MINUTES
OF
178th OCC MEETING

Date:30.04.2021

Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata:700033

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 178thOCC MEETING HELD ON 20.04.2021(TUESDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the meeting. He welcomed all the participants to the meeting. In the opening remarks, he highlighted the grid performance for the month of March, 2021 and for the year 2020-21. He mentioned the following points:

- *During the month of March-21, growth in energy consumption of ER was 33.76% compared to same month of previous year.*
- *Despite the COVID pandemic during the year 2020-21, ER achieved a growth of 0.74% in energy consumption compared to the previous year.*
- *During the year 2020-21, the Peak Demand Met of ER was 24,016 MW in the month of March-21 which is 2.6 % more than year 2019-20.*
- *Eastern Region registered a highest PLF of 79.23% in March-21, which is 20.3 % more than the same month of previous year. Moreover, during the month of March-21,16 nos. of thermal plants have achieved more than 90% PLF including Bakreswar TPS of WBPDCL which has achieved highest PLF of 102.23%.*
- *Growth in net energy export by ER in 2020-21 was increased by 42% compared to the previous year.*
- *77.8% of time in the year 2020-21 the grid frequency was within IEGC band (49.90Hz – 50.05Hz).*

PART – A

ITEM NO. A.1: Confirmation of Minutes of 177thOCC Meeting held on 17thMarch 2021 through MS Teams.

The minutes of 177thOperation Sub-Committee meeting held on 17.03.2021 circulated vide letter dated 09.04.2021.

Members may confirm the minutes of 177th OCC meeting.

Deliberation in the meeting

It was informed that two requests for modification in minutes of 177th OCC meeting were received through e-mail which are as follows:

1) *Powergrid vide e-mail dated 19.04.2021 requested that para 4 of minutes of Item no. B6.2 may be replaced with*

"On 13th March 2021, the 400/220 kV ICT-5 was made switched off in emergency due to breakdown of pneumatic drive of the main bay circuit breaker".

2) *DVC vide email dated 19.04.21 requested that para 1 of the minutes of Item no. C.5 may be replaced with:*

*"DVC informed that PSS tuning of **Unit#1 of Bokaro-A** TPS had been completed".*

Members confirmed the minutes of the 177th OCC meeting with the above two modifications with respect to Item no. B6.2 and C.5.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B.1: Change in Control Logic at HVDC Sasaram

Powergrid has requested for shutdown of following elements for facilitating the Shutdown of HVDC Pole for operation checking of CB, Isolator from Mimic Panel of HVDC.

- 400 kV Biharsariff-Sasaram D/C,
- 400 kV Sasaram-Allahabad,
- 400 kV Sasaram-Varanasi and
- AC by pass at Sasaram.

Further HVDC has some hardwired logic which restricts the Power order of HVDC to 250 MW in case of an outage/non-availability of any Biharsariff circuit. Also, it cannot be taken into service when both Biharshariff circuits are out.

The above logic was implemented during commissioning of the HVDC as at that time, Sasaram was getting infeed only from Biharsariff at 400 kV level. However, with available of multiple connectivity now, it is proposed that the above logic may be reviewed.

Members may discuss.

Deliberation in the meeting

Powergrid informed that the issue of changing the control logic at HVDC Sasaram was discussed in detail in past OCC meetings and during that meeting it was concluded that the same was not possible due to huge cost implications.

Further, they clarified that the software logic cannot be modified alone with the existing hardware. The modification is only possible by changing complete software and hardware module which is having huge cost implications.

After detailed deliberation, members decided that existing logic should be continued at HVDC Sasaram.

ITEM NO. B.2: Finalization of metering arrangement for 33 kV Power Supply to Dulanga Mines from Darlipali STPP—NTPC

NTPC vide email informed that in-principle approval has been accorded by GRIDCO, Bhubaneswar, Odisha for availing 15 MVA power supply connection from Darlipali STPP by Dulanga Coal Mine of NTPC Ltd as a consumer of local DISCOM i.e. WESCO(presently TPWODL) for mining operation at Dulanga Coal Mine which will be treated as part of drawl of Odisha share from Darlipali STPP.

Accordingly, two number 33 feeders in 33 KV Misc SWGR, DSTPP have been envisaged for providing power supply to Dulanga for mining operation.

In replying to WESCO's query on the subject power supply connection to SMASL vide letter no 1677(5) dated 31.12.2020, M/s GRICO has opined vide their letter no 106 dated 20.01.2021 to get approval from ERPC/ERLDC regarding the connectivity and the metering scheme for availing the power supply connection as Darlipali STPP is a central generating power station.

NTPC may elaborate. Members may discuss.

Deliberation in the meeting

NTPC elaborated the issue and informed that GRIDCO has accorded approval for availing power supply from Darlipali STPP to Dulanga coal Mines of NTPC Ltd as a consumer of Local Discom.

Accordingly, 2 nos. of 33 kV feeders have been envisaged for supply of power from Darlipali STPP to Dulanga mines.

On a query from ERPC secretariat, NTPC representative informed that the length of 33kV feeders is 10KM and clarified that the flow through the 33 kV feeders shall be accounted for as GRIDCO drawal and DSTPP injection and shall not be accounted for in the auxiliary consumption or as a part of station load of Darlipali STPP.

GRIDCO representative stated that they have given in-principal approval to the arrangement as proposed by NTPC for evacuation of power from Darlipali STPP through 33 kV feeders to Dulanga coal mines. The power so evacuated would be considered as GRIDCO share of drawal and to be consumed by NTPC in the capacity of being a consumer of local Discom. They submitted that Darlipalli STPP being a central generating station, the necessary metering arrangement and accounting for the above scheme needs to be approved by ERPC/ERLDC.

ERLDC informed that as the 33 kV feeders are evacuating GRIDCO power and connected to ISGS and state control area the same should be considered as a tie line. Accordingly, they stated that the scheme needs to be approved by the standing committee on transmission planning of ER. However, OCC opined that since the flow through 33kV feeders shall be accounted for as drawal of Odisha and NTPC intends to draw power through these feeders as consumer of WESCO (a DISCOM of Odisha), these feeders can be treated as part of Distribution system.

ERPC Secretariat expressed that the power supply to Dulanga mines shall be totally separated from Station Transformer of Darlipalli STPP and separate ABT compliant Special Energy meters to be installed at both end of the 33kV feeders for energy accounting. Further, if these two feeders are dedicatedly supplying power to Dulanga Mines, it can be treated at par with auxiliary power drawl of Powergrid Sub-station in Eastern Region for Accounting purpose.

After detailed deliberation, OCC agreed for the above scheme of power supply to Dulanga mines from Darlipalli STPP through2 nos. of 33 kV feeders and the energy drawl from these two feeders shall be considered as GRIDCO drawl and DSTPP injection.

Further, OCC advised NTPC to submit the details of above scheme along with SLD/Sketch details to ERPC Secretariat so that the scheme can be referred to ERPCTP for necessary approval.

ITEM NO. B.3: Repeated disturbances at 132/66 kV Melli S/S in March 2021

The occurrence of repeated grid events at 132/66 kV Melli S/S has been reported in March 2021 resulting in power failure at Melli and Kalimpong areas. A summary of the grid events in March 2021 is given in the following table:

Sr No	Date	Time (Hrs.)	Brief Description	Relay Indication of RangpoMelli S/C	Relay Indication of SiliguriMelli S/C	Power loss
1	11-03-2021	16:17	132 kV SiliguriMelli S/C was out of service. Kalimpong was radially fed from Melli through 66 KV Kalimpong-Melli D/C. 132 kV Rangpo – Melli S/C tripped ON R-Y phase fault leading to power failure at Melli.	R-Y, IR=1.2 kA, IY=1.1 kA, 2.1 km from Rangpo	--	Melli: 15 MW Kalimpong: 5 MW
2	24-03-2021	18:41	Both 132 kV Rangpo-Melli S/C and 132 KV Siliguri-Melli S/C tripped due to R & Y phase to earth fault resulting in total power failure at Melli and Kalimpong. Kalimpong was radially fed from Melli through 66 KV Kalimpong-Melli D/C.	R-Y, IR=1.6 kA, IY=1.5 kA, 2.1 km from Rangpo	R-Y, IR=1.4 kA, IY=1.3 kA, 104 km from Siliguri;	Melli: 12 MW Kalimpong: 6 MW
3	28-03-2021	16:42	132 kV Rangpo-Melli S/C and 132 KV Siliguri-Melli S/C tripped due to R & Y phase to earth fault resulting in total power failure at Melli and Kalimpong. Kalimpong was radially fed from Melli through 66 KV Kalimpong-Melli D/C.	R-Y, IR=1.4 kA, IY=1.4 kA, 2 km from Rangpo	R-Y, IR=1.4 kA, IY=1.3 kA, 105 km from Siliguri	Melli: 15 MW Kalimpong: 5 MW

In 101st PCC Meeting held on 13.04.2021, the agenda was placed for discussion. PCC referred the issue to OCC for discussion as Sikkim representative were not present in the meeting.

Sikkim may explain.

Deliberation in the meeting

Powergrid informed that line section of 132kV Rangpo-Melli line from 0.3 km to 3.3 km from Rangpo belongs to P&E Deptt. Sikkim and the fault location for the above trippings comes under their jurisdiction.

Sikkim representative informed that the maintenance of 132 kV Rangpo-Melli line is being carried out by Powergrid.

Powergrid clarified that there was no formal agreement between Sikkim and Powergrid for

maintenance of the subjected portion of line.

OCC opined that as the line section belongs to Sikkim, the onus of the maintenance of the line lies with Sikkim and advised Sikkim to maintain the particular section of the line either by their own or by Powergrid through a formal O & M agreement.

Sikkim representative stated that the proposal of O& M agreement with Powergrid is under consideration and they would take up the issue with their higher authority for expedition of the same.

Regarding issue of protection system at Melli S/s, Powergrid informed that the issue is in the substation DC system and needs thorough investigation.

Sikkim representative responded that the DC issue at Melli S/s has been resolved and further informed that tendering process for renovation of Melli S/s under PSDF scheme has been started.

After detailed deliberation, OCC decided that a complete review protection system of Melli S/s may be carried out by a team comprising of the technical experts from Powergrid, West Bengal and Sikkim tentatively in the last week of April'21 and the team has to submit its report to ERPC. Further, OCC advised respective utilities to nominate one representative preferably from the nearby areas.

ITEM NO. B.4: Repair/rectification of D/C tower at location 79 of of 132kV Rangpo-Melli and 132 kV Rangpo -Gangtok line.

Powergrid had informed that their patrolling team had observed bent in part of tower no. 79 of 132kV Rangpo-Melli D/C line and 132 kV Chuzachen(Rangpo)-Gangtok transmission lines which might 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 43rdERPC Meeting, Powergrid informed that the tower at location no. 79 is in vulnerable condition and needs immediate attention so as to avoid any further devastation.

