



**MINUTES
OF
175th OCC MEETING**

**Date: 03.02.2021
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700033**

Eastern Regional Power Committee

Member Secretary, ERPC chaired the 175th OCC Meeting. The meeting was conducted through Microsoft Teams online platform. List of participants is enclosed at **Annexure A**.

PART A

Item No. A.1: Confirmation of Minutes of 174th OCC meeting of ERPC held on 21.12.2020.

The minutes of 174th OCC meeting were uploaded in ERPC website and circulated vide letter dated 07.01.2021 to all the constituents.

Members may confirm the minutes of 174th OCC meeting.

Deliberation in the meeting

Members confirmed the minutes of 174th OCC meeting.

PART B: ITEMS FOR DISCUSSION

Item No. B.1 : Review of System Protection Scheme (SPS) of HVDC Talcher-Kolar Bipole-NLDC.

NLDC vide letter dated 21st October 2020 informed that the SPS associated with HVDC Talcher-Kolar Bipole was implemented long back in the year 2003 as per system requirements at that time. The addition of high- capacity AC lines in the corridor parallel to this HVDC link have strengthened the ER-SR &WR-SR corridors for exchange of power to/from southern region (SR). The newly commissioned HVDC Raigarh-Pugalur Pole-I has also been commissioned recently. Presently, in cases of HVDC Talcher-Kolar Pole blocking, SPS as per design operates with load disconnection in SR and generation backing down/outage in ER.

In view of strengthening of transmission system as stated above, the scheme has been reviewed in consultation with RLDC's. NLDC requested for ER constituent's view for finalization of the SPS scheme.

In the 173rd OCC Meeting, NLDC explained the revised SPS scheme in details and pointed the out followings:

- GMR and JITPL thermal power plants are radially connected to 765/400 kV Angul pooling station and 765/400 kV Angul station is strongly connected to western region and southern region through 765 kV lines. The tripping of HVDC Talcher-Kolar does not cause any constraint in evacuation of GMR and JITPL. Therefore, the SPS for 600 MW generation backing down at these stations would not be required and the same may be disabled.
- During the study, it was observed that 400 kV Talcher-Meramundali D/C Lines are getting heavily loaded (beyond 874 MW) after the tripping of HVDC Talcher-Kolar in some cases. Therefore, the loading of 400 kV Talcher-Meramundali lines may also be included in the SPS logic (SPS 1000 and SPS 450) installed at Talcher STPS, NTPC. The proposed revised SPS logic in brief is as follows:

The flow on 400 kV Talcher-Meramundali-1 **(or)** 400 kV Talcher-Meramundali- 2 is more than 874 MW (and) SPS 1000 triggered **(or)** SPS 450 triggered

NTPC Talcher informed that, as per the existing SPS logic 800 MW generation backing down is happening by tripping one of the running unit and unloading two units by 150 MW each, when both the poles are getting blocked. NTPC requested to consider generation backing down of the generating units instead of tripping of the units.

NLDC explained that immediate response might not be achieved by generation backing down which would lead to cascade tripping of the transmission lines. Therefore, they have considered unit tripping instead of generation backing down for successful operation of SPS. NLDC further informed that since 400 kV Talcher- Meramundali Line loading has also been included in the SPS logic, chances of meeting the SPS criterion and its operation would be exceedingly rare.

SLDC Odisha informed that 400/220 kV ICTs at Meramundali S/s may get overloaded before increase in the loading of 400 kV Talcher-Meramundali Line. SLDC, Odisha requested to verify the ICT loading at Meramundali.

NLDC informed that according to the studies done for various scenarios, it was observed that the 400kV Talcher-Meramundali lines are getting overloaded first before the ICT loading. NLDC agreed to share the study details to SLDC, Odisha.

ERLDC informed that there is an issue with PLC logic which is supposed to generate the ground return mode of pole 2 at HVDC, Talcher. As a result, the SPS is not operating as per the logic.

After detailed deliberation OCC decided the following:

- The SPS logic for 600 MW generation backing down at JITPL and GMR shall be disabled at JITPL and GMR.
- All the concerned constituents shall go through SPS logic given at Annexure-B1 of 173rd OCC Minutes document and submit their comments, if any to ERPC and ERLDC within 15 days. The issues shall be placed for discussion in next OCC meeting.
- Powergrid and NTPC Talcher shall rectify the issue of PLC logic related to generation of ground return mode of pole 2 during the HVDC shutdown.

It was informed vide mail dated 15th Dec 2020 that the SPS logic at GMR and JITPL has been by-passed.

NLDC mentioned that the simulation study for proposed SPS have been carried out for high demand and low generation scenarios for Odisha and loading of 400/220 kV Meramundali ICTs have been found to be within limits. In addition to this, worst case scenario for Odisha internal network has also been studied and results for both the scenarios are given in **Annexure**.

In the 174th OCC meeting, OCC decided the followings:

- *OCC in principle agreed for implementation of the revised SPS for HVDC Talcher-Kolar Bipole.*
- *NTPC shall implement the revised SPS logic at Talcher STPS.*
- *The logic for the revised SPS scheme shall be prepared by ERLDC in consultation with NLDC and shall be shared with the concerned utilities for implementation of SPS.*
- *Powergrid in coordination with NTPC shall rectify the issue of PLC logic related to generation of ground return mode of pole 2 for proper integration of SPS logic.*

Powergrid vide mail dated 14.01.2021, informed that SPS system at HVDC, Talcher and Angul are healthy.

Members may update.

Deliberation in the meeting

ERLDC explained the logic for revised SPS scheme through a presentation. The same is enclosed at Annexure B1. The logic in brief is given below:

- 400 kV Talcher-Meramundali Line current logic would have three I_{max} settings out of which one will be active depending on the season.
- The I_{max} current settings have been calculated based on thermal ratings of the lines.
- This Talcher-Meramundali Current logic would be ANDed with existing Talcher-Kolar HVDC SPS logic.

Further it was advised that while finalizing the logic the provision for bypassing the of 400 kV Talcher-Meramundali line loading logic should be kept to mitigate the planned shutdown of these lines.

NTPC informed that they are ready to implement the revised SPS logic at their end. They added that the ground return mode determination by the SPS logic would be same as it was in the existing logic.

ERLDC informed that for determination of ground return mode condition using the existing logic involves a delay of around 75 sec. They viewed that the time delay can be reduced if a specific signal indicating ground return mode is made available at TSTPS, NTPC end.

Powergrid informed that exclusive signal for ground return mode is not available at their end.

After detailed deliberation OCC agreed to implement the revised SPS logic with ground return mode condition determined as per the existing logic in place.

NTPC informed that the SPS logic will be implemented at their end within one month once the scheme gets finalized.

OCC advised NTPC that after implementation of SPS, the testing of SPS need to be planned and completed.

Regarding issue of non-availability of pole-2 ground recovery signal at NTPC end, OCC advised Powergrid to resolve the issue by Feb'21.

Item No. B.2 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 view of above NLDC vide their letter dated 9th December 2020 proposed to review the existing SPS.

In the 174th OCC meeting, NLDC informed that during the simulation study, it was being observed that the angular separation between Angul and Srikakulam was reaching 25 degrees. This may create problem during the charging of 765 KV Angul-Srikakulam D/C line. Therefore, NLDC explained that a SOP may be prepared to control the angular separation between Angul and

Srikakulam to restore 765 KV Angul-Srikakulam D/C line smoothly.

After detailed deliberation, OCC advised NLDC & ERLDC to prepare a SOP and communicate to respective RPCs. The SOP would be discussed and finalized in the OCC meeting after detailed deliberation.

ERLDC & NLDC may update.

Deliberation in the meeting

ERLDC informed that a draft SOP has been prepared and submitted to NLDC for finalization of the same. They explained the various actions to be taken depending on the real time scenario to restore 765 kV Angul-Srikakulam D/c.

They further added that NLDC in co-ordination with RLDCs and SLDCs would take appropriate actions as required depending on the real time scenario.

OCC advised ERLDC to discuss and finalize the draft SOP in consultation with NLDC and submit the same for further discussion.

Item No. B.3 Data for preparation of National Electricity Plan (NEP) 2022-27 and 2027-32.

Sub-committee 8 on "Transmission Planning" was constituted by the Committee for preparation of National Electricity Plan (NEP) 2022-27. The first meeting of the sub-Committee was held on 27.10.2020 wherein CEA requested STUs/Discoms to furnish the relevant data pertaining to their state within 30 days as per the format.

All states are requested to submit the relevant details to CEA with a copy to ERPC for preparation of the transmission planning. The relevant details as per the format may be send to the following mail addresses:

- cea-pspa1@gov.in
- mserpc-power@nic.in

CESC has submitted the relevant details for preparation of NEP for 2022-27 and 2027-32. WBSETCL has submitted the details for preparation of NEP for 2022-27.

In the 174th OCC meeting, it was advised to all the states to submit the relevant details to CEA with a copy to ERPC & ERLDC at the earliest.

WBSETCL has submitted the NEP data for 2027-2032.

Members may update.

Deliberation in the meeting

DVC informed that they have submitted the detail information for preparation of NEP for 2022-27 and 2027-32 to CEA

BSPTCL, OPTCL & JUSNL informed that the relevant information would be submitted within Jan'21.

OCC advised Sikkim also to submit the aforesaid details, if any, to CEA by Jan'21.

