR	WBSETCL	WBDPCL				WBSETCL			
109	BIDHANNAGAR-DPL	WBSETCL	WBSETCL				DPL			
110	BIDHANNAGAR-BAKRESWAR	WBSETCL	WBSETCL				WBPDC			
111	SATGACHIA-BAKRESWAR	WBSETCL	WBSETCL				WBPDC			
112	KHARAGPUR- MIDNAPORE I&II	WBSETCL	WBSETCL				WBSETCL			
113	ARAMBAGH- MIDNAPORE	WBSETCL	WBSETCL				WBSETCL			
114	ARAMBAGH-N.BISHNUPUR	WBSETCL	WBSETCL				WBSETCL			
115	ARAMBAGH- DOMJUR	WBSETCL	WBSETCL				WBSETCL			
116	ARAMBAGH- RISHRA	WBSETCL	WBPDC				WBSETCL			
117	JEERAT-NEWTOWN	WBSETCL	WBSETCL				WBSETCL			
118	JEERAT-SATGACHIA	WBSETCL	WBPDC				WBSETCL			
119	SATGACHIA-KRISHNANAGAR	WBSETCL	WBPDC				WBSETCL			
120	BAKRESWAR-SADAIPUR	WBSETCL	WBPDC				WBSETCL			
120	SADAIPUR-GOKARNO	WBSETCL	WBPDC				WBSETCL			

121	GOKARNO-SAGARDIGHI	WBSETCL	WBSETCL				WBPDC			
122	GOKARNO-KRISHNANAGAR	WBSETCL	WBSETCL				WBPDC			
123	SUBHASGRAM (WB)- LAKHIKANTPUR	WBSETCL	WBSETCL				WBSETCL			
124	DALKHOLA-PURNEA	POWERGRID	WBSETCL				WBSETCL			
125	BIRPARA-BINAGURI	POWERGRID	POWERGRID				POWERGRID			
	BINAGURI-SILIGURI	POWERGRID	POWERGRID				POWERGRID			
126	JEERAT-KASBA	WBSETCL	WBPDC				WBSETCL			
127	JEERAT- DHARAMPUR	WBSETCL	WBPDC				WBSETCL			
128	DHARAMPUR- RISHRA	WBSETCL	WBPDC				WBSETCL			
	SILIGURI-KISHANGANJ	POWERGRID	POWERGRID				POWERGRID			
129	DALKHOLA-KISHANGANJ	POWERGRID	POWERGRID				POWERGRID			
130	DALKHOLA-MALDA	POWERGRID	POWERGRID				POWERGRID			
131	RANGPOO- NEW MELLI	POWERGRID	POWERGRID				POWERGRID			
132	ALIPURDUAR-BIRPARA	POWERGRID	POWERGRID(ER)				POWERGRID(ER)			

