Minutes

of

145th OCC Meeting

Date: 05.06.2018

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700 033

Eastern Regional Power Committee

Minutes of 145th OCC Meeting held on 21st May, 2018 at ERPC, Kolkata

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

Member Secretary, ERPC chaired the meeting. He welcomed all the participants to the meeting. He informed that Secretary, Ministry of Power is taking a meeting at New Delhi to address the coal shortage issues being faced by the generators. He asked all the state utilities to update the latest status on power cuts due to coal shortage. Concern members updated the latest status.

Item no. 1: Confirmation of minutes of 144th OCC meeting of ERPC held on 19.04.2018

The minutes of 144th OCC meeting were uploaded in ERPC website and circulated vide letter dated 02.05.2018 to all the constituents.

Members may confirm the minutes.

Deliberation in the meeting

Members confirmed the minutes of 144th OCC meeting.

PART A : ER GRID PERFORMANCE

Item no. A1: ER Grid performance during April, 2018

The average consumption of Eastern Region for April- 2018 was 400 Mu. Eastern Region achieved maximum energy consumption of 441 Mu on 23rdApril - 2018. Total Export schedule of Eastern region for April - 2018 was 2458 Mu, whereas actual export was 2426 Mu.

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

1. **Over drawal/under injection by ER Entities**
2. **Performance of Hydro Power Stations during peak hours**
3. **Performance of ISGS during RRAS**

Deliberation in the meeting

ERLDC presented the performance of the Eastern Region grid during April 2018. Presentation is enclosed at ***Annexure- A1****.*

ERLDC informed that frequency has touched minimum value of 49.61Hz because of huge demand. Odisha, Jharkhand and West Bengal were over drawing from the Grid. Moreover, West Bengal was running PPSP in pump mode while overdrawing from the Grid.

OCC advised Odisha, Jharkhand and West Bengal to plan their generation to balance the load by maximizing the availability of their internal generation and arranging procurement of power through STOA/ MTOA/ Power Exchange. OCC advised West Bengal to avoid PPSP in pump mode operation while overdrawing from Grid.

West Bengal informed that they are purchasing power from market at very high rate to manage the load during peak hours. They are forecasting their loads as per IMD weather forecast but facing difficulty in predicting sudden weather changes.

West Bengal added that on some occasions, power was also not available in the market. Hence they were compelled to run the PPSP in pump mode while drawing power from Grid in order to manage the power during peak hours.

ERLDC informed that Farakka units are not maintaining their declared capacity and continuously under generating.

OCC advised NTPC to plan their availability properly and declare the DC judiciously.

West Bengal informed that beneficiaries should be informed immediately while extending the shutdown period of the generators.

OCC advised all the generators to inform beneficiaries regarding deviations in the scheduled shutdown so that beneficiaries can plan their availability.

ERLDC informed that generation relief provided by the generators was not sufficient during SPS Operation on HVDC Talcher-Kolar Pole 1 tripping on 16-05-2018 15:34 Hrs. ERLDC elaborated the event with detailed presentation. Presentation is enclosed at Annexure-A1.1.

OCC advised Powergrid to submit a report on frequent tripping of only pole 1.

OCC opined that a Committee was already formed to study the SPS issues related to HVDC Talcher-Kolar. OCC advised the Committee to analyze this event and place the report in OCC Meeting.

ERLDC informed that at 05:45 Hrs on 9th May 2018, 400 kV Binaguri-Rangpo 1 circuit tripped on R phase to earth fault but Rangpo SPS did not operate. ERLDC elaborated the event with detailed presentation. Presentation is enclosed at Annexure-A1.2.

It was informed that issue is already placed in 67th PCC Meeting scheduled to be held on next day and it would be discussed in detail.

Item no. A2: Commissioning of new transmission elements in Eastern Region

The details of new units/transmission elements commissioned in the month of April - 2018 based on information furnished by the constituents are depicted below:

SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	240 MVAr Line reactor of 765 KV Angul-Jharsuguda IV at Angul	PGCIL	4/12/2018	22:00	Only Line Reactor charged
2	400 KV New-Duburi-TSL (Kalinganagar) I	OPTCL	4/17/2018	15:49	
3	Bus I & II at TSL Kalinganagar	TSL (GRIDCO)	4/17/2018	15:49	
4	Main bay of Gaya II, tie bay of Gaya II and GT-1; main bay of GT-1) alongwith bus I at NPGC	NPGC	4/25/2018	19:00	
5	Bus II at NPGC	NPGC	4/25/2018	19:20	220kv MB#2 CHARGED
6	220 KV KASBA-BARASAT #1(Route Length: 39km) (LILO of 220kv Jeerat-Kasba at Barasat)	WBSETCL	4/27/2018	18:51(both end)	

7	220 KV JEERAT-BARASAT #1 (R.L.- 21km)	WBSETCL	4/27/2018	19:04(JRT) 19:06(BARASAT)	
8	220/132KV 160MVA TR-1 BARASAT	WBSETCL	4/27/2018	19:30 (HV SIDE)	
9	220/132KV 160MVA TR-2 BARASAT	WBSETCL	4/27/2018	19:40 (HV SIDE)	CHARGED VIA 220kv
10	220 KV BUS COUPLER BARASAT	WBSETCL	4/27/2018	19:49	220KV KASBA-BARASAT#1 & JEERAT-BARASAT#1 ARE LOADED
11	220KV KASBA-BARASAT #2 (RL- 39km)	WBSETCL	4/28/2018	15:08(KSB) 15:10(BARASAT)	Both end charged only at 220kv idle bus(MB#2)
12	220KV JEERAT-BARASAT #2 (RL- 21km)	WBSETCL	4/28/2018	15:28 (JRT) 15:30(BARASAT)	Both end charged and power flow started in both lines
13	132/33 KV 31.SMVA TR#3 at Ranaghat		13-04-2018 14/04/018	18:50 09:40	CHARGED(HV). LOADED.
14	220 kV Bargarh New LILO DC (220 kV Katapalli - New BolangirCkt-I)	OPTCL	21.03.2018	20:11 Hrs	ckt km : 0.070 ACSR Zebra (54+7/3.18mm)
15	220/132/33 kVBargarh New Substation	OPTCL	21.03.2018	20:11 Hrs	1x100 MVA Auto Transformer 1x12.5 MVA Power Transformer
16	132 kV Bargarh New-Ghens DC	OPTCL	13.04.2018	10:00 Hrs	ckt km : 59.00 ACSR Panther(30+7/3.00mm) Expected Load : 40 MW
17	132/33 KV Ghens Substation	OPTCL	13.04.2018	10:00 Hrs	1x40 MVA Power Transformer

Constituents may update.

Deliberation in the meeting

Members noted.

Item no. A3: Restricted Governor /Free Governor Mode Operation of generators in ER

In the month of April-2018 following event took place

1. On 23.04.2018 at 10:42 Hrs, Multiple tripping from Kotra PG due to DC earth fault reported in 765kV Kotra S/S, consequently Generation loss of 3090 MW occurred. Leading to 0.3 Hz dip in frequency.

The details of event was circulated via e-mail to all the concerned. However, response only from Budge-Budge, DPL, HEL and DVC were received till date.

ERLDC may present.

Deliberation in the meeting

*ERLDC presented the performance of the generators for last three incidences. Presentation is enclosed at **Annexure-A3**.*

NTPC informed that they are taking up with OEM to improve the RGMO performance of Barh units

ERLDC informed that data of Farakka units was not available.

OCC advised NTPC to send the data to ERLDC in excel format.

ERLDC requested all the concerned utilities to submit the data in one-second or high-resolution format (In .csv or excel) in order to check RGMO response of the units during large frequency change events.

OCC advised all the generators to ensure proper RGMO response of their units and submit the relevant data to ERLDC within seven days before the OCC.

All generators agreed.

Item no. A4: Reactive Power performance of Generators

Generating stations have been monitored for certain sample dates in the month of April,18.

Power Plant	**Max and Min Voltage observed for April 18 (KV)**	**Date for occurrence (April 18)**
Farakka STPS	421, 409	03,30
Khalgaon STPS	438, 409	17,25
Talcher STPS	411, 395	13,25
Bakreshwar TPS	406, 387	03, 22
Kolaghat TPS	420, 402	12,17
Sagardighi TPS	420, 400	03,28
MPL	416, 405	03,21
Mejia-B	420, 410	03,28
DSTPS	420, 411	03,21
Adhunik TPS	419, 400	03,21
Barh	423, 409	13,22
JITPL	417, 406	14,27
GMR	410, 404	17,28
HEL	421,398	03,28
Kodarma	421, 406	03,28
Raghunathpur	419,407	03,28
Nabinagar TPS	418,405	31,27

ERLDC may present the reactive performance.

Deliberation in the meeting

ERLDC informed that performance of all the generators was satisfactory.

Item no. A5: UFR operation during the month of April'18

System frequency touched a maximum of 50.21 Hz at 18:02Hrs of 29/04/18and a minimum of 49.61Hz at 10:44Hrs of 23/04/18.Hence, no report of operation of UFR has been received from any of the constituents.

Members may note.

Deliberation in the meeting

Members noted.

Item no. A6: Grid incidences during the month of April, 2018

Sl No	GD/ GI	Date	Time	Affected System	Summary
1	GD-I	07-04-2018	09:56	DMTCL	At 09:48 hrs 400 KV Motihari – Gorakhpur I and II tripped on Y-N and B-N fault respectively. Thereafter tripping of 400 kV Motihari – Barh D/C at 09:56 hrs on R-Y-B fault resulted in total power failure at 400/132 kV Motihari S/S and other radially connected areas (Birganj, Surajpura, Parwanipur in Nepal; Ramnagar, Betiah, Raxaul, Motihari, Dhaka in Bihar).
2	GD-I	07-04-2018	17:20	ER-II	220 kV Maithon - Dhanbad D/C, 220 kV Maithon - Kalyaneswari D/C and 220 kV Maithon - Dumka - II along with 220 kV B/C bay at 400/220kV Maithon S/s tripped due to operation of Bus Bar protection.
3	GD-I	11-04-2018	20:10	DVC	At 19:40 hrs 220 kV Maithon – Dhanbad - I tripped on B-N fault. At 20:15 hrs 220 kVKalyaneswari – CTPS – I tripped due to jumper snapping (suspected) and at 20:18 hrs 220 kV Kalyaneswari – CTPS – II tripped on overload. At the same time, 220 kV Joda – Jindal S/C line tripped from Joda end resulting load loss at radially fed area i.e. Jamshedpur (DVC) through 220 kV Joda – Jindal – Jamshedpur section.
4	GD-I	15-04-2018	06:43	ISTS	At 06:43 hrs, 220 kV TashidingRangpo S/C and 220 kV Tashiding New Melli S/C tripped on Y-N fault resulting in tripping of running unit at Tashiding due to loss of evacuation path. At the same time 220 kV Jorethang New Melli - I tripped from Jorethang end.
5	GD-I	17-04-2018	10:37	CESC	At 10:37 hrs, 220 kV Subhasgram - EMSS D/C tripped due to operation of line differential relay at EMSS end (R phase for Circuit II and B phase for Circuit I) resulting load loss at

					radially connected loads i.e. New Cossipore, Kasba, Dum Dum and B/T road.
6	GD-I	30-04-2018	05:48	BSPTCL	At 05:48 hrs 220 kV Purnea - Madhepura I tripped on B-N fault causing load loss at Madhepura, Supaul and Lahan (Nepal).

Members may note.

Deliberation in the meeting

Members noted. It was decided to have detailed discussion of the important trippings at the PCC meeting.

Item no. A7: Non-compliance of directions issued by SLDC

Vide clause no 5.5.1.(c)(h) of IEGC, non-compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal are to be reported to ERLDC for incorporating the same in weekly report to be prepared and published by ERLDC.

All SLDCs are to inform ERLDC the instances of non–compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal, within two days after the day of operation.

No report from any constituent has yet received. Hence, ERLDC would be considering 'Nil' report for all constituents for April18.

Members may note.

Deliberation in the meeting

Members noted.

Item no. A8: Reporting of voltage deviation indices (VDI) for select S/Stns in ER

ERLDC submitted the Voltage Deviation Index (VDI) of selected 400 kV Sub-stations for April 2018 of Eastern Region which is enclosed at **Annexure- A8**.

Members may note.

Deliberation in the meeting

Members noted.