Item No. B.4 Outage of Important Transmission System.

1. 400 kV Barh-Motihari D/C and 400 kV Motihari -Gorakhpur D/C lines.

In the 173rd OCC Meeting, DMTCL informed that they had resumed the work and they are planning to bring one circuit of 400kV Gorakhpur-Motihari line on ERS by 10th December 2020. DMTCL added that they are putting out all efforts for permanent restoration of all the four circuits by 31st Mar 2021.

Regarding the issue of SCADA data of NTPC Barh, DMTCL informed that ABB engineer would visit the site on 26th Nov 2020 to resolve the issue.

In the 174th OCC meeting, DMTCL informed that one circuit of 400kV Gorakhpur-Motihari line was ready for charging and the line would be charged after getting clearance from CEA.

ERLDC informed that there was a restriction of power flow of 350 MW in 400kV Barh-Motihari line therefore, 400kV Gorakhpur-Motihari line could not be charged simultaneously to avoid overloading of the line during

normal operation. 400kV Gorakhpur-Motihari line would be kept on anti-theft charging from one end and the line would be restored from other end in case of tripping of 400kV Barh-Motihari line.

OCC opined that both the lines could be put in service on each bus by opening bus coupler at Motihari.

After detailed deliberation, OCC advised ERLDC to make suitable scheme for above subjected lines based on existing loading conditions at Motihari for reliable power supply to Bihar.

On query, DMTCL intimated that the permanent restoration of the lines would be completed by March 2021.

DMTCL vide e-mail dated 16th January, 2021 updated the progress of Barh-Motihari and Barh-Gorakhpur D/C lines which is given in **Annexure B4.1**.

DMTCL may update.

Deliberation in the meeting

DMTCL submitted that the work for pile foundations were completed at all locations, whereas at 02 nos. (at 26/0 & 26/3) locations the work for pile cap is under progress

DMTCL informed that the works are in progress at all fronts and both the lines would get restored by 2nd week of March '21.

Regarding non-availability of SCADA data of Motihari, DMTCL submitted that the same has not been rectified yet. They informed that they are pursuing the issue with the vendor i.e. M/S ABB for early restoration. They also informed that the SCADA data would get restored once the 400 kV lines from Motihari get restored to its present configuration.

It was informed that the OPGW work of 400 kV Barh-Motihari lines would be started after permanent restoration of the lines.

2. Reconductoring work of 400 kV Rangpo-Binaguri D/C lines.

In 167th OCC, Powergrid updated that reconductoring work of 38 km of both the circuits out of 110 km line had been completed and the line is in service.

Powergrid requested for shutdown of the line from 1st November 2020.

In the 172nd OCC Meeting, ERLDC requested Powergrid to complete the reconductoring work of one circuit at least before Monsoon for safe evacuation of hydro generation in Sikkim.

In the 173rd OCC meeting, Powergrid gave a presentation regarding progress of reconductoring work of 400 kV Rangpo-Binaguri D/C lines.

Powergrid was advised to prepare the shutdown list required for the line crossing and submit in advance to ERPC & ERLDC so that it could be discussed with concerned constituents.

ERLDC vide mail dated 2nd Dec 2020 informed that Powergrid ER-II had proposed to carry out the reconductoring work of 400KV D/C Rangpo - Binaguri TL in Sikkim portion from 07-12-20 to 12-12-20 (07- 16 Hrs) ODB basis.

DANS Energy vide mail dated 3rd Dec 2020 requested to re-schedule the shutdown of 220 kV D/C Jorethang – New Melli lines in last week of January or first Week of February from 11:00 Hrs. to 16:30 Hrs. as during this particular time period Generation from 2 X 48 MW Jorethang Loop HEP will be Zero / Nil.

In the 174th OCC meeting, Powergrid informed that in West Bengal near about 25 km work has been completed and in total 65 kms out of 110 kms have been completed.

OCC advised Powergrid to prepare the shutdown list required for the line crossing and submit in advance to ERPC & ERLDC so that it could be discussed with concerned constituents.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that around 80 kms reconductoring work has been completed in total out of 110 kms, and the remaining portions which are left mainly consists of major power line crossings.

They informed that the work will be completed within two months subject to availability of shutdown.

Powergrid was advised to submit the plan for the shutdowns schedule for balance power line crossings at the earliest so that it could be allowed in the lean hydro season to the extent possible and the reconductoring work of these crossings would be completed as per the schedule to be finalized during OCC Shut Down Meeting in February 2021.

3. 132kV Sagbari – Melli.

132 kV Melli-Sagabari-S/C was under outage since last 2 & half years due to breaker issue at Sagabari end. In absence of the said line, Melli is connected through 132 kV Siliguri – Melli and 132 kV Rangpo – Melli single ckts. However, during shutdown of 132 kV Rangit – Rangpo and 132 kV Rangit – Gangtok -2 due to damage in Multi circuit tower, the above two lines are reconfigured as 132 kV Rangit – Gangtok direct circuit and 132

kV Rangpo – Melli was kept open at Rangpo end on reliability issue. Thus, during above mentioned shutdown period Melli is fed from single source either from Siliguri or Rangpo depending upon the system condition. So, for reliable power supply to Melli restoration of 132 kV Sagbari - Melli is very

much required.

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

OCC opined that restoration of 132 kV Melli-Sagabari S/C line is very important to ensure reliable supply to Sikkim during contingencies.

OCC advised SLDC Sikkim to take up the issue with DISCOM for rectification of the circuit breaker at Sagabari end of 132 kV Melli-Sagabari S/C line.

Sikkim may update.

Deliberation in the meeting

SLDC, Sikkim informed that they have taken up the issue with their DISCOM and informed that the circuit breaker issue will be resolved within two weeks.

4. 400KV tie bay of (GMR AND JSPL II) at Meramundali S/s.

The tie bay was taken out of service for replacement of damaged R-Phase 408 DÍA 89TB tie isolator arm at Meramundali on 27/05/20. The element remains out of service.

In the 174th meeting, SLDC Odisha informed that they are planning to replace the tie isolator in the first week of Jan 2021.

GMR informed that bus 1 would be under outage during the replacement work and GMR generation of one unit connected to GRIDCO would not be evacuated during that period. GMR requested Odisha to plan the replacement work during February 2021 when this unit would be under shutdown for overhauling.

OCC advised Odisha to plan the isolator replacement work in coordination with GMR unit overhauling in February 2021.

OPTCL may update.

Deliberation in the meeting

OPTCL informed that isolator for 400 kV tie bay of GMR & JSPL-II at Meramundali has already been replaced and put into operation on 9th January, 2021.

5. Main bay of Dikchu ICT.

Main Bay 405 connecting Dikchu ICT to Main Bus-2 remains out of service from 19th Feb' 20.

In the 174th OCC meeting, Dikchu informed that the work orders have been placed with the OEM. The materials would be procured by the end of Jan 2021 and the work would be completed by the end of Feb 2021.

Dikchu may update.

Deliberation in the meeting

Dikchu representative was not present in the meeting.

6. 400 KV main bay of Patna-1 at Kishanganj.

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

In the 174th OCC meeting, Powergrid informed that they had received the material but because of unavailability of service engineers from China they are unable to start the work.

Powergrid may update.

Deliberation in the meeting

Powergrid informed that the work has not been started yet due to unavailability of service engineer from China.

OCC advised Powergrid to take up the issue with their corporate office, for early resolution.

7. 400KV NEW PURNEA-GOKARNA & 400KV NEW PURNEA-FSTPP.

400 kV New Purnea Gokarna S/C and 400 kV New Purnea Farakka S/C were restored at 23:05 hrs on 26-12- 2020 and 16:37 hrs on 27-12-2020 respectively.

It was reported that during restoration of 400 kV New Purnea Farakka S/C, PLCC channel between Farakka and Purnea could not be established due to problem in co-axial cable at Farakka end and the problem in signal generator card at Farakka end.

In view of importance of the line, 400 kV New Purnea Farakka S/C was charged with modified Zone – 2 timing at 200 ms at Farakka and New Purnea end with auto-reclose was enabled at both ends for zone – 2 tripping also.

Powergrid may update.

Deliberation in the 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.

Item No. B.5 Short Term and Long-Term Transmission Plan for Intra state Constraints in Orissa-- ERLDC

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 173rd OCC Meeting, OCC advised Odisha to study the loading and share their action plan to ERPC and ERLDC.

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.

Members may update.

Deliberation in the meeting

OCC advised SLDC Odisha to submit their comments to ERLDC/ERPC secretariat within a week.

Item No. B.6 Shutdown proposal of generating units for the month of February, 2021.

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

In the 174th OCC meeting, NTPC Farakka informed that they are planning to take the shutdown of unit-4 from 1st Mar 2021 for 30 days.

OCC advised NTPC Farakka to take the shutdown from 15th Feb 2021.

NTPC informed that unit 1 would be under shutdown during February 2021 and it would be extremely difficult to carry out the overhauling of two units at a time. Overhauling of unit-4 could be possible only after restoration of unit-1. Moreover, NTPC Farakka may not be able to generate its maximum capacity due to less availability of water during the month of March 2021 hence shutdown of unit 4 may be allowed from 1st March 2021.

WBSETCL requested to restrict the shutdown of the units till 15th Mar 2021 to maintain availability in view of State Elections in West Bengal.

