भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति
Eastern Regional Power Committee
14, गोल्फ क्लब रोड, टालीगंज, कोलकाता-700033
Tel. No.: 033-24239651, 24239658 FAX No.:033-24239652, 24239653 Web: **www.erpc.gov.in**

NO. ERPC/EE/OPERATION/2022/ 190 **DATE: 09.05.2022**

To

As per list enclosed.

Sub: Minutes of 190th OCC Meeting held on 21.04.2022 physically at PowerGrid ER-II Regional Head Quarter, Kolkata as well as through MS Teams Platform- reg.

Sir,

Please find enclosed minutes of 190th OCC Meeting held on 21.04.2022 physically at PowerGrid ER-II Regional Head Quarter, Kolkata as well as through MS Teams Platform for your kind information and necessary action. The same is also available at ERPC website (www.erpc.gov.in).

Observations, if any, may please be forwarded to this office at the earliest.

This issues with the approval of Member Secretary.

Regards,

Yours faithfully,

09.V.22

(A. De)
EE(Opération)

LIST OF ADDRESSES:

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3. CHIEF ENGINEER, TRANSMISSION (O&M), JUSNL, RANCHI (FAX NO.-0651-2490486/2490863)
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CC:

Chief Engineer, OPM, CEA	Chief Engineer, NPC, CEA	ASSISTANT SECRETARY, ERPC

MINUTES
OF
190th OCC MEETING

Date: 21.04.2022

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700033

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 190TH OCC MEETING HELD ON 21.04.2022 (THURSDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the 190th OCC meeting. Welcoming all the participants to the meeting, he outlined the performance of ER Grid during March-2022 in brief. He highlighted the following points:

- *In March-2022, energy consumption of ER was 13944 MU which was same as that in March-2021.*
- *In March-2022, Peak demand of ER was 24,530 MW which was 2.1 % more than that of March-2021.*
- *During March -2022, 73.4 % of time, grid frequency was in IEGC Band (49.90Hz-50.05Hz).*
- *As per LGBR 2021-22, no thermal unit was scheduled for planned maintenance in May-2022.*
- *During month of March-2022 following Transmission lines were commissioned.*
    1. *400 kV LILO of Ckt. III & IV Patna-balia at Naubatpur (New) D/C-By BSPTCL*
    2. *220 kV Bihta-New Bihta D/ line - By BSPTCL*
    3. *220 kV Bihta-SDipara (New) D/C – By BSPTCL*
    4. *220 kV LILO of Ara (PG) - Pusauli (PG) at Dumraon GIS - By BSPTCL*
    5. *220 kV LILO of Begusarai - Biharsarif at Mokama line-By BSPTCL*
- *As far as coal stock position (As on 19.04.2022) is concerned, still many of the power stations of Eastern Region are reeling under coal shortage.*
- *Three units of WBPDCL have been retired w.e.f. 21st Feb, 2022: Bandel TPS U- (60MW); Kolaghat U-1 & 2 (210 MW each).*

PART – A

ITEM NO. A.1: Confirmation of Minutes of 189th OCC Meeting held on 16th March 2022 through MS Teams online platform.

The minutes of 189th Operation Coordination sub-Committee meeting held on 16.03.2022 was circulated vide letter dated 04.04.2022.

Members may confirm the minutes of 189th OCC meeting.

Deliberation in the meeting

Members confirmed the minutes of 189th OCC Meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B.1: Presentation on Technical Minimum Software by NTPC.

As per the scheme approved in 45th ERPC meeting held on 26.03.2022, NTPC has developed the Technical Minimum Software for Easter Region- URJA [URS Re-Scheduling and Jacking-Up Assistant] in co-ordination with ERLDC and ERPC. The URL link for easy accessibility of URS software- http://www.ntpcurja.in.

A special meeting was held on 15.04.2022 at 04.00 PM through MS Team Platform to go-live the URJA software for Eastern Region.

NTPC may give a brief presentation on Technical Minimum Software.

Deliberation in the meeting

NTPC representative gave a brief presentation on the functioning of the Technical Minimum Software.

OCC opined that the website may be password protected in order to restrict the usage of software to the ER constituents. Individual login id and password may be provided to the concerned constituents.

Further, provisioning of pop-up in case of generators are not able to meet the technical minimum schedule also to be ensured for better monitoring by the Grid operators.

The Committee applauded the efforts of NTPC towards timely delivery of the Technical Minimum Software.

ITEM NO. B.2: Islanding Schemes in Eastern Region.

B2.1. Implementation of Islanding Schemes in Eastern Region

In the meeting held on 28th December 2020 and chaired by the Hon'ble Minister of State (IC) it was directed that islanding schemes should be implemented for all major cities of the country considering all the strategic and essential loads. Subsequently, in line with the direction given in the meeting, the subject matter was discussed in PCC meeting of ERPC and it was finalized that new islanding scheme would be implemented for capital city of Patna & Ranchi.

I. Patna Islanding Scheme:

In the special meeting held on 06.08.2021, it was decided that Patna islanding scheme would be designed considering two unit of Nabinagar STPP (2*660 MW) of NPGCL as participating generator and loads of in and around Patna city. The provision of island formation with one unit of NPGC with corresponding load is also to be included in the island logic.

The islanding frequency & logic will be finalized based on the result of dynamic study to be carried out by SLDC Bihar/ERLDC.

The following timelines were decided:
1. Submission of requisite information by SLDC, Bihar: 2nd week of Aug' 2021.
2. Completion of Islanding simulation study by ERLDC: 4th Week of Aug' 2021
3. Review of islanding study & designing of the logic: By September'2021
4. Implementation & Operationalization of the Islanding Schemes: By March'2022

In 106th PCC meeting held on 16.09.2021 it was informed that the requisite information had already been shared by SLDC Bihar and the study is under progress by ERLDC. Further SLDC Bihar was advised to prepare the DPR by September'2021 for PSDF funding, if required.

In the 44th TCC Meeting, BSPTCL updated that preparation of DPR for PSDF funding is under process and the same would be completed within 15 days.

TCC stressed on the fact that this issue is being regularly monitored by MoP and advised BSPTCL for timely implementation of the Islanding Scheme.
OCC advised BSPTCL to expedite the matter with Siemens and prepare the DPR as per the said schedule without any further delay.

In the 189th OCC Meeting, Bihar representative submitted that the tender was cancelled due to no participation of vendors.