Sikkim informed that they are in process of obtaining approval from State Govt. for rectification of the defective tower

In view of importance of the said line for power supply to State Capital, ERPC advised Sikkim to resolve the issue on priority basis and same shall be monitored in lower forum of ERPC.

Sikkim may update.

Deliberation in the meeting

Sikkim informed that they would communicate the status of the proposal for rectification of the defective tower within a month.

ITEM NO. B.5: Outage of Important Transmission System.

1. 132kV Sagbari –Melli.

In the 174th OCC meeting, Sikkim informed that 132kVMelli-Sagabari S/C is under outage because of faulty breaker issue at Sagbari end. Sikkim informed that 132 kV Sagbari S/s is under DISCOM jurisdiction.

In the 176th OCC meeting, Sikkim informed that the circuit breaker issue has been resolved.

They further informed that as the line was under outage for more than two years, there were vegetation &RoW issues. They added that there is conductor snapping in the line between loc. 20 and loc. 29.

In 177th OCC Meeting, Sikkim informed that necessary RoW clearance has been received for 80% section of the line and it would take two more weeks to get the clearance for remaining section of the line OCC advised Sikkim to expedite the work and restore the line at the earliest.

Sikkim may update.

Deliberation in the meeting

Sikkim informed that necessary RoW clearance for charging of the line is being taken up by the Discom. They submitted that the issue would be resolved within a month.

2. 400 kV Maithon- Maithon RB D/C

400KV Maithon-Maithon RB D/C is under continuous shutdown from 12-01-21, for re-conductoring work.
In 177th OCC Meeting, Powergrid submitted that 14 km of stringing has been completed out of 31 km for each circuit.

OCC advised Powergrid to submit the detailed plan and timeline of restoration of the line to ERPC secretariat/ERLDC within a week.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that out of total 63 km circuit length of both circuits, HTLS stringing for 41.5 km has been completed till date and the target date for completion of the work is June' 21.

MPL informed that any long-term shutdown for the lines evacuating power from MPL would not be allowed after April'21 in view of summer demand.

OCC advised Powergrid to expediate the reconductoring work and to avail the shutdown of the 400 kV Maithon-MPL lines in consultation with MPL and ERLDC.

3. 400 KV main bay of Patna-1 at Kishanganj S/s.

The said bay remains out of service due to problem in Y-ph CB mechanism from 10/04/20.

In the 177thOCC meeting, Powergrid informed that they are planning to carry out the work with in-house expertise and the restoration of bay is expected by April'21.

Power Grid may update.

Deliberation in the meeting

Powergrid informed that the restoration work would be completed by May' 21 and added that 5-6 days of shutdown for 400 kV Kishanganj-Patna D/C lines would be required for completion of the work.

It was informed that shutdown of 400 kV Kishanganj-Patna lines have already been approved for the month of May-21 for LILO work of Saharsa and for shifting of line on pile foundation at Kankai river.

OCC advised Powergrid to optimize their plan for shutdown of 400 kV Kishanganj-Patna D/C lines and complete the work before high hydro period.

ERLDC stated that the shutdowns would be allowed based on the hydro situation.

4. 400KV New Purnea-Gokarna & 400KV New Purnea-FSTPP.

In the 175th OCC meeting, Powergrid informed that the line has already been restored.

Regarding PLCC work of 400 kV New Purnea-Farakka S/C, they informed that LOA has already been placed for new data card to be replaced at 400 kV Farakka end. The PLCC channel will be restored by Feb'21.

In the 176thOCC meeting, Powergrid informed that the permanent restoration of 400 kV New-Purnea-Gokarna& 400 kV New Purnea-FSTPP is going to be completed by March-2021 and the PLCC issue would be resolved during the permanent restoration of the line.

In 177th OCC Meeting, Powergrid informed that two out of two pile foundations had been completed and tower erection is under progress along with one open cast foundation.

They further informed that they want to avail the shutdown of both the lines from 23rdMarch 2021 for the bypass arrangement from Farakka to Gokarna as discussed in 177th OCC Maintenance programme meeting.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the work could not be completed due to non-availability of shutdown by SLDC, West Bengal.

SLDC West Bengal informed that the shutdown would be allowed after getting some hydro support i.e. end of May'21.

ERLDC stated that based on the discussion on the 178th OCC shutdown meeting, a study has been carried out and it was found that the proposed shutdown may be allowed in early May-21 before onset of the high hydro period.

OCC opined that after starting of the hydro season it would be difficult to carry out the restoration work at site and also allowing shutdown 400 kV Purnea-Farakka & Purnea-Gokrna line in high hydro is not desirable from grid operation point of view.

OCC advised SLDC West Bengal to facilitate the initial shutdown for two days for bypassing arrangement work in mid of May'21.

5. 315MVA ICT-1 at Jeyore

315MVA ICT-1at Jeypore taken under outage from 25.03.2021 for commissioning of the 315MVA ICT-3 in parallel with the existing ICT-1. The shutdown was approved upto 31.03.2021 as per requisition received from Powergrid Odisha. However, the 315MVA ICT-1 at Jeypore is still under outage.

Powergrid may explain.

Deliberation in the meeting

Powergrid informed that the ICT-1 at Jeypore had been restored on 16th April'21.

ITEM NO. B.6: Prolonged outage of Line reactor of 400 kV Motihari-Gorakhpur D/C -- ERLDC

400 kV Gorakhpur-Motihari D/C line reactor at Motihari (DMTCL) end is kept out since 2017 due to issue of failure of NGR breaker. It has been observed that these circuits have 139 MVAR of Line charging with 80 MVAR L/R at Gorakhpur and 50 MVAR L/R at Motihari end. The overall compensation on the circuit is around 93 % making it susceptible to LC resonance. In a report submitted by the DMTCL, it has been confirmed regarding LC resonance during line tripping. Following is suggested for taking the line reactor at Motihari in service.

1. Line Reactor tripping on single-phase fault to be adopted on the switchable reactor at Gorakhpur (PG).
2. Line reactor at Motihari (DMTCL) should be made switchable or in case not the above may be applied.
3. During any Maintenance, first, the line reactor at Gorakhpur is to be tripped and thereafter the line has to be opened to perform the rest of the activity.

Member may discuss.

Deliberation in the meeting

ERLDC informed that Line reactor at Motihari was out since last 3-4 years due to NGR issues. The above reactor is required to be put in service for adequate compensation of line.

They proposed that in order to bring the LR at Motihari end in service, the following proposal may be considered:

I. *Tripping of switchable line reactor at Gorakhpur end during single phase fault in the line.*

II. *Converting the non-switchable Line reactor at Motihari to switchable reactor*

Members deliberated that proposal of tripping the LR at Gorakhpur end may be considered as the proposal of having switchable reactor at Motihari involves capital investment.

DMTCL representative was not available in the meeting.

OCC decided that after getting the status of Line reactor at Motihari end, the issue would be taken up with NRPC/Powergrid NR for implementation of the necessary scheme at Gorakhpur end.

ITEM NO. B.7: Outage of 400 kV main bays of 315MVA ICT 3 & 4 at Subhasgram S/s--ERLDC

315MVA ICT 3 & 4 at 400 kV Subhasgram S/s was taken shutdown to complete the bay related work for upcoming 400kV-Subhasgram-New_Jeerat-DC lines which are in the same dia with ICT 3 & 4 respectively. Shutdown was availed on 12th & 13th February 2021 for the ICT 3 & 4respectively.

During application of shutdown, reason was cited that "*Bay upgradation Work under ERSS-XVIII - Dropper opening from 412-89B Isolator required for dismantling of Old and Erection of New Upgraded Isolator & C*T".

However, it was not specified that the outage of main bay of ICT 3 & 4 is required. The same was intimated to ERLDC control room during the returning of the shutdown and both the ICTs were charged only through the tie bay & other main bay of the Dia.

The above-mentioned bays were under outage since 12th & 13th February 2021. This is serious network depletion for such an import substation which fed the capital city of West Bengal during summer season.

Powergrid may explain.

Deliberation in the meeting

ERLDC informed that 315 MVA ICT 3 & 4 at Subhasgram S/s was taken for shutdown for bay upgradation work however during returning of the shutdown both the ICTs were charged only through tie bays and main bays were kept out of service.

They further informed that neither the requirement of outage of main bay was mentioned in the

shutdown application nor the outage of the main bays after returning of the shutdown was intimated to ERLDC and stated that it is a violation of grid code.

WBSETCL informed that it is a clear case of violation of standard procedure for taking continuous shutdown of any elements and stated that in case of any contingency there would be serious consequence during this period of ongoing assembly election.

OCC took serious note of the above negligence and opined that this type of action is detrimental for reliability and security of the grid and advised Powergrid to take necessary action so as not to repeat similar kind of event in future.

Powergrid informed that the issue has been taken by them seriously and already necessary directives have been communicated to concerned dept/personnel for strict compliance.

Powergrid informed that the main bay would be brought into service after getting the necessary bus & ICT shutdown at Subhasgram.

OCC advised all the utilities that while availing and returning the shutdown for any elements they should avail or return the complete elements i.e. with all its associated equipment and in case of any issues in any part of the equipment they shall intimate ERLDC with written communication.

ITEM NO. B.8: Replacement of existing 50 MVAR LR of 400 kV Maithon-Gaya-I with new 50 MVAR LR (Natural Ester Oil) at Maithon S/s.

Presently, 400 KV Maithon-Gaya-I Line is having switchable Line Reactor (50 MVAR) installed at Maithon end. Generally, all the oil filled equipment's (Transformer/Reactors) at EHV switchyards are filled with conventional mineral oil. However, considering latest technological advancements in the field of cooling medium and further increasing materials which are more eco-friendly in nature, first 400 KV class Reactor with natural ester oil is developed as per POWERGRID design with 50 MVAR capacity.

Few salient features of Easter oil over mineral oil are given in tabular forms for understanding.

Criteria	Mineral oil characteristic	Ester Oil characteristic
Key properties	Produced from increasingly scarce and non-renewable special petroleum crude	Produced from domestically grown, renewable sources, such as soybeans.
Environmental Properties	Contains compounds that do not readily biodegrade. May contain traces of a confirmed carcinogen.	Highly biodegradable; non-toxic, does not contain petroleum, silicone, or halogens.
Fire Risks	Catches fire more easily, leading to higher probability of transformer fires. Typical Flash point 140 °C	Higher fire point reduces the frequency and impact of transformer fires; virtually eliminates sustained fires. Typical Flash point 320 °C
Stability	Higher thermal stability can be achieved through addition of inhibitors	Esters have higher temperature stability than mineral oil, meaning esters can be exposed to a higher

		temperature for longer periods with less degradation than would be expected when using mineral oil
Transformer Performance	Does not slow down the standard insulation aging rate; requires special and expensive processing to dry out the paper insulation	Proven to slow down the aging rate of the insulation system, resulting in an increase in the expected life of a transformer by decades: also promotes automatic dry-out of paper insulation

For subject replacement, existing 50 MVAR LR will be dismantled and kept at spare foundation as spare Reactor, while, the new asset will be commissioned as 50 MVAR switchable LR of GAYA-I.