OCC decided to defer the issue to next OCC meeting.

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 during 2020-21 as on 20.01.2021 | | | | | | | | | | |
|--|---------|------|---------------|------------------------------|--------------|-------------|--------|---|-----|---------|
| 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 | |
| | | | | TVNL | Tenughat TPS | | | 1 | 210 | |

| | | | | | | | | | | |
|---|-----------------------|---|-----|----------|----------|----|---------------------|----------|----------|---------------------------------|
| DVC | CTPS | 8 | 250 | 08.12.20 | 12.01.21 | 36 | COH | | | Not required |
| | MTPS | 8 | 500 | 08.01.21 | 07.02.21 | 36 | AOH | 18.01.21 | 21.02.21 | |
| ODISHA | Talcher TPS | 6 | 110 | 25.04.21 | 24.05.21 | 30 | AOH | | | Proposed after March'21 |
| | IB TPS | 1 | 210 | 10.11.20 | 30.11.20 | 21 | AOH | | | No plan as of now. |
| | IB TPS | 2 | 210 | 12.01.21 | 30.01.21 | 19 | AOH | 14.01.21 | 02.02.21 | |
| WBPDC | Kolaghat TPS | 3 | 210 | 02.01.21 | 15.02.21 | 14 | AOH/BOH | 15.01.21 | 24.01.21 | |
| | Kolaghat TPS | 4 | 210 | 01.02.21 | 10.02.21 | 10 | BLR | | | Not required |
| | Kolaghat TPS | 5 | 210 | 17.02.21 | 16.03.21 | 28 | AOH/BOH | 17.02.21 | 16.03.21 | As per schedule. |
| DPL | DPPS | 7 | 300 | 01.01.21 | 10.01.21 | 10 | Tit bit maintenance | | | Not required. |
| HEL | Haldia Energy Limited | 2 | 300 | 06.01.21 | 19.02.21 | 45 | AOH | 27.12.20 | 04.02.21 | |
| NTPC | Farakka | 1 | 200 | 27.12.20 | 09.02.21 | 45 | BOH | | | Deferred to next OCC of Feb-21. |
| NTPC | Barh | 5 | 660 | 15.02.21 | 05.05.21 | 80 | Boiler Modification | | | Postponed |
| NTPC | MTPS-II | 2 | 195 | 15.02.21 | 12.03.21 | 26 | AOH | | | Deferred |
| IPP | GMR | 2 | 350 | 06.01.21 | 04.02.21 | 30 | Turbine OH | 13.01.21 | 03.02.21 | |
| | GMR | 3 | 350 | 09.02.21 | 10.03.21 | 30 | Turbine OH | 02.02.21 | 22.02.21 | |
| IPP | MPL | 1 | 525 | 15.12.20 | 30.01.21 | 45 | COH | 12.01.21 | 24.02.21 | |
| Additional unit shutdown list of Thermal generating stations as approved in 175 th OCC Meeting | | | | | | | | | | |
| DVC | BTPS-A | 1 | 500 | 26.10.20 | 29.11.20 | 35 | BOH/FGD/DeNox Bumer | 15.02.21 | 21.03.21 | |
| NTPC | Farakka | 4 | 500 | 23.11.20 | 22.12.20 | 30 | BOH | 15.02.21 | 15.03.21 | |

NTPC representative stated that they wanted to avail the shutdown of FSTPS U#1 (200 MW) in the month of March,2021.

WBSEDCL representative did not agree with the proposal due to onset of Summer and upcoming elections in the state.

OCC decided to discuss the shutdown proposal of of FSTPS U#1 (200 MW) in the next OCC meeting of Feb'21.

Item No. B.7 Difficulty faced during charging of 400 kV Farakka-Sagardighi-1 line after return of Shutdown.--ERLDC

In line with decision taken in 150th OCC meeting, in case of a transmission line connecting two generating plants need to be charged then the following guideline has to be followed:

- If voltage difference between two systems is more than 5 kV system which has lower voltage should charge the line.
- In case voltage difference is less than 5 kV systems which have higher fault level should charge.
- If only one end has line reactor than the end which is not having the line reactor should

attempt to charge first.

During return of Shutdown of 400 kV Farakka-Sagardighi-1 on 30-Dec-2020, following above condition line was to be charged from Farakka end and should be synchronized at Sagardighi end.

However, NTPC Farraka was reluctant to charge the line from their end, and finally it was charged from Sagardighi End.

NTPC Farakka may explain.

Deliberation in the meeting

ERLDC explained the non-compliance by referring the decision of 150th OCC Meeting for charging of transmission lines connecting two generating stations.

OCC viewed it seriously and advised NTPC Stations for strict compliance of the instruction issued by ERLDC in this regard.

NTPC noted for compliance.

Item No. B.8 Dead bus charging requirement by NTPC Power Plants at the time of revival of unit after long outage.--ERLDC

In the past it was observed that, NTPC power plants particularly Barh, Kahalgoan and Farakka as for complete outage of one 400 kV bus at the time of synchronization of any unit after long outage. Such practice not only

reduces the reliability of that power plant but also the regional grid as a whole. If during such bus outage other bus also trips, then it may result in large scale disturbance.

The instances of dead bus charging are as follows:

| Name of the Bus | Outage Date & Time | | Reason | Restore Date & Time | |
|------------------------------|--------------------|-------|--|---------------------|-------|
| 400KV MAIN BUS - 1 AT FSTPP | 10-02-2020 | 01:25 | FOR DEAD BUS CHARGING OF UNIT 3 AFTER OVERHAUL | 10-02-2020 | 03:35 |
| 400KV MAIN BUS - 1 AT FSTPP | 25-12-2020 | 08:25 | dead bus charging | 25-12-2020 | 10:38 |
| 400KV MAIN BUS - 3 AT KHSTPP | 23-11-2020 | 10:37 | dead bus charging of unit 6 after overhauling | 23-11-2020 | 11:52 |

NTPC may explain.

Deliberation in the meeting

NTPC Farakka informed that the dead bus charging is required for old units where R & M activity has been carried out. This is being done in order to avoid any eventuality which may be caused due to any failure of protection system/ unit auxiliary system during the synchronization.

After detailed deliberation OCC decided that dead bus charging would be allowed only in cases of R & M of synchronization system or R & M activity in Bus PT.

Item No. B.9: Frequent tripping of units of APNRL--ERLDC

It has been observed that units of APNRL have tripped frequently in recent past. Such frequent tripping impacts load generation balance in real time & compromises reliable supply of power to its beneficiaries. A list citing instances of such frequent tripping in last one year is hereby attached.

| Instances of tripping of units of APNRL since Jan 2019 | | | | | |
|--|---------------|---------------|---|--------------|--------------|
| Element Name | Tripping Date | Tripping Time | Reason | Revival Date | Revival Time |
| ADHUNIK - UNIT 2 | 22/01/2020 | 10:29 | FALME FAILURE | 22/01/2020 | 12:06 |
| ADHUNIK - UNIT 2 | 09/02/2020 | 7:10 | ASH EVACUATION PROBLEM | 17/02/2020 | 10:59 |
| ADHUNIK - UNIT 1 | 22/02/2020 | 21:31 | ESP HOPPER SUSPECTED CHOCKAGE & HIGH LEVEL | 27/02/2020 | 10:35 |
| ADHUNIK - UNIT 1 | 05/03/2020 | 5:16 | TURBINE CONTROL VALVE MALFUNCTIONING | 09/03/2020 | 7:57 |
| ADHUNIK - UNIT 1 | 12/03/2020 | 23:29 | CONDENSOR TUBE LEAKAGE | 19/03/2020 | 23:54 |
| ADHUNIK - UNIT 1 | 30/03/2020 | 14:10 | ASH EVACUATION PROBLEM | 12/05/2020 | 20:44 |
| ADHUNIK - UNIT 2 | 01/05/2020 | 10:47 | PA FAN-2B TRIPPED | 01/05/2020 | 12:11 |
| ADHUNIK - UNIT 2 | 25/05/2020 | 12:20 | ROTOR EARTH FAULT CHECKING | 25/05/2020 | 15:42 |
| ADHUNIK - UNIT 2 | 07/06/2020 | 22:08 | LUBE OIL LEAKAGE OF TURBINE LO PIPE LINE | 05/07/2020 | 17:50 |
| ADHUNIK - UNIT 1 | 09/06/2020 | 13:31 | PA FAN TRIPPED | 09/06/2020 | 14:56 |
| ADHUNIK - UNIT 1 | 07/07/2020 | 15:04 | CONDENSER TUBE LEAKAGE | 16/07/2020 | 15:40 |
| ADHUNIK - UNIT 2 | 12/07/2020 | 22:13 | GT FANS TRIPPED,DETAILS UNDER INVESTIGATION | 13/07/2020 | 0:15 |
| ADHUNIK - UNIT 1 | 26/08/2020 | 7:23 | FIRE PROTECTION-1 MALFUNCTION. | 26/08/2020 | 9:33 |
| ADHUNIK - UNIT 1 | 04/09/2020 | 23:44 | BOILER TUBE LEAKAGE | 12/09/2020 | 16:05 |
| ADHUNIK - UNIT 1 | 22/09/2020 | 11:21 | GT TIE EARTH FAULT | 24/09/2020 | 20:08 |
| ADHUNIK - UNIT 2 | 22/09/2020 | 11:21 | GT TIE EARTH FAULT | 22/09/2020 | 18:51 |
| ADHUNIK - UNIT 2 | 15/10/2020 | 7:08 | HPSU OIL REPLACEMENT WORK | 17/10/2020 | 09:10 |
| ADHUNIK - UNIT 1 | 27/10/2020 | 0:32 | ASH EVACUATION PROBLEM AND ESP HOPPER LEVEL HIGH | 11/12/2020 | 12:52 |
| ADHUNIK - UNIT 2 | 22/12/2020 | 0:13 | BTL | 26/12/2020 | 09:17 |
| ADHUNIK - UNIT 1 | 10/01/2021 | 15:19 | APNRL UNIT 1 TRIPPED AT 15:19 HRS OF 10.01.2021 DUE TO BOTTOM ASH HOPER CHOCKED | | |
| ADHUNIK - UNIT 2 | 10/01/2021 | 5:54 | DUE TO BOTTOM ASH LEVEL HIGH. | | |

APNRL may explain.