In the 45th TCC Meeting, following was decided:

a) A Technical Committee comprising of the members from BSPTCL, SLDC Bihar, and participating generator, Powergrid, ERLDC and ERPC may be constituted for finalizing the Islanding Scheme.

b) CESC may also be included in the Committee for any technical expertise.

c) The Committee may consult OEM/Vendor as and when required for any inputs.

d) The Committee may submit its report by 15th May'2022. TCC advised the concerned constituents to give their nominations latest by 31st March'2022.

In this regard, ERPC vide letter no. ERPC/Operation/IS/2022/97 dated 18.04.2022 **(Annexure B.2.1)** constituted a Technical Committee based on the nominations received for finalizing Patna Islanding Scheme.

Committee may update.

Deliberation in the meeting

The Committee submitted that the first meeting was convened on 19th April 2022 and the second meeting is scheduled to be held by 1st week of May 2022. The report would be submitted by 15th May 2022.

II. Ranchi Islanding Scheme:

In the special meeting held on 06.08.2021, it was decided that Ranchi islanding scheme would be formed with one unit of Tenughat TPS (150-160 MW average generation) & Inland IPP (50-55 MW average generation) as participating generator & essential/critical loads of Ranchi to the tune of 180 MW. The islanding frequency & logic will be finalized based on the result of dynamic study to be carried out by SLDC Jharkhand/ERLDC.

The following timelines were decided:
1. Submission of requisite information by SLDC, Jharkhand: 2nd week of Aug' 2021.
2. Completion of Islanding simulation study by ERLDC: 4th Week of Aug' 2021
3. Review of islanding study & designing of the logic: By September'2021
4. Implementation & Operationalization of the Islanding Schemes: By February'2022

In 106th PCC meeting held on 16.09.2021 it was informed that the requisite information had already been shared by SLDC Jharkhand and the study is under progress by ERLDC. Further

SLDC Jharkhand was advised to prepare the DPR by September'2021 for PSDF funding, if required.

In the 44th TCC Meeting, JUSNL updated that preparation of DPR for PSDF funding is under process and the same would be completed within 15 days.

TCC stressed on the fact that this issue is being regularly monitored by MoP and advised JUSNL for timely implementation of the Islanding Scheme.

In the 189th OCC Meeting, Jharkhand representative submitted that the tender was cancelled as only one bidder qualified among the 3 participants.

In the 45th TCC Meeting, following was decided:

a) A Technical Committee comprising of the members from JUSNL, SLDC Jharkhand, and participating generator, Powergrid, ERLDC and ERPC may be constituted for finalizing the Islanding Scheme.

b) CESC may also be included in the Committee for any technical expertise.

c) The Committee may consult OEM/Vendor as and when required for any inputs.

d) The Committee may submit its report by 15th May'2022. TCC advised the concerned constituents to give their nominations latest by 31st March'2022.

In this regard, ERPC vide letter no. ERPC/Operation/IS/2022/97 dated 18.04.2022 **(Annexure B.2.1)** constituted a Technical Committee based on the nominations received for finalizing Ranchi Islanding Scheme.

Committee may update.

Deliberation in the meeting

The Committee submitted that the first meeting was convened on 19th April 2022 and the second meeting is scheduled to be held by 1st week of May 2022. The report would be submitted by 15th May 2022.

In addition to above new islanding schemes, the following schemes have already been finalized and under different stage of implementation:

III. Chandrapura Islanding Scheme:

The scheme detail in brief is as follows:

- The CTPS-B islanding scheme is to de designed with two units of CTPS-B (2x250 MW) generating station as participating generator and connected loads at CTPS, Putki, Biada, Nimiaghata & Patherdih. The estimated off-peak and peak load in the proposed islanding system is 280 MW & 420 MW respectively.

- The islanding frequency for CTPS-B islanding system was decided as 48.4 Hz.

In special meeting held on 06.08.2021, following deliberations took place:

Representative of SPE wing of DVC updated that necessary discussion for implementation of the scheme at CTPS-B is going on with M/s GE for finalization of the scope of work & other

modalities. He submitted that the tender process for implementation of islanding scheme would be initiated within two weeks.

In the 44th TCC Meeting, DVC representative informed that the work order for implementation of Chandrapura Islanding Scheme would be placed by March-2022 and the same would be implemented within 6 months.

In the 185th OCC meeting, DVC representative informed that the scope of work and scheme for the islanding of CTPS unit # 7 & 8 has been prepared and the budgetary offer from M/s Siemens & M/s GE has also been collected. The scheme would be finalized within 2-3 months and subsequently the tendering process would be initiated.

OCC advised DVC to complete the work within the stipulated time period.

In the 186th OCC meeting, DVC representative informed that the project is in the process of approval and the NIT would be floated within a month.

In the 187th OCC meeting, DVC representative informed that the order placement would be done by February 2022 and the work would be completed within 6 months.

In the 188th OCC meeting, DVC representative informed that the NIT was floated on 25th January 2022 and the bid would be opened on 25th February 2022.

In the 189th OCC Meeting, DVC representative submitted that the bid opening date has been extended to 22nd March 2022.

DVC may update.

Deliberation in the meeting

DVC representative submitted that 3 bids were received which were opened on 18th April 2022. He further submitted that the technical evaluation is under progress and the commercial evaluation would be completed by the end of April 2022.

IV. IB-TPS Islanding Scheme:

The scheme was finalized in the special Meeting on Islanding Scheme of IB-TPS held at ERPC, Kolkata on 12th December 2018.

In special meeting held on 06.08.2021, OPGC representative informed that work order had been placed on OEM (M/s BHEL) for implementation of the Islanding scheme at IB TPS units.

OPGC was also advised to take up the issue with their highest authority as well as with the OEM for expediting the implementation of islanding scheme.

In the 44th TCC Meeting, OPGC representative informed that IB TPS Islanding Scheme would be implemented as per the given timeline i.e., April-22.

In the 184th OCC meeting, OPGC representative informed that the erection and testing work has been completed. He further submitted that the islanding scheme would be implemented after consultation with OPTCL regarding the load details (144 MW).

OCC advised OPGC to update the status of their meeting with OPTCL regarding this to ERPC and ERLDC.

In the 185th OCC meeting, OPGC representative submitted that a meeting with OPTCL has been conducted on 11.11.2021 regarding erection and commissioning of DTPC at OPGC and Tarkera ends. The work has already been started at the Tarkera end and the whole work is scheduled to be completed by the end of December 2021.