PART B: ITEMS FOR DISCUSSION

Item No. B.1: 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	108.6 Cr	18.26 Cr.	100 % Supply is Completed 100 % Erection is completed Claim is submitted for releasing of 22.27 Cr., the same is yet to be received.
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	Nil	Order has been placed for 96.44 Cr. 1st instalment is yet to be received.
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	Nil	Order has been placed for 12.53 Cr. 1st instalment is yet to be received.
4	WBPDCL	Implementation of Islanding scheme at Bandel Thermal Power Station	*10.04.17*	*March 2018*	1.39 Cr		*The implementation at Power station would be completed by May 2018. Implementation part at Substation for load segregation would be done by WBSETCL.* *WBSETCL agreed to send their plan within 7 days.*
5		Upgradation of Protection and SAS			23.48		Approved by Ministry of Power. Fresh tendering is in progress.
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.	10.05.15	30.11.18	162.5 Cr.	37.79 Cr	Total contract awarded for Rs. 51.35 Cr
7		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.2017		25.61 Cr.		Agreement signed on 03.01.2018
8	OHPC	Renovation and up-gradation of protection and control system of 4 nos.OHPC substations.		*U.Kolab-March 19 Balimela-Feb 2019 U.Indravati-Jan 19 Burla-Nov 2018, Chiplima Dec 2018*	*22.35 Cr.*		Tendering under progress.
9	BSPTCL	Renovation and up-gradation of 220/132/33 KV GSS Biharshariff, Bodhgaya, Fatuha, Khagaul, Dehri -on-sone& 132/33 kV GSS Kataiya	11/5/2015	31.07.2018	64.02 crore	56.04 crore	85% of work has been completed. Contract awarded for Rs.71.37 Cr till date.
10		Installation of capacitor bank at different 35 nos. of GSS under BSPTCL	5/9/2016	12th March 2019	18.88 crore	Nil	Work awarded for all GSS.

11		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.
12	JUSNL	Renovation and up-gradation of protection system	*September 2017*	*2 years*	*138.13 crores*		LOA issued to PRDC on 22nd March 2018 for monitoring the project. Tendering is in progress.
13	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.
14		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 6.45 Cr.
15	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.
16	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.
17a	ERPC	Training for Power System Engineers					The proposal was approved by Appraisal Committee. The proposal was sent to CERC. CERC has sought some queries from the Appraisal Committee. The matter shall be taken up by the Appraisal Committee during its next meeting.
17b		Training on Power market trading at NORD POOL Academy for Power System Engineers of Eastern Regional Constituents					

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	Scheme was examined by TSEG. Inputs sought from entity. Sikkim submitted the relevant information.
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 examined by TSEG. Inputs sought from entity. Sikkim submitted the relevant information.
3	JUSNL	Reliable Communication & Data Acquisition System upto 132kV Substations.	23-08-17	102.31 Cr	Scheme was examined by TSEG. Inputs sought from entity. Scheme has been revised as suggested by TSEG and it would be submitted within a week.
4	OPTCL	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	28-08-17	31.94 Cr	Scheme was examined by TSEG. Inputs sought from entity. OPTCL submitted the relevant information.

C. Projects recently submitted:

SN	Name of Constituent	Name of Project	Date of Submission	Estimated cost (in Rs.)	Latest status
1	WBSETCL	Implementation of Integated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal	22-12-17	25.96 Cr	
2	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	3.26 Cr	
3	OPTCL	Protection upgradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir&Paradeep).	20.02.2018	41.1 Cr.	

Respective constituents may update the status.

Deliberation in the meeting

Members updated the latest status as mentioned in above table.

It was informed that PSDF review meeting of Eastern Region is scheduled to be held at 400kV Binaguri S/s on 8th June 2018 at 10:30 hrs under the Chairmanship of Chairperson, CEA.

OCC advised all the state utilities to send the issues related to PSDF to NPC with a copy to ERPC for detailed discussion in the meeting.

Item No. B.2: Low-Frequency Oscillation (LFO) observed At Durgapur and nearby nodes on 05thAPRIL 2018 from 14:21 hrs to 14:28 hrs.

Low-frequency oscillation of 0.1 Hz was observed in Durgapur and nearby nodes on 05th April 2018 from 14:21 hrs to 14:28 hrs. The oscillation was prominent in the Eastern region near Durgapur only based on the synchrophasor data analysis. Plot of Durgapur bus voltage based on PMU data is shown in the figure below where oscillation can be clearly observed. No significant oscillation was recorded by any other PMU during the said period, indicating some nearby local phenomenon or generator hunting. On further analysis of Eastern region SCADA data, large variations in the MW and MVAR of Sagardighi Unit 4 was noticed during the same time period.

In 144th OCC, ERLDC informed that similar incident was occurred earlier on 22nd July 2017 at 22:47 Hrs, Low Frequency Oscillations of frequency 0.083 Hz were observed in Sagardighi Unit 4 and WBPDCL has not submitted any report.

ERLDC added that oscillations in electrical parameters like voltage & frequency would impact nearby generators by increasing wear and tear. Therefore, ERLDC has requested for following actions:

- WBPDCL should submit a report.
- All Generating Units must intimate the RLDC/SLDC immediately if any such hunting/vibration is observed in Units (Cause/Effect).
- All Generating Units must Submit the one second or finer resolution data of MW/MVAr for all units to RLDC/SLDC
- PSS Tuning of all Generating Units above 100 MW must tune their PSS in Compliance to CERC Regulation and CEA grid Standard.

WBPDCL informed that oscillations were observed due to problem in Governor of Sagardhigi unit#4. WBPDCL added that the unit is under shutdown and they are investigating the root cause.

OCC advised WBPDCL to submit a report for both the incidences occurred on 05 April'18 and 22nd July 2017 along with the action taken.

WBPDCL vide letter dated 1stMay2018 informed that unwanted oscillations in Sagardighi unit-4 was observed due to suspected malfunctioning of the governing system of the machine, which in turn oscillated the EHC output. The issue has been brought to the notice of BHEL and WBPDCL maintenance department for immediate rectification of the problem. WBPDCL also informed that during the ongoing shutdown period of U#4 control valve's pilot cleaning, calibration and thorough operation checking w.r.t EHC output will be done to identify and resolve the issue.

WBPDCL may elaborate. Members may discuss.

Deliberation in the meeting

WBDPCL informed that OEM would visit the site within 2 days to resolve the issue.

OCC advised WBPDCL to submit the outcome to ERPC and ERLDC.

Item No. B.3: Status of Implementation of Enquiry Committee Recommendations

9.9 Optimum utilization of available assets:

9.9.2 An audit of devices such as HVDC, TCSC, SVC and PSS should be done immediately to ensure that their stability features are enabled. Further, exercise of PSS tuning should be planned and implemented. Settings of these dynamic stabilizing devices should be reviewed at appropriate intervals.

In 2007 Based on a system study (Prof. Kulkarni) were proposed the following units to be equipped with PSS devices:
1. Kolaghat stage II 400 kV U#4.5.6.(201MW each)of WBPDCL;
2. Farakka U#4,5 (500MW each)of NTPC;
3. U.Kolab 4 units (80 MW each) of OHPC;
4. Budge Budge U# 1,2,(250 MW) of CESC Ltd.

Thereafter, PSS tuning of all units were carried out with the help of BHEL Service Manager, Shri K. ParthaSarathi in the presence of Prof. Kulkarni except Budge Budge units. PSS tuning of Budge-Budge unit 1&2 of CESC has been carried out on 28th&29th July, 2015.

142ndOCC opined that for identifying the generators for PSS tuning, a fresh study is needed to be done as per the existing network. OCC referred to TCC for further guidance.

Powergrid informed that they are planning to conduct audit for HVDC, TCSC and SVC in April 2018.

In 37th TCC, Members authorised Member Secretary, ERPC to contact different IITs including IISc for the study and advised to place a comprehensive proposal in next TCC Meeting.

In 143rd OCC, Powergrid informed that audit for TCSC Purnea, FSC Ranchi and HVDC Talcherhad been completed and the same for HVDC Alipurduar is planned in April 2018.

OCC advised Powergrid to share the details to ERPC to ERLDC.

In 144th OCC, Powergrid agreed to submit the technical audit report within 10 days.

Deliberation in the meeting

Powergrid agreed to submit the technical audit report within 10 days.

9.12 Implementation of islanding schemes: Efforts should be made to design islanding scheme based on frequency sensing relays so that in case of imminent grid failure, electrical islands can be formed. These electrical islands can not only help in maintaining supply to essential services but would also help in faster restoration of grid.

No islanding scheme is available in Odisha, Bihar and Sikkim.

Bihar and NTPC informed that they would discuss the islanding scheme for Kanti generating units with Bihar load in 2nd week of April 2018.

OPTCL has submitted the detail plan of IbTPS islanding scheme.

OCC advised OPTCL to give a presentation on CPP islanding scheme existing in Odisha with the details of extending power capacity to Odisha during emergencies.

In 144th OCC, OPTCL informed that they are yet to convene a separate meeting with respective CPPs.

Bihar and NTPC informed that the islanding scheme for Kanti was discussed on 18th April 2018 and agreed to implement the islanding scheme. However, they could not prepare any draft scheme.

OCC advised ERLDC to prepare a draft islanding scheme.

OCC advised BSPTCL and NTPC to share all the required details to ERLDC.

ERLDC submitted the detailed information required from BSPTCL and KBUNL for implementation of the islanding scheme. Details are enclosed at ***Annexure-B3****.*

Members may update.

Deliberation in the meeting

Regarding IBTPS islanding scheme, OPTCL informed that the frequency at which the units would be islanded is to be decided.

Regarding Kanti islanding scheme, ERLDC informed that they have received the requisite information from KBUNL and BSPTCL.

ERLDC added that BSPTCL is keeping some lines in open during normal operation as per their load requirement. ERLDC requested BSPTCL to submit the details.

BSPTCL agreed.

9.13.2Training and certification of system operators need to be given focused attention. Sufficient financial incentives need to be given to certified system operators so that system operation gets recognized as specialized activity.

In 142nd OCC, Members updated the status of certification of system operators as follows:

State	***Status of certification of system operator***
SLDC, West Bengal	*Operators will appear for certification in March 2018*
SLDC, Odisha	*Complied*
SLDC, DVC	*Complied*
SLDC, Jharkhand	*4 operators were certified*
SLDC, Bihar	*Training has been completed but yet to appear in exam for certification*
SLDC, Sikkim	*No information received*

In 37th TCC, Sikkim informed that they are in the process of creating a separate cadre of certified operator for their newly established SLDC after necessary approval of the State Govt. of Sikkim.

Thereafter, Sikkim informed that they are sending 05 (Five) Shift Engineers to PSTI, Bangalore, to undergo 2 Weeks Basic Level Course on ''Power System Operation'' w.e.f. 28.05.2018 to 09.06.2018.

Deliberation in the meeting

Members noted.

9.20. Improved telecom Infrastructure for cyber security

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.

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-B3.1**.

OCC advised all the constituents to submit the information to ERPC as per Annexure-B3.1.

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.

Members may submit the status as per Annexure-B3.1.

Deliberation in the meeting

OCC advised all the constituents to submit the information to ERPC as per Annexure-B3.1.

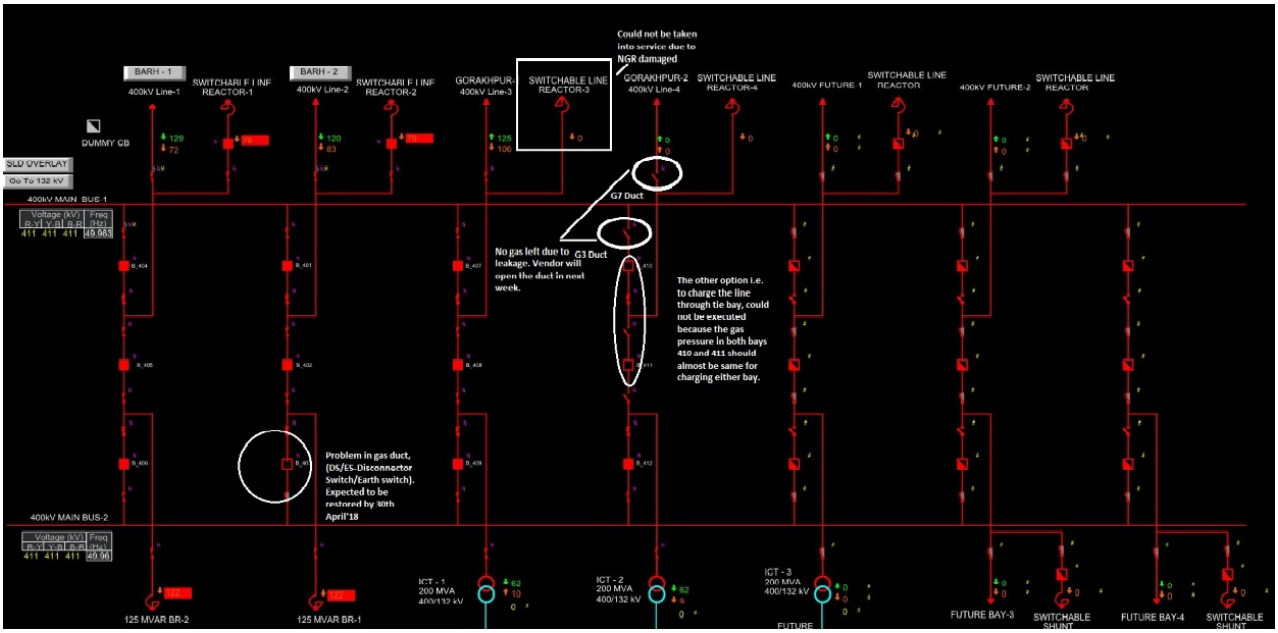
Item No. B.4: Unreliable operation at Motihari (DMTCL) SS

400/132kV Motihari S/Stn is of critical importance as the two high capacity inter-regional lines (400kVBarh-Gorakhpur Qd. Moose D/C) link E. Region with N. Region at this S/Stn. The Barh-Motihari D/C Qd. Moose line is essential for reliable power evacuation from Barh STPS of 2X660MW capacity. Motihari S/Stn is also responsible for meeting about 200MW load, considering Bihar and Nepal together.

Power supply to Motihari, Dhaka, Raxaul, Bettia, Ramnagar etc. S/Stns of Bihar and to Nepal at Surajpura and Parwanipur interface points failed at 09:56 Hrs of 07-04-18, due to tripping of all lines connected to Motihari 400kV (DMTCL) S/Stn on YN/BN/3-ph faults, leading to interruption of around 200MW load in Bihar and Nepal taken together. The 3-ph fault of Barh-Motihari D/C line was cleared with a delay of 400ms, which is much higher than that mandated by CEA standards (100ms). The units at Barh STPS experienced severe jerk of about 110MW during such fault. On same day at 18:25 Hrs, ICT I again tripped on overload protection. As a result 132

KV side became dead resulting in load loss of 177 MW at Ramnagar, Betiah, Raxaul, Motihari, Dhaka, Sibhar, Narkatiyaganj including 80 MW of Nepal as mentioned above

As on date main CB of 125MVAR bus reactor-1, line isolator of 400kV Gorakhpur-2 line along with main and tie CBs of this line are out of service due to problem in gas duct. 400 kV Motihari – Gorakhpur – II was out of service due to unavailability of both bays at Motihari S/S.



It may be appreciated that in view of the importance of Motihari 400kV as stated above, reliable performance of this S/Stn has to be ensured under all circumstances. Further absence of DMTCL executives are felt in various ERPC meeting such as OCC and PCC where all such disturbances/events are analyzed threadbare and remedial measures to avoid recurrence such type of incidences are decided.

In 144th OCC, it was decided to pursue the issue with DMTCL and decided to discuss the issue in 66th PCC Meeting scheduled to be held on 25th April 2018.

In 66th PCC, DMTCL has submitted a report. The report is enclosed at ***Annexure-B4****.*

ERLDC informed that any fault in 400kV Barh-Motihari line is getting cleared in 500 msec. It should be cleared within 100 ms.

PCC advised DMTCL to put the PLCC and inter tripping scheme is service so that the fault would be cleared within 100 ms.

PCC also advised DMTCL to attend OCC & PCC meetings on regular basis.

Members may discuss.

Deliberation in the meeting

DMTCL informed that 400kV Motihar-Gorakhpur D/C line is under outage due to non-availability of GIS spares.

DMTCL added that the line would be restored within a month.

OCC advised DMTCL to expedite the work to restore the line at the earliest.

Item No. B.5: Segregation of ISGS station wise Bundle Coal power & Non Bundle coal power in ERLDC schedule to maintain proper merit order dispatch.

As per present practice of ISGS scheduling, both Bundle (Coal) & Non Bundle power in respect of any beneficiary are scheduled in clubbed manner. But as a matter of fact the Bundle (Coal) power is costlier than non bundle power of same ISGS station due to additional trading margin @7paisa per unit payable to NVVNL as Nodal Agency of JNSM Bundle power scheme. So due to this prevailing practice proper merit order dispatch is not being maintained during Backing down & URS allocation. Hence, head wise segregation of ISGS schedule is required to explore immediately with a view to honour the spirit of merit order dispatch principle in compliance with National Tariff Policy.

In 144th OCC, Member Secretary, ERPC suggested that ERPC in co-ordination with ERLDC and WBSEDCL would study the issue and revert back to OCC.

Subsequently, a meeting was held at ERPC among ERPC, ERLDC and WBSEDCL. Different aspects of segregation are being studied. Once the methodology is finalised, the same would be put in the OCC meeting**.**

Members may note.

Deliberation in the meeting

Members noted.

Item No. B.6: Adopting adequate precautionary measures to prevent alert state operation-ERLDC

With onset of summer and associated rise of demand, the grid is being occasionally subjected to low frequency operation. The duration for which frequency persisted below the IEGC specified lower limit i.e. 49.9 Hz, was 31.85% of the time on 5-5-18 and 26.09 % of the time on 7-5-18. Moreover, the minimum frequency touched 49.6 Hz at 22:59 Hrs of 5-5-18, clearly indicating an all-India shortage of around 4000MW at that instant.

In view of the above, to ensure secured grid operation at all times, all regional entities of Eastern Region are requested to strictly comply with the following:

1. All SLDCs may kindly ensure that the actual net drawl of the concerned control area is always maintained within the schedule, in line with the provision 6.4.7 of IEGC. Accordingly, requirement of respective control area may be assessed accurately in advance with necessary arrangement for meeting the same from all possible sources viz. long-term, medium-term and short-term markets.
2. Reserve corresponding to capacity of the largest unit may be maintained at all times, either from own generating stations or in the form of matching load response
3. Area control error (ACE) of respective control areas may be closely monitored and prompt action for demand curtailment taken whenever the positive value of the same exceeds 150MW or 12% of the schedule, whichever is lower.
4. All ISGSs and IPPs scheduled by ERLDC to strictly avoid generation below the schedule.

Members may please note.

Deliberation in the meeting

Members noted.

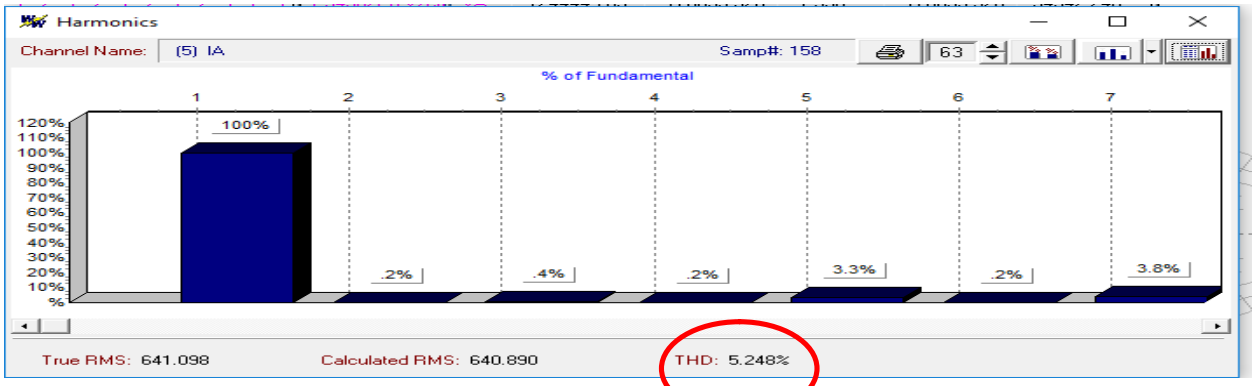
Item No. B.7: Total Harmonics distortion beyond CEA permissible standard at 400 KV Subhasgram and 220 KV EMSS Substation

As per CEA Grid standard clause 3.2 " *The transmission licensee shall ensure that the voltage wave-form quality is maintained at all points in the Grid by observing the limits given in Table 5 below"*

S.No	System Voltage (kV rms)	Total Harmonic Distortion (%)	Individual Harmonic of any particular Frequency (%)
1	765	1.5	1
2	400	2	1.5
3	220	2.5	2
4	33 to 132	5	3

It is the primary task of transmission licensee to ensure that the above standard is met. Recently a case of violation of the above harmonics standard at 400 KV Subhasgram and 220 KV EMSS(CESC substation) under steady state condition has come to the notice of ERLDC, while analyzing the tripping of 220 KV Subhasgram-EMSS D/C line. At Subhasgram presence of harmonics beyond permissible limit at different periods of the day (from various DR sources) has been observed. Generally, chances of harmonics distortion are maximum at those S/S which feed lot of radial loads. A similar case was noticed last September at Biharshariff also and the same was discussed in the September-17 PCC meeting. However, that distortion was on account of CVT error. Further it is well known that harmonics can cause various nuisances which in turn can threaten Grid reliability. Therefore, matter needs to be deliberated in detail for deciding further action plan in this regard.

Harmonics Plot of Shubhasgram end of R phase current of 220 KV EMSS-Subhasgram line: (17/04/18)



THD >5% and Individual 5th and 7th harmonics > 3% at 220 KV level.

ERLDC may elaborate. Members may discuss.

Deliberation in the meeting

ERLDC gave a detailed presentation elaborating the harmonics issue. Presentation is enclosed at Annexure-B7. ERLDC informed that current harmonics are observed at GIS substations.

After detailed deliberation, OCC advised ERLDC to check the harmonic content in other GIS substations and prepare a report.

Item No. B.8: Installation of new PWC made STOA software at ERLDC

ERLDC is in the process of installation of new STOA software developed by PWC.The new software is likely to be operationalised from 01.06.2018.A training programme will be arranged on the functioning of new STOA softwareon 24th May,2018 at ERLDC.

Members may note.

Deliberation in the meeting

It was informed that the training program would be held at ERPC Conference Hall on 24th May 2018.

Item No. B.9: Non-submission of Meter data by M/s Ind-Barath (IBEUL)-ERLDC

Six (6) nos of SEM are installed at Ind-Bharath end for energy accounting of IBEUL. As per IEGC, every Utility has to send SEM data to respective RLDC by Tuesday noon in every week. IBEUL is not sending the SEM data since April'17. Due to non-receipt of data, validation of data of other end i.esundergarhis being affected. Several reminders through mail and phone were sent to the representatives of IBEUL but till date no data is received.

IBEUL may please update.

Deliberation in the meeting

IBEUL representative was not available in the meeting.

ERLDC informed that IBEUL has requested for idle charging of 400kV IBEUL-Sundergarh line from Sudergarh end.

OCC could not discuss the issue, as IBEUL representative was not available in the meeting.

OCC decided to convene a separate meeting with IBEUL to resolve the issues.

Item No. B.10: Replacement of GPRS communication with Optical Fiber for AMR-ERLDC

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 alsoreduce the cost of GSM.

ERLDC may elaborate. Member may discuss.

Deliberation in the meeting

TCS representative explained the scheme with a detailed presentation. Presentation is enclosed at Annexure-B10.

OCC in principle agreed to the proposal.

Item No. B.11: Submission of meter data to ERLDC prior and after 6 hr of first time charging of new element--ERLDC

Before first time charging of any new element in the Grid, SEM details along with meter dummy data is being submitted by respective utility to ERLDC. The purpose of meter reading without power flow was to ensure its compatibility with RLDCs software and purpose of meter reading with power flow was to ensure its healthiness, correct connections of CT/PT and correct CT ratio. Correctness of SEM readings is important for computing of drawl/Injection of a control area and inter-regional/trans-national energy flows as various accounts/billings are based on it.
In view of the above, meter readings after six(6) hrs of power flow must be sent by the utilities to ERLDC before start of trial operation. Further the 24 hour trial operation would be assumed complete only when the both end meter readings for this period are correct.

Members may note.

Deliberation in the meeting

Members noted.

Item No. B.12: Auxiliary power consumption by Powergrid Substations-GRIDCO

GRIDCO vide letter dated 14th May 2018 informed that, GRIDCO had convened a meeting with Powergrid with a suggestion to become the consumer of state DISCOM and make the payment towards auxiliary power consumption as per the applicable tariff. Further, GRIDCO prevailed upon Powegrid that the amount to be paid to DISCOM should not be claimed in transmission tariff as the same has already been factored in the tariff as per the Regulation 29(4) of 2014 Tariff Regulations.

In this regard, Powergrid is not signing the minutes for commercial settlement.

GRIDCO may elaborate. Members may discuss.

Deliberation in the meeting

Powergrid informed that they had agreed to make the payment towards auxiliary power. Powergrid stressed that recovery of the payment made by Powergrid for auxiliary power would be governed by the relevant Regulation(s) of CERC. Hence Powergrid considered that there was no necessity of spelling out a methodology in the minutes of the meeting. For this reason, the Minutes of the meeting was not signed by Powergrid.

GRIDCO requested to place an agenda in commercial meeting to know the procedure being adopted by other states to recover the auxiliary power consumption charges from Powergrid.

Item No. B.13: Restoration of MPL-Ranchi line-1-MPL

At around 5:21 hrs on 10th May 2018, both 400kV MPL-MRBL line-1 and 2 tripped on line to earth and phase to phase fault. Later upon physical inspection from MPL end, it was found that 3 towers namely 63, 64 and 65 have collapsed at 2 kms from MPL periphery. Being a double circuit tower both MRBL-1 and 2 are not available henceforth.

At present, MPL power is evacuating through 400kV MPL- Ranchi lines 1 & 2 only. At 11:15 hrs on 15th May 2018, 400kV MPL-Ranchi line-1 got tripped due to snapping of R-phase conductor and melting of PG clamp. This failure has happened at line loading of approx 500 MW (which is much below of line loading capacity). MPL was forced to back down their export generation from 900 MW to 640 MW to prevent 400kV MPL-Ranchi Line-2 tripping on overheating and to avoidMPL station blackout. Backing down of station generation has led to huge commercial implication.

MPL requested to take urgent action for restoration of MPL-Ranchi line-1 on high priority and confirm the tentative time of line restoration.

MPL may elaborate. Powergrid may respond.

Deliberation in the meeting

Powergrid informed that restoration of 400kV MPL-MRBL line-1 and 2 using ERS towers is not possible as the damaged tower was at river crossing and the line would be restored only by 15th July 2018.

OCC advised Powergrid to expedite the work to restore the line at the earliest.

MPL requested Powergrid to ensure the healthiness of 400kV MPL- Ranchi lines 1 & 2.

OCC advised Powergrid to carry out the line patrolling and other precautionary measures to minimize line trippings.

Powergrid agreed.

Item No. B.14: Anti-theft charging of 400 kV Kishanganj – Teesta III line -TPTL

1. Anti-theft charging of 400 kV Kishanganj – Teesta III HEP D/C Quad Moose Transmission Line from Kishanganj Substation.
2. Energisation of two (2) no. 63 MVAR Line Shunt Reactor associated with 400 kV Kishanganj – Teesta III HEP D/C Quad Moose Transmission Line at Kishanganj Substation.

TPTL may elaborate. Members may discuss.

Deliberation in the meeting

Powergrid informed that one reactor would be available by last week of May 2018 and the other reactor would be available by June 2018.

PART C: ITEMS FOR UPDATE

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

UFR Healthiness Certification for the month of April, 2018 has been received fromCESC, WBSETCL, DVC, JUSNL and OPTCL.

BSPTCL may submit.

Deliberation in the meeting

BSPTCL has submitted the UFRs healthiness certificate.

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

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

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

The healthiness certificate for Islanding Scheme for April, 2018 has been received from NTPC, CTPS, DVC, West Bengal, JUSNLand CESC.

WBPDCL may submit.

Deliberation in the meeting

OCC advised WBPDCL to submit the healthiness certificate to ERPC at the earliest.

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

The Status of healthiness certificate for April, 2018 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*	*Powergrid, Dikchu, Teesta-III, Dansenergy*
3.	SPS of 132 kV Muzaffarpur-Dhalkebar D/C	*Nil*	*Powergrid*
4.	SPS in CESC system	*CESC*	*Nil*
5.	SPS for Power Export to Bangladesh	*Nil*	*Powergrid*
6.	SPS at Chuzachen	*Chuzachen*	*Nil*

In 144th OCC, Powergrid informed that SPS will be tested after time synchronization.

Dikchu, Dansenergy&Teesta-III informed that time synchronization has been completed at their end.

OCC advised Powergrid to carry out the SPS testing at the earliest.

Teesta-III, Chuzachen, Dikchu and Dans Energy informed that implementation of Proposal 2 as decided in the meeting held at ERPC on 06.04.2018 has been tested and they are ready to implement Proposal 2 from 1st may 2018.

OCC advised Teesta-III, Chuzachen, Dikchu and DansEnergy to give a written confirmation to ERPC and ERLDC.

The written confirmation has been received from Teesta-III, Chuzachen, Dikchu and DansEnergy.

Members may update.

Deliberation in the meeting

Powergrid informed that SPS of 132 kV Muzaffarpur-Dhalkebar D/C line successfully operated on 8th May 2018. Updated status 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*	*Powergrid, Dikchu, Teesta-III, Dansenergy*
3.	SPS of 132 kV Muzaffarpur-Dhalkebar D/C	*Powergrid.*	*Nil*
4.	SPS in CESC system	*CESC*	*Nil*
5.	SPS for Power Export to Bangladesh	*Nil*	*Powergrid*
6.	SPS at Chuzachen	*Chuzachen*	*Nil*

Item no. C.4: Methodology for Submitting the Status of New Transmission Elements/ Generating Units to be Commissioned within the State

For clear visibility of the Eastern Region networks and better system operation, all the new transmission elements (ISTS & STU links) need to be updated regularly. The commissioning of new transmission elements of ISTS lines has been processed and updated by RLDC whereas commissioning of STU lines has been processed by SLDCs. However, commissioning status of new STU lines of states has not been updated to ERLDC and ERPC regularly. Sometime SLDCs used to submit the status of their new commissioning of elements during OCC meeting. To regularize the process following methodology need to be adopted:

1. Transmission elements/ Generating units expected to be commissioned during next month need to be submitted to ERLDC/ERPC in every OCC.
2. Detail parameters of new transmission element before commissioning need to be shared with RLDC.
3. Detail date and time of synchronization need to be updated on real time to ERLDC after commissioning of any new Transmission element/Generating unit.
4. SLDC SCADA team needs to configure the new element in their SCADA and share the same to ERLDC SCADA for network update.
5. List of the new transmission elements/ generating units commissioned during last month need to inform RLDC/RPC within 7th day of the current month, so that same to be updated in OCC.

In 141st OCC, all the constituents were advised to submit the information within 7th day of the month to following mail ids:

- *erldcam@gmail.com*
- *ftcer@posoco.in*
- *mserpc-power@nic.in*

To maintain harmonization, all the states and transmission licensees are request to submit the details to ERLDC/ERPC in the following format:

Monthly commissioning List of Transmission element and generators: Previous Month					
SL NO	**Element Name**	**Owner**	**Charging Date**	**Charging Time**	**Remarks (conductor type/spec/expected load/any other)**

Expected commissioning List of Transmission element and generators: Next Month				
SL NO	**Element Name**	**Owner**	**Expected Charging Date**	**Remarks (conductor type/spec/expected load/any other)**

The matter was deliberated in last OCC meetings, wherein all states and transmission licensees agreed to submit the list of transmissions elements synchronized for the first timeduring last month within 7th day of the current month to ERLDC through mail. However, in April-2018 ERLDC received information regarding new elements commissioned inMar-18 only from West Bengal. Other states and transmission licensees did not submit both List of Transmission element and generators synchronised in theprevious Month and List of Transmission element and generators expected to be synchronised during next Month.

ERLDC may update.

Deliberation in the meeting

OCC advised all the other constituents to send the information as per the format on monthly basis to ERLDC.

Item no. C.5: LILO arrangement at 132/33 KV GSS Baisi in 132 KV Kishanganj(old)-Dalkola(WBESTCL)

BSPTCL vide mail dated 13th April 2018 informed that 132/33 KV GSS Baisi is being constructed by M/S GE T&D India Ltd. under state plan which is ready for charging through 132 KV Kishanganj(old) – Dalkola(WBESTCL) transmission line (which is ISTS line) through LILO arrangement.

i. Erection and commissioning of Remote Terminal Unit (RTU) is being under progress.
ii. Shifting of ABT meter installed at Kishanganj (old) end in Dalkola feeder to Baisi end of Dalkola feeder also under process.

BSPTCL requested for charging of 132/33 KV Baisi GSS through LILO in 132 KV Kishanganj(old) – Dalkola(WBESTCL) transmission line.

In 144th OCC, BSPTCL informed that the construction of 132/33 KV GSS Baisi S/s is almost at completion stage. They are planning to LILO 132 KV Kishanganj(old) – Dalkola(WBESTCL) transmission line at 132/33 KV GSS Baisi S/s. After LILO, 132kV Baisi – Dalkola(WBESTCL) would become an interstate tie line.

OCC in principle agreed to the proposal and advised to place the details in State Sector Standing Committee for further deliberation.

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed that 132 KV Kishanganj(old) – Dalkola(WBESTCL) transmission line LILO at 132/33 KV GSS Baisi S/s on 1st May 2018. SEMs were shifted from Kishanganj and installed at Baisi S/s.

Item no. C.6: Commissioning of breakers at 400/220kV Indravati (OHPC) S/s

In 141st OCC, it was explained that 3x105 MVA 400/220kV ICT-I tie breaker, 220kV Bus coupler and transfer bus breakers are not in service at 400/220kV Indravati (OHPC) S/s.

In 142nd OCC,OHPC submitted the action plan as follows:

1. *220kV Bus Coupler: CB and CT needed to be replaced. They would restore the Bus coupler by August 2018.*
2. *220kV Bus tie: CB and CT needed to be replaced. They would restore the Bus Tie by November 2018.*
3. *400kV Tie-1 Breaker: CB and CT needed to be replaced. They would restore the 400kV Tie-I by January 2019.*

OCC opined that the target dates given by OHPC for replacement of CT and Breakers is too long and advised to take serious actions to complete the work at the earliest.

OHPC may update.

Deliberation in the meeting

OHPC informed that the work would be completed as per the above schedule.

Item no. C.7: Inadequacy of DVC transmission system (220kV and below) for meeting its own demand

The total load of DVC system is catered by the 220/132kV ATRs at Jamshedpur, CTPS, DTPS, Kalyaneswari ,Giridih, Koderma and Ramgarh. The ATRs at CTPS, Kalyaneswari and DTPS remain heavily loaded and tripping of any ATR is likely to trigger cascade tripping and loss of major load in DVC system. Moreover, during shutdown or forced outage of 220kV Jindal-Jamshedpur tie or nil generation at Bokaro-B, the only 315MVA, 400/220kV ICT at Bokaro-A gets severely overloaded. In the event of loss of 400kV Bokaro-A-Koderma D/C line, the Bokaro-A station has little chance of survival as the existing 315MVA, 400/220kV ICT at Bokaro is insufficient to evacuate the station generation. It has also been observed that, during low generation at CTPS-B, the 220kV Bokaro-B – CTPS-B D/C line gets heavily overloaded and (n-1) security criteria is not satisfied.

In view of the aforesaid facts, DVC needs to expedite strengthening of its transmission system for achieving long term adequacy and till such time, to cope with the rising demand, suitable load / generation rejection schemes may be urgently implemented to automatically shed load/generation with tripping of associated line / ATR.

In 37th TCC, ERLDC gave a detailed presentation highlighting the constraints faced by DVC in catering its load due to phasing out of old units connected at 132kV level and increase in demand at DVC system.

Further evacuation problem in Bokaro-A was also highlighted. Tripping of any of the existing highly loaded 220/132kV ATR may create disturbance not only in DVC system but also the adjacent system.

DVC assured that they have already taken short term and medium term measures to mitigate the problem.

TCC advised DVC to submit their action plan to ERPC and ERLDC.

*DVC submitted their action plan, which is enclosed at **Annexure-C7**.*

However, after analysis it appears that it is a long term plan.

DVC is requested to share short term and medium term measures, which they have already taken to mitigate the problem.

Further after analysis it appears that, while installing 2 x 80 MVA 220/33 kV ATRs at CTPS will reduce the loading of 220/132 kV ATRs and 132/33 kV ATRs at CTPS but the main issue which is "during low generation at CTPS-B, the 220kV Bokaro-B – CTPS-B D/C line gets heavily overloaded and N-1 security criteria is not satisfied" will not improve.

ERLDC may elaborate. DVC may update.

Deliberation in the meeting

DVC informed that loading on 220kV Bokaro-B – CTPS-B D/C lines would be reduced after commissioning of 132kV Dhanbad-Patherdih D/C line in August 2018

Item no. C.8: Flexible jumpering arrangement for bypassing substations, prone to inundation during monsoon, for ensuring continuity of important corridors and power evacuation from power stations—ERLDC

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

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

In 136th OCC, ERLDC explained that the flexible jumpering arrangement may be done for 400 kV Binaguri-Kisheenganj-N.Purnea D/C and 400kV Binaguri-Alipurduar-Bongaigaon D/C lines for bypassing the LILO points i.e. 400kV Kishanganj(PG) and Alipurduar(PG) S/s so that the same lines may be directly connected during the emergencies like flood situations at LILO points. The possibility may be explored as these elements are very important in terms of hydro power evacuation and long outages of these elements may endanger the grid security. The other such elements (LILOed at Dalkhola, Motihari (DMTCL) etc) may also be explored which are under threat during flood and other emergencies.

In 138th OCC Powergrid informed that feeders are identified for Alipurduar, Kishanganj and Dalkhola SS for necessary jumpering. However, awarding and execution of the work will take some time.

In 143rd OCC, Powergrid informed that the necessary jumpering arrangement at Alipurduar, Kishanganj and Dalkhola SS would be completed by May 2018.

In 144th OCC, Powergrid informed that the necessary jumpering arrangement at Alipurduar, Kishanganj and Dalkhola SS would be completed by May 2018.

PGCIL may update. DMTCL may update the actions taken for Motihari S/S.

Deliberation in the meeting

Powergrid informed that the necessary jumpering arrangement at Alipurduar, Kishanganj and Dalkhola SS would be completed by June 2018.

Item no. C.9: 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	3 months Feeders identified. Communication healthiness needs to be checked.	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 RTU installation is in progress	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			No information furnished by Sikkim

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 37th TCC, Bihar informed that the Scheme would be implemented after commissioning of communication scheme which is being executed by PGCIL.

PGCIL informed that the communication scheme would be commissioned by June 2018.

Bihar added that PGCIL has agreed to commission the communication scheme by April 2018 and requested to adhere the schedule.

Jharkhand informed that they would implement the scheme by May 2018.

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.

Members may update.

Deliberation in the meeting

Members noted.

Item no. C.10: Repeated tripping of 220kV Chuka-Birpara D/c line

In 60th PCC, meeting Powergridexplained that the line is in lightning prone area. The line is getting tripped due to Insulator failures. Powergrid added that line insulators of part of the line which is belongs to Powergrid have been replaced with polymer insulators. The insulator failures during lightning have been reduced. However, the line is getting tripped due to failure of porcelain insulators in 39.8 km stretch which is belongs to Bhutan.

BPC vide mail submitted the details of replacement of porcelain insulators with glass insulators in the 220kV Chhukha-Birpara D/C line (Bhutan section). Out of 97 towers, porcelain insulators have been completely replaced with glass insulators in 31 locations, while at 20 locations only some insulator strings have been replaced. The remaining insulators would be replaced in a phase wise manner during preventive and break down maintenance.

BPC/DGPC and POWERGRID may update.

Deliberation in the meeting

Members noted.

Item no. C.11: Repair/Rectification of tower at location 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines - Powergrid

Powergrid informed that their patrolling team has observed bent in part of tower no. 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines which may further degrade the condition of tower.

In 137th OCC, Powergrid informed that tower no. 79 of 132kV Rangpo-Melli D/c line and Chuzachen(Rangpo)-Gangtok transmission lines falls under the jurisdiction of Energy & Power Department, Govt. of Sikkim.

In 141st OCC, Sikkim informed that rectification of the tower has been taken up with Gati. The work would be completed by 2nd week of February 2018.

In 37th TCC, it was decided that Sikkim would give a comprehensive proposal to PGCIL within one week regarding handing over of the relevant segments of the line to PGCIL. Thereafter, PGCIL and Sikkim would sit together and sort out the issues involved therein.

In 144th OCC, Powergrid informed that they have not yet received any proposal from Sikkim.

Powergrid and Sikkim may update.

Deliberation in the meeting

Sikkim informed that the proposal had been sent to State Govt. for approval.

Item no. C.12: Status of Installation of STATCOM in Eastern Region

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

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

Powergrid updated the latest status as follows:

Sl No	Location /Sub-Station of POWERGRID in ER	STATCOM - Dynamic Shunt Controller (MVAr)	Mechanically Switched Compensation Sl. (MVAr)		Latest status
			Reactor (MSR)	Capacitor (MSC)	
1	Rourkela	±300	2x125		*Completed and test charged in March 2018.*
2	Kishanganj	±200	2x125		*70% civil work completed. 30% switchyard equipment supplied. Expected to complete by December 2018*
3	Ranchi(New)	±300	2x125		*80% civil work completed. All switchyard equipment, reactors and 3 transformers supplied. Expected to complete by June 2018*
4	Jeypore	±200	2x125	2x125	*Expected to complete by June 2018*

In 144th OCC, Powergridwas advised to share the details of test charging and present status of STATCOM at Rourkela.

Powergrid may update.

Deliberation in the meeting

Powergridinformed that STATCOM at Rourkela is in service.

Item no. C.13: 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 lastOCC, 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 June, 2018.***
2.	**400/220kV Pandiabil Grid S/s:**	
a.	Pratapsasan(OPTCL)-Pandiabil(PG) 220 kV D/C line	By Dec, 2018.
3.	**400/220 kV Keonjhar S/S**	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By May, 2018.
b.	Keonjhar (PG)-Turumunga(OPTCL) 220kV D/C line	By 2019. The work is yet to be started.

OPTCL may update.

Deliberation in the meeting

OPTCL updated the status as mentioned in above table.

Item no. C.14: 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 April, 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 Dec 2018.
c	Daltonganj (POWERGRID) – Daltonganj (JUSNL) 132kV D/c	The line would be charged as per original configuration by July 2018. At present,Daltonganj (PG) has been connected to Daltonganj (JUSNL) at 132kV through existing 220 kV Latehar-Daltonganj line as stop gap arrangement till completion of the line.
d	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 November 2018.

JUSNL may update.

Deliberation in the meeting

JUSNL updated the status as mentioned in above table.

Item no. C.15: 220 kV inter-connecting lines of WBSETCL with 400/220 kV, 2x315 MVAAlipurduar& 2x500 MVA Rajarhatsub-stations

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

Sl. No.	Name of the transmission line	Completion schedule
1.	**2x315MVA, 400/220kV Alipurduar sub-station**	
a.	Alipurduar (POWERGRID) – Alipurduar (WBSETCL) 220kV D/c (***Twin moose***)	*The work has been completed and the wouldbe charged by this week.*
2.	**2x500MVA, 400/220kV Rajarhat---**	
a.	Rajarhat-N. Town-3 (WBSETCL) 220 kV D/C line	Matching, ROW problem
b.	Rajarhat-N. Town-2 (WBSETCL) 220 kV D/C line	June, 2018,ROW problem
c.	Rajarhat- Barasat (WBSETCL) 220 kV D/C line	June, 2018,ROW problem
3	**Subashgram400/220kVS/s**	
a	Subashgram–Baraipur220kVD/cline	Feb 2019, 50% of work has been completed.

WBSETCL may update.

Deliberation in the meeting

WBSETCL updated the status as mentioned in above table.

Item no. C.16: 220 kV inter-connecting lines of BSPTCL

In 144thOCC, BSPTCL updated the status as follows:

1. Darbhanga (ISTS) –Darbhanga (BSPTCL) 220kV D/c by Mid May 2018
2. Darbhanga(ISTS)–Laukhi (earlier Supaul New) 220kVD/c by end of April 2018

BSPTCL may update.

Deliberation in the meeting

BSPTCL updated the status as follows:

1. Darbhanga (ISTS) –Darbhanga (BSPTCL) 220kV D/c by July 2018
2. Darbhanga(ISTS)–Laukhi (earlier Supaul New) 220kVD/c by May2018

Item no. C.17: 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.

ERLDC may present. Members may update.

Deliberation in the meeting

*ERLDC has placed the latest status of telemetry, which is enclosed at **Annexure-C17**.*

ERLDC informed that telemetry of 400 KV TISCO (DVC) restored on 12/05/18 but telemetry of New Farakka and Lalmatia (NTPC) data are still not available.

OCC advised NTPC to ensure the data availability of New Farakka and Lalmatia(NTPC) at ERLDC.

Item no. C.18: Failure of Real time telemetry

a) In geographically located area of North Bengal and Sikkim to ERLDC:

On 06th December 2017 at 17:26 hours, there was failure of real time SCADA data of 17 nos Central Sector station to ERLDC due to communication failure between Malda – Farakka OPGW link. The real time data restored at 09:37 Hours of 07th December 2017.

The real time SCADA data of North Bengal & Sikkim is totally dependent on availability of Malda – Farakka communication link. The path redundancy of Malda – Farakka communication link must be planned and implemented by POWERGRID so that such failure could be avoided.

The real time SCADA data failure of 17 nos Central Sector station to ERLDC due to communication failure Malda – Farakka OPGW link has been discussed in 141st OCC meeting held on 18th January 2018 wherein POWERGRID pointed out the alternate communication path could be established after installation of OPGW communication link between Purnea 400 kV to Biharshariff 400 kV. This link is owned by M/s East North Interconnection Company Limited (A subsidiary of Sterlite Power Transmission Limited).

In 142nd OCC, M/s East North Interconnection Company Limited (ENICL) informed that OPGW is already available in the line but laying of approach cable inside the POWERGRID sub-stations & termination at both end to communication Mux is pending. ENICL added that the same is under discussion at their end for early implementation of the same.

In 143rd OCC, ENCIL updated that termination of OPGW would be completed by end of June 2018.

Powergrid informed that the link would be in service by end of July 2018 subjected to termination of OPGW link.

ENCIL &POWERGRID may update

Deliberation in the meeting

Members noted.

b) Farakka STPS to ERLDC:

Real time SCADA data from Farakka STPS stage #3 SAS is not available at ERLDC since 10:32 Hrs of 09/09/2017. Real time SCADA data failure has been intimated to NTPC Farakka Generating station on number of occasions; verbally over phone & through but the same is yet to be rectified.

In 144th OCC, NTPC informed that they are in the process of replacing the SAS which would be completed by end of May 2018.

NTPC may update

Deliberation in the meeting

NTPC informed that they are in the process of replacing the SAS which would be completed by end of May 2018.

Item no. C.19: 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.

ATC/TTC declared by states for the month of August-2018 is given below:

Sl No	State/Utility	TTC import(MW)		RM(MW)		ATC (Import) MW		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	--	--	--	--	--	--	Last available for Jan-18
2	JUSNL	980	--	60	--	920	--	
3	DVC	1182	3164	59	46	1247	3118	
4	OPTCL	1171	--	85	--	1686	--	
5	WBSETCL	3944	--	300	--	3644	--	July-18
6	Sikkim	--	--	--	--	--	--	

As per decision of 143rd OCC meeting constituents have started sending TTC figures 3 months in advance only Bihar and Sikkim are not sending their updated TTC value. Sikkim has not intimated TTC value till date.

In last OCC meeting,BSPTCL informed that they need some training on ATC/TTC computation and their SLDC engineers will visit ERLDC to be acquainted with the procedure.

BSPTCL is requested to update the status.

Deliberation in the meeting

ERLDC updated the ATC and TTC figures declared by the states for the Month of Sep 2018 as follows:

Sl No	State/Utility	TTC (MW)		RM(MW)		ATC (MW)		Remarks
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	--	--	--	--	--	--	Last available for Jan-18
2	JUSNL	997	--	30	--	920	--	Sep-18
3	DVC	1220	3104	62	49	1158	3055	Sep-18
4	OPTCL	1858	--	85	--	1773	--	Sep 18
5	WBSETCL	3944	--	300	--	3644	--	July-18
6	Sikkim	--	--	--	--	--	--	

ERLDC informed that all the SLDCsexcept BSPTCL and Sikkim were sharing interstate ATC and TTC figures three monthsin advance.

OCC advised Bihar and Sikkim to compute TTC and submit to ERLDC on monthly basis.

Bihar informed that due to shortage of man power they are not able to depute their engineers for training on ATC/TTC computation.

Item no. C.20: Time correction of SEMs in Eastern Region – Replacement of heavily drifted SEMs

The issue was discussed in 35th TCC/ERPC meetings and it was felt that the meters with severe drift greater than 10 min need to be replaced first and if replacement is done with Genus then readings are to be collected manually using Laptop till interfacing with AMR is completed. 35th ERPC advised Powergrid to replace the 10% of the heavily drifted SEMs with new Genus make meters in Phase-I. Subsequently drifted meter replacement work of Phase –I for 24 meters have been completed.

As per decision taken in 134th OCC meeting, another 10% heavily drifted meter list was prepared by ERLDC and given to Powergrid for replacement. In 140thOCC it was informed that all the Phase-II meters have been replaced except Kharagpur. Since issue of integration of Genus meter is already resolved, It was also decided that list of meters to be replaced in next phase may be prepared.

Accordingly List of drifted meters to be replaced in Phase-III is placed below:

List of drifted meters to be replaced in Phase-III

SNO	LOCATION	METER SNO	FEEDER NAME	Region
1	JEERAT(WB)	NP-6445-A	400 KV JEERAT (WBSETCL) - BERHAMPORE(PG)	ER-II
2	JEERAT(WB)	NP-6446-A	400 KV JEERAT (WBSETCL) - SUBHASGRAM	ER-II
3	RANCHI(PG)	NP-7853-A	400 KV RAGHUNATHPUR 1	ER-I
4	RANCHI(PG)	NP-7871-A	400 KV RAGHUNATHPUR 2	ER-I
5	ALIPURDUAR(PG)	NR-3716-A	400 KV POLE-3 MAIN BAY-AGRA(NR)	ER-II
6	ALIPURDUAR(PG)	NR-3718-A	400 KV POLE-3 TIE BAY AGRA(NR)	ER-II
7	NEW MELLI(PG)	NR-4620-A	220 KV JORETHANG(JLHEP)-1	ER-II
8	NEW MELLI(PG)	NR-4621-A	220 KV JORETHANG(JLHEP)-2	ER-II
9	TEESTA-III	NR-3714-A	400 KV SIDE OF TEEST-III HEP GT-1	ER-II
10	TEESTA-III	NR-3715-A	400 KV SIDE OF TEEST-III HEP GT-2	ER-II
11	TEESTA-III	NR-4450-A	400 KV SIDE OF TEEST-III HEP GT-3	ER-II
12	TEESTA-III	NR-3720-A	400 KV SIDE OF TEEST-III HEP GT-4	ER-II
13	TEESTA-III	NR-4623-A	400 KV SIDE OF TEEST-III HEP GT-5	ER-II
14	TEESTA-III	NR-3719-A	400 KV SIDE OF TEEST-III HEP GT-6	ER-II
15	TEESTA-III	NR-4456-A	400 KV TEESTA-III - DICKCHU (MAIN)	ER-II
16	TEESTA-III	NR-4618-A	400 KV TEESTA-III - DICKCHU (CHECK)	ER-II
17	TEESTA-III	NR-4454-A	400 KV TEESTA-III - RANGPO (MAIN)	ER-II
18	TEESTA-III	NR-4453-A	400 KV TEESTA-III - RANGPO (CHECK)	ER-II
19	JINDAL (GRIDCO)	NP-6502-A	220KV JAMSHEDPUR (DVC)	ODHISA PROJECT
20	JAMSHEDPUR (DVC)	NP-6010-B	220 KV JINDAL	ER-I
21	GANGTOK(PG)	NP-6026-A	132KV CHUZACHEN(GATI)	ER-II
22	RANGPO(PG)	NP-7958-A	132 KV CHUZACHEN (GATI)	ER-II

In 144th OCC, Powergrid updated that new SEMs have been received and acceptance tests are in progress. Acceptance tests would complete by end of April 2018.

Powergrid added that time correction has been done at Ranchi.

Powergrid may update.

Deliberation in the meeting

Members noted.

Item no. C.21: Accounting of state drawl from Substation of PGCIL/ISTS Licensee in ER

State net drawl from Substation of PGCIL/ISTS Licensee in ER is being computed considering meter installed at feeders on LV side of Transformer due to the fact that for a few ICTs, multiple states used to draw through same ICT. Further, Sub stations where auxiliary requirement is met through tertiary of the IST ICT, States net drawl is computed by adding drawl through feeders after LV side of Transformer and auxiliary consumption through tertiary. Presently with network strengthening and re-configuration in ER, such case of multiple State/entity drawing power from same ICT of PGCIL/ISTS Licence does not exist anymore.

As per Clause 7(1) (C) of CEA (Installation and Operation of Meters) Regulations, 2006 &its subsequent amendments, Main Meters for drawl computation through ICT should be installed on HV side of ICT and meters installed on LV side of ICT should be considered as Standby meters .

In view of the above it is proposed that Sate drawl from PGCIL/ISTS Licensee S/S may be computed by using the meter installed on HV side of ICTs in line with CEA regulation.

In order to enable ERLDC compute the state drawl through ICTs of PGCIL & other ISTS Licensees in ER as per CEA Regulations, PGCIL is requested to install meters at HV and LV side of ICTs at the stations enclosed at **Annexure-C21**.

In 144th OCC, Powergrid informed that SEMs are already available at some stations.

OCC advised Powergrid to check the healthiness & time synchronization of the installed SEMs and install new SEMs wherever it is required.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that they will install the new SEMs by 2nd week of June 2018.

Item no. C.22: Meter related issues

1. **Replacement of SEM meters/time drift correction of SEMs installed in 400kV Derang-Phoolpada(PG) D/C line.**

JITPL vide letter dated 5th February 2018 informed that there was time drift in SEMs installed in 400kV Derang-Phoolpada(PG) D/C line.

JITPL requested to resolve the long pending issue for which they are incurring loss in billing and DSM.

In 143rdOCC, Powergrid informed that SEM at one end has been replaced, the other end would be replaced after receiving the SEMs.

In 144th OCC, Powergrid informed that 6 SEMs are yet to be replaced. The meters would be replaced soon.

ERLDC, JITPL and PGCIL may update.

Deliberation in the meeting

Powergrid informed that the meters would be replaced soon.

2. Less(1/3rd) energy recording by 132kV side SEM of Malda ICT-2

Meter No NP-7977-A installed at 132 KV side of Malda 220/132 ICT-2 is recording 1/3rd as compared to actual loading of ICT-2 since 25.02.18. Itissuspected that themeter is not getting Voltage of two Phases due to either CVT fuse outage or some other reason. ERLDC requested PGCIL vide email dated 02.03.18 to check current and Voltage input to the meter and rectify the problem immediately. The problem is still persisting and data validation part is being affected.

In 144th OCC, Powergrid informed that CT & PT connections are yet to be checked.

It was informed that Genus interfacing software is not reading the SEM data properly during element outage blocks.

OCC advised Powergrid to resolve the issues.

PGCIL may please update.

Deliberation in the meeting

Powergrid informed that the issues have been resolved.

3. Non receipt of Jamtara end meter data

Jamtara end meter NP-6110-A data of Maithon Line is not being received by ERLDC since 01.04.18. The meter data of Jamtarawas being sent to ERLDC by Vendor of JUVNL upto 31.03.18. As informed by SLDC Ranchi, the data will be sent to ERLDC by respective sub stations of Jharkhand wef 01.04.18. However the data is not being received by ERLDC since 01.04.18. The said meter is also not reporting in AMR.

In 144th OCC, ERLDC informed that the data of Jamtara end has been received, the same is expected to be resolved.

ERLDC and JUSNL may update.

Deliberation in the meeting

ERLDC informed that the issue has been resolved.

4. Less recording by BidhanagarWBSETCL end meter

Meter No NP-6485-A installed at Bidhanagar end of 220 Waria (DVC) Line-2 is recording almost negligible data compared to Waria end meter since 11:15 Hrs of 16.03.2018. Subsequently ERLDC vide mail dated 28.03.18 and 03.04.18 (with a copy to PGCIL) requested WBSETCL to check CT/PT connection and Value measuredbythe said meter. However the problem is still persisting and WBSETCL energy accounting is done with Waria DVC end meter.

In 144th OCC, WBSETCL was advised to resolve the issues at the earliest.

WBSETCL/PGCIL may please further update.

Deliberation in the meeting

It was informed that the issue would be resolved by 23rd June 2018.

5. High error between Main and Check Energy Meters of 220kV CB Feeder No.II at Birpara end.

The difference between main and check energy of 220kV ChhukhaBirpara Feeder II at Birpara end is showing high error of 1.08% and 1.00% for February and March 2018 respectively. The error is more than the allowable limit of 0.6%.

The Check Energy Meter which belong to Bhutan has been tested during January, 2018 and found to be within permissible limit. The main energy meter at Birpara end for 220kV CB Feeder No. II & III pertaining to PTC/POWERGRID was replaced with Genus make energy meter on April 20, 2017.

Therefore, PTC/POWERGRID is requested to test the Main Energy Meter at Birpara end.

In 144th OCC, Powergrid informed the meters have been tested and matched with other end meters.

Bhutan representative was requested to hand over all the relevant data to ERLDC for thorough scrutiny. The result of the scrutiny would be placed by ERLDC in the next OCC meeting.

ERLDC may update.

Deliberation in the meeting

*ERLDC has placed the difference in SEM data between Main and Check Meters. Details are enclosed at **Annexure-C22.***

6. High error between Main and Check Energy Meters of 400kV Malbase – Siliguri Feeder – III (Siliguri end)

The percentage error observed for Main Energy Meter of 400kV Siliguri-Malbase Feeder – III(Siliguri end) is beyond permissible limit for the Month of February & March 2018. As per Power Purchase Agreement (PPA) the percentage error should not exceed 0.6%. The Check Energy Meter which belong to Bhutan has been tested on 19th January, 2018 and found to be within permissible limit.

Therefore, PTC/POWERGRID is requested to test the Main Energy Meter at Siliguri End.

In 144th OCC, Powergrid informed the meters have been tested and matched with other end meters.

It was informed that ERLDC would study and place the outcome in next OCC Meeting.

ERLDC may update.

Deliberation in the meeting

*ERLDC has placed the difference in SEM data between Main and Check Meters. Details are enclosed at **Annexure-C22.***

Item no. C.23: 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		Last Week of January2019	
2	Maithon	1stweek of June 2018		1stWeek of February2019	
3	Rengali	2ndweek of June 2018		Last week of November 2018	

4	U. Indarvati	3rdweek ofJune 2018		2ndweek of February2019	
5	Subarnarekha	1stweek of October 2018		1stweek of January2019	
6	Balimela	3rdweek of October 2018		1stweek of March 2019	
7	Teesta-V	2ndweek of Nov 2018	Done on 3rd May 2018	Last week of February2019	
8	Chuzachen	Last Week of May2018	In May 2018	2nd week of January2019	
9	Burla	Last Week of June 2018		Last week of February2019	
10	TLDP-III	1st Week of June 2018	After Monsoon	2ndWeek of January2019	
11	TLDP-IV	Last Week of June 2018	After Monsoon	1st Week of February2019	
12	Teesta-III	Last week of Oct 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	

Members may update.

Deliberation in the meeting

Members updated the schedule as mentioned in above table.

Item no. C.24: Schedule for reactive capability tests

In last OCC,Members updated the status and informed the schedule as follows:

- AdhunikTPS(both units) – Unit #1 done on 27.10.2016 and submitted the testing report of unit #1. Unit #2 would be in service from April 2018.
- JITPL(both units) – done testing of unit#1 and agreed to send the report. After the emergent inspection of OEM(BHEL). Unit #2 testing would be done in June 2018
- Barh TPS – Vibration problems will be attended during overhauling. The testing would be done after overhauling in December 2019.
- Raghunathpur – Next week
- GMR (Three units) – In last week of April 2018.

GMR informed that they would perform the Reactive Capability test for their generators on 18th May 2018.

Members may update.

Deliberation in the meeting

GMR informed that the Reactive Capability test for Unit 1 & 2 was done on 18th May 2018.

Item no. C.25: Installation of PMUs in Eastern Region under URTDSM project

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

important to real time shift operator for analyzing the security of the grid. The updated status as furnished in 142nd OCC by Powergridis given at **Annexure-C.25**.

Powergrid vide mail dated 8th January 2018 informed that they are facing difficulty in installation of PMUs at following locations:

1. IBEUL: Material delivered at site in the month of August. Accordingly team was deployed for installation. But Due to non-readiness at site the team could not work and has to returned back. Till now permission has not been granted for PMU installation.
2. JITPL: Material delivered at site in the month of August. Team was deployed for PMU installation. Due to space constraint the installation could not be done.

In 142nd OCC, POWERGRID informed that the installation could not be completed at Jindal, Angul due to space constraint. In the meeting, JITPL representative agreed to resolve the issues.

POWERGRID informed that air-conditioning and lighting arrangement in PDC control room at SLDC-Howrah was not yet provided by WBSETCL for PDC installation. The requirement of air-conditioning and lighting in PDC control room at SLDC-Howrah was intimated to WBSETCL during survey on November-2014 but the same is not yet provided. The matter has also been discussed in 20th SCADA O&M meeting held on 15th December 2018 wherein WBSETCL intimated that the same would be done on priority.

OCC advised WBSETCL to provide the air-conditioning and lighting in PDC control room at SLDC-Howrah at the earliest.

In 37th TCC, JITPL agreed to examine and confirm the space within one week.

Regarding Patratu, it was decided that NTPC and JUSNL would sit together and sort out the issue by March, 2018.

In 143rd OCC, WBSETCL informed that the air-conditioning and lighting in PDC control room at SLDC-Howrah by July 2018.

Regarding Patratu, NTPC and JUSNL informed that they would settle the issues in April, 2018.

In 144th OCC, JITPL informed that they have allotted the space but few issues related to interfacing are needed to be discussed.

OCC advised Powergrid and JITPL to settle the issues.

POWERGRID may update the status.

Deliberation in the meeting

Powergrid informed that issues related to installation of PMU at JITPL have been resolved.

Item no. C.26: Curtailment of charging time on tripping of 132 KV new Kataiya-Kushaha Transmission Line from GSS Kataiya raised by Nepal Electricity Authority--BSPTCL

Nepal Electricity Authority (NEA) has requested to arrange the shortest time period for charging of 132 KV new Kataiya- Kushaha Transmission Line from GSS Kataiya. The charging of the said lines are getting delayed about 1:30 - 2 hrs from January itself. Previously on tripping of line, the line used to be charged based on telephonic conversation within 10 min. To minimize the charging time on tripping of 132 KV new Kataiya- Kushaha Transmission Line from GSS Kataiya the method of 1st instance charging of tripped line with consent limited to BSPTCL Kataiya&Duhabi/Kushaha/Nepal only may be allowed.

In 142nd OCC, BSPTCL informed that they were to take consent from ERLDC then NLDC before charging the line. Hence the charging of the line was getting delayed.

ERLDC informed that they take up the issue with NLDC.

In 144th OCC, ERLDC assured that all the best possible efforts would be taken in consultation with NLDC to minimise the time delay in charging the line.

BSPTCL may update.

Deliberation in the meeting

It was informed that since it is an internationally connected line, the charging code has to be taken from NLDC however, ERLDC assured to minimize the time delay in charging the line in consultation with NLDC.

Item no. C.27: Flexible Operation of thermal power stations- Identification of pilot projects--CEA

Central Electricity Authority vide letter dated 16th February 2018 informed that a special Task Force was constituted under IGEF Sub-Group-I for enhancing the flexible operation of existing coal-fired power plants. The committee has recommendd for implementation of measures for 50%, 40% and 25% minimum load in thermal power stations. The measures for 50% minimum load operation requires no investment or minimal investment. (Report is available on CEA website under TRM division)

Subsequently, a meeting was held under the chairmanship of Member (Thermal) on 8th February 2018 where in it was decided that 55% minimum load operation would be implemented nationwide in first phase. Furher, Six units, including two units of NTPC and one unit each from DVC, GSECL, APGENCO, MSPGCL, would be taken up for 55% minimum load operation on pilot basis as 55% minimum load operation in line with the CERC notification dated 6th April 2016 and 5th May 2017 (IEGC 4th Amendment).

In 142nd OCC, NTPC informed all the units of NTPC were capable of 55% minimum load operation. DVC informed that they were planning to implement at DSTPS.

In 37th TCC, DVC informed that they would demonstrate the capability of 55% minimum load operation for one unit of DSTPS by March 2018.

In 144th OCC, DVC informed that an exercise to test 55% minimum load operation had been conducted at DSTPS recently. The details of the test results, as and when received, would be shared with OCC members.

DVC may update.

Deliberation in the meeting

Members noted.

Item no. C.28: CONTINGENCY PLAN TO MEET DEFICIENT / EXCESS RAILFALL DURING MONSOON -CEA

The anticipated monthly demand profile in respect of various states and the annual maintenance plan of various generating units of has been received from Eastern Region. It is understood that this data is based on normal monsoon scenario. However, a poor or excess monsoon activity, sudden excess silt in the river, and such other contingencies may lead to increased demand –

supply gap in the region(s) or county. Each RPC needs to be fully prepared to meet such credible contingencies.

In the above background, it is requested to estimate the impact (in terms of average MW) of various contingencies including the above ones, on the demand and availability in respect of each state/ UT for the months of June to September,2018, and an implementable action plan be prepared for handling the contingency situation like deficit or delayed monsoon, excessive monsoon, flooding of mines or damaging of railway network or situation of high silt(in the Northern Region during July-August),etc, Implementable concrete steps like identification of flexible plant outages, maintaining sufficient coal stock at critical plant sites and diversion of coal via alternate route may also be identified and documented by each RPC. Contingency arising out of failure of transmission towers also needs to be considered and preparedness by the CTU/STUs to meet the same using ERS be examined and outcome/action plan documented. The Ministry of Power has desired that the aforesaid contingency plan be made ready by this month end.

The contingency plan has been received from West Bengal, WBPDCL, DVC, Bihar and Odisha. OCC advised all other constituents to submit the contingency plan to mserpc-power@nic.in.

Members may submit the contingency plan.

Deliberation in the meeting

Members noted.

Item no. C.29: Operationalizing black start facility at Purulia Pump Storage Project (PPSP) of WBSEDCL--ERLDC

In 143rd OCC, WBSEDCL informed that a feasibility study had been carried out by OEM Toshiba.

WBSEDCL added that OEM had not recommended for charging the line beyond the PPSPswitchyard. WBSEDCL alsosubmitted “Technical Comment for Black Start-Line Charge operation Purulia Pumped Storage unit” from OEM Toshiba. Extracts from the technical comment is as follows

Quote

Firstly, we would like to clarify the meaning of the Black start operation which you mentioned in the letter PM/PPSP63/633 and /63/449. Your understanding of the Black start operation is to charge a transmission line which has lost voltage due to some trouble in order to confirm its healthiness. For this purpose, you will perform the Black start operation and line charge. Specifically, this work could be clearly defined as below;

a) Starting up one generator by emergency (Diesel engine) generators.
b) Charging one circuit of Arambag transmission line by the generator which is started up by emergency generators.

Ref. No: ECS1-GDP-PSPP-1001

Under the above condition, we had already made a study, and confirmed that the generator protection system is properly protecting the generators during the Black start operation and line charge. Even if an electric failure occurs while generator is charging one circuit of Arambag transmission line after its black start

Unquote

WBSEDCL is requested to share the detailed report of the study mentioned above along with all data that were used for carrying out the study. Further the reference (Ref. No. ECS1-GDP-PPSP-1001) quoted above may also be provided for analysis.

WBSEDCL may update.

Deliberation in the meeting

OCC advised WBSEDCL to submit the reference documents to ERLDC.

Item no. C.30: Control area Jurisdiction of Chuzachen HEP

CTU has informed vide letter dated 29.03.18 that the connectivity of Chuzachen HEP with CTU is revoked with immediate effect.Chuzachen HEP being an Independent Power Producer (IPP), presently having connectivity with STU (Govt. of Sikkim) network only and embedded entity of Sikkim,so as per IEGC clause 6.4.2.c.ii and CERC order 95 MP 2013, the scheduling responsibility lies with the State Load Despatch Centre, Sikkim.

IEGC 6.4.2.clause states that:

Quote

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

a) Central Generating Stations (excluding stations where full Share is allocated to host state),
b) ……
c) In other cases, the control area shall be decided on the following criteria:

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

As per IEGC clause 6.4.2.ii, if scheduling responsibility is to be continued by ERLDC, then approval has to be taken from CERC and a No Objection Certificate (NOC) is also required from Sikkim.

In 144th OCC, Sikkim agreed to give NOC for scheduling Chuzachen generation after the approval of CERC.

Chuzachen informed that they will approach Sikkim after the approval of CERC.

Chuzachen may update.

Deliberation in the meeting

Members noted.

PART D:: OPERATIONAL PLANNING

Item no. D.1: Anticipated power supply position during June'18

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of June'18 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 June 2018 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 June'18

Members may finalize the Shutdown proposals of transmission lines andgenerating stations for the month of June 18.

Shutdown proposals of generating stations:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	MTPS	3	210	12.06.18	12.07.18	31	AOH (Boiler acid cleaning + LPT)
	KTPS	2	500	25.06.18	30.07.18	36	COH
ODISHA	TTPS	3	60	26.06.18	25.07.18	30	Capital Maintenance
WBPDCL	Sagarighi TPS	3	500	01.06.18	20.06.18	20	Boiler Overhauling

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

Deliberation in the meeting

Approved maintenance programme of generators as follows:

System	Station	Unit	Size (MW)	Period		No. of Days	Reason
				From	To		
DVC	MTPS	3	210	12.06.18	12.07.18	31	AOH (Boiler acid cleaning + LPT)
	KTPS	2	500	25.06.18	30.07.18	36	COH
ODISHA	TTPS	2	60	24.06.18	28.07.18	15	Capital Maintenance
WBPDCL	Sagarighi TPS	3	500	01.06.18	20.06.18	20	Boiler Overhauling
	BkTPS	5	210	05.06.18	24.06.18	20	Boiler Overhauling
	KTPS	1	210	01.06.18	30.11.18	180	For R&M to meet NGT norms

Approved maintenance programme of transmission elements for the month of May 2018 is given at **Annexure-D.2.**

Powergrid gave a detailed presentation on requirement of shutdown of 400kV S/C Berhampore-Farakka line. Presentation is enclosed at Annexure-D2.1.

OCC referred the shutdown of 400kV Farakka-Sagardighi line and 400 kV Behrampore-FarakkaS/C lines to 67th PCC Meeting scheduled to be held on next day.

Powergrid informed that as part of improving the system availability, POWERGRID ER-II have carried out Puncture Insulator Detection Testing in lines which are 25 years in service and those lines which are frequently getting auto-reclosed/de-capped during lightening. It is urgently required to replace the insulators as defective porcelain insulator strings are very vulnerable to sudden de-capping/Auto-reclosure of lines. Powergrid requested for the shutdown of lines and consider this outage non-attributable to Powergrid. Details are given in Annexure-D2.2.

OCC approved the shutdown as given in **Annexure-D.2.** *It was informed that deemed availability would be considered as per CERC regulations.*

WBPDCL informed that one 400/220kV ICT at Kolaghat is under outage hence WBPDCL requested SLDC, West Bengal to restrict the loading on other ICT so that it would not trip on overloading. WBPDCL added that auxiliary supply of Kolaghat units is connected through tertiary of the ICT. The tripping of other ICT would lead to tripping of Kolaghat units.

SLDC, West Bengal agreed to take care.

Shutdown of 220 kV New Melli - Rangpo Line & 220 kV Jorethang-New Melli Line:

TPTL and Dansenergy explained the interim arrangement to minimize the shutdown period. OCC agreed to the shutdown of 220 kV New Melli - Rangpo Line & 220 kV Jorethang-New Melli Lines as per the given schedule:

30th May 2018

(i) from 09-00 hrs to 14-00 hrs : for making by-pass arrangement to be carried out by TPTL for stringing on 220kV New Melli – Rangpo Line
(ii) from 14-00 hrs to 16-00 hrs : for SPS testing to be carried out by POWERGRID

7th June 2018

(i) from 08-00 hrs to 15-00 hrs : for making by-pass arrangement to be carried out by TPTL for stringing on Jorethang - New Melli Line
(ii) from 15-00 hrs to 17-00 hrs : for SPS testing to be carried out by POWERGRID

15th June 2018

(i) from 09-00 hrs to 14-00 hrs : for removal of by-pass arrangement to be carried out by TPTL for restoration of original 220 kV lines
(ii) from 14-00 hrs to 16-00 hrs : for SPS testing to be carried out by POWERGRID

1. Rescheduling of Kahalgaon STPS unit overhauling –NTPC

NTPC vide letter dated 30th March 2018 informed that in view if increased incidences of blade failure of 250 MW and 500 MW KWU design LP turbine rotors(version 3,4, 5 & 6), it has now become imperative to carry out LP turbine overhauling in every 2 years as per our corporate Turbine Expert Group. Accordingly, the overhauling of Kahalgaon STPS units are rescheduled as tabulated below to avoid any mis-happening and unwanted long outage:

Kahalgaon STPS	Schedule as per Provisional LGBR	Re-schedule proposed	Remarks
Unit-4	24.06.18 to 30.06.18 (7 days)	07.05.18 to 13.05.18 (7 days)	Short shutdown preponed to avoid generation loss on account of Air Pre-Heater tubes choking.
Unit-3	15.05.18 to 08.06.18 (25 days)	01.06.18 to 25.06.18 (25 days)	Postponed for resource mobilisation after Unit-4.
Unit-5	01.08.18 to 04.09.18 (35 days)	15.07.18 to 13.08.18 (30 days)	Preponed for early overhauling of Unit-6.
Unit-6	Earlier not planned in 2018-19	01.09.18 to 05.10.18 (35 days)	Earlier not planned in 2018-19 but revised in view of increased incidences of LP turbine blade failure.
Unit-7	16.11.18 to 10.12.18 (25 days)	Dropped	Re-planned in Apr'19.

In 144th OCC, Member Secretary, ERPC informed that LGBR for 2018-19 has been prepared after through consultation with all the constituents of Eastern Region. The same has already been submitted to CEA for necessary action at their end. Based on the LGBR, the utility constituents of Eastern Region has made the necessary planning to meet the load during 2018-19. At this juncture, wholesale changes with regard to shut down program of generation units, as proposed by NTPC, is not acceptable, as it makes the entire exercise associated with preparation and finalization of LGBR futile. The very purpose of whole exercise would be defeated with such huge changes in schedules. He advised NTPC to properly plan the overhauling schedules of their units in advance.He observed that only with the explicit approval of the beneficiaries of the generating units, NTPC may proceed with the implementation of revised shut down program.

After through deliberation, OCC agreed for rescheduling of shut down program of Unit 4 and Unit 6 of Kahalgaon STPS.

For rescheduling of other units, OCC advised NTPC to consult with all the beneficiaries and place the revised schedule in next OCC meeting.

NTPC may elaborate. Members may approve.

Deliberation in the meeting

NTPC informed that they are taking shutdown of Unit 5 as per the schedule given LGBR and shutdown of unit #3 would be taken after completion of the maintenance of Unit #6.

1a. Rescheduling of Kahalgaon STPS unit-6 overhauling –NTPC

NTPC vide letter dated 14th May 2018 informed that Kahalgaon STPS unit-6 was taken out of bar for attending boiler tube leakage on 11th May 2018. The unit was synchronized to Grid at 12:35hrs on 13th May 2018 after rectification. But suddenly, the unit got tripped at 14:41 hrs on 13th May 2018 due to high turbine vibration. The unit was taken under Capital Overhaul from 00:00hrs of 14th May 2018 for 35 days to inspect and attend the vibration problem.

NTPC may elaborate. Members may note.

Deliberation in the meeting

Members noted.

2. Rescheduling of Talcher STPS unit 2 overhauling–NTPC

NTPC vide letter dated 27th March 2018 informed that overhauling of Talcher STPS unit 2 was initially scheduled from **10th November 2018 for 30 days** as per LGBR.

Subsequently considering the past experience of power demand in festive season of ER during October and November, NTPC requested to prepone the shutdown to **15th July 2018 to 13th August 2018** for 30 days. During this period there will be increased hydro generation and hence less demand in the Grid.

In 144th OCC, Membersdid not agree with the NTPC proposal regarding rescheduling of Unit-2 of Talcher STPS. NTPC was advised to strictly adhere to the schedule given in LGBR unless an emergent situation demands any revision of shut down program.

*NTPC vide letter dated 10th May 2018 requested for the rescheduling of Talcher STPS unit 2. The letter is enclosed at **Annexure-D2.2**.*

NTPC may elaborate. Members may approve.

Deliberation in the meeting

OCC has given the provisional clearance for Talcher Unit 2 shutdown from 15th July 2018 to 13th August 2018 for 30 days. Shutdown would be approved subjected to Grid conditions in June 2018.

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

(i) Thermal Generating units:

S.No	Station	Owner	Unit No	Capacity (MW)	Reason(s)	Outage (Date)
1	FARAKKA	NTPC	4	500	Annual O/H	11-Mar-18
2	KOLAGHAT	WBPDCL	3	210	POLLUSION CONTROL PROBLEM	23-Feb-17
3	CTPS	DVC	3	130	TURBINE BLADE DAMAGE	30-Jul-17
4	JITPL	JITPL	2	500	PA FAN PROBLEM	7-May-18
5	MEJIA	DVC	6	250	STATOR EARTH FAULT	15-Mar-18
6	VEDANTA	GRIDCO	2	600	PROBLEM IN BOILER	8-Feb-18
7	SAGARDIGHI	WBPDCL	4	500	TURBINE VIBRATION	5-Apr-18
8	SAGARDIGHI	WBPDCL	2	300	DESYN FOR BOILER LICENSE RENEWAL	29-Apr-18
9	KOLAGHAT	WBPDCL	5	210	DESYN FOR BOILER LICENSE RENEWAL	26-Apr-18
10	KBUNL STG-I	BSPHCL	1	110	COAL SHORTAGE	1-May-18
11	MEJIA	DVC	1	210	COAL SHORTAGE	30-Apr-18
12	MEJIA	DVC	2	210	COAL SHORTAGE	30-Apr-18
13	TENUGHAT	JUVNL	1	210	COAL SHORTAGE	29-Apr-18
14	RAGHUNATHPUR	DVC	2	600	COAL SHORTAGE	24-Apr-18

(ii) Hydro Generating units:

Sr. No	Generating Station	UNIT NO	CAP(MW)	REASONS FOR OUTAGE	OUTAGE DATE
1	BURLA	1	49.5	Turbine & Gov. coupling cover leakage	25.10.2016
2	BURLA	5	37.5	R & M WORK	25.10.2016
3	BURLA	6	37.5	R & M WORK	16.10.2015
4	CHIPLIMA	3	24	R & M WORK	15.10.2015
5	BALIMELA	1	60	R & M WORK	05.08.2016
6	BALIMELA	2	60	R & M WORK	20.11.2017
7	U.KOLAB	2	80	Repair of MIV & Draft tube gate leakage	28.05.2017

It is therefore seen that about 375 MW hydro capacity in Odisha is under forced outage / R&M and therefore not available for providing the much needed peaking support in summer peak. SLDC / OHPC may please indicate the capacity expected to be restored by 31/05/18.

(iii) Transmission elements

SL NO	Transmission Element / ICT	Agency	OutageDate	Reasons for Outage
1	220 KV BALIMELA - U' SILERU	OPTCL / APSEB	10.03.18	L.A FAILURE AT UPPER SILERU END.
2	400KV TALA -BINAGURI -I	POWERGRID/BHUTAN	02.03.18	LINE OPENED ON O/V
3	220 KV ROURKELLA - TARKERA II	OPTCL	10/05/18	B PHASE JUMPER SNAPPED AT LOC NO -2
4	220 KV PATNA -FATWA	BSEB	10/05/18	B PHASE JUMPER SNAPPED
5	400 KV FARAKKA - DURGAPUR II	POWERGRID	10/05/18	TOWER BEND AT LOC NO -377,378
6	400 KV MPL-MAITHON D/C	POWERGRID	10/05/18	TOWER COLLAPSED AT LOC NO -63/64/65
7	400 KV IBEUL JHARSAGUDAD/C	IBEUL	29/04/18	TOWER COLLAPSE AT LOC 44,45

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

Members may update.

Deliberation in the meeting

OPTCL informed that 220 KV BALIMELA - U' SILERU line charged on 16th April 2018 and 220 KV ROURKELLA - TARKERA II was charged on 11th May 2018.

PART E::ITEMS FOR INFORMATION

Item No. E.1: Restricted Governor /Free Governor Mode Operation of generators in ER

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

The latest status of the RGMO/FGMO of ER generators is enclosed in **Annexure-E1**.

Members may note.

Deliberation in the meeting

Members noted.

Item No. E.2: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

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

NTPC communicated their activity of the preparation ofCrisis Management Plan for countering the cyber attacks vide letter dated 2nd August, 2013.

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

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

Members may note.

Deliberation in the meeting

Members noted.

Item No. E.3: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

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

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

- All NTPC stations in Eastern Region
- Teesta, NHPC
- All OHPC generating units
- All CESC generating units
- All units of WBPDCL
- DGPC units

Members may note.

Deliberation in the meeting

Members noted.

Item No. E.4: Status of Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipment.

The status of DR/EL and GPS as updated in previous OCCs is enclosed at **Annexure-E.4**.

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

TeestaUrja Limited vide letter dated 8th September 2017 informed that Disturbance Recorder, Stand alone Event Logger and Time Synchronization equipments are available at Teesta III HEP.

Members may note.

Deliberation in the meeting

Members noted.

Item No. E.5: Status of Emergency Restoration System (ERS Towers) for Eastern Region constituents

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

In 136th OCC, MS, ERPC informed that CEA vide letter dated 21.07.2017 has sought the latest status on ERS. Therefore, OCC advised all constituents to send the updated status to ERPC secretariat vide mail (mserpc-power@nic.in).

Latest status is enclosed at **Annexure- E.5**.

In 138th OCC, WBSETCL informed that they are having total 10 ERS towers, 5 at Arambagh and 5 at Gokharno.

In 139th OCC, JUSNL informed that they are having eight 220/132kV ERS towers at following locations:

- Hatia – 3 nos
- Ranchi – 2 nos
- Dumka – 3 nos

Members may note.

Deliberation in the meeting

Members noted.

Item No. E.6: 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.

Members may comply.

Deliberation in the meeting

Members noted.

Item No. E.7: Checklist for submission of updated data for Protection Database

The network data in Protection Database needs to be updated on regular basis on account of commissioning of new elements in the CTU as well as STU networks. Accordingly, a checklist has been prepared which is enclosed in **Annexure-E8**.

All the constituents are requested to submit the checklist on monthly bases in every OCC/PCC meetings.

In 139th OCC, all the constituents were advised to submit the data to ERPC vide mail (mserpc-power@nic.in) as per the checklist for last three months.

OCC advised all the constituents to submit the data to ERPC vide mail (mserpc-power@nic.in) as per the checklist for last three months.

Constituents may note and comply.

Deliberation in the meeting

Members noted.

Item No. E.8: Non-Payment of dues to Powergrid—PowergridOdisha

A. **JITPL**: Rs. 1.09 Crore from M/s JITPL (Rs. 52.653 Lakh towards bay maintenance + Rs. 57.239 Lakh towards interest charges)

B. **Ind-BharathEnergy(Utkal) Ltd(IBEUL):** Rs.88 Lakh is due from M/s Ind-Bharath (Utkal) Energy Limited towards Bay maintenance and Interest charges.

JITPL and IBEUL may note and clear the dues.

Deliberation in the meeting

Members noted.

Item No. E.9: Additional agenda

Meeting ended with vote of thanks to the chair

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Annexure-A

Participants in 145th OCC Meeting of ERPC

Venue: ERPC Conference Room, Kolkata Time: 10:30 hrs Date: 21.05.2018 (Monday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
1	J. Bandyopadhyay	Member Secretary ERPC	9432326351	mserpc-power@gov.in	
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Participants in 145th OCC Meeting of ERPC

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