C) 132 KV LINES

		Cross Border Power Trans. Ltd.								
131	MUZZAFARPUR- DHALKEBAR		POWERGRID				NEPAL			
132	BARHI - B'SHARIFF	BSPHCL & DVC	DVC				BSPHCL			
133	BARHI-RAJGIR	BSPHCL & DVC	DVC				BSPHCL			
134	DEOGHAR-SULTANGANJ	BSPTCL & JUSNL	JUSNL				BSPHCL			
135	KAHALGAON-KAHALGAON	POWERGRID	BSPHCL				NTPC			
136	ARRAH-ARRAH	POWERGRID	BSPHCL				POWERGRID			
137	DUMRAON-ARRAH	POWERGRID	BSPHCL				POWERGRID			
138	PURNEA(PG)-PURNEA(BS)	BSPHCL	BSPHCL				POWERGRID			
139	PURNEA(PG)-KISANGANJ	BSPHCL	BSPHCL				POWERGRID			
140	DEHRI--PUSUALI	POWERGRID	BSPHCL				POWERGRID			
141	KARMANASA--PUSUALI	POWERGRID	BSPHCL				POWERGRID			
142	KARMANASA-SAHUPURI	BSPHCL & UPPCL	BSPHCL				UPPCL			
143	KARMANASA-CHANDAUJI	BSPHCL & UPPCL	BSPHCL				UPPCL			
144	SONENAGAR - RIHAND	BSPHCL & UPPCL	BSPHCL				UPPCL			
145	MAITHON-JAMTARA	DVC & JUSNL	DVC				JUSNL			
146	KHARAGPUR-KHARAGPUR	DVC	DVC				WBSETCL			
147	KOLAGHAT-KOLAGHAT	DVC	DVC				WBSETCL			
148	MACHKUND-VIZAG	APTRANSCO	OPTCL				APTRANSCO			
149	JODA-KENDPOSI	OPTCL & JUSNL	OPTCL				JUSNL			
150	BARIPADA-BANGIRIPOSI	OPTCL	POWERGRID				OPTCL			
151	BARIPADA-BARIPADA	OPTCL	POWERGRID				OPTCL			
152	GARWA-SONENAGAR	BSPHCL & JUSNL	JUSNL				BSPHCL			
153	LALMATIA-SABOUR	BSPHCL & JUSNL	JUSNL				BSPHCL			
154	CHANDIL-MANIQUE	JUSNL & DVC	JUSNL				DVC			
155	PATRATU-PATRATU	JUSNL & DVC	JUSNL				DVC			
156	GARWA-RIHAND	JUSNL & UPPCL	JUSNL				UPPCL			
157	RANGIT-RAMMAM	POWERGRID	NHPC				WBSETCL			
158	KAHALGAON-SABOUR	POWERGRID	NTPC				BSPHCL			
159	KAHALGAON-LALMATIA	POWERGRID	NTPC				JUSNL			
160	BIRPARA-BIRPARA	WBSETCL	POWERGRID				WBSETCL			
161	MALDA-MALDA	WBSETCL	POWERGRID				WBSETCL			
162	SILIGURI-NBU	WBSETCL	POWERGRID				WBSETCL			
	SILIGURI - NJP	WBSETCL	POWERGRID				WBSETCL			
163	RANGIT -SAGBARI	SIKKIM	NHPC				SIKKIM			
164	ARHA-JAGDISHPUR	BSPHCL	POWERGRID				BSPHCL			
165	RANGIT-RANGPO	POWERGRID	NHPC				POWERGRID			
166	RANGIT-KURSEONG	POWERGRID	NHPC				WBSETCL			
167	RANGIT-SAGBARI	SIKKIM	NHPC				SIKKIM			
168	CHUJACHEN-GANGTOK	POWERGRID & GATI	GATI INFRA				POWERGRID			
169	BANKA-SABOUR	BSPTCL	POWERGRID				BSPTCL			
170	BANKA-BANKA	BSPTCL	POWERGRID				BSPTCL			

171	RANGPO-CHUJACHEN	GATI INFRA	POWERGRID				GATI INFRA			
172	NJP-MELLI	POWERGRID	POWERGRID				SIKKIM			
173	RANGPO- MELLI	POWERGRID+GATI INFRA	POWERGRID				SIKKIM			
174	NJP-MELLI	POWERGRID	POWERGRID				SIKKIM			
175	LAKHISARAI - JAMAUI	BSPHCL	POWERGRID				BSPHCL			
176	RANGIT - RABANGLA	POWERGRID	NHPC				SIKKIM			
177	KALINGPONG-MELLI	WBSETCL & SIKKIM	WBSETCL				SIKKIM			
178	BANKA-SULTANGUNJ	BSPTCL	POWERGRID				BSPTCL			



Bihar State Power Transmission Company Limited

(A Government of Bihar Undertaking)

Head Office, Vidyut Bhawan, Bailey Road, Patna-800021

Letter no. 140
ULD C/Maintenance-17/2013

Dated: 05/06/2017

From,

Sri G.K. Choubey
Chief Engineer (S.O)

Fax No 0612-2504655

To,

Sri S.N. Ghosh
Asst. GM (ULDC/ER-II),PGCIL
CF-17 Action area -1C, New Town,
Kolkata

Sub.- Regarding Trial Opration Cirtificate for underground fiber optic link Jakkanpur to SLDC

- Ref:-
1. This office letter no-208, dated - 24/11/16,
 2. Your office leter no-ER/KOL/ULDC/5317, dated 27/02/2017
 3. This office letter no-82, dated -03/04/2017
 4. MoM between BSPTCL & KEC dated: 31.05.17

Sir,

With reference to the above it is to inform that the end to end testing of UGFO link between Jakkanpur to SLDC Patna has been carried out, dated 03/10/16. Route survey with representative of M/s KEC carried out on 31.05.17. It was observed that no marking to identify route, location of splice chamber, joint chamber and pits.As per "following clause of standard technical specification of UGFO of PGCIL,

"Marking:

The Contractor shall provide markers, warning bricks and warning tape as stipulated below for the routes where new PLB HDPE pipes are installed under this package. A) Markers Route markers made of RCC (1:2:4) of length 1450 mm and a bottom cross section of 150mmx200mm tapering to 75mmx125mm at top shall be provided. Route markers shall be provided at 500 mm from the trench and away from the road centre, at an average of 200 m. Markers shall also be provided at major directional changes in route (from straight) and at both sides of all types of crossings. 900 mm of the marker shall be underground and 550 mm shall be above the ground. The portion of route markers above ground shall be painted with brown synthetic enamel paint. Joint Markers shall be provided at each joint location and shall be same as route markers except that they shall be blue in colour. In case joint markers and route markers fall at the same location, route marker shall not be installed and only joint marker shall be provided. All Markers shall be Engraved vertically as "NAME OF UTILTIY" in 500 mm portion above the ground area and filled with fluorescent white colour. The marking shall face the road. B) Warning Bricks Bricks class designation-5(50) of the actual size 225 mm (Length) x 111 mm (Width) x 70 mm (Thick) shall be laid breadth-wise as per Figure : 5-1(average 9 bricks per metre) in city area (municipality limits) immediately above the sand layer in which PLB HDPE pipe is installed. Stone slabs of suitable size may also be used in place of warning bricks with the approval of the Owner/Employer. C) Warning Tape A warning tape, made of HDPE or LDPE (Low Density Poly Ethylene) other suitable inert material, containing a printed message "WARNING : " Name of utility's " Fibre Optic Cable below" shall also be laid over the pipe, throughout the cable route at a depth of 1000mm in normal soil (the depth in soft rock and hard rock shall be proposed by the Contractor and approved by the Owner/Employer), for warning the person who is excavating the trench. The width of the tape shall be at least 100 mm and thickness of the tape shall be at least 500 micrometer. The life of the warning tape shall be at least 25 years."

(17)
No provision of the above clause has been followed either regarding the route markers, construction of manholes, warning brick etc.

BSPTCL is repeatedly requesting you to furnish Technical specification and the SAT procedure of UGFO, but the same has not been provided yet. This work may affect the maintenance of UGFO link further.

Therefore it is requested to direct the agency to install route markers, warning bricks and show that the manholes are constructed as per the above said clause and reconduct the SAT by furnishing the approved SAT document, LoA, technical specification (supply, installation & commissioning), at the earliest and get SAT completed.

Yours faithfully,

G.K. Choubey
03/6/2017

(G.K. Choubey)

Chief Engineer (Transmission)

Dated: 05/06/2017

Memo No. 140

Copy forwarded to Sri S.N. Sahay GM, ER -I, BSEB Colony PGCIL, Patna for kind information

G.K. Choubey
03/6/2017

(G.K. Choubey)

Chief Engineer (System operation)

Dated: 05/06/2017

Memo No. 140

Copy forwarded to Member Secretry, ERPC, 14 Golf Club Road , Tollyganj, Kolkata /GM, ERLDC, 14 Golf Club Road , Tollyganj, Kolkata for kind information

G.K. Choubey
03/6/2017

(G.K. Choubey)

Chief Engineer (System operation)



Bihar State Power Transmission Company Limited

(A Government of Bihar Undertaking)

Head Office, Vidyut Bhawan, Bailey Road, Patna-800021

Annexure-D5.4

Letter no _____
ULDC/DCPS-31/2014

Date _____

From,

H.R.Panday
Chief Engineer (System Opration)
BSPTCL, Patna

To,

Executive Director,
Er-1, PGCIL,
BSEB Colony, New Punaichak, Patna

Sub :- Regarding Ethernet Link for integration of Kishanganj SAS GSS with SLDC, Patna for monitoring of Real time data & voice of 220/132/33 Kishanganj Grid Sub-station.

Ref :- 1. Letter no 122, Dated: 19/1/17,
2. Email of this office Dated: 25/04/17,
3. Email of this office Dated: 31/07/17.

Sir,

With reference to the above, this is to inform that Synchronous Digital Hierarchy (SDH) has been installed in Kishanganj(PG) and approach cable laid out up to connecting SDH for integration of SDH of Kishanganj New GSS.

Therefore, it is requested that Ethernet link for integration of SDH of Kishanganj SAS GSS with SLDC, Patna for monitoring of Real time data voice of 220/132/33 Kishanganj Grid Sub-station as well as its connecting Grid sub-stations for ULDC purpose may kindly be provide provide on priority basis.