OCC advised OPGC to complete the commissioning work of DTPC coupler at the earliest.

In the 186th OCC meeting, OPTCL representative informed that the installation and commissioning work of DTPC at both Budhipadar and IB TPS end are in progress and would be completed shortly. Further, co-ordination with M/s ABB regarding the commissioning work had also been done and the work is expected to be completed by the end of January 2022.

In the 187th OCC meeting, OPTCL representative informed that installation of DTPC and cable laying at both the ends i.e., Budhipadar and IB-TPS are completed. The commissioning and testing work would be started after the arrival of ABB engineers and the whole work is expected to be completed by the end of February 2022.

In the 188th OCC meeting, OPTCL representative informed that the ABB engineers had arrived and the pre-commissioning work had started. The commissioning and testing works are expected to be completed by 2nd week of March 2022.

In the 189th OCC Meeting, OPTCL representative submitted that the ABB engineers would arrive by 27th March 2022 and the work is expected to be completed by the end of March 2022.

OPTCL may update.

Deliberation in the meeting

OPTCL representative submitted that the installation, commissioning and testing of DTPC at both Budhipadar and OPGC end was completed.

OPGC representative submitted that end to end signal testing and wiring from switchyard to relay panel had been completed. The testing would be done during shutdown or outage of the units.

ITEM NO. B.3:	**Declaration of Peak seasons for Hydro-Generating Stations for calculation of Regional Transmission Deviation Accounts.**

Clause No. 12 (1) (a) of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations'2020 states that,

"For a generating station, net metered ex-bus injection, in a time block in excess of the sum of Long-Term Access, Medium Term Open Access and Short-Term Open Access: Provided that for a hydro-generating station, overload capacity of 10% during peak season shall be taken into account."

Point No. 43.3.10 of SoR issued by Hon'ble CERC vide No. L-1/250/2019/CERC dated 10th August'2020 states that:

"Regarding hydro generating stations' overload capacity of 10%, the Regulation has been modified to include that such exemption/ consideration shall be applicable only during high inflow period."

The above clause of the Sharing Regulation'2020 and Statements of Reason reveals that for hydro-generating stations, an overload capacity of 10% can be considered during peak season for the calculation of RTDA accounts. As per the CERC Tariff Regulations 2019-24, the peak season for hydro-generating stations should be considered based on the high inflow season. In this regard, the high inflow season may vary depending upon the geographical location of the hydro generators.

In this context, proper guidelines and Nodal Agency are required for declaring the peak seasons for each hydro generating station.

In the 3rd Meeting of the Hon'ble CERC with Chairperson and Member Secretary of RPCs dated 17.10.2021, the following decision was taken after detailed deliberation:

a) ERPC has raised the issue regarding special dispensation to hydro generating stations where, in RTDA (regional transmission deviation account), the capacity of hydro station during peak season is calculated at over and above 10% of such generating station's capacity.

ERPC has requested that there should be proper guidelines for declaration of peak season (in respect of hydro-generating stations) by the Implementing Agency (NLDC) for the purpose of the Sharing Regulations.

b) Member Secretary (ERPC) stated that RPCs decide the peak demand season and communicate the same to the Commission as per the 2019 Tariff Regulations. But in this case, the Implementing Agency (NLDC) is required to make such declaration. Sh. Kejriwal SE(ERPC) stated that under the 2019 Tariff Regulations, ERPC is finalizing high demand season and low demand season for thermal power generating stations after discussing in the RPC and the same is communicated to all.

c) Member (ISJ) observed that RPC is the agency that may be entrusted with declaration of peak season for hydro-generating stations too. Chairperson, CERC observed that same formulation, as provided in the 2019 Tariff Regulations, can be extended for declaration of peak season for the purpose of the Sharing Regulations for the hydro-generating stations also i.e., RLDC in consultation with RPC.

In light of the above decision, Peak season for Hydro Generating stations shall be decided in the OCC forum of ERPC.

In the 189th OCC Meeting, ERPC representative gave an overview of the agenda item and submitted that as directed in the 3rd meeting of CERC with RPCs and further in line with the discussions of the 45th CCM meetings, the high inflow season for hydro generating stations may be concluded in the OCC meetings as per the formulations provided in the 2019 Tariff Regulations.

NHPC representative submitted that high inflow and spillage for the hydro stations in the Teesta basin is generally observed from 15th May till 10th October. Therefore, May to October could be considered as peak seasons.

Member Secretary, ERPC was of the view that the peak season should be specific to respective hydro stations and should be defined on monthly basis.

OCC advised all the regional hydro generators whose RTDA is being calculated by ERPC Secretariat to furnish relevant data in consideration of high inflow seasons and the reasons

thereof so that it could be finalized in the upcoming OCC meetings.

ED, ERLDC highlighted that the declaration of peak seasons should only be considered for the calculation of RTDA. However, the NOC would be given as per the prevailing procedure considering the actual spillage.

NHPC representative further requested to withhold the RTDA payment raised by CTU during the period from March 21 to June 21 until any final decision is taken regarding finalizing of high inflow seasons.

OCC advised NHPC to release the RTDA payment at the earliest. Further, after the finalization of high inflow season for respective hydro generators, necessary revisions of the RTDA accounts pertaining to those months would be done by ERPC Secretariat.

Respective hydro-stations may update. Members may discuss.

Deliberation in the meeting

ERPC representative submitted that a preliminary study was done based on the spillage data of previous years submitted by the hydro stations of Eastern Region. Accordingly, it was decided that for the months in which spillage was there on daily basis throughout the complete months for last 3 years submitted data, the corresponding months would be taken as high-inflow period.

Further in case of partial spillage during a month, high inflow month would be considered in case the spillage is more than 15 days during the month according to the last 3 years submitted data.

ERLDC representative was of the view that the high inflow season could be considered as per the actual spillage condition declared by the respective hydro power stations in due course of time.

ERPC representative submitted that high inflow period based on actual spillage data may lead to unnecessary complications in the calculation of RTDA accounts. Moreover, the regulations suggest the consideration of high inflow period to be continuous rather than on discrete basis.

Regarding newly commissioned hydro power stations, high inflow period would be decided based on the available hydrological data.

Based on the spillage data received and the preliminary study done, the inflow period for the respective hydro stations for the years 2021-22 & 2022-23 is mentioned below.