For above activity following S/D's will be required (Dates are tentative, S/D will be taken only after receipt of Reactor at Maithon):-

SL NO	NAME OF ELEMENT	FROM DATE	TO DATE	FROM TIME	TO TIME	REMARKS
01.	50 MVAR L/R OF GAYA-I.	08.05.21	15.06.21	10:00 Hrs	16:00 Hrs	On continuous basis.
01.	400 KV Maithon-Gaya-I.	10.05.21	10.05.21	09:00 Hrs	17:00 Hrs	For bushing dismantling.
03.	400 KV Maithon-Gaya-I.	28.05.21	28.05.21	09:00 Hrs	17:00 Hrs	For erection of bushing.
04.	400 KV Maithon-Gaya-I.	14.06.21	14.06.21	09:00 Hrs	17:00 Hrs	For testing purpose.

This is first of its kind for such equipment to be charged in India and performance of the same shall be updated also for future references such that system improvement steps along with eco-friendly measure can maximize the benefit for the users.

Member may discuss.

Deliberation in the meeting

Powergrid representative explained the features and characteristics of natural ester oil vis-a-vis mineral oil and stated that the commissioning of 400 kV 50 MVAR switchable LR with ester oil is first of its kind in India and had been undertaken as a R& D project by their O&M wing.

On a query from OCC, they clarified that the entire cost for this new LR would be met from their internal fund and there would not be any cost implication on the beneficiaries.

ERLDC opined that as the commissioning of LR with ester oil is first of its kind in India, it can be considered as a pilot project and accordingly the same should get the approval of CEA/CTU.

OCC appreciated the initiatives of Powergrid for adopting the latest technological advancements in cooling field using eco-friendly ester oil.

After detailed deliberation, OCC agreed for replacement of the switchable 50 MVAR LR of 400 kV Maithon-Gaya-I line at Maithon end and the existing 50 MVAR LR would be kept as spare Reactor. OCC *referred the proposal to ERPCTP (standing committee on transmission planning of ER) for approval.*

ITEM NO. B.9: Assessment of O&M activities for Repetitive Tripping of lines

In recent months, frequent tripping on various lines on account of RoW issues has been observed. This directly impacts the Eastern regional grid reliability and security.

The below Tables provides a list of such lines where such issues have been observed from July 2020 to March 2021.

It is important to find the real cause of these events and the need for taking preventive action and remedial measures to avoid such tripping. Due care must be taken by Line owners to ensure such events are reduced.

Name of Transmission Line	No of tripping	Remarks	Owner
400 kV PPPSP-Bidhannagar-2	12	All single-phase fault, and 5 times at a distance of 140 km approx. from PPSP end	WBSETCL
400 kV Meeramundali-Bolangir	10	All single-phase fault, 5 times B-earth	PGCIL
400 kV-Meramundali-Lapanga 2	10	All single-phase fault, and 7 times at a distance of 170 km approx. from Meramundali end	OPTCL
400 kV Meramundali-Lapanga 1	8	All single-phase fault	OPTCL
400 kV-Kharagpur-Kolaghat-1	8	All at a distance of 30-33 km from Kolaghat	WBSETCL

Name of Transmission Line	No of tripping	Remarks	Owner
220 kV Chandil-STPS(WBPDCL)	23	No A/R at STPS and mostly faults at 90 km from Chandil end.	WBSETCL/ JUSNL
220 kV Khagaria-New Purnea-2	18	Many times, A/R successful only from Purnea end, but no A/R from Khagaria which could have avoided tipping	BSPTCL
220 kV Joda-Ramchandrapur	14	Generally high resistive fault, with delayed clearance and no A/R .	OPTCL/ JUSNL
220 kV Begusarai-New Purnea-1	11	7-time fault at a distance of 70 km from Purnea.	BSPTCL
220 kV Tenughat-Bihar Sharif	11	Fault mostly in JUSNL portion	JUSNL/BSPTCL
220 kV Farakka-Lalmatia	11	Fault at a distance of 85 km from fstpp .	NTPC
220 kV Budhipadar-Korba-2	10	Multiple tripping either on fault or due to bus bar mal operation at Buddhipadar	OPTCL/ CSPTCL

Name of Transmission Line	No of tripping	Remarks	Owner
132 kV Chuzachen-Rangpo-1	38	mostly B phase fault at a distance of 3 km from Rangpo.	Sikkim Power Dept
132 kV Sultanganj-Deoghar-1	38	Most faults at distance of 90-100 km from Sultanganj.	BSPTCL/ JUSNL
132 kV Banka (PG)-Sultanganj-2	26	All faults are R phase Fault in ckt-2 at a distance of 17-20 km from banka, and ckt-1 tripping on O/C	BSPTCL
132 kV Banka (PG)-Sultanganj-1	22	All faults are R phase Fault in ckt-2 at a distance of 17-20 km from banka, and ckt-1 tripping on O/C	BSPTCL
132 kV Rihand-Garwah-1	21	Multiple tripping, No Root cause shared	JUSNL/ UPPCL
132 kV Kahalgaon-Sabour-1	18	Vegetation related tripping	BSPTCL
132 kV Raxaul-Parwanipur-1	17	Multiple tripping,	BSPTCL/ Nepal
132 kV Rihand-Sonenagar-1	16	No Root cause shared	BSPTCL/ UPPpCL
132 kV Rangit-Sagbari-1	15	Vegetation related tripping	Sikkim Power Dept
132 kV Baripada(PG)-Bhogarai-1	14	Multiple tripping, No Root cause shared	
132 kV Sonnagar-Japla-1	13	Multiple tripping, No Root cause shared	BSPTCL /JUSNL
132 kV Khstpp-Lalmatia-1	12	Vegetation related tripping	BSPTCL/ JUSNL
132 kV Purnea (PG)-Barsoi-1	11	Multiple tripping, No Root cause shared	BSPTCL

Member may discuss.

Deliberation in the meeting

Concerned representatives updated as follows:

Name of Transmission Line	Owner	Remarks
400 kV-Meramundali-Lapanga 2	OPTCL	A number of RoW issues have been resolved. At some locations, RoW issue is still continuing which is being addressed. Frequent patrolling is being carried out. OPTCL informed that no. of trippings have been reduced compared to last year.
400 kV Meramundali-Lapanga 1		
220 kV Budhipadar-Korba-2		Patrolling is being carried out to address the RoW issue.
400 kV PPPSP-Bidhannagar-2	WBSETCL	Trippings are due to issue in disc insulator. Insulators are being replaced at concerned

		location.
400 kV-Kharagpur-Kolaghat-1		There were 2 issues. 1. Deposition of contaminants over the line in the industrial zone. The affected insulators have been replaced. 2. Row issue at particular location. The issue has been intimated to the concerned zone for patrolling of the line and resolving the issue.
220 kV Chandil-STPS(WBPDCL)	WBSETCL/JUSNL	WBSETCL informed that patrolling was carried out but nothing was found. PCC advised there may be clearance issue at power line crossing in the line advised for through checking and detailed analysis.
400 kV Meeramundali-Bolangir	Powergrid	Tripping caused by bird drops on insulator. Insulators are being replaced with polymer insulator.
220 kV Khagaria-New Purnea-2	BSPTCL	A/R issue has been resolved.
220 kV Begusarai-New Purnea-1		Row issue due to a bamboo garden and mango orchard under the line. Tree cutting is being carried out with support from local administration.
132 kV Banka (PG)-Sultanganj-2		Trippings was due to undercrossing of a 33 kV feeder. The 33 kV feeder have been dismantled inDec'20. Thereafter no trippings have been observed in the line.
132 kV Banka (PG)-Sultanganj-1		
132 kV Raxaul-Parwanipur-1		Fault location lies in Nepal jurisdiction.
132 kV Rihand-Sonenagar-1		Fault was not found in BSPTCL portion.
132 kV Purnea (PG)-Barsoi-1		Line charged with 11 no. of ERS tower. Trippings mainly occur during stormy weather. Permanent restoration would take tentatively one year.
220 kV Tenughat-Bihar Sharif	BSPTCL/JUSNL	Patrolling was carried out and RoW issue have been resolved in BSPTCL portion. PCC advised JUSNL for patrolling and resolving Row issues in their portion.

220 kV Joda-Ramchandrapur	JUSNL	Issue has been resolved. No trippings are observed after Jan'21.
132 kV Sonnagar-Japla-1		Patrolling was done however nothing was found in JUSNL portion. However, the concerned division has been advised for frequent patrolling of the line.
132 kV Rihand-Sonenagar-1		
132 kV Rihand-Garwah-1		

DVC informed that there was multiple tripping in 132 kV Patratu(DVC)- PTPS(JUSNL) circuit-I in recent months from PTPS end due to VT fuse failure.

JUSNL informed that the issue would be intimated to PVUNL for necessary action.

OCC advised all concerned utilities to take necessary steps for clearing the RoW and other issues in order to avoid frequent trippings in the lines.

ITEM NO. B.10: Agenda item by BSPTCL

1. Bihar DISCOMs i.e. NBPDCL and SBPDCL are purchasing power as mandated by Electricity Act 2003.
2. Accordingly, PPAs are signed with ISGS and intra-state generating stations as well. Also, power is purchased from IEX/PXI.

Power is being exported to Jharkhand from Bihar periphery through following tie-lines:

Import/Export Energy details of Inter-State Transmission Lines between Bihar and Jharkhand for FY 2020-21					
Transmission Line Details	**Meter sl No.**	**GSS**	**Voltage Level (kV)**	**Import Energy (kWh)**	**Export Energy(kWh)**
132 KV Sultanganj-Deoghar	Q0200965	Sultanganj_ 132/33kV	132	9576	168364607
132 KV Kahalgaon-Lalmatia	Q0201711	Kahalgaon_ 132/33kV	132	437	211343282
132 KV Sonenagar-Garhwa	Q0303049	Sonenagar_ 132/33kV	132	2225.7	150758807.2
Total				12238.7	530466696.2

Further, 400/220/132 KV level transformer loss as well transmission losses for power being exported to Jharkhand are being borne by DISCOMs.

Hence, following actions/ measures are being proposed:

1. De-registration of above tie-lines from the list of ISTS.

2. Jharkhand may be requested to purchase power from Bihar either as a consumer or through open access.

BSPTCL may elaborate. Members may discuss.

Deliberation in the meeting

Bihar representative explained the following:

- *Energy to the tune of 530 MU was exported to Jharkhand through 3 nos of 132 kV tie lines as mentioned above.*

- *Presently the metering was done at HV side of the ICT for accounting of the state drawal. As a result, the transformer losses are being borne by the Bihar Discoms whereas a considerable share of the power is being exported to Jharkhand.*

ERLDC informed that the metering was done as per CEA metering regulation.