Deliberation in the meeting

APNRL informed that they are looking into the issue of frequent tripping of units, for resolving the various issues they are planning to take shutdown of Unit#1 in July'21 and for unit#2 it would be taken care which is under shutdown at present.

OCC noticed that many of the trippings are due to problem in ash evacuation system. APNRL informed that they are also looking into the ash evacuation problem and the present Unit #2 will be taken on bar after rectification of this issue.

OCC advised APNRL to share the action plan/measures to address the frequent tripping of their units at the earliest.

Item No. B.10: Black Start and Restoration Procedure of Eastern Region.- -ERLDC

In compliance with clause 5.8 (a) and (b) of the present IEGC, The Restoration Procedure has to be developed and updated annually by RLDC in consultation with NLDC, all users STU, SLDC,CTU, RPC Secretariat of the region.

Draft copy of “Black Start and Restoration Procedure” was circulated earlier on 12th Jan 2020 for review and the updated 2021 procedure was circulated via email on 14th January, 2021 for feedback from stake holder. All stake holders are advised to review and give input on following:-

- Generating Station
 - Installed Capacity (MW)
 - De-rated Capacity (MW)
 - Survival Power(MW)
 - Minimum Aux. Power (MW)
 - Maxi-mum Aux. Power (MW)
 - DG Set Capacity (KW)
 - Maximum Motor size (MW)
 - Synchronization facility
- Transmission utilities
 - List of Substations where Synchronization facility is available
- SLDC
 - Restoration path
 - Nodes for supply of traction power
 - List of critical and important load points with minimum active and reactive power requirement in case large scale grid disturbance.
 - Under frequency relay setting and quantum of

power This is desired for the finalization of the procedure.

Members may discuss.

Deliberation in the meeting

ERLDC informed that the comments from Bihar and DVC and some of the generators have been received.

OCC advised all the utilities including the IPPs to go through the draft procedure and in case any change/addition is required, the same shall be intimated to ERLDC at the earliest.

PART C: ITEMS FOR UPDATE

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

In the 174th OCC meeting, OCC advised all the constituents to send the UFR healthiness data on monthly basis to ERPC.

UFRs healthiness status has been received from WBSETCL, Jharkhand.

Members may update.

Deliberation in the meeting

CESC, DVC & BSPTCL submitted the UFR healthiness status.

OCC advised OPTCL to submit the UFR healthiness certificate at the earliest.

Item No. C.2: 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 load utility |
|--------|---------------------------------------|-------------------------------------|---|
| 1 | CESC as a whole Islanding | Healthy | Healthy |
| 2 | BkTPS Islanding Scheme | Healthy | Healthy |
| 3 | Tata Power Islanding Scheme, Haldia | Healthy | Healthy |
| 4 | Chandrapura TPS Islanding Scheme, DVC | Not in service | |
| 5 | Farakka Islanding Scheme, NTPC | | |
| 6 | Bandel Islanding Scheme, WBPCL | Healthy | Healthy |

NTPC Farakka may update.

Deliberation in the meeting

JUSNL informed that 220 kV Lalmatia-Godda line has been charged recently. They added that the islanding scheme will be reviewed based on this change in network configuration.

OCC advised JUSNL to submit the relevant details for review of the islanding scheme.

NTPC Farakka informed that the islanding scheme is healthy on their side.

Item No. C.3: Review of Islanding Scheme in Eastern Region--ERLDC

a. Islanding Scheme of Power plants/system.

Most of the islanding schemes in ER were designed and implemented after 2012 grid disturbance. However in the recent time many network changes has taken place, LGBR of the nodes considered in island also get changed due to natural load growth. In view of the above it is prudent to review all the islanding schemes in ER for enhancement of chances of survival in event of actual operation. A mail regarding the same was sent to all the concerned on 04th Jan 2021 highlighting criteria for successful islanding during the grid collapse.

Network changes that are like to affect the existing islanding scheme of eastern region were shared and same is highlighted in below table.

| SI No | Islanding Scheme | Review of Network change affecting the islanding logic post commissioning of Islanding scheme, (Major network Change) | Review of Load Generation Balance |
|-------|------------------|---|---|
| 1 | Bakreswar | 400/220 kV Gokarno commissioned, 220 kV Sadaipur Commissioned, 220 kV Rejinagar Commissioned. | Impact of change in Load Generation balance need to be Analyzed |
| 2 | Bandel | No significant network change around the island | Impact of change in Load Generation balance need to be analyzed |
| 3 | Farraka | 220 KV Lalmatia-Godda and 220 kV Godda-Dumka, 220 kV Dumka new commissioned | Impact of change in Load generation Balance need to be Analyzed |
| 4 | CESC | | Impact of change in Load generation Balance need to be Analyzed |

WBSLDC via their email dated 7th Jan 2021 informed that new UFRs are installed at different substations to take care of recent network change around Bakreswar and Bandel.

No input is received from Jharkhand, Farakka and CESC.

Deliberation in the meeting

WBSLDC informed that the updated scheme details of Bakreswar, Bandel and Tata power Haldia islanding scheme have been submitted to ERLDC.

OCC advised JUSNL to submit the load details and change in network configuration after commissioning of 220 kV Lalmatia-Godda line to ERLDC at the earliest.

Further, OCC refer the issue of review of FSTPS islanding scheme to PCC.

b. Islanding Scheme of CPPs

In line with power plant and system, a mail has also been sent for review of islanding scheme of CPP. However, input is received only from WBSLDC.

Members may update.

Deliberation in the meeting

OCC advised all SLDCs to coordinate with the CPPs under their control area jurisdiction and intimate the changes occurred in islanding schemes of CPPs, if any, to ERLDC.

Item No. C.4: Review of Over Current Settings of Lines having HTLS Conductor—ERLDC

In 220 kV and 132 kV network many lines are re-conducted with HTLS conductor. However it is being observed that for some line(s) overcurrent setting modification is not done accordingly. This is leading to underutilization of asset below their thermal limit. Relay setting should not restrict the loadability of transmission line below its thermal loading limit or stability loading limit. The list of some of the lines having HTLS conductor is as follows:

- i. 132kV Jeerat-Dharampur-1
- ii. 132kV Jeerat-Dharampur-2
- iii. 132kV-Bidhannagar-Ukhara-1
- iv. 132kV-Bidhannagar-Ukhara-2
- v. 132kV Titagarh-Dharampur-1
- vi. 132kV Titagarh-Dharampur-2
- vii. 132kV-Baharampur-Gokarna-1
- viii. 132kV-Baharampur-Gokarna-2
- ix. 132kV Malda-Malda-1
- x. 132kV Malda-Malda-2
- xi. 220kV Bakreswar-Saidaipur-1
- xii. 220kV Bakreswar-Saidaipur-2
- xiii. 220kV-Patna-Khagaul-2
- xiv. 220kV-Patna-Khagaul-3

It is requested that all transmission licensees who have uprated their lines with HTLS conductor may furnish following data

| Sl No | Name of line which is re-conducted | Thermal loading limit of line (Amps) | Thermal loading limit of End equipment (Amps) | Over Current Setting of line (Amps) |
|-------|------------------------------------|--------------------------------------|---|-------------------------------------|
| | | | | |
| | | | | |
| | | | | |

Members may update.

Deliberation in the meeting

OCC advised respective utilities to review the overcurrent settings for the lines wherein up gradation of lines are being done with HTLS conductor.

ERLDC informed that this is important for ATC/TTC calculation of the utilities.

OCC advised utilities to go through the list of the lines and update the same in case of any addition to the list.

Item No. C.5: 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 the 174th OCC meeting, ERLDC informed that testing has been started in other regions however, it is yet to be undertaken in Eastern Region.

OCC advised all the generators to prepare the unit-wise schedule for testing and submit to ERPC & ERLDC at the earliest.

Respective Generators may update.

Deliberation in the meeting

ERLDC updated the primary frequency response testing schedule of the generators received by them.

The list is enclosed at Annexure C.5.

Item No. C.6: Testing of Primary Frequency Response of state generating units by third party agency--ERLDC

In the 171st OCC 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 in a 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 |

However, at present the Primary Frequency Response Testing may not be possible for the following units of DVC:

| Sl. No. | Name of the Units | Capacity (MW) | Remarks |
|---------|-------------------|---------------|---------|
|---------|-------------------|---------------|---------|

| | | | |
|---|-----------------|-------|--|
| 1 | BTPS-B U#3 | 210 | The Governing system is of the Hydro-mechanical type and the Control system is a Solid-state Hardware/Relay based system. |
| 2 | DTPS U#4 | 210 | The Governing system is of the Hydro-mechanical type and the Control system is a Solid-state Hardware/Relay based system |
| 3 | MTPS Unit # 1&2 | 2X210 | C & I system of Unit 1 & 2 are originally supplied with a Solid-state Hardware-based system for SG & TG Package which is lacking in scalability and flexibility and the BOP Package is supplied with a primitive DCS system. |

In the 173rd OCC Meeting, OPGC informed that for unit # 3 & 4, the order has been placed with M/s Siemens and approval is in process.

OHPC informed that in concurrence to a meeting held with SLDC Odisha, they have planned to carry out the test at one unit of Indravati.

West Bengal informed that they are in discussion with their generators to carry out the primary Frequency response Testing.

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 174th OCC meeting, ERLDC clarified that as per the regulation vendors have already been finalized by POSOCO i.e., M/s Slovina & M/s Siemens for the generators which are under the jurisdiction of RLDCs. Regarding the generating stations which come under the control of SLDCs, it is the responsibility of the respective SLDCs to finalize the vendors for Primary Frequency Response Testing for their generating units. They can either go for the vendors selected by NLDC else they can select any other vendors as per their procedure.

OCC advised all the SLDCs interact with the vendors finalized by NLDC and take a suitable decision.

Members may update.

Deliberation in the meeting

SLDC, Bihar informed that BTPS is already coordinating with M/s Slovina regarding the primary frequency test.

DVC informed that the matter is being taken up by their operation team.

SLDC West Bengal informed that the relevant document and vendor names collected from ERLDC has been intimated to the generators.

OCC advised all the SLDCs to coordinate with their generators and submit the unit wise schedule for primary frequency response testing.

Item No. C.7: Transfer capability determination by the states.

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

| SL. No | State/Utility | TTC (MW) | | RM(MW) | | ATC Import (MW) | | Remark |
|--------|---------------|----------|--------|--------|--------|-----------------|--------|--------|
| | | Import | Export | Import | Export | Import | Export | |
| 1 | BSPTCL | 5150 | -- | 103 | -- | 5047 | -- | Feb-21 |
| 2 | JUSNL | 1570 | -- | 53 | -- | 1517 | -- | Apr-21 |
| 3 | DVC | 1355 | 2995 | 65 | 51 | 1290 | 2944 | Feb-21 |
| 4 | OPTCL | 2251 | 1432 | 74 | 54 | 2177 | 1378 | Dec-20 |
| 5 | WBSETCL | 5191 | -- | 400 | -- | 4791 | -- | Feb-21 |
| 6 | Sikkim | 315 | -- | 2.44 | -- | 315.56 | -- | Feb-21 |

Declaration of TTC/ATC on SLDC Website

| SI 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/atcttcm_enu.jsp# | Yes | Static Link-Word file |
| 4 | OPTCL | Yes | https://www.sldcorissa.org.in/TTC_ATC_a_spx | Yes | Static Link-pdf file |
| 5 | WBSETCL | Yes | http://www.wbsldc.in/atc-ttc | No (Not updating) | Static Link-Table |
| 6 | Sikkim | No | – | No | No link |

In the 174th OCC Meeting, ERLDC mentioned that the states must furnish the updated ATC figures along with the transmission constraints as well as reliability margins on a regular basis. Also, states should intimate the changes in the ATC/TTC values well in advance to ERLDC.

OCC advised all the states to send the ATC/TTC values on a regular basis as well update the changes in ATC/TTC values well in advance.

Members may update.

Deliberation in the meeting

Odisha SLDC informed that the ATC/TTC details up to March'21 has been sent to ERLDC.

ERLDC requested all the constituents to update the ATC/TTC data in their website in a tabular form and also to put a suitable link on their respective website so that the data can be fetched easily.

Item No. C.8: Mock Black start exercises in Eastern Region – ERLDC.

Mock black start date for financial year 2020-21 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 2020 | | Second Week of Feb 2021 | |
| 2 | Balimela | Second week of Nov 2020 | | First Week of March 2021 | |
| 3 | Rengali | Second week of Nov 2020 | Done on 23 rd Nov 2020 | First Week of March 2021 | |
| 4 | Burla | Second week of Nov 2020 | | First Week of March 2021 | |
| 5 | U. Indravati | Last week of Oct 2020 | | Second Week of Feb 2021 | |
| 6 | Maithon | Third Week of Nov 2020 | | First Week of March 2021 | |
| 7 | TLDP-III | Second week of Nov 2020 | | Second Week of Feb 2021 | |
| 8 | TLDP-IV | Third Week of Nov 2020 | | First Week of March 2021 | |
| 9 | Subarnarekha | Second week of Nov 2020 | | Second Week of Feb 2021 | |
| 10 | Teesta-V | Third Week of Nov 2020 | | Third Week of March 2021 | |
| 11 | Chuzachen | Second week of Nov 2020 | | First Week of March 2021 | |
| 12 | Teesta-III | Third Week of Nov 2020 | | First Week of March 2021 | |
| 13 | Jorethang | Third Week of Nov 2020 | | First Week of March 2021 | |
| 14 | Tasheding | Second week of Nov 2020 | | First Week of March 2021 | |
| 15 | Dikchu | Second week of Nov 2020 | | Second Week of Feb 2021 | |

Members may update.

Deliberation in the meeting

SLDC Odisha informed that mock black start exercise at U. Indravati is planned to be carried out in Feb'21.

SLDC Jharkhand informed that black start exercise of Subarnarekha would be completed by Jan'21.

Item No. C.9: Operationalizing Bus splitting at Bihar Shariff—ERLDC.

In the 172nd OCC Meeting, OCC advised Bihar to share the plan for load trimming scheme with ERLDC at the earliest.

OCC decided to put the Bihar Shariff bus splitting scheme in service on 12th Nov 2020. In the 173rd OCC Meeting, ERLDC informed that bus splitting scheme was put in operation on 18th November 2020 and the bus coupler was closed on 19th November 2020.

Bihar informed that uneven power flow through the ICTs was observed and they are in process of implementation of load trimming scheme.

OCC advised Bihar to send their queries, if any to ERPC and ERLDC within a week. OCC also advised Bihar to implement the load trimming scheme to avoid unwanted tripping of the transformers on overload.

Thereafter, BSPTCL submitted the following Load trimming Scheme based on internal discussion:

| |
|--|
| <p>(A) By using a Bay Control Unit(BCU) to make logical tripping command by using Digital Input and Digital Output. This will be more technical and sophisticated way of implementation.</p> <p>(B) By extending the tripping command to 220 KV Double Circuit Bihar Sharif-Fathua transmission line along with tripping of 500 MVA TRF-04 at Bihar Sharif (PG).Fathua will avail power from Patna(PG) and Gaurichak without any load restriction.</p> <p>In implementation of scheme under option (A) will take significant time (At least 18 Months),as such decision has been taken to implement option (B).Apart from implementation of scheme under option (B) following 132/33 KV GSS shall be shifted on other GSS which are having power source other than Bihar Sharif GSS.</p> <p>(1)Hathidah GSS shall be shifted on Lakhisarai GSS.</p> <p>(2) Wazirganj GSS shall be shifted on Khizirsarai GSS</p> |
|--|

Based on the inputs some queries were raised by ERLDC which are provided below for discussion:

1. BCU based SPS logic implementation may need more explanation. In general, multiple element input and status based SPS require PLC based SPS scheme as implemented in most of the schemes.
2. Present option B proposes 500 MVA ICT 4 tripping based SPS rather than 315 MVA ICT 2 (ICT which can overload in certain loading condition) which is the prime objective. The SPS logic of overloading of ICT 2 above 315 MVA would be more apt as it will consider the criteria and will also avoid any unnecessary tripping of 220 kV Bihar Sharif -Fathua D/C with 500 MVA ICT 4 tripping when its outage is not causing any overload on ICT 2 as per demand scenario. BSPTCL is advised to review the scheme.
3. Bihar SLDC may share the impact of the 132kV load shifting and their sensitivity on the ICT loading after split bus condition to ensure their impact.
4. Whether the issue of simultaneous 400/220 kV ICT 1 and 3 tripping on 400 kV line faults observed in the past due to wiring /old relay issue has been resolved by BSPTCL?
5. Any plan by STU for controlling 220 kV Fault level Bihar Sharif also needs to be submitted.

In the 174th OCC Meeting, ERLDC stated that the above queries have been shared with BSPTCL.

Accordingly, OCC advised BSPTCL to submit their comments on the queries raised by ERLDC to ERPC and ERLDC.

BSPTCL may update.

Deliberation in the meeting

BSPTCL informed that all the electromechanical relays of 400/220 kV ICTs at Bihar Sharif S/s has been replaced with numerical relays.

They further added that, their O&M team is doing analysis regarding the load tripping scheme and the same will be shared with ERLDC shortly.

OCC advised to finalize and implement load tripping scheme so that bus splitting scheme can be operationalized at the earliest. It also advised BSPTCL to submit their comments on the queries raised by ERLDC within a week.