Hydro Station	High inflow period	Duration
Teesta V	June, July, August, September	04 Months
Rangit	July, August, September, October	04 Months
Jorethang	July, August, September	03 Months
Tashiding	July, August, September	03 Months
Dikchu	July, August, September	03 Months
Chuzachen	June, July, August	03 Months
Teesta-III	June, July, August, September	04 Months
Rongnichu	June, July, August, September	04 Months

ITEM NO. B.4: Outage of Important Transmission System.

B4.1. 132kV Sagbari–Melli.

Sikkim vide mail dated 09.06.2021 updated the following status:

1) In loc 82,83 & 84 we have low ground clearance which need hill cutting but if needed TL can be charged after putting temporarily barbed wire fencing.
2) In loc 98-99 a house had been constructed just below the line and warning had been issued to the owner for not to do vertical extension of the house till any such arrangement is made.
3) In loc 116 &117 land owner demanding for intermediate tower and not allowing for us to clear the jungles.
4) Loc 128 is in dilapidated condition due to sinking effect posing threat to lives and properties. Local public are asking to shift the tower in safe place before restoration of supply in the TL.
5) 80% of jungle clearance has been completed and remaining 20% is in Forest area most of it is under west district and waiting for permission from Forest department.
6) The delay in obtaining permission for following trees in forest land is that it cannot be ascertained whether FCA clearance during construction of TL was obtained as the record is not available either in power department or in DFO Office. Regarding this it had been told by ERPC that once obtaining environment clearance at the time of construction there need not to take permission for further clearance of ROW from Forest dept and this matter is been conveyed to the Forest department but they informed us as per Forest Act of Sikkim state permission has to be obtained for fresh felling with payment of compensation. File for approval is being send to conservator of Forest from DFO on 10/6/2021.

In the 181st OCC meeting, Sikkim representative submitted that for the rest 20% work, they are yet to get clearance from the Forest Department. He further informed that there are also some RoW issues in that portion of the line. Further, ERLDC representative stressed over the fact that being a very important line, the restoration of the 132kV Sagbari–Melli linemay be done at the earliest.

OCC advised Sikkim to take up the matter with Forest Department for obtaining necessary clearance and also to resolve the ROW issues without any further delay.

In the 187th OCC meeting, Sikkim representative informed that clearance from the Forest Department is yet to be received.

OCC expressed serious concern over the issue and advised Sikkim to be in regular touch with the Forest Department for obtaining the clearance.

In the 45th TCC Meeting, Sikkim representative informed that efforts have been made to restore the line at the earliest.

Sikkim may update.

Deliberation in the meeting

Sikkim representative submitted that the issues related to location 82, 83, 84 and 128 are still persisting.

ERLDC representative submitted that Melli being an important load center of Sikkim is connected to Siliguri and Rangit Power Station through Rangpo S/s. Therefore, absence of 132 KV Sagbari-Melli T/L would render shutdown of any link in Rangit-Rangpo-Melli line impossible from

maintenance point of view.

Sensing the gravity of the situation, the Committee was of the view that a separate meeting with Sikkim would be convened for further deliberation on the above issue.

B4.2. 220kV Pandiabili - Samangara D/C

220kV Pandiabili-Samangara D/C line tripped on 03-02-2019 during the event of Fani due to Tower collapse. 48 no towers got fully damaged and 12 no towers got partially damaged. Presently the line is charged from Pandiabili end up to location no 58. It is a very important line for supplying power to Puri area. The line is under outage more than 2 years.

In the 184th OCC meeting, OPTCL representative submitted that the restoration work has been undertaken by Powergrid.

He added that DA & DD type tower design has already been tested and passed by CPRI, however, the prototypes of DB & DC type tower are under testing. Once the testing of the same is successfully completed, the action plan of the restoration work would be submitted by Powergrid.

OCC advised OPTCL to share the action plan to ERPC & ERLDC.

In the 185th OCC meeting, OPTCL representative informed that permission for testing of type DB & DC towers has been taken from CPRI but the tentative timelines for completion of test are yet to be received from CPRI.

In the 186th OCC meeting, OPTCL representative informed that the type testing of DB & DC towers is under progress at CPRI. Type testing of DB & DC type tower is expected to be completed by 22nd and 28th December 2021 respectively. Further, the foundation work of towers has also started and is under progress.

In the 187th OCC meeting, OPTCL representative informed that the type-testing for all the towers had been completed at CPRI. The foundation work has been started at three places and the tower materials would be procured shortly.

In the 188th OCC meeting, OPTCL representative informed that type testing of all towers had been completed and procurement and pile foundation works are in progress.

In the 189th OCC Meeting, OPTCL representative submitted that the pile foundation works are in progress and work would be completed by June 2023.

OPTCL may update.

Deliberation in the meeting

OPTCL representative submitted that the work is under progress and is expected to be completed by December 2023.

OCC expressed serious concern over the issue and advised OPTCL to expedite with Powergrid for the timely completion of work.

B4.3. 440/220kV 315 MVA ICT 2 at Meramundali:

400KV/220KV 315 MVA ICT 2 at Meramundali tripped on 21-02-2021 due to fire hazard at Meramundali SS. The ICT is under outage since then. Meramundali S/S is serving the important load of the Odisha. Long outage of an ICT at such crucial S/S may hamper the reliability of the Grid.

In the 182nd OCC meeting, OPTCL representative submitted that the old ICT, which was completely damaged, would be replaced by a new one. The new 315 MVA ICT of BHEL make has already arrived at site and the foundation modification work is going on. OPTCL representative stated that the replacement work is expected to be completed by 30th Nov'21.

OCC advised OPTCL to expedite the work and also to share the work schedule of the same to ERPC & ERLDC for effective monitoring of the same.

In the 183rd OCC meeting, OPTCL representative submitted that the foundation work has been completed and the remaining work is expected to be completed by Nov'21.

In the 184th OCC meeting, OPTCL representative submitted that the work would be completed by December'21. He further mentioned that representative of BHEL (OEM) is yet to visit the site, however, the civil construction work has been completed and the said transformer is on the plinth.

OCC advised OPTCL to expedite the work and complete it by 31st Dec'21.
In the 185th OCC meeting, OPTCL representative informed that they are in constant touch with the OEM and after receipt of some of the materials at the site the erection work is expected to be completed by the end of December 2021.

In the 186th OCC meeting, OPTCL representative informed that some materials are yet to be received for which the order has already been placed. After receipt of materials and arrival of OEM representatives, work would be started and would be completed in another 2 months.

OCC advised OPTCL to co-ordinate with their OEM and complete the work without any further delay.