Yours faithfully

Sd/-

(H.R.Panday)

Chief Engineer (System Operation)

Encl: Copy of Reference

Memo No. _____

Date _____

Copy forwarded to ED(LD & C), PGCIL, Corporate Center, Saudamini, Plote no. 2, Sector 29, Gurgaon for kind information.

Sd/-

(H.R.Panday)

Chief Engineer (System Operation)

Memo No. _____

Dated: _____

Copy forwarded to Member Secretry, ERPC, 14 Golf Club Road , Tollyganj, Kolkata / GM, ERLDC, 14 Golf Club Road , Tollyganj, Kolkata for kind information. It is requested to kindly takeup the matter with PGCILat thier level also for establishment of fiber connectivity for monitring of Kisanganj and its peripheral GSS like Forbisganj, Kisanganj New, Madhepura, Supaul etc.

Sd/-

(H.R. Panday)

Chief Engineer (System Operation)

Memo No. _____

Date _____

Copy forwarded to the Director (Projects), BSPTCL, Patna kind information.

Sd/-

(H.R.Panday)

Chief Engineer (System Operation)

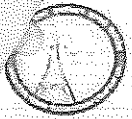
Memo No. 199

Date 19/08/2017

Copy forwarded to the Resident Engineer, 18 Camac Street, Kolkata kind information.

(H.R.Panday)

Chief Engineer (System Operation)



BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna

CIN - U40102BR2012SGC018889

[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]

Head Office: Vidyut Bhawan, Bailey Road, Patna - 800021

Telephone No. 0612 - 2504655.

E-mail address - ee.trans664@gmail.com.

Fax No. 0612 - 2504655.

Website - www.bsptcl.in

Letter No. 129 /
TRANS/MISC/224/2014

Patna, Dated 19-01-17

From,

Sri B. Sharma
Director (Project)

To,

Sri Devendra Kumar
Executive Director,
Power grid Patna.
Phone No- 0612-2533440
Email-qandmer1@gmail.com,
uldcer1@gmail.com
er_nprnss@gmail.com.


Sub: - Regarding instruction to provide space for installation of FODB and SDH panel at 400/200 KV GIS, Kishanganj(PG) for 220/132/33 KV Kishanganj GSS(BSPTCL).

Dear Sir,

With reference to the above, it is to say that FODB and SDH panels are required to be installed at 400/220 KV GIS Kishanganj(PG) end for the communication and data transfer from 220/132/33 KV Kishanganj GSS through OPGW. Concerned officers at 400/220 KV GIS Kishanganj have been requested to for the required space for installation of FODB and SDH panel. They need instruction/direction from higher authority for allowing installation of FODB and SDH Panel at 400/220 KV GIS Kishanganj.

Therefore, it is requested to kindly give direction to the concerned to provide space for installation of FODB and SDH Panel for communication & data transfer so that communication may be established at the earliest .

Yours faithfully,


(B.Sharma)
Director (Project)

C.C-Sri S.N Sahay
GM(O&M)
Powergrid, Patna
Email i.d-er_nprnss@yahoo.com.

Regarding space for SDH&FODB at Kishanganj PG

3 messages

ULDC SLDC <slidcbstcl@gmail.com>

Tue, Apr 25, 2017 at 4:34 PM


To: uldc er1 <uldc1@powergrid.co.in>, Rajesh (राजेश) <rajeshos@powergridindia.com>, mithun <mithun@powergridindia.com>

Cc: cetrans.664@gmail.com

Dear Sir

Please find herewith attached letter for identification of space for installation of SDH and FODB at Kishanganj PG.

Hopeful for kind co-operation and needful.

Regards
Pankaj Mishra
ULDC/BSPTCL sdh at kne.pdf
394K

ULDC SLDC <slidcbstcl@gmail.com>

Mon, Jul 31, 2017 at 11:41 AM

To: uldc er1 <uldc1@powergrid.co.in>, Rajesh (राजेश) <rajeshos@powergridindia.com>, Powergrid Rajesh <rajesh66k@yahoo.com>

Cc: CE_BSPTCL <ce.sysop@gmail.com>

Dear sir

with reference to the trailing mail and further discussion held on, it is requested to kindly provide Ethernet Link for integration of Kishanganj SAS GSS with SLDC, Patna for monitoring of Real time data voice of 220/132/33 Kishanganj Grid Sub-station as well as its connecting sub-stations for ULDC purpose. All termination of cable has been got laid out in Kishanganj PG.


Thanking You.

Pankaj Mishra
ULDC,BSPTCL

दावात्म्य / Disclaimer:

बिहार स्टेट पावर ट्रांसमिशन कम्पनी लिमिटेड इस ईमेल में वितरित किसी भी सामग्री के लिए या इसमें दी गई किसी सूचना के आधार पर की गई किसी भी कार्यवाई के परिणामों के लिए कोई भी दायित्व नहीं स्वीकारता है। चूंकि सूचना को अवरुद्ध, भ्रष्ट, त्रुटि, नष्ट, विलंबित, अपूर्ण अथवा संक्रमित किया जा सकता है अतः प्राप्तकर्ता यह मानता है कि इलेक्ट्रॉनिक मेल में परिवर्तन किए जा सकते हैं एवं उनके सुरक्षित या नुतिमुक्त होने की गारंटी नहीं दी जा सकती। इसलिए बिहार स्टेट पावर ट्रांसमिशन कम्पनी लिमिटेड इस संदेश अथवा इसके संलग्नकों की सामग्री में इस प्रेषण के परिणामस्वरूप उत्पन्न किसी भी त्रुटि, चूक, वायरस या क्षति के लिए उत्तरदायी नहीं होगा। यह ईमेल और इसके कोई भी संलग्नक केवल आशयित प्राप्तकर्ता(ओं) के एकमात्र उपयोग के लिए है और इसमें कुछ गोपनीय और विशिष्ट जानकारी हो सकती है। यदि आप आशयित प्राप्तकर्ता नहीं हैं, तो तुरंत इस ईमेल के प्रेषक को इस बाबत सूचित करें तथा इस संदेश की सभी प्रतियां और इसके सभी संलग्नक तत्काल नष्ट कर दें। इस संदेश या इसके किसी संलग्नक का किसी भी प्रकार से (चाहे पूर्णतः या अंशतः) अनधिकृत प्रयोग, प्रकटीकरण या उसकी प्रतियां बनाना सर्वथा निषिद्ध है और यह एक गैर-कानूनी कृत्य हो सकता है।

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ULDC SLDC <slidcbstcl@gmail.com>

Mon, Jul 31, 2017 at 11:43 AM

To: uldc er1 <uldc1@powergrid.co.in>

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बिहार स्टेट पावर ट्रांसमिशन कम्पनी लिमिटेड इस ईमेल में वितरित किसी भी सामग्री के लिए या इसमें दी गई किसी सूचना के आधार पर की गई किसी भी कार्यवाई के परिणामों के लिए कोई भी दायित्व नहीं स्वीकारता है। चूंकि सूचना को अवरुद्ध, भ्रष्ट, त्रुटि, नष्ट, विलंबित, अपूर्ण अथवा संक्रमित किया जा सकता है अतः प्राप्तकर्ता यह मानता है कि इलेक्ट्रॉनिक मेल में परिवर्तन किए जा सकते हैं एवं उनके सुरक्षित या नुतिमुक्त होने की गारंटी नहीं दी जा सकती। इसलिए बिहार स्टेट पावर ट्रांसमिशन कम्पनी लिमिटेड इस संदेश अथवा इसके संलग्नकों की सामग्री में इस प्रेषण के परिणामस्वरूप उत्पन्न किसी भी त्रुटि, चूक, वायरस या क्षति के लिए उत्तरदायी नहीं होगा। यह ईमेल और इसके कोई भी संलग्नक केवल आशयित प्राप्तकर्ता(ओं) के एकमात्र उपयोग के लिए है और इसमें कुछ गोपनीय और विशिष्ट जानकारी हो सकती है। यदि आप आशयित प्राप्तकर्ता नहीं हैं, तो तुरंत इस ईमेल के प्रेषक को इस बाबत सूचित करें तथा इस संदेश की सभी प्रतियां और इसके सभी संलग्नक तत्काल नष्ट कर दें। इस संदेश या इसके किसी संलग्नक का किसी भी प्रकार से (चाहे पूर्णतः या अंशतः) अनधिकृत प्रयोग, प्रकटीकरण या उसकी प्रतियां बनाना सर्वथा निषिद्ध है और यह एक गैर-कानूनी कृत्य हो सकता है।

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From: ULDC SLDC <slidcbstcl@gmail.com>

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