Item No. C.10: ER Grid performance during December 2020.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month December – 2020 were as follows:

| Average Consumption (Mu) | Maximum Consumption(mu)/ Date | Maximum Demand (MW) | Minimum Demand(MW) | Schedule Export (Mu) | Actual Export (Mu) |
|--------------------------|-------------------------------|--------------------------------|---------------------------------|----------------------|--------------------|
| | | Date/Time | Date/Time | | |
| 356 | 381 MU 31-12-2020 | 19691MW 31-12-2020 19:10 | 11674 MW 06-12-2020 14:50 | 3813 | 3724 |

ERLDC may present Performance of Eastern Regional Grid.

Deliberation in the meeting

The presentation on the performance of Eastern Regional grid is given in Annexure C.10.

Members noted.

Item No. C.11: PSS tuning of Generators in Eastern Region. –ERLDC.

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. List of units where PSS tuning activities is pending is given at Annexure C11.

In 174th OCC, all the concerned generators were advised to submit the plan of PSS tuning to ERPC &ERLDC.

Members may update.

Deliberation in the meeting

ERLDC informed that PSS tuning at Chuzachen has been completed in Jan'21.

OCC advised all generators to submit their plan for PSS tuning to ERLDC/ERPC secretariat at the earliest.

Item No. C.12: Performance primary frequency response of generating stations in Eastern Region for the event in the month of December 2020. –ERLDC.

Frequency response characteristics (FRC) have been analyzed pan India for one event of sudden frequency change that occurred in December 2020. The details of this event and the overall response of the Eastern region have been summarized in following table.

| Event | Frequency Change | ER FRC |
|--|--|--------|
| Event 1: On 26 th December 2020 at 10:18:09 :560hrs., around 1000 MW generation loss occurred at Wanakbori in WR. | 50.042 Hz to 49.962Hz. Later stabilized at 50.019Hz. | 66 % |

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 10^h January 2021).
 - a. NTPC Farakka
 - b. NTPC Kahalgaon
 - c. NTPC Talcher
 - d. NTPC Barh
 - e. NTPC Darlipalli
 - f. BRBCL
 - g. GMR
 - h. Adhunik
 - i. Teesta III
 - j. Dikchu
 - k. Bihar SLDC
 - l. Jharkhand SLDC
 - m. GRIDCO SLDC
 - n. WB SLDC
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**.

The detailed report is enclosed at Annexure C12.

Table 1: performance of regional generating stations and state control areas for the events in December 2020.

| Generating Station/ SLDC | Response observed |
|-----------------------------|--|
| NTPC Farakka | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| NTPC Kahalgaon | Non Satisfactory for Stage 2; Satisfactory for Stage 1 (as per FRC calculated based on ERLDC SCADA data) |
| NTPC Talcher | Non Satisfactory for Stage 1; Satisfactory for Stage 2 (as per FRC calculated based on ERLDC SCADA data) |
| NTPC Barh | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| NTPC Darlipalli | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| BRBCL | Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| NPGC Nabinagar | Non Satisfactory; |
| GMR | Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| JITPL | Non Satisfactory; |
| MPL | Non Satisfactory; Unit 1 was being run at installed capacity. No response has been observed. Around 50% of ideal response has been observed for unit 2. |
| Adhunik | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| Teesta V HEP | Unit not in service |
| Teesta III HEP | Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| Dikchu HEP | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| Bihar SLDC | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| Jharkhand SLDC | Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| DVC SLDC | Satisfactory; |
| GRIDCO SLDC | Satisfactory (as per FRC calculated based on ERLDC SCADA data) |
| WB SLDC | Non Satisfactory (as per FRC calculated based on ERLDC SCADA data) |

Table 2: performance of state generating stations for the events in December 2020 (Based on data received from SLDC/generating stations)

| Generating Station | Response observed |
|--------------------|--|
| HEL | Satisfactory |
| BBGS | NonSatisfactory ; Unit was being run at more than installed capacity. |

Remarks on the primary frequency response observed at generating stations

- MPL:** Unit 1 was being run at installed capacity. Around 8 MW response has been observed for unit

2. Ideal response was around 16 MW for frequency loss event. As per IEGC section 5.2 (f) and 5.2 (g), power output of any unit can be increased up to 105% of installed capacity. MPL may share the reason for non-providing any response for unit 1. Reason for non-adequate response of unit 2 may also be investigated.
- HEL:** Response did not sustain for more than 30 seconds. Governor may be tuned for providing sustained response for at least 3-5 minutes.

Members may explain.

Deliberation in the meeting

ERLDC informed that data regarding primary frequency performance study has not been received from some of the SLDCs and Generating stations.

OCC advised concerned generators and SLDCs to send the required data to ERLDC at the earliest.

OCC also advised generators whose performance is below satisfactory, to go through the report and take measures to improve their primary frequency response performance.

Item No. C.13: 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 on 27-11-2020.

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.

Members may note.

Deliberation in the meeting

ERLDC informed that the procedure has been revised based on deliberation in the meeting held on 27.11.2020 and the same has been circulated to all utilities vide mail dated 04.01.2021.

OCC advised all the utilities to go through the revised operating procedure and submit their final observation/comments if any, by January' 21.

PART D: OPERATIONAL PLANNING

Item No. D.1: Anticipated power supply position during February 2021.

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of February 2021 were prepared by ERPC Secretariat on the basis of LGBR for 2019-20 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 February 2021 is given in Annexure D1.

Item No. D.2: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 13.01.2021).

| SL No | Station | Agency | Unit No | Capacity MW | Reason(s) | Outage Date |
|--------------|-------------------|---------------|----------------|--------------------|---|--------------------|
| 1 | MPL | MPL | 1 | 525 | Annual Over Hauling | 12-Jan-2021 |
| 2 | CHANDRAPURA TPS | DVC | 3 | 130 | TURBINE BLADE DAMAGE | 30-Jul-2017 |
| 3 | HALDIA ENERGY LTD | HEL,CESC | 2 | 300 | ANNUAL OVERHAULING | 22-Dec-2020 |
| 4 | KOLAGHAT | WBPDC | 1 | 210 | POLLUTION PROBLEM | 10-May-2018 |
| 5 | KOLAGHAT | WBPDC | 2 | 210 | ESP FIELD MAINTENANCE | 26-Dec-2019 |
| 6 | MEJIA TPS | DVC | 4 | 210 | CAPITAL OVERHAULING | 19-Nov-2020 |
| 7 | MUZAFFARPUR TPS | BSPHCL | 1 | 110 | INITIALLY BTL LATER OUT DUE TO RSD/ LOW SYSTEM DEMAND | 10-Aug-2020 |
| 8 | MUZAFFARPUR TPS | BSPHCL | 2 | 110 | INITIALLY BTL LATER OUT DUE TO RSD/ LOW SYSTEM DEMAND | 15-Aug-2020 |
| 9 | ADHUNIK | APNRL | 2 | 270 | Due to Bottom ash level high. | 10-Jan-2021 |
| 10 | GMR | GMR-Infra | 1 | 350 | Scrapper Chain Conveyors problem | 12-Jan-2021 |
| 11 | GMR | GMR-Infra | 2 | 350 | MFT | 12-Jan-2021 |
| 12 | JITPL | JITPL | 2 | 600 | GENERATOR ELECTRICAL PROTECTION | 25-Sep-2020 |

| | | | | | | |
|----|----------------|-----------------|---|-----|---|-------------|
| 13 | KBUNL | NTPC,BS PHCL | 1 | 195 | Due to APH problem | 09-Jan-2021 |
| 14 | KHSTPP | NTPC | 4 | 210 | Ash dyke problem | 07-Nov-2020 |
| 15 | KHSTPP | NTPC | 5 | 500 | Ash dyke problem | 07-Nov-2020 |
| 16 | BARAUNI TPS | BSPHCL | 6 | 110 | ROTOR FAULT | 09-Nov-2020 |
| 17 | BARAUNI TPS | BSPHCL | 8 | 250 | Due to high GT phase bushing temperature | 09-Jan-2021 |
| 18 | DPL | WBPDC | 7 | 300 | Due to APH- B problem | 09-Jan-2021 |
| 19 | IB.TPS | OPGC | 2 | 210 | Boiler bottom de-ashing issue | 09-Jan-2021 |
| 20 | MEJIA TPS | DVC | 1 | 210 | FURNACE PRESSURE V.LOW | 12-Jan-2021 |
| 21 | SAGARDI GHI | WBPDC | 2 | 300 | AUXILLARY SUPPLY FAILED | 18-Mar-2020 |
| 22 | TTPS | NTPC | 5 | 110 | GENERATOR OIL LEAKAGE | 10-Jan-2021 |
| 23 | WARIA TPS | DVC | 4 | 210 | Taken out of Bar due to non-receipt of Environmental Clearance | 31-Dec-2020 |

All Generating stations are requested to update expected restoration time and outage reason 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.