In the 189th OCC Meeting, OPTCL representative submitted that OEM engineers had arrived and the erection works are in progress and would be completed by 2nd week of April 2022.

OPTCL may update.

Deliberation in the meeting

OPTCL representative submitted that all the erection works had been completed except those of header pipes due to probable mismatch in them. The work would be completed after the new header pipes are received.

Further, two phases of nitrogen purging have been completed and the third is under progress. The commissioning work would be completed by 15th May 2022.

B4.4. Outage of 400kV Main Bus-2 at Dikchu HEP.

400kV Main Bus-2 at Dikchu HEP has been out since 05.05.2021.

In the 185th OCC meeting, Dikchu representative was not available in the meeting.

Dikchu vide mail dated 27.11.2021 informed that, on 07.09.2021 a test had been conducted by them to pin point the fault location. Subsequently, the fault was found in the B phase Circuit Breaker Compartment of 400 KV Dikchu-Teesta 3-line bay 403.

So as suggested by the OEM, there was a need to replace the CB compartment.

In this regard, the offer for new CB compartment from OEM GE(T&D) had already been received on 15th Nov' 21. The procurement process is in progress & the works are being planned to be carried out in 3rd week of Jan' 22.

In the 186th OCC meeting, Dikchu representative informed that OEM M/s GE had given a lead time of 8 months for the supply of new CB compartment, but considering the seriousness of the issue, M/s GE has now agreed to provide the same in 3 months. The work is expected to be completed by the end of March 2022.

Considering the importance of Dikchu-Teesta-III line, OCC advised Dikchu to expedite the work at the earliest in consultation with their OEM.

In the 187th OCC meeting, Dikchu representative informed that the work would be completed by the end of June 2022.

OCC advised Dikchu to expedite the work before the arrival of peak hydro season.

In the 188th OCC meeting, Dikchu representative was not available during the discussion.

In the 189th OCC Meeting, Dikchu representative submitted that the procurement of CB compartment is under process.

OCC advised Dikchu to coordinate with OEM to expedite the supply of CB compartment.

Dikchu may update.

Deliberation in the meeting

Dikchu representative was not available during the discussion.

Dikchu vide mail dated 22nd April 2022 submitted the following:

- *The delivery of the new B-phase Circuit breaker compartment is being delayed due to the long Queue of pending orders with the OEM during the Covid-19 period. There is also delay in receipt of some of the specialized imported components of the Breaker causing delay in manufacturing of CB.*
- *OEM GE(T&D) has informed that the supply would be completed within six months. The CB accordingly is expected to be received at site in October, 2022 and the work will be completed in the same month.*

ITEM NO. B.5: Reliable Power Supply to Lalmatia/Godda/Dumka areas of JUSNL

B5.1. Restoration of 220kV Farraka-Lalmatia S/C line

The 220 kV Farakka-Lalmatia S/C was out of service since April 2021 due to tower collapse. The 220/132/33 kV Lalmatia substation is relying on only 132 kV lines. At present the local load at 220 kV Dumka and Godda S/S were being radially fed from 400/220 kV Maithon S/S through 220 kV Maithon-Dumka D/C and 220 kV Dumka-Godda D/C.

In 181st OCC Meeting, JUSNL representative submitted that they had got a letter from NTPC on 19th July '21 regarding anti-theft charging of the220kV Farraka-Lalmatia S/C line at 33kV level. Earlier the antitheft charging of the line was done at 11kV level but incidents of thefts have been reported in some portion of the conductor.

Further, Jharkhand representative requested NTPC to submit the details of the 33kV lines passing below 220kV Farakka-Lamatia T/L. He added that as per information obtained from their JUSNL Discom part, the 33kV lines are mostly connected with 11kV feeders and due to this it would be difficult to charge the Farakka-Lalmatia line at 33kV level in Pakur area.

NTPC representative informed that they had charged the line up to loc no.241 but in between loc no.76-82 only the top conductor was in charged condition and the bottom rest were not; because of this theft might have happened in that portion. He further added that they had already isolated the section from loc no.76-82, whereas up to loc no.76 the line is in charged Condition and from loc no.82-241 the line needs to be charged.

ERPC advised NTPC and Jharkhand to explore the possibility of antitheft charging at 33kV level first and if that is not feasible then charging at 11kV can be assessed.

In the meeting held on 10th August 2021 by the Hon'ble Secretary, Ministry of Power, Government of India, ECL was directed to handover the FLTS assets on "as is where is basis" to

JUSNL, the Operation and Maintenance whereof as was with the NTPC is also to be transferred to the JUSNL without any further delay and latest by 20th August 2021. Further JUSNL was directed to comply with all other directions of the CERC's order dated 21.07.2020, after the transfer of the FLTS from ECL.

In the 182nd OCC meeting, JUSNL representative submitted that the tripartite agreement for

taking over of FLTS as well as O&M of FLTS is in process and the same would be done after getting the consent from the competent authority by 4th week of August'2021.

ERLDC representative advised JUSNL for putting 220kV Lamatia-Godda line into service. JUSNL representative informed that they had tried to charge the line once but due to voltage rise at Lalmatia end, they had to open the line.

OCC advised JUSNL to re-check the possibility of charging the 220kV Lamatia-Godda line for reliable power supply to Lalmatia.

ERLDC representative opined that restoration of the 10 nos. of collapsed towers may be done first on priority basis.

JUSNL representative stated that the estimate for restoration of the lines has already been

approved by their BoD and Govt. of Jharkhand has been approached for fund requisition. In the meantime, the tendering process would be finalized and after getting the necessary fund approval the work order for the same would be placed.

On query, JUSNL representative ensured that the line would be restored by June'22.

In the 188th OCC meeting, JUSNL representative informed that the BOQ has been revised due to the incident of conductor theft. The tender would be placed within 15 days and the restoration work is expected to be completed in 3 months.

In the 189th OCC Meeting, JUSNL representative submitted that the tender had been floated and the due date is 21st March 2022.

In the 45th TCC Meeting, JUNSL representative informed that re-tendering work is under process and the expected timeline for restoration of the said line is July'2022.

JUSNL may update.

Deliberation in the meeting

JUSNL representative submitted that the due date of tender opening is 21st April 2022.

ITEM NO. B.6: Restoration of PLCC for 220 kV Chandil-STPS S/C line

In 101st PCC meeting held on 13.04.2021, it was come to notice that both the channels of PLCC of 220 kV Chandil-Santaldih S/C line is unhealthy at Chandil end since May-2020. PCC advised JUSNL to rectify the PLCC issue at Chandil end at the earliest.

In 108th PCC meeting held on 16.11.2021, JUSNL representative informed that the PLCC rectification work could not be carried out as they are yet to receive the financial approval for the said work from their higher authority.

220 kV Chandil-STPS being an inter-state line and connected to generating station, healthiness of PLCC/line shall be ensured for overall reliability & security of the grid.

In the 185th OCC meeting, OCC expressed serious concern over the issue and advised JUSNL to update the status at the earliest.

In the 186th OCC meeting, JUSNL representative informed that the technical part of the tender has been opened and PLCC rectification work would be carried out after finalization of the tender.

In the 187th OCC meeting, JUSNL representative informed that the work order would be placed by the end of January 2022 and the work would be completed by February 2022.

In the 188th OCC meeting, JUSNL representative informed that as the price of L1 bidder was much higher than the estimation, further negotiation with the vendor was done. The work order would be placed by 1st week of March 2022.

In the 189th OCC Meeting, JUSNL representative submitted that the work order has been awarded. The PLCC rectification work would be started during the shutdown planned in the last

week of March' 2022.

JUSNL may update.

Deliberation in the meeting

JUSNL representative submitted that the PLCC work was completed on 25th March 2022. Further, Carrier healthiness was also achieved in the relay panels and control panels at both the ends.

JUSNL representative further enquired about the connection of relay with PLCC at Santaldih end. WBPDCL representative was advised to update the status of the same to Jharkhand.

ITEM NO. B.7: Power assistance of 40 MW at 132 KV Manique (JUSNL) from Manique (DVC) and 30 MW additional power from 132 KV Joda-Kendposi T/L.

With reference to the above captioned subject, it is to inform that, overhauling 220/132 KV 100 MVA Transformer No. – 01 at Chandil GSS has to be done on the basis of test report submitted by Transmission Division, Jamshedpur (JUSNL). They have applied for shutdown of this Transformer from 10:00 hrs. of 22.04.2022 to 17:00 hrs. of 17.05.2022 (on continuous basis) for overhauling of transformer. A load flow plan has been attached herewith considering availability of only two transformer of rating 100 MVA each. Due to outage of 01 transformer of rating 100 MVA around 70 MW load will be shifted to other GSS of JUSNL.

As such sufficient power assistance will be required throughout the above period to provide uninterrupted, unrestricted quality power to Manique and Kendposi GSS. Accordingly, it is requested to kindly ensure availability of power as follows:

1) 40-45 MW power assistance through 132 KV Manique (JUSNL) – Manique (DVC) tie with DVC.
2) 30-35 MW additional power assistance through 132 KV Joda (OPTCL) – Kendposi (JUSNL) tie with OPTCL.

JUSNL may update. Members may discuss.

Deliberation in the meeting

JUSNL representative submitted that out of 3 nos. of 100 MVA Transformers at Chandil, overhauling of transformer No. 1 has to be carried out, for which load shifting to other GSS would be necessary. In this regard, power assistance of around 60-65 MW from DVC and around 52 MW from Joda would be required during the shutdown period.

DVC representative submitted that power assistance up to a maximum of 20 MW may be provided after the revival of Ramgarh-Ranchi line which is expected to be synchronized on 26th April 2022. Moreover, the above-mentioned power may be restricted to 10 MW during peak hours.

Further, SLDC Jharkhand representative submitted that an assistance of 30 MW of power may be provided to DVC from Patratu to compensate for the same in Manique.

Odisha representative submitted that as of now a quantum of 30 MW of power is being drawn through the Joda-Kendposi tie line radially on continuous basis for the last 2 years.

Further, Odisha agreed to provide a temporary assistance of 52 MW of power during the outage period on terms of making permanent arrangements for using the Joda-Kendposi as tie line rather than as a radial line.

OCC advised JUSNL to plan the overhauling activities from the 1st week of May 2022 after the revival of Ramgarh-Ranchi line.

ITEM NO. B.8: Continuous high loading of 220 KV Lapanga-Katapalli D/C line.

Load of Katapalli, Bolangir, and Keshinga area is met through two sources. One is from 400/220 kV Lapanga and the other is from 400/220 kV Bolangir. Further, around 225 MW of solar plant is installed in the area. It is observed that during late evening hours, when the demand is at its peak while generation from solar is almost zero, loading of 220 kV Lapanga-Katapalli D/C remains very high and the system remains N-1 insecure during the period and any outage of the line may lead to a widespread blackout.

In view of the above OPTCL is requested to share any upcoming plan for making the system N-1 Secure. Further, till the new lines are constructed, designing of suitable SPS for making system N-1 secure is being taken up with Odisha.

OPTCL may update.

Deliberation in the meeting

ERLDC representative submitted that the load of Katapalli, Bolangir, Keshinga and Bargarh which is around 450-500 MW during summer is met through Lapanga and Bolangir ICT's. As a result, the N-1 criteria for 220 KV Lapanga-Katapalli D/C line is not fulfilled due to high loading. In case of tripping of these lines, the entire load may shift to Bolangir ICT affecting power supply to South Odisha, Indravati and Southern Grid.

SLDC Odisha representative submitted that before 1st April 2022 the loading in the Lapanga-Katapalli D/C line was around 180 MW each. After idle charging of 400 KV Meramundali-Angul line, the load in the Lapanga-Katapalli D/C line has reduced to 110 MW each.

In case of high loading of the lines, 400 KV Meramundali-Angul may be opened first following which Katapalli-Bolangir may be opened at the Katapalli end in the worst case to reduce the loading.

OCC advised SLDC Odisha to follow the instructions of ERLDC during the high loading conditions.

ITEM NO. B.9: Ensuring N-1 reliability in West Bengal system.

At present only one 315 MVA ICT is installed at 400/220 kV Sagardighi power station and the same is continuously loaded close to its limit during the peak hours. Further, any outage of this ICT will increase the loading of 2 x 315 MVA 400/220 kV ICTs at Gokarno which itself is not N-1 complied.

WBSETCL is requested to share their plan for mitigating these contingencies and making system N-1 secure.

Deliberation in the meeting

ERLDC representative submitted that the entire Sagardighi generation of around 1600 MW is being evacuated through the 400 KV systems. Outage of the Sagardighi ICT affects various other networks like Gokarno and DVC.

WBSETCL representative submitted that in view of non-compliance of N-1 criteria at Gokarno ICT, a third ICT was planned long back for which LOA was placed on 18.08.2020 and delivery was scheduled by 14.06.2021 which was delayed on ground of covid restrictions. As of now, the delivery of the transformer is scheduled in October 2022 and commissioning is expected by December 2022.

WBPDCL representative submitted that the plans for another 315 MVA ICT at Sagardighi is under progress and is expected by January 2024, as its procurement and commissioning is linked with the FGD project which is under tendering stage.

OCC advised WBPDCL to go for tendering of FGD and 315 MVA ICT project separately.

ITEM NO. B.10: Ensuring Grid security in case of extreme Low-Frequency System.

The Indian power system is passing through a very rough phase, where low frequency is observed almost on daily basis. In line with IEGC 5.4.2(e)

Quote

In order to maintain the frequency within the stipulated band and maintaining the network security, the interruptible loads shall be arranged in four groups of loads, for scheduled power cuts/load shedding, loads for unscheduled load shedding, loads to be shed through under frequency relays/ df/dt relays and loads to be shed under any System Protection Scheme identified at the RPC level. These loads shall be grouped in such a manner, that there is no overlapping between different Groups of loads. In case of certain contingencies and/or threat to system security, the RLDC may direct any SLDC/ SEB/distribution licensee or bulk consumer connected to the ISTS to decrease drawl of its control area by a certain quantum. Such directions shall immediately be acted upon. SLDC shall send a compliance report immediately after compliance of these directions to RLDC.

Unquote

A list of feeders has already been decided and agreed upon in earlier OCC meetings which can be opened as physical measures for demand disconnection as per ERLDC and SLDC.

Further UFRs are installed as a defense mechanism to restore the frequency whenever it falls below 49.4 Hz. However, it may happen that even after an operation of the first stage of UFR frequency again remains/dips below 49.4 Hz and become a threat to grid stability. As per section 29(1) of the Electricity Act

In line with the same to enhance the grid stability a list of feeder have been identified which ERLDC will open for the constituent which is overdrawing and when the frequency is below 49.4 Hz. The same list is attached in **Annexure-B.10**.

ERLDC may update.

Deliberation in the meeting

ERLDC representative submitted that operationalization of UFR has to be ensured as there has been few instances of under frequency. Further, all the states were requested to keep the UFR settings at 49.4 Hz.

*In case the UFR does not operate below 49.4 Hz, a list of feeders (**Annexure-B.10**) have been identified corresponding to each state, which may be opened to prevent any grid collapse.*

Upon enquiring Odisha regarding frequent over drawl from the grid, it was informed that sufficient power from the IPP's as contracted are not being provided. Due to insufficient coal stock, GMR is able to supply only 175-180 MW of power out the 375 MW contracted value. In this regard, GMR has been advised to avail the imported coal option. Further, supply of power from Vedanta is also restricted to 30-40% of the total.

Odisha representative submitted that the above issue of over drawl would be resolved after the synchronization of OPGC unit # 4 on 26th April 2022. Further, hydro generation also to be maximized during the peak hours and night to reduce the instances of over drawl.

Odisha representative was of the view that the UFR relay settings of 49.4 HZ is too low and requested to review the same in the NPC forum.

ITEM NO. B.11: Ensuring healthiness of ADMS.

Automatic demand management scheme (ADMS) is already commissioned in West Bengal, DVC and Jharkhand. Logic for ADMS is as implemented in these sate is as follows.

Sl No	State/Utility	Logic for ADMS operation	Implementation Date	Total Load connected in ADMS logic
1	Jharkhand	System Frequency < 49.9 Hz AND Deviation > 12 % or 25/50/75 MW. Block I, II & III feeders will be selected for load shedding depending on the O/D.	In service from 21st August 2019.	Total 90 MW
2	DVC	F <49.9 Hz AND deviation > 12 % or 150 MW	In service from 17.06.2016.	Total 281 MW
3	West Bengal	F <49.7 AND deviation > 12 % or 150 MW	In service from 25.11.16.	Total 225 MW

In the month of April 2022 frequency remained on lower side for major amount of time. Further on some occasion the above criteria for operation of ADMS was satisfied for all the three constituents. However, only West Bengal has reported a successful operation of ADMS, even in West Bengal full quantum relief is not observed on all occasions.

DVC and Jharkhand are requested to share the reason behind non operation of ADMS and action

taken for rectification of same. West Bengal is requested to share the reason behind less relief on some occasions.

Deliberation in the meeting

ERLDC representative submitted that non operation of ADMS for DVC was due to some issues in the logic. He further requested DVC not to club the feeders earmarked for ADMS with feeders for load shedding for availing any relief during requirement.

ERLDC representative requested West Bengal to implement the same logic as followed by other states to maintain a uniformity.

Jharkhand representative submitted that due to some unresponsive behavior of processer the ADMS could not operate. Necessary rectification in this regard had been done.

ITEM NO. B.12: Commissioning status of ADMS.

Automatic demand management scheme (ADMS) is already commissioned in West Bengal, DVC and Jharkhand. However, for Bihar and Odisha it is yet to be implemented, the last status as confirmed in the earlier meeting is as follows.

Sl No	State/Utility	Logic for ADMS operation	Implementation status/target
1	Bihar	F <49.7 AND deviation > 12 % or 150 MW	Under testing.
2	Odisha	1. System Frequency < **49.9** Hz 2. Odisha over-drawl > 150 MW 3. Discom over-drawl > 40 MW	Work order placed to M/s Kirititel to be complemented April 2022.

Bihar and Odisha may share the present status of implementation and share the reason for delay in implementation if any.

Deliberation in the meeting

Odisha representative submitted that the ADMS would be operational by 15th May 2022.

Bihar representative submitted that ADMS would be operational by 1st week of May 2022.

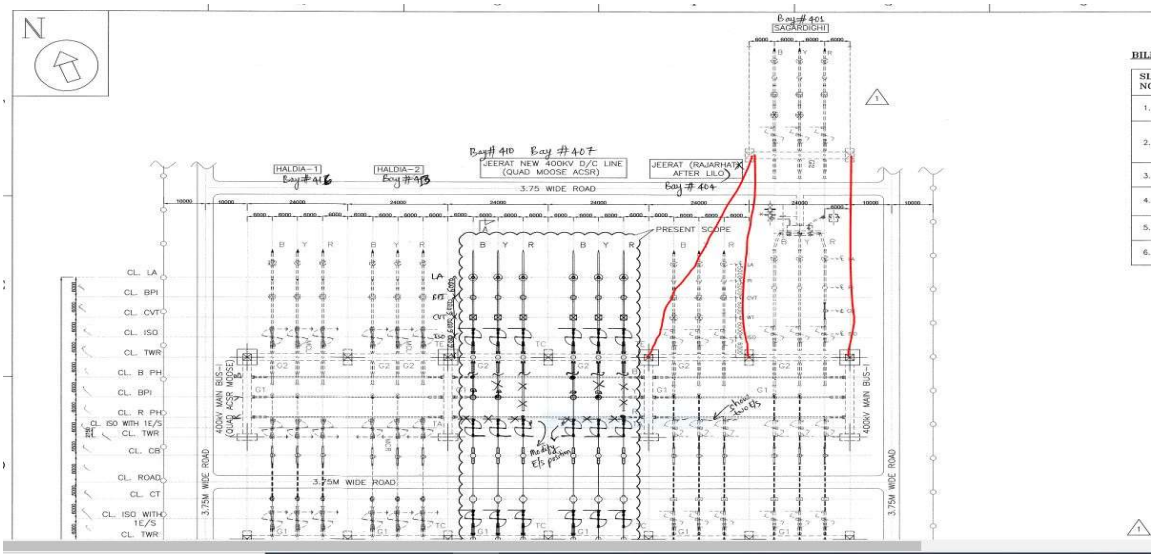
ITEM NO. B.13: Simultaneous shutdown of both 400 KV Subhashgram Jeerat & 400 KV Subhashgram Rajarhat for shield wire replacement.

A. POWERGRID Subhashgram S/S is located in cyclone zone and every year the sub-station have to encounter very high wind in the Month of May & June. On 20.01.2022 at 05:41 Hrs. all 400KV Main Bus-II Bus bar operated at Subhashgram SS as overhead shield wire connected between the peak of common Jack Bus gantry of ICT-I & II had snapped which subsequently fell on 400KV Main Bus-II leading to the outage.

B. Based on above analysis it can be concluded that the tripping of 400KV Bus-II took place due to snapping of Old rusted shield wires during high wind condition.

C. As a precautionary measure new shield wire has been fixed between the peaks. Additionally almost all the shield wires of same lot/batch used had been replaced during Shutdown pertaining to Retrofitting of Busbar Protection Panel.

D. However, the earthwire of same above lot from Dead End D/C Tower of 400KV Subhasgram-Jeerat & Subhasgram-Rajarhat to Gantry peaks could not be replaced due to proximity with adjoining charged circuits.



E. The span for earth-wire required to be replaced is shown above. Both the lines from D/C Towers form a conical shape on termination upon the gantry. Hence replacing the earth-wire under charged condition involves risk and safety issue. In view of above simultaneous Shutdown of both circuits as per following are proposed to complete the replacement of old rusted shield wires of above lots.

Sl No.	Name of TL	Proposed Date	Time	Remarks
1	400KV Subhasgram-Jeerat TL	28.04.2022	From 07:00 Hrs to 15:00 Hours	ODB
2	400kV Subhasgram-Rajarhat TL	28.04.2022	From 07:00 Hrs to 15:00 Hours	ODB

F. Condition of old Rusted Shield wire replaced earlier are provided as below:

Powergrid may explain. Members may discuss.

Deliberation in the meeting

Powergrid representative gave an overview of the agenda item and requested for allowing of shutdown of 400 KV Subhashgram-Jeerat and 400 KV Subhashgram-Rajarhat T/L for 7 hours on one day basis to replace the earth wires.

On query regarding why the above issue of replacement of earth wire was not highlighted in the shutdown meetings, Powergrid representative submitted that they had planned to replace the earth wire in parallel with the shutdown for construction work. ERLDC representative was of the view that the above-mentioned lines are highly loaded and opening of these would lead to the collapse of 220 KV network of West Bengal. They further advised Powergrid either to take the shutdown during winter or wait till the commissioning of Subhashgram-New Jeerat lines.

West Bengal representative submitted that since the state load is at its all-time peak the shutdown of the above lines cannot be permitted.

ITEM NO. B.14: LAN Integration for various S/S for AMR Data Transmission to ERLDC.

This is in continuation with the agenda discussed in last CCM where in a list of locations for AMR data transmission through LAN was deliberated.
At present the AMR data connectivity status are as follows:-

TOTAL NO OF DCU- 190
TOTAL NO OF DCU COMMUNICATED OVER LAN- 118
TOTAL NO OF DCU COMMUNICATED OVER GPRS- 72

A. NO OF DCU AT KIOSK/DISTANT LOCATIONS- **22.**

LOCATION DETAILS ARE AS FOLLWS:-

ALIPURDUAR	MOSTLY POWERGRID LOCATIONS. NOW THE ISSUE IS RESOLVED AND CAN BE INTEGRATED OVER LAN SUBJECTED TO ADDITIONAL FINANCIAL IMPLICATION OF AMOUNT RS. 23,11,208/- + GST. BREAK UP PROVIDED IN ANNEXURE.
ANGUL	
BERHAMPORE(BMP)	
CHANDAUTI	
DUMKA(DUM)	
GAYA(GYA)	
JEERAT(JRT)	
KEONJHAR(KJR)	
MEDINIPUR	
MELLI (MEL)	
B. PATNA (PAT)	
C. PURNEA (PRN)	B. LAN PRESENT AND ONLY PORT OPENING REQUIRED FOR INTEGRATION WITH AMR: - **14**. COST IMPLICATION FOR THE SAME STANDS AT RS. 2, 17, 896/- + GST.
PUSAULI	
RANCHI NEW	
GAYA(GYA)	
NEW JEERAT	
CHANDIL(CHN)	
CHUZACHEN(CZN)	
DALTONGANJ	
DARBHANGA	
DARBHANGA	
EMSS(EMS)	
HALDIA(HAL)	
INDRAVATI(IND)	
KAHALGAON(KAH)	
MENDHASAL(MEN)	
MOTIHARI	
MOTIHARI	
PATRATU(PTJ)	
SADEIPALI	

C. LOCATIONS WHERE FIBER RECENTLY LAID OR UNDER PROGRESS:-

36 No's. Respective constituents may update please. However as gathered Highlighted stations are already having fibre connectivity.

ADHUNIK(APNRL)	NAGARUNTