Minutes

of

156th OCC Meeting

Date: 03.05.2019

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 156th OCC Meeting held on 25th April, 2019 at Kahalgaon STPS, NTPC

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

Item no. 1: Confirmation of minutes of 155th OCC meeting of ERPC held on 25.03.2019

The minutes of 155th OCC meeting were uploaded in ERPC website and circulated vide letter dated 03.04.2019 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 155th OCC meeting.

PART A : ER GRID PERFORMANCE

Item no. A1: ER Grid performance during March, 2019

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

1. **Frequency profile**
2. **Over drawal/under injection by ER Entities**
3. **Performance of Hydro Power Stations during peak hours**
4. **Performance of ISGS during RRAS**
5. **Reactive Power performance of Generators**

Based on the P-Q and V-Q curve and real time data of many of the generating plants, it is observed that a few plants only start absorbing reactive power when voltage is going above 410 kV. The same is summarized in the table given below:

Unit Name	Voltage on HV Bus above which generating plant starts absorbing reactive power
Sagardighi Unit 1,2,3,4	> 410 kV
Kolaghat 4,5,6	> 420 kV
Barh 4,5	> 415 kV
Farakka Unit 1,2,3,4,5,6	> 415 kV
Kahalgaon Unit 1,2,3,4,5,6,7	> 415 kV
Santaldih Unit 5,6	> 232 kV

This may be due to the setting of their GT Tap which is presently allowing absorption of VAR only after voltages rise significantly which need to be coordinated so that generating unit start absorbing VAR whenever HV bus voltages rise above 405kV.

In view of the above it is desired that, generating units should set their GT tap in such a manner that they should be absorbing VAR when the voltage is exceeding 405 kV. In case of any

requirement of increasing this voltage limit (Generators located in low voltage pocket area), then that can be studied on case to case basis.

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

During the Month of March 2019, one event has occurred for which Frequency Response Characteristic has been analyzed pan India. The detail report based on response observed at ERLDC SCADA data and data received from SLDC & generating stations is attached as **Annexure-A1.6**.

In view of the above Generating Power Plants of Eastern Region and SLDC may kindly explain the following points:

1. Inadequate RGMO/FGMO response in the event in March 2019 and action taken after RGMO meeting.
2. Non-Submission of data even after correspondence has been sent to all generators and SLDC.
3. NTPC to intimate the tuning of RGMO done after overhauling of KhSTPP #1 (12-03-19) and Barh #4 (17-02-19) Units.

Details of FRC and all data sharing with ERLDC on Governor response may kindly be shared on following email id : erldcprotection@posoco.in , chandan@posoco.in, saibal@posoco.in, saurav.sahay@posoco.in, akbasak@posoco.in, rajprotim@posoco.in

Member may discuss.

Deliberation in the meeting

*The performance of the Eastern Regional Grid during March 2019 is enclosed at **Annexure- A1**.*

OCC advised all the generating units and SLCDs to review the GT tap in such a manner that they should be absorbing VAR when the voltage is exceeding 405 kV. OCC also advised to share the details of FRC and tuning of RGMO to ERLDC vide above-mentioned mail ids.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: Power Assistance at Manique GSS from DVC and at Kendposi GSS from OPTCL –JUSNL

JUSNL vide letter dated 8th February 2019 informed that they are planning shutdown of 132 KV D/C RCP-ADP line for erection of 05 nos. Multi Circuit Tower in place of existing transmission tower. Erection of Multi Circuit Tower is inevitable for new 132 KY RCP-Jadugoda transmission line due to limitation of vacant corridor.

In 154th OCC, JUSNL explained that they needed around 35 MW power from Manique (DVC) and 40 MW power from Joda (OPTCL) S/s during the shutdown of 132kV Ramchandrapur-Adityapur D/C line for 31 days.

DVC informed that, due to network constraints in DVC system, DVC would not be in a position to give power from Manique (DVC).

OPTCL informed that the ATRs at Joda are quite old and they are planning to augment the ATRs. Power could be extended to JUSNL only after completion of augmentation of ATR.

Underlining the need to facilitate the shut-down to JUSNL and at the same time, to ensure system integrity, OCC advised Member Secretary, ERPC to convene a special meeting at ERPC Secretariat to discuss the issue with JUSNL, DVC, OPTCL, ERPC and ERLDC to arrive at an acceptable solution.

Accordingly, a separate meeting was held on 1st March 2019. The minutes of the meeting are enclosed at **Annexure-B1**.

In 155th OCC, OPTCL informed that in view of Lok Sabha Elections, they had not taken the shutdown of 220/132kV ATR at Joda for augmentation work. OPTCL added that they would take the shutdown after the Elections.

Members may discuss.

Deliberation in the meeting

*DVC did not attend the meeting***.**

JUSNL informed that they are ready to take the shutdown of 132 KV Ramchandrapur-Adityapur D/C line but they needed around 35 MW power from Manique (DVC).

It was informed by ERPC Secretariat that DVC vide mail had informed that power Assistance at Manique GSS through 132kV Chandil-Manique Tie would be provided after putting the ICT#2 at BTPS-A on load which may take few more days.

Item No. B.2: Review of Rangpo SPS in view of Shutdown of 400 kV Rangpo-Binaguri D/C ---ERLDC

In 155th OCC, Powergrid informed that they had taken the shutdown of 400 kV Rangpo-Binaguri D/C line from 20th March 2019 and the reconductoring work is in progress. Powergrid added that, because of hilly terrain, they had been facing severe problems in executing the reconductoring work and requested for extension of both line (400 kV Rangpo-Binaguri D/C line) shutdown from 31st March 2019 to 30th April 2019.

OCC agreed for shutdown of 400 kV Rangpo-Binaguri D/C line till 25th April 2019. OCC decided to review the progress in next OCC Meeting scheduled to be held on 25th April 2019.

Powergrid informed that SPS logic had been implemented as per the decision of the meeting held on 8th March 2019. Powergrid proposed that actuation of SPS signal with increase in power flow in 400 kV Rangpo-Kishanganj be included in the SPS logic.

Teesta III agreed to include the breaker status and power flow of 400 kV Teesta-III-Kishanganj line in the SPS logic.

Powergrid informed that they were planning to test the SPS scheme on 26th March 2019.

OCC advised Teesta III, Testa V, Chuzachen, Dansenergy and Dikchu to implement the SPS logic at their end and send the details to Powergrid and ERLDC before testing of the SPS.

In line with the discussion in 155th OCC meeting, Rangpo SPS with new logic and setting has been tested on 26 March 2019. The new logic implemented at Rangpo Substation included two conditions which are as:

1. Tripping of 400 kV Rangpo-Kishangunj S/C when it pre-tripping flow is > 650 MW (SPS Test 1)

OR

2. flow of 400 kV Rangpo-Kishangunj S/C crosses 1700 MW (SPS Test 2)

The observation for SPS Test 1 where limit kept at >800 MW (present limit 650 MW) is given below:

Event Description	Time(Hrs)	Delay(s)	Remarks
Rangpo end SPS signal triggered	14:59:30.775	--	
SPS signal received at Teesta III end	14:59:30.829	0.054	
CB opening time at Teesta III end	14:59:30.903	0.128	
SPS signal received at Dikchu end	--	--	Wiring for extension of SPS signal was in process; SPS signal was received at PLCC panel only
SPS signal received at Jorethang end	14:59:31.593	0.818	Jorethang to share the reason for delay in receiving SPS signal.
SPS signal received at Tashiding end	14:59:31.572	0.797	Tashiding to share the reason for delay in receiving SPS signal.
SPS signal received at Chujachen end	14:59:30.989	0.214	
SPS signal received at Teesta V end	14:59:30.821	0.046	

The observation for SPS Test 2 is given below:

Event Description	Time(Hrs)	Delay(s)	Remarks
SPS signal triggered at Rangpo end	15:32:31.975	--	
SPS signal received at Teesta III end	15:32:32.028	0.053	
SPS signal received at Dikchu end	15:32:33.331	1.356	As per verbal information received, delay was due to problem in GPS time stamping in SCADA system. Dikchu to take remedial action.
SPS signal received at Jorethang end	15:32:32.550	0.575	Jorethang to share the reason for delay in receiving SPS signal.
SPS signal received at Tashiding end	15:32:32.612	0.637	Tashiding to share the reason for delay in receiving SPS signal.
SPS signal received at Chujachen end	15:32:32.188	0.213	
SPS signal received at Teesta V end	15:32:32.021	0.046	

In addition to above SPS signal, two units (including the one unit identified for SPS operation) will trip at Teesta III end if flow of 400 kV Teesta-III-Kishangunj exceeds 2000 Amps (1385 MW).

Member may discuss.

Deliberation in the meeting

Powergrid informed that they were facing huge difficulty in executing the re-conductoring work of 400 kV Rangpo-Binaguri D/C line because of hilly terrain. They requested for continuous shutdown of both the circuits of 400 kV Rangpo-Binaguri D/C line for executing the work in a secured manner.

OCC opined that, in view of full generation evacuation of Sikkim hydro generators during the summer and monsoon, it might not be feasible to allow shut down during this period. After detailed deliberation, OCC decided to allow the shutdown of 400 kV Rangpo-Binaguri D/C line during lean water period i.e. in winter.

ERLDC informed that as per the last few years trend, water inflow for Sikkim hydro generators would be reduced from 15th November 2019 onwards.

OCC advised Powergrid to plan the reconductoring work of 400 kV Rangpo-Binaguri D/C line from November 2019 such that the work could be completed before February 2020.

Powergrid agreed with the decision of OCC.

Regarding SPS at Rangpo, OCC advised ERLDC to study the requirement of SPS for different contingencies considering the availability of 400 kV Rangpo-Binaguri D/C line. OCC decided to

discuss the issue in a separate meeting with the concerned utilities after receiving the study results from ERLDC.

It was informed that line reactor of 400kV Rangpo-Kishanganj line at Kishanganj end is getting tripped on over voltage.

OCC advised Powergrid look into the issue and resolve.

Item No. B.3: Flexibilisation of Thermal Power Plants-Units identified by WBPDCL

In view of large scale integration of renewable energy sources into the Grid, flexible operation of thermal generators is essential to balance the grid.

CEA vide letter dated 8th April 2019 informed that CEA had received confirmation from WBPDCL for conducting the pilot test for flexible operation in the units given below:

- Bakreswar unit 5 (210 MW)
- Sagardighi unit 3 (500 MW)

In a special meeting with BHEL at CEA, BHEL informed that they have adequate technical and managerial expertise to conduct the pilot tests.

Therefore, WBPDCL is requested to coordinate with BHEL for conducting the pilot tests and finalise the dates.

CEA also advised ERPC and POSOCO to support WBPDCL for providing appropriate schedule for flexible operation pilot tests.

Members may discuss.

Deliberation in the meeting

WBPDCL informed that they had already interacted with BHEL and BHEL engineers are expected to visit the site in May 2019.

Item No. B.4: Revised Overhauling Schedule proposal of NTPC ER-I stations--NTPC

NTPC vide letter dated 17th April 2019 informed that in view of short shutdowns availed by Barh Unit-4 and Kahalgoan Unit-1 with kind consent of our beneficiaries, ERPC & ERLDC, deferment of Farakka Unit-5 overhauling, recently cropped up liability and reliability concerns, following planned maintenance is proposed for approval in OCC meeting:

Station	Unit	LGBR/OCC approved		Proposed Revised schedule		Scope	Remarks
		Start date End date	Dur. days	Start date End date	Dur. days		
FSTPS	1	01.09.19 to 25.09.19	25	17.02.20 to 22.03.20	35	Boiler (acid cleaning) +DDCMIS R&M+ RLA of critical piping	Shifted from Sep'19 to Feb'20.
	3	20.07.19 to 23.08.19	35	01.11.19 15.12.19	45	Boiler (acid cleaning) +DDCMIS R&M + HPT+IPT+LPT+Gen	Unit-6 slot in LGBR to be used.
	4	11.03.20 to 05.04.20	26	No OH	0	No Overhauling in 2019-20.	Will be done in FY 2020-21.
	5	01.04.19 to 30.04.19	30	07.06.19 to 06.07.19	30	Boiler+Gen+ESP R&M	Not availed in Mar-Apr'19 as per water availability.
	6	01.11.19 to 05.12.19	35	15.07.19 to 28.08.19	45	Boiler+ HPT+ IPT+ LPT+ Gen.	Overhauling long due, it will not be safe to run upto Nov'19.

KhSTPS	1	27.08.19 to 30.09.19	35	No OH	0	Short shutdown availed earlier in Mar'19.	Unit-1 not proposed in 2019-20.
	2	10.11.19 to 09.12.19	30	10.11.19 to 09.12.19	30	Boiler+Gen+ESP R&M	No change, as per LGBR.
	4	25.07.19 to 23.08.19	30	15.06.19 to 14.07.19	30	Boiler+Gen+ESP R&M	Preponed, as Boiler license valid till 14.06.2019.
	7	22.04.19 to 16.05.19	25	22.04.19 to 21.05.19	30	Boiler	Duration extension by 5 days.
Barh	4	01.11.19 to 04.01.20	65	10.11.19 to 28.01.20	80	Boiler modification	Chhath is on 02.11.2019, so start date shifted. Modification of only one Unit is planned in 2019-20.
	5	15.01.20 to 19.03.20	65	21.03.20 to 04.04.20	15	Short shutdown	

The above proposal represented on time line is attached in **Annexure-B4**. In addition to above, Farakka Unit-4 / Unit-5 shutdown for 2 to 3 days will be required at different dates in May'19 to Jan'20 for each ESP pass to normalize / isolate the pass with dummy plate.

BSPHCL vide letter dated 20th April 2019 informed that, BSPHCL is procuring power on behalf of both the discoms NBPDCL and SBPDCL, do not agree any schedule maintenance by NTPC in the summer season as already few of the plants which were scheduled to be commissioned during summer are delayed. Therefore, the proposed timeline of overhauling of Farakka Unit 5 and 6 and Kahalgaon unit 4 may not be agreed to.

Members may discuss.

Deliberation in the meeting

After detailed deliberation, OCC agreed the following revised overhauling schedules of NTPC ER-I stations:

Station	Unit	LGBR/OCC approved		Proposed Revised schedule		Scope	Deliberation in the meeting
		Start date End date	Dur. days	Start date End date	Dur. days		
FSTPS	1	01.09.19 to 25.09.19	25	17.02.20 to 22.03.20	35	Boiler (acid cleaning) +DDCMIS R&M+ RLA of critical piping	*OCC agreed for the revised schedule*
	3	20.07.19 to 23.08.19	35	01.11.19 15.12.19	45	Boiler (acid cleaning) +DDCMIS R&M + HPT+IPT+LPT+Gen	*OCC agreed for the shutdown from 04.11.2019 to 19.12.2019 in view of Chhat Puja*
	4	11.03.20 to 05.04.20	26	No OH	0	No Overhauling in 2019-20.	*No overhauling was scheduled in 2019-20*
	5	01.04.19 to 30.04.19	30	07.06.19 to 06.07.19	30	Boiler+Gen+ESP R&M	*OCC agreed from 07.06.19 to 06.07.19*
	6	01.11.19 to 05.12.19	35	15.07.19 to 28.08.19	45	Boiler+ HPT+ IPT+ LPT+ Gen.	*WBSEDCL and Bihar did not agree to the revised schedule. OCC decided to review the shutdown proposal in next OCC Meeting.*
KhSTPS	1	27.08.19 to 30.09.19	35	No OH	0	Short shutdown availed earlier in Mar'19.	*No overhauling was scheduled in 2019-20*
	2	10.11.19 to 09.12.19	30	10.11.19 to 09.12.19	30	Boiler+Gen+ESP R&M	*OCC agreed for the shutdown as per LGBR.*
	4	25.07.19 to 23.08.19	30	15.06.19 to 14.07.19	30	Boiler+Gen+ESP R&M	*After detailed deliberation, OCC agreed for the shutdown from 01.07.2019 to 30.07.2019*
	7	22.04.19 to 16.05.19	25	22.04.19 to 21.05.19	30	Boiler	*OCC agreed for the shutdown from 22.04.19 to 21.05.19*
Barh	4	01.11.19	65	10.11.19	80	Boiler modification	*OCC agreed to the revised*

		to 04.01.20		to 28.01.20			*schedule.*
	5	15.01.20 to 19.03.20	65	21.03.20 to 04.04.20	15	Short shutdown	

OCC also agreed for the following revised overhauling schedules:

1. *BRBCL unit 2(250 MW) from 01.05.2019 to 15.05.2019 as unit 3 (250 MW) was declared under commercial operation from 26.02.2019.*
2. *KBUNL, MTPS stage II, unit 4 (195 MW) from 01.07.2019 to 04.08.2019 subject to Bihar consent*

NTPC informed that overhauling of unit #6 (500 MW) of FSTPS is due since long and it will not be safe to run the unit up to November 2019. NTPC requested to consider the shutdown of unit #6 from 15.07.19 to 28.08.19.

WBSEDCL informed that in view of high demand during July and August 2019, it was not possible to allow the shutdown during this period. However, NTPC can avail the shutdown during low demand period during November 2019 to February 2020. WBSEDCL added that in case of emergency, the unit #6 may be taken in place of unit #5 in the month of June and July 2019.

OCC decided to review the overhauling schedule of unit #6 (500 MW) of FSTPS in next OCC Meeting.

NTPC requested for shutdown of unit 1 of TSTPS from 1st August 2019 for 45 days.

OCC decided to discuss the shutdown of unit 1 of TSTPS in next OCC Meeting and advised NTPC to interact with beneficiaries in the mean time.

Member Secretary, ERPC informed that the maintenance schedule finalized in the LGBR should be strictly adhered to and no deviation shall normally be allowed unless it is considered as an emergency. He added that the onus lies with the requester to prove the emergency condition.

NTPC informed that unit 1 (800 MW) and unit 2 (800 MW) of Darlipalli STPS would be declared under commercial operation by July 2019 and December 2019 respectively.

Item No. B.5: Overhauling of Unit 2 of MPL--MPL.

Maithon 2* 525 MW units receive water from Maithon Reservoir. In year 2018 due to overall deficit of 28% rainfall in Jharkhand district, DVC -Maithon reservoir level is in stressful condition. DVC being the water resource provider, requested MPL (vide letter no MRO/Water Tariff/Optimum utilization/MPL/127/192) to take the necessary steps towards optimizing the utilization of water to avoid crisis and fulfil the M&I demands in the coming dry situation.

DVC has clearly stated that water requirement for industrial usage of MPL may be curtailed during dry period in order to meet the basic need of the municipal water supply in the valley.

As approved in 40th TCC meeting, MPL unit-2 AOH is planned from 15th June to 16th July-2019. In case of water curtailment from DVC, MPL Unit-2 AOH will be preponed as per the situation.

Members may note.

Deliberation in the meeting

DVC did not attend the meeting.

Members noted.

Item No. B.6: Operationalization of 400 kV Durgapur Bus Splitting Scheme

In 151st OCC Meeting, it was decided to discuss the issue in a separate meeting. In line with the OCC decision three meetings were held at ERPC, Kolkata on 26.12.2018, 17.01.2019 and 08.04.2019.

The minutes of the 3rd Special Meeting on "Operationalization of 400 kV Durgapur Bus Splitting Scheme" held at ERPC, Kolkata on 8th April 2019 at 11:00hrs is enclosed at **Annexure-B6**.

Members may note.

Deliberation in the meeting

ERLDC informed that protection coordination with the adjacent substations should be completed before putting the bus splitting scheme in service.

It was informed that the protection coordination issues were discussed in 78th PCC Meeting held on 22nd April 2019. As per the decision, Powergrid had to coordinate with adjacent substations.

OCC advised NTPC, WBPDCL and WBSETCL to review the settings and submit the confirmation to ERPC and ERLDC by end of April 2019.

OCC decided to put the Bus Splitting Scheme at 400 kV Durgapur S/s in 1st week of May 2019.

Regarding utilization of 3rd ICT at Durgapur, it was informed that the Committee met on 10th April 2019. The report will be placed in next OCC meeting.

Item No. B.7: Connectivity/Evacuation system for OPGC IBTPS thermal power project in Odisha----GRIDCO

The agenda received from GRIDCO is enclosed at **Annexure-B7**.

Members may discuss.

Deliberation in the meeting

OCC advised OPGC to approach CERC as per the decision taken in the meeting held at CEA on 26.03.2019. In view of commissioning of unit #4 by May 2019 and immediate connectivity with the grid, OPGC was advised to approach CEA for necessary connectivity arrangement and mode of operation.

ERLDC informed that unit #4 of OPGC is still registered as a central sector unit.

OCC suggested OPGC to interact with appropriate authority to review the status of unit #4 of OPGC as state sector unit.

Item No. B.8: Erroneous Energy data of 220kV Balangir-Katapalli line at Bolangir ---- SLDC, Odisha

The agenda received from SLDC, Odisha is enclosed at **Annexure-B8**.

Members may discuss.

Deliberation in the meeting

GRIDCO informed that they had incurred huge commercial loss in DSM charges because of the erroneous SEM reading at Bolangir and requested for modification of DSM accounts for the affected period.

OCC noted that the issue has been raised after a lapse of more than two years. OCC advised GRIDCO to establish the fact that the meter reading of SEM of Bolangir is erroneous and the other end readings are o.k. OCC advised to submit the relevant documents to ERPC Secretariat for scrutiny. After receiving the documents from GRIDCO, ERPC Secretariat would study the case and place the details in next OCC and Commercial Meeting.

Item No. B.9: REPLACEMENT OF OLD RTUS IN EASTERN REGION FOR REPORTING OF RTU/SAS TO BACKUP CONTROL CENTRES

In 39th ERPC Meeting, it was decided that,

i) ERPC approved the proposal of Power Grid for replacement of the old RTUs in the Eastern Region for reporting of RTU / SAS to backup control centres at an estimated cost of Rs. 88.57 Crore with an implementation time of 36 months.

ii) Power Grid shall place a proposal before PSDF Committee for financing the above project from PSDF.

In 40th TCC, Powergrid informed that the DPR for PSDF would be submitted by April, 2019.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the DPR for PSDF would be submitted by April, 2019.

Item No. B.10: Assistance of 40 MW power from Sahupuri(UP) to Karmnasa(BSPTCL)--BSPTCL

BSPTCL informed that due to following reasons, there is loss of 250 MVA capacity at Dehri and Nadokar:

Sl. No.	Name of 220/132/33 KV GSS	Installed capacity of 220/132 KV Transformer	Present Capacity	Remarks
1	Dehri	(4x100) MVA	3x100 MVA	Out of four, one no. 100 MVA power transformer has become defective & send in works for repair. So present capacity is 300 MVA.
2	Nadokhar	(2x150) MVA	1x150 MVA	Out of two, one no. 150 MVA power transformer has become defective & in process of sending in works for repair. So present capacity is 150 MVA.

Even with shifting of 60 MW of Dehri load to Sonenagar New S/s, there would be shortage of 140 MW power.

Therefore, Bihar is planning to take 40 MW power from Sahupur(UP) to Karmnasa.

BSPTCL may explain.

Deliberation in the meeting

OCC advised Bihar to approach SLDC, UP and NRPC for the necessary power support from Sahupuri(UP).

Item No. B.11: Review of the PSS Tuning of Generators in Eastern Region

PSS tuning meeting was conducted by ERPC on 31st January 2019 where generators from Eastern Region have participated. The MoM of the meeting has been released by ERPC and is available on the website. During the PSS meeting following decision have been taken:

1. Generators who had already done the PSS tuning shall submit the details of the Excitation System, PSS tuning and its report. The generators shall submit the Generator terminal voltage, Field voltage, Real power, Reactive Power, Generator Speed, and PSS output in excel/.csv format for better analysis of the result.
2. Generators for which PSS tuning was not carried out shall take up the PSS Tuning with OEM immediately.
3. Generators for which PSS was not in service shall take up the issue with OEM immediately to bring the PSS into service.
4. For any future tuning, it was recommended to all generators to collect the response along with data in .csv/excel format.
5. All the generators where the PSS tuning was done and PSS not in service shall submit their action plan for PSS Tuning in line with IEGC and CEA standards before the next OCC meeting to ERPC/ERLDC.

In view of the same five categories have been made for comprehensive checkup and plan for PSS tuning for Eastern region Generating plants, which are given at **Annexure-B11.**

Details may kindly be shared on following email id :erldcprotection@posoco.in , chandan@posoco.in, saibal@posoco.in, saurav.sahay@posoco.in, akbasak@posoco.in, rajprotim@posoco.in

Members may update.

Deliberation in the meeting

OCC advised all the generators to update the status given at Annexure-B11 and send the updated status to above mentioned mail ids.

Item No. B.12: Status of Auto-Reclosure on Lines from Tala and Chukha Hydro Power Plant (Bhutan)--ERLDC

Auto-reclsoure on transmission lines is essential specially when it is connected with generating station as it ensures the availability of the feeders during any transient faults for safer evacuation of generation. In the previous OCC/PCC meeting the auto-reclosure on 400 kV Lines from Tala and 220 kV lines from Chukha has been discussed and Bhutan Representative ensure that they will into the feasibility of its implementation. Bhutan representative in the meeting have also informed that they have visited similar hydro plants on Indian side.

In view of this Bhutan Representative may kindly intimate the status of Auto-Reclosure on Lines from Tala and Chukha Hydro Power Plant for ensuring better evacuation security and reliability from these power plants.

Bhutan may update.

Deliberation in the meeting

DGPC informed that an expert Committee was constituted to enable the auto recloser for transmission lines connected to Tala and Chuka hydro stations. The Committee had recommended for implementation of the auto recloser at Tala and Chuka.

DGPC added that they are planning to implement the autorecloser scheme for the transmission lines connected at Chuka by May 2019. Based on the experience gained, they would implement the auto recloser scheme for the transmission lines connected at Tala.

Item No. B.13: ERLDC Shutdown approval process flow and time line- ERLDC

On an average ERLDC has to clear shutdown of roughly 15 elements per day. Apart from the above, shutdown of emergency nature also needs to be processed at short notice. It has been observed that, due to lack of mutual consent/communication between two control areas/licensees, outage of transmission elements are getting delayed or denied due to which monetary loss may occur as well as health of that particular element may deteriorate. Keeping in view the above points ERLDC wants to draw the attention on the following points which are observed in Eastern Region constituents/licensees.

1. There is a shortage of designated outage coordinators in ER constituents /Transmission licensees. Sometimes it's difficult to establish communication with them.
2. E-mails sent from ERLDC are not reaching them in time (particularly in case of GRIDCO). Most of the time mails are checked when ERLDC informs them verbally over phone.
3. This also leads to delay in obtaining consent thereby delaying the whole shutdown process.
4. For the purpose of coordinated transmission element outage the need for an outage coordinator is absolutely undeniable. Sometimes SLDC control room person are coordinating shutdown which is not a good practice. Progress tracking of any outage will be lost once shift change occurs.
5. Planned outages are being requested on holidays also which is very difficult to process.
6. It has been seen that, in absence of designated outage coordinators (SLDC Howrah and SLDC Patna for example), OCC approved shutdowns are also getting cancelled/delayed.

To take care all the above difficulties following suggestions may be considered:

1. Every Transmission licensee, generators and SLDCs must nominate two dedicated outage co-coordinators along with contact information and mail-id dedicated for outage handling.
2. All the nominated outage coordinators list from respective SLDCs/Tr. Licensees/Generators shall be forwarded to ERLDC through mail id
    - erldcoutage@gmail.com
    - Contact Executives: Shri B. B. Bhoi (9432351830) & Shri D. Majumder(9903593500)
3. In absence of the designated outage co-coordinator, suitable substitute may be provided and the same shall be intimated to ERLDC.
4. All the indenting agencies are requested to communicate with their counterpart outage co-coordinator for smooth and speedy consent if it require.
5. Getting timely consent is very important. All the agencies, whose consent is required for a particular outage, are requested to adhere the time line given by ERLDC, failing which the outage may be cancelled or delayed or revised for a suitable date.
6. A whatsapp group for outage coordination will be opened to handle shutdown coordination and suitable information sharing for speedy outage processing.

Members may discuss.

Deliberation in the meeting

*The flow diagram of the shutdown approval process is given at **Annexure-B13**.*

ERLDC informed that two coordinators are required from each constituent to avoid the difficulties in approval of shutdown.

OCC advised all the constituents to go through the procedure and submit their comments to ERLDC within 15 days. OCC also advised to nominate two coordinators along with contact information and mail-id.

OCC decided to finalize the procedure in next OCC Meeting.

Item No. B.14: Status of projects funded under PSDF schemes

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

A. Projects approved:

SN	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	PSDF grant approved (in Rs.)	Amount drawn till date (inRs.)	Latest status
1	WBSETCL	Renovation & up-gradation of protection system of 220 kV & 400 kV Substations in W. Bengal	31-12-14	April 2018 Extended till March 2019	108.6 Cr	37 Cr.	Project has been completed. Final value of the project is 51.22 Cr.
2		Renovation & modernisation of transmission system for relieving congestion in Intra-State Transmission System.	22-05-17	25 months from date of release of 1st instalment	70.13	63.12 Cr	Order has been placed . Work is in progress.
3		Installation of switchable reactor at 400kV & shunt capacitors at 33kV	22-05-17	19 months from date of release of 1st instalment	43.37	11.69 Cr	Order had been placed and work is in progress.
4	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station	*10.04.17*	*March 2018*	1.39 Cr	1.25 Cr	*The islanding scheme had been implemented and in operation wef**15.11.2018***
5		Upgradation of Protection and SAS		April 2020	23.48	2.348 Cr	Bid opened and order has been placed. Work started.
6	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	11.05.15	31.03.19	162.5 Cr.	37.79 Cr	90% work has been completed. Total expenditure may not exceed 68 Cr.
7		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.17		25.61 Cr.		Agreement signed on 03.01.2018. Tender has been floated.
8		Installation of 125 MVAR Bus Reactor along with construction of associated bay each at 400kV Grid S/S of Mendhasal, Meramundali& New Duburi for VAR control &stabilisation of system voltage	27.07.18		27.23 Cr		Tender has been floated.
9	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		*U.Kolab, Balimela, U.Indravati, Burla, Chiplima March 2019*	*22.35 Cr.*	2.235 Cr	Placed the work order.
10	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/15	31.07.2018	64.02 crore	56.04 crore	85% of work has been completed. Contract awarded for Rs.71.37 Cr till date. The work would be completed by Feb 2019.
11		Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016	31st March 2019	18.88 crore	Nil	Work awarded for all GSS. 90% supply and 60% of erection had been completed.

12		Renovation & up-gradation of protection and control system of 12 nos. 132/33 KV GSS under BSPTCL.	02.01.17	31st March 2018	49.22 Cr.		75% work completed for seven no. GSS as part of R & M work. Revised DPR is to be submitted for rest 5 no. GSS.
13	JUSNL	Renovation and up-gradation of protection system	*September 2017*	*15 Months*	*138.13 crores*		LOA placed to Siemens on 28th Sep 2018.
14	DVC	Renovation and upgradation of control & protection system and replacement of Substation Equipment of 220/132/33 kV Ramgarh Substation	02.01.17	01.06.2019	25.96 Cr	2.596 Crore on 01.06.2017	Work awarded for 28.07 Cr. Work would be completed by May 2019.
15		Renovation and upgradation of control & protection system including replacement of substation equipment at Parulia, Durgapur, Kalyaneshwari, Jamshedpur, Giridih, Barjora, Burnpur, Dhanbad and Burdwan Substation of DVC	27.11.17	24 Months from the date of release of fund.	140.5 Cr.	1st installment of 14.05 Cr. received on 21.12.2017	Work awarded for 77.97 Cr.
16	POWERGRID	Installation of STATCOM in ER		June 2018	*160.28 Cr*	*16.028 Cr*	Work is in progress, expected to complete by June 2018. STATCOM at Rourkela has been commissioned.
17	ERPC	Creation & Maintenance of web based protection database and desktop based protection calculation tool for Eastern Regional Grid	17.03.16	Project is alive from 30th October 2017	20 Cr.	4.94 Cr. + 9.88 Cr.	1) Protection Database Project has been declared 'Go live' w.e.f. 31.10.17. 2) Pending training on PDMS at Sikkim and 3rd training on PSCT has been also completed at ERPC Kolkata.
18a	ERPC	Training for Power System Engineers	*27.07.18*		0.61 Cr.	Nil	Approved
18b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents	*27.07.18*		5.46 Cr.	Nil	

B. Projects under process of approval:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	Sikkim	Renovation &Upgradation of Protection System of Energy and Power Department, Sikkim.	09-08-17	68.95 Cr	The proposal requires third party protection audit. Issue was discussed in the Monitoring Group meeting in Siliguri on 8.6.2018. Sikkim was asked to coordinate with ERPC.
2		Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim	09-08-17	25.36 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
3	JUSNL	Reliable Communication & Data Acquisition System upto 132kV Substations.	23-08-17	102.31 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
4	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	3.26 Cr	Scheme was approved by Appraisal Committee. It was sent to CERC for concurrence.
5		Protection upgradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir&Paradeep).	12-03-18	41.1 Cr.	Scheme examined by TSEG on 20.03.2018. Inputs sought from the entity are awaited.
6	WBSETCL	Implementation of Integated system for	22-12-17	25.96 Cr	Proposal recommended by Appraisal

		Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal			committee as communicated on 16.11.2018.
7		Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid	12-03-18	78.75 Cr.	Proposal recommended by Appraisal committee as communicated on 16.11.2018.
8		Project for establishment of reliable communication and data acquisition at different substation at WBSETCL.	10-05-18	80.39 Cr.	Proposal recommended by Appraisal committee as communicated on 16.11.2018.
9	BSPTCL	Implementation of Schedulling, Accounting, Metering and settlement of Transcation in Electricity (SAMAST)in SLDC Bihar.	27-02-18	93.76 Cr.	Scheme examined by TSEG on 20.03.2018 & 31.05.2018. Further inputs furnished by BSPTCL on 1.8.2018. Shall be examined in the next meeting of TESG.

Respective constituents may update the status.

Deliberation in the meeting

Members updated the status as mentioned in above table.

Item No. B.15: Additional agenda

1. GPS synchronized SEM meters required to match 15 minute block wise schedule with actual generation –NTPC

NTPC informed that SEM meters used for scheduling and DSM accounting is not GPS synchronized whereas our stations generate with GPS synchronized system. We operate to match real time block average generation with schedule, but when weekly SEM data comes, it is not matching exactly with data as seen by operating engineer on real time basis. SEM meters drift over time which can be adjusted only once in a week by one minute and not in fraction of one minute in most of the meters. Exact matching with GPS time is not possible in this case. So averaging of generation over 15 minute time block does not match exactly with schedule even with our best effort. The difference is bound to be more as rate of change of schedule increases. Due to the deficiency in time synchronization between SEM meters, it is not possible to be in schedule when it changes so frequently (on an average more than 200 revisions in a day). In this scenario, it is very difficult to ensure on real time basis whether we are generating above schedule, equal to schedule or below schedule, when the judgment comes with weekly SEM data since it is not being matched instantaneously but 15 minute averaging of generation is done. This is attracting penalty on account of sign change violation even if it would not have been violated, but it was concluded on the basis of SEMs which are not GPS synchronized.

Deliberation in the meeting

During discussion, it was informed that CERC, in the draft 5th Amendment to the DSM Regulation has proposed a margin of 10 MW.

NTPC submitted that, if the proposed regulation of CERC is implemented, the same would greatly address the concern of NTPC.

PART C: ITEMS FOR UPDATE

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

UFR Healthiness Certification for the month of March, 2019 has been received from OPTCL, CESC, WBSETCL, DVC, BSPTCL and JUSNL.

Members may note.

Deliberation in the meeting

Members noted.

Item no. C.2: Status of Islanding Schemes healthiness installed in Eastern Region

At present, the following islanding schemes are in service:

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

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

The healthiness certificate for Islanding Scheme for March, 2019 has been received from CTPS, DVC, NTPC, West Bengal, JUSNL, WBPDCL and CESC.

Members may note.

Deliberation in the meeting

Members noted.

Item no. C.3: Healthiness of SPS existing in Eastern Region

The Status of healthiness certificate for March, 2019 is given below:

Sl. No.	Name of the SPS	Healthiness certificate received from	Healthiness certificate not received from
1.	*Talcher HVDC*	*NTPC,GMR, Powergrid,*	*JITPL,*
2.	*Rangpo*	*Chuzachen,*	*Dikchu, Dansenergy, Powergrid, Teesta-III*
3.	SPS in CESC system	*CESC*	*Nil*
4.	SPS at Chuzachen	*Chuzachen*	*Nil*

Members may update.

Deliberation in the meeting

Members noted.

Item no. C.4: Implementation of Automatic Demand Management Scheme (ADMS)-ERLDC

The latest status along with proposed logic as follows:

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 25.11.16	F <49.9 AND deviation > 12 % or 150 MW
2	DVC	F <49.7 AND deviation > 12 % or 150 MW	Implemented on 17.06.2016	
3	Bihar	F <49.7 AND deviation > 12 % or 150 MW	They would place the order to Chemtrol for implementation.	F <49.9 AND deviation > 12 % or 150 MW
4	Jharkhand	1. System Frequency < 49.9 Hz AND deviation > 12 % or 25 MW 2. System Frequency < 49.9 Hz AND deviation > 12 % or 50 MW 3. System Frequency < 49.9 Hz AND deviation > 12 % or 75 MW	9 Months Tendering for RTU installation is in progress. Offer received from Chemtrol for implementation.	Condition 1: Block I feeders will be selected for load shedding Condition 2: Block I & II feeders will be selected for load shedding Condition 3: Block I, II & III feeders will be selected for load shedding
5	Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. DISCOM over-drawl > (40 MW)	10 Months Sent for PSDF approval.	Logic 2 and 3 is AND or OR, in case it is AND then ADMS may not operated when discom are in schedule but GRIDCO is overdrawing due to less generation at state embedded generators
6.	Sikkim			Sikkim informed that they have submitted a proposal to PSDF Committee for installation of OPGW cables which is under approval stage. Sikkim added that ADMS scheme would be implemented after installation of OPGW.

In 142nd OCC, it was opined that uniform logic should be implemented for all the states. OCC decided to review the logic of ADMS after implementation of the scheme by all the states.

In 40th TCC, ERLDC informed that in SCADA O&M Meeting held on 6th March 2019, Chemtrol has agreed to implement ADMS in Bihar and Jharkhand system without any additional charges. However necessary consent for making payment of Rs 4 lakhs (excluding GST) for remaining period of maintenance contract shall be given before implementing the same.

In the TCC Meeting both Bihar and Jharkhand gave consent for making necessary payment.

Members may update.

Deliberation in the meeting

It was informed that in SCADA O&M Meeting held on 24th April 2019, Chemtrol had informed that ADMS had already been implemented in Bihar and testing was to be done. Chemtrol had added that, for implementation ADMS for Jharkhand, they needed the list feeders as per the blocks.

OCC advised Bihar and Jharkhand to do the needful to implement the ADMS.

Item no. C.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 last OCC, OPTCL updated the completion schedule of inter-connecting system as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x315MVA 400/220kV Bolangir S/s**	
a.	LILO of one circuit of Sadeipalli-Kesinga220 kV D/C line at Bolangir S/S	*Only 7 towers left (Severe ROW problem).**By July, 2019.***
2.	**400/220kV Pandiabil Grid S/s:**	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	***By July, 2019.***
3.	**400/220 kV Keonjhar S/S**	
a	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By June 2020

OPTCL may update.

Deliberation in the meeting

OPTCL updated the status as mentioned in above table.

Item no. C.6: 220 kV inter-connecting lines of JUSNL with 2x315 MVA, 400/220 kV sub-stations at Chaibasa, Daltonganj&Dhanbad

In last OCC, JUSNL updated the latest status as follows:

Sl. No.	Name of the transmission line	Completion schedule
1.	**Daltonganj 400/220/132kV S/s:**	
a.	Daltonganj(POWERGRID)–Latehar220kVD/c	By Dec, 2019.
b.	Daltonganj (POWERGRID) – Garhwa 220kV D/c	The line expected to be completed by May, 2018 but – Garhwa 220kV is expected to be completed by June 2019.
c	Daltonganj (POWERGRID) – Chatarpur/Lesliganj 132kV D/c	Tendering is in progress. Expected to be completed by October 2019
2	**Chaibasa400/220kVS/s**	
A	Chaibasa(POWERGRID)–Noamundi220kVD/c	Not yet started
3	**Dhanbad400/220kVS/s**	
A	LILO of Govindpur–Jainamore/TTPS 220kVD/c at Dhanbad	ROW issues.Target date April 2020.

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as mentioned in above table.

Item no. C.7: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVA Subashgram & 2x500 MVA Rajarhat sub-stations

In last OCC, *WBSETCL updated the latest status as follows:*

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	ROW problem, August 2020
b.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	The line is charged from Rajathat and Jeerat. The line would be charged from Barasat end after completion of rest of the work by September 2020.
2	**Subashgram400/220kVS/s**	
a	Subashgram–Baraipur220kVD/cline	December 2019, 80% of work has been completed.

WBSETCL may update.

Deliberation in the meeting

WBSETCL updated the status as mentioned in above table.

Item no. C.8: Bypassing arrangement of LILO of 400kV Lines at Angul

LILO of Meramundali-Bolangir/Jeypore 400 kV S/C line and LILO of one Ckt of TalcherMeramundali 400 kV D/C line has been done at Angul 765/400kV Sub-station. The bypass arrangement for these circuits were under implementation at Angul by Powergrid.

In 154th OCC, Powergrid informed that bypass arrangement would be completed by March 2019.

OPTCL may please inform the commissioning schedule of the 2nd circuit of 400kV Meramundali-Mendhasal line.

Powergrid and OPTCL may update.

Deliberation in the meeting

Powergrid informed that bypass arrangement would be completed by June 2019.

Item no. C.9: 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.

Major issues are given below:

i. Regarding frequent intermittent of real time SCADA data from Talcher STPS Stage 1 & 2, NTPC agreed to provide additional ports by March 2019.
ii. Alternate path for Malda–Farakka OPGW link

In 153rd OCC, Powergrid was advised to implement alternate OPGW link through 400 kV Kishenganj- Darbhanga-Muzaffarpur lines.

In 40th TCC, it was informed that in SCADA O&M Meeting held on 6th March 2019, both DMTCL and KPTL agreed to extend the necessary support to implement the scheme. DMTCL has insisted on payment for extending the facility.

In the TCC Meeting, Powergrid clarified that as per the terms of TBCB project, DMTCL and KPTL are not entitled for any charges for using the OPGW for SCADA.

TCC advised Powergrid to implement the scheme within three months as indicated by Powergrid in SCADA O&M Meeting.

The latest status of telemetry as received from ERLDC is enclosed at ***Annexure-C9***.

Members may update.

Deliberation in the meeting

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

Item no. C.10: Removal of Vedanta Towers(5 nos) for direct connectivity on permanent basis of 400kV Sundargarh-Raigarh ckt#4 and 400kV sundargarh-Raigarh ckt#2--Powergrid

Initially 02 nos LILO was made in 400kV Rourkela-Raigarh ckt-2 and Ckt-4 to evacuate power generation of Sterlite Energy Ltd(Now Vedanta Ltd),Jharsuguda. However, as per directives from ERLDC/ERPC LILO of 400kV Rourkela-Raigarh ckt-2(Now Sundargarh-Raigarh ckt-3) was opened in 2014 and LILO of 400kV Rourkela-Raigarh ckt-4(Now Sundargarh-Raigarh ckt-4) was opened in October 2017.

As a temporary measure to facilitate immediate disconnection of LILO and making the line direct PG clamps were used in Vedanta Towers. In this process 05nos of Vedanta Towers are there in the 400kv Sundargarh-Raigarh ckt-2 and 4. 03nos between Loc 298-299of 400kV Sundargarh-Raigarh ckt-4 and 02nos of Towers between Loc 834-833 of 400kV Sundargarh-Raigarh Ckt-3.The sketch showing the Vedanta Towers in both the circuits is enclosed for ready reference.

The matter for removal of Towers and making direct connectivity with Raigarh on permanent basis has been discussed several times with M/s Vedanta. But till date no action has been taken by M/s Vedanta for making the line direct after removal of Towers. Maintenance of the said Towers and corridor are not being done. Any outage of these lines due to issues in these towers and span shall not be attributed to POWERGRID.M/s Vedanta may be asked to restored the line as it was before making the Line LILO.

In 155th OCC, Odisha was advised to take up the issue with Vedanta.

Odisha agreed to take up the issue with Vedanta and place the details in next OCC Meeting.

OPTCL may update.

Deliberation in the meeting

OPTCL informed that Vedanta had agreed to remove the towers and make the direct connectivity.

Item no. C.11: Transfer capability determination by the states

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

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

Latest status of State ATC/TTC declared by states for the month of August-2019

Sl No	State/Utility	TTC import(MW)		RM(MW)		ATC (Import) MW		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	5092	--	100	--	4992	--	June-19
2	JUSNL	1107	--	60	--	1047	--	July-19
3	DVC	1152.6	3176.4	61.2	48.1	1091.4	3128.3	
4	OPTCL	2238	--	88	--	2150	--	Jun-19
5	WBSETCL	4170	--	300	--	3870	--	April-19
6	Sikkim	--	--	--	--	--	--	

Members may update.

Deliberation in the meeting

Odisha had submitted the ATC and TTC figures for Aug 2019.

OCC advised all the other states to compute ATC/TTC figures three months in advance and send to ERLDC.

Sikkim informed that they needed one more training at ERLDC on computation of ATC and TTC.

ERLDC agreed to facilitate and advised Sikkim to give tentative dates for arranging the training.

Item no. C.12: Replacement of GPRS communication with Optical Fiber for AMR

In ER, 80% meters are connected through Automated Meter Reading (AMR). At present the communication system used for data transfer from each location is GPRS. It has been observed that many locations are not communicating with AMR system due to poor/no GPRS signal. Many substations have their own optical fiber which is also used for the LAN network of respective stations. TCS has successfully connected 02 locations (Subhasgram-PG and Binaguri-PG) in ER-II with PGCIL intranet and these two locations are smoothly reporting to AMR system after connecting with PGCIL LAN. The proposed network will not only provide better communication but also reduce the cost of GSM.

In 155th OCC, Powergrid informed that optical fiber for AMR had been implemented at 33 locations and rest of the locations would be completed by April 2019.

POWERGRID may please update the progress.

Deliberation in the meeting

Powergrid informed that optical fiber for AMR had been implemented at 35 locations and rest of the locations would be completed by May 2019.

Item no. C.13: Mock Black start exercises in Eastern Region – ERLDC

Tentative Schedule for mock black start exercise for FY 2018-19 is given below:

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2018	*Completed on 8th June,2018*	Last Week of January2019	*Done on 27th Sep 2018*
2	Maithon	1stweek of June 2018	*Completed on 6th June,2018*	1stWeek of February2019	
3	Rengali	2ndweek of June 2018	*Done on 18th August,2018.*	Last week of November 2018	Done on 12th Feb 2019
4	U. Indarvati	3rdweek of une 2018	--	2ndweek of February2019	*Done on 28th Dec 2018*
5	Subarnarekha	1stweek of October 2018	*Done on 10th August,2018.*	1stweek of January2019	Done on 9th Feb 2019
6	Balimela	3rdweek of October 2018	Done on 21st Dec, 2018	1stweek of March 2019	Done on 11th Mar 2019
7	Teesta-V	2ndweek of Nov 2018	Done on 3rd May 2018	Last week of February2019	
8	Chuzachen	Last Week of May2018	--	2nd week of January2019	Done on 15th Jan 19

9	Burla	Last Week of June 2018	*Completed on 7th June,2018*	Last week of February2019	Done on 7th Mar 2019
10	TLDP-III	1st Week of June 2018	After Monsoon	2ndWeek of January2019	Done on 10th Jan 2019
11	TLDP-IV	Last Week of June 2018	After Monsoon	1st Week of February2019	Done on 10th Feb 2019
12	Teesta-III	Last week of Oct 2018	Done on 30th Nov 2018	First Week of March 2019	
13	Jorthang	First Week of May 2018		First Week of Feb 2019	
14	Tasheding	2nd Week of May 2018		2nd Week of Feb 2019	
15	Dikchu	3rd Week of May 2018		3rd Week of Feb 2019	

Mock black start date for financial year 2019-20 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, 2019		Last Week of January 2020	
2	Maithon	1stweek of June 2019		1st Week of February 2020	
3	Rengali	2ndweek of June 2019		Last week of November 2020	
4	U. Indarvati	3rdweek ofJune 2019		2nd week of February 2020	
5	Subarnarekha	1stweek of October 2019		1st week of January 2020	
6	Balimela	3rdweek of October 2019		1st week of March 2020	
7	Teesta-V	2ndweek of May 2019		Last week of February 2020	
8	Chuzachen	Last Week of Dec 2019		Last week of February 2020	
9	Burla	Last Week of June 2019		Last week of February 2020	
10	TLDP-III	1st Week of June 2019		2nd Week of January 2020	
11	TLDP-IV	Last Week of June 2019		1st Week of February 2020	
12	Teesta-III	Last Week of Oct 2019		First Week of March 2020	
13	Jorthang	First Week of May 2019		First Week of Feb 2020	
14	Tasheding	2nd Week of May 2019		2nd Week of Feb 2020	
15	Dikchu	3rd Week of May 2019		3rd Week of Feb 2020	

Format for Reporting of Mock Black Start Activity:

Mock drill on Black start is a continuous activity ongoing in the power system. In addition to black start mock drill, it is essential to monitor each black start to check the performance. ERLDC is in receipt of reports from various black start stations performing these activities from their respective SLDC however, many a times essential information pertaining to performance monitoring of the activities are missing. In view of this it is proposed that, for any mock drill on

black start, SLDC must share the following details to access the performanceand the same need to be intimated one week before to ERLDC along with blackstart process. This will help in finding out any challenges and sharing of experiences with other utilities.

1. Name and Contact of Personnel available at SLDC:
2. Name and Contact of Personnel available at Generating Plant:
3. Name and Contact of Personnel available at Load Substation:
4. Single Line diagram of the mock drill:
5. Details of Steps taken for Mock Drill

Table 1: Performance monitoring of Mock Drill

Activity	Time (Minutes)
Time taken to start DG set after black out of Island	
Time taken to charge dead bus at Black start station	
Time taken to charge dead bus at Remote end by line charging	
Time taken to connect first load post a black out in the island	
Duration of stable island operation after successful black start and building up the of the island till synchronization with grid	
Time taken to synchronize the island with Grid	

6. Issues Observed:
7. Remedial Action Taken if Any for the challenges:
8. Any other details:

Members may update.

Deliberation in the meeting

Members updated the status as mentioned in above table.

OCC advised all the generators to submit the details as per the above format to ERPC and ERLDC.

Item no. C.14: Submission of Thermal Loading of Transmission line and associated terminal equipment by ISTS licensee

In line with the MoM of 4th NRCE Meeting dt.03-11-14 and "Operational Guidelines for determination Of TTC, ATC and TRM for the Short-Term Horizon (0-3 Months)" published by NRCE dt.20-02-15, thermal limit for transmission line has to be used for calculation of ATC/TTC. However, the thermal loading of transmission line depend on the Maximum Conductor Temperature, End equipment thermal rating. This has to be submitted by the Owner of the equipment. Further, the equipment owner also has to confirm that relay setting has been aligned so that the line can be operated up to its thermal limit. In the absence of complete details, ERLDC is utilising the data from the CEA Planning Criteria for thermal rating as given below :

Conductor Type	**Ampacity per conductor(A)***	**Thermal loading limit of line (MVA)**
765 kV Quad ACSR_Bersimis	732	3880
765 kV HexaACSR_Zebra	560	4452
400 kV Twin ACSR_Moose	631	874
400 kV Quad ACSR_Moose	631	1749
400 kV Quad ACSR_Bersimis	732	2029

400 kV Triple Snowbird	630	1309
400 kV Twin ACSR_Lapwing	773	1071
220 kV Single AAAC_Zebra	557	212
220 kV Single ACSR_Zebra	560	213
220 kV Twin ACSR_Moose	631	481
132 kV Single ACSR_Zebra	560	128
132 kV Single ACSR_Panther	366	84

*Ambient and Maximum conductor temperature are taken as 45°C and 75°C respectively.

Apart from above specifically mentioned in CEA transmission planning criteria following loading limit is considered for HTLS line while calculating ATC/TTC

Conductor Type	Ampacity per conductor(A)*	Thermal loading limit of line (MVA)
400 kV Twin HTLS	1262	1750
220 kV Single HTLS	1020	390
132 kV Single HTLS	732	168

In view of this, it is desired that all ISTS Licensee and STU(for 400 kV and important 220 kV lines) may kindly submit the following details to ERLDC for utilisation in ATC/TTC calculation:

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

In 152nd OCC, ERLDC informed they received the details only from DVC.

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

Members may note and comply.

Deliberation in the meeting

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

Item no. C.15: Status of Emergency Restoration system (ERS) of respective Transmission Licencees

CEA vide mail dated 28-09-2018 has requested to provide Status of Emergency Restoration system (ERS) of respective Transmission Licencees in respective Regions as per the format.

OCC advised all the transmission licensees to submit the requisite information as per the format in the form of soft copy through email (mail ID: mserpc-power@nic.in).

The details have been received from the Transmission Licencees is as follows:

State-wise Emergency Restoration system				
Transmission Licensee	**Requirement of Total no of ERS in State**	**Number of ERS available in state**	**No of ERS to Be Procured**	**Remark if Any .**
WBSETCL	10	10	Nil	-
OPTCL	84	54	30	
JUSNL	13	8	5	
DVC	400kV – 2 nos	400kV- Nil	400kV – 2nos	
	220kV – 2 nos	220kV – 1 nos	220kV – 1 nos	
	132kV – 10 nos	132kV – 8 nos	132kV – 2 nos	
BSPTCL	40	40	Nil	

Members may note.

Deliberation in the meeting

Members noted.

Item no. C.16: Delay in furnishing information to ERLDC/ERPC regarding of Commissioning of new Transmission Elements/ Generating Units within State--ERLDC

The above matter was deliberated in various OCC meetings and data submission format was also circulated. All states and transmission licensees agreed to submit the list of transmissions elements (ISTS & within state) synchronized **for the first time**during last month and new elements to be commissioned during next month, within 7th day of the current month to ERLDC through mail.

For the Month of March-2019, except Odisha no states and transmission licensees has submitted their List of Transmission element /generators synchronised **in the previous Month** and List of Transmission element and generators expected to be synchronised during next Month.

The absence of updated information regarding new elements energized in the previous month and elements expected to be commissioned during the next month poses difficulty in monitoring and supervising the regional grid – both in real time as well as off-line, at RLDC level.

Members may update.

Deliberation in the meeting

OCC advised all the states and transmission licensees to submit the list of transmissions elements (ISTS & within state) synchronized for the first time during last month and new elements to be commissioned during next month, within 7th day of the current month to ERLDC through mail.

Item no. C.17: Implementation of Automatic Generation Control (AGC) in India (at Inter-State level)

CERC in its order dated 13.10.2015 in Petition No. 11/SM/2015 reiterated the need for mandating Primary Reserves as well as enabling Secondary Reserves, through Automatic Generation Control (AGC) as follows:

"(a) All generating stations that are regional entities must plan to operationalise AGC along with reliable telemetry and communication by 1st April, 2017. This would entail a one-time expense for the generators to install requisite software and firmware, which could be compensated for

Communication infrastructure must be planned by the CTU and developed in parallel, in a cost-effective manner.
(b) On the other hand, National/Regional/State Load Dispatch Centres (NLDC/RLDCs/SLDCs) would need technical upgrades as well as operational procedures to be able to send automated signals to these generators. NLDC /RLDCs and SLDCs should plan to be ready with requisite software and procedures by the same date.
(c) The Central Commission advises the State Commissions to issue orders for intra-state generators in line with this timeline as AGC is essential for reliable operation of India's large inter-connected grid."

The issue was discussed in 8th NPC Meeting held on 30th November 2018, it was decided that each RPC would submit the status of implementation of AGC to NPC.

In 40th TCC, NTPC informed that AGC at Barh STPS will be implemented by May, 2019.

DVC confirmed that unit#8 of Mejia TPS has been identified for AGC implementation as a pilot project.

The followings were decided in the TCC Meeting:

1. *Status of implementation of AGC shall be regularly monitored in OCC meetings.*

2. *An workshop shall be organised in ERPC wherein NLDC and NTPC will be invited to interact with the ER constituents regarding the experience they have gained in implementing the AGC in other regions.*

In 155th OCC, NTPC informed that implementation of AGC at Unit#4 & 5 of Barh STPS are in progress and was expected to completed by May 2019.

Odisha informed that unit#3 of OPGC had been selected for implementation of AGC.

WBPDCL informed that unit#5 of Bakreswar had been selected for implementation of AGC.

Members may update.

Deliberation in the meeting

OCC decided to organize the workshop at ERPC in May 2019 wherein NLDC, NTPC and Siemens will be invited to interact with the ER constituents.

Item no. C.18: Maintenance and support (AMC) renewal of PSSE software.

Siemens vide letter dated 20th March 2019 informed that the AMC for PSSE software has ended on 30th November 2018. The letter is enclosed at **Annexure-C18**.

Siemens requested ERPC Secretariat to renew the maintenance and support period for all the existing supplied licenses of states for next five years.

In 156th OCC, all the SLDCs were advised to send their comments to ERPC within a week.

Members may update.

Deliberation in the meeting

All the SLDCs in the meeting agreed for renewal of the AMC of PSSE software for next five years and requested to take up the AMC contract jointly for all the states with the Siemens as it was done during the procurement of software.

OCC advised ERLDC to take up the issue with NLDC and CTU.

Item no. C.19: Information regarding details of existing transmission system (220 kV and above AC & DC voltage level) in Eastern Region as on 31.12.2018

CEA vide letter dated 29/01/2019 intimated that MoP, GoI has desired information regarding details of state wise growth of transmission system (both interstate and intra state system) over the years to create database of existing transmission system.

Accordingly, it is requested that the information in respect of existing transmission system (both interstate and intra state system) as well as State Power Map and single line Diagram of transmission network including Powergrid (ISTS) and other Transmission Service Provider (TSPs) (as on 31.12.2018) may please be made available in the specified format attached at **Annexure –C19.I &II** to ERPC for onward transmission to CEA / MoP by 28.02.2019.

In 154th OCC, all the constituents were advised to submit the relevant information as per the format to ERPC Secretariat vide mail at the earliest.

The data has been received from Powergrid Odisha, Jharkhand and West Bengal.

Members may furnish.

Deliberation in the meeting

Bihar and DVC had submitted the data. Odisha agreed to submit the data in 2nd week of May 2019.

Item no. C.20: Updated Black Start and Restoration procedure of State--ERLDC

As per clause IEGC 5.8(b)

"*Detailed plans and procedures for restoration after partial/total blackout of each User's/STU/CTU system within a Region, will be finalized by the concerned User's/STU/CTU in coordination with the RLDC. The procedure will be reviewed, confirmed and/or revised once every subsequent year."*

In 154th OCC all the SLDCs to were advised to submit the updated restoration procedure of their respective state.

However SLDCs are yet to submit the Black Start and restoration procedure for respective states.

SLDCs may update.

Deliberation in the meeting

DVC submitted the updated restoration procedure. Odisha, Bihar and Jharkhand agreed to submit the restoration procedure in next month.

Item no. C.21: Details of Capacitor bank installed in Distribution/Sub transmission network --ERLDC

Details of capacitor installed in Eastern Region as a whole was last collected in year 2011. The last updated list is given in **Annexure-C21**. In the meantime, many utilities might have installed additional capacitor bank for better voltage regulation some has also applied for fund form PSDF for installation of capacitor banks.

Utilities are requested to provide the updated capacitor bank list for record purpose.

Members may submit the data.

Deliberation in the meeting

Bihar and Odisha submitted the details in the meeting. Jharkhand informed that no capacitor bank was installed in their system.

West Bengal agreed to submit the details in a week.

Item no. C.22: Collection of modelling data from Renewable as well as conventional energy generators: ERLDC

As a National Grid operator, POSOCO is continuously working for ensuring reliability and security of the Grid. With penetration of more and more renewable energy source the task is becoming complicated day by day. An accurate dynamic modeling of the National Grid,needsmodelling of conventional as well as renewable / distributed generation sources. World Bank has engaged Digsilent as consultant for assisting POSOCO for building dynamic model of the Grid. A guideline for dynamic data collection has been developed in consultation with Digsilent Pacific team.

All the utilities are requested to collect data from the grid scale renewable power plants as well as from conventional power plants under their jurisdiction and submit the same to ERLDC/ERPC as early as possible.

In 153rd OCC, OCC advised all the constituents to submit the details of renewable power plants of 5 MW and above.

Members may comply.

Deliberation in the meeting

OCC advised all the constituents to submit the details of renewable power plants of 5 MW and above.

Item no. C.23: Availability of Auto-synchrocheck Relay Display for Substation Operators --ERLDC

It is known that with increasing automation, synchronization at substation is now mostly done through auto-synchronization facility. This is a built-in facility within the relay and has similar setting facility as of manual synchrocheck trolley. The relay gets bus as well as line voltage (Voltage across the breaker) and by comparing them with set values of phase angle difference, voltage difference and frequency difference it provides the closing command. Unlike manual trolley, the auto synchrocheck relay works on two timers in the relay which are as:

1. Wait time for which Auto-Synchrocheck facility will be active after its activation
2. Minimum time required up to which the relay checks that all the criteria are met before giving breaker closing command after its activation.

If both these timers are set correctly, then auto-synchronization will be smooth.
In the recent black start mock drill activity of Teesta 3 power plant using 400 kV Teesta 3-Kishanganj circuit certain issues were observed. First, during the mock black start the synchronization of circuit was done manually rather than auto-synchronization which led to closing of breaker at Kishanganj end at high angle leading to severe voltage dip and high current resembling 3 phase fault. This caused tripping of the unit. In subsequent breaker closing attempt through auto-synchronization, it was observed that Kishanganj operator does not have any display to monitor the various parameters across the breaker as available in synchrocheck

trolley. This led to non-closing of breaker and thus the black start mock drill could not be completed.

In view of the above discussion, it is now essential to ensure the following in the substation having SAS:

1. Auto-synchronization Display at Substation Operator Console as well as RTAMC.
2. Suitable wait time configuration for Auto-Synchronization facility reset (25 seconds) and synchronization condition monitoring (10 ms)
3. Possibility to use synchronization trolley in such substation for synchronization during black start activity.
4. Operator training for setting of auto-synchrocheck parameters setting as per the instruction of RLDC/SLDC operators and utilizing it during black start.

All 765/400/220 kV Substation which are having Substation Automation System along with auto-synchronization facility may kindly provide their input on the matter and based on that a uniform strategy on auto-synchronization facility may be adopted for better system security and crisis management.

Details may kindly be shared on following email id :erldcprotection@posoco.in , chandan@posoco.in, saibal@posoco.in, saurav.sahay@posoco.in, akbasak@posoco.in, rajprotim@posoco.in

Members may note.

Deliberation in the meeting

After detailed deliberation, OCC advised Powergrid and other transmission utilities to ensure the following:

- *Auto-synchronization Display at Substation Operator Console as well as RTAMC.*
- *Suitable wait time configuration for Auto-Synchronization facility reset (25 seconds) and synchronization condition monitoring (10 ms)*
- *Possibility to use synchronization trolley in such substation for synchronization during black start activity.*
- *Operator training for setting of auto-synchrocheck parameters setting as per the instruction of RLDC/SLDC operators and utilizing it during black start.*

Item no. C.24: Modification of First time charging documents for charging of new transmission elements--ERLDC

In reference to the recent notified “Terms & conditions of Tariff-2019-24” and past amendments in IEGC, some modifications has been done in annexure A1, A2 and B2 of first time charging documents for charging of new transmission elements.

ERLDC may explain.

Deliberation in the meeting

*ERLDC presented the modified formats of first time charging documents. The revised documents are enclosed at **Annexure-C24**.*

OCC advised all the utilities to follow the documents while submitting first time charging of new transmission elements.

Item no. C.25: Low frequency Oscillation at MTDC BNC-ALP-Agra --ERLDC

On 21st February 2019 from 03:46:28 Hrs to 03:47:15 Hrs (47 Seconds), Severe oscillation were observed across Indian grid. It was observed that oscillation were highly prominent near to the AC nodes connected with MTDC BNC-Alipurdwar-Agra i.e. Binaguri (Eastern Grid) Bongaigaon, Misa, Nehu, Badarpur, Imphal (All nodes in NER Grid) and Agra (Northern Grid). On Analysis, it was observed that there was a tripping of 400 kV Sikar-Bassi 1 on Single-phase fault which cleared in 80 ms (in Northern Region) and after which the HVDC Agra terminal started oscillating with 5 Hz. The 5 Hz oscillation was observed in DC power, Current and Voltage of MTDC as well as AC Current at Agra end. These oscillations were reflected more prominently in North Eastern region (All Locations) and Binaguri in eastern region. In addition, these oscillations also led to inert-area mode excitation in other regional grids. The Frequency, Voltage for various nodes from PMUs and TFR plot of Agra Node of MTDC is given below indicating the severity of oscillation.

Similarly, on 23rd February 2019 at 00:23:04 Hrs, Oscillation got triggered in the grid during tripping of 765kV Lalitpur-Fatehabad-1 on overvoltage protection and lasted for 7 seconds. The frequency of oscillation was 3.125 Hz and it was again more prominent at Binaguri (Eastern Grid) Bongaigaon, Misa, Nehu, Badarpur, Imphal (All nodes in NER Grid) and Agra (Northern Grid).
These oscillations are forced oscillation in nature and may impact reliability and security of the grid significantly as observed in earlier cases of forced oscillation deliberated in previous OCC like Kahalgoan Unit 6 (139th OCC) and Talcher Unit unit 3 and 6 (147th OCC). These events intensifies the need of proper PSS tuning of all generators in Eastern region as per the relevant regulation of CERC and CEA.

In view of these severe oscillations in the power system during MTDC Interaction with AC system, Powergrid may kindly explain the following:

1. Why the external system faults has led to oscillation in MTDC Agra terminal?
2. Whether there was any controller malfunction at MTDC agra which led to such widely varying quantities on HVDC?
3. Measures taken to ensure such events do not reappear in the system.

In 155th OCC, ERLDC informed that oscillations were significant in ER and NER compared to NR. Significant oscillations were also observed in HVDC power flow and current signals.

Powergrid explained that the oscillations were significant in ER and NER due to low inertia corresponding to availability of low hydro generation in these regions.

Powergrid added that their corporate office had been analyzing the disturbance in consultation with ABB and NLDC.

OCC advised Powergrid submit the details of findings to ERPC and ERLDC.

Members may update.

Deliberation in the meeting

Powergrid informed that report is yet to be finalized.

PART D:: OPERATIONAL PLANNING

Item no. D.1: Anticipated power supply position during May 19

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of May 19 were prepared by ERPC Secretariat on the basis of Provisional LGBR for 2015-16 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is at **Annexure-D.1**.

Members may confirm.

Deliberation in the meeting

Modified anticipated power supply position for the month of May 2019 after incorporating constituents' observations is given at **Annexure-D.1***.*

Item no. D.2: Shutdown proposal of transmission lines and generating units for the month of May 19

In 151st OCC, it was observed that constituents had not submitting the shutdown requisition within stipulated time as a result ERLDC had been facing difficulty in properly analyzing the shutdown.

OCC decided the following procedure for submission of transmission elements outage requisition:

1. ***Shutdown of Intra Regional Lines*** *- Transmission licensee/SLDCs/Transmission Asset owners shall apply shutdown of their respective Intra Regional Lines for the next month to ERLDC strictly by* ***8th*** *of every Month. Based on this, ERLDC shall prepare the list which would be placed in OCC Agenda. Any shutdown requisition received after 8th of the month would not be normally considered for discussion in the OCC meeting unless it is considered to be an emergency requirement.*
2. ***Shutdown of Inter Regional Lines*** *- Transmission licensee/ SLDCs/Transmission Asset owners shall send their shutdown requisition of Inter Regional Lines for the next month directly to NLDC strictly by* ***5th*** *of every month with a copy to respective RLDCs.*

Members may finalize the Shutdown proposals of transmission lines and generating stations for the month of May 19.

Generator shutdown:

System	Station	Unit	Capacity (MW)	Period		No. of Days	Reason
				From	To		
DVC	MTPS	7	500	14.05.19	18.06.19	36	COH (Blr,Turb,Gen.)
WBPDCL	Sagarighi TPS	3	500	01.05.19	07.05.19	7	Boiler License renewal

ERLDC may place the list transmission line shutdown discussed on 22nd April 2019 through VC.

Members may confirm.

Deliberation in the meeting

WBPDCL informed that they not taking the shutdown of unit #3 of Sagarighi TPS.

DVC vide mail informed that MTPS U#7 will be taken under shutdown from 25-06-19 to 30-07-19 instead of 14.05.19. The shutdown of DTPS U#4 for COH will continue upto 06-05-19.

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

Member Secretary, ERPC highlighted that in view of Loksabha Elections, no transmission element or generating unit shall be taken under shutdown without OCC approval unless an emergency condition.

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

(i) Thermal Generating units:

S.No	Station	Location	Owner	Unit No	Capacity	Reason(s)	Outage	
					(MW)		Date	Time
1	BARAUNI	BIHAR	BSPHCL	6	105	R & M WORK	17-Mar-12	13:15
2	KOLAGHAT	WEST BENGAL	WBPDCL	1	210	POLLUTION CONTROL PROBLEM	10-May-18	23:05
3	KOLAGHAT	WEST BENGAL	WBPDCL	3	210	POLLUTION CONTROL PROBLEM	23-Feb-17	11:51
4	CTPS	JHARKHAND	DVC	3	130	TURBINE BLADE DAMAGE	30-Jul-17	00:00
5	MEJIA	WEST BENGAL	DVC	3	210	INITIALLY ON STATOR EARTH FAULT,LATER ON CAPITAL OVERHAULING	4-Feb-19	22:15
6	JITPL	ODISHA	JITPL	2	600	COAL SHORTAGE	26-Jun-18	00:03
7	KAHALGAON	BIHAR	NTPC	5	500	TURBINE VIBRATIION HIGH	6-Apr-19	00:56
8	BOKARO B	JHARKHAND	DVC	3	210	ASH POND OVERFLOW	19-Mar-19	17:31
9	SAGARDIGHI	WEST BENGAL	WBPDCL	2	300	INITIALLY TAKEN OUT ON LOW DEMAND BUT PRESENTLY OUT DUE TO CONTROL VALVE PROBLEM SINCE 14/03/19	25-Feb-19	04:44
10	TENUGHAT	JHARKHAND	JUVNL	2	210	TO AVOID OVERLOADING IN 220 KV TENUGHAT PATRATU LINE .	5-Apr-19	00:02
11	MEJIA	WEST BENGAL	DVC	4	210	INITIALLY TRIPPED ON FLAME FAILURE BUT PRESENTLY OUT DUE TO STATOR EARTH FAULT	10-Apr-19	19:29
12	STERLITE	ODHISA	GRIDCO	2	600	DUE TO PROBLEM IN OLTC SYSTEM OF UAT	10-Apr-19	00:29

Generators/ constituents are requested to update the expected date of revival of the units.

(ii) Hydro Generating units:

S.NO.	Station	Owner	Unit No.	Cap. (in MW)	Reason (s) of outage	Outage date from	Outage Time	Expected Revival Date
1	BHEP, Balimela	OHPC	UNIT-1	60	Renovation & Modernization Work (Planned)	08-05-2016		30/09/2019
			UNIT-2	60	Renovation & Modernization Work (Planned)	20/11/2017		30/09/2019
2	HHEP,Burla	OHPC	UNIT-1	49.5	Turbine & Generator Coupling Cover Water Leakage (Forced)	14/03/2018	17:20	30/06/2019
			UNIT-5	37.5	Renovation, Modernization & Up Rating Work Work (Planned)	25/10/2016		12-09-2019
			UNIT-6	37.5	Renovation, Modernization & Up Rating Work Work (Planned)	16/10/2015		11-07-2019
			UNIT-4	32	Intake Gate Problem (Forced)	25/10/2018	19:00	20/05/2019
			UNIT-7	37.5	Gen. Cooler Problem	04-07-2019	16:25	18/04/2019
3	CHEP,Chiplima	OHPC	UNIT-3	24	Renovation & Modernization Work (Planned)	15/10/2015		30/04/2019
4	RHEP, Rengali	OHPC	UNIT-2	50	Capital Maintenance (Planned)	12-12-2018	09:05	05-10-2019
5	UKHEP,UpperKolab	OHPC	UNIT-4	80	Capital Maintenance (Planned)	02-01-2019	17:00:00	31/07/2019
			UNIT-3	80	Generator Stator Inter Turn/Earth Fault	28/03/2019	23:35	15/06/2019

(iii) Transmission elements

SL NO	Transmission Element / ICT	Agency	Outage From		Reasons for Outage
			DATE	TIME (HRS)	
1	220 KV BALIMELA - U' SILERU	OPTCL / APSEB	10-03-2018	22:45	LINE ANTITHEFT CHARGED FROM UPPER SILERU ON 17-04-18
2	400 KV IBEUL JHARSAGUDA D/C	IBEUL	29-04-2018	17:30	TOWER COLLAPSE AT LOC 44,45
3	400KV NEW PURNEA-BIHARSARIFF(PG)-D/C	ENICL	10-08-2018	10:28	TOWER COLLAPSE AT LOC 47/0
4	400 KV PATNA KISHANGANJ- I	POWERGRID	01-09-2018	00:32	TOWER COLLAPSE AT LOC 129. PILING DAMAGED
5	400 KV TALA BINAGURI - I	POWERGRID	01-04-2019	00:23	SUSPECTED CABLE FAULT NEAR TALA
6	400 KV TALA BINAGURI - IV	POWERGRID	26-03-2019	11:20	KEPT OPEN DUE TO OVERVOLTAGE AT TALA END
7	220 KV NEW PURNEA BEGUSARAI -D/C	BSPHCL	05-02-2019	13:35	S/D AVAILED BY BIHAR FOR PILE FOUNDATION IN KOSHI RIVER AT KURSELA LOCATION NO 413 A
8	400KV FARAKKA -	POWERGRID	06-03-2019	08:28	FOR TAKING UP BAY UP

	KAHALGAON- I				GRADATION WORK OF BAY-22
9	400KV BINAGURI- RANGPO-D/C	POWERGRID	19-03-2019	11:23/ 11:25	FOR RE-CONDUCTORING WORK
10	400KV RANCHI-RAGHUNATHPUR-I	POWERGRID	20-03-2019	09:32	FOR REALIGNMENT WORK OF LINES AT DVC RTPS COAL FEEDING RAILWAY LINE
11	400KV MAITHON-RANCHI-SC	POWERGRID	20-03-2019	09:39	FOR REALIGNMENT WORK OF LINES AT DVC RTPS COAL FEEDING RAILWAY LINE
12	400KV BIHARSARIFF(PG)-VARANASI D/C	POWERGRID	03-04-2019	11:50	FOR REALIGNMENT WORKS OF MENTIONED ABOVE TR. LINE DUE TO CONSTRUCTION OF NEW RAILWAY LINE.

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

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

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

Members may update.

Deliberation in the meeting

Members noted.

PART E::ITEMS FOR INFORMATION

The following agenda items are placed for information and necessary compliance:

Item No. E.1: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

The activity of the preparation of Crisis Management Plan for countering the cyber attacks and its implementation including the Mock Drills, audits etc. is being monitored by CEA regularly in line with crisis management plant of Ministry of Power. Power Utilities (including generation, transmission & distribution utilities) of eastern region are to furnish regularly the updated status to on the same to Chief Engineer, Distribution Planning & Development Division, CEA.

In 142nd OCC, ERLDC informed that, in line with Enquiry Committee Recommendation, cyber security audit is being conducted on regular basis for SCADA system installed at ERLDC and SLDC as well but cyber security audit for telecom infrastructure installed in Eastern Region is not being carried out.

OCC advised all the constituents to conduct the cyber security audit on telecom infrastructure installed in Eastern Region. It is further advised that compliance / mitigation of the points observed during the audit should also be completed for improvement of the telecom infrastructure in ER.

In 37th TCC meeting, it was decided that a workshop would be conducted by CEA at ERPC for further benefit of ER Constituents.

In 144th OCC, ERLDC informed that they have already conducted a workshop with the help of NPTI, Durgapur on 21st March 2018.

A workshop on cyber security was conducted by CEA at ERPC, Kolkataon 09-05-2018.

As suggested by CEA, a format would be circulated among ER constituents for furnishing the information of the their respective systems for discussion in OCC Meeting. The format is enclosed at **Annexure-E1**.

OCC advised all the constituents to submit the information to ERPC as per Annexure-E2.

Item No. E.2: Status of 1st Third Party Protection Audit:

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

Name of Constituents	Total Observations	Complied	% of Compliance
Powergrid	54	46	85.19
NTPC	16	14	87.50
NHPC	1	1	100.00
DVC	40	26	65.00
WB	68	49	72.06
Odisha	59	42	71.19
JUSNL	34	25	73.53
BSPTCL	16	5	31.25
IPP (GMR, Sterlite and MPL)	5	5	100.00

** Pending observations of Powergridare related to PLCC problems at other end.*

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

PLCC rectification/activation which needs a comprehensive plan).

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

Item No. E.3: Commissioning of new transmission elements in Eastern Region

The details of new units/transmission elements commissioned in the month of March-2019 based on the inputs received from beneficiaries

Monthly commissioning List of Transmission element and generators: March 2018					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	Main Bay of 400 KV Kishanganj-I at Darbhanga (Bay-412)	DMTCL	02-03-2019	19:09 hrs	
2	Tie Bay of 400 KV Kishanganj-I and Kishanganj-II at Darbhanga (Bay-413)	DMTCL	02-03-2019	19:15 hrs	
3	Main Bay of 400 KV Kishanganj-II at Darbhanga (Bay-414)	DMTCL	02-03-2019	19:09 hrs	
4	400 KV Darbhanga-Kishanganj-1	PGCIL	12-03-2019	03:31 hrs	
5	Bay of 50 MVaR L/R of 400KV Biharsharif-Lakhisarai-2 at Biharsharif end	PGCIL	12-03-2019	18:30 hrs	
6	125 MVaR B/R-1 at Rajarhat	PGCIL	15-03-2019	21:07 hrs	
7	765 KV Main Bay of GT-1 (Bay no-704) at Daripalli	NTPC	18-03-2019	15:50 hrs	
8	Tie bay of ICT-II & Future (Bay B-20) at NPGC	NPGC	19-03-2019		
9	NSTPP Unit-1 (660MW)	NPGC	23-03-2019	22:31 hrs	First time synchronization
10	125 MVaR B/R-2 at Rajarhat	PGCIL	29-03-2019	23:56 hrs	
11	80 MVaR L/R at Rajarhat for 400KV Rajarhat-Farakka line charged as B/R with main bay 404	PGCIL	30-03-2019	04:10 hrs	
12	IBTPS,OPGC Unit #3(660MW)	OPGC	30-03-2019	08:00Hrs	
13	240 MVaR L/R at Sundergarh for 765 KV Sundergarh-Raipur-2 charged as B/R	PGCIL	31-03-2019	00:12 hrs	
14	132 KV New_Aska -Purussotampur	OPTCL	31-03-2019	23:32 Hrs	
15	132 KV Aska -New_Aska	OPTCL	31-03-2019	23:32 Hrs	

Item No. E.4: UFR operation during the month of March '19

System frequency touched a maximum of 50.30 Hz at 04:34Hrs of 01/03/19and a minimum of 49.64 Hz at 20:38 2Hrs of 10/03/19. Hence, no report of operation of UFR has been received from any of the constituents.