OCC opined that the metering and commercial settlement are being done as per the prevalent CEA/CERC regulations and stated that in an interconnected grid, power can be exported or imported through tie lines depending on the grid parameters.

OCC observed that there may be issues in understanding the present commercial mechanism by Bihar and advised Bihar to relook the issue and in case of any clarification in energy accounting they may approach ERLDC/ERPC secretariat.

ITEM NO. B.11: Shutdown proposal of generating units for the month of May' 2021.

Generator unit shutdown schedule for May' 2021 is given in the table.

Members may update.

Deliberation in the meeting

The updated generating unit shutdown schedule is given below:

Approved Maintenance Schedule of Thermal Generating Units of ER for the month of May'21 as on 20.04.2021

System	Station	Unit	Capacity (MW)	Period (as per LGBR 2020-21)		No. of Days	Reason	Revised Period(As agreed in OCC Meeting)		Remarks
				From	To			From	To	
DVC	Koderma TPS	1	500	15.05.21	19.06.21	35	COH, FGD,			Deferred

NTPC informed that overhauling of Unit-5 of Barh Stage-II was scheduled from 01.02.21 for 80 days however, the same got delayed. They informed that the materials have now received at site and the overhauling is planned from 14.06.21 to 01.09.21.

After detailed deliberation, OCC decided that the shutdown of Unit-5 of Barh-II would be allowed subject to consent of Bihar and CoD of second unit of NPGCL and decided that the proposed shutdown may be placed in next OCC meeting.

SLDC Odisha informed that shutdown of Unit#1 of IB TPS has been rescheduled from 02.05.2021 for 24 days.

ITEM NO. B.12: Status of implementation of AGC as a pilot project in States

In 42nd TCC, DVC intimated that AGC shall be implemented in unit 7 and 8 of Mejia as per the given schedule by 31st July 2020.

WBPDCL informed that they have already collected offer from Siemens for implementation of AGC and they are awaiting the concurrence from SLDC.

SLDC, WB informed that they are not in a position to implement AGC unless a clear direction is given by WBERC. Further, implementation of intra state DSM is a prerequisite for implementation of AGC in the states.

It was decided to request CERC to include this as an issue in the Agenda for discussion in the meeting of Forum of Regulators.

Summary of status of implementation:

State	Station/Unit	Action plan
DVC	Mejia unit#7 &8	NIT has been floated. Order placement :30th March2020 Commissioning of AGC:31st July2020
West Bengal	Unit-5 of Bakreswar TPP	SLDC, WB to establish the required hardware for generating AGC signal at SLDC.
Odisha	Unit#3 of OPGC	Joint meeting between SLDC, Odisha and OPGC was held wherein, it was decided to visit Barh, NTPC and NLDC to get acquainted with the AGC Implementation and formulate a plan.

In 169th OCC Meeting, SLDC DVC informed that due to COVID-19 pandemic, participation in the tender was very less therefore they are floating a new tender for implementation of AGC. AGC would be implemented by Feb 2021.

Odisha informed that they could not visit Barh NTPC and NLDC due to ongoing COVID 19 pandemic situation.

OCC advised SLDC Odisha and OPGC to interact with Barh NTPC & ERLDC to get the technical specifications & the procedure for implementation of AGC.

Members may update.

Deliberation in the meeting

DVC updated that previous NIT had been cancelled and fresh indent to be placed in April'21.

SLDC West Bengal informed that at present there is no relevant regulation by WBERC for implementation of AGC in state generators. They would proceed for AGC implementation only after getting direction from WBERC.

OPGC informed that purchase order for AGC implementation is to be placed to M/s Siemens within one month.

ITEM NO. B.13: Reliability of Power Supply to Gangtok

132 kV Gangtok S/s has a Single Main transfer bus scheme. However this single bus scheme at such an important substation which is feeding state capital is resulting in various Operation, Maintenance and Reliability issues like:

- An outage of Single bus results in a complete outage of Gangtok substation
- The shutdown of the Main bus of Gangtok for maintenance purposes is denied by Sikkim on many occasions as it results in interruption of power supply to the capital, as a fact shutdown of Gangtok bus was not taken in last 4 years.

Thus for increasing reliability and operational flexibility following needs to be explored:

- Creation of one more bus at 132 kV Gangtok
- Creation of bus sectionalizer at 132 kV level in case the second bus is not possible
- Creation of any new substation nearby where some load of Gangtok can be shifted
- Maintaining healthiness of 66 kV Melli-URHP D/c line so that power to critical load can be supplied from Melli source in case of outage of Gangtok

Member may discuss.

Deliberation in the meeting

Sikkim representative was not available in the meeting.

It was decided that a separate meeting would be convened among Sikkim, Powergrid, ERLDC & ERPC secretariat to discuss the issue.

ITEM NO. B.14: Preparedness for meeting summer demand in 2021--ERLDC

This year, the mercury has started rising sharply from February end, which is a bit earlier than previous year and indicative of scorching summer that lies ahead. As per IMD forecast, higher Maximum temperature than usual is expected in Odisha, Jharkhand and Bihar in Eastern

Region. With India's reasonably well fight back against COVID-19 and largest vaccination drive, this summer is likely to be extremely challenging for system operators to ensure reliable power supply, particularly to the remote corners of the region.

Therefore, very robust planning and preparedness is absolutely essential for meeting the system demand in a reliable manner. In view of this, dissemination of the following information and formulating action plans are extremely important:

Information:

1. Realistic forecast of peak and off-peak load to be met by each state for the months of April-21 to June-21.
2. Proper projection of availability of state internal generation
3. Anticipated network congestion in STU systems
4. Areas likely to experience low voltage in each state
5. Identification of nodes (at 132kV level) by each state, where very high amount of Air conditioning load is anticipated.

Action plan:

6. Ensuring maximum VAR support from all state generators as per their capability curve.
7. Ensuring timely completion of all over hauling maintenance activity of all generators and transmission elements and maintaining maximum possible resource adequacy.
8. Strengthening of network by restoring elements under long outage before April-21, where ever it is possible.
9. Timely Switching off/on of Bus reactors as per real time voltage as well as under RLDC instruction.
10. Monitoring the compliance of proper reactive power support by RE resources, as per CEA connectivity standard.
11. With higher maximum temperature higher sag of overhead transmission lines is expected. So regular tree cutting activity and preventing encroachment of vegetation in the corridor is extremely important. SLDCs to inform all transmission licensees under their respective jurisdiction, accordingly.

In addition to the above, SLDCs too may share their comprehensive summer preparedness plan.

In 177th OCC Meeting, all SLDCs were advised to submit the required information to ERLDC by March' 2022.

Members may update.

Deliberation in the meeting

ERLDC informed that they have received some of the data from SLDCs and further some additional information/data have been sought from all SLDCs. After receiving the same, the study would be carried out and the report would be finalized by April'21.

OCC advised all SLDCs to furnish the requisite data to ERLDC at the earliest so that the report can be finalized by end of April'21.

ITEM NO. B.15: Review of implementation of PSDF approved projects of Eastern Region.

In 10th NPC meeting held on 09.04.2021, RPCs were advised take up the matter for improvement of the fund disbursement and expeditious implementation of the sanctioned projects under PSDF.

In view of the above, status review of the projects being executed under PSDF funding in Eastern Region would be carried out on regular basis for expediting the projects. All the constituents are requested to furnish/update the status of their respective project in every month.

Concerned utilities may update the present status of the project as given in the Annexure.

Members may update.

Deliberation in the meeting

Concerned utilities updated the status as attached at Annexure-B15.

Member Secretary, ERPC pointed that the utilization of PSDF fund for the sanctioned projects needs to be ensured in timely manner as Ministry of Power may divert the fund to other projects for better utilization of funds. Therefore, he requested all the concerned utilities to complete the PSDF projects as per time-line for proper utilization of fund. If there is any revision of cost, the same may be brought in to notice of PSDF Nodal agency for necessary action. New schemes may also be proposed before PSDF Nodal agency for allocation of fund.

ITEM NO. B.16: Review of System Protection Scheme (SPS) designed for NEW-SR grid integration - NLDC.

The existing SPS on NEW-SR corridor (for 765 kV Solapur-Raichur lines) were implemented during the synchronization of SR grid with NEW grid in the year 2014. Over the years, SR grid has been integrated with NEW grid through many inter-regional lines apart from 765 kV Solapur-Raichur. The newly commissioned HVDC Raigarh (WR)-Puglur (SR) Bipole is very soon expected to be in operation which will further strengthen the network connecting Southern Region.

In 176th OCC Meeting, ERLDC informed that the draft SOP has been prepared which is enclosed at Annexure B16.

OCC advised SLDC Odisha and others to go through the SOP and submit their comments/observation, if any, at the earliest.

177th OCC advised SLDC Odisha to submit their comments to ERLDC within a week.

SLDC, Odisha may update.

Deliberation in the meeting

SLDC Odisha informed that their observation would be submitted soon.

ITEM NO. B.17: High variation in demand pattern of States--ERLDC

It is observed that the demand of Odisha is varying to a large extend on day to day basis. On further analysis, it is found those on days when there is an outage of units at Sterlite CPP, Odisha reports higher demand (which is calculated by adding tie line interchange with internal generation). While on days when generation at Sterlite is available Odisha's demands remain on the lower side.

Such large variation in system demand for outage of units at any Captive power plant is not observed at any other location.

In view of the above all SLDCs are requested to furnish details of their respective Captive Power Plant generation & interchange details.

Members may discuss.

Deliberation in the meeting

SLDC Odisha informed that the high variation in demand for Odisha is due to Vedanta units.

OCC advised SLDC Odisha to include the Sterlite demand separately along with their own demand while submitting their total demand to ERPC/ERLDC.

ITEM NO. B.18: Short Term and Long-Term Transmission Plan for Intra state Constraints in Odisha

Based on January 2020-2021 Base case and real-time data, the following constraints have been observed in the State network which does not satisfy N-1 reliability criteria. The details are given below:

Transmission Lines having N-1 Reliability Issue	Present Actual Loading Observed (MW)	Loading observed in Simulation (MW)	Sensitivity of N-1 on Parallel Element	Action Plan by STU and SLDC	Remarks and Details from SLDC/STU
220 kV Rourkela-Tarkera D/C (Loading is low in Real time with High Injection by Vedanta)	24	120	80 %	OPTCL	
220 kV Vedanta-Buddhipadar D/C (High Loading in Injection by Vedanta)	155-160	0	100%	OPTCL	
220 kV Buddhipadar-Lapanga D/C (High loading in injection by Vedanta)	120-140	16	67 %	OPTCL	

In the 174th OCC meeting, ERLDC informed that the N-1 criteria are not being satisfied when the injection from Vedanta is above 130 or 140 MW.

OCC advised Odisha to submit the action plan for removing the constraints in above lines to ERPC and ERLDC.

In the 177th OCC Meeting, OPTCL was advised to submit the action plan by 23rd March,2021.

OPTCL may update.

Deliberation in the meeting

SLDC Odisha informed that following action plan have been envisaged in view of high loading of the aforesaid lines.

- *220 kV Vedanta-Budhipadar D/C line would be opened at Vedanta end and the line would remain idle charged from Budhipadar end.*
- *At Vedanta, their 220 kV level would be connected to 400 kV Level and the Vedanta generation would be evacuated through 400 kV System.*
- *As there would be no injection by Vedanta through 220 kV Vedanta-Buddhipadar D/C, the loading of 220 kV Buddhipadar-Lapanga D/C & 220 kV Rourkela-Tarkera D/C would also get reduced.*

They informed that the scheme is in proposal stage and after detailed study, the final report would be submitted.

ERLDC informed that higher loading in 220 kV Rourkela-Tarkera D/C would not get resolved by the proposed scheme and advised to carry out a detailed study.

After detailed deliberation, OCC decided to convene a separate meeting among planning wing of OPTCL, SLDC Odisha, Vedanta, ERLDC & ERPC secretariat in second week of May'21 to discuss the issue.

ITEM NO. B.19: Reliability Issue at 220/132 kV Buddhipadar Complex-- ERLDC

Recently on 08-04-2021, there was black out at 220 kV Budhhipadar substation and one of the primary reasons was that the N-1 reliability of the 220 kV Budhhipadar-Lapanga D/C, 220 kV Buddhipadar-Tarkera D/C and 220 kV Buddhipadar -Vedanta D/C were not being satisfied.

Power swing has also been observed causing tripping of lines connecting Buddhipadar to Korba East/ Raigarh substations. It has been observed that there has been significant injection continuously from 220 kV Vedanta into the Odisha system which also is among one prominent reason behind the above N-1 issue being observed.

Orissa SLDC and OPTCL may kindly provide:

1. What is the plan for strengthening the 220 kV system and avoiding this N-1 reliability constraint at Lines from Buddhipadar and Rourkela?

2. Why there is a continuous injection in order of 250-300 MW from Vedanta resulting in higher loading of 220 kV Buddhipadar-Tarkera and Buddipadar-Lapanga D/C.

OPTCL may explain.

Deliberation in the meeting

It was decided that the issue would be discussed in the separate meeting to be convened in second week of May'21 with OPTCL.

ITEM NO. B.20: Monthly Data on Category-wise consumption of electricity in states.

The data of category-wise consumption of electricity in the states/UTs, are being frequently referred to by CEA and Ministry of Power. In this regard, as advised by Member(GO &D), GM division of CEA has advised the following:

- The monthly data of category-wise consumption of electricity in the states/UTs may be discussed in the OCC meeting on regular basis with comparative analysis of the same for corresponding monthly data of previous years.
- In case the utilities have reservations on submitting unaudited data then the same may be mentioned in the data itself that these data are unaudited. In that case the data so received would be used only for the purpose of trend analysis and would not be used in any report of CEA.

In 177th OCC Meeting, OCC advised all SLDCs to take up the issue with their DISCOM(s) and submit the required data on monthly basis to ERPC secretariat.

Members may update.

Deliberation in the meeting

It was informed that CESC had submitted the data.

Odisha, Jharkhand & Bihar informed that they would submit the date within a week.

DVC & West Bengal informed that they had written a letter in this regard to their Discoms.

ITEM NO. B.21: Disabling 400 kV Rangpo-Kishanganj and Teesta-III -Kishanganj SPS at Rangpo Substation.--ERLDC

400 kV Rangpo-Bingauri D/C was under outage for HTLS reconductoring work. These lines are now restored after the completion of the HTLS Reconductoring activity. The circuit now has an ampacity of 1574 Amp, 157^0 C. The end equipment for these circuits is rated at 3000 Amp so the line loading capability now is 2078 MW per circuit. This has strengthened the corridor for Sikkim Hydro evacuation.

The present installed capacity of Sikkim Hydro Generation complex is around 2222 MW.

(Teesta 3: 1200 MW, Teesta 3: 510 MW MW, Dikchu: 96 MW, Tashiding: 97 MW, Jorethang: 96 MW, Chujachen: 110 MW, Rongnichu: 113 MW (Upcoming)) with Gangtok Load in range of 50-70 MW.

With the availability of all four lines, ERLDC issued the instruction to disable this SPS scheme on 30th March 2021. After this, all utilities have confirmed that the SPS signal is made disabled at their respective end.

Member may note.

Deliberation in the meeting

Members noted.

ITEM NO. B.22: Additional Agenda

A. Frequent tripping/Restarting of HVDC (BNC-Agra) Pole due to stringent ROW situation at Altagram/ North Bengal--Powergrid.

In recent past HVDC (BNC-Agra) Pole restarting/tripping observed and details of line tripping's are as per the following: -

Sl No.	Date & Time of Line Fault on Pole-2	Distance to Fault from Agra	Distance to Fault From BNC	Remarks
1	24.03.2021 12:17	1259.1	515.5	Pole-2 tripped
2	25.03.2021 12:12	1264.7	510.0	-Do-
3	25.03.2021 13:29	1258.6	516.1	-Do-
4	11.04.2021 10:38	1260.0	514.7	-Do-
5	11.04.2021 12:51	1258.1	516.0	Pole-2 successfully restarted
6	11.04.2021 13:02	1257.7	516.9	-Do-
7	16.04.2021 10:38	1260.0	814.7	Pole-2 tripped

Based on the above relay indications Line Patrolling Team carry out necessary checking and found that flash-over has occurred in between span 1293-1294 due to underlying eucalyptus trees. However, even after identifying all the problems, subject trees could not be accessed due to stiff resistance (severe ROW) from local villagers.

The villager's forcefully stopped POWERGRID Line Maintenance staffs to enter in the corridor in span-1293-1294. Considering the seriousness of the issue, letter have been issued to DM, Jalpaiguri with copy to SP, Jalpaiguri seeking administrative support in order to remove the trees under the line corridor.

Photos highlighting the condition of the site are as below:-

Our officials along with T&P's were continuously trying to enter in the corridor of span 1293-1294 for tree cutting but due to severe resistance of local villagers they could not enter in the corridor till date. Our officials also approached to District Magistrate Jalpaiguri, SDO Jalpaiguri, BDO Dhupguri, OC Dhupguri (local Thana) for administrative help but due to "West Bengal Assembly Election" they suggested that serious Law & Order crisis may evolve if any action is taken at present.

In this regard it is to mention that since commissioning of the line, line patrolling/maintenance work from Tower No.-1292 to Tower No.-1295 under Altagram village, P.S-Dhupguri, Dist.-Jalpaiguri were severely obstructed/resisted by villagers. Copy of previous mail communications & letter enclosed for reference. The severe ROW problem in that village have been time to time reported to all concerned district administration officials but in spite of several meetings, the problem could not be resolved till date.

At present due to ongoing election activity, it is really beyond control of POWERGRID for clearing the ROW until strong administrative support from district authority. As already assured by district authority, the matter will be taken up after completion of election activity (By mid-way of May-21).

In view of certain constraints in administrative part followings are proposed: -

1. As per design, each POLE between BNC to Agra is capable of carrying 1500 MW through Pole-I & II individually. Presently it has been observed that most of the time power flow direction are from NR to NER with maximum 500 MW load flow. Details of synopsis of power flow are given below: -

SI NO.	DATE SPAN	POLE IN OPERATION	POWER FLOW QUANTUM	REMARKS
1	01.03.21 TO 24.03.21	POLE-I	500 MW	FROM NR TO NER.
2	24.03.21 TO 26.03.21	POLE-II	500 MW	FROM NR TO NER.
3	27.03.21 TO 09.04.21	POLE-I	500 MW	FROM NR TO NER.
4	11.04.21 TO TILL DATE	POLE-II	500 MW	FROM NR TO NER.

Now, due to frequent restart/tripping of Pole-II, terminal equipment's of both side stations are coming under stress and if continue in same pattern may lead to major breakdown. However, as stated above, Pole-I is having same capacity and comparatively free from such constraints. As such, instead of POLE-II, till resolving of the ROW (Expected by midway of May-21), POLE-I may be operated. However, for all instances, POLE-II will be ready for catering any contingency need.

2. Tripping/RVM operation for the above period (24.03.2021 to till date), as already briefed are really beyond control of POWERGRID and even administration also not able to control the ROW for all instances as seen from the past communications. It is very much evident that even after POWERGRID has tried its best to resolve the ROW, due to certain uncontrollable facts the ROW not yet resolved fully and expected to be resolved after intervention of district authority only after conclusion of the election process. As such, all outages for the above period may be considered under Deemed Availability category.

Members may discuss.

Deliberation in the meeting

Powergrid representative explained the issue and informed that as per the present status the tree cutting in the line span of 1293-1294 could not be carried out due to RoW issue which leads to several flashover of Pole-2 of HVDC line. The same can be carried out only after getting administrative support from district authority after the completion of assembly election in West Bengal.

They added that Pole-I is having same capacity and comparatively free from such constraints and proposed for operation of pole-I instead of pole-II till the time the RoW issue gets resolved.

After detailed deliberation and analysis of the facts OCC felt that there is severe ROW issue in the span of 1293-1294 which is beyond the control of licensee and advised Powergrid to be in continuous touch with the District Authorities to resolve the issue.

Further, OCC opined that till the resolution of ROW issues, Pole-1 may be frequently used upto its optimum limits as the clearance of Pole-1 is better to avoid the unnecessary trippings of Pole-2 and requested ERLDC to take up the issue with NLDC for un-interrupted and reliable pole operation of HVDC BNC-Agra.

Further OCC felt that the operation of HVDC BNC-Agra is being looked/controlled by NRPC/ NLDC the operational and availability issues may be placed before NRPC/NLDC for final resolution.

PART C: ITEMS FORUPDATE

ITEM NO. C.1: ER Grid performance during February'2021.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month February-2021 were as follows:

Average Consumption (mu)	Maximum Consumption(mu)/ Date	Maximum Demand (MW)	Minimum Demand(MW)	Schedule Export	Actual Export
		Date/Time	Date/Time	(Mu)	(Mu)
450.7	500.7 24-03-2021	23467 MW, 31-03-2021 19:12 Hrs.	13596 MW, 13-03-2021 14:07 Hrs.	3753	3641

ERLDC may present performance of Eastern Regional Grid.

Deliberation in the meeting

The presentation on performance of Eastern Regional Grid is given in Annexure C1.

Members noted.

ITEM NO. C.2: Primary frequency response of ER generating units in March 2021

Frequency response characteristics (FRC) have been analyzed pan India for two events of sudden frequency change that occurred in the month of March 2021. The details of this event and the overall response of the Eastern region have been summarized in Table 1.

Table 1: Summary of the events and Frequency Response Characteristic (FRC) of the Eastern Region for the events

Event	Frequency Change	Power Number (ΔMW/Δf)	ER FRC
Event 1: On 10th March 2021 at 19:35:34:200 hrs, around 1560 MW generation loss occurred in Sikkim hydro complex in ER.	50.01 Hz to 49.87 Hz. Later stabilized at 49.94 Hz	10764	30 %
Event 2: On 24th March 2021 at 12:16:19:360 hrs, around 2000 MW generation loss and 450 MW load loss occurred in Badla in NR.	50.022 Hz to 49.856 Hz. Later stabilized at 49.907 Hz	9554	16%

Summary of the analysis of these events are given below:

1. In spite of repeated reminders, generation end data (generation output in MW and frequency/speed measured at generator end) and FRCs are yet to be received from few regional

generating stations (ISGS and IPP) and SLDCs respectively. List of such regional generating stations/SLDCs are shown below (as per status on 15th April 2021)

Generating Station/ SLDC	Event 1	Event 2
NTPC Farakka	Data received	**Yet to be received**
NTPC Kahalgaon	Data received	**Yet to be received**
NTPC Talcher	Data received	**Yet to be received**
NTPC Darlipalli	**Yet to be received**	**Yet to be received**
MPL	Data received	**Yet to be received**
Bihar SLDC	**Yet to be received**	**Yet to be received**
Jharkhand SLDC	**Yet to be received**	**Yet to be received**
WB SLDC	**Yet to be received**	**Yet to be received**

2. Based on data received from regional generating stations & SLDCs and SCADA data archived at ERLDC, regional generating stations and state control areas performance have been analyzed and summarized in table 2.
3. Based on data received from state generating stations & SLDCs, the performance of state generating stations has been analyzed and summarized in table 3.

Table 2: performance of regional generating stations and state control areas for the events in March 2021*

Generating Station/ SLDC	Event 1	Event 2
NTPC Farakka	**Satisfactory response** for unit 6. Other unit's response was not satisfactory. All the units were running at or more than installed capacity.	**Non – Satisfactory**(as per ERLDC SCADA data)
NTPC Kahalgaon	**Non – Satisfactory** except unit 5	**Non – Satisfactory**(as per ERLDC SCADA data)
NTPC Talcher	**Non – Satisfactory** (Only unit 6 has response of around 10 MW; ideal response 25 MW). Unit 1, 4 and 6 were running at more than installed capacity.	**Non – Satisfactory**(as per ERLDC SCADA data)
NTPC Barh	**Non - Satisfactory**	**Non - Satisfactory**
NTPC Darlipalli	**Non – Satisfactory**(as per ERLDC SCADA data)	**Non – Satisfactory**(as per ERLDC SCADA data)
BRBCL	**Non – Satisfactory;** 5 MW response has been observed (Ideal response 12.5 MW)	**Non – Satisfactory**
NPGC Nabinagar	**Non - Satisfactory**	**Non - Satisfactory**
GMR	**Non – Satisfactory**for unit 2; **Satisfactory** for unit 1. Both the units were running at more than installed capacity.	**Non – Satisfactory**for unit 2 (Around 10 MW response observed; ideal response 17.5 MW); **Satisfactory** for unit 1.
JITPL	**Non - Satisfactory**	**Non - Satisfactory**
MPL	**Non – Satisfactory; Unit 1 was running at VWO mode. Response of unit 2 was around 8 MW (Ideal response around 25 MW).**	**Non – Satisfactory**(as per ERLDC SCADA data)
Adhunik	**Non – Satisfactory; Unit was being run at more than Installed capacity.**	**Non - Satisfactory**

Generating Station/ SLDC	Event 1	Event 2
Teesta V HEP	Unit tripped during the event	Unit was not in service
Teesta III HEP	Unit tripped during the event	Unit was not in service
Dikchu HEP	Unit tripped during the event	Unit was not in service
Bihar SLDC	**Satisfactory**(as per ERLDC SCADA data)	**Non – Satisfactory**(as per ERLDC SCADA data)
Jharkhand SLDC	**Non – Satisfactory**(as per ERLDC SCADA data)	**Non – Satisfactory**(as per ERLDC SCADA data)
DVC SLDC	**Non – Satisfactory**(28% of ideal response)	**Non – Satisfactory**(34% of ideal response)
GRIDCO SLDC	**Non – Satisfactory**(14% of ideal response)	**Non – Satisfactory**(11% of ideal response)
WB SLDC	**Non – Satisfactory**(as per ERLDC SCADA data)	**Non – Satisfactory**(as per ERLDC SCADA data)

Following points may be shared by respective SLDC/generating stations:

1. Reason for non-sharing of generator end data/FRC by NTPC Farakka, NTPC Kahalgaon, NTPC Talcher, NTPC Darlipalli, MPL, Bihar SLDC, Jharkhand SLDC and WB SLDC.

2. During PFR testing, response was satisfactory for unit 2, 3, 4, 5 & 6 at Farakka STPS and unit 5, 6 and 7 at Kahalgaon STPS. But during real time events, response is non-satisfactory. Reason may be shared by NTPC Farakka and Kahalgaon.

Members may update.

Deliberation in the meeting

OCC advised all the concerned generators and SLDCs to share the requisite generation end data during the incidence and Frequency response characteristics (FRC) to ERLDC at the earliest.

OCC further advised concerned generators to share the reason for non-satisfactory primary frequency response by their units during the above incidents and action plan on improvement of the performance.

Regarding VWO mode operation at unit#1 of MPL, MPL representative explained that the condenser vacuum of the unit is very poor due to aging and to achieve full load operation the unit has to run at valve wide open mode.

ITEM NO. C.3: Primary Frequency Response Testing of Generating Units—ERLDC.

In the 173rd OCC Meeting, NTPC informed that Farakka has already planned to carry out the teston1st of Feb 2021.Kahalgaon is planning to carry out test after 15th Jan 2021 and BRBCL is planning to carry out the test after Dec 2020.

MPL informed that they have placed the order with Siemens and the dates for testing would be finalized in coordination with ERLDC and Siemens.

OCC further, advised all the other Generators, especially the Hydro-Electric Plants to plan the Primary Frequency Response Testing in the winter season.

A presentation on Primary Frequency Response Testing was given by M/s Siemens on 11.12.2020.

NTPC Kahalgaon informed that they had already placed the PO with M/s Solvina for Primary Frequency Response Testing and it is expected that the testing will be done in the second fortnight of Jan-2021 as confirmed by the agency.

In 176th OCC Meeting, ERLDC informed that as per preliminary report received for units where PFR have been completed, the primary frequency response observed during testing were satisfactory.

In 177th OCC Meeting, ERLDC informed that information regarding testing schedule of JITPL & GMR has not been received.

OCC advised GMR & JITPL to share their schedule for PFR testing to ERLDC.

The status of the testing schedule for the generators is enclosed at Annexure C.3.

Respective Generators may update.

Deliberation in the meeting

GMR updated that the PFR testing for their units have been scheduled in the month of May'21 and the date of scheduling would be intimated shortly.

ITEM NO. C.4: Testing of Primary Frequency Response of state generating units by third party agency

In the 171stOCC Meeting, OCC advised all the SLDC's to prepare the action plan for their state generators and submit the details to ERPC and ERLDC at the earliest.

DVC videe-mail dated 6th Oct 2020 informed that the Primary Frequency Response Testing may be carried out for the following generating units:

Sl. No.	Name of the Units	Capacity (MW)
1	BTPS-A	500
2	CTPS Unit #7&8	2X250
3	DSTPS Unit#1&2	2X500
4	KTPS Unit # 1&2	2X500
5	MTPS Unit # 3 to 8	2 X 210 MW +2 X 250 MW + 2X 500 MW
6	RTPS Unit # 1 & 2	2 X 600 MW

DVC informed that both the agencies M/s Siemens & M/s Solvina have agreed to carry out the testing at pre-agreed rates, terms & conditions.

In the 176th OCC meeting,

OPGC informed that they would finalize the order with Siemens by end of Feb'2021.

SLDC, DVC informed that indent has been placed for PFR testing of their generating units.

On request from WBPDCL, OCC advised ERLDC to share all relevant documents related to selection of the vendor for PFR Testing along with contact details of the vendors to West Bengal SLDC for further sharing by them with their state generators.

In 177th OCC Meeting, SLDC, Bihar informed that PFR testing for Barauni TPS would be completed by April '2021.

OHPC informed that PFR testing is being planned to be carried out for units of Indravati & Rengali. OCC advised OHPC to submit a schedule for testing to ERLDC/ERPC secretariat.

OCC advised SLDC DVC, SLDC West Bengal & SLDC Jharkhand to coordinate with their generators and submit the schedule of PFR testing.

Members may update.

Deliberation in the meeting

WBPDCL informed that they have received some of the relevant documents from SLDC West Bengal. Further they informed that they are collecting some other information to finalize the scope and purchase order for PFR testing.

DVC informed that the indent has been placed for PFR testing of generating units and the order would be placed tentatively in October'21.

ITEM NO. C.5: PSS tuning of Generators in Eastern Region

The PSS tuning activity is mandatory in line with IEGC and CEA regulations. The Procedure of PSS tuning for helping utilities in getting this activity carried out has been approved in 171st OCC Meeting and shared with all concerned utilities.

In 176th OCC Meeting, NTPC informed that PSS tuning schedule for BRBCL & Barh has been submitted. OCC advised NTPC to submit a complete schedule for PSS Tuning of all of their units to ERPC secretariat/ERLDC within two weeks.

OHPC informed that they have already taken up with OEM for PSS tuning of their units. OCC advised to submit a status report in this regard.

In 177th OCC Meeting, DVC informed that PSS tuning of Unit#1 of Bokaro-A TPS had been completed.

WBSEDCL stated that the status of PSS tuning in PPSP units would be submitted shortly.

The updated schedule for PSS tuning of the units is attached at AnnexureC5.

Members may update.

Deliberation in the meeting

ERLDC informed that PSS tuning for APNRL units were carried out however it was not successful due to some technical issue at APNRL end.

It was informed that PSS tuning of Unit#4 of Mejia TPS of DVC had been completed on 07.04.2021.

ITEM NO. C.6: Updated Operating Procedure of Eastern Region, 2020.

The Operating Procedure of every region must be updated and revised annually by the concerned RLDC, in compliance to section 5.1(f) of the IEGC. The procedure is finalized and uploaded at ERLDC website by

20- 07-2020, taking into consideration comments received till 18-07-20. To discuss the revised operating procedure of Eastern Region, one special meeting was held on27-11-2020.

Based on the deliberation in the meeting, operating procedure of Eastern Region has been revised and the final procedure was shared with all regional utilities vide mail dated 04-01-2021. The final procedure is also uploaded on the ERLDC website.

In 176th OCC Meeting, after detailed deliberation on the comments submitted by Powergrid, the followings were concluded:

- Regarding First time charging procedure, OCC reiterated that the procedure as documented by NLDC shall be followed.
- Regarding clause 3.7, It was decided that ERLDC would share the relevant details/band details of STATCOM while issuing instruction to utility for changing of setpoint of STATCOM.
- It was found that remaining observations of Powergrid have already been addressed in the revised operating procedure circulated vide e-mail dated 04.01.2021.
- OCC advised Powergrid to go through the revised operating procedure and submit their comments, if any.

SLDC West Bengal requested for two weeks time to review the operating procedure in view of the changes in SLDC management due to recent transfer/retirement.

OCC agreed and advised all utilities to go through the revised document and submit their final observation/comments within two weeks.

In 177th OCC Meeting, ERLDC informed that they have received comments from SLDC, West Bengal recently.

OCC opined that ERLDC should discuss those points with SLDC, West Bengal and the final outcome to be placed before next OCC

Members may update.

Deliberation in the meeting

It was decided that separate meeting would be convened among West Bengal, ERLDC & ERPC secretariat to discuss the comments of West Bengal and finalize the procedure.

ITEM NO. C.7: Status of UFRs healthiness installed in Eastern Region

UFRs healthiness status has been received from Jharkhand and CESC.

Members may update.

Deliberation in the meeting

OCC advised all the constituents to send the UFR healthiness data on monthly basis to ERPC.

ITEM NO. C.8: Status of Islanding Schemes healthiness installed in Eastern Region

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

Details received from the constituents are as follows:

Sl. No	Name of Islanding Scheme	Confirmation from Generator utility	Confirmation from Transmission Utility end
1	CESC as a whole Islanding	Healthy	Healthy
2	BkTPS Islanding Scheme	Healthy	
3	Tata Power Islanding Scheme, Haldia		
4	Chandrapura TPS Islanding Scheme, DVC	Not in service	
5	Farakka Islanding Scheme, NTPC		
6	Bandel Islanding Scheme, WBPDCL		

Members may update.

Deliberation in the meeting

OCC advised concerned constituents to update the status of Islanding scheme healthiness regularly on monthly basis by 7th of every month.

Further, it was informed that a SOP is being formulated by CEA to ensure the healthiness of Islanding Schemes and the inputs from ERPC regarding the SOP has to be submitted to NPC,

CEA. After detailed deliberation in line with the practice followed by ER utilities, the following draft format to certify the healthiness of Islanding Schemes was proposed and the same may be forwarded to NPC, CEA for finalization of SOP.

A.

Format for Generating Station End		
Name of Islanding Scheme	*Healthiness of Islanding Relay*	*Healthiness of Communication channel*

B.

Format for Transmission Utility end				
Name of Islanding Scheme	*Name of Feeders considered for tripping to from Island*	*For communication based tripping logic of feeders*	*For UFR based tripping logic of feeders*	
		Healthiness of Communication channel	*Healthiness of PT Fuse and status of DC supply to UFR relay**	*Healthiness of Relay#*

ITEM NO. C.9: Transfer capability determination by the states--ERLDC.

Latest status of State ATC/TTC declared by states for the month of May-2021

Sl No	State/Utility	TTC (MW)		RM(MW)		ATC Import (MW)		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	6075	--	122	--	5953	--	May-21
2	JUSNL	1578	--	52	--	1525	--	July-21
3	DVC	1663	2925	67	53	1596	2872	May-21
4	OPTCL	2167	1340	88	61	2079	1279	April-21
5	WBSETCL	5283	--	400	--	4883	--	April-21
6	Sikkim	315	--	2.44	--	315.56	--	Feb-21

Declaration of TTC/ATC on SLDC Website

Sl No	SLDC	Declared on Website	Website Link	Constraint Available on Website	Type of Website Link
1	BSPTCL	Yes	http://www.bsptcl.in/ViewATCTTCWeb.aspx?GL=12&PL=10	Yes	Static Link-Table
2	JUSNL	Yes	http://www.jusnl.in/pdf/download/ttc_atc_nov_2020.pdf	Yes	Static link – pdf file
3	DVC	Yes	https://application.dvc.gov.in/CLD/atcttcmenu.jsp#	Yes	Static Link-Word file
4	OPTCL	Yes	https://www.sldcorissa.org.in/TTC_ATC.aspx	Yes	Static Link-pdf file
5	WBSETCL	Yes	http://www.wbsldc.in/atc-ttc	No (Not updating)	Static Link-Table
6	Sikkim	Yes	https://power.sikkim.gov.in/atc-and-ttc	No (Not updating)	Static Link-Excel file

After collecting state ATC/TTC value from SLDCs, NLDC is publishing all value at a single location in their website, it is available under monthly ATC subsection of Market section.

As some of the state in Eastern Region are not declaring ATC/TTC on 3- Month ahead while few don't declare constraint, it becomes very difficult to publish the values uniformly for all the states in a timely manner.

Members may update.

Deliberation in the meeting

Members noted.

ITEM NO. C.10: Mock Black start exercises in Eastern Region

Mock black start date for financial year 2021-22 is as follows:

Sl. No	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U. Kolab	Last week of Oct 2021		Second Week of Feb 2022	
2	Balimela	Second week of Nov 2021		First Week of March 2022	

3	Rengali	Second week of Nov 2021		First 2eek of March 2022	
4	Burla	Second week of Nov 2021		First Week of March 2022	
5	U. Indravati	Last week of Oct 2021		Second Week of Feb 2022	
6	Maithon	Third Week of Nov 2021		First Week of March 2022	
7	TLDP-III	Second week of Nov 2021		Second Week of Feb 2022	
8	TLDP-IV	Third Week of Nov 2021		First Week of March 2022	
9	Subarnarekha	Second week of Nov 2021		Second Week of Feb 2022	
10	Teesta-V	Third Week of Nov 2020		Third Week of March 2022	
11	Chuzachen	Second week of Nov 2021		First Week of March 2022	
12	Teesta-III	Third Week of Nov 2021		First Week of March 2022	
13	Jorethang	Third Week of Nov 2021		First Week of March 2022	
14	Tasheding	Second week of Nov 2021		First Week of March 2022	
15	Dikchu	Second week of Nov 2021		Second Week of Feb 2022	

Members may update.

Deliberation in the meeting

Members noted.

PART D: OPERATIONAL PLANNING

ITEM NO. D.1: Anticipated power supply position during May 2021.

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of May 2021 were prepared by ERPC Secretariat on the basis of LGBR for 2021-22 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is enclosed at Annexure.

Members may update.

Deliberation in the meeting

The updated anticipated power supply position for the month of May, 2021 is given in ***Annexure D1.***

ITEM NO. D.2: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 11.04.2021).

S.No	Station	State	Agency	Unit No.	Capacity in Mw	Reason(s)	Outage Date
1	KOLAGHAT	WEST BENGAL	WBPDCL	1	210	ESP R & M	07-Jun-2018
2	KOLAGHAT	WEST BENGAL	WBPDCL	2	210	ESP & Ash Handling R & M	26-Dec-2019
3	BOKARO'B'	DVC	DVC	3	210	INITAILLY OUT DUE TO ASH PONDAGE PROBLEM UPTO 31/12/20. LATER OUT DUE TO POLLUTION CLERANCE ISSUE	21-Oct-2020
4	WARIA TPS	DVC	DVC	4	210	TAKEN OUT OF BAR DUE TO NON RECEIPT OF ENVIRONMENTAL CLEARANCE	31-Dec-2020
5	TSTPP	ODISHA	NTPC	2	500	ANNUAL OVERHAULING	01-Mar-2021
6	BARAUNI TPS	BIHAR	BSPHCL	9	250	PROBLEM IN GT	05-Mar-2021
7	TTPS	ODISHA	NTPC	6	110	HAND TRIPPED DUE TO SMOKE IN GENERATOR; Permanently closed	07-Mar-2021
8	BARAUNI TPS	BIHAR	BSPHCL	7	110	MAINTENANCE WORK	17-Mar-2021
9	BARAUNI TPS	BIHAR	BSPHCL	6	110	ABNORMAL TSI PARAMETER	17-Mar-2021
10	MEJIA TPS	DVC	DVC	3	210	Generator inter-turn fault	19-Mar-2021
11	TTPS	ODISHA	NTPC	1	62.5	Hand tripped due to coal shortage; Permanently closed	22-Mar-2021
12	TTPS	ODISHA	NTPC	2	62.5	Hand tripped due to coal shortage; Permanently closure	23-Mar-2021

13	TTPS	ODISHA	NTPC	4	62.5	Hand tripped due to coal shortage; Permanently closed	23-Mar-2021
14	TTPS	ODISHA	NTPC	5	110	Hand tripped due to coal shortage; Permanently closed	23-Mar-2021
15	TTPS	ODISHA	NTPC	3	62.5	CLOSURE OF TTPS; Permanently closed	31-Mar-2021
16	FSTPP	WEST BENGAL	NTPC	4	500	Cooling Water Shortage	03-Apr-2021
17	MEJIA TPS	DVC	DVC	7	500	BTL	11-Apr-2021
18	OPGC	ODISHA	OPGC	4	660	BTL	11-Apr-2021

All Generating stations are requested to update expected restoration time and reason outage to ERLDC/ERPC on weekly basis in case of any change at their end.
Generators/ constituents are requested to update the expected date of revival of the units.

b) Major Generating stations Out on Reserve Shutdown due to low system demand: - nil

c) Hydro Unit Outage Report: -

S.No	Station	State	Agency	Unit No	Capacity	Reason(s)	Outage
1	BALIMELA HPS	ODISHA	OHPC	1	60	R & M WORK	05-Aug-2016
2	BALIMELA HPS	ODISHA	OHPC	2	60	R & M WORK	20-Nov-2017
3	BURLA HPS/HIRAKUDI	ODISHA	OHPC	5	37.5	R & M WORK	25-Oct-2016
4	BURLA HPS/HIRAKUDI	ODISHA	OHPC	6	37.5	R & M WORK	16-Oct-2015
5	BURLA HPS/HIRAKUDI	ODISHA	OHPC	7	37.5	ANNUAL MAINTENANCE	20-Jan-2020
6	BALIMELA HPS	ODISHA	OHPC	5	60	STATOR EARTH FAULT	13-Dec-2020
7	RENGALI HPS	ODISHA	OHPC	2	50	Heavy oil leakage in cylinder of first gate	20-Mar-2021
8	U.KOLAB	ODISHA	OHPC	2	80	TGB PAD VIBRATION HIGH	19-Mar-2021
9	U.KOLAB	ODISHA	OHPC	3	80	Turbine Guide Bearing Problem	07-Jan-2021
10	JORETHANG	SIKKIM	DANS	1	48	ANNUAL MAINTENANCE	26-Feb-2021
11	RENGALI HPS	ODISHA	OHPC	5	50	ANNUAL MAINTENANCE WORK	16-Dec-2020

It is seen that about 552..5 MW hydro capacities in Odisha is under forced outage / planned outage and therefore not available for providing the much needed peaking support during evening peak. SLDC / OHPC may please indicate restoration plan of the units.

d) Long outage report of transmission lines:

SL NO	Transmission Element / ICT	Agency	Outage DATE	Reasons for Outage
1	400 KV IBEUL JHARSUGUDA D/C	IBEUL	29-04-18	TOWER COLLAPSE AT LOC 44,45
2	220/132 KV 100 MVA ICT I AT LALMATIA	FSTPP/JUSNL	22-01-19	FAILURE OF HV SIDE BREAKER
3	220 KV PANDIABILI - SAMANGARA D/C	OPTCL	03-05-19	49 NOS OF TOWER COLLAPSED.AS REPORTED BY SLDC OPTCL, TOTAL 60 NOS OF TOWER IN BETWEEN 220KV PANDIABILI – SAMANGARA LINE IN WHICH 48 NOS TOWERS FULLY DAMAGED AND 12 NOS TOWERS PARTIALLY DAMAGED. WORK UNDER PROGRESS.PRESENTLY CHARGED FROM PANDIABILLI END (LOC 156) TO LOC 58
4	220kV Barauni-Hajipur Ckt-1	BSPTCL	28-09-19	TOWER COLLAPSE AT LOCATION 38 & 39. CKT-2 IS ON ERS SINCE 13.01.2020.
5	220/132 KV 100 MVA ICT 3 at Chandil	JUSNL	30-04-20	ICT BURST AND DAMAGED AFTER FIRE REPORTED
6	400KV-ALIPURDUAR (PG)-PUNATSANGCHUN-JIGMELLING-II	PGCIL/ Bhutan	21-03-21	OVERVOLTAGE AT BHUTAN END.
7	800KV HVDC ALIPURDUAR-AGRA-POLE-IV	PGCIL	10-04-21	BLOCKED after healthiness testing,for overvoltage mitigation
8	800KV HVDC ALIPURDUAR-AGRA-POLE-III	PGCIL	10-04-21	BLOCKED after healthiness testing,for overvoltage mitigation
9	220KV/132 KV 100 MVA ICT 4 AT RANGPO	PGCIL	08-04-21	---------- Hand Tripped after tripping of all 400/220 icts at rangpo on 8.4.21 after disturbance and therafter developed relay reset problem
10	400KV/220KV 315 MVA ICT 2 AT RANGPO	PGCIL	20-02-21	SD FOR SF6 GAS LEAKAGE RECTIFICATION WORK IN ICT-2 GIS MODULE UP TO 16/03/2021 16:00 HRS, FURTHER EXTENSION REQUESTED.
11	400KV/220KV 315 MVA ICT 2 AT Meeramandali	OPTCL	21-02-21	FIRE HAZARD ---------- VOLTAGE REGULATION
12	765KV-ANGUL-JHARSUGUDA-4	PGCIL	03-04-21	
13	220KV-CHUKHA-BIRPARA-2	PGCIL	06-04-21	VOLTAGE REGULATION
14	400KV-MAITHON-MAITHON RB-1	PGCIL	19-03-21	FOR RE-CONDUCTORING WORK UP TO 02/04/2021 EXTENDED UPTO 13.4.21
15	400KV/220KV 315 MVA ICT 1 AT JEYPORE	PGCIL	25-03-21	SD FOR 220KV CABLE TERMINATION AND JUMPER CONNECTION FROM EXISTING ICT-I TO ICT-3 TRANSFORMER BAY UPTO 31.3.21.S/D REQUESTED TO EXTEND UPTO

				12.04.21
16	400KV-BINAGURI-TALA-4	PGCIL/ Bhutan	09-04-21	VOLTAGE REGULATION AT BHUTAN END AND LATER ON S/D AVAILED BY BHUTAN AT 09:39HRS OF 09.04.2021.
17	400KV-BINAGURI-TALA-2	PGCIL/ Bhutan	09-04-21	VOLTAGE REGULATION
18	400KV/220KV 315 MVA ICT 4 AT JEERAT	WBSETCL	09-04-21	TRIPPED ON DIFFERENTIAL AND PRD PROTECTION PROTECTION OPTD

Transmission licensees/ Utilities are requested to update expected restoration date & work progress regarding restoration regularly to ERLDC/ERPC on monthly basis by 5th of each month so that status of restoration can be reviewed in OCC. Utilities are also requested to update outage of any elements within their substation premises like isolator/breaker to ERLDC/ERPC regularly.
(Reported as per Clause 5.2(e) of IEGC)

Deliberation in the meeting

Members noted.

ITEM NO. D.3: Commissioning of new units and transmission elements in Eastern Grid in the month of February-2021.

The details of new units/transmission elements commissioned in the month of March -2021 based on the inputs received from beneficiaries:

SL No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	400KV MAIN BAY OF SAGARDIGHI-2 AT JEERAT	PMJTL	01-03-2021	13:54	
2	400KV MAIN BAY OF NEW JEERAT-2 AT JEERAT	PMJTL	01-03-2021	13:40	
3	400KV MAIN BAY OF NEW JEERAT-1 AT JEERAT	PMJTL	01-03-2021	13:38	
4	400KV MAIN BAY OF SUBHASGRAM-1 AT JEERAT	PMJTL	01-03-2021	13:41	
5	125MVAR 400KV B/R-2 AT CHANDAUTI	PMTL	01-03-2021	17:50	
6	125MVAR 400KV B/R-1 AT CHANDAUTI	PMTL	01-03-2021	16:21	
7	220KV/132KV 200 MVA ICT 3 AT CHANDAUTI	PMTL	05-03-2021	18:16	Charged from 220 kV side
8	220KV/132KV 200 MVA ICT 1 AT CHANDAUTI	PMTL	05-03-2021	16:15	First timed charged from 220 kv side
9	400KV MAIN BAY OF GAYA-1 AT CHANDAUTI	PMTL	08-03-2021	13:28	
10	220KV MAIN BAY OF SONENAGAR-2 AT CHANDAUTI	PMTL	08-03-2021	13:18	
11	220KV MAIN BAY OF SONENAGAR-1 AT CHANDAUTI	PMTL	08-03-2021	13:19	
12	220KV MAIN BAY OF GAYA -2 AT CHANDAUTI	PMTL	08-03-2021	13:26	
13	132KV MAIN BAY OF	PMTL	09-03-	16:09	

	CHANDAUTI(BSPTCL)-2 AT CHANDAUTI		2021		
14	132KV MAIN BAY OF CHANDAUTI-1(BSPTCL) AT CHANDAUTI	PMTL	09-03-2021	16:10	
15	132KV MAIN BAY OF RAFIGANJ-1 AT CHANDAUTI	PMTL	09-03-2021	16:08	
16	132KV MAIN BAY OF SONENAGAR-1 AT CHANDAUTI	PMTL	09-03-2021	16:07	
17	132KV MAIN BAY OF 220/132KV 200 MVA ICT 3 AT CHANDAUTI	PMTL	09-03-2021	16:05	
18	132KV MAIN BAY OF 220KV/132KV 200 MVA ICT 2 AT CHANDAUTI	PMTL	09-03-2021	16:03	
19	132KV MAIN BAY OF 220KV/132KV 200 MVA ICT 1 AT CHANDAUTI	PMTL	09-03-2021	15:54	
20	220KV MAIN BAY OF SONENAGAR-1 AT CHANDAUTI	PMTL	16-03-2021	18:38	
21	400 KV GORAKHPUR MOTIHARI 2	DMTCL	17-03-2021	16:33	
22	220KV-CHANDAUTI - SONENAGAR-2	PMTL	19-03-2021	11:02	
23	400 kv PATNA KISHANGANJ D/C LINE	PGCIL	23-03-2021	14:54	Restoration on permanent tower in Koshi river portion.
24	23.5/765 KV, 3x315 MVA, GT-2, DARLIPALLI (NTPC)	DSTPP	23-03-2021	04:37	
25	400 KV RANGPO-BINAGURI D/C	PGCIL	24-03-2021	16:27 for CKT 1 16:55 for CKT 2	Reconductoring from Twin Moose to HTLS.
26	400KV-ALIPURDUAR (PG)-JIGMELLING-1	PGCIL	26-03-2021	17:42	Anti theft charged upto 55 km
27	400KV-ALIPURDUAR (PG)-JIGMELLING-2	PGCIL	26-03-2021	17:57	
28	220KV - GAYA CHANDAUTI 1	PMTL	27-03-2021	17:21	Idle charged from Gaya end only
29	220KV MAIN BAY OF RONGNICHU -2 AT RANGPO	MBPCL	28-03-2021	17:35	
30	220KV MAIN BAY OF RONGNICHU -1 AT RANGPO	MBPCL	28-03-2021	17:03	
31	220KV-RONGNICHU-RANGPO-2	MBPCL	28-03-2021	17:35	
32	220KV-RONGNICHU-RANGPO-1	MBPCL	28-03-2021	17:03	
33	400 KV BARH MOTIHARI 1	DMTCL	28-03-2021	16:48	
34	400/22 KV 3*260 MVA GT 3 AT NPGC	NPGC	28-03-2021	10:15	
35	220KV - GAYA CHANDAUTI 2	PMTL	29-03-2021	11:14	Idle charged from Gaya end only
36	400KV/220KV 500 MVA ICT 3 AT MALDA	PGCIL	29-03-2021	14:46	First time Loaded with 178 MW
37	400 KV GORAKHPUR MOTIHARI 1	DMTCL	29-03-2021	13:55	
38	220KV BUS SECTIONALIZER BAY	MBPC	30-03-	15:45	

	OF (220KV BUS 1A AND 220KV BUS 1B) AT RONGNICHU	L	2021		
39	400KV TIE BAY OF (125MVAR B/R-1 AND DARBHANGA (DMTCL)-1) AT SITAMARHI	PMTL	31-03-2021	18:03	
40	400KV MAIN BAY OF SITAMARHI -1 AT DARBHANGA (DMTCL)	PMTL	31-03-2021	14:02	
41	400KV MAIN BAY OF DARBHANGA (DMTCL)-1 AT SITAMARHI	PMTL	31-03-2021	14:02	
42	400KV MAIN BAY OF B/R 1 AT SITAMARHI	PMTL	31-03-2021	18:03	
43	400KV-SITAMARHI-DARBHANGA (DMTCL)-1	PMTL	31-03-2021	14:02	
44	125MVAR 400KV B/R-2 AT SITAMARHI	PMTL	31-03-2021	19:45	

Members may update.

Deliberation in the meeting

Members noted.

ITEM NO. D.4: UFR operation during the month of February 2021.

Frequency profile for the month as follows

Month	Max	Min	% Less IEGC Band	% Within IEGC Band	% More IEGC Band
	(Date/Time)	(Date/Time)			
March, 2021	50.32 Hz, 21-03-2021 18:02 Hrs.	49.66 Hz , 17-03-2021 22:09 Hrs	7.14	72.81	20.05

Hence, no report of operation of UFR has been received from any of the constituents.

Members may note.

Deliberation in the meeting

Members noted.

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