Major Generating stations Out on Reserve Shutdown due to low system demand

| SL .No | Station | State | Agency | Unit No | Capacity MW | Reason(s) | Outage Date |
|--------|------------------------|----------------|------------|---------|-------------|--|-------------|
| 1 | BARAUNI TPS | BIHAR | BSPHCL | 7 | 110 | RSD/ LOW SYSTEM DEMAND | 28-May-20 |
| 2 | KOLAGHAT | WEST BENGAL | WBPD CL | 3 | 210 | RSD/LOW SYSTEM DEMAND | 13-Jun-20 |
| 3 | KOLAGHAT | WEST BENGAL | WBPD CL | 4 | 210 | RSD/ LOW SYSTEM DEMAND | 15-Jul-20 |
| 4 | KOLAGHAT | WEST BENGAL | WBPD CL | 5 | 210 | RSD/LOW SYSTEM DEMAND | 15-Dec-20 |
| 5 | MUZAFFAR PUR TPS | BIHAR | BSPHCL | 1 | 110 | INITIALLY BTL LATER OUT DUE TO RSD/ LOW SYSTEM DEMAND | 10-Aug-20 |
| 6 | MUZAFFAR PUR TPS | BIHAR | BSPHCL | 2 | 110 | INITIALLY BTL LATER OUT DUE TO RSD/ LOW SYSTEM DEMAND | 15-Aug-20 |

Hydro Unit Outage report:

| SI No. | Station | State | Agency | Unit No | Capacity | Reason(s) | Outage Date |
|--------|---------------------|---------|--------|---------|----------|--------------------------------|-------------|
| 1 | BALIMELA HPS | ODISH A | OHPC | 1 | 60 | R & M WORK | 05-Aug-2016 |
| 2 | BALIMELA HPS | ODISH A | OHPC | 2 | 60 | R & M WORK | 20-Nov-2017 |
| 3 | BURLA HPS/HIRAKUD I | ODISH A | OHPC | 1 | 49.5 | R & M WORK | 14-Mar-2018 |
| 4 | BURLA HPS/HIRAKUD I | ODISH A | OHPC | 5 | 37.5 | R & M WORK | 25-Oct-2016 |
| 5 | BURLA HPS/HIRAKUD I | ODISH A | OHPC | 6 | 37.5 | R & M WORK | 16-Oct-2015 |
| 6 | BURLA HPS/HIRAKUD I | ODISH A | OHPC | 7 | 37.5 | ANNUAL MAINTENANCE | 06-Dec-2019 |
| 7 | BALIMELA HPS | ODISH A | OHPC | 4 | 60 | SPARKING IN PMG | 02-Mar-2020 |
| 8 | BALIMELA HPS | ODISH A | OHPC | 5 | 60 | STATOR EARTH FAULT | 13-Dec-2020 |
| 9 | U.KOLAB | ODISH A | OHPC | 3 | 80 | GUIDE BEARING TEMPERATURE HIGH | 07-Jan-2020 |

It is seen that about 482 MW hydro capacities in Odisha is under forced outage / planned outage in the period of peak monsoon and therefore not available for providing the much-needed peaking support during evening peak. SLDC / OHPC may please indicate restoration plan of the units.

Line Long Outage Report:

| SL NO | Transmission Element / ICT | Agency | Outage DATE | Reasons for Outage |
|-------|--------------------------------------|-----------------|-------------|---|
| 1 | 400 KV IBEUL JHARSUGUDA D/C | IBEUL | 29-04-2018 | TOWER COLLAPSE AT LOC 44,45 |
| 2 | 220/132 KV 100 MVA ICT I AT LALMATIA | FSTPP/JUSNL | 22-01-2019 | Failure of HV side breaker |
| | 220 KV PANDIABILI - SAMANGARA D/C | OPTCL | 03-05-2019 | 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 Pandiabili end (loc 156) to loc 58 |
| 4 | 400 KV MOTIHARI(DMT CL)-GORAKHPUR-I | POWERGRID/DMTCL | 13-08-2019 | LINE SWITCHED OFF DUE TO ANTICIPATED TOWER COLLAPSE AT LOC 27/0(132) DUE TO CHANGE OF COURSE OF GANDAK RIVER.TOWER COLLAPSED REPORTED AT LOC 27/0(132) ON 15/08/19 AT 07:00 HRS. 400KV BARH -GORAKHPUR 1 |

| | | | | |
|----|---------------------------------------|-----------------|------------|--|
| | | | | CHARGED AT 18:57 HRS ON 05.02.20 AS INTERIM ARRANGEMENT BYPASSING LILO PORTION OF MOTIHARI. |
| 5 | 400 KV MOTIHARI(DMTCL)-GORAKHPUR-II | POWERGRID/DMTCL | 13-08-2019 | Earlier reconfigured Barh - Gorokpur # II again LILOED back at Motihari and the portion beyond Motihari shall be termed as 400 KV MOTIHARI(DMTCL)-GORAKHPUR-II |
| 6 | 400 KV BARH-MOTIHARI(DMTCL) -I | POWERGRID/DMTCL | 04-09-2019 | TOWER COLLAPSE AT LOCATION 26/0 AND 25/5. 400KV BARH -GORAKHPUR 2 CHARGED AT 10:06 HRS ON 31.01.20 AS INTERIM ARRANGEMENT BYPASSING LILO PORTION OF MOTIHARI. 400KV BARH -GORAKHPUR 1 CHARGED AT 18:57 HRS ON 05.02.20 AS INTERIM ARRANGEMENT BYPASSING LILO PORTION OF MOTIHARI. |
| 7 | 220/132 KV 100 MVA ICT 3 at Chandil | JUSNL | 30-04-2020 | ICT BURST AND DAMAGED AFTER FIRE REPORTED |
| 8 | 132 KV NEW KISHANGA NJ - BARSOI S/C | BSPTCL | 02-07-2020 | Out due to heavy soil erosion at loc no 140 and 141 by river Kankai. line charged as 132 KV Purnea (PG) – Barsoiw.e.f 21.07.20 at 19:05 Hrs temporarily by suitable jumper arrangement at the crossing point of 132 kV Kisanganj(New) - Barsoi and 132 kV Purnea(PG) - Kisanganj (old). |
| 9 | 132KV-PURNEA (PG)-KISHANGANJ(OLD) S/C | BSPTCL | 02-07-2020 | |
| 10 | 220kV Barauni-Hajipur Ckt-1 | BSPTCL | 28-09-2019 | Tower collapse at location 38 & 39. Ckt-2 is on ERS since 13.01.2020. |
| 11 | 400KV-BINAGURI-RANGPO-1 | PGCIL | 01-11-2020 | Re-conductoring work from twin moose to HTLS. |
| 12 | 400KV-BINAGURI-RANGPO-2 | PGCIL | 01-11-2020 | |
| 13 | 400KV-BINAGURI-TALA-2 | PGCIL/ Bhutan | 18-12-2020 | initially opened on Voltage Regulation. Later S/D taken on 31.12.20 12:13Hrs up to 31.01.21 for line maintenance work. |
| 14 | 400KV-BINAGURI-TALA-1 | PGCIL/ Bhutan | 31-12-2020 | To facilitate shutdown of ckt 2 to avoid induction |
| 15 | 800KV HVDC ALIPURDUAR-AGRA- POLE-IV | PGCIL | 20-11-2020 | Voltage Regulation, at Alipurduar, 422 |

| | | | | |
|--------|--|---------|------------|---|
| 5 | | | | KV/419 KV |
| 1 6 | 800KV HVDC ALIPURDUAR- AGRA- POLE-III | PGCIL | 25-12-2020 | Power flow direction Reversal (NR- NER) |
| 1 7 | 400KV- ALIPURDUAR (PG)- JIGMELLING-2 | PGCIL | 28-12-2020 | Voltage Regulation as requested by Bhutan/changeover done from ckt 1 |
| 1 9 | 400KV/220KV 315 MVA ICT 1 AT ROURKELA | PGCIL | 26-12-2020 | Erection Works related to Paralleling of ICTs |
| 2 0 | 220kV Barauni TPS- Begusarai D/C | BSPTCL | 30-12-2020 | Tower collapse reported at location no. 41 |
| 2 1 | 220KV-NEW PURNEA- MADHEPURA-1 | BSPTCL | 27-12-2020 | Voltage Regulation |
| 2 2 | 765KV- JHARSUGUDA- RAIPUR PS (DURG)-2 | PGCIL | 07-01-2021 | Voltage Regulation |
| 2 3 | 765KV-ANGUL- JHARSUGUDA-3 | PGCIL | 08-01-2021 | Voltage Regulation |
| 2 4 | 400KV/220KV 315 MVA ICT 3 AT MALDA | PGCIL | 04-01-2021 | Annual maintenance & testing of ICT-2 at NTPC Barh |
| 2 5 | 400KV-MAITHON- MAITHON RB-1 | PGCIL | 09-01-2021 | Re-conductoring work |
| 2 6 | 400KV MAIN BUS - 1 AT JEERAT | WBSETCL | 09-01-2021 | Overhauling and maintenance of isolators connected to 400 KV Main Bus I |

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

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.

Members may update.

Deliberation in the meeting

Members noted.

Item No. D.3: Commissioning of new units and transmission elements in Eastern Grid in the month of December 2020.

The details of new units/transmission elements commissioned in the month of December-2020 based on the inputs received from beneficiaries:

| SL. No. | Element Name | Owner | Charging Date | Charging Time | Remarks |
|---------|---------------------------------------|-------|---------------|---------------|------------------------------|
| 1 | 400KV/220KV 315 MVA ICT 4 at Rourkela | PGCIL | 03-12-2020 | 13:46 | Parallel with existing ICT-2 |
| 2 | 400kV Gaya-Chandauti Ckt#2 | PMTL | 02-12-2020 | 18:41 | LILO of 400kV |

| | | | | | |
|---|---|------------|------------|-------|---|
| 3 | 400 kV Chandauti – Navinagar (NPGC) # II | PMTL | 03-12-2020 | 13:23 | Gaya-NPGC-DC at Chandauti |
| 4 | 400 KV Chandauti -Gaya #1 | PMTL | 11-12-2020 | 14:30 | |
| 5 | 400 KV Chandauti- Nabinagar #1 | PMTL | 11-12-2020 | 15:05 | |
| 6 | 220 kV Arrah (PG) - Dumraon New -1 | BSPTC L | 11-12-2020 | 11:40 | LILO of 220 kV Arrah-Nadokhar at Dumraon New. LILO portion owned by BGCL |
| 7 | 220 kV Arrah (PG) - Dumraon New -2 | BSPTC L | 11-12-2020 | 15:13 | |
| 8 | 220 kV Nadokhar (BSPTCL) -Dumraon New 1 | BSPTC L | 10-12-2020 | 17:02 | |
| 9 | 220 kV Nadokhar (BSPTCL) -Dumraon New 2 | BSPTC L | 11-12-2020 | 13:37 | |

Members may update.

Deliberation in the meeting

Members noted.

Item No. D.4: UFR operation during the month of December 2020.

Frequency profile for the month is as follows:

| Month | Max | Min | % Less IEGC Band | % Within IEGC Band | % More IEGC Band |
|----------------|-------------------------------|------------------------------|---------------------|-----------------------|---------------------|
| | (Date/Time) | (Date/Time) | | | |
| December, 2020 | 50.26, 25-12-2020 14:02 | 49.66 16-12-2020 09:57 | 4.79 | 75.75 | 19.46 |

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

Members may update.

Deliberation in the meeting

Members noted.

Item No. D.5: Bus splitting in 220 kV Durgapur (WBSETCL) S/s.

WBSETCL vide email dated 19/01/2021 informed that bus split arrangement has been done at 220 kV Durgapur (Bidhannagar) S/s to reduce fault MVA at both 220 kV & 132 kV level. The scheme detail is as given below:

220 KV system :

Bus A : 220 KV BKTTP Ckt 1 & 2, Asansol Ckt , J. K.Nagar Ckt, 200 MVA Tr1

Bus B: 220 KV DPL 1 & 2, 315 MVA Tr 1 & 2, Waria Ckt 1 & 2, 200 MVA Tr 2 & 3
220 KV Bus Coupler off.

132 KV system :

Bus zone A : 200 MVA Tr 2 & 3 (LV side), Bolpur 1, 132 KV DPL 1 & 2, Ukhra 1 & 2,

Bus zone B:- 200 MVA Tr1 (LV side), Mankar 1 & 2, Barjora 1 & 2, Panagarh 1 & 2 and Bolpur Ckt 2.

132 KV Durgapur- Bolpur Ckt 2 kept OFF from Bolpur end.

The detailed bus configuration arrangement is enclosed at Annexure D.4.

Deliberation in the meeting

WBSETCL informed that the bus coupler was opened in 220 kV level at Durgapur (WBSETCL) S/s and the feeders have been segregated and distributed between two buses.

OCC opined that by this arrangement the reliability gets reduced and it is not a proper bus splitting arrangement.

WBSETCL replied that this is an interim arrangement and the same would be reviewed after installation of 315MVA ICT at Durgapur S/s.

Item No. D.5: Revised FGD phasing plan details of NTPC stations- NTPC.

NTPC vide mail dated 14/01/2021 and 19/01/2021 intimated the revised FGD phasing plan details for their generators as given below:

Darlipalli U-1: 20/12/2022

Darlipalli U-2: 31/12/2022

Barh Unit-1: 31/10/2023

Barh Unit-2: 30/11/2023

Barh Unit-3: 31/12/2023

BRBCL Unit-4: 31/12/2023

Barauni Unit-8: 31/12/2023

Barauni Unit-9: 31/12/2023

NPGCL Unit-2: 30/09/2023

NPGCL Unit-3: 31/12/2023

NKSTPP Unit-1: 31/10/2023

NKSTPP Unit-2: 30/11/2023

NKSTPP Unit-3: 31/12/2023

Deliberation in the meeting

Members noted.

Meeting ended with vote of thanks to the chair.

Annexure A

LIST OF ATTENDEES OF 175th OCC MEETING

| SL NO. | NAME | DESIGNATION | ORGANISATION | PHONE NO. |
|--------|-------------------------|------------------------------|------------------|------------|
| 1 | ERPC, KOLKATA | HOST | ERPC | |
| 2 | N.S. MONDAL | MEMBER SECRETARY | ERPC | |
| 3 | D.K. BAURI | SUPERINTENDING ENGINEER | ERPC | |
| 4 | R.S. TALUKDAR | | | |
| 5 | S.M. JHA | CONSULTANT | ERPC | |
| 6 | SANATAN SARVESH | ASSISTANT DIRECTOR-I | ERPC | |
| 7 | ABHINABA BASU | ASSISTANT EXECUTIVE ENGINEER | BSPTCL | |
| 8 | KUMAR SATYAM | ASSISTANT DIRECTOR-II | ERPC | |
| 9 | J. G. RAO | EXECUTIVE ENGINEER | ERPC | |
| 10 | SAURAV SAHAY | CHIEF MANAGER | ERLDC | |
| 11 | DEBAJYOTI MAJUMDAR | MANAGER | ERLDC | 9903593500 |
| 12 | GOPAL MITRA | CHIEF GENERAL MANAGER | ERLDC | |
| 13 | CHANDAN MALLICK | MANAGER | ERLDC | |
| 14 | PRAKASH KUMAR GUPTA | | | |
| 15 | A BHUIN | | | |
| 16 | TUSHAR RANJAN MOHAPATRA | CHIEF MANAGER | ERLDC | |
| 17 | AMARESH MALLICK | | ERLDC | |
| 18 | SOURAV BISWAS | DEPUTY MANAGER | ERLDC | |
| 19 | LALDHARI KUMAR | | ERLDC | |
| 20 | NISHANT KUMAR SHANKWAR | MANAGER | DMTCL | 7987210324 |
| 21 | SHYAMAL KONAR | | | |
| 22 | GAGAN KUMAR MISHRA | EXECUTIVE ENGINEER | SLDC BSPTCL | 7992486100 |
| 23 | S. K. KHUNTIA | | | |
| 24 | D.K. JAIN | EXECUTIVE DIRECTOR | ERLDC | |
| 25 | PIYUSH PRADHAN | | OPGC | |
| 26 | PREETAM BANERJEE | | | |
| 27 | RABI MANIK | | | |
| 28 | ALOK PRATAP SINGH | | ERLDC | |
| 29 | AKHOURI AMRENDRA PRASAD | | | |
| 30 | CHANDAN MALLICK | DEPUTY MANAGER | ERLDC | |
| 31 | SUKANTA KUMAR SETHI | | | |
| 32 | SATYA DEEP TANGUDU | | SKPPL DIKCHU | |
| 33 | RAJ PROTIM | | ERLDC | 9433041823 |
| 34 | PRASANT KUMAR | SLDC ESE | | |
| 35 | B.B. MEHTA | SLDC ODISHA | | |
| 36 | J.C. PATRA | | NTPC TALCHER | |
| 37 | SANJEEV KUMAR SINGH | | | |
| 38 | D. BHATTACHARYA | | WB SLDC | |
| 39 | CH MOHAN RAO | | POWERGRID ODISHA | |
| 40 | PRACHI GUPTA | ASSISTANT EXECUTIVE ENGINEER | SLDC BIHAR | |
| 41 | FAISAL AHMED | | | |
| 42 | SURAJIT BANERJEE | | ERLDC | |
| 43 | RAMAN BHARMAURIA | | | |
| 44 | S.K. SAHU | | POWERGRID ODISHA | |
| 45 | NIMISH SETHI | | | |
| 46 | S.K. PRADHAN | ASSISTANT EXECUTIVE ENGINEER | ERPC | |
| 47 | RAJDEEP BHATTACHAJEE | RE | BSPHCL | |
| 48 | PALLAVI | | | |
| 49 | RAVI PRASAD | | | |
| 50 | P.P. JENA | EXECUTIVE ENGINEER | ERPC | |
| 51 | PARTHA GHOSH | CHIEF MANAGER | POWERGRID | |
| 52 | PRAVAS KUMAR DAS | | | |
| 53 | SANJAYA KUMAR SHARMA | | DVC | 9434539432 |
| 54 | MANORANJAN PANIGRAHY | | | |
| 55 | LENIN BODIGADLA | EXECUTIVE ENGINEER | ERPC | |
| 56 | BAURIBANDHU BEHERA | | | |
| 57 | SONAM WANGCHUK LEPCHA | | | |
| 58 | KARIKALCHOZAN M | | | |
| 59 | SUDEEP KUMAR | | POWERGRID ER-1 | |
| 60 | SAUGATO MONDAL | | | |
| 61 | KOUSHIK BANERJEE | | | |
| 62 | BIPLAB CHATERJEE | | | |
| 63 | SATYAPRIYA BEHERA | | | |
| 64 | SUNIL KUMAR SHARMA | | | |
| 65 | PRACHI GUPTA | | | |
| 66 | GAURAV AGARWAL | | | |
| 68 | P. P. CHAND | | | |
| 69 | S. GOUTAM | | CHUZACHEN HEP | |
| 70 | SAURABH KUMAR | | | |