Item No. E.5: Grid incidences during the month of March, 2019

Sr No	GD/ GI	Date	Time	S/S involved	Summary	Load loss (MW)	Gen loss (MW)
1	GI-II	14-03-2019	13:39	SEL	At 13:39 hrs 400 kV SEL - Jharsuguda D/C and 400 kV SEL - Lapanga D/C tripped at 13:39 hrs. In PMU data, fault has been observed in R and Y phases. As per DR received DT received at Jharsuguda end.	0	0
2	GD-I	15-03-2019	11:59	Lapanga	400 kV bus I at Lapanga was out of service since previous day. At 11:59 hrs, bus II tripped due to isolator flashover of 400 kV Lapanga - Meramundali - II resulting total power failure at 400/220 kV at Lapanga s/s.	0	0
3	GI-II	27-03-2019	12:42	Binaguri	400 kV Alipurduar - Binaguri - II tripped at 11:34 hrs on B-N fault. This line was charged at 12:42 hrs from Alipurduar end. While closing breaker at Binaguri end, all main breakers connected to bus I tripped. 400 kV Purnea - Binaguri D/C also tripped at this event.	0	0

****

Annexure-A

Participants in 156 th OCC Meeting of ERPC

Venue: Channakya Conf Hall, NTPC Kahalgaon   Time 10:00 Hrs   Date:25/04/2019

S.No.	Name	Designation/organisation	Contact No.	Email	Signature
1	J. Bandyopadhyay	Member Secretary ERPC	9432326351	mserpc-power@gov.in	
2	D. K, Jain	Executive Director, ERLDC	9910344127	dk.jain@posco.in	
3	K. Sreedhar	CGM, NTPC Kahalgaon	9453010340	ksreedhar@ntpc.co.in	
4	S. GOURI SHANKAR	GM(O&M) NTPC Kahalgaon	9650149666	sgshankar@ntpc.co.in	
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6	S. M. JHA	GM(O), NTPC Kahalgaon	8544414293	smjha@ntpc.co.in	
7	नीरज कपूर	GM(FM) NTPC Kahalgaon	9650992490	neerajkapoor@ntpc.co.in	
8	PK Mishra	CLD, SLDC, Odisha	9438907412	cld_sldc@sldcorissa.org.in	
9	Manoj Kr. Das	G.M(EI) S.L.D.C. Odisha	9438907603	ele.mkdas@optcl.co.in	
10	Ugyen Tshering	Dy. Ex. Engineer	97517882946	u.tshering2124@drukgreen.bt	
11	Biplab Chaley	GM(OPS) MPL	9204851[illegible]	biplab.chaley@tatapower.com	
12	B. B. Bhoi	CM / ERLDC	9432351830	bibhu@posoco.in	
13	D. K. Bauri	EE(Comml.), ERPC	9883617236	eeop.erpc@gov.in	
14	Shri Mohan Jha	Consultant, ERPC	9874738913	erpcjha@yahoo.com	
15	K. G. Bhutia	JE (SLDC Sikkim)	7819083980	kamu8400@gmail.com	
16	S. K. Chaudhary	AVP (APNRL) JSR	8294633412	sanjivchoudhary@adhunikgroup.co.in	
17	K. Banerjee	SM CESC Limited	9831003281	koushik.banerjee@rp-sg.in	
18	Amit Chowdhury	Asst. Mgr (ERLDC)	894483496	akchoudhury@posoco.in	
19	Diptikanta Panda	Associate Manager (GMR)	8114918762	diptikanta.panda@gmrgroup.in	
20	Arun Pramanick	AGM (opn), TSTPS	943502638	arunpramanick@ntpc.com	
21	G. C. Garnayak	AGM(EEMG), FSTPS	9437466670	gcgarnayak@ntpc.co.in	
22	D. Bhattacharyya	AGM(MTP), FSTPS	9434076814	dbhattacharya@ntpc.co.in	
23	Roshan Kr. Singh	Dy. Mgr (EEMG), BARH	9471003357	rksingh50@ntpc.co.in	
24	Amit Kumar	CM (POWERGRID), ER-1, Banka	9431821129	amitkumar@powergridindia.com	
25	Chinmoy Sarkar	AGM (EMD)/KhSTPS	9431609665	csarkar@ntpc.co.in	
26	A. D. K. Gupta	AGM (Opn) KhSTPS	9431215279	adkgupta@ntpc.co.in	
27	R. K. MANDAL	AGM(EEMG) NTPC KAHALGAON	9431600132	rkmandal@ntpc.co.in	
28	AVINASH M. PAVGI	CGM(AM) POWERGRID	9910378086	apavgi@powergridindia.com	
29	G. K. Choubey	CE(SYS. Op.), BSPTCL	7763817770	gkc1959@rediffmail.com	
30	SK Pramanik	CGM(AM) Powergrid ER-I	7603037367	skpramanik@powergridindia.com	
31	S. K. HAZRA	Sr. GM / Powergrid / ER2	9433041809	skhazra@powergridindia.com	

Participants in 156 th OCC Meeting of ERPC

Venue: Channakya Conf Hall, NTPC Kahalgaon   Time 10:00 Hrs   Date:25/04/2019

S.No.	Name	Designation/organisation	Contact No.	Email	Signature
~~31~~					
32	Surajit Banerjee	GM / ERLDC	9433041823	surajit.banerjee@posoco.in	[signature]
33	SHOUVIK BANERJEE	SE(E)/CPD/WBSETCL	9434910093	svkbanerjee@yahoo.com	[signature]
34	PREETAM BANERJEE	SE(E) WBSEDCL	943214076	preeban72@gmail.com	[signature]
35	Pradeep Mahapatra	AGM / OPGC	9338715401	Pradeep.mahapatra@opgc.co.in	[signature]
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38	Hissay D. Bhutia	S.E /SLDC Sikkim	9647879822	hissaydbhutia44@gmail.com	[signature]
39	Nisit Kr. Gupta	EE / SLDC, BSPTCL	7033095872	nkgupta.bsptcl@gmail.com	[signature]
40	R.K. Panday	SM/SLDC, JUSNL	9934138298	k.rajesh.p@gmail.com	[signature]
41	D.N. Singh	Sr Manager, KBUNL	9431600191	dnsingh01@ntpc.co.in	[signature]
42	Tushar Ranjan	Manager/SLDC/JUSNL	9326374226	ranjtushar@gmail.com	[signature]
43	Tharan Pd Sharma	Junior Engineer/SLDC/Sikkim	7872078394	sharmatpo@gmail.com	[signature]
44	Prabuddha Kumar	Prabuddha Kumar, BRBCL	9473196027	prabuddhakumar@ntpc.co.in	[signature]
45	Karma Rinchen	Assistant Engineer / DGPC	17757686	k.rinchen300@gmail.com	[signature]
46	Nima Dorji	Section officer / DGPC	77272343	n.dorji2505@gmail.com	[signature]
47	Siddhartha Singh	Manager (O&M)	8170005771	SIDDHARTHA.SINGH@GATIINFRA.COM	[signature]
48	PRAKASH KR. GUPTA	DGM(OS)/BSPDCL	8336903939	pkgupta@bsphcl.co.in	[signature]
49	Ansuman Ray	SM(E), Teesta-V	8170057738	ansuman1975@gmail.com	[signature]
50	B.Devendra Kumar	DGM-Teesta-III	7719379087	devendra.b@teestaurja.com	[signature]
51	D.P.Bhargava	Chief Consultant (O&M) Teesta Urja Limited	9958833995	dpbhargava@teestaurja.com	[signature]
52					
53	Jit Bdr limboo	Section officer (DGPC)	77777618	jitbdrlimboo@gmail	[signature]
54	Dorji Wangchok	Section officer (DGPC)	77205831	d.wangchok2486@drukgreen.com	[signature]
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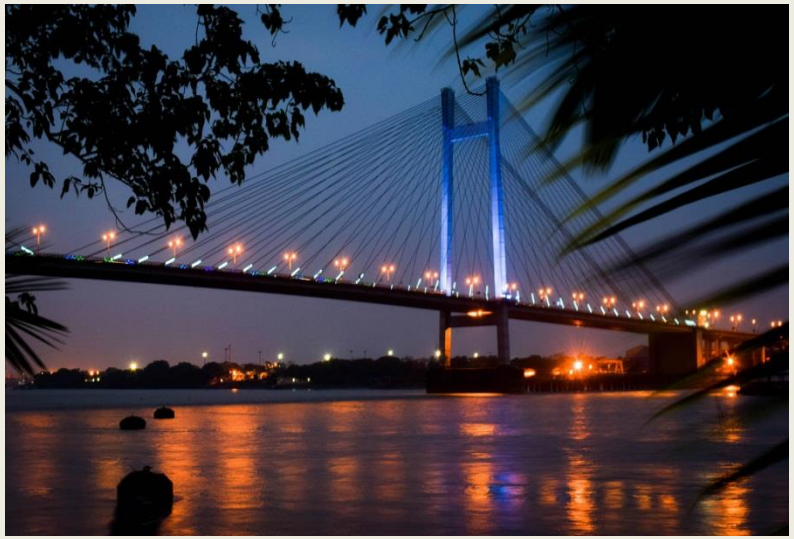
Power System Operation Corporation Ltd.

156th OCC Meeting



At ERPC, Kolkata

25th April, 2019

ER Grid Performances

Highlights for the month of Mar-19

Frequency Profile

Average Freq:- 49.99 Hz

Avg FVI: - 0.047

Lowest FVI:- 0.021

Max- 50.30Hz on 01st Mar' 19

Min- 49.64 Hz on 10th Mar'19

71.11% of the time freq was with in IEGC Band

Peak Demand*

ER: 21818 MW on 29th Mar 2019 at 19:40 hrs

% Growth in Average Demand Met w.r.t. last year: (-)0.98%

BSPHCL : 4542 MW ; ON 30/03/19

JUVNL: 1243 MW; ON 30/03/19

DVC: 3256 MW; ON 29/03/19

GRIDCO: 4776 MW; ON 27/03/19

WB: 8152 MW; ON 30/03/19

SIKKIM: 110 MW; ON 05/03/19

**All data source are from SCADA*

Energy met

Max. 462 MU on 29th Mar *2019*

%Growth w.r.t. last year on Max energy : 0%

Avg. 416 MU in Mar *2019*

%Growth w.r.t. last year on Avg. energy : 0%

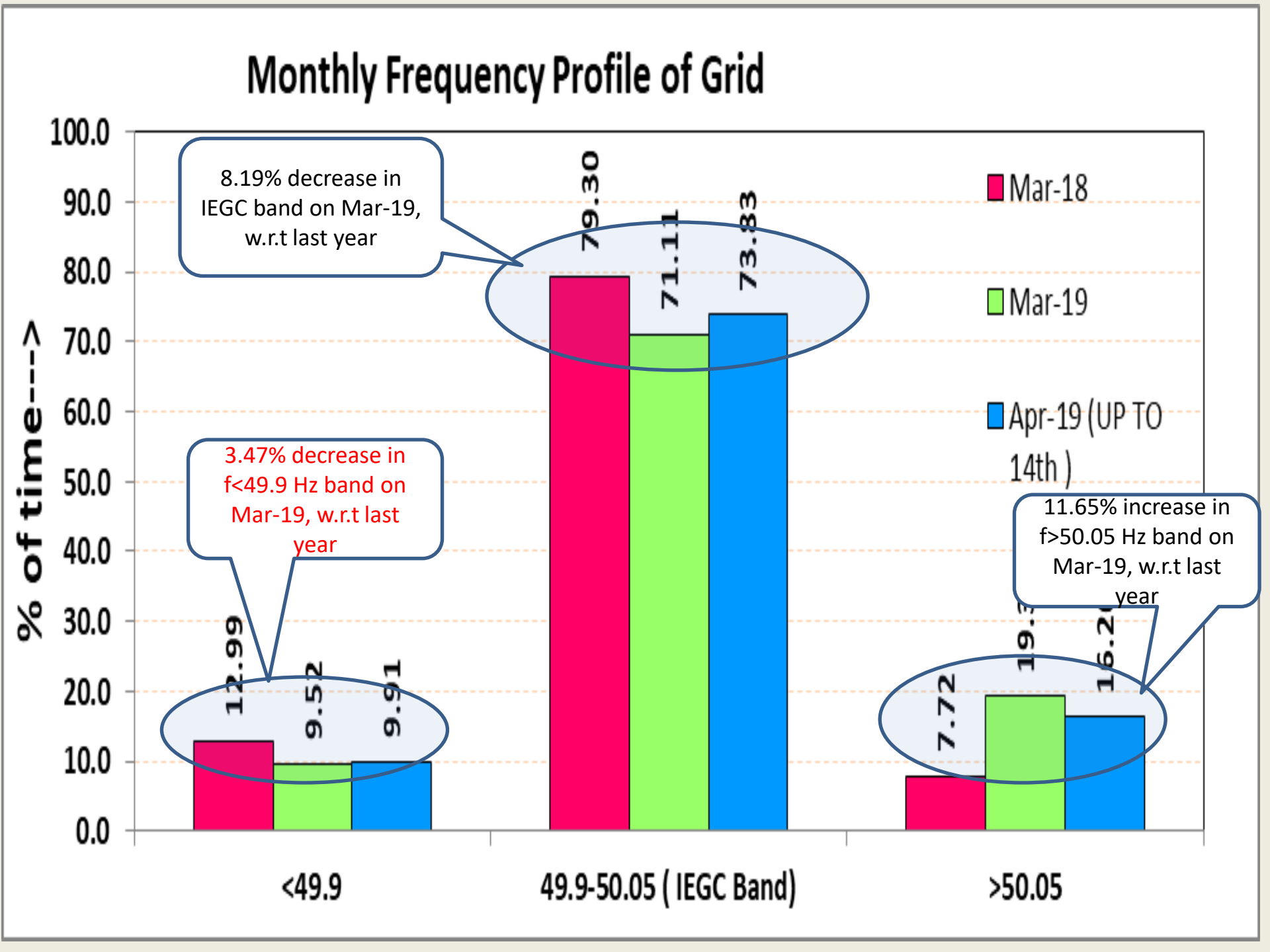
New Element

Generating Units-NIL

Open Access

STOA transactions approved -154 nos.

Energy Approved- 1045.97 MUs


Monthly Frequency Profile of Grid
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
% of time--->
8.19% decrease in IEGC band on Mar-19, w.r.t last year
3.47% decrease in f<49.9 Hz band on Mar-19, w.r.t last year
11.65% increase in f>50.05 Hz band on Mar-19, w.r.t last year
12.99
9.52
9.91
79.30
71.11
73.33
7.72
19.
16.2
Mar-18
Mar-19
Apr-19 (UP TO 14th)
<49.9
49.9-50.05 (IEGC Band)
>50.05

Major Transmission Constraints in Eastern Region

- 80MVAR 400KV BR-1 AT PATNA was out since 02-03.19 for construction activity of Nabinagar bay under Nabingar -2 project. Powergrid ER-1 may update.

- 400KV TIE BAY OF (KHSTPP-III AND BAHARAMPORE-I) AT FSTPP was not available since 19.07.18. NTPC Farakka may update.

- 400KV FSTPP-KhSTPP-I was out since 06.03.2019 for bay upgradation work. To normalize this link 400 kV Bus – I shutdown and also 400 kV Farakka – Bherampur – I shutdown is required due to unavailability of tie bay as mentioned above. Powergrid ER – I and NTPC Farakka may please update the plan for restoration.

- 400KV NEW PURNEA-BIHARSARIFF(PG)-D/C was out since 10-08-18 due to Tower Collapse. ENICL may please update the status of restoration.

- 400 KV PATNA - KISHANGANJ D/C was out since 01-09-2018 due to tower collapse. However 400 KV PATNA - KISHANGANJ – II was restored through twin moose with temporary arrangement on 16-01-2019. Powergrid ER-1 may please update tentative program for permanent restoration of both the circuits.

- 400KV TIE BAY OF (MAITHON RB-I AND DURGAPUR-I) AT MAITHON was taken under shutdown since 11-01-2019 for upgradation work. Due to unavailability of the same reliability of MPL evacuation was hampered. Powergrid ER -2 may please update the status.

New Element addition during the month:

Monthly commissioning List of Transmission element and generators: March 2019				
SL NO	**Element Name**	**Owner**	**Charging Date**	**Charging Time**
1	400 KV Darbhanga-Kishanganj-1	PGCIL	12/03/19	03:31 hrs
2	125 MVAR Bus Reactor-1 at Rajarhat	PGCIL	15/03/19	21:07 hrs
3	NSTPP Unit-1 (660MW)	NPGC	23/03/19	22:31 hrs
4	125 MVaR Bus Reactor-2 at Rajarhat	PGCIL	29/03/19	23:56 hrs
5	80 MVAR Line Reactor at Rajarhat for 400KV Rajarhat-Farakka line charged as Bus Reactor	PGCIL	30/03/19	04:10 hrs
6	IBTPS, OPGC Unit #3(660MW)	OPGC	30/03/19	08:00Hrs
7	240 MVAR Line Reactor at Sundergarh for 765 KV Sundergarh-Raipur-2 charged as Bus Reactor	PGCIL	31/03/19	00:12 hrs

So Far Highest Demand

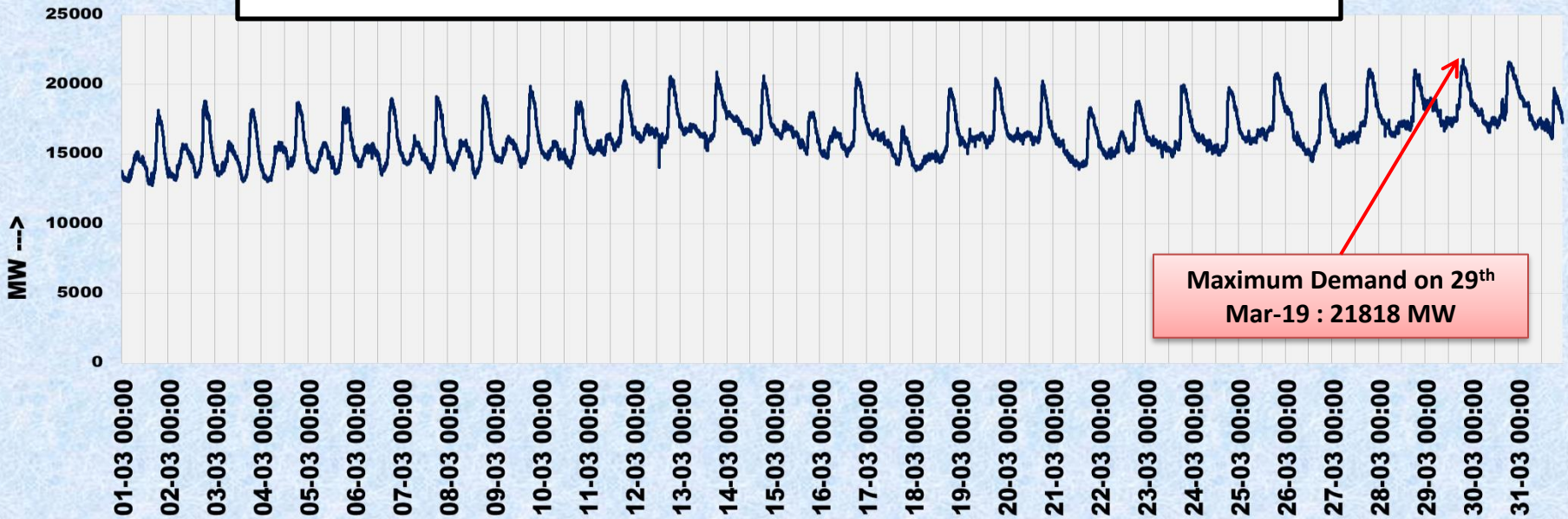
Constitute	Demand (in MW)	Date	Time	Dmd met (MW) on 29th Mar'19 (max dmd met day)	
				MW	Time
Bihar	5003	03-Oct-18	21:08	4442	20:47
DVC	3256	29-Mar-19	8:02	3256	08:02
Jharkhand	1319	19-May-18	21:02	1106	19:47
Odisha	5558	23-Aug-18	20:21	4403	20:05
W. Bengal	8832	19-July-18	19:20	8125	19:23
Sikkim	117	28-Oct-16	19:22	99	07:02
ER	23030	03-Oct-18	20:43	21818	19:40

So Far Highest Energy Consumption

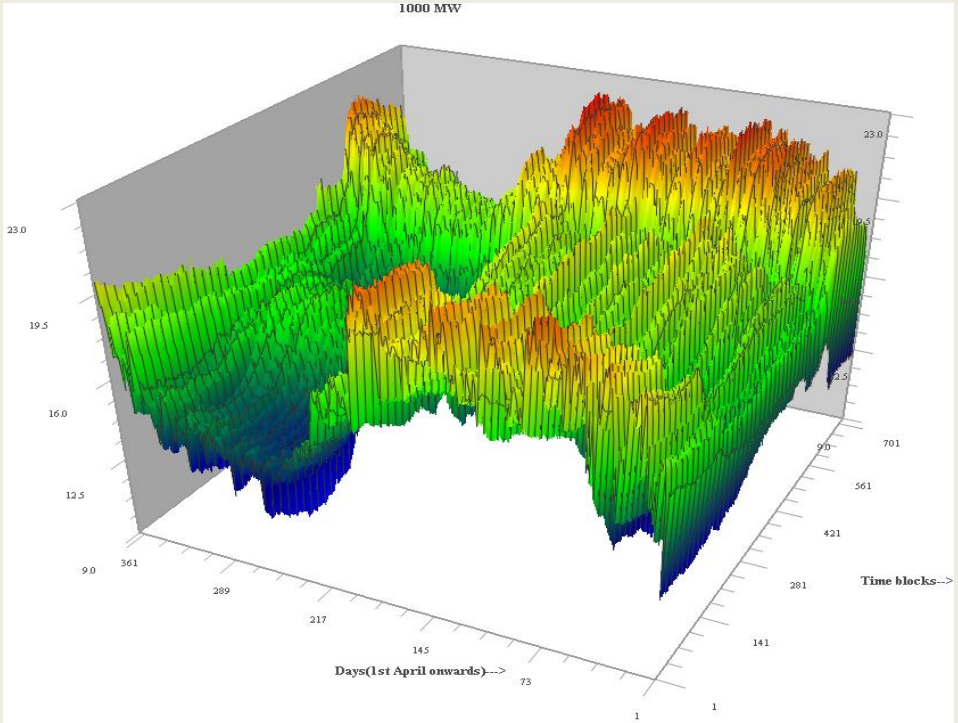
Constitute	Energy consumption (in MUs)	Date	Energy met on 29th Mar'19 (max dmd met day)
Bihar	104.0	02-Oct-18	80.5
DVC	75.8	12-July-18	69.4
Jharkhand	27.8	19-May-18	22.4
Odisha	123.5	02-Oct-18	90.7
West Bengal	192.6	05-Oct-18	169.6
Sikkim	2.1	07-Dec-17	1.5
ER	499.8	18-Aug-18	445

3D VIEW OF ER DEMAND PATTERN (APR-18 to MAR-19)

ER Demand Pattern in Mar-19

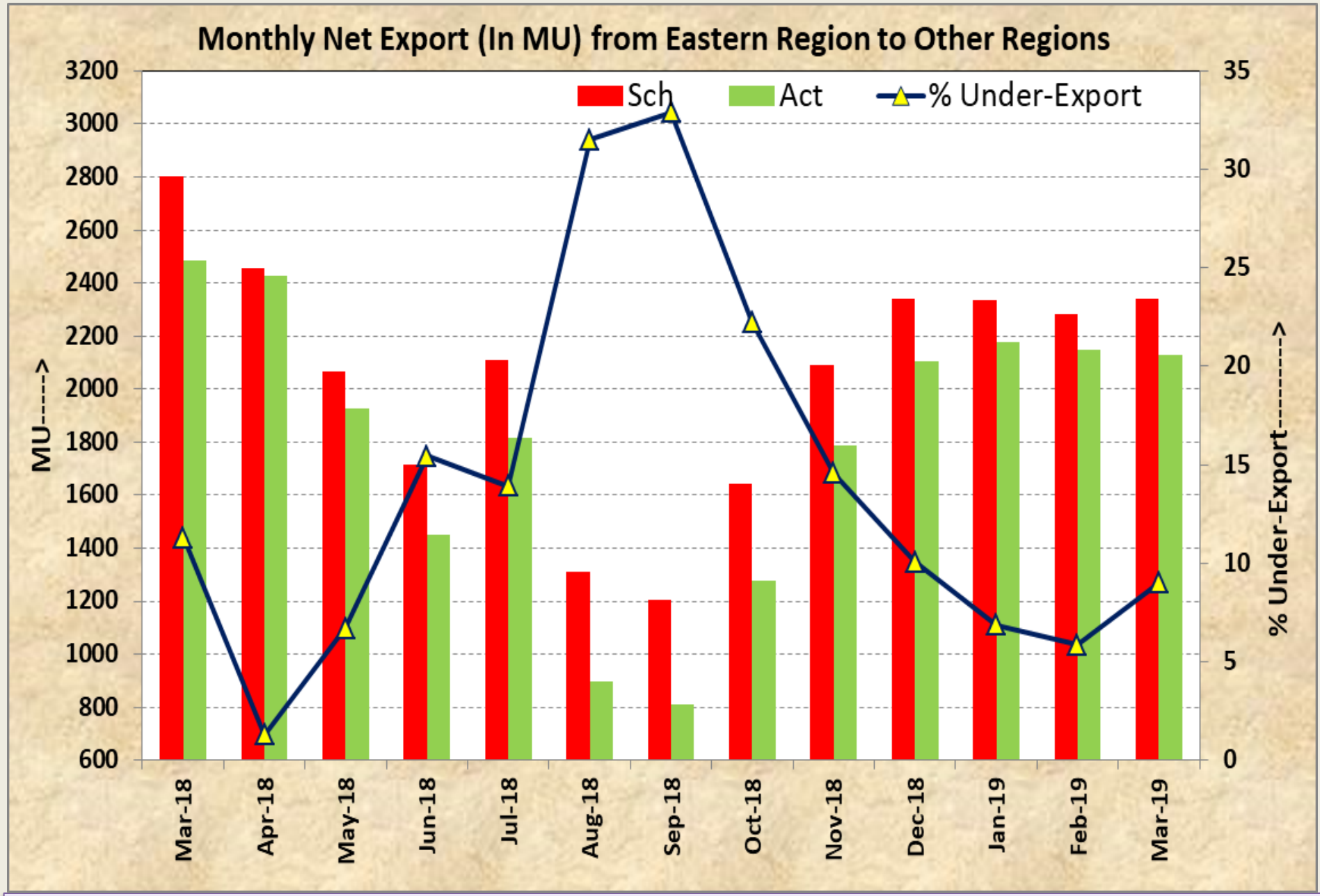


EASTERN REGION DEMAND
3D CURVES (APR'18-MAR'19)



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

March 2019 Schedule vs Actual Status					
	Schedule (MU)	Actual (MU)	OD (MU)	Daily Avg OD (MU)	% Deviation
Bihar	2171	2167	-3	-0.1	-0.2
Jharkhand	554	557	3	0.1	0.6
DVC	-1475	-1472	3	0.1	0.2
Odisha	1027	1066	40	1.3	3.8
West Bengal	1126	1123	-3	-0.1	-0.3
Sikkim	49	47	-1	0.0	-3.0
FSTPP I & II	902	887	-15	-0.5	-1.6
FSTPP III	280	278	-3	-0.1	-0.9
KHSTPP I	433	429	-4	-0.1	-1.0
KHSTPP II	895	892	-4	-0.1	-0.4
TSTPP I	661	658	-3	-0.1	-0.5
BARH II	744	739	-5	-0.2	-0.7
GMR	412	402	-10	-0.3	-2.5
MPL	623	624	2	0.1	0.3
APRNL	224	225	1	0.0	0.4
JITPL	362	362	-1	0.0	-0.2

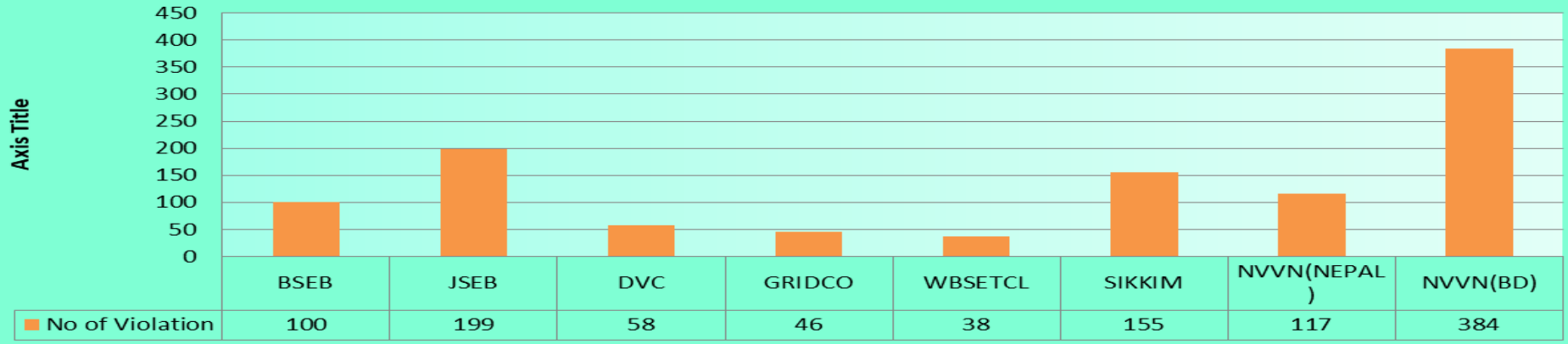


Actual Export schedule for Mar-19 was 2340 Mu, whereas actual export was 2130 Mu

Total Under export was 211 Mu for the month.

Sign reversal

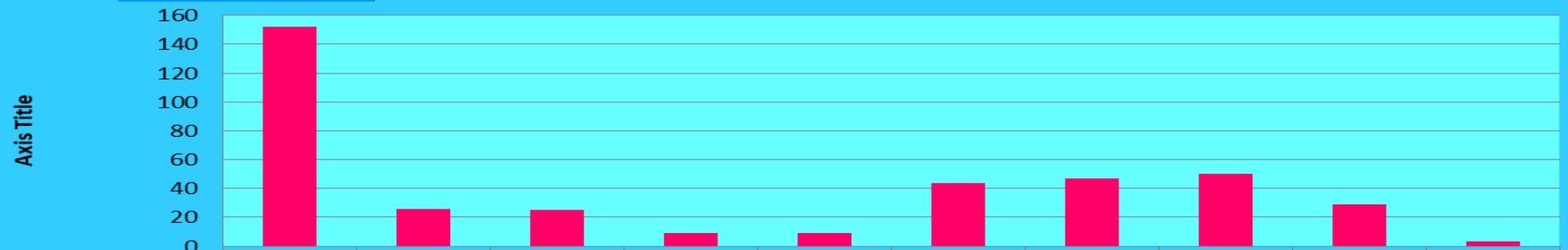
Violation for states of Eastern Region March 2019



	BSEB	JSEB	DVC	GRIDCO	WBSETCL	SIKKIM	NVVN(NEPAL)	NVVN(BD)
No of Violation	100	199	58	46	38	155	117	384

Sign reversal

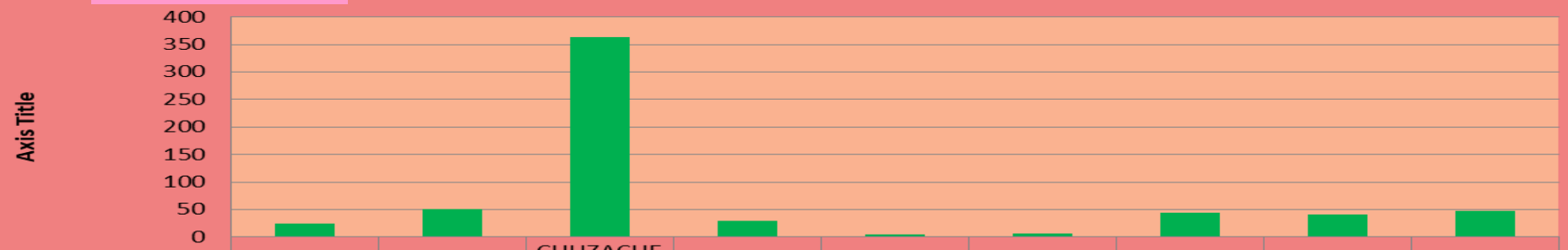
Violation ISGS of Eastern Region March 2019



	RANGIT	FARAKKA-I	FARAKKA-II	Kahalgaon-I	Kahalgaon-II	Talcher	Barh	BRBCL	MTPS	TEESTA
No of Violation	152	26	25	9	9	44	47	50	29	3

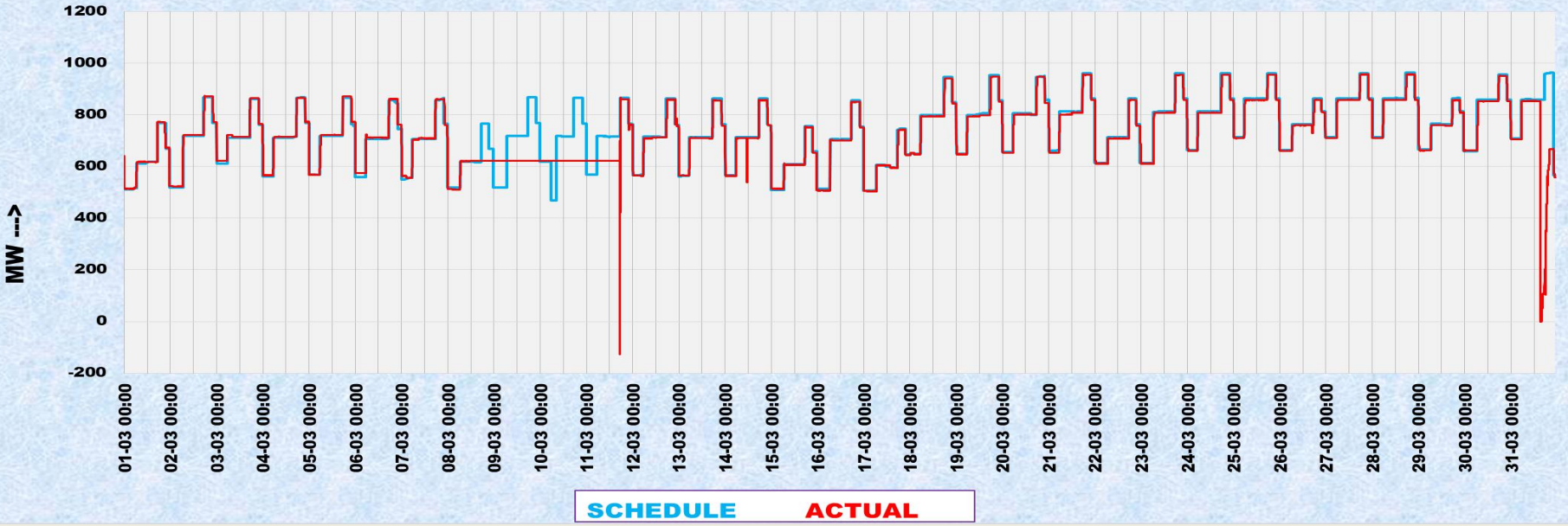
Sign reversal

Violation of IPP of Eastern Region March 2019

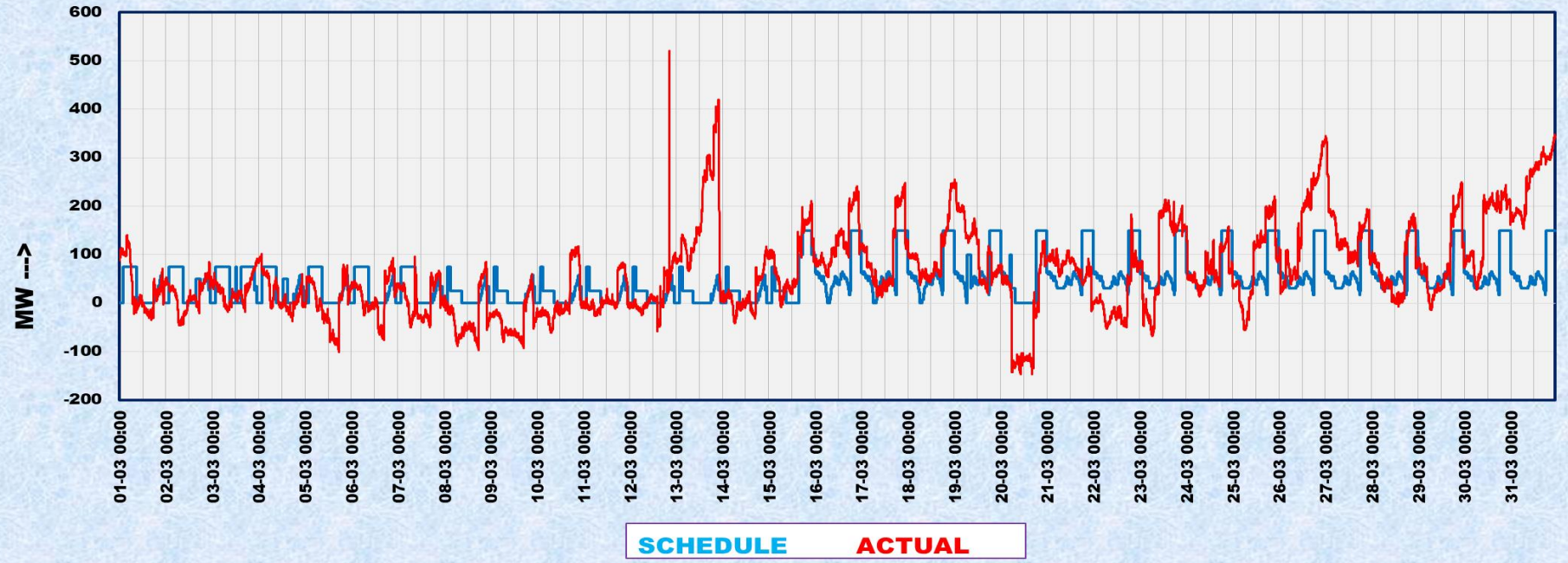


	MPL	APNRL	CHUZACHEN	JITPL	GMR	JLHEP	TUL	DIKCHU	TASHIDING
No of Violation	24	51	363	30	4	6	44	41	47

Bangladesh Drawal data From 1st March 2019 to 31st March 2019

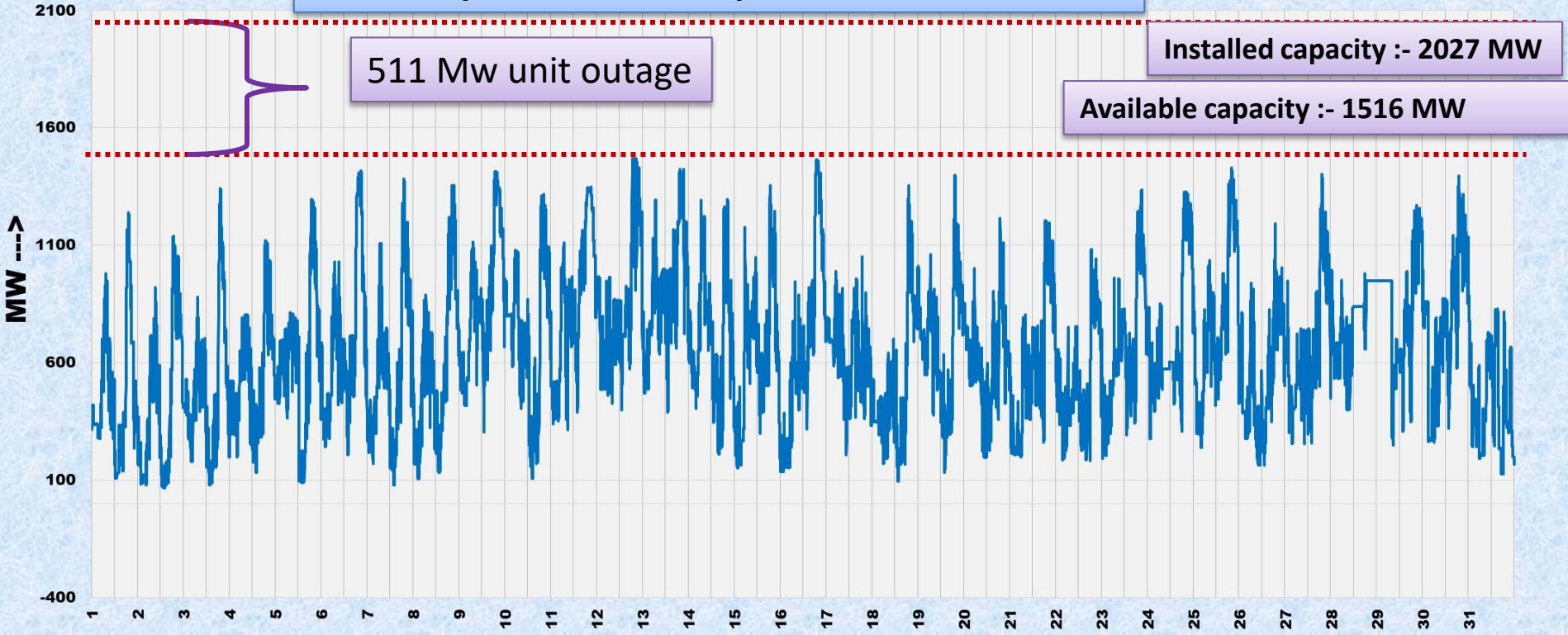


Tala+ chukha Net Generation data From 1st March 2019 to 31st March 2019

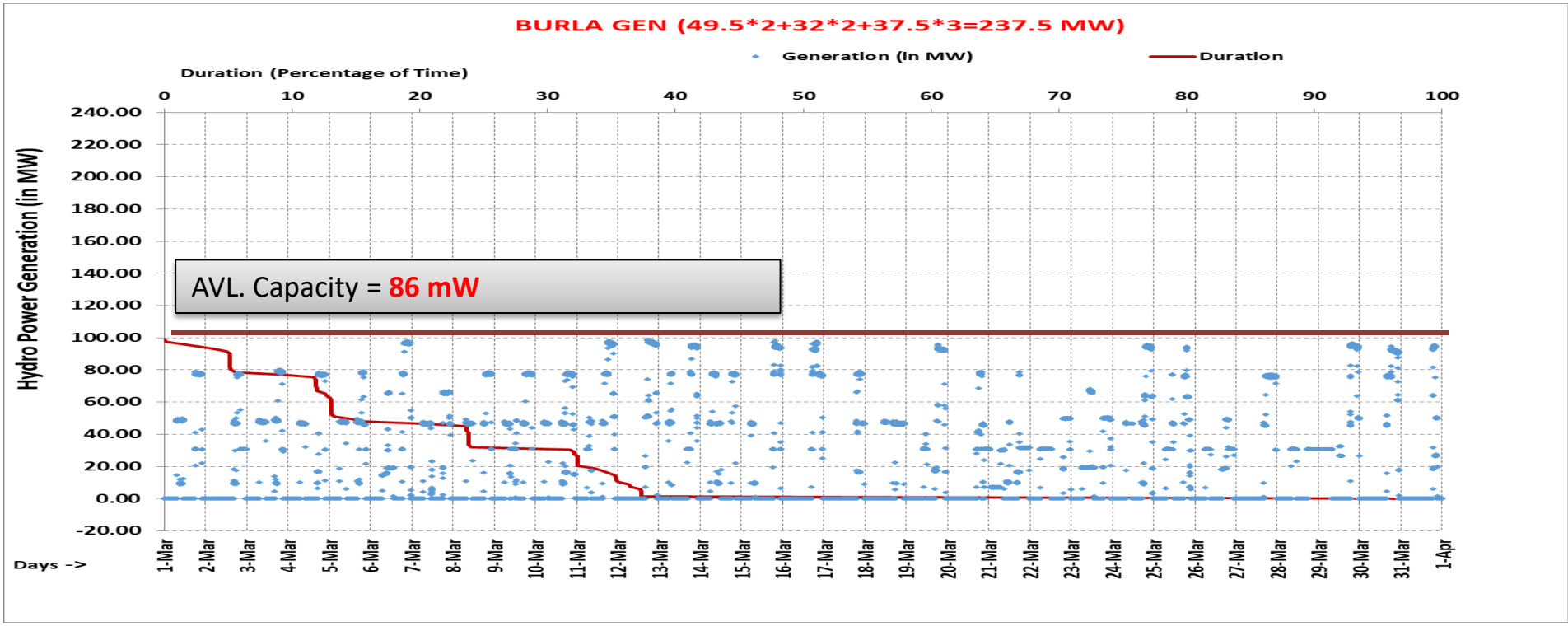


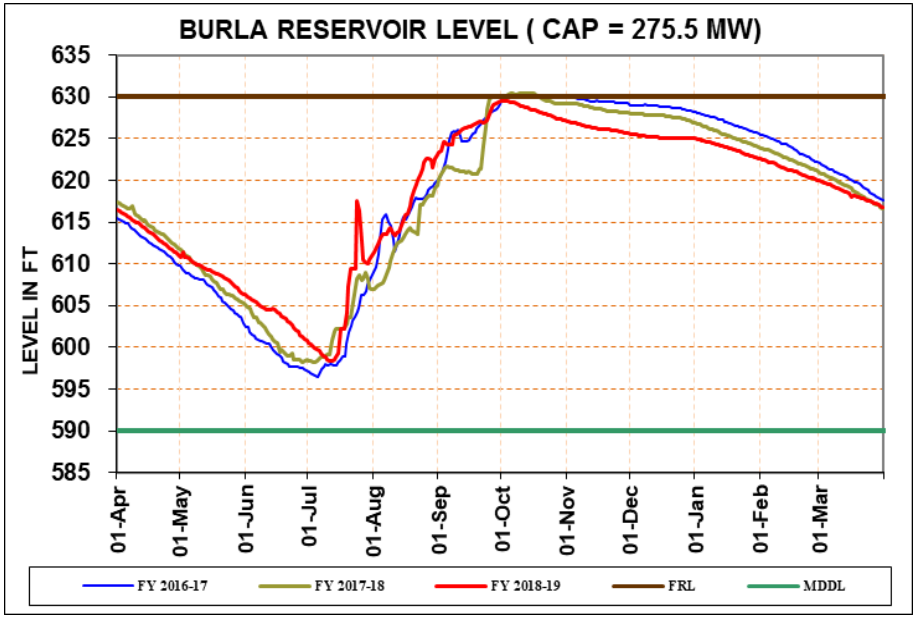
State Hydro Generators Performance

Odisha Hydro Generation pattern for March-2019

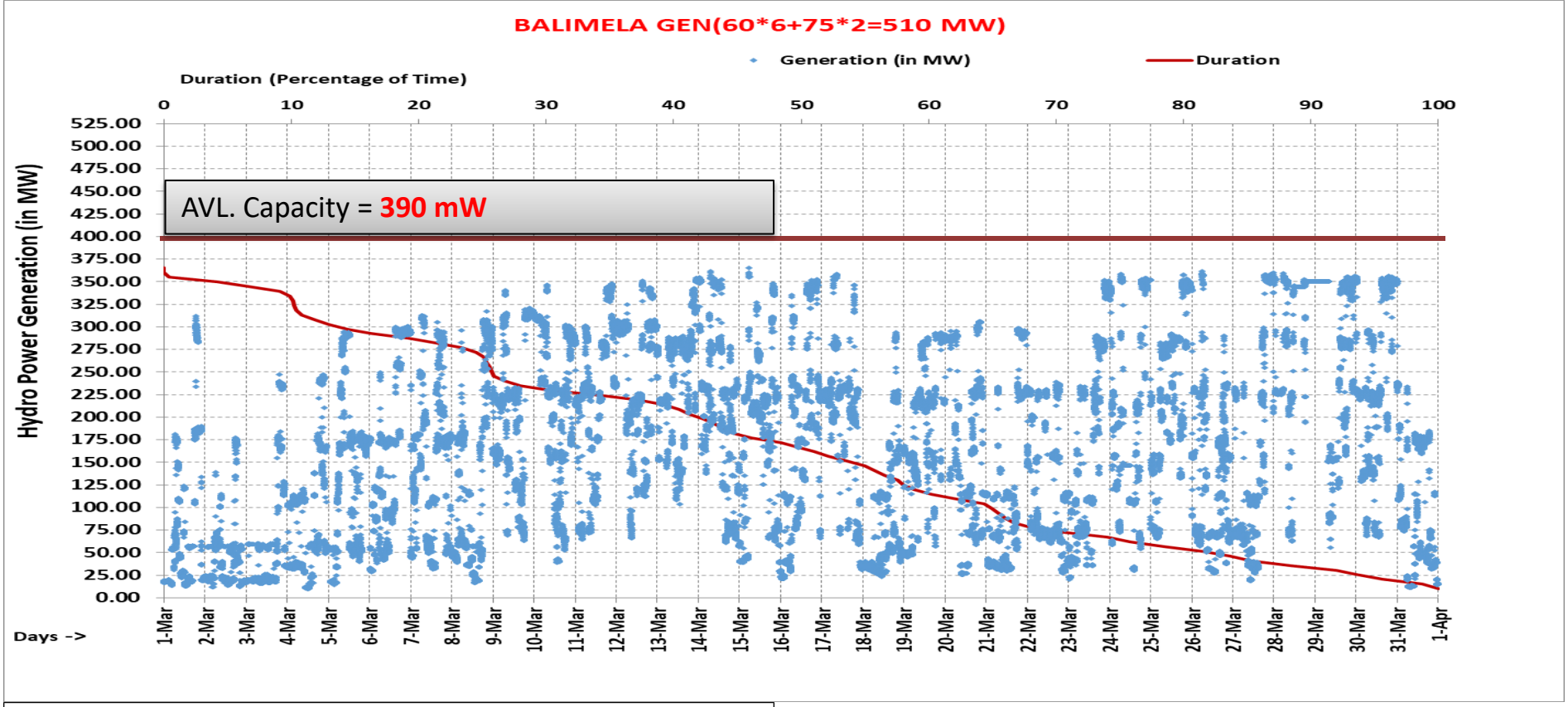


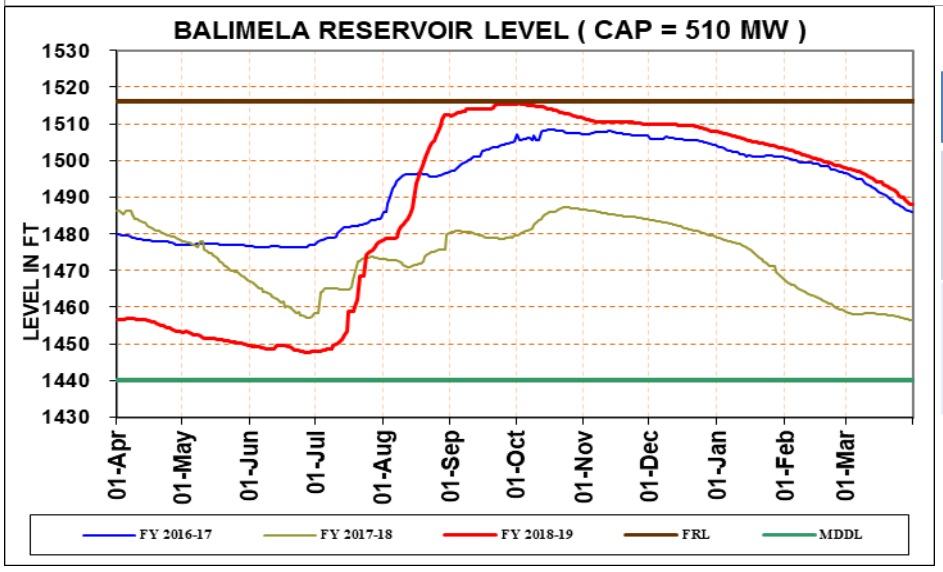
	Long Outage	Forced Outage
Burla	75 : U-5(37.5 mw), U-6(37.5 mw)	81.5: U-1(49.5 mw), U-4(32 mw)
Chipilima	24 :U-3 (24mW)	
Balimela	120 : U-1(60 mw) U-2(60Mw)	
Rengali		50: U-5(50 mw)
Up Kolab		160 : U-3(80 Mw), U-3(80 Mw)
	219	291.5



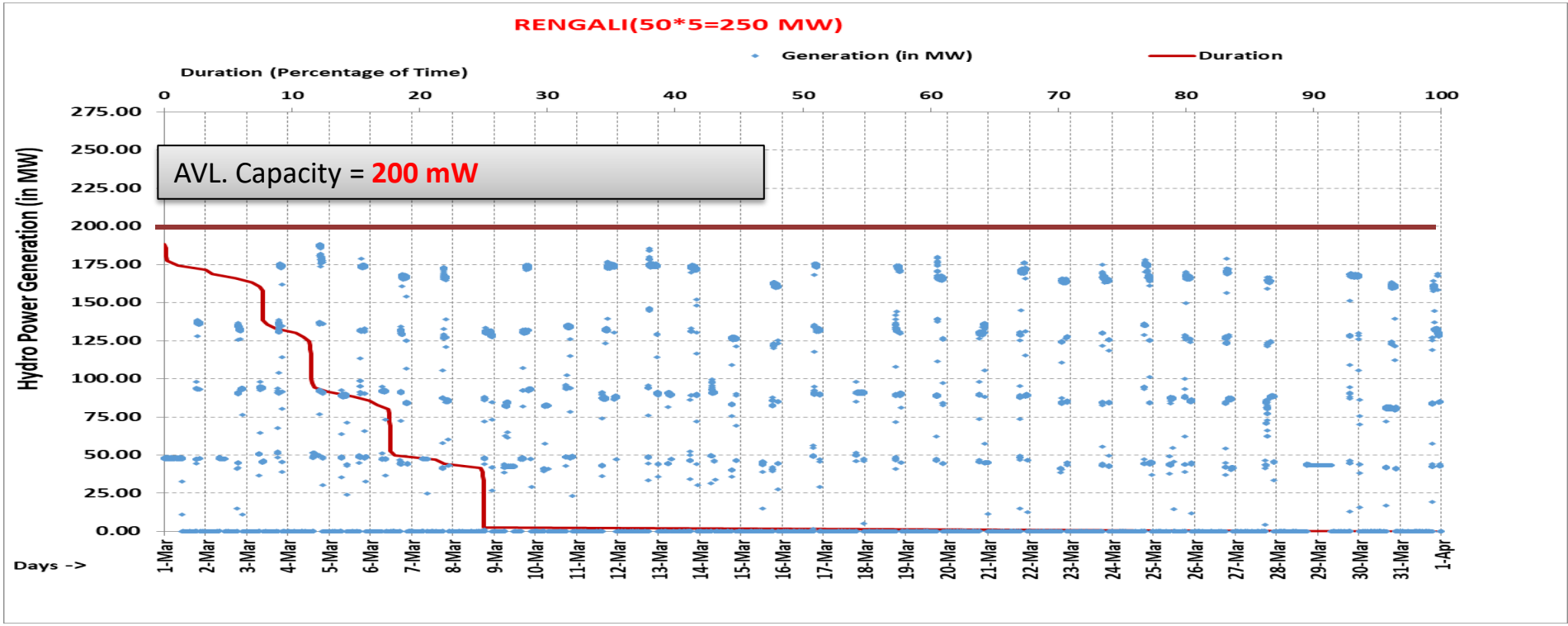


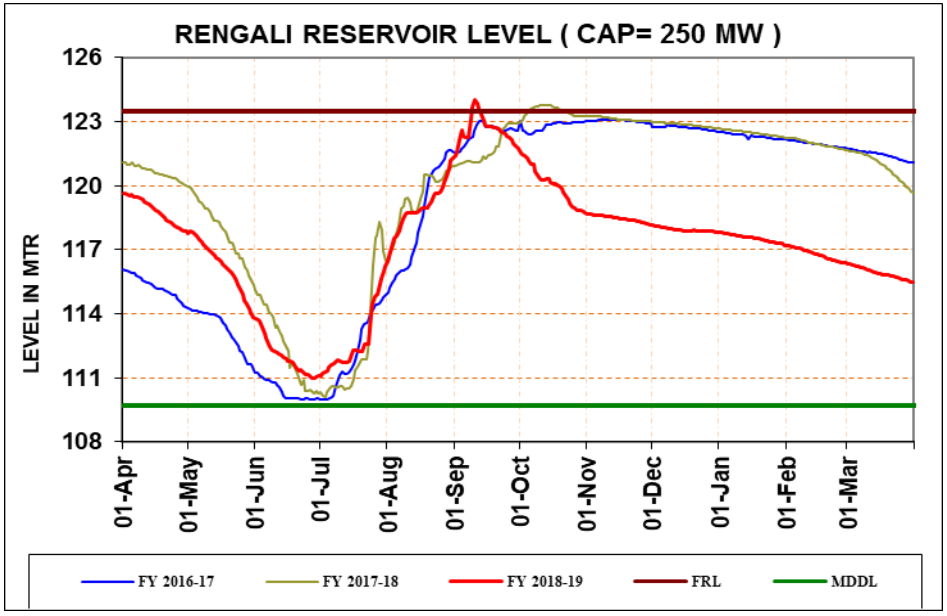
Unit No	Date of Outage	Reason
U - 1	19.11.17(19:00)	Gen. UGB oil temp high
U - 4	25.10.2018	Intake gate prob
U - 5	25.10.2016	R & M Work
U - 6	16.10.2015	R & M Work



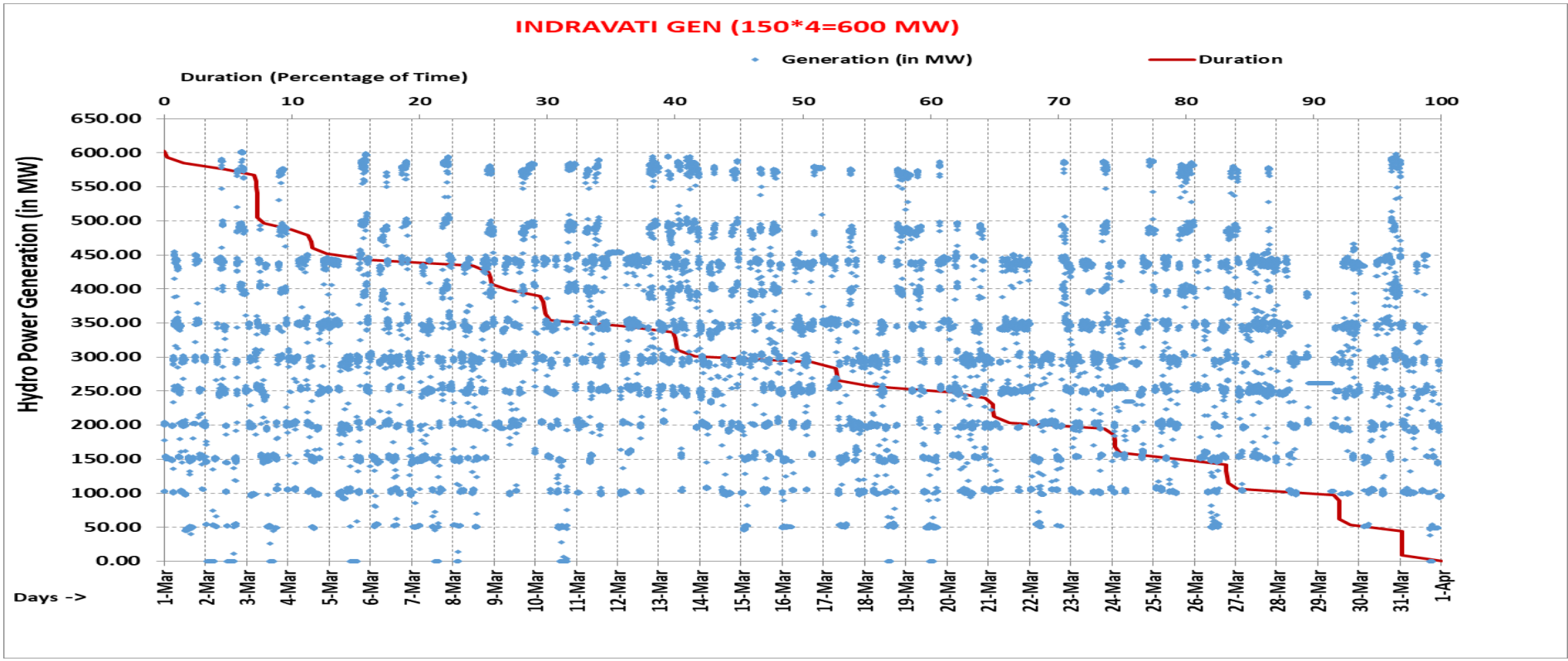


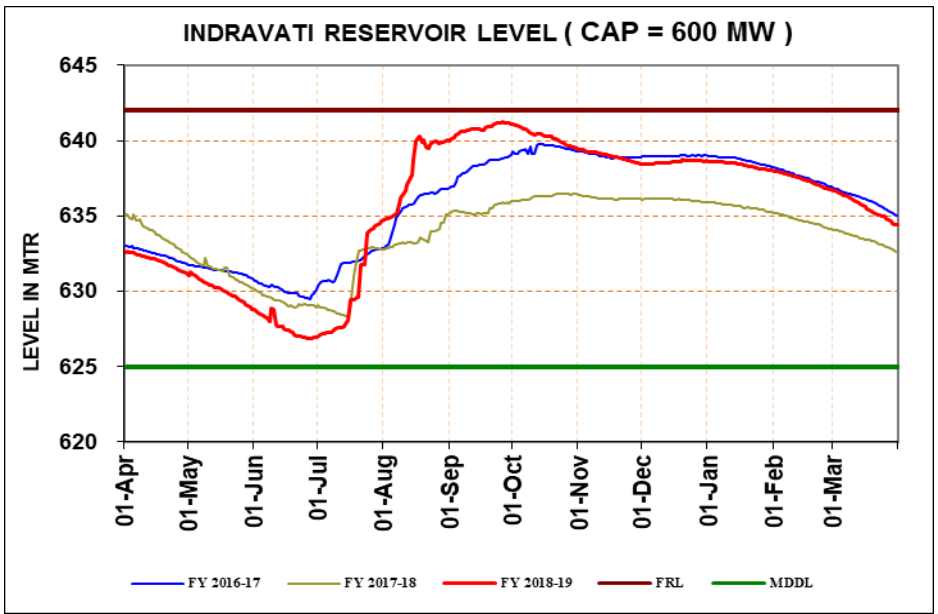
Unit No	Date of Outage	Reason
U – 1(60 MW)	05.08.16	R & M Work
U – 2(60 MW)	20.11.17	R & M Work

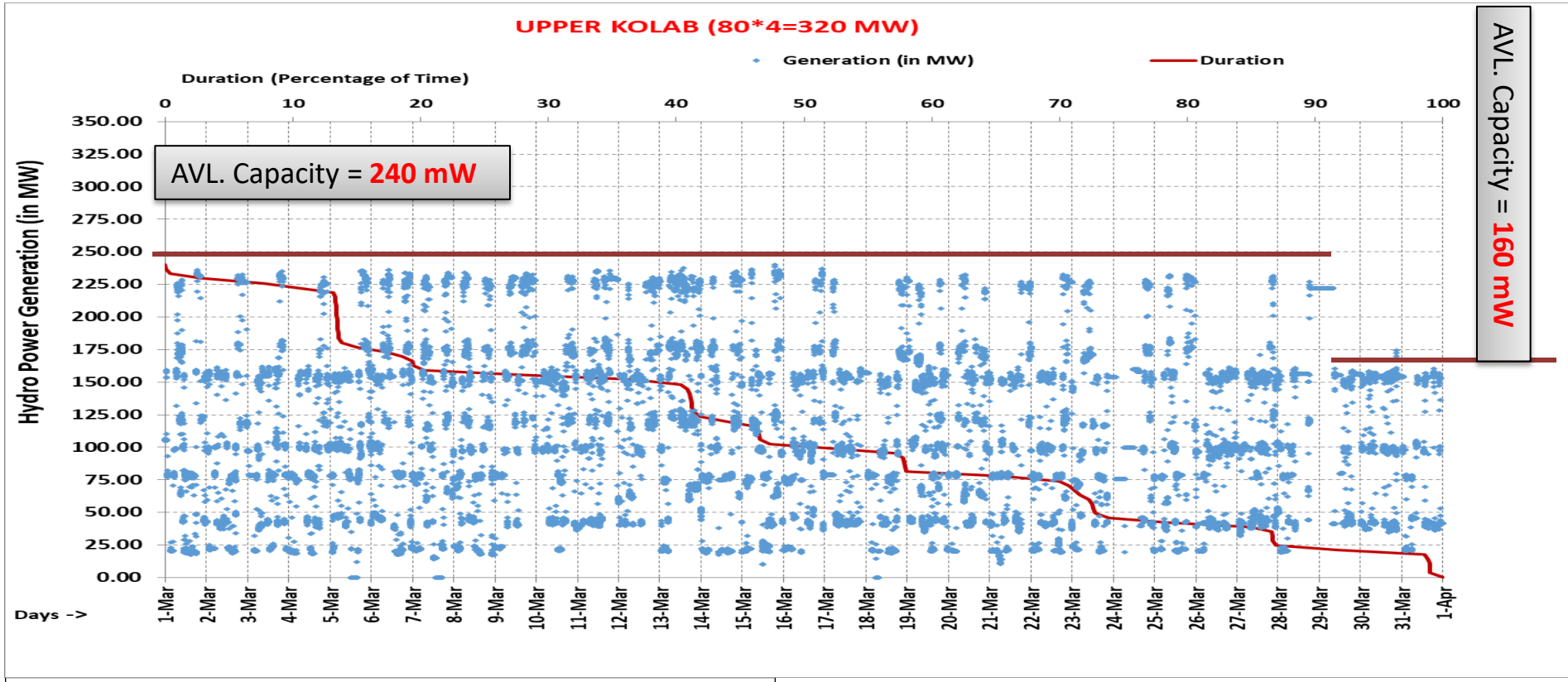


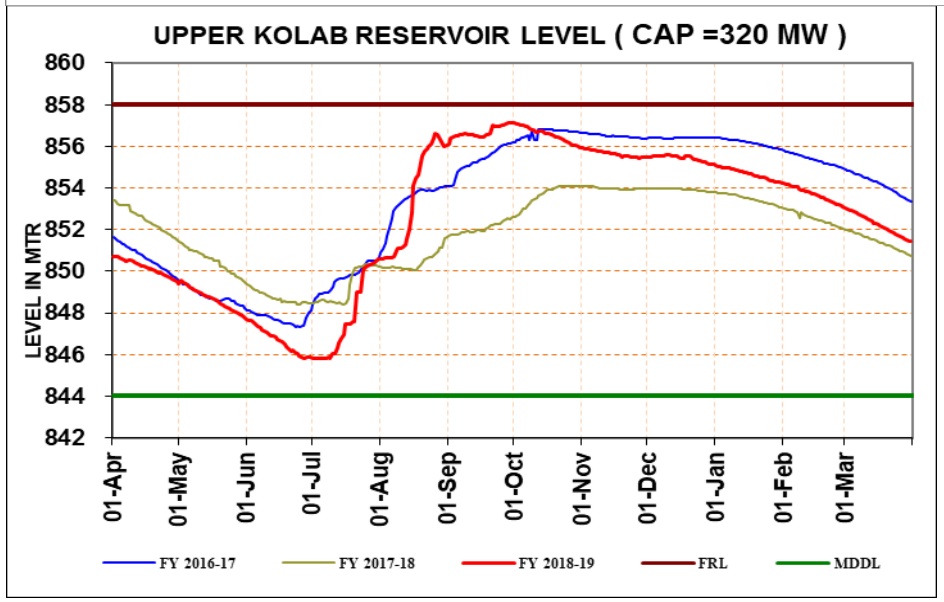


Unit No	Date of Outage	Reason
U – 2(50 MW)	12-12-2018	Maint. Work

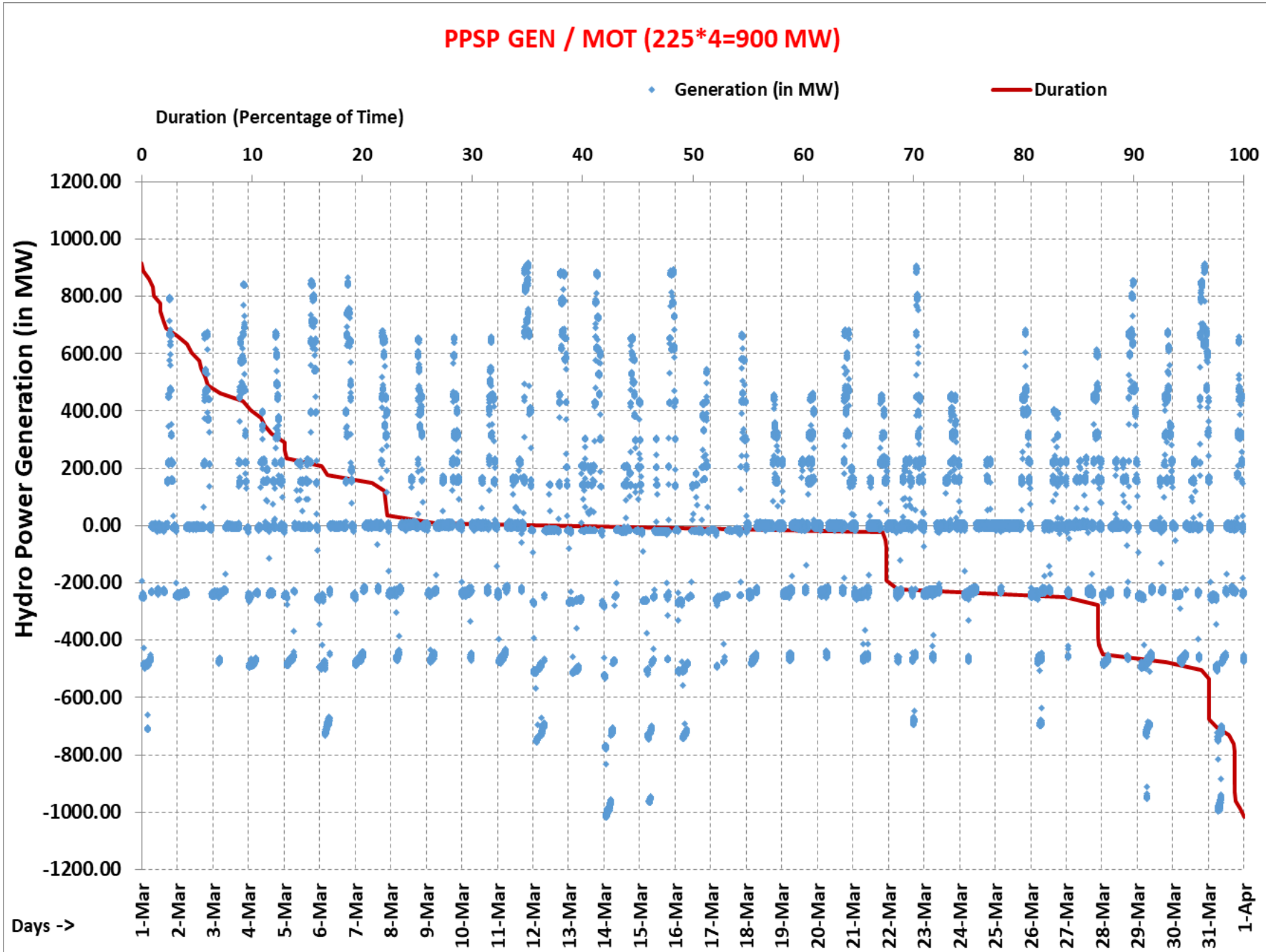

INDRAVATI GEN (150*4=600 MW)
Generation (in MW)
Duration
Duration (Percentage of Time)
0
10
20
30
40
50
60
70
80
90
100
Hydro Power Generation (in MW)
650.00
600.00
550.00
500.00
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Days -->
1-Mar
2-Mar
3-Mar
4-Mar
5-Mar
6-Mar
7-Mar
8-Mar
9-Mar
10-Mar
11-Mar
12-Mar
13-Mar
14-Mar
15-Mar
16-Mar
17-Mar
18-Mar
19-Mar
20-Mar
21-Mar
22-Mar
23-Mar
24-Mar
25-Mar
26-Mar
27-Mar
28-Mar
29-Mar
30-Mar
31-Mar
1-Apr


INDRAVATI RESERVOIR LEVEL (CAP = 600 MW)
LEVEL IN MTR
645
640
635
630
625
620
01-Apr
01-May
01-Jun
01-Jul
01-Aug
01-Sep
01-Oct
01-Nov
01-Dec
01-Jan
01-Feb
01-Mar
FY 2016-17
FY 2017-18
FY 2018-19
FRL
MDDL





Unit No	Date of Outage	Reason
U – 4(80 MW)	02.01.19	Maint. Work
U – 3(80 MW)	28.03.19	Gen stator Inter turn fault


PPSP GEN / MOT (225*4=900 MW)
Generation (in MW)
Duration
Duration (Percentage of Time)
0
10
20
30
40
50
60
70
80
90
100
Hydro Power Generation (in MW)
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
-200.00
-400.00
-600.00
-800.00
-1000.00
-1200.00
Days ->
1-Mar
2-Mar
3-Mar
4-Mar
5-Mar
6-Mar
7-Mar
8-Mar
9-Mar
10-Mar
11-Mar
12-Mar
13-Mar
14-Mar
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25-Mar
26-Mar
27-Mar
28-Mar
29-Mar
30-Mar
31-Mar
1-Apr

Response Based on ERLDC SCADA Data (generation end data yet to be received)

Generating Station	Percentage of ideal response	Remarks	Action plans to be taken by generating stations/SLDCs as per decision taken in special meeting on 31-03-19 at ERPC
FSTPP I & II	-17%	Non-Satisfactory	DCS to be replaced in next overhauling for unit I, II & III; Fine tuning of logic for RGMO to be completed by March 2019.**NTPC to share the status of RGMO tuning, DCS replacement and reason for non-satisfactory response.**
FSTPP III	0 %	Non-Satisfactory	
KhSTPP I	73%	Satisfactory and response lasted for around 5 min	NTPC intimated that by 4th Feb 2019 the fine-tuning activity would be completed. **NTPC to share the status of RGMO tuning and reason for non-satisfactory response for stage – II.**
KhSTPP II	7%	Non-Satisfactory	
Talcher I & II	--	More data resolution is required for analysis	Fine-tuning of RGMO was going on and expected to be completed by Next Overhauling.**NTPC to share the status of RGMO tuning and response observed at the time of the event.**
Barh	50 %	Unit generation was being ramped up prior to the event	NTPC to take up the matter of data collection in .csv format and the issue of fine tuning of the RGMO with their OEM.**NTPC to share the status of RGMO tuning and the status of data collection in .csv format.**
GMR	80 %	Satisfactory and response lasted for more than 5 min	No representative from GMR attended the meeting.
Adhunik	70 %	Satisfactory	No representative from Adhunik attended the meeting.
Teesta V	44 %	Unit generation was being ramped up prior to the event	NHPC to take up the matter of data collection in .csv format and the issue of fine tuning of the RGMO with their OEM.**NHPC to share the status of RGMO tuning and the status of data collection in .csv format.NHPC to provide a detailed explanation with reason on the statement on no response during high hydro season.**
Teesta III &Dikchu	--	Unit not in service	Teesta III to fine-tune RGMO. No representative from Dikchu attended the meeting.**Teesta III &Dikchu to share the status of RGMO tuning.**
JITPL	7%	Non-Satisfactory	No representative from JITPL attended the meeting.**JITPL to share the status of RGMO tuning and reason for non-satisfactory response.**
BRBCL	24%	Non-Satisfactory	BRBCL to take up the issue of fine tuning of the RGMO with their OEM.**BRBCL to share the status of RGMO tuning and reason for non-satisfactory response.**
Jharkhand	-194%	Non-Satisfactory	Jharkhand SLDC to calculate FRC observed at the boundary of the control area and reason for non-satisfactory response.
WB	14%	Non-Satisfactory	WB SLDC to calculate FRC observed at the boundary of the control area and reason for non-satisfactory response. Format for calculation of FRC has been circulated.

Response calculated from High-Resolution Data recorded at generating stations/SLDCs *

Generating Station/ SLDC **	Responses observed	Action plans to be taken by generating stations/SLDCs as per decision taken in special meeting on 31-03-19 at ERPC
MPL	**Non-Satisfactory**; Generation reduced with reduction in frequency; resolution of data received is not suitable for analysis.	MPL to take up the issue of fine tuning of the RGMO with their OEM. **MPL to share the status of RGMO tuning and reason for non-satisfactory response.**
HEL	**Non-Satisfactory**; As per data received, 3 MW generation increase has been observed in place of RGMO influence of 6 MW. As per 5% droop characteristics, ideal response should be 21.84 MW.	**HEL to share reason for RGMO influence less than ideal response as per droop characteristics.**
Bakreswar TPS	**Non-Satisfactory**; Response of unit I, II & III cannot be analyzed due to non-availability of data in excel/csv format. In case of unit 4 & 5, unit generation was more than I/C and response was very less and did not last for more than 10 sec.	**WBPDCL to share the reason for non-satisfactory response along with remedial action to be taken.**
FRC shared by DVC	**Non-Satisfactory**; As per generation data received, primary frequency response is not observed.	DVC intimated in the meeting that they were going to have an internal meeting. **DVC to share the reason for non-satisfactory response along with remedial action to be taken.**
FRC shared by GRIDCO	**Non-Satisfactory** response for Balimela unit # 6 and #8, Burla, Indravati& U Kolab units. Below satisfactory response for Balimela #3 & #4. Data were not available for Rengali and IBTPS.	**GRIDCO to share the reason for non-satisfactory response along with remedial action to be taken**

**** Based on data received on or before 09-04-2019***

Eastern Regional Power Committee, Kolkata

Minutes of Special Meeting on Power support at Manique GSS from DVC and at Kendposi GSS from OPTCL held at ERLDC, Kolkata on 1st March, 2019 (Friday) at 15: 00 hrs

OPTCL, SLDC Odisha, JUSNL and SLDC DVC attended the meeting through video conference.

At the start of the meeting, ERPC explained that in 154th OCC Meeting held on 21st February 2019, JUSNL informed that they needed around 35 MW power from Manique (DVC) and 40 MW power from Joda (OPTCL) S/s during the shutdown of 132kV Ramchandrapur-Adityapur D/C line for 31 days. OCC advised Member Secretary, ERPC to convene a special meeting at ERPC Secretariat to discuss the issue with JUSNL, DVC, OPTCL, ERPC and ERLDC to arrive at an acceptable solution. In line with OCC decision, this meeting had been called.

- OPTCL informed that 220/132kV ATRs at Joda are quite old and they are planning to augment one 100MVA 220/132kV ATR with 160 MVA. Power could be extended to JUSNL only after completion of the augmentation of ATR.
- OPTCL added that they are ready to take shutdown of one 100MVA 220/132kV ATR at Joda from next day to start the augmentation work and they needed 35 days to complete the work.
- DVC informed that unit #7 of Chandrapura TPS is under maintenance which would be in service from 20th March 2019 tentatively. DVC added that after bringing the unit #7 of Chandrapura into service they can give 35 MW during off peak and 25 MW during peak hours at Manique subjected to availability of unit #3 of Bokaro. DVC explained that at present unit #3 of Bokaro is in service but availability of the unit is uncertain.
- After detailed deliberation, the following were decided:
    1. OPTCL shall take shutdown of one 100MVA 220/132kV ATR at Joda from 2nd March 2019 to start the augmentation work
    2. After completion of augmentation of 220/132kV ATR at Joda, JUSNL shall avail the shutdown of 132kV Ramchandrapur-Adityapur D/C line tentatively from 6th April 2019.
    3. OPTCL shall provide additional 40 MW power from Joda (OPTCL) to fed Kendiposi loads during the shutdown period of 132kV Ramchandrapur-Adityapur D/C line
    4. DVC shall provide power support of 35 MW during off peak and 25 MW during peak hours at Manique subjected to availability of unit #3 of Bokaro during the shutdown period of 132kV Ramchandrapur-Adityapur D/C line

- OPTCL added that during shutdown of one 100MVA, 220/132kV ATR at Joda from 2nd March 2019, they can only give 20 MW power to Kendiposi during off peak hours and they cannot give any power during peak hours due to significant load growth in Joda area.
- Jharkhand agreed and requested to keep the 220kV Joda-Kendiposi line as idle charged condition so that they can draw railway power in case of any emergency.
- Odisha agreed but requested Jharkhand to avoid power drawal during peak hours.
- Jharkhand assured that they would draw power only during emergency after taking consent from OPTCL.
- It was opined that most of the JUSNL loads would be met by 220kV Chandil S/s during shutdown of 132kV Ramchandrapur-Adityapur D/C line. Jharkhand was advised to maintain the reliability of the 220kV Chandil S/s and ensure healthiness of the protection system at Chandil S/s.

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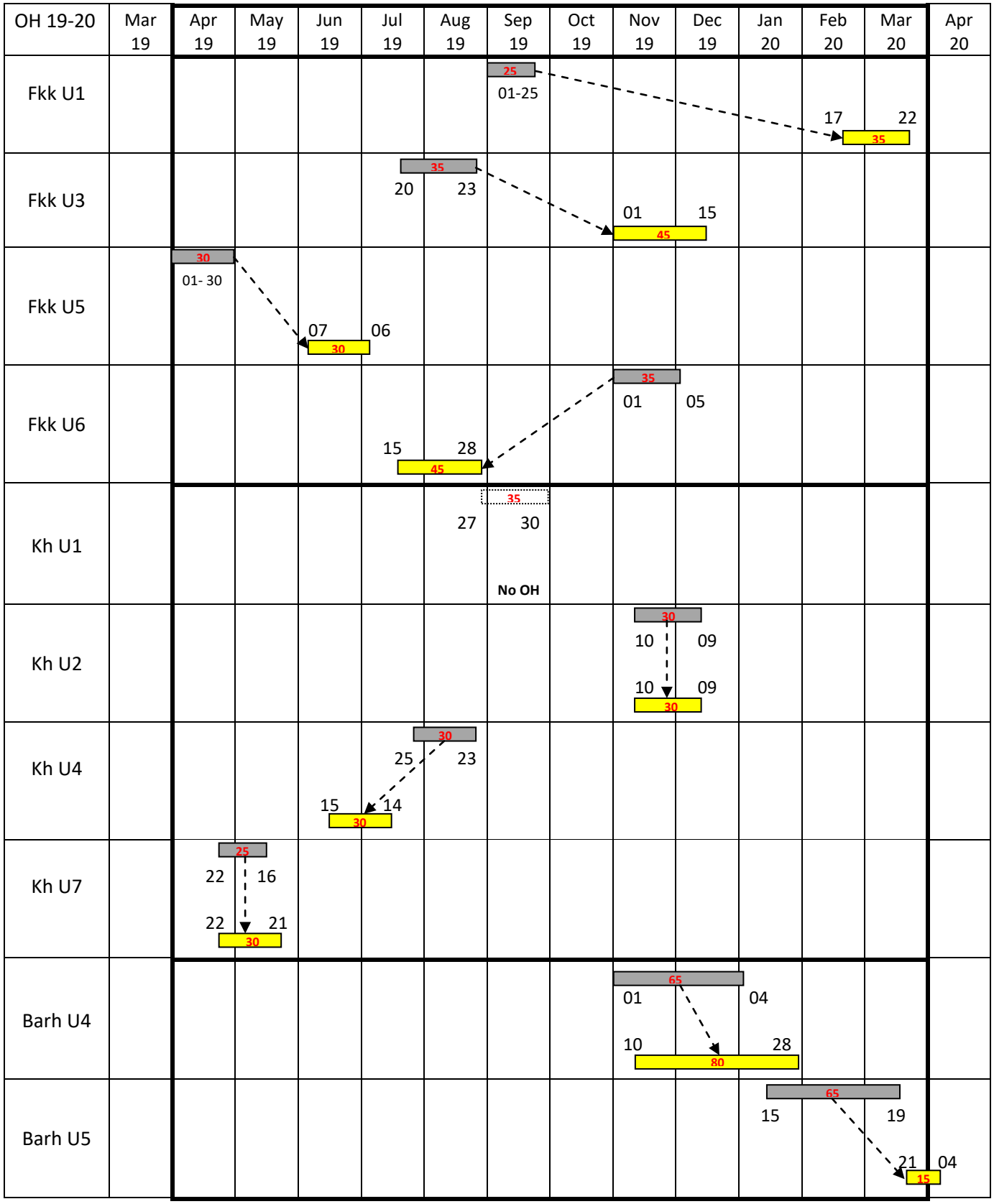
Annexure-B4

Annexure: Revision proposal for NTPC Farakka, Kahalgaon & Barh Units Overhauling 2019-20



Dussehra: 08.10.2019, Diwali:27.10.2019, Chhath : 02.11.2019

As per LGBR/OCC Revised proposal

Eastern Regional Power Committee, Kolkata

Minutes of 3rd Special Meeting on "Operationalization of 400 kV Durgapur Bus Splitting Scheme" held at ERPC, Kolkata on 8th April 2019 at 11:00hrs

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

In the second meeting on "Operationalization of 400 kV Durgapur Bus SplittingScheme" held on 17thJanuary 2019 at ERPC, it was decided to conduct a detailed study to find out any network constraint in DVC and West Bengal network after operationalization of 400 kV Bus Splitting scheme at Durgapur and utilization of 3rd 315 MVA, 400/220 kV ICT at Durgapur S/s. DVC and West Bengal were advised to submit the relevant details to ERLDC for carrying out the study.

1. **Operationalization of 400 kV Bus Splitting scheme at Durgapur**

ERLDC informed that they had received the details from DVC and West Bengal, however, the expected schedule of commissioning of new transmission elements was not available from the concerned utilities.

On query, DVC informed that they had submitted the details of transmission elements which are going to be commissioned in a year.

Members observed that there is no network constraint in DVC and West Bengal system after operationalization of 400 kV Bus Split at Durgapur except the N-1 reliability issues of 220kV Durgapur (PG)-Parulia (DVC) D/C line.

DVC informed that no cascade tripping of the transmission lines would occur during the tripping of any one line of 220kV Durgapur (PG)-Parulia (DVC) D/C line, as part of the power flow in the line would be diverted to other parallel paths i.e. 220kV Maithon-Kalyaneswar D/C line and 220kV Waria-Bidhannagar D/C line. DVC added that the loading of the healthy line in case of tripping any one line of 220kV Durgapur (PG)-Parulia (DVC) D/C line would be within the safe limit and no Special Protection Scheme would be required for that.

DVC further informed that 220kV Waria (DTPS)-Parulia (DVC) D/C line would be LILO'ed at DSTPS and it would be completed within a year. Thereafter, the loading of 220kV Durgapur (PG)-Parulia (DVC) D/C line would be reduced.

Members opined that the line distance protection settings at local and remote ends of 400kV Durgapur S/s are to be modified as per the new configuration after commencement of split bus operation. All the concerned constituents were advised to check the reach settings for both the cases (with and without bus splitting at Durgapur) and to review the Zone 2/zone 3 settings. The PLCC and carrier protection should be kept in healthy condition to ensure fault clearance in Zone 1 time and prevent uncoordinated line trippings. It was decided to communicate the decision to NTPC, WBPDCL, Powergrid ER-I for reviewing the reach settings of following lines:

- 400kV Sagardhigi-Durgapur line
- 400kV Bidhannagar-Durgapur line
- 400kV Farakka-Durgapur line
- 400kV Jamshedpur-Durgapur Lines.

After detailed discussion, Members agreed for operationalization of 400 kV Split Bus arrangement at 400kV Durgapur S/s and decided to place the issue in 156th OCC Meeting for further decision.

2. Utilization of 3rd 315 MVA, 400/220 kV ICT at Durgapur S/s

Powergrid informed that 3rd 315 MVA, 400/220 kV ICT at Durgapur S/s would be commissioned by end of April 2019.

DVC once again requested to conduct a detailed study on utilization of 3rd 315 MVA, 400/220 kV ICT at Durgapur S/sconsidering the present and future network conditions.

Members decided to form a committee with the following members for the above study:

1. S. Banerjee, SE(E), WBSETCL
2. Sandip Ghosh, SDE(E), SPE, DVC
3. Santhosh Kumar Panda, EE, SLDC, DVC
4. J G Rao, EE, ERPC
5. Members from ERLDC

It was decided that the committee members would meet on 10th April 2019 at 11:30 hrs at ERPC for detailed discussion.

Based on the report submitted by the Committee, utilization of 3rd 315 MVA, 400/220 kV ICT at Durgapur S/s would be referred to the appropriate forum for further decision.

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Agenda Item for 156th OCC Meeting to be held on 25.04.2019 at ERPC

Sub :- Connectivity /LTA/Evacuation system for OPGC IBTPS (2 X 660 MW) thermal power project in Odisha.

The subject matter was discussed in detail in the 153rd OCC Meeting under Item No.B.6 and it was decided as follows:

"OCC advised GRIDCO to submit the proposal to CEA for detail discussion in Standing Committee."

Subsequently both GRIDCO and OPGC approached CEA and a meeting was held at CEA, New Delhi on 26.03.2019 to review Connectivity /LTA/Evacuation system for OPGC IBTPS (2 X 660 MW) thermal power project in Odisha. The Minutes of Meeting drawn as per the discussion held is enclosed herewith for reference.

Based on the decision recorded in the said MoM dated 26.03.2019, it is clear that the operation of the Split Bus in OPGC Switchyard under closed condition of Bus Sectionalizer between Unit -3(connected to STU) and Unit-4 (connected to ISTS) i.e. operating the system under COMMON BUS mode is technically feasible.

It is to be mentioned here that, Unit-3(660 MW) has already been synchronised with STU on 15.04.2019 and both the Units of OPGC Expansion Project are expected to be commissioned by May-2019.

In view of the above facts, permission may be granted to proceed with operation under Common Bus Mode, so as to facilitate evacuation of power to GRIDCO through STU system.

In the meantime OPGC shall also be requested to approach CERC for resolution of commercial matters, as per the decision recorded in the aforesaid Minutes of Meeting.

XXXXXX

Annexure-B8

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OFFICE OF THE CHIEF LOAD DESPATCHER,SLDC

ODISHA POWER TRANSMISSION CORPORATION LIMITED
GRIDCO Colony, P.O.- Mancheswar Rly. Colony, Bhubaneswar-751017, FAX-0674- 2748509
CIN – U40102OR2004SGC007553

SGM(PS)-PL-419/2016/ 1137(5) Dtd...15/4/19

From

The Chief Load Despatcher,

SLDC, OPTCL Bhubaneswar-17

TO

THE MEMBER SECRETARY,

ERPC, Kolkata.

Ref.: - 1) This office letter No. SGM(PS)-PL-419/2016-1649 (5) dated 30/05/2018.

Sub: Regarding revision of weekly Deviation charge energy accounting of GRIDCO , due to erroneous less energy data reported at Bolangir PGCIL end SEM of 220kV Bolangir(PG)-Katapali line for the period from 04/05/2016 to 02/12/2018.

Sir,

With reference to the subject cited above, it was previously intimated to you that, the Bolangir PGCIL end SEM of 220kV Bolangir(PG)-Katapali(OPTCL) tie line was reported erroneous energy data as compared to Katapali(OPTCL) end SEM bearing SL.No. NP7561A from 04/05/2016 to 02/12/2018. Being a tie line, SEM at Bolangir(PG) is used for energy calculation at ERPC, Kolkata. There is a huge difference of energy data of both end meters and the net energy difference is calculated to **be 97281.8 MWh** approximately during the period from 04/05/2016 to 02/12/2018. The net energy comparison sheet of both side of SEM data for all the above weeks and 15 minutes energy data of Katapali OPTCL end SEM for the above period are attached herewith for your ready reference.

Further, it has been observed that the ICTs SEM at Bolangir PGCIL end are considered for energy accounting at ERPC, Kolkata from 02/12/2018 onwards and the above energy data was rectified after engagement of the above ICTs SEM at Bolangir PGCIL.

It is therefore requested to resolve the above matter on next OCC meeting at ERPC, Kolkata.

Encl: As above

Yours faithfully

15/4/19

CHIEF LOAD DESPATCHER

SLDC, BHUBANESWAR

CC to :

- **GM, ERLDC, Kolkata for information and necessary action.**
- **Director (Commercial), GRIDCO, Bhubaneswar**
- **Chief General Manager (PP), GRIDCO, Bhubaneswar**
- **Chief General Manager (O&M), OPTCL, Bhubaneswar**

A. The list of generators where PSS is not tuned however kept in service and no details have been provided for PSS tuning:

Power Plant	Unit No	PSS tuned (Yes/No)	PSS in Service (Yes/No)	Timeline and Plan for PSS tuning Activity
Kolaghat-WBPDCL	1	No	Yes	
Kolaghat-WBPDCL	2	No	Yes	
Kolaghat-WBPDCL	3	No	Yes	
Kolaghat-WBPDCL	4	No	Yes	
Kolaghat-WBPDCL	5	No	Yes	
DPL	8	No	Yes	
PPSP	1	No	Yes	
PPSP	2	No	Yes	
PPSP	3	No	Yes	
PPSP	4	No	Yes	
Bokaro A1	500 MW	No	Yes	

B. Generating Power Plants whose Excitation details or PSS tuning status or both have not been received at ERLDC/ ERPC:

Generating Utility	Unit		Generating Utility	Unit
WBSEDCL			**OHPC**	
TLDP III	4 x 33		Upper Indravati	1,2,3,4
TLDP IV	4 X 44		Balimela	6 X 60
DVC			Balimela	2 X 75
Bokaro -DVC	500 MW		Upper Kolab	4 X 80
Bokaro	3 X 210 MW		Rengali	4 X 50
Waria	4		**Orissa SLDC**	
Chandrapura B	2 X 250 MW		Sterlite	4 X 600
ISGS			**Jharkhand**	
Talcher Stage 1	1,2 (PSS tuning Received)		Subarnrekha	2 X 65
Nabinagar NPGC	1		**Bihar**	
BRBCL	1,2,3		KBUNL	1,2
KBUNL	3,4		**Bhutan**	
Rangit	3 x 20		Tala	6 X 170
			Chukha	4 X 84

C. Generating Power Plants where PSS is tuned and kept in service however, PSS Tuning report/plots/data have not been submitted to ERLDC/ERPC is as following:

Power Plant	Unit No		Power Plant	Unit No
Sagardighi-WBPDCL	3		Farakka NTPC	5
Sagardighi-WBPDCL	4		Farakka NTPC	6
Budge Budge-CESC	3		Talcher Stage 2	4
HEL-CESC	1		Talcher Stage 2	5
HEL-CESC	2		Talcher Stage 2	6
Mejia-DVC	4		Teesta-III	1
Mejia-DVC	5		Teesta-III	2
Mejia-DVC	6		Teesta-III	4
Mejia-DVC	7		Teesta-III	5
Mejia-DVC	8		Teesta-III	6
Durgapur-DVC	1		Tashiding	1
Durgapur-DVC	2		Maithon Power Limited	1
Koderma-DVC	1		Maithon Power Limited	2

Koderma-DVC	2		ADHUNIK	1
Farakka NTPC	1		ADHUNIK	2
Farakka NTPC	2		IB TPS	1
Farakka NTPC	3		IB TPS	2
Farakka NTPC	4			

D. Generators where PSS tuning has been done more than 3 years back:

Power Plant	Unit No	Last PSS Tuning Date	Whether Done in Last 3 Years	Timeline for Next PSS Tuning
Sagardighi-WBPDCL	4	Commissioning	No	
Budge Budge-CESC	1	2015	No	
Budge Budge-CESC	2	2015	No	
Budge Budge-CESC	3	2010	No	
HEL-CESC	1	2015	No	
HEL-CESC	2	2015	No	
Mejia-DVC	4			
Mejia-DVC	7	2010	No	
Mejia-DVC	8	2011	No	
Koderma-DVC	1			
Koderma-DVC	2			
Kahalgaon NTPC	4	2015	No	
Kahalgaon NTPC	5	2009	No	
Kahalgaon NTPC	6	2009	No	
Kahalgaon NTPC	7	2010	No	
Farakka NTPC	1	2008	No	
Farakka NTPC	2	2008	No	
Farakka NTPC	3	2008	No	
Farakka NTPC	4	2008	No	
Farakka NTPC	5	2008	No	
Farakka NTPC	6	2015	No	
Talcher Stage 1	1	2015	No	
Talcher Stage 1	2	2014	No	
Talcher Stage 2	3	No Details		
Talcher Stage 2	4	No Details		
Talcher Stage 2	5	No Details		
Talcher Stage 2	6	No Details		
Teesta V	1	2008	No	
Teesta V	2	2008	No	
Teesta V	3	2008	No	
Jorethang	1	2015	No	
Jorethang	2	2015	No	
Chuzachen HEP	1	2013	No	
Chuzachen HEP	2	2013	No	
ADHUNIK	1	2013	No	
ADHUNIK	2	2013	No	
GMR	1	2013	No	
GMR	2	2013	No	
GMR	3	2013	No	
IB TPS	1	2011	No	
IB TPS	2	2012	No	

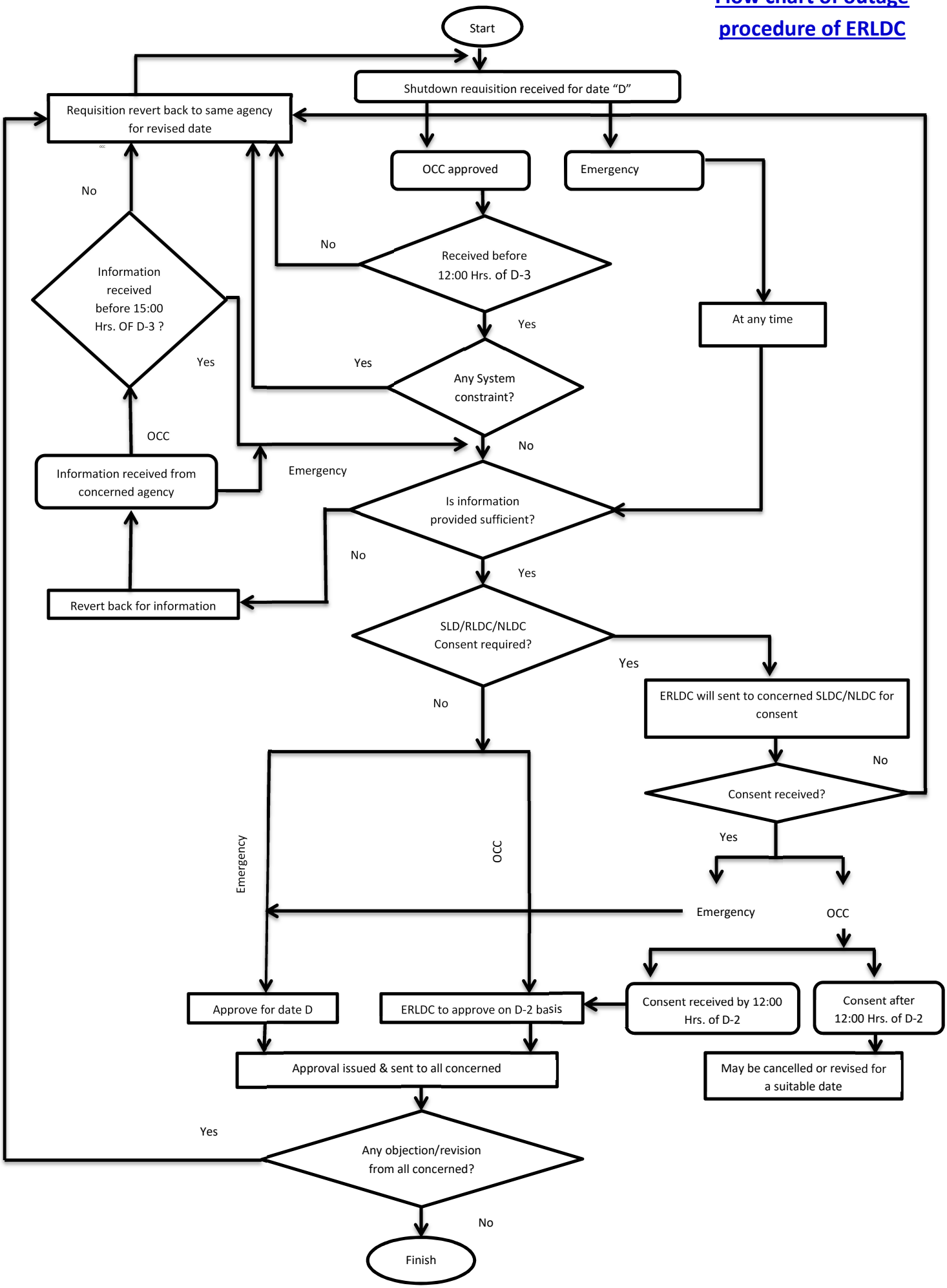
E. Generators where PSS tuning has been done and have submitted the report and the observation

Name of the Unit	Intra Plant Mode (Hz)	Step Size of U_{ref}	Oscillation periodwith out PSS	Oscillation period with PSS	Whether PSS is effective as per step response test	Year of Tuning	Whether Recommended for Tuning
Kahalgaon Unit 1		3 %	3 cycle	1 cycle	Yes	2017	Yes after Bus Split
Kahalgaon Unit 2	1.5 Hz	3 %	3 cycle	1 cycle	Yes	2016	Yes after Bus Split
Kahalgaon Unit 3		6 %	-	-	Provided picture not clear to analyze response	2016	To be decided after explanation by NTPC, Also after bus split, returning is required
Kahalgaon Unit 4	1.876	3 %	5 cycle	3 Cycle	Yes	2015	Yes after Bus Split
Kahalgaon Unit 5		4 %			No Appreciable Response	2009	To be decided after explanation by NTPC, Yes after Bus Split
Kahalgaon Unit 6		4 %			No Appreciable Response	2019	
Kahalgaon Unit 7		2 %			Provided picture not clear to analyze response	2010	
Teesta V Unit 1		2 %	5 cycle	2 cycle	Yes	2008	Yes in view of changes in network
Teesta V Unit 2		2 %	5 cycle	1 cycle	Yes	2008	
Teesta V Unit 3		2 %	5 cycle	1 cycle	Yes	2008	
Talcher Unit 3		3 %	-	-	PSS is showing response but noappreciable change in active power is seen.		NTPC may explain the details after which requirement of retuning to be decided.
Talcher Unit 6		3 %	3 cycle	2 cycle	Yes	2008	No
Budge Budge 1		2 %	5 cycle	1 cycle	Yes (Tuned for various contingency)	2015	No
Budge Budge 2		2 %	5 cycle	1 cycle	Yes (Tuned for various contingency)	2015	No
JITPL Unit 1		5 %	-	-	No Appreciable Response	2016	JITPL to explain the response based on which it will be decided.
JITPL Unit 2		5 %	-	-	No Appreciable Response	2016	
Chujachen Unit 1		2 %	6 cycle	1 cycle	Yes	2013	Yes in view of changes in network
Chujachen Unit 1		2 %	6 cycle	1 cycle	Yes	2013	
Tashiding Unit 2	1.5 Hz	4 %	5 Cycle	1 Cycle	Yes	2017	Yes in view of changes in network
Bandel Unit 5	1.5 Hz	5 %	6 Cycle	3 cycle	Yes	2019	Adequate
Teesta 3 Unit 5		2 % and 3 %	3 Cycle	2 Cycle	Yes	2017	Retuning to be done due to network change

Talcher Unit 1		1 %	2 cycle	2 cycle	No Appreciable Response	2015	Yes (Either NTPC explain why there is no appreciable change in damping or better resolution data to be submitted if damping has been observed)
Talcher Unit 2		3 %	4 cycle	2 Cycle	Yes	2014	Adequate
Bakreshwar Unit 1		3 %	3 cycle	2 cycle	Yes	2019	Adequate
Bakreshwar Unit 2		3 %	4 cycle	4 cycle	No Appreciable Response	2019	Yes, Returning required as PSS signal is in phase with disturbance which is not good for unit.
Bakreshwar Unit 3		3 %	3 Cycle	4 cycle	Negative Response	2019	Yes, PSS response is negative which is highly undesirable
Bakreshwar Unit 4		3 %	No Change in Power	No Change in Power	No Response	2019	Yes, tuning to be done at reduced power level as at full load transient response is not observed which also need to be checked.
Bakreshwar Unit 5		3 %	No Change in Power	No Change in Power	No Response	2019	Yes, tuning to be done at reduced power level as at full load transient response is not observed which also need to be checked.
Santaldih Unit 5		3 %	3 cycle	2 cycle	Yes (more observable in Excel Data)	2019	Adequate
Santaldih Unit 6		3 %	3 cycle	2 cycle	Yes (more observable in Excel Data)	2019	Adequate
GMR Unit 1		3 %	3 cycle	1 cycle	Yes	2013	Yes, as done long time back
GMR Unit 2		3 %	4 cycle	1 cycle	Yes	2013	Yes, as done long time back
GMR Unit 3		3 %	3 cycle	1 cycle	Yes	2013	Yes, as done long time back

Annexure-B13

Flow chart of outage procedure of ERLDC



ERLDC Shutdown approval process flow and time line-reg.

With the ever increase in transmission elements, the Grid is getting more secure and reliable. Still, outage of one element may affect severely to adjacent control area depending on system condition that area. Hence, planning and co-ordination between different control areas is absolute necessary. It has been seen that, due to lack of mutual consent/communication between two control area/license, outage of transmission elements are getting delayed or denied due to which monetary loss occurred as well as condition of that particular element worsen. ERLDC wants to draw the attention on the following points which are seen in Eastern constituents/license.

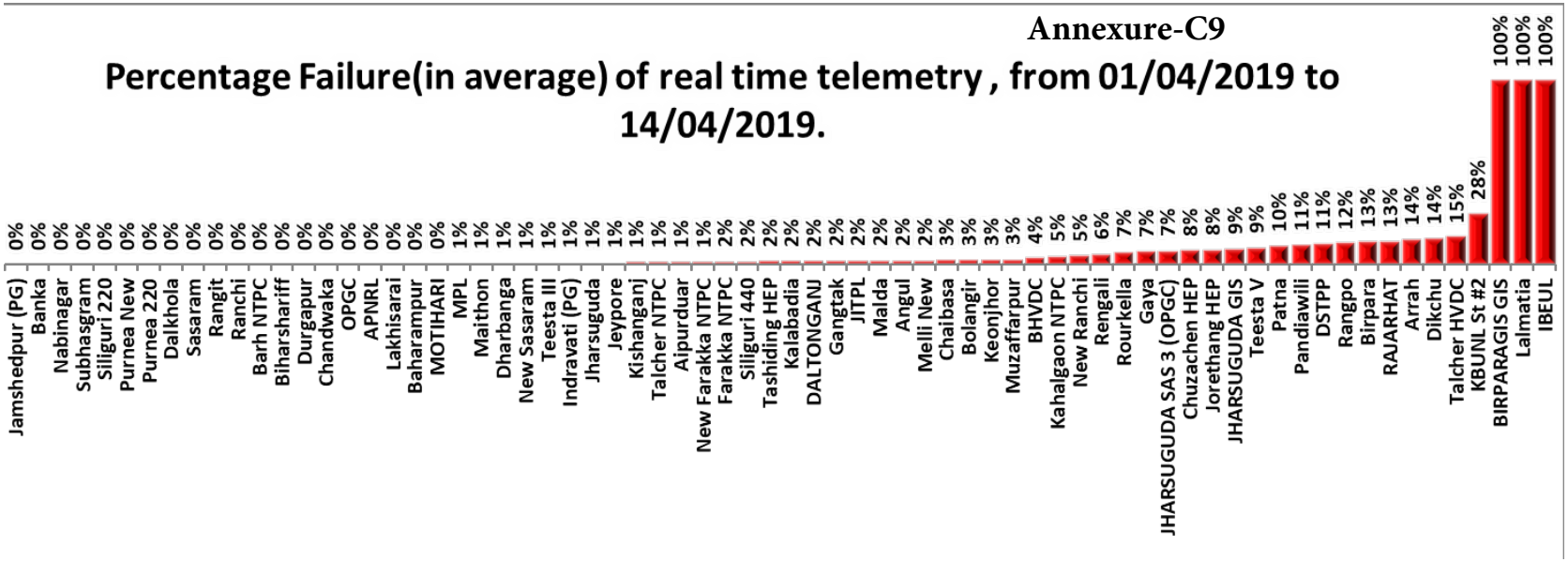
1. There is a shortage of designated outage coordinators in ER constituents /license. Sometimes proper communication is not possible with them.
2. E-mails are not reaching to them in time which is sent from ERLDC (particularly in GRIDCO case). Most of the time mails are seen when ERLDC inform them verbally.
3. It also leads to delayed consent thereby delaying the shutdown.
4. There is no substitute for the absence of outage co-ordination. Sometimes SLDC control room person are coordinating shutdown which is not a good practice. Progress tracking of any outage will be lost once shift change occurred.
5. Planned outages are being sent on holidays also which is very difficult to process.
6. We have seen that, in absence of competent authority (SLDC Hawarh and SLDC Patna for example), OCC approved shutdowns are also get cancelled.

To tackle all the above following suggestions may be considered:

1. Every Transmission license, generators and SLDCs must have dedicated outage co-coordinators and the contact information of all such co-coordinators shall be shared with all.
2. In absence of the designated outage co-coordinator, suitable substitute should be provided and the same shall be intimated to all.
3. All the indenting agencies are requested to communicate with their counterpart outage co-coordinator for smooth and speedy consent if it require.
4. Getting consent timely is very important. All the agencies, whose consent is required for a particular outage, are requested to adhere the time line given by ERLDC fails to which the outage will be cancelled or delayed accordingly.
5. All the agencies are requested to submit holiday list in their control area or any other contingencies well in advance to all.
6. All the agencies must provide their official as well as personal E-mail of their outage coordinators to ERLDC and ensure that checking of the both email are being done simultaneously.

Annexure-C9

Percentage Failure(in average) of real time telemetry , from 01/04/2019 to 14/04/2019.



Percentage failure in SAS/RTU data reporting for Central sector stations ▼

	14-Apr-19	13-Apr-19	12-Apr-19	11-Apr-19	10-Apr-19	9-Apr-19	8-Apr-19	7-Apr-19	6-Apr-19	5-Apr-19	4-Apr-19	3-Apr-19	2-Apr-19	1-Apr-19
JHARSUGUDA SAS	1%	0%	0%	0%	23%	1%	0%	0%	0%	1%	0%	0%	62%	14%
Chuzachen HEP	0%	0%	2%	21%	1%	0%	1%	0%	49%	35%	0%	0%	0%	0%
Jorethang HEP	23%	2%	4%	1%	3%	3%	3%	1%	1%	1%	3%	4%	2%	61%
JHARSUGUDA GIS	6%	15%	22%	15%	14%	7%	10%	9%	9%	8%	1%	1%	1%	2%
Teesta V	0%	89%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Patna	9%	16%	8%	10%	15%	12%	9%	9%	9%	10%	8%	8%	9%	9%
Pandiawili	11%	20%	26%	17%	22%	11%	10%	10%	11%	11%	0%	0%	0%	1%
DSTPP	0%	0%	40%	0%	39%	68%	0%	0%	0%	1%	0%	0%	8%	1%
Rangpo	0%	0%	0%	0%	56%	100%	9%	0%	0%	0%	0%	0%	0%	0%
Birpara	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	78%	100%
RAJARHAT	0%	0%	0%	0%	33%	1%	0%	6%	9%	0%	0%	51%	64%	14%
Arrah	0%	0%	1%	7%	11%	13%	11%	2%	1%	2%	3%	2%	45%	99%
Dikchu	0%	0%	0%	0%	7%	0%	0%	0%	0%	25%	0%	46%	78%	44%
Talcher HVDC	0%	0%	0%	0%	0%	1%	0%	12%	12%	74%	43%	5%	26%	42%
KBUNL St #2	22%	25%	16%	64%	53%	25%	22%	31%	30%	30%	16%	16%	19%	25%
BIRPARA GIS	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Lalmatia	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
IBEUL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Talcher STPS related matter

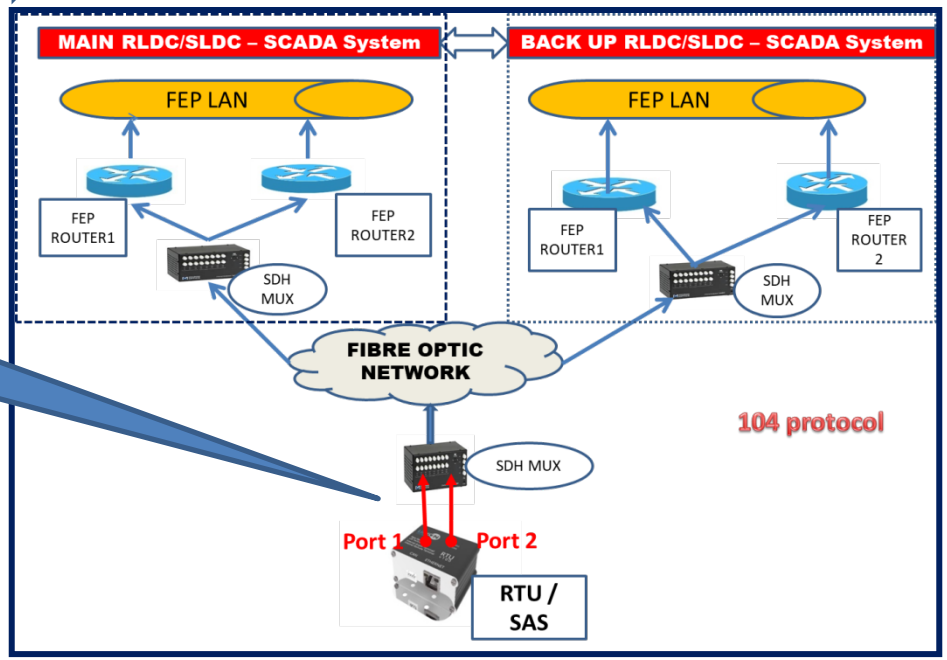
1. Non availability of elementary SCADA data

Sl No.	Feeder Name	Measurement	
1	400kv Rourkela -1	MVAr	
2	400/11 kV Station transformer #3	MVAr	→ Pending
3	400/11 kV Station transformer #4	MVAr	
4	400kvV Bus Sectionalizer of Bus 2 of stage 1 and Bus 2 of stage 2	MW & MVAr	
5	GT - 6 (UNIT-6)	MVAr	→ Pending

2. Stand by channel configuration.

Resolution:

1. **Port 1 & Port 2 should be dedicated for reporting to ERLDC Main CC and ERLDC Back up CC**



Non availability of SCADA data above 220 kV Level

WBSETCL

- Following 220 kV station data not available:
  - TLDP 4 220kV : Communication link failure.
  - Dharampur 220kV : Communication link issue.
  - Egra 220 : Communication link issue.
  - Bantala 220kV : Communication link issue.
  - Alipurduar 220kV: Communication link yet to be established.
  - Vidyasagar 220kV
  - Rishra 220kV

Non availability of SCADA data above 220 kV Level &132kV Station having tie lines

- **BIHAR**
  - Barauni TPS 220kV
  - Baisi 132kV.
- **Odisha**
  - Narsingpur 220kV Station commissioned on 24-08-2018. SCADA data yet to be integrated at Odissa SLDC end.
  - Nalco 220kV : Most of CB and Isolator data are not available
  - Jindal Steel and Power Limited (JSPL) 400kV: Most of CB and Isolator data are not available
- **JHARKHAND**
  - Hatia New 220 : RTU not reporting to SLDC.
  - Dumka 220 : RTU not yet integrated at Jharkhand SLDC.
  - Jamtara 132kV
  - Dalbhumgarh 132kV
  - Garwa 132kV
  - Deoghar 132kV
  - Kendposi 132 kV

Annexure-C18

SIEMENS

ENERGY MANAGEMENT

To
Eastern Region Power Committee
14, Golf Club Road , Tollygunge
Kolkata-700033

Name: Archik Byabortta
Designation: RC IN EM S ER
(Energy Management – Sales)
Mobile: 8910894204
Email: Archik.byabortta@siemens.com

Kind Attention: Mr J. Bandyopadhyay
Member Secretary

Date: 20/03/2019

Subject: Request for coordination of Maintenance & support (AMC) renewal of PSS®E supplied Licenses through Power grid for state transmission utilities (STU's), State load dispatch center's for Eastern Region.

Reference PGCIL Contract No: NO. CC-CS/357-CC/ITSW-1900/3/G2/CA/4394 DATED 13.8.2012 FOR PROCUREMENT OF UPGRADED VERSION OF POWER SYSTEM ANALYSIS SOFTWARE (PSS/E), IMPARTING EXPERT PRODUCT TRAININGS AND PROVIDING MAINTENANCE & SUPPORT - MAINTENANCE & SUPPORT RENEWAL & CC-CS/357-CC/ITSW-1900/3/G2/CA/4394/AMEND-1 DATED 30.04.2013.

Dear Sir,

As you are aware, Power grid had done One-time Capacity Building exercise for different stake holders under which 249 no's of PSS®E Licenses were distributed to Power grid, STU's, SLDC's RLDC's, CEA, CERC, SERC etc. in the year 2012 that includes 6 years of maintenance & Support for supplied licenses which has ended on 30th Nov,2018.

In this regard, we would like to request Regional Power Committees (RPC's) to act as an coordinator/aggregator and get the maintenance & support renewed of all the existing supplied licenses for the entities falling under your jurisdiction so that all these licenses can be upgraded with new features and we can continue to support seamlessly **the way they have been doing it on annual basis since Dec, 2012**

With ERPC playing the role of a coordinator/aggregator, following challenges can be avoided;

- Supporting PGCIL/CEA/NLDC **to have a common platform of PSS®E across all states and seamless integration of network models**. If all stakeholders are not current on M&S then they will not have same version of PSS®E which would **create difficulties to PGCIL/CEA/NLDC to synchronize with other state utilities because of version mismatch issues.**
- STU's and SLDC's would find it **difficult to justify & purchase M&S separately** as original contract was not decided by them.
- M&S price approval at each state (even for the interested states) would be a long-time process.
- **Conducting PSS®E UGM every year would be difficult** as only few entities would be current on M&S.
- The implementation of a **country wide network model management centrally** (for e.g. Model on Demand (MOD) kind of application) for long term planning across India becomes more challenging if other stakeholders are not current in M&S with the latest version of the software
- **PTI supporting entities by providing free training sessions across all regions (on quarterly basis)** thus supporting them -in the implementation of updates as well as other PSS®E related topics would not be possible if some STU's do not renew the M&S.
- Conducting quarterly webinars to resolve PSS®E specific user issues or highlighting new features would be difficult if some STU's do not renew the M&S

SIEMENS

Role of Maintenance & Support Programme for supplied PSS®E licenses.

The M&S program has its goal to seamless usage of PSS®E at PGCIL and other stakeholders for productive use by all its engineers in more than one hundred different locations spread across the country. Siemens is firmly committed to this and the comprehensive program offered to PGCIL goes well beyond the standard M&S components of software support and product upgrades. It is a comprehensive program intended to address the specific requirements of PGCIL and other stakeholders so that the continuous usage of updated PSS®E is ensured at PGCIL and other stake holders in the country.

Please note Maintenance & support is a full featured programme that provides significant additional value to the end users and majorly include the following inherent benefits which shall be covered as part of these services.

- Free Software subscription: This keeps PSS®E users current with the most up-to-date PSS®E features and functions. With this service PSS®E users automatically get the latest release of PSS®E with all its new features, models, and bug fixes. In addition, to the latest version releases, users who have reported a bug that needs to be fixed can download software patches. All new releases during the maintenance & support (M&S) period, **two new versions are released every year free of cost with enhanced features based on customer feedback.**
- Technical Support: Specific features include **free unlimited 24-hour access to Siemens PTI Support website for 24-hour web-based reporting and case tracking**, 24/7 technical support by expert product engineers with guaranteed response within 24 hours.
- **Direct link to product managers & roadmaps** through access to PSS® Ideas Portal (www.siemens.com/pss-ideas) community for submitting, voting, and commenting on PSS® product ideas.
- Beta test participant: Licensee may be invited to participate in Beta testing of future releases.
- **Free updates and patches to the current and previous versions of the program.**
- Access to the "users-only" area of our World Wide Website where you get details of all the updates of the software and details recently added new models (e.g. renewable) which can be directly downloaded
- **Conducting the Indian Users Group Meetings (UGM)** and address the key topics, issues, performance review and best practice. The following is included.

  Performance Review: This will include a meeting with a senior PSS®E support engineer on site in India. It will be an open forum discussion on the PSS®E product roadmap, and any PSS®E operational topics. Engineers will be able to engage with the PSS®E support expert to get many of their questions and issues resolved instantaneously.

  Best practice Check: This is an appraisal of all aspects of STU's implementation of PSS®E by experienced Siemens technical staff. This program is intended to help utilities establish best-in-class operational procedures and optimal use of PSS®E
- **Free License support even in case of broken dongles**
- A reasonable amount of support in the installation and operation of the program for the current revision and last previous revision of the program. Support requests are accepted via telephone or email or personnel visit

Additional M&S Support: Siemens PTI would also conduct a survey on an all-India basis where every stakeholder would be approached for any support and training needs for PSS®E software. However, Siemens PTI is committed to support the stakeholders as following:

- Siemens PTI to conduct **one basic PSS®E training per quarter in all 4 regions** across the country to cater to the needs of various regions on planning & operational planning studies.
- Siemens PTI to support entities who are currently not using PSS®E by providing the required support to migrate to PSS®E.
- Siemens PTI would also be in touch with Power Grid on a quarterly basis for addressing any issues in PSS®E and provide possible resolutions to the issues

SIEMENS

We would once again request ERPC to lead the M&S Renewal Contract for jurisdiction entities (as per below) and exploit the benefit of bulk pricing discount from Siemens.

Upon the confirmation of ERPC, we would submit a maintenance & support price considering the discount of a bulk order for below 20 no's licenses for next 5 years.

The list of PSS®E Licenses which were distributed in ER States will be as following:

S.No	Entity Name	Number of PSS®E licenses
1	Damodar Valley Corporation	2
2	Damodar Valley Corporation (SLDC)	2
3	Jharkhand State Electricity Board	2
4	Jharkhand State Electricity Board (SLDC)	2
5	Odisha Power Transmission Company Ltd	2
6	Odisha Power Transmission Company Ltd (SLDC)	2
7	West Bengal State Electricity Transmission Company Ltd	2
8	West Bengal State Electricity Transmission Company Ltd (SLDC)	2
9	Bihar State Power Transmission Company Ltd	4
Total: 20 Licenses		

(Name) Brajesh Malviya
(Designation) Regional Head- Sales
Siemens Limited

Existing Substations (220 KV and above) as on 31st December 2018

1. Intra- State:

S.no.	State	Name of Transmission Utility / Tr. Service Provider (TSP)	Substation name	Highest system voltage level (kV)	Transformation voltage Ratio (s)	Transformation Capacity (MVA) at each transformation level	Line reactors (in MVAR)			Bur Reactors (in MVAR)		
							765kV	400kV	220kV / 132kV	765kV	400kV	220kV / 132kV

For Example

1	*AP*	*APTRANSCO*	*X*	*765kV*	*765/400kV* *400/220kV*	*1500* *1000*	*480*	*126*	*-*	*660*	*205*	-

2. Inter-State

S.no.	State	Name of Transmission Utility / Tr. Service Provider (TSP)	Substation name	Highest system voltage level (kV)	Transformation voltage Ratio (s)	Transformation Capacity (MVA) at each transformation level	Line reactors (in MVAR)			Bur Reactors (in MVAR)		
							765kV	400kV	220kV / 132kV	765kV	400kV	220kV / 132kV

Existing Transmission Lines (220 KV & above) as on 31st December 2018

1. Intra- State:

s.no.	State	Transmission Utility	Transmission Line		Voltage Level (KV)	Length of Transmission Lines (**in Circuit Kms**)	S/C or D/C or S/C line on D/C towers or multi-circuit & multi voltage	No. of conducter(s)/ phase	Type & Name of conductor (ACSR/AAAC/AL59/ any other; Bersimis/ Lapwing/ Moose/ Zebra/Panther/ Dog/any other)
			From (End 1)	To (End 2)					

For example:

1	*Assam*	*AEGCL*	*A*	*B*	*220*	*150*	*D/C*	*1*	*ACSR Zebra*

2. Inter- State:

s.no.	From State	To State	Transmission Utility	Transmission Line		Voltage Level (KV)	Length of Transmission Lines **(in Circuit Kms)**	S/C or D/C or S/C line on D/C towers or multi-circuit & multi voltage	No. of conducter(s)/ phase	Type & Name of conductor (ACSR/AAAC/AL59/ any other; Bersimis/ Lapwing/ Moose/ Zebra/Panther/ Dog/any other)
				From (End 1)	To (End 2)					

ANNEXURE-E

CESC CAPACITORS DETAILS

List if 6/11kV Capacitor Bank

STATION	CAPACITY (MVAR)	STATION	CAPACITY (MVAR)
Alipur	3	Kamarhati	4
Amherst Street	4.5	Kankurgachi	4.8
Auckland	3	Kasba	4.482(11kV)
Akra	4	Kuthighat	4
Baranagar	4.84	Kidderpore	4.5
Bhatpara	4	Liloah	4
Bally	3	Majerjat	3
Barisha	4.5	Maheshtala	4
Barrackpore	6	New Ballygunge East	4
BBD Bag	4	Princep Street	4
Belur	3	Patuli	4(11kV)
Budge Budge	1.5	Rabindra Sadan	4
Budge Budge South	4.8	Rashbehari	4(11kV)
Canal	4.5	Ritchie	4.8
Central Avenue	4	Srerampur	4
Dhakuria	3	Science City	4.8(11kV)
Dum Dum	4.5	Shalimar	3(2x1.5)
Entally D/S	1+3	Sinthia	4.5
Foreshore	3	Southern (Voltas)	6
Fort Gloster	1.59	Southern (Voltas)	4.5
Gourhati	4	South City	4.8
Grey Street	3.6	Strand South	4.842
Howrah Central	3	Strand North	6
Howrah South	4.842	Talpukur	4
Howrah West	4.5	Taratala	4
Jessore West	3	Tollygunge	4.8 (11kV)
Jadavpur	4	**Total**	**215.656**
Jadavpur	4.8(11kV)		

List of 132kV Capacitor Bank

STATION	CAPACITY (MVAR)
Taratala	50
East Calcutta	50
Chakmir	50
Total	**150**

List of 33kV Capacitor Bank

STATION	CAPACITY (MVAR)	STATION	CAPACITY (MVAR)
BBD Bag	15	NCGS	2x10
KRS 33 KV ODY	30	SRS	2x15
KRS M1 SECTION	30	MAJ	2x15
KRS M3 SECTION	30	JAD M1 SECTION	2x15
MSS	20	JAD M2 SECTION	2x10
BRS	15	**Total**	**315**
PRS	30		
PLN	15		

Planned Installation of Capacitor Banks in 2010-11

STATION	CAPACITY (MVAR)	LEVEL
EMSS	50	132kV
Botanical Gardens S/s	30	33kV
6 and 11 KV Distribution Stations	15-20	6/11 kV

Connected Total MVAR = 680.656

BSEB

Capacitor Bank installation at different Grid sub-station of BSEB

Sl. No.	Name of Grid S / Stn.	No. of Capacitor Bank	Capacity
1	Jakkanpur	I	2x 12000 KVAR
		II	2x 12000 KVAR
		III	2x 12000 KVAR
2.	Fatuah	I	2x 12000 KVAR
		II	2x 12000 KVAR
		III	2x 12000 KVAR
3.	Khagaul	I	2x 12000 KVAR
		II	2x 12000 KVAR
		III	2x 12000 KVAR

WBSEDCL

Present Capacitor			Future Plan of Capacitive Compensation		
Sl. No.	Name of EHV S/Stn.	Exist Comp (MVAR)	Sl. No.	Name of EHV S/Stn.	Exist Comp (MVAR)
1	Adisaptagram	10.0	1	Adisaptagram	10.0
2	Bankura	10.0	2	Arambag	10.0
3	Barasat	10.0	3	Asokenagar	10.0
4	Joka	10.0	4	Balurghat	5.0
5	Berhampur	20.0	5	KLC	10.0
6	Bishnupur	10.0	6	Barasat	20.0
7	Bolpur	20.0	7	Basirhat	10.0
8	Ch. Kona Road	10.0	8	Joka	10.0
9	Debogram	20.0	9	Berhampur	10.0
10	Dharampur	10.0	10	Bongaon	10.0
11	Egra	10.0	11	Chanditala	10.0
12	Falta	20.0	12	Coochbehar	5.0
13	Gangarampur	14.4	13	Dalkhola	10.0
14	Gokarna	10.0	14	Dharampur	10.0
15	Kalyani	10.0	15	Domjur	10.0
16	Katwa	20.0	16	Haldia	5.0
17	Kolaghat	10.0	17	Jangipara	5.0
18	Krishnagar	28.8	18	Khanyan	5.0
19	Liluah	20.0	19	Lakhikantapur	5.0
20	Midnapur	10.0	20	Liluah	10.0
21	Moinaguri	10.0	21	Malda	10.0
22	NBU	10.0	22	Midnapur	5.0
23	Raghunathgunj	10.0	23	New Haldia	5.0
24	Rishra	30.0	24	Pingla	10.0
25	Sainthia	20.0	25	Purulia	10.0
26	Salt Lake	45.0	26	Raigunj	10.0
27	Samsi	10.0	27	Raina	10.0
28	Satgachia	20.0	28	Rampurhat	10.0
29	Titagarh	25.0	29	Ranaghat	10.0
	Total	463.2	30	Siliguri	10.0
			31	Sonarpur	10.0
			32	Tamluk	10.0
			33	Tarakeswar	5.0
			34	Titagarh	10.0
			35	Ukhra	10.0
			36	Uluberia	10.0
				Total	325

OPTCL

Annexure III

2 of 2

List of Capacitor Banks installed at different Grid S/Ss and proposed installation programme

Name of Sub Station	S/S Capacity (MVA)	Rating of capacitor units (MVAR)	No of units	Total installed Capacity (MVAR)
Aska	2x40	5	1	5
Balugaon	2x20	5	1	5
Berhampur	1x12.5+1x40+1x20	10	1	10
Bolangir	2x40+1x12.5	5	2	10
Bhubaneswar	3x40	5	1	5
Cuttack	2x40	5	2	10
Kendrapara	1x40+1x20+1x12.5	5	2	10
Khurda	3x40	5	2	10
Puri	2x31.5	5	1	5
Balasore	2x40+1x12.5	10	1	10
Baripada	2x31.5	5	2	10
Bhadrak	2x40	5	2	10
Jajpur Road	1x40+2x20	5	2	10
Total installed capacity				**110**
Proposed for installation				
Sonepur	2x12.5			10
Pattamundei	1x20+1x12.5			15
Kendrapara	1x40+1x20+1x12.5			20
Kharior	2x20			10
Jajpur Tpwn	1x40+2x20			20
Rairangapur	1x20+1x12.5			10
Puri	2x31.5			10
Ransingpur	2x40			10
Chandikhol	2x20			10
Choudwar	1x20+1x40+1x10			10
Cuttack	2x40			5
Nuapatna	1x12.5+1x20			15
Sunabeda	2x12.5+1x12.5			10
Jaleswar	2x20+1x12.5			10
Bhadrak	2x40			15
Paradeep	2x20			15
Balugaon	2x20			10
Berhampur	1x12.5+1x40+1x20			10
Khurda	3x40			10
Jagatsingpur	2x20			15
Balasore	2x40+1x12.5			15
Junagarh	2x12.5			10
Phulabani				10
Total capacity (Proposed)				**275**

Agenda – C 24:Changes in FTC formats

- In line of IEGC (2010) (upto 5th Amendment) clause no 6.3 & currently changes has done in TCT-2019-24 , some changes has been done in Annexure A1, A2 & B2. Which are as follows:

Annexure-A1

- **Additional points:**
  - **Schedule Date of Commercial Operation**:

    (As per original scheme)
  - **Project Scheme** : TBCB / Other than TBCB
  - **Associated elements of this project** :

    (In case co-ordinated Transmission/Generation evacuation project)

- **Section Annexure A6:** Connection Agreement/ **Implementation agreement (for non-TBCB project)** , if applicable along with all annexures.

- **Section Annexure A7 :** Project initiation/approval copy by competent authority.

Above mentioned points have been added in the updated FTC format A1

Changes in FTC formats (contd…)

Annexure-A2

- Additional point:
  - Section II> Element Ratings> Transmission Line
    7. Thermal Capacity (Thermal capacity for lines to be declared)

Annexure-B2

- **Point 2:** Table has been modified. Now onwards it is mandatory to co-ordinate & confirm the required changes in adjacent S/S of the two substation with which this line will be connected (Already being discussed in 78th PCC ERPC).

Sl No:	Name of the substation	Name of the line	Confirmation of suitable Protection Co-ordinations with adjacent connected S/S/ Line
			YES/NO

This portion added.

- **Point 3.0:** End to end PLCC testing (Voice & Protection channel) has been completed in co-ordination with other end substation.

Scope under which agency of PLCC coordination may also be mentioned in the indenting mail.

Annexure - A1

Format - I

Intimation by Transmission Licensee regarding anticipated charging of new elements

<Name of Transmission Licensee>

Name of the transmission element :

Type of Transmission Element : Transmission Line / ICT / Bus Reactor / Line Reactor / Bus / Bay / Series Capacitor/ Series Reactor/Station transformer/ Generator transformer/STATCOM/ HVDC Terminal /Converter Transformer/ HVDC Line / MSR / MSC / TCSC / FSC

Voltage Level :

Owner of the Transmission Asset :

Likely Date and time of Charging :

Likely Date and time of start of Trial Operation

Schedule Date of Commercial Operation:
(As per original scheme)

Project Scheme : TBCB / Other than TBCB

Associated elements of this project :
(In case co-ordinated Transmission/Generation evacuation project)

Place:
Date:

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

Encl: Please provide full details.

Annexure A2 : Format I A: List of elements to be charged and Element Rating details

Annexure A3 : Single line diagram of the concerned substations, along with status of completion of each dia / bus / breakers

Annexure A4 : List of SCADA points to be made available

Annexure A5 : Location of installation of Energy meters as per relevant CEA regulations

Annexure A6 : Connection Agreement/Implementation agreement , if applicable along with all annexures

Annexure A7 : Project initiation/approval copy by competent authority

Annexure - A2

Format - I A

List of elements to be charged and Element Rating details

I. List of Elements to be charged:

II. Element Ratings:

a. Transmission Line -

1	From Substation	
2	To Substation	
3	Voltage Level (kV)	
4	Line Length(km)	
5	Conductor Type	
6	No of sub-conductors	
7	Thermal Capacity	

b. ICT -

1	Voltage(HV kV / LV kV)	
2	Capacity (MVA)	
3	Transformer Vector group	
4	Total no of taps	
5	Nominal Tap Position	
6	Present Tap Position	
9	Tertiary Winding Rating and Ratio	
10	% Impedance	

c. Shunt/Series Reactor -

1	Substation Name/ Line Name	
2	Voltage	
3	MVAR Rating	
4	Switchable / Non Switchable	
5	In case of Bus Reactor, whether it can be taken as line reactor	

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

Annexure B2

Format IIIA

< Name and Address of Transmission Licensee>

Undertaking by Transmission Licensee in respect of Protective systems

The following transmission element is proposed to be charged on _____<date> tentatively around ___hours.
S no and Name of transmission element

1.0 It is certified that all the systems as stipulated in Part-III of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 (as amended from time to time) have been tested and commissioned and would be in position when the element is taken into service.

2.0 The protective relay settings have been done as per the guidelines of the Regional Power Committee (RPC) as per section 5.2 l of the Indian Electricity Grid Code (IEGC). The necessary changes have also been made/would be made appropriately for the following lines at the following substations:

Sl No:	Name of the substation	Name of the line	Confirmation of suitable Protection Co-ordinations with adjacent connected S/S/ Line
			YES/NO

3.0 End to end PLCC testing (Voice & Protection channel) has been completed in co-ordination with other end substation.

Place:
Date:

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

Power Supply Position for May 2019

SL.NO	PARTICULARS	May-19	May-19
1	BIHAR		
	i) NET MAX DEMAND	5300	2800
	ii) NET POWER AVAILABILITY- Own+KBUNL	316	171
	Central Sector+Bi-Lateral	3596	2239
	iii) SURPLUS(+)/DEFICIT(-)	-1388	-390
2	JHARKHAND		
	i) NET MAX DEMAND	1380	825
	ii) NET POWER AVAILABILITY- Own Source	455	237
	Central Sector+Bi-Lateral+KBUNL	904	542
	iii) SURPLUS(+)/DEFICIT(-)	-21	-45
3	DVC		
	i) NET MAX DEMAND (OWN)	2980	1960
	ii) NET POWER AVAILABILITY- OWN SOURCE	5247	3254
	- Central Sector+MPL+KBUNL	552	316
	BI-LATERAL EXPORT BY DVC	1772	1318
	iii) SURPLUS(+)/DEFICIT(-) AFTER EXPORT	1048	292
4	ODISHA		
	i) NET MAX DEMAND	4700	2944.8
	ii) NET POWER AVAILABILITY- OWN+IPP+CPP	3913	2498
	- Central Sector+KBUNL	1658	1054
	iii) SURPLUS(+)/DEFICIT(-)	120	608
5	WEST BENGAL		
5.1	WBSEDCL		
	i) NET MAX DEMAND (OWN)	6800	3678
	ii) IPCL DEMAND	86	64
	iii) TOTAL WBSEDCL's DEMAND (incl.B'Desh+Sikkim+IPCL)	7091	3895
	iv) NET POWER AVAILABILITY- Own Source	3690	2477
	- Import from DPL	155	111
	- Central Sector+Bi-lateral+IPP&CPP+TLDP+IPCL	2428	1449
	v) SURPLUS(+)/DEFICIT(-) AFTER EXPORT	-819	142
	vi) EXPORT (TO B'DESH & SIKKIM)	205	153
5.2	DPL		
	i) NET MAX DEMAND	310	210
	ii) NET POWER AVAILABILITY	465	321
	iii) SURPLUS(+)/DEFICIT(-)	155	111
5.3	CESC		
	i) NET MAX DEMAND	2190	1103
	ii) NET POWER AVAILABILITY - OWN SOURCE	820	536
	IMPORT FROM OTHER SOURCE	830	176
	IMPORT FROM HALDIA ENERGY LTD.	540	391
	iii) TOTAL AVAILABILITY	2190	1103
	iv) SURPLUS(+)/DEFICIT(-)	0	0
6	WEST BENGAL (WBSEDCL+DPL+CESC+IPCL) (excluding DVC's supply to WBSEDCL's command area)		
	i) NET MAX DEMAND OWN (Excl. Export)	9386	5055
	ii) NET POWER AVAILABILITY- Own Source	4975	3334
	iii) CS SHARE+BILETARAL+IPP/CPP+TLDP+HEL	3798	2016
	iv) SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXP.	-614	295
	v) SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXP.	-819	142
7	SIKKIM		
	i) NET MAX DEMAND	100	45
	ii) NET POWER AVAILABILITY- Own Source	8	3
	- Central Sector	171	99
	iii) SURPLUS(+)/DEFICIT(-)	80	57
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR		
	i) NET MAX DEMAND	23609	13630
	ii) BI-LATERAL EXPORT BY DVC	1772	1318
	iii) EXPORT BY WBSEDCL	205	153
	iv) NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+CPP+HEL)	25594	15765
	v) PEAK SURPLUS(+)/DEFICIT(-) OF ER AFTER EXPORT (v = iv - i -ii - iii)	7	664

Annexure-D2

ERLDC, KOLKATA										
TRANSMISSION ELEMENTS OUTAGE APPROVED IN 156th OCC MEETING OF ERPC										
		FROM		TO						
SL. No	NAME OF THE ELEMENTS	DATE	TIME	DATE	TIME	REMARKS	S.D availed BY	Reason	SUBJECT TO CONSENT FROM AGENCY	COMMENT
1	80 MVAR B/R at Pandiabili	01-05-2019	10:00	01-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	AMP		
2	220KV Siliguri-Kishengunj # I & II	01-05-2019	08:00	02-05-2019	17:00	OCB	POWERGRID, ER-II	For shorting at Anch-I tower (M/C)to by-pass the LILO portion of 220KV SLG-KNE-DLK -I&II line terminating Kishanganj S/S . This arrangement required for tower erection on new Pile foundation near Kishanganj S/S. After shoring line will be established as 220KV SLG-DLK line . Antipacted outage duration of LILO M/C portion feeding Kishanganj S/S 40 days.		
3	220KV Dalkhola-Kishengunj # I & II	01-05-2019	08:00	02-05-2019	17:00	OCB	POWERGRID, ER-II	For shorting at Anch-I tower (M/C)to by-pass the LILO portion of 220KV SLG-KNE-DLK -I&II line terminating Kishanganj S/S . This arrangement required for tower erection on new Pile foundation near Kishanganj S/S. After shoring line will be established as 220KV SLG-DLK line . Antipacted outage duration of LILO M/C portion feeding Kishanganj S/S 40 days.		
4	220 KV TBC at Malda	01-05-2019	08:00	31-05-2019	17:00	OCB	POWERGRID, ER-II	ERSS-XVII-B Constructional work	WB	
5	400KV TBC at Malda	01-05-2019	08:00	31-05-2019	17:00	OCB	POWERGRID, ER-II	ERSS-XVII-B Constructional work	WB	
6	220 KV Bus 1&2 with Binaguri-siliguri 1&2, Binaguri Birpara1&2, Bus sectionalizer 1&2	01-05-2019	09:00	01-05-2019	15:00	ODB	POWERGRID, ER-II	for stringing of Jackbus of 315 MVA ICT#3(Construction package-Techno) ERSS-XIV	WB	
7	220\132 Kv 100 MVA ICT-1 BAY 211 at Rangpo	01-05-2019	08:00	04-05-2019	17:00	OCB	POWERGRID, ER-II	For rectification of SF6 gas leakage repair work,		
8	220 KV BUS-II at Durgapur	01-05-2019	09:00	01-05-2019	17:00	ODB	POWERGRID, ER-II	220 KV Jumper connection for ICT-III & B/B Stability test. ICT-II & DVC-II are connected in Bus-II, Hence S/D of Bus-II both the elements to be taken in S/D.	DVC	
9	220 KV Durgapur-Parulia DVC-II	01-05-2019	09:00	01-05-2019	17:00	ODB	POWERGRID, ER-II	220 KV Jumper connection for ICT-III & B/B Stability test. ICT-II & DVC-II are connected in Bus-II, Hence S/D of Bus-II both the elements to be taken in S/D.	DVC	
10	315 MVA ICT-II at Durgapur	01-05-2019	09:00	01-05-2019	17:00	ODB	POWERGRID, ER-II	220 KV Jumper connection for ICT-III & B/B Stability test. ICT-II & DVC-II are connected in Bus-II, Hence S/D of Bus-II both the elements to be taken in S/D.	DVC	
11	403 ICT#1 Main Bay at Subhasgram SS	01-05-2019	09:00	01-05-2019	17:00	ODB	POWERGRID, ER-II	AMP work		
12	400 KV BUS-I of NTPC Farakka	01-05-2019	09:00	01-05-2019	18:00	ODB	POWERGRID, ER-II	For disconnecting BUS isolator of bay no-22 from BUS-I (For augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	What are the other elements will be out?	
13	125 MVAR BUS REACTOR	01/05/19	09:00	02/05/19	18:00	OCB	ER-II/Odisha/Balangir	Replacement of defective Air Cell of conervator.		
14	400 KV Rourkela-Talcher Line # 1 in Non-Auto Mode	01/05/19	08:00	10-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For PID Work		
15	400KV CHAIBASA#2 MAIN BAY (BAY NO.-409)	01-05-2019	09:00	09-05-2019	18:00	OCB	ER-II/ODISHA/ROURKELA	RETROFITTING OF OLD HYDRAULIC OPERATED BHEL MAKE CB BY NEW SPRING-SPRING OPERATED CGPISL MAKE CB		
16	400KV ROURKELA-CHAIBASA#2	01-05-2019	09:00	01-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	FOR CRANE MOVEMENT FOR DISMANTLING OF INTERRUPTER & POLE COLUMN OF OLD BHEL MAKE CB OF 40952.		
17	132KV LAKHISARAI-JAMUI-I	01-05-2019	10:00	01-05-2019	14:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
18	400kV BUS-4 AT BIHARSHARIFF	01-05-2019	09:00	01-05-2019	17:00	ODB	POWERGRID ER-I	For jumper opening of 26th bay for erection of 25th bay equipments of new 500 MVA ICT -4 and AMP work		
19	400KV TIE BAY OF KODERMA-II AND FUTURE AT BIHARSHARIFF	01-05-2019	09:00	30-05-2019	17:00	OCB	POWERGRID ER-I	For erection of 25th bay equipments of new 500 MVA ICT -4 as Jack bus should be uncharged.		
20	400 kV Maithon-Gaya-1	01-05-2019	09:00	30-05-2019	18:00	OCB	POWERGRID ER-I	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80	NLDC	
21	400 kV Maithon-Gaya-2	01-05-2019	09:00	30-05-2019	18:00	OCB	POWERGRID ER-I	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80	NLDC	
22	400 kV Koderma-Gaya-1	01-05-2019	09:00	30-05-2019	18:00	OCB	POWERGRID ER-I	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80	DVC	
23	400 kV Koderma-Gaya-2	01-05-2019	09:00	30-05-2019	18:00	OCB	POWERGRID ER-I	Destringing, erection & re-stringing of multi ckt. Tower Loc. 80	DVC	
24	765kV Gaya-Balia line	01-05-2019	08:00	15-05-2019	18:00	ODB	POWERGRID ER-I	FOR TOWER STRENGHTHENING WORK.	NLDC	
25	220kV Bus Coupler AT SASARAM	01-05-2019	09:00	01-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
26	400KV Bus -I AT PATNA	01-05-2019	09:30	03-05-2019	17:30	ODB	POWERGRID ER-I	CB and sky bus connection under SS03 package of Patna Nabinagar Ckt 1	BSEB	
27	500MVA ICT 1 AT PATNA	01-05-2019	09:30	20-05-2019	17:30	OCB	POWERGRID ER-I	Construction of Firewall of ICT 2 and equipment uprating & jumper connection	BSEB	
28	400 kV Patna Barh line 1	01-05-2019	09:30	15-05-2019	17:30	OCB	POWERGRID ER-I	for commissioning of 80 MVAR Bus reactor as switchable line reactor Under Nabinagar - II package		
29	A/R of 400 KV Biharsarif - Banka - II	01-05-2019	08:00	31-05-2019	17:00	ODB	POWERGRID ER-I	for OPGW Installation work		

30	A/R of 400 KV Biharsarif -Koderma - II	01-05-2019	08:00	31-05-2019	17:00	ODB	POWERGRID ER-I	for OPGW Installation work		
31	315 MVA ICT-II at N.Duburi grid S/s	02-05-2019	07:00	09-05-2019	17:00	ODB	OPTCL	Painting work		
32	220 KV Budhipadar-Korba-I & II	02-05-2019	08:00	07-05-2019	16:00	ODB	OPTCL	Interposing of OC+6 type tower for adequate clearance to 132 KV Brajrajnagar-RTSS, Kechhobahal line	NLDC	NLDC ASKED FOR RESTRICTION OF DRAWL THROUGH RAIGARH-III AT 100 MW
33	400kV DSTPS-RTPS Ckt#1	02-05-2019	10:30	03-05-2019	17:00	ODB	DVC	Relay Maintenance work at both DSTPS and RTPS end simultaneously		
34	400KV BUS-I at Malda	02-05-2019	08:00	02-05-2019	17:00	ODB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
35	220 KV Bus #1 at Binaguri	02-05-2019	09:00	02-05-2019	17:00	ODB	POWERGRID, ER-II	Equipment erection of 220 KV ICT#3 bay		
36	132kV BUS-1 at Rangpo	02-05-2019	09:00	12-05-2019	17:00	OCB	POWERGRID, ER-II	For Bus extension to new Chuzachen bays (Construction works)	SIKKIM	
37	400 KV D/C Maithan - Jamshedpur (TATA) (TL -(316-317)	02-05-2019	6.00	03-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 85/0 (DD+25)-86/0(DD+25+1.5 RC). Span Length-262 mtr	DVC	
38	1) 400 KV Mejia (DVC)-Jamshedpur (PG)- Line-1 2) 400 KV MAITHON (PG)- JAMSHEDPUR (PG)- LINE -2	02-05-2019	6.00	03-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 85/0 (DD+25)-86/0(DD+25+1.5 RC). Span Length-262 mtr	DVC	
39	400 KV BUS-III at Durgapur	02-05-2019	09:00	02-05-2019	17:00	ODB	POWERGRID, ER-II	ICT-III 400 KV Jumper connection under construction head		
40	415 ICT#5 Main Bay at Subhasgram SS	02-05-2019	09:00	05-05-2019	17:00	ODB	POWERGRID, ER-II	AMP Work		
41	500 MVA ICT-1 at Pandiabili	02-05-2019	09:00	02-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Retrofitting of Back up impedance relays.	GRIDCO	
42	765KV 240 MVAR Bus Reactor-1 at Sundergarh	02/05/19	10:00	02/05/19	12:00	ODB	ER-II/Odisha/Sundergarh	Taking R-Ph Reactor in to service in place of Spare Reactor after attending oil leakage of R-Ph reactor	NLDC	
43	400 KV ICT # 1 Main Bay (Bay No-407)	02/05/19	09:00	02-05-2019	17:00	ODB	ER-II/Odisha/Rengali	AMP Work		
44	132KV LAKHISARAI-JAMUI-II	02-05-2019	10:00	02-05-2019	14:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
45	400 KV MAIN BUS-1 AT RANCHI	02-05-2019	09:30	03-05-2019	17:00	OCB	POWERGRID ER-I	For Errection & Commisssioning of Jack bus for Tie Bay of Ranchi-New Ranchi-I & II	JSEB	
46	400 KV 125 MVAR BR-I AT GAYA	02-05-2019	09:00	04-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.		
47	400 KV BUS-I at Gaya S/S	02-05-2019	09:00	07-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.	BSEB	
48	400/220KV 500 MVA ICT-1 KISHANAGNJ	02-05-2019	08:30	02-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
49	400kV JSR -DURGAPUR LINE	02-05-2019	09:30	02-05-2019	17:30	ODB	POWERGRID ER-I	Static Auto reclose relay to be replaced with numerical relay		
50	400KV North Bus-2 AT SASARAM	02-05-2019	09:00	02-05-2019	18:00	ODB	POWERGRID ER-I	AMP work	NLDC	
51	220kv Main bay of sipara -1 AT PATNA	02-05-2019	09:30	04-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
52	132KV Ara (PG)-Dumraon Trans. Line	02-05-2019	09:00	03-05-2019	17:00	ODB	BSPTCL	Maintenance work by tree pruning work		
53	50 MVA ICT -I 132/66 KV at Gangtok	03-05-2019	09:00	03-05-2019	18:00	ODB	POWERGRID, ER-II	For AnnualAMp Works	SIKKIM	
54	400KV BUS-II at Malda	03-05-2019	08:00	03-05-2019	17:00	ODB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
55	220 KV Bus #2 at Binaguri	03-05-2019	09:00	03-05-2019	17:00	ODB	POWERGRID, ER-II	Equipment erection of 220 KV ICT#3 bay		
56	500 MVA ICT #1 at Maithan	03-05-2019	08:00	03-05-2019	18:00	ODB	POWERGRID, ER-II	Rectification of MOG , CT replacement of main and X-mer bay and AMP	DVC	DRAWL RESTRICTION JSEB - 100 MW & DVC- 350 MW
57	315 MVA ICT#1 at Subhasgram S/s	03-05-2019	09:00	06-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of Numerical REF Relay	WB	
58	765/400kV, 3*500MVA ICT-1 at Angul	03-05-2019	09:00	03-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	Retrofitting of back up Impedance relay.Taking into service of B-phase ICT in place of spare ICT.	NLDC	
59	400 KV 406 Main Bay of 315 MVA ICT-II	03/05/19	09:00	03/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
60	500 MVA ICT-2 at pandiabili	03-05-2019	09:00	03-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Retrofitting of Back up impedance relays.	GRIDCO	
61	400kV Sundargarh-Raigarh Ckt#1	03/05/19	08:00	14/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	NLDC	
62	765KV Sundargarh-Angul Ckt #4 with LR at Sundergarh	03/05/19	10:00	03/05/19	12:00	ODB	ER-II/Odisha/Sundergarh	To take spare Reactor in to service in place of B-Ph Reactor for attending oil leakage in B-Ph reactor	NLDC	
63	400KV ROURKELA-CHAIBASA#2	03-05-2019	09:00	03-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	FOR CRANE MOVEMENT FOR ERECTION OF INTERRUPTER & POLE COLUMN OF NEW CGPISL MAKE CB OF 40952.		
64	220/132KV 160MVA ICT-1 AT PURNEA	03-05-2019	09:00	03-05-2019	17:00	ODB	POWERGRID ER-I	for 132KV Side Yph CVT replacement work	BSEB	
65	400KV Bus Reactor-1 (413 Bay) AT SASARAM	03-05-2019	09:00	03-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
66	220 KV Bus #2 at Maithan	04-05-2019	09:00	04-05-2019	17:00	ODB	POWERGRID, ER-II	For replacement of B Isolator of 220 KV Kalyaneswari #1 Line	DVC	
67	220KV 203 Bus Coupler Bay	04/05/19	09:00	04/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
68	ICT-I (3x 105 MVA) at Jeypore	04-05-2019	08:00	04-05-2019	20:00	ODB	ER-II/Odisha /Jeypore	For changing ICT-I combination form Unit-I,III, IV to Unit-I , II & IV for charging Unit-II & To carry Insulation sleeves work Teritiry side of ICT 1 , For Isolator Retrofitting works (220KV ICT I TBC Isolator) ,Testing of Back Up Impedance relay	GRIDCO	
69	765/400KV 1500MVA ICT-2 at Sundergarh	04/05/19	09:00	04/05/19	12:00	ODB	ER-II/Odisha/Sundergarh	Taking spare ICT in service in place of B-Ph ICT for attending oil leakage of B-Ph ICT	NLDC	
70	220 KV ICT # 1 Main Bay (Bay No-201)	04/05/19	09:00	04-05-2019	17:00	ODB	ER-II/Odisha/Rengali	MOM Box Retrofitting		
71	400 KV MAIN BUS-2 AT RANCHI	04-05-2019	09:30	05-05-2019	17:00	OCB	POWERGRID ER-I	Errection & Commisssioning of Jack bus for Tie Bay of Ranchi-New Ranchi-I & II RNC-NRNC-I & CKT-II WILL BE OUT OF SERVICE DUE TO NON AVAILABILITY OF TIE BAY	JSEB	

72	765 KV Main bay of 1500MVA ICT-2 (bay 706) ,AT NEW RANCHI	04-05-2019	09:00	04-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
73	400kV Ranchi - Rourkela Ckt 2	04-05-2019	09:30	04-05-2019	17:30	ODB	POWERGRID ER-I	Insulator replacement work damaged by miscreants		
74	400KV Farakka Gokarna Ckt-I	04-05-2019	08:00	05-05-2019	17:00	ODB	POWERGRID ER-I	Termination of 400KV D/C Rajarhat- Purnea Line from Purnea End	WB	
75	400KV Farakka Gokarna Ckt-II	04-05-2019	08:00	05-05-2019	17:00	ODB	POWERGRID ER-I	Termination of 400KV D/C Rajarhat- Purnea Line from Purnea End	WB	
76	400KV Bus 2 AT PATNA	04-05-2019	09:30	06-05-2019	17:30	ODB	POWERGRID ER-I	Stringing of Sky bus under SS03 package of Patna Nabinagar Ckt 1	BSEB	
77	220kV BUS-1 at Rajarhat	05-05-2019	10:00	05-05-2019	13:00	ODB	POWERGRID, ER-II	For attending Wave Trap Jumper	WB	
78	400kV Malda-Purnea-I	05-05-2019	09:00	14-05-2019	18:00	ODB	POWERGRID, ER-II	Ckt wise S/D shall be taken on alternate day basis for carrying out replacement of defective Porcelain Insulators identified through PID Testing with CLR Insulators		
79	400 kV 407 main Bay of Baripada-Duburi line	05/05/19	09:00	06/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement		
80	400 kV Jeypore-Indravati S/C Line	05-05-2019	08:00	05-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	For testing New A/R relayof Jeypore - Indravati Line & For PID defect insulator replacement work and for attending S/D nature defects	NLDC	
81	400kV OPGC#1 Tie bay (GIS)	05/05/19	09:00	09/05/19	18:00	OCB	ER-II/Odisha/Sundergarh	For Earth Switch Cleaning excersice		
82	400 KV 125 MVAR BR-II AT GAYA	05-05-2019	09:00	07-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.		
83	400 KV Meramundali-Duburi-I	06-05-2019	10:00	06-05-2019	14:00	ODB	OPTCL	Implemetation and Testing of Tigital Tele Protection System		
84	220kV Kalyaneswari-MTN PG Ckt#1	06-05-2019	09:00	06-05-2019	17:00	ODB	DVC	for annual maintenance and jumper/angle point tightness checking		
85	50 MVA ICT-II 132/66KV at Gangtok	06-05-2019	09:00	06-05-2019	18:00	ODB	POWERGRID, ER-II	For AnnualAMp Works	SIKKIM	
86	220KV BUS-I at Malda	06-05-2019	08:00	06-05-2019	16:00	ODB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
87	220KV Bus coupler(Bay-208) at Siliguri	06-05-2019	10:00	06-05-2019	17:00	ODB	POWERGRID, ER-II	BAY AMP WORK.		
88	220KV BUS-1 at Rangpo	06-05-2019	08:00	08-05-2019	17:00	OCB	POWERGRID, ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates) & Line AMC		
89	220KV Rangpo NEW MELLI line	06-05-2019	08:00	12-05-2019	17:00	OCB	POWERGRID, ER-II	For rectification of SF6 gas leakage repair work(both Shutdown needed on same dates) & Line AMC		
90	220 KV Bus # 1at Maithan	06-05-2019	09:00	06-05-2019	17:00	ODB	POWERGRID, ER-II	For replacement of Bus Isolator of 220 KV side of ICT #2	DVC	
91	418 bay (ICT-II main Bay) at Durgapur	06-05-2019	09:00	08-05-2019	17/00	OCB	POWERGRID, ER-II	Interrupter replace of main CB		
92	315 MVA ICT#2 at Subhasgram S/s	06-05-2019	09:00	07-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of Numerical REF Relay	WB	
93	Bus Coupler 210 bay at New Melli	06-05-2019	11:00	06-05-2019	14:00	ODB	POWERGRID, ER-II	SF6 Gas filling in G4-Y phase compt.		
94	765/400kV, 3*500MVA ICT-3 at Angul	06-05-2019	09:00	06-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	For taking spare phase into service and taking ICT-3 B-Phase out of service for attending oil leakage by M/S TBEA	NLDC	
95	50 MVAR Line Reactor of Indravati-Rengali	06-05-2019	08:00	10-05-2019	17:00	OCB	ER-II/Odisha /Indravati	For Arresting oil leakge in Bushing , Turret,Radiator bank joints etc. But The power flow in line will not interrupt.		
96	125 MVAR Bus Reactor at Keonjhar	06/05/19	09:00	10/05/19	18:00	OCB	Keonjhar	For replacement of defective rediator of Bus Reactor		
97	765KV Bus-I at Sundargarh at Sundergarh	06/05/19	09:00	15/05/19	18:00	OCB	ER-II/Odisha/Sundergarh	Erection of SF6 to Air bushing of 765KV GIS bus sectionalizer, jumpering , HV & impulse testing for commissioning of 765KV GIS under construction head.	NLDC	
98	400KV Barh- Motihari CKT-1	06-05-2019	08:00	31-05-2019	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	NLDC	AFTER REVIVAL OF 400KV BSF-VARNASI
99	400KV Barh- Motihari CKT-II	06-05-2019	08:00	31-05-2019	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	NLDC	AFTER REVIVAL OF 400KV BSF-VARNASI
100	400KV MAIN BAY OF 400/220KV 500MVA ICT-2 AT NEW PURNEA.	06-05-2019	09:30	08-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
101	400/132KV 200 MVA ICT-1 AT LAKHISARAI	06-05-2019	09:00	06-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
102	400KV Barh- Motihari CKT-1	06-05-2019	08:00	31-05-2019	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	NLDC	AFTER REVIVAL OF 400KV BSF-VARNSAI
103	400KV Barh- Motihari CKT-II	06-05-2019	08:00	31-05-2019	18:00	OCB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI	NLDC	AFTER REVIVAL OF 400KV BSF-VARNSAI
104	404 MAIN BAY of 125 BR-I at KISHANAGNJ	06-05-2019	09:30	06-05-2019	16:00	ODB	POWERGRID ER-I	AMP WORK		
105	400KV Bus-2 AT NEW RANCHI	06-05-2019	09:00	07-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
106	400kV JAMSHEDPUR - MEJIA	06-05-2019	09:30	06-05-2019	17:30	ODB	POWERGRID ER-I	Static Auto reclose relay to be replaced with numerical relay	DVC	
107	400KV DALTANGANJ-SASARAM-1	06-05-2019	09:30	06-05-2019	17:30	ODB	POWERGRID ER-I	CSD Commissioning of its L/R at Daltanganj		
108	220KV SIDE BAY OF 400/220KV ICT-2 AT SASARAM	06-05-2019	09:00	06-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
109	220kv Main bay of Sipara -2 AT PATNA	06-05-2019	09:30	08-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
110	Maintenance work for ICT#3	06-05-2019	09:30	15-05-2019	18:00	OCB	BARH	Annual Maintenance & Testing of ICT#3		
111	Maintenance work for ICT#3 Bay	06-05-2019	09:30	15-05-2019	18:00	OCB	BARH	Annual Maintenance & Testing of ICT#3 Bay		
112	400 KV Meramundali-Duburi-II	07-05-2019	10:00	07-05-2019	14:00	ODB	OPTCL	Implemetation and Testing of Tigital Tele Protection System		
113	220kV Kalyaneswari-MTN PG Ckt#2	07-05-2019	09:00	07-05-2019	17:00	ODB	DVC	for annual maintenance and jumper/angle point tightness checking		
114	400kV Koderma-B'Sariff Ckt#1	07-05-2019	09:00	07-05-2019	17:30	ODB	DVC	Preventive maintenance job	AFTER SD OF 400KV KODERMA-GAYA-DC	

115	220KV BUS-II at Malda	07-05-2019	08:00	07-05-2019	17:00	ODB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
116	400KV BINAGURI-PURNEA-4	07-05-2019	10:00	07-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay		
117	500 MVA ICT #2 at Maithan	07-05-2019	09:00	07-05-2019	17:00	ODB	POWERGRID, ER-II	For replacement of line Isolator of 220 KV side of ICT #2	DVC	DRAWL RESTRICTION JSEB - 100 MW & DVC- 350 MW
118	220kV BUS-II at Rajarhat	07-05-2019	14:00	07-05-2019	18:00	ODB	POWERGRID, ER-II	For attending Wave Trap Jumper	WB	
119	315 MVA ICT#3 at Powergrid,Subhasgram	07-05-2019	09:00	08-05-2019	17:00	ODB	POWERGRID, ER-II	AMP of 315 MVA ICT#3.	WB	
120	400 kV 411 Tie Bay of Baripada-Pandiabili & Baripada-TISCO	07/05/19	09:00	08/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP & Gasket replacement		
121	Mendhasal-Pandiabili CKT-1 at Mendhasal Main bay NB: Line will be in service through tie Bay.	07-05-2019	09:30	09-05-2019	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Amp of Main Bay(Timing,CRM,DCRM)	GRIDCO	
122	400kV Jeypore-Gazuwaka-I Line	07-05-2019	08:00	08-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	Replacement of porcelain insulator with polymer insulator and for attending S/D nature defects	NLDC	
123	400kV Sundargarh-Raigarh Ckt#1	07/05/19	08:00	08/05/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
124	Main Bay-715 of 765KV Dharamjaygarh Ckt-3 at Sundergarh	07/05/19	09:00	07/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP work	NLDC	
125	220 KV ICT # 2 Main Bay (Bay No-202)	07/05/19	09:00	08-05-2019	17:00	OCB	ER-II/Odisha/Rengali	CB Pole Overhauling & MOM Box Retrofitting		
126	220 KV MUZAFFARPUR-DHALKEBAR (NEPAL)-1	07-05-2019	09:30	07-05-2019	17:30	ODB	POWERGRID ER-I	INTEGRATION WORK OF SIGNAL WITH NTAMC/RTAMC	NLDC	
127	220 KV MAIN BUS-1 AT RANCHI	07-05-2019	09:30	07-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	JSEB	
128	220 kV Ara Khagaul Ckt 1	07-05-2019	10:00	07-05-2019	17:00	ODB	POWERGRID ER-I	Main 1 Distance Relay replacement at Ara	BSEB	
129	400KV Bus coupler Bay of Bus-1 & 3 AT BIHARSHARIFF	07-05-2019	09:00	07-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
130	220 KV MUZAFFARPUR-DHALKEBAR -1	07-05-2019	09:30	07-05-2019	17:30	ODB	POWERGRID ER-I	INTEGRATION WORK OF SIGNAL WITH NTAMC/RTAMC	NLDC	Early requisition required
131	220 KV Ara- khagaul line -1	07-05-2019	09:30	07-05-2019	17:30	ODB	POWERGRID ER-I	AMP	BSEB	
132	400 KV BARIPADA-DUBURI LINE	08-05-2019	07:00	08-05-2019	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	TO NEUTRALISE ACCUMULATED DEFECTS	GRIDCO	
133	220kV Dhanbad-MTN PG Ckt#1	08-05-2019	09:00	08-05-2019	17:00	ODB	DVC	for annual maintenance and jumper/angle point tightness checking		
134	400kV DSTPS-RTPS Ckt#2	08-05-2019	10:30	09-05-2019	17:00	ODB	DVC	Relay Maintenance work at both DSTPS and RTPS end simultaneously		
135	132KV Gangtok-Rangpo Line	08-05-2019	09:00	08-05-2019	14:00	ODB	POWERGRID, ER-II	For AnnualAMp Works & DCRM	SIKKIM	
136	160 MVA ICT-II at Malda	08-05-2019	08:00	08-05-2019	17:00	ODB	POWERGRID, ER-II	AMP	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
137	400KV BINAGURI-PURNEA-2	08-05-2019	10:00	08-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay		
138	220 KV D/C Satgachia-Jeerat TL - CKT-I&II	08-05-2019	08:00	09-05-2019	16:00	ODB	POWERGRID, ER-II	For strining work from location 112/0 to 113/0. Consent require from WBSETCL	WB	
139	400KV Mejia-Jamshedpur Line	08-05-2019	09:00	09-05-2019	18:00	ODB	POWERGRID, ER-II	To replace Punctured disc Insulator,damage by miscreant		
140	315 MVA ICT#4 at Powergrid,Subhasgram	08-05-2019	09:00	09-05-2019	17:00	ODB	POWERGRID, ER-II	AMP of 315 MVA ICT#4.	WB	
141	400 KV Farakka- Kahalgaon-III line	08-05-2019	09:00	09-05-2019	18:00	ODB	POWERGRID, ER-II	For Jumper coonnection, relay setting change & Bay stability between Bay- 34 & 35 after upgradation of bay-34 under ERSS-XV projects.		
142	765kV, 3*110MVAR Bus reactor-2 at Angul	08-05-2019	09:00	08-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC	
143	Mendhasal-Pandiabili CKT-2 at Mendhasal Main bay NB: Line will be in service through tie Bay.	08-05-2019	09:30	09-05-2019	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Amp of Main Bay(Timing,CRM,DCRM)	GRIDCO	
144	Main Bay-721 of 765KV Dharamjaygarh Ckt-1 at Sundargarh	08/05/19	09:00	08/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP work	NLDC	
145	220 KV MUZAFFARPUR-DHALKEBAR (NEPAL)-2	08-05-2019	09:30	08-05-2019	17:30	ODB	POWERGRID ER-I	INTEGRATION WORK OF SIGNAL WITH NTAMC/RTAMC	NLDC	
146	400/132KV 200 MVA ICT-2 AT LAKHISARAI	08-05-2019	09:00	08-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
147	400KV MAIN BAY OF 400/220 KV 315MVA ICT-2 AT RANCHI	08-05-2019	09:30	08-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
148	220 kV Ara Khagaul Ckt 2	08-05-2019	10:00	08-05-2019	17:00	ODB	POWERGRID ER-I	Main 1 Distance Relay replacement at Ara	BSEB	
149	400KV Bus coupler Bay of Bus-2 & 4 AT BIHARSHARIFF	08-05-2019	09:00	08-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
150	400 /220 kV ICT-II at Gaya ss	08-05-2019	09:00	10-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.	BSEB	
151	400 KV BUS-I at Gaya S/S	08-05-2019	09:00	10-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.	BSEB	
152	125 BR-I & ICT-1 TIE BAY KISHANAGNJ	08-05-2019	09:30	08-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
153	765KV Bus-1 AT NEW RANCHI	08-05-2019	09:00	08-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
154	400KV DALTANGANJ-SASARAM-II	08-05-2019	09:30	08-05-2019	17:30	ODB	POWERGRID ER-I	CSD Commissioning of its L/R at Daltanganj		
155	400KV MAIN BAY OF 125MVAR B/R -2 AT SASARAM	08-05-2019	09:00	08-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
156	220 KV MUZAFFARPUR-DHALKEBAR -2	08-05-2019	09:30	08-05-2019	17:30	ODB	POWERGRID ER-I	INTEGRATION WORK OF SIGNAL WITH NTAMC/RTAMC	NLDC	Early requisition required
157	220 KV Ara -Khagaul line- 2	08-05-2019	09:30	08-05-2019	17:30	ODB	POWERGRID ER-I	AMP	BSEB	
158	400 kV Patna-Ballia CKT 1	08-05-2019	09:00	08-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	
159	220kV Dhanbad-MTN PG Ckt#2	09-05-2019	09:00	09-05-2019	17:00	ODB	DVC	for annual maintenance and jumper/angle point tightness checking		
160	400kV Koderma-B'Sariff Ckt#2	09-05-2019	09:00	09-05-2019	17:30	ODB	DVC	Preventive maintenance job	AFTER SD OF 400KV KODERMA-GAYA-DC	
161	220KV DLK-DLK-# II	09-05-2019	09:00	09-05-2019	11:00	ODB	POWERGRID, ER-II	For Newly replaced Y-Ph CT DGA Test (Replacement Date-30.03.2019)	WB	

162	400kV Main Bay of Bheramara-2 (Bay-401) at Baharampore	09-05-2019	09:00	09-05-2019	17:00	ODB	POWERGRID, ER-II	Bay AMP		
163	400KV BINAGURI-PURNEA-1	09-05-2019	10:00	09-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay		
164	220 KV Birpara-Siliguri Ckt-I	09-05-2019	08:00	09-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay		
165	500 MVA ICT#5 at Powergrid,Subhasgram	09-05-2019	09:00	10-05-2019	17:00	ODB	POWERGRID, ER-II	CSD Commissioing in 414 Bay	WB	
166	50MVAR ANGUL LINE REACTOR	09/05/19	09:00	09/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 50MVAR Angul L/R and 401R 52 CB		
167	400KV Balangir-Angul Line	09/05/19	08:00	11/05/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of defective insulator by Polymer long Rod Insulator	NLDC	
168	63 MVAR Baripada-Duburi Line Reactor	09/05/19	09:00	09/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
169	Mendhasal-Pandiabili CKT-1 & 2 Tie Bay at Mendhasal NB:Both line will be in service through Main Bay	09-05-2019	09:30	09-04-2019	18:00	ODB	ER-II/Odisha/ Pandiabili GIS	Amp of Tie Bay(Timing,CRM,DCRM)	GRIDCO	
170	400kV Jeypore-Gazuwaka-II Line	09-05-2019	08:00	10-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	Replacement of porcelain insulator with polymer insulator and for attending S/D nature defects	NLDC	
171	400kV Sundargarh-Raigarh Ckt#3	09/05/19	08:00	10/05/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
172	Main Bay-722 of 765KV Darlipali Ckt-1 at Sundergarh	09/05/19	09:00	09/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP work	NLDC	
173	220 KV OPTCL # 1 Main Bay (Bay No-208)	09/05/19	09:00	09-05-2019	17:00	ODB	ER-II/Odisha/Rengali	MOM Box Retrofitting		
174	400KV MAIN BAY OF MUZAFFARPUR-II AT NEW PURNEA.	09-05-2019	09:30	11-09-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
175	400KV MAIN BAY OF 400KV SIPAT-1 AT RANCHI	09-05-2019	09:30	09-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
176	220 kV Ara Sasaram	09-05-2019	10:00	09-05-2019	17:00	ODB	POWERGRID ER-I	Main 1 Distance Relay replacement and Bus Isolator Dropper Modification at Ara	BSEB	
177	765KV Bus-2 AT NEW RANCHI	09-05-2019	09:00	09-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
178	220KV SIDE BAY OF 400/220KV ICT-1 AT SASARAM	09-05-2019	09:00	09-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
179	400KV Main bay Ballia -3 AT PATNA	09-05-2019	10:00	09-05-2019	11:00	ODB	POWERGRID ER-I	CB dew point measurement		
180	400KV Tie bay of Barh 3 and ballia 3 AT PATNA	09-05-2019	13:00	09-05-2019	14:00	ODB	POWERGRID ER-I	CB dew point measurement		
181	400KV Main bay Barh-3 AT PATNA	09-05-2019	16:00	09-05-2019	17:00	ODB	POWERGRID ER-I	CB dew point measurement		
182	220kv Main bay Fatuha line AT PATNA	09-05-2019	09:30	12-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
183	400 kV Patna-Ballia CKT 2	09-05-2019	09:00	09-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	
184	400KV Kh-Farakka #3	09-05-2019	08:00	09-05-2019	18:30	ODB	KAHALGAON	PM works and Relay Testing		
185	400 KV Meramundali-Kaniha Feeder	10-05-2019	10:00	10-05-2019	14:00	ODB	OPTCL	Implematation and Testing of Tigital Tele Protection System		
186	132 KV Gangtok-Chuzachen Line	10-05-2019	09:00	10-05-2019	14:00	ODB	POWERGRID, ER-II	For Annual AMP Works	SIKKIM	
187	400kV Berhampore-Farakka-Line-1	10-05-2019	09:00	11-05-2019	17:00	ODB	POWERGRID, ER-II	For protection scheme checking of Bay-34 with respect of bay-33 after upgradation of bay-34 under ERSS-XV projects	What are the other elements will be out?	THE S/D 400KV FARAKKA-BAHARAMPORE-I HAS TO CLUBBED WITH REVIVAL OF 400KV KHSTPP-FSTPP-I WHICH REQUIRES S/D OF FARAKA BUS-I
188	220kV Bus Coupler bay at Alipurduar	10-05-2019	07:00	10-05-2019	18:00	ODB	POWERGRID, ER-II	Bay AMP Work		
189	420 Bay (Mithon-II & Future Tie bay) at Durgapur	10-05-2019	09:00	10-05-2019	17/00	ODB	POWERGRID, ER-II	Gasket replace in main pole		
190	400kV Rajarhat Jeerat Line	10-05-2019	10:00	10-05-2019	18:00	ODB	POWERGRID, ER-II	For erection of Bus Pipe of Gokarna Bay coming below Jeerat Line , shutdown require due to Clearance issue with Jeerat Line	WB	
191	50 MVAR Line Reactor at Subhasgram S/s	10-05-2019	09:00	11-05-2019	17:00	ODB	POWERGRID, ER-II	VT Section Work	WB	
192	400kV Andal-Jamshedpur-I	10-05-2019	09:00	19-05-2019	18:00	ODB	POWERGRID, ER-II	Ckt wise S/D shall be taken on alternate day basis for carrying out replacement of defective Porcelain Insulators identified through PID Testing with CLR Insulators	DVC	
193	400KV Balangir-Angul Line TIE BAY(40102BAY)	10/05/19	09:00	10/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 40102 52 CB and 40102 CT		
194	125 MVAR Bus Reactor-1	10/05/19	09:00	10/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
195	Tie Bay-723 of 765KV Darlipali Ckt-1 & Dharamjaygarh Ckt-2 at Sundargarh	10/05/19	09:00	10/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	AMP work	NLDC	
196	400KV CHAIBASA#1 MAIN BAY (BAY NO.-416)	10-05-2019	09:00	21-05-2019	18:00	OCB	ER-II/ODISHA/ROURKELA	RETROFITTING OF OLD HYDRAULIC OPERATED BHEL MAKE CB BY NEW SPRING-SPRING OPERATED CGPISL MAKE CB		
197	400KV ROURKELA-CHAIBASA#1	10-05-2019	09:00	10-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	FOR CRANE MOVEMENT FOR DISMANTLING OF INTERRUPTER & POLE COLUMN OF OLD BHEL MAKE CB OF 41652.		
198	400KV Main Bay of BSF -1 AT LAKHISARAI	10-05-2019	10:00	10-05-2019	14:00	ODB	POWERGRID ER-I	AMP WORK		
199	400KV TIE BAY OF SIPAT-1 & FUTURE AT RANCHI	10-05-2019	09:30	10-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
200	220 kV Ara Nadokhar	10-05-2019	10:00	10-05-2019	17:00	ODB	POWERGRID ER-I	Main 1 Distance Relay replacement at Ara	BSEB	
201	400kV JAMSHEDPUR - CHAIBASA-I	10-05-2019	09:30	10-05-2019	17:30	ODB	POWERGRID ER-I	Static Auto reclose relay to be replaced with numerical relay		
202	400KV Main bay Ballia 4 AT PATNA	10-05-2019	10:00	10-05-2019	11:00	ODB	POWERGRID ER-I	CB dew point measurement		
203	400KV Tie bay of Barh 4 and Ballia 4 AT PATNA	10-05-2019	13:00	10-05-2019	14:00	ODB	POWERGRID ER-I	CB dew point measurement		
204	400KV Main bay of Barh 4 AT PATNA	10-05-2019	16:00	10-05-2019	17:00	ODB	POWERGRID ER-I	CB dew point measurement		
205	400kV Kahalgaon-Barh ckt #1	10-05-2019	09:00	10-05-2019	18:00	ODB	POWERGRID ER-I	for replacement of damaged insulators		
206	400 Bus-I & Bus-III Sectionalize CB (BS-I) at Durgapur	11-05-2019	09:00	11-05-2019	17/00	ODB	POWERGRID, ER-II	AMP works		
207	220KV CESC CKT#2 (Bay No.203) at Powergrid,Subhasgram	11-05-2019	09:00	12-05-2019	17:00	ODB	POWERGRID, ER-II	AMP work	WB	
208	400KV Balangir-Angul Line Main BAY(401BAY)	11/05/19	09:00	11/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 401 52 CB and 401 CT		
209	41052- Main Bay of Pandiabilli line	11/05/19	09:00	11/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
210	ICT-I (3x 105 MVA) at Jeypore	11-05-2019	08:00	11-05-2019	12:00	ODB	ER-II/Odisha /Jeypore	For Change over of ICT-I, from TBC CB to ICT-I Bay(201 CB) after Isolator Retrofitting works of 30 Years old 201 89C (ICT-I Isolator)	GRIDCO	

211	400kV Sundargarh-Raigarh Ckt#2	11/05/19	08:00	11/05/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
212	Main bay-703 of 765/400KV ICT-1 at Sundergarh	11/05/19	09:00	11/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	for replacement of CB closing damper	NLDC	
213	220 KV OPTCL # 2 Main Bay (Bay No-207)	11/05/19	09:00	11-05-2019	17:00	ODB	ER-II/Odisha/Rengali	MOM Box Retrofitting		
214	400 KV Rourkela-Talcher Line # 2 in Non-Auto Mode	11/05/19	08:00	11-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For PID Work		
215	400KV TIE BAY OF BSF-1 & 200 MVA ICT-1 AT LAKHISARAI	11-05-2019	10:00	11-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
216	400KV BARH- PATNA CKT - 3 & 4	11-05-2019	08:00	13-05-2019	18:00	ODB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI		
217	132 KV DALTANGAN- DALTANGAN-I	11-05-2019	09:30	11-05-2019	17:30	ODB	POWERGRID ER-I	AMP WORK	JSEB	
218	400kV Kahalgaon-Barh ckt #2	11-05-2019	09:00	11-05-2019	18:00	ODB	POWERGRID ER-I	for replacement of damaged insulators		
219	400kV Berhampore-Farakka-Line-2 with reactor at Farakka end	12-05-2019	09:00	13-05-2019	17:00	ODB	POWERGRID, ER-II	For balance protection scheme checking of bay-23 (Tie bay of 400 KV Fkk- Bhp-II and 400 KV Fkk- Khg-I) with respect with bay-24 & to carry out punch point works in TL	What are the other elements will be out?	AFTER REVIVAL OF 400KV KHSTPP-FSTPP-I
220	220 KV Birpara-Siliguri Ckt-II	12-05-2019	08:00	12-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay		
221	400 KV Bus -4 at Maithan	12-05-2019	10:00	12-05-2019	11:00	ODB	POWERGRID, ER-II	Project work under ERSS-XVII (dismantling of jumpers)		
222	400kV Rajarhat Subhashgram Line	12-05-2019	10:00	12-05-2019	18:00	ODB	POWERGRID, ER-II	For Termination of Farakka Line at Gantry Tower , Clearance issue with Subhashgram Line	WB	
223	400KV Balangir-Jeypore Line	12/05/19	08:00	13/05/19	18:00	ODB	ER-II/Odisha/Balangir	Replacement of defective insulator by Polymer long Rod Insulator	NLDC	
224	40552- Tie Bay of Kharagpur line & 315MVA ICT II	12/05/19	09:00	12/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
225	315MVA ICT # II at Jeypore	12-05-2019	09:00	12-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	AMP of ICT # II, 208 Bay CT and testing of Back up Impedance relay	GRIDCO	
226	400 KV Jamshedpur - Baripada	12-05-2019	08:00	12-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of flashed insulator		
227	66 KV Gangtok-Tadong Line	13-05-2019	09:00	13-05-2019	14:00	ODB	POWERGRID, ER-II	For Annual AMP Works	SIKKIM	
228	400KV BINAGURI-TALA -4	13-05-2019	10:00	13-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
229	400KV BINAGURI-TALA-1	13-05-2019	10:00	13-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
230	220KV NEWTOWN LINE (Bay No.205) at Powergrid,Subhasgram	13-05-2019	09:00	13-05-2019	17:00	ODB	POWERGRID, ER-II	AMP work	WB	
231	400KV BINAGURI-TALA -4	13-05-2019	10:00	13-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
232	400KV BINAGURI-TALA-1	13-05-2019	10:00	13-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
233	765kV, 3*80MVAR SRIKAKULAM LINE REACTOR-2 at Angul	13-05-2019	09:00	13-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC	
234	50MVAR JEYPORE LINE REACTOR	13/05/19	09:00	13/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 50MVAR Jeypore L/R and 403R 52CB		
235	Future ICT main bay 400 kv (410)	13-05-2019	10:00	13-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker		
236	410 MAIN BAY (JEYPORE-INDRAVATI MAIN BAY)	13-05-2019	08:00	13-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	AMP of 410MAIN BAY		
237	205 ICT-II Bay	13/05/19	09:00	13/05/19	18:00	ODB	Keonjhar	For CB timing & DCRM rectification job		
238	Main bay-706 of 765/400KV ICT-2 at Sundergarh	13/05/19	09:00	13/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	for replacement of CB closing damper	NLDC	
239	400KV MAIN BAY OF KISHANGANJ-II AT NEW PURNEA.	13-05-2019	09:30	15-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
240	400KV MAIN BAY OF 400/132KV 200 MVA ICT-1 AT LAKHISARAI	13-05-2019	10:00	13-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
241	220 KV MAIN BUS-2 AT RANCHI	13-05-2019	09:30	13-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	JSEB	
242	132 kV Ara Dumraon	13-05-2019	10:00	13-05-2019	17:00	ODB	POWERGRID ER-I	Distance Relay replacement at Ara	BSEB	
243	400 KV BUS-II at Gaya S/S	13-05-2019	09:00	14-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.	BSEB	
244	400 KV GAYA-NABINAGAR -1 line	13-05-2019	09:00	13-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.		
245	300MVAR STATCOM AT NEW RANCHI	13-05-2019	09:00	15-05-2019	16:00	ODB	POWERGRID ER-I	AHU Rectification work		
246	400kV JAMSHEDPUR - CHAIBASA-II	13-05-2019	09:30	13-05-2019	17:30	ODB	POWERGRID ER-I	Static Auto reclose relay to be replaced with numerical relay		
247	400KV Main Bay of Varanasi East (418 Bay) AT SASARAM	13-05-2019	09:00	13-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
248	400/220 KV 315 MVA ICT-2 AT MUZAFFARPUR	13-05-2019	09:30	15-05-2019	17:30	OCB	POWERGRID ER-I	OLTC OVERHAULING	BSEB	
249	220kv Bus coupler AT PATNA	13-05-2019	09:30	15-05-2019	17:30	OCB	POWERGRID ER-I	AMP & CB Overhauling		
250	220kV Main bay of 400/220kv ICT 1 AT PATNA	13-05-2019	09:30	15-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
251	220kV DTPS-Bidhannagar Ckt#1	14-05-2019	10:00	14-05-2019	17:00	ODB	DVC	incorporation of Auto Re-close Unit to the said line at DTPS end.	WB	
252	132 KV Malda- WBSETCL-I	14-05-2019	08:00	14-05-2019	17:00	ODB	POWERGRID, ER-II	O/C Relay retrofitting	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
253	400kV 80MVAR Reactor at Baharampore	14-05-2019	09:00	14-05-2019	17:00	ODB	POWERGRID, ER-II	AMP		
254	400KV BINAGURI-BONGAIGAON-1	14-05-2019	10:00	14-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay	NLDC	
255	132kV BUS-2 at Rangpo	14-05-2019	09:00	24-05-2019	17:00	OCB	POWERGRID, ER-II	For Bus extension to new Chuzachen bays (Construction works)	SIKKIM	
256	400 KV BUS-I at Durgapur	14-05-2019	09:00	14-05-2019	17:00	ODB	POWERGRID, ER-II	Bus Bar relay checking & AMP		
257	400kV Bus-I at Rajarhat	14-05-2019	10:00	14-05-2019	18:00	ODB	POWERGRID, ER-II	For Installation & replacement of Earth Switch Insulating flange and For carrying out Bus Bar Stability Test of Farakka Line & Gokarna	WB	
258	400 KV Farakka-Gokarna-I	14-05-2019	09:00	15-05-2019	18:00	ODB	POWERGRID, ER-II	For Event Logger commissioning (Integration with NTPC system) under ERSS-V.	WB	

259	400KV BINAGURI-BONGAIGAON-1	14-05-2019	10:00	14-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay	NLDC	
260	3X105 MVA ICT-II at OHPC Switch yard of Indravati	14-05-2019	08:00	14-05-2019	17:00	ODB	ER-II/Odisha /Indravati	For retrofitting of Backup Impedance relay in ICT-II at OHPC S/Y.	GRIDCO	
261	315MVA ICT-I at Bolangir	14/05/19	09:00	15/05/19	18:00	ODB	ER-II/Odisha/Balangir	Retrofit of Back up Impedance relay in ICT	GRIDCO	
262	220KV Side, 315MVA ICT-1 BAY (208 BAY)	14/05/19	09:00	14/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 208 52 CB and 208 CT		
263	20452- 315MVA ICT II Bay	14/05/19	09:00	14/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Amp Works		
264	220 kv Pandiabili-Samagra ckt-1(204)	14-05-2019	10:00	14-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	GRIDCO	
265	411 TIE BAY (TIE BAY OF GAZ 1-INDRAVATI)	14-05-2019	08:00	14-05-2019	18:00	ODB	ER-II/Odisha /Jeypore	AMP of 411 TIEBAY		
266	207 bus coupler	14/05/19	09:00	14/05/19	18:00	ODB	Keonjhar	For CB timing & DCRM rectification job		
267	400kV Sundargarh-Raigarh Ckt#4	14/05/19	08:00	14/05/19	18:00	ODB	ER-II /ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
268	Main Bay-710 of 765KV Angul Ckt-3 at Sundergarh	14/05/19	09:00	14/05/19	18:00	ODB	ER-II/Odisha/Sundergarh	for replacement of CB closing damper	NLDC	
269	400 KV Rourkela-Talcher Line # 2	14/05/19	09:00	15-05-2019	17:00	ODB	ER-II/Odisha/Rengali	Insulator Replacement Work		
270	400KV ROURKELA-CHAIBASA#1	14-05-2019	09:00	14-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	FOR CRANE MOVEMENT FOR ERECTION OF INTERRUPTER & POLE COLUMN OF NEW CGPISL MAKE CB OF 41652.		
271	765 kV New Ranchi - Dharamjaygarh CKT-II	14-05-2019	09:00	18-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of broken Glass insulators by miscreants about 140 nos. locations, spacer damper 214 nso., 35 keeper missing, 24 nos. CC ring loose/broken.	NLDC	
272	400KV MAIN BAY OF 80 MVAR B/REACTOR AT RANCHI	14-05-2019	09:30	14-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
273	132 kV Ara Ara (BSPTCL)	14-05-2019	10:00	14-05-2019	17:00	ODB	POWERGRID ER-I	Distance Relay replacement at Ara	BSEB	
274	400kV Bus-1 AT BIHARSHARIFF	14-05-2019	09:00	14-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
275	400 KV GAYA-NABINAGAR -2 line	14-05-2019	09:00	14-05-2019	18:00	ODB	POWERGRID ER-I	For Upgradation of Bay equipments under Nabinagar - II Packagae.		
276	765 kV New Ranchi - Dharamjaygarh CKT-II	14-05-2019	09:00	18-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of broken Glass insulators by miscreants about 140 nos. locations, spacer damper 214 nso., 35 keeper missing, 24 nos. CC ring loose/broken.	NLDC	
277	400/220KV 315 MVA ICT- 2 AT JAMSHEDPUR	14-05-2019	09:30	14-05-2019	17:30	ODB	POWERGRID ER-I	FDS TEST OF WINDING TO BE CARRIED OUT.	JSEB	
278	400 kV PATNA-BALIA -III	14-05-2019	08:00	14-05-2019	18:00	ODB	POWERGRID NR-III	For replacement of porcelain insulator with polymer for Tension Tower	NLDC	
279	400KV Main Bay of Allahabad North (CWL22 Bay) AT SASARAM	14-05-2019	09:00	14-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
280	400KV Bus -I AT PATNA	14-05-2019	09:30	16-05-2019	17:30	ODB	POWERGRID ER-I	Dismantling and erection of Bus isolator of Dia of Patna Nabinagar D/C	BSEB	
281	200KV FKK-Lalmatia Line	14-05-2019	09:00	15-05-2019	17:00	ODB	FARAKKA	Line relay test & CB test	JSEB	
282	SST-2 Bay at BTPS-A S/Y	15-05-2019	09:00	28-05-2019	18:00	OCB	DVC	To attend the leakage in Two points		
283	66 KV Gangtok-Bulbulay Line	15-05-2019	09:00	15-05-2019	14:00	ODB	POWERGRID, ER-II	For Annual AMP Works	SIKKIM	
284	132 KV Malda-WBSETCL-II	15-05-2019	08:00	15-05-2019	17:00	ODB	POWERGRID, ER-II	O/C Relay retrofitting	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
285	400KV BINAGURI-TALA-3	15-05-2019	10:00	15-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
286	400KV TIE OF BONGAIGAON-1 AND RANGPO-1	15-05-2019	10:00	15-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose relay		
287	220kV Alipurduar-WBSETCL - II Bay	15-05-2019	07:00	15-05-2019	18:00	ODB	POWERGRID, ER-II	Bay AMP Work		
288	400 KV S/C Bakeshwar-Jeerat TL	15-05-2019	08:00	16-05-2019	16:00	ODB	POWERGRID, ER-II	For strining work from location 108/0 to 109/1.Consent require from WBSETCL	WB	
289	400 KV BUS-II at Durgapur	15-05-2019	09:00	15-05-2019	17:00	ODB	POWERGRID, ER-II	Bus Bar relay checking & AMP		
290	220KV KLC Bantala Line (Bay No.206) at Powergrid,Subhasgram	15-05-2019	09:00	15-05-2019	17:00	ODB	POWERGRID, ER-II	AMP work	WB	
291	400kV Malda-Purnea-II	15-05-2019	09:00	24-05-2019	18:00	ODB	POWERGRID, ER-II	Ckt wise S/D shall be taken on alternate day basis for carrying out replacement of defective Porcelain Insulators identified through PID Testing with CLR Insulators		
292	400KV BINAGURI-TALA-3	15-05-2019	10:00	15-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
293	400 kV 408 Tie Bay of Baripada-Duburi & Baripada-Jamshedp	15/05/19	09:00	16/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Gasket replacement		
294	220 kv Pandiabili-Samagra ckt-2 (205)	15-05-2019	10:00	15-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker	GRIDCO	
295	220KV Jeypore-JEYNAGAR-I Line	15-05-2019	08:00	15-05-2019	20:00	ODB	ER-II/Odisha /Jeypore	For 30 Years Old Line Isolator & TBC Isolator Retrofitting works of Jeynagar-I Bay	GRIDCO	
296	206 Bay	15/05/19	09:00	15/05/19	18:00	ODB	Keonjhar	For CB timing & DCRM rectification job		
297	400kV Sundargarh-Raigarh Ckt#3	15/05/19	08:00	31/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	For PID Testing of Porcelain Insulator. Only Auto reclose relay will be off. Line will be in service	NLDC	
298	400kV Sundargarh-Rourkela Ckt #1	15/05/19	08:00	15/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works		
299	400 KV, 315 MVA ICT # 2	15/05/19	09:00	15-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Retrofitting of Backup impadance Relay		
300	400 KV ROURKELA-TALCHER#1	15-05-2019	09:00	16-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	INSULATOR REPLACEMENT WITH POLYMER INSULATOR WHICH ARE FOUND DEFECTIVE IN PID TEST AND ATTENDING DEFECTS NOTICED DURING CAMERA PATROLLING.		
301	765KV SASARAM-FATEHPUR-S/C	15-05-2019	09:00	30-05-2019	18:00	ODB	POWERGRID ER-I	FOR TOWER STRENGHTHENING WORK.	NLDC	
302	400KV Main Bay of BSF -II AT LAKHISARAI	15-05-2019	10:00	15-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
303	400KV RANCHI-MAITHON(RB)-II	15-05-2019	09:30	15-05-2019	17:00	ODB	POWERGRID ER-I	FOR REPLCEMENT OF DAMAGED INSULATOR BY MISCREANTS		
304	132 kV Ara Jagdishpur	15-05-2019	10:00	15-05-2019	17:00	ODB	POWERGRID ER-I	Distance Relay replacement at Ara	BSEB	
305	400KV BUS I AT KISHANAGNJ	15-05-2019	10:00	20-05-2019	20:00	OCB	POWERGRID ER-I	Replacement of 416 BAY Y PH CB	NLDC	
306	400/220KV 315 MVA ICT- 1 AT JAMSHEDPUR	15-05-2019	09:30	15-05-2019	17:30	ODB	POWERGRID ER-I	FDS TEST OF WINDING TO BE CARRIED OUT.	JSEB	
307	132 KV DALTANGAN- DALTANGAN-II	15-05-2019	09:30	15-05-2019	17:30	ODB	POWERGRID ER-I	AMP WORK	JSEB	
308	400kV PATNA-BALIA -IV	15-05-2019	08:00	15-05-2019	18:00	ODB	POWERGRID NR-III	For replacement of porcelain insulator with polymer for Tension Tower	NLDC	

309	765KV SASARAM-FATEHPUR-S/C	15-05-2019	09:00	30-05-2019	18:00	ODB	POWERGRID ER-I	FOR TOWER STRENGHTHENING WORK.	NLDC	
310	Biharsharif-Barhi (via Rajgir) 132kV line	15-05-2019	09:00	15-05-2019	17:00	ODB	BSPTCL	Reconductoring of Rajgir-Barhi section		
311	400KV MLD-PRN-I	16-05-2019	08:00	16-05-2019	17:00	ODB	POWERGRID, ER-II	A/R Relay Retrofitting	WB	
312	400kV 125 MVAR Reactor at Baharampore	16-05-2019	09:00	16-05-2019	17:00	ODB	POWERGRID, ER-II	Balance Construction Activity		
313	400kV Berhampore-Sagardighi-Line 1	16-05-2019	09:00	17-05-2019	17:00	ODB	POWERGRID, ER-II	Line Maint Activity	WB	
314	400KV BINAGURI-TALA 2	16-05-2019	10:00	16-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
315	220KV BINAGURI-BIRPARA-1	16-05-2019	10:00	16-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay		
316	220KV Birpara-Chukha Ckt-I	16-05-2019	08:00	16-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay	NLDC	
317	132KV Rangpo-Gangtok line	16-05-2019	09:00	16-05-2019	18:00	ODB	POWERGRID, ER-II	Line A/R implementation & conductor repairing in b/w loc 104 & 105	SIKKIM	
318	400 KV D/C Durgapur - Jamshedpur/ (Reconfigured as 400 KV D/C Andal(DVC)- JAMSHEDPUR LINE (TL-286-287)	16-05-2019	6.00	17-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 101/0 (DD+25+1.5 RC)-102/0(DD+25+1.5 RC). Span Length-208 mtr	DVC	
319	400 Bus-II & Bus-IV Sectionalize CB (BS-II) at Durgapur	16-05-2019	09:00	16-05-2019	17/00	ODB	POWERGRID, ER-II	AMP works		
320	400kV Bus-II at Rajarhat	16-05-2019	10:00	16-05-2019	18:00	ODB	POWERGRID, ER-II	For carrying out Bus Bar Stability Test of Farakka & Gokarna Line	WB	
321	402 Tie Bay of 315 MVA ICT#1 and 400 KV Subhasgram Sagardighi Line	16-05-2019	09:00	16-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of A/R Relay in 402 Bay		
322	400 KV Farakka-Gokarna-II	16-05-2019	09:00	17-05-2019	18:00	ODB	POWERGRID, ER-II	For Event Logger commissioning (Integration with NTPC system) under ERSS-V.	WB	
323	400KV BINAGURI-TALA 2	16-05-2019	10:00	16-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
324	220KV Birpara-Chukha Ckt-I	16-05-2019	08:00	16-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay	NLDC	
325	765kV, 3*80MVAR SRIKAKULAM LINE REACTOR-1 at Angul	16-05-2019	09:00	16-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC	
326	315MVA ICT-II at Bolangir	16/05/19	09:00	17/05/19	18:00	ODB	ER-II/Odisha/Balangir	Retrofit of Back up Impedance relay in ICT	GRIDCO	
327	220KV Side, 315MVA ICT-2 BAY (212 BAY)	16/05/19	09:00	16/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 212 52 CB and 212 CT		
328	220KV Jeypore-JEYNAGAR-I Line	16-05-2019	10:00	16-05-2019	13:00	ODB	ER-II/Odisha /Jeypore	For Change over of Jeynagar Line from TBC CB to Jeynagar-I Bay(204 CB) after Isolator Retrofitting works of 30 Years old 204 89C (Jeynagar -I Line Isolator)	GRIDCO	
329	204 bay	16/05/19	09:00	16/05/19	18:00	ODB	Keonjhar	For CB timing & DCRM rectification job		
330	400kV Sundargarh-Rourkela Ckt #2	16/05/19	08:00	16/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works		
331	765KV Bus-II at Sundargarh	16/05/19	09:00	25/05/19	18:00	OCB	ER-II/Odisha/Sundergarh	Erection of SF6 to Air bushing of 765KV GIS bus sectionalizer, jumpering , HV & impulse testing for commissioning of 765KV GIS under construction head.	NLDC	
332	400 KV Rengali-Indravati Line	16/05/19	09:00	17-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Rectification of shutdown nature Defects	NLDC	
333	400 KV, 315 MVA ICT # 1	16/05/19	09:00	16-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Retrofitting of Backup impadance Relay		
334	400KV MAIN BAY OF MUZAFFARPUR-I AT NEW PURNEA.	16-05-2019	09:30	18-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
335	400kV Bus-2 AT BIHARSHARIFF	16-05-2019	09:00	16-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	BSEB	
336	400KV TIE BAY OF ANDAL-II & BARIPADA AT JAMSHEDPUR	16-05-2019	09:30	16-05-2019	17:30	ODB	POWERGRID ER-I	Maintenance of CB Catch gear unit, as per recomendation of RHQ Patna		
337	132kV Pusauli-Kudra	16-05-2019	09:00	16-05-2019	18:00	ODB	POWERGRID ER-I	Relay retrofitting Job	BSEB	
338	400kv Main bay Of ICT 1 AT PATNA	16-05-2019	09:30	28-05-2019	17:30	OCB	POWERGRID ER-I	Equipment uprating under Under Nabinagar - II package		
339	400kv Main bay Of ICT 1 AT PATNA	16-05-2019	09:30	19-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
340	400KV Kh-Farakka #4	16-05-2019	09:00	16-05-2019	17:30	ODB	KAHALGAON	PM works and Relay Testing		
341	400KV FKK-Malda Line#2	16-05-2019	09:00	17-05-2019	17:00	ODB	FARAKKA	CB,CT and Relay test		
342	400KV MLD-PRN-II	17-05-2019	08:00	17-05-2019	17:00	ODB	POWERGRID, ER-II	A/R Relay Retrofitting	WB	
343	400KV BINAGURI-BONGAIGAON-2	17-05-2019	10:00	17-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
344	220KV BINAGURI-BIRPARA-2	17-05-2019	10:00	17-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay		
345	132KV Rangpo-Chuzachen line	17-05-2019	09:00	17-05-2019	18:00	ODB	POWERGRID, ER-II	Line A/R implementation	SIKKIM	
346	220 KV Bus Sectionalize CB (205) at Durgapur	17-05-2019	09:00	17-05-2019	17/00	ODB	POWERGRID, ER-II	AMP works		
347	405 Tie Bay of 315 MVA ICT#2 and 400 KV Subhasgram Jeerat Line	17-05-2019	09:00	17-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of A/R Relay in 405 Bay		
348	400KV BINAGURI-BONGAIGAON-2	17-05-2019	10:00	17-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay	NLDC	
349	315 MVA, ICT-2 Main BAY (404 BAY)	17/05/19	09:00	17/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 404 52 CB and 404 CT		
350	220 KV Bus Coupler (206)	17-05-2019	10:00	17-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	Timing & CRM of Breaker		
351	220 kV Bus -I at Jeypore & 220 kV Bus Coupler CB(202 52)	17-05-2019	08:00	19-05-2019	18:00	OCB	ER-II/Odisha /Jeypore	For 30 Years old Isolator Retrofitting Works of Bus-I side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	GRIDCO	
352	315MVA ICT-I at Keonjhar	17/05/19	09:00	17/05/19	18:00	ODB	Keonjhar	Retro fitting of Back up Impedance relay		
353	Mai Bay-709 of 765KV Raipur Ckt-2 at Sundergarh	17/05/19	09:00	17/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	to take oil sample of 765KV CT after first time charging	NLDC	
354	400 KV Indravati Main Bay (Bay No-412)	17/05/19	09:00	17-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Retrofitting of AR Relay		
355	400 KV ROURKELA-TALCHER#2	17-05-2019	09:00	18-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	INSULATOR REPLACEMENT WITH POLYMER INSULATOR WHICH ARE FOUND DEFECTIVE IN PID TEST AND ATTENDING DEFECTS NOTICED DURING CAMERA PATROLLING.		
356	400KV TIE BAY OF BSF-2 & 200 MVA ICT-2 AT LAKHISARAI	17-05-2019	10:00	17-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
357	400 /220 kV ICT-III at Gaya ss	17-05-2019	09:00	18-05-2019	18:00	ODB	POWERGRID ER-I	for commisssioning of CSD work	BSEB	
358	132kV Pusauli-Mohaniya	17-05-2019	09:00	17-05-2019	18:00	ODB	POWERGRID ER-I	Relay retrofitting Job	BSEB	
359	400KV Bus 2 AT PATNA	17-05-2019	09:30	19-05-2019	17:30	ODB	POWERGRID ER-I	Dismantling and erection of Bus isolator of Dia of Patna Nabinagar D/C	BSEB	
360	400KV BINAGURI-PURNEA-3	18-05-2019	10:00	18-05-2019	18:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of auto-reclose and distance relay		
361	220KV BINAGURI-SILIGURI-1	18-05-2019	10:00	18-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay		

362	400\220kV 315 MVAICT -3 at Rangpo	18-05-2019	08:00	22-05-2019	17:00	OCB	POWERGRID, ER-II	For rectification of SF6 gas leakage repair work,		
363	401 Main Bay of Subhasgram Sagardighi Line at Subhasgram SS	18-05-2019	09:00	18-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of A/R Relay in 401 Bay		
364	125 MVAR BR	18-05-2019	08:00	18-05-2019	12:00	ODB	ER-II/Odisha /Indravati	To Replace Terminal Box of PRD.		
365	315MVA ICT-II at Keonjhar	18/05/19	09:00	18/05/19	18:00	ODB	Keonjhar	Retro fitting of Back up Impedance relay		
366	765 KV DC Sundargarh - Dharamjaygarh Ckt-I	18/05/19	08:00	18/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
367	Mai Bay-712 of 765KV Raipur Ckt-1 at Sundergarh	18/05/19	09:00	18/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	to take oil sample of 765KV CT after first time charging	NLDC	
368	Talcher-Kolar HVDC Bipole (Pole-1 & 2)	18-05-2019	06:00	19-05-2019	18:00	OCB	ER-II/Odisha/HVDC Talcher	Bi-Pole shutdown for Electrode Line Shifting at Talcher station for Railway Electrification Works	NLDC	PROVIDED RTAMC ER-2 GIVES SUITABLE EXPALNATION ON WHY ONE POLE WITH METALLIC RETURN OPERATION IS NOT POSSIBLE?
369	400kV NTPC-HVDC Feeder-1, 2, 3 & 4	18-05-2019	07:00	19-05-2019	17:00	OCB	ER-II/Odisha/HVDC Talcher	Shutdown to be availed during HVDC Bipole shutdown for, 1) Testing of Busbar protection 2) Replacement of SU200 (PLC) at NTPC end and checking of SPS 3) Upgradation and testing of SCADA	NLDC	
370	400KV MAIN BAY OF 400/132KV 200 MVA ICT-2 AT LAKHISARAI	18-05-2019	10:00	18-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
371	500 MVA ICT 3 AT PATNA	18-05-2019	09:30	18-05-2019	13:30	ODB	POWERGRID ER-I	Sweep Test of 220kV Side CT	BSEB	
372	220KV Birpara-Chukha Ckt-II	19-05-2019	08:00	19-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay	NLDC	
373	404 Main Bay of Subhasgram Rajarhat Line at Subhasgram SS	19-05-2019	09:00	19-05-2019	17:00	ODB	POWERGRID, ER-II	Retrofitting of A/R Relay in 404 Bay		
374	220KV Birpara-Chukha Ckt-II	19-05-2019	08:00	19-05-2019	17:30	ODB	POWERGRID, ER-II	Retrofitting of Numerical Distance Relay	NLDC	
375	400 kV 403 Baripada-Duburi Line Main Bay at Duburi SS	19/05/19	09:00	19/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
376	220 Kv Patna Sipara 3	19-05-2019	09:30	19-05-2019	17:30	ODB	POWERGRID ER-I	AMP	BSEB	
377	400kV Berhampore-Sagardighi-Line 2	20-05-2019	09:00	21-05-2019	17:00	ODB	POWERGRID, ER-II	Line Maint Activity	WB	
378	220KV BINAGURI-SILIGURI-2	20-05-2019	10:00	20-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay		
379	220 KV S/C STPS - Chandil TL-(TL-229-230)-WBSETCL	20-05-2019	7.00	21-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 83/0 (DD+9)-84/0(DD+9). Span Length-160 mtr	WB	
380	414 Tie Bay of 500 MVA ICT#5 and 400 KV Subhasgram Haldia Line-2	20-05-2019	09:00	20-05-2019	17:00	OCB	POWERGRID, ER-II	Pole Inspection of 414 Breaker		
381	400 KV BUS-I of NTPC Farakka	20-05-2019	09:00	20-05-2019	18:00	ODB	POWERGRID, ER-II	For connecting BUS isolator of bay no-22 to BUS-I (After augmentation of BUS Isolator from 2000A to 3150 A rating under ERSS-XV projects).	What are the other elements will be out?	
382	400kV Andal-Jamshedpur-II	20-05-2019	09:00	30-05-2019	18:00	ODB	POWERGRID, ER-II	Ckt wise S/D shall be taken on alternate day basis for carrying out replacement of defective Porcelain Insulators identified through PID Testing with CLR Insulators	DVC	
383	Main Bay (707) of 3*500MVA ICT-2 at Angul	20-05-2019	09:00	20-05-2019	18:00	ODB	ER-II/Odisha/Angul SS	AMP Work.	NLDC	
384	63 MVAR L/R-2(400KV Duburi line)	20-05-2019	10:00	20-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	AMP of L/R		
385	220 kV Bus -II at Jeypore & 220 kV Bus Coupler CB(202 52)	20-05-2019	08:00	22-05-2019	18:00	OCB	ER-II/Odisha /Jeypore	For 30 Years old Isolator Retrofitting Works of Bus-II side Isolators of Jeynagar I, Jeynagar-2 & ICT-I & Bus Coupler Bay	GRIDCO	
386	765KV Raipur240MVAr LR-1 at Sundergarh	20/05/19	09:00	20/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	online CSD commissioning works	NLDC	
387	765KV SASARAM-FATEHPUR-S/C	20-05-2019	08:00	27-05-2019	18:00	ODB	POWERGRID ER-I	Strengthing of Suspension Towers with Delta Configuration (Total=419 Nos)	NLDC	
388	400KV SWITCHABLE L/R BAY OF 400KV MUZ-1 AT NEW PURNEA	20-05-2019	09:30	22-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB , LINE WILL BE REMAIN CHARGED WITHOUT REACTOR.		
389	400KV Main Bay of kahalgaon-II AT LAKHISARAI	20-05-2019	10:00	20-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
390	400/220KV 315 MVA ICT-1 AT RANCHI	20-05-2019	09:30	22-05-2019	17:00	OCB	POWERGRID ER-I	Replacement of 01 No 220 KV (Y-Ph) & 2 Nos 33 KV (R & Y Ph) Bushings due to Tan delta violation	JSEB	MAY BE GIVEN AFTER RETURN OF TENUGHAT UNIT
391	765 KV BUS-I at Gaya S/S	20-05-2019	09:00	20-05-2019	18:00	ODB	POWERGRID ER-I	For Attendig Corona Discharge from Bus connector.	NLDC	
392	765 KV BUS-II at Gaya S/S	20-05-2019	09:00	20-05-2019	18:00	ODB	POWERGRID ER-I	For Alignment of Bus Isolator.	NLDC	
393	765/400 KV, 1500MVA ICT-1 AT NEW RANCHI	20-05-2019	09:00	21-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
394	400k Main Bay Ballia 1 AT PATNA	20-05-2019	09:30	22-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
395	400 kV 4034 Tie Bay of Baripada Line & Bus Reactor at Dubur	21/05/19	09:00	21/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
396	63 MVAR L/R -1(400KV Baripada Line)	21-05-2019	10:00	21-05-2019	17:00	ODB	ER-II/Odisha/ Pandiabili GIS	AMP of L/R		
397	765 KV DC Sundargarh - Dharamjaygarh Ckt-II	21/05/19	08:00	21/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
398	765KV Raipur240MVAr LR-2 at Sundergarh	21/05/19	09:00	21/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	online CSD commissioning works	NLDC	
399	400 KV Indravati - Bus Reactor # 1 Tie Bay (Bay No-411)	21/05/19	09:00	21-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Retrofitting of AR Relay		
400	Barh Kahalgaon LINE # 2	21-05-2019	09:30	22-05-2019	18:00	OCB	BARH	For Leveling of Land & Annual Maintenance & Testing of Bays Equipments		
401	400KV FKK-Malda Line#1	21-05-2019	09:00	22-05-2019	17:00	ODB	FARAKKA	CB,CT and Relay test		
402	315 MVA ICT-1 at Binaguri	22-05-2019	10:00	22-05-2019	15:00	ODB	POWERGRID, ER-II	Replacement and retrofitting of distance relay		
403	160 MVA ICT-1 at Birpara	22-05-2019	08:00	22-05-2019	17:30	ODB	POWERGRID, ER-II	Variable Frequency Tan-delta test for Bushing and Winding and also to attend the Oil seapage in PRD	WB	
404	132 KV D/C Satgachia-Bandel TL-CKT-I&II	22-05-2019	08:00	23-05-2019	16:00	ODB	POWERGRID, ER-II	For strining work from location 106/0 to 107/1. Consent require from WBSETCL	WB	
405	400 KV Farakka- Sagradighi-II	22-05-2019	09:00	23-05-2019	18:00	ODB	POWERGRID, ER-II	Reactification of damage earthpeak at loc no-15 & 103	WB	
406	220KV Side, TRANSFER BUS COUPLER BAY (210 BAY)	22/05/19	09:00	22/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 210 52 CB and 210 CT		
407	400 kV 404 Main Bay of 80 MVAR Bus Reactor at Duburi SS	22/05/19	09:00	22/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
408	765KV Bus-I(GIS Section & Darlipali#1&2 dia) at Sundargarh	22/05/19	09:00	23/05/19	18:00	OCB	ER-II/Odisha/Sundergarh	for 765KV GIS and 765KV ICT-3&4 commissioning work under construction head	NLDC	

409	400KV CHAIBASA#1 & 400KV SUNDARGARH#1 TIE BAY (BAY NO.- 417)	22-05-2019	09:00	31-05-2019	18:00	OCB	ER-II/ODISHA/ROURKELA	RETROFITTING OF OLD HYDRAULIC OPERATED BHEL MAKE CB BY NEW SPRING-SPRING OPERATED CGPISL MAKE CB		
410	765/400 KV, 1500MVA ICT-2 AT NEW RANCHI	22-05-2019	09:00	23-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
411	400KV Bus -I AT PATNA	22-05-2019	09:30	23-05-2019	17:30	ODB	POWERGRID ER-I	Jumper connection of Bus isolator and Bus stability	BSEB	
412	220kv Patna(PG)-Sipara ckt3	22-05-2019	09:00	27-05-2019	17:00	OCB	BSPTCL	For stringing work of 220kv D/C Patna(PG)-Khagaul T/L		
413	400KV BUS-I at Malda	23-05-2019	08:00	24-05-2019	17:00	OCB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
414	400KV D/C (Twin Moose) Baharampur(India)-Bheramara (Bangladesh) Lines	23-05-2019	08:00	24-05-2019	16:00	ODB	POWERGRID, ER-II	Stringing of Power line xing :New Line location AP68-AP69 (existing line loc:151-152) & AP88-AP89(existing line loc:194-195)	NLDC	
415	400kV Sagardighi-Jeerat Line	23-05-2019	09:00	23-05-2019	17:00	ODB	POWERGRID, ER-II	A/R relay retrofitting, Testing	WB	
416	400 KV Bus -4 at Maithan	23-05-2019	10:00	23-05-2019	11:00	ODB	POWERGRID, ER-II	Project work under ERSS-XVII (Reconnection of jumpers)		
417	400KV D/C (Twin Moose) Baharampur(India)-Bheramara (Bangladesh) Lines	23-05-2019	08:00	23-05-2019	16:00	ODB	POWERGRID, ER-II	Stringing of Power line xing :New Line location AP68-AP69 (existing line loc:151-152) & AP88-AP89(existing line loc:194-195)	NLDC	Early requisition required
418	125MVAR BR Main Bay (410)	23-05-2019	08:00	23-05-2019	17:00	ODB	ER-II/Odisha /Indravati	AMP works		
419	220KV Side, BUS COUPLER BAY (204 BAY)	23/05/19	09:00	23/05/19	18:00	ODB	ER-II/Odisha/Balangir	AMP for 204 52 CB and 204 CT		
420	400 kV 402 Main Bay of Duburi-Pandiabili Line at Duburi SS	23/05/19	09:00	23/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
421	412 Main Bay (JEYPORE-GAZ I MAIN BAY)	23-05-2019	09:00	28-08-2019	18:00	OCB	ER-II/Odisha /Jeypore	Overhauling of R, Y, B of 41252 (CB)(JEYPORE-GAZ I MAIN BAY)		
422	765 KV DC Sundargarh - Dharamjaygarh Ckt-III	23/05/19	08:00	23/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
423	315 MVA ICT#1 at Rourkela	23-05-2019	09:00	23-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	GRIDCO	
424	400KV MAIN BAY OF MALDA-I AT NEW PURNEA.	23-05-2019	09:30	25-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
425	400kv Main bay of 400/220kv ICT 2 AT PATNA	23-05-2019	09:30	25-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
426	400KV Kh-Lkr#1	23-05-2019	09:00	23-05-2019	17:30	ODB	KAHALGAON	PM works and Relay Testing		
427	400 KV Farakka- Durgapur-II	24-05-2019	09:00	24-05-2019	18:00	ODB	POWERGRID, ER-II	Reactification of damage earthpeak at loc no-118		
428	Bus bar-I	24-05-2019	08:00	24-05-2019	17:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-1		
429	400 kV 4012 Tie Bay of Duburi-Pandiabili Line at Duburi SS	24/05/19	09:00	24/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
430	765 KV DC Sundargarh - Dharamjaygarh Ckt-IV	24/05/19	08:00	24/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works	NLDC	
431	765KV Bus-II (GIS Section & nDharamjaygarh #1&2 dia)at Sundargarh	24/05/19	09:00	25/05/19	18:00	OCB	ER-II/Odisha/Sundergarh	for 765KV GIS and 765KV ICT-3&4 commissioning work under construction head	NLDC	
432	400 KV Keonjhar - Talcher # 2 Tie bay (Bay No-402)	24/05/19	09:00	24-05-2019	17:00	ODB	ER-II/Odisha/Rengali	For Retrofitting of AR Relay		
433	315 MVA ICT#2 at Rourkela	24-05-2019	09:00	24-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	RETROFITTING OF EXISTING OLD ICT PROTECTION RELAYS WITH NEW NUMERICAL RELAYS	GRIDCO	
434	765KV Tie bay(Bay 711) of 240MVAR B/R-1 and Future AT NEW RANCHI	24-05-2019	09:00	24-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK	NLDC	
435	400KV Bus 2 AT PATNA	24-05-2019	09:30	25-05-2019	17:30	ODB	POWERGRID ER-I	Jumper connection of Bus isolator and Bus stability	BSEB	
436	400 KV BUS-II at Malda	25-05-2019	08:00	26-05-2019	17:00	OCB	POWERGRID, ER-II	Isolator replacement under ERSS-XVII (ERSS-XVII-B Constructional work)	WB	WB ALLOWED PROVIDED NO RESTRICTION AT MALDA & DALKHOLA
437	800KV BNC – Alipurduar HVDC line (both APD - BNC Line 1 & 2)	25-05-2019	6:00	26-05-2019	18:00	ODB	POWERGRID, ER-II	Stringing work for overhead crossing of under construction 400 KV D/C Jigmeling-Alipurduar TL.	NLDC	
438	400 KV Bus -3 at Maithan	25-05-2019	10:00	25-05-2019	11:00	ODB	POWERGRID, ER-II	Project work under ERSS-XVII (dismantling of jumpers)		
439	800KV BNC – Alipurduar HVDC line (both APD - BNC Line 1 & 2)	25-05-2019	06:00	26-05-2019	18:00	ODB	POWERGRID, ER-II	Stringing work for overhead crossing of under construction 400 KV D/C Jigmeling-Alipurduar TL.	NLDC	
440	Bus bar-II	25-05-2019	08:00	25-05-2019	17:00	ODB	ER-II/Odisha /Indravati	AMP works -Bus-2		
441	80 MVAR Bus Reactor at Duburi SS	25/05/19	09:00	25/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP works		
442	220KV SASARAM-SAHUPURI-S/C	25-05-2019	09:00	28-05-2019	18:00	OCB	POWERGRID ER-I	TO FACILITATE THE S/D OF 500MVA ICT-I AT SASARAM FOR REPLACEMENT OF ICT-II.	NLDC	
443	400/220kV 500MVA ICT-I AT SASARAM	25-05-2019	09:00	28-05-2019	18:00	OCB	POWERGRID ER-I	Shifting of transformer for Transformer Retrofitting Work	BSEB	
444	220KV SASARAM-SAHUPURI-S/C	25-05-2019	09:00	28-05-2019	18:00	OCB	POWERGRID ER-I	TO FACILITATE THE S/D OF 500MVA ICT-I AT SASARAM FOR REPLACEMENT OF ICT-II.	NLDC	
445	400 KV Rajarhat Jeerat Line	26-05-2019	09:00	26-05-2019	17:00	ODB	POWERGRID, ER-II	A/R relay retrofitting & testing	WB	
446	220 kV Bus-1 at Baripada	26/05/19	09:00	26/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Isolator Alignment works	GRIDCO	
447	400k Main Bay Barh- 2 AT PATNA	26-05-2019	09:30	28-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
448	132 KV D/C Bishnupur - Khatra (TL- 180-181)	27-05-2019	6.00	28-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 134/4 (DD+9+3 RC)-135/0(DD+9). Span Length-320 mtr	WB	
449	220 kV Bus-2 at Baripada	27/05/19	09:00	27/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	Isolator Alignment works	GRIDCO	
450	765 KV DC Sundargarh - Angul Ckt-I	27/05/19	08:00	27/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works + AMP of LR1	NLDC	
451	220KV SIDE MAIN BAY OF 400/220KV 500MVA ICT -2 AT NEW PURNEA.	27-05-2019	09:30	29-05-2019	18:00	OCB	POWERGRID ER-I	MIDLIFE OVERHAULING OF ALSTOM MAKE CB		
452	400KV TIE BAY OF NEW RANCHI-IV AND FUTURE AT RANCHI	27-05-2019	09:30	27-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
453	400KV MAIN BAY OF 125MVAR B/R -1 AT SASARAM	27-05-2019	09:00	27-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
454	132kV Rangpo Chuzachen and Rangpo- Melli ,	28-05-2019	08:00	28-05-2019	18:00	ODB	POWERGRID, ER-II	For new Chuzachen bays LILO (Construction works)		
455	765 KV DC Sundargarh - Angul Ckt-II	28/05/19	08:00	28/05/19	18:00	ODB	ER-II/ODISHA/SUNDERGARH	TL Maintenance works + AMP of LR2	NLDC	
456	400KV MAIN BAY OF NEW RANCHI-IV AT RANCHI	28-05-2019	09:30	28-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
457	400KV BARH - PATNA CKT 3 & 4	28-05-2019	08:00	31-05-2019	18:00	ODB	POWERGRID ER-I	Realingmnet works of 400KV Barh- Motihari Line due to Construction of Barh Bypass by NHAI		

458	400kV MAIN BAY OF BALIA-2 AT BIHARSHARIFF	28-05-2019	09:00	28-05-2019	17:00	ODB	POWERGRID ER-I	AMP WORK		
459	400KV MAIN BAY OF VARANASI (NORTH SIDE) AT SASARAM	28-05-2019	09:00	28-05-2019	18:00	ODB	POWERGRID ER-I	AMP work		
460	400KV FKK-Sagardighi Line#1	28-05-2019	09:00	29-05-2019	17:00	ODB	FARAKKA	CB,CT and Relay test	WB	
461	400kV Bokaro-A-Koderma Ckt#1	29-05-2019	09:00	08-06-2019	18:00	OCB	DVC	To attend the leakage at a single point		
462	400kV Sagardighi-Subhasgram Line	29-05-2019	09:00	30-05-2019	17:00	ODB	POWERGRID, ER-II	A/R relay retrofitting & testing ,defective insulator replacement	WB	
463	41252-main Bay of TISCO line	29/05/19	09:00	29/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP Works		
464	413 MAIN BAY (JEYPORE-GAZ II MAIN BAY)	29-05-2019	09:00	01-06-2019	17:00	OCB	ER-II/Odisha /Jeypore	Overhauling of 41352 (CB)(JEYPORE-GAZ II MAIN BAY)		
465	400KV GIS Bus-1 at Sundergarh	29/05/19	09:00	29/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	for bus PT secondary circuit modification works		
466	125 MVAR BUS REACTOR-I	29-05-2019	09:00	29-05-2019	18:00	ODB	ER-II/ODISHA/ROURKELA	COMMISSIONING OF CSD IN ITS TIE BAY CB (42352 CB)		
467	400/220kV 315MVA ICT-II AT SASARAM	29-05-2019	08:00	03-07-2019	18:00	OCB	POWERGRID ER-I	For Transformer Retrofitting Work	BSEB	
468	400kv Main bay of Balia-2 AT PATNA	29-05-2019	09:30	31-05-2019	17:30	OCB	POWERGRID ER-I	CB Overhauling		
469	220kv Patna(PG)-Sipara ckt1 ,2,& 3	29-05-2019	09:00	29-05-2019	14:00	ODB	BSPTCL	For stringing work of 220kv D/C Patna(PG)-Khagaul T/L		
470	132 KV D/C CK Road - Medinipur TL	30-05-2019	6.00	31-05-2019	17.00	ODB	POWERGRID, ER-II	For Powerline crossing of 765 KV RMTL-AP 162/0 (DD+9)-163/0(DD+9). Span Length-265 mtr	WB	
471	400KV GIS Bus-2 at Sundergarh	30/05/19	09:00	30/05/19	14:00	ODB	ER-II/Odisha/Sundergarh	for bus PT secondary circuit modification works		
472	400KV RANCHI-SIPAT-I	30-05-2019	09:30	31-05-2019	17:00	ODB	POWERGRID ER-I	1) To attend oil leakage in Non switchable L/R of 400 KV RANCHI-SIPAT-1 (80 MVAR).	NLDC	
473	400/220KV 500MVA ICT-II AT NEW PURNEA.	30-05-2019	09:30	30-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of Transformer Isolator (20689T)		
474	400KV RANCHI-SIPAT-I	30-05-2019	09:30	31-05-2019	17:00	ODB	POWERGRID ER-I	1) To attend oil leakage in Non switchable L/R of 400 KV RANCHI-SIPAT-1 (80 MVAR). 2) Replacement of defective CAPTHOR in FSC of the same line at Ranchi	NLDC	
475	400 KV Bus -3 at Maithan	31-05-2019	10:00	31-05-2019	11:00	ODB	POWERGRID, ER-II	Project work under ERSS-XVII (reconnection of jumpers)		
476	400/220KV 500MVA ICT-I AT NEW PURNEA.	31-05-2019	09:30	31-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of Transformer Isolator (20689T)		
477	SST-1 Bay at BTPS-A S/Y	10-06-2019	09:00	18-06-2019	18:00	OCB	DVC	To attend the leakage at a single point		
478	Tapping point of 400 KV D/C MID-KGP-CHANDITALA LILO LINE-(TL-56/0 &55/0)	11-06-2019	6.00	12-06-2019	17.00	OCB	POWERGRID, ER-II	For TAPPING of 400 KV CKTL-Loop In AP-1/0(DD+0) SPAN-200 MTR and LOOP OUT AP-29/0-(DD+0)- - SPAN 200 MTR--	WB	S/D IS ALLOWED SUBJECT TO SUBMISSION OF SKETCH/DRAWING/PLANNING OF WORK TO BE EXECUTED
479	220kv Biharsarif (PG)-Biharsarif Ckt-I	08/05/19	09:00	08/05/19	12:00	ODB	BSPTCL	Line Maintainance work		

ERLDC, KOLKATA										
TRANSMISSION ELEMENTS OUTAGE DEFFERED IN 156th OCC MEETING OF ERPC										
		FROM		TO						
SL. No	NAME OF THE ELEMENTS	DATE	TIME	DATE	TIME	REMARKS	S.D availed BY	Reason	SUBJECT TO CONSENT FROM AGENCY	COMMENT
1	220 KV Budhipadar-Korba-I & II	25-04-2019	08:00	30-04-2019	16:00	ODB	OPTCL	Interposing of OC+6 type tower for adequate clearance to 132 KV Brajrajnagar-RTSS, Kechhobahal line	NLDC	DEFFERED
2	132 KV BUS at Malda	10-05-2019	08:00	10-05-2019	14:00	ODB	POWERGRID, ER-II	Fixation of CVT in BUS	WB	DEFFERED (TILL WB GAJAL S/S IS COMISSIONED)
3	400KV Bus#1 at Binaguri	04-05-2019	09:00	04-05-2019	17:00	ODB	POWERGRID, ER-II	GIS bushing erection under 400KV Bus#1		DEFFERED (TILL END OF MONSOON)
4	400KV Bus#2 at Binaguri	06-05-2019	09:00	06-05-2019	17:00	ODB	POWERGRID, ER-II	GIS bushing erection under 400KV Bus#2		DEFFERED (TILL END OF MONSOON)
5	400KV BINAGURI-RANGPO-1	01-04-2019	10:00	30-05-2019	18:00	ODB	POWERGRID, ER-II	Reconductoring works		DEFERRED (TILL END OF MONSOON)
6	400KV BINAGURI-RANGPO-2	01-04-2019	10:00	30-05-2019	18:00	ODB	POWERGRID, ER-II	Reconductoring works		DEFERRED (TILL END OF MONSOON)
7	400KV Rangpo - Teesta -V Line 2	13-05-2019	08:00	17-05-2019	17:00	OCB	POWERGRID, ER-II	For rectification of SF6 gas leakage repair work		DEFFERED (TILL END OF MONSOON, N.B-RTAMCER2 WILL INFORM ERLDC ABOUT SERIOUSNESS OF LEAKAGE)
8	400KV Rangpo - Teesta -V Line 1	22-05-2019	08:00	23-05-2019	17:00	ODB	POWERGRID, ER-II	For Line AMC		DEFFERED (TILL END OF MONSOON, N.B-RTAMCER2 WILL INFORM ERLDC ABOUT SERIOUSNESS OF LEAKAGE)
9	400 KV Maithon-Kahalgaon # 2 line	01-05-2019	09:00	02-05-2019	17:00	ODB	POWERGRID, ER-II	Replacement of Main and line bay CT		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
10	400 KV Maithon-Mejia #3 line	08-05-2019	09:00	08-05-2019	17:00	ODB	POWERGRID, ER-II	for oil sampling of Line CT	DVC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
11	400 KV Maithon-Right bank #1 line	01-05-2019	08:00	11-05-2019	18:00	OCB	POWERGRID, ER-II	Re-Conductoring work under ERSS-XVII		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
12	400 KV Maithon-Right bank #2 line	25-05-2019	08:00	31-05-2019	18:00	OCB	POWERGRID, ER-II	Re-Conductoring work under ERSS-XVII		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
13	400 KV Maithon-Right bank #1 line	12-05-2019	08:00	24-05-2019	18:00	OCB	POWERGRID, ER-II	Re-Conductoring work under ERSS-XVII		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
14	400 KV Maithon-Jamshedpur Line	06-05-2019	09:00	07-05-2019	18:00	ODB	POWERGRID, ER-II	To replace Punctured disc Insulator, damaged by miscreant		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
15	400 KV Maithon- Durgapur #2 Line	15-05-2019	09:00	15-05-2019	18:00	ODB	POWERGRID, ER-II	Jumper Replacement Work		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
16	765 KV Gaya-Varanasi-II	09-05-2019	08:00	10-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of broken insulators caused by miscreants	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)

17	765kV Gaya-Balia line	01-05-2019	08:00	15-05-2019	18:00	ODB	POWERGRID ER-I	FOR TOWER STRENGHTHENING WORK.	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
18	400 kV Patna-Ballia CKT 1	08-05-2019	09:00	08-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
19	400 kV Patna-Ballia CKT 2	09-05-2019	09:00	09-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
20	400KV BIHARSHARIFF-BALIA-I	07-05-2019	09:00	08-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
21	400KV BIHARSHARIFF-BALIA-II	09-05-2019	09:00	10-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
22	400 kV Patna-Ballia CKT 3	06-05-2019	08:00	08-05-2019	18:00	ODB	POWERGRID NR-III	For replacement of porcelain insulator with polymer for Tension Tower	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
23	400 kV Patna-Ballia CKT 4	09-05-2019	08:00	10-05-2019	18:00	ODB	POWERGRID NR-III	For replacement of porcelain insulator with polymer for Tension Tower	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
24	400KV Chandwa -Gaya ckt-1	04-05-2019	09:00	04-05-2019	18:00	ODB	POWERGRID ER-I	For shifting of 33 KV under crossing line of JBVNL|(400 KV Chandwa - Gaya T/L tripped due to less clearence)	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
25	400KV Chandwa -Gaya ckt-2	04-05-2019	09:00	04-05-2019	18:00	ODB	POWERGRID ER-I	For shifting of 33 KV under crossing line of JBVNL|(400 KV Chandwa - Gaya T/L tripped due to less clearence)	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
26	400kV JAMSHEDPUR - MAITHON	08-05-2019	09:30	08-05-2019	17:30	ODB	POWERGRID ER-I	Static Auto reclose relay to be replaced with numerical relay		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
27	400KV BIHARSHARIFF-BALIA-I	07-05-2019	09:00	08-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
28	400KV BIHARSHARIFF-BALIA-II	09-05-2019	09:00	10-05-2019	18:00	ODB	POWERGRID ER-I	Replacement of porcelain Insulator by polymer	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
29	765 KV Gaya-Varanasi-II	09-05-2019	08:00	10-05-2019	18:00	ODB	POWERGRID ER-I	For replacement of broken insulators caused by miscreants	NLDC	DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)

30	400 KV GAYA-CHANDWA-I	04-05-2019	09:00	04-05-2019	11:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
31	400 KV GAYA-CHANDWA-II	04-05-2019	14:00	04-05-2019	16:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
32	400 KV NEW RANCHI-CHANDWA-I	06-05-2019	09:00	06-05-2019	11:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
33	400 KV NEW RANCHI-CHANDWA-I	06-05-2019	14:00	06-05-2019	16:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
34	400 KV BUS-I AT CHANDWA	07-05-2019	09:00	07-05-2019	11:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
35	400 KV BUS-II AT CHANDWA	07-05-2019	14:00	07-05-2019	16:00	ODB	POWERGRID ER-I	NTAMC WORK	NLDC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
36	400 KV KODERMA-BOKARO TL - 1	10-05-2019	08:00	10-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of damaged insulators	DVC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
37	400 KV KODERMA-BOKARO TL - 2	11-05-2019	08:00	11-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of damaged insulators	DVC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
38	400 KV KODERMA -BIHARSHARIF TL - 1	24-05-2019	08:00	24-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of damaged insulators	DVC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
39	400 KV KODERMA -BIHARSHARIF TL - 2	25-05-2019	08:00	25-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of damaged insulators	DVC	DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
40	400 KV Biharsarif - Banka - II	10-05-2019	08:00	10-05-2019	17:00	ODB	POWERGRID ER-I	for replacement of flashed insulator at Loc No 340.		DEFFERED (BY NRPC DUE TO REPEATED S/D & NON INTIMATION OF INFORMATION RELATED TO EXACT NATURE OF DAMAGE AND WORK DONE,PENDING)
41	400 kv New Ranchi-Ranchi CKT-3	25-05-2019	09:00	25-05-2019	18:00	ODB	POWERGRID ER-I	for Insulation sleeve installation work at Loc 054-055 of 400 KV New Ranchi-New Ranchi ckt - 3&4 Line		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
42	400 kV New Ranchi-Ranchi - CKT-4	25-05-2019	09:00	25-05-2019	18:00	ODB	POWERGRID ER-I	for Insulation sleeve installation work at Loc 054-055 of 400 KV New Ranchi-New Ranchi ckt - 3&4 Line		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
43	400 kV Ranchi- Maithan-(PG)	25-05-2019	09:00	25-05-2019	18:00	ODB	POWERGRID ER-I	for Insulation sleeve installation work at Loc 054-055 of 400 KV New Ranchi-New Ranchi ckt - 3&4 Line		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
44	400 kV Ranchi -Raghunathpur CKT-1	25-05-2019	09:00	25-05-2019	18:00	ODB	POWERGRID ER-I	for Insulation sleeve installation work at Loc 054-055 of 400 KV New Ranchi-New Ranchi ckt - 3&4 Line		DEFERRED(TILL RETURN OF S/D OF 400KV GAYA-KODERMA D/C & 400KV MAITHON-GAYA D/C)
45	400 kV 410 main Bay of Baripada-Pandiabili line	17/04/19	09:00	18/05/19	17:30	ODB	ER-II/Odisha/BARIPADA S/S	AMP & Gasket replacement		Shutdown proposed for the month of April will not be allowed.
46	400 KV Meramundali-Duburi-I	22-04-2019	10:00	22-04-2019	14:00	ODB	OPTCL	Implematation and Testing of Tigital Tele Protection System		Shutdown proposed for the month of April will not be allowed.
47	400 KV Meramundali-Duburi-II	23-04-2019	10:00	23-04-2019	14:00	ODB	OPTCL	Implematation and Testing of Tigital Tele Protection System		Shutdown proposed for the month of April will not be allowed.
48	400 KV Meramundali-Kaniha Feeder	26-04-2019	10:00	26-04-2019	14:00	ODB	OPTCL	Implematation and Testing of Tigital Tele Protection System		Shutdown proposed for the month of April will not be allowed.
49	132kv D/C Motihari (DMTCL)-Motihari	26-04-2019	10:00	26/0419	17:00	ODB	BSPTCL	Line maintainance work		Shutdown proposed for the month of April will not be allowed.

50	400 KV BUS-I AT KISANGANJ ALONG WITH 400 KV KISANGANJ- DARBHNGA CKT-II	27-04-2019	08:00	28-04-2019	18:00	ODB	POWERGRID ER-I	TESTING AND COMMISSINING OF 80 MVAR L/R.		Shutdown proposed for the month of April will not be allowed.
51	220 KV Gaya(PG)-Bodhgaya ckt 1	27-04-2019	10:00	27-04-2019	12:00	ODB	BSPTCL	Jumper tightening/replacement work at tension tower location no - 1 & 03		Shutdown proposed for the month of April will not be allowed.
52	220 KV Gaya(PG)-Bodhgaya ckt 2	27-04-2019	12:30	27-04-2019	14:30	ODB	BSPTCL	Jumper tightening/replacement work at tension tower location no - 1 & 03		Shutdown proposed for the month of April will not be allowed.
53	315 MVA ICT-I at Lapanga grid S/s	29-04-2019	09:00	03-05-2019	17:00	ODB	OPTCL	Flushing of fire water pipe line, fixing of spray nozzle and detectors		Shutdown proposed for the month of April will not be allowed.
54	400 KV BUS-II AT KISANGANJ ALONG WITH 400 KV KISANGANJ- DARBHNGA CKT-I	29-04-2019	08:00	30-04-2019	18:00	ODB	POWERGRID ER-I	BAY EAXTENSION BALANCE WORK AT KISANGANJ		Shutdown proposed for the month of April will not be allowed.
55	220 KV Gaya(PG)- Sonenagar ckt 1	29-04-2019	11:00	06-05-2019	13:30	ODB	BSPTCL	Jumper tightening/replacement work at tension towers		Shutdown proposed for the month of April will not be allowed.
56	220 KV Gaya(PG)- Sonenagar ckt 2	29-04-2019	14:00	06-05-2019	16:00	ODB	BSPTCL	Jumper tightening/replacement work at tension towers		Shutdown proposed for the month of April will not be allowed.
57	132kv Lakhisarai (PG) - Jamui ckt - 1	29-04-2019	11:00	29-04-2019	13:30	ODB	BSPTCL	Line maintainance work		Shutdown proposed for the month of April will not be allowed.
58	132kv Lakhisarai (PG) - Jamui ckt 2	29-04-2019	14:00	29-04-2019	16:30	ODB	BSPTCL	Line maintainance work		Shutdown proposed for the month of April will not be allowed.
59	220 kV Muzaffarpur (PG) -Hajipur ckt - 1	29-04-2019	10:00	29-04-2019	12:00	ODB	BSPTCL	Tree pruning work		Shutdown proposed for the month of April will not be allowed.
60	220 kV Muzaffarpur (PG) -Hajipur ckt - 2	29-04-2019	12:00	29-04-2019	16:00	ODB	BSPTCL	Tree pruning work		Shutdown proposed for the month of April will not be allowed.
61	400 KV 80 MVAR Reactor at Lapanga grid S/s	30-04-2019	09:00	04-05-2019	17:00	ODB	OPTCL	Flushing of fire water pipe line, fixing of spray nozzle and detectors		Shutdown proposed for the month of April will not be allowed.
62	132 KV Baripada PG-Baripada OPTCL Feeder	30-04-2019	10:00	30-04-2019	15:00	ODB	OPTCL	Stringing of OPGW cable		Shutdown proposed for the month of April will not be allowed.
63	132 KV Baripada PG-Bangiriposi OPTCL Feeder	30-04-2019	10:00	30-04-2019	15:00	ODB	OPTCL	Stringing of OPGW cable		Shutdown proposed for the month of April will not be allowed.
64	220kv Pusauli (PG)-Pusauli (BSPTCL)	30-04-2019	09:00	30-04-2019	15:00	ODB	BSPTCL	Over head line crossing of 220kv Pusauli (PG)-Pusauli (BSPTCL) & 220 KV Pusouli (PG)-Ara (PG) for LILO line construction on 2nd circuit of 220 KV Pusouli (PG)-Ara (PG) at Pusouli (BSPTCL).		Shutdown proposed for the month of April will not be allowed.
65	220kv Pusauli (PG)-Ara (PG)	30-04-2019	09:00	30-04-2019	15:00	ODB	BSPTCL	Over head line crossing of 220kv Pusauli (PG)-Pusauli (BSPTCL) & 220 KV Pusouli (PG)-Ara (PG) for LILO line construction on 2nd circuit of 220 KV Pusouli (PG)-Ara (PG) at Pusouli (BSPTCL).		Shutdown proposed for the month of April will not be allowed.

Quarterly Preparedness Monitoring -AGENDA

(Status as on :)

S.No.	State	Sector (G/T/D)	Utilities	Status of CISO Nomination	Critical Infra Identified	Crisis management Plan Prepared	Status of CS mock drill	Status of Training/ Workshops organized/ participated by utility	Action taken on CERT-In/NCIIPC Advisories
1	Tamilnadu	T	TANGEDCO	Yes/No	Yes/No	Yes/No	Done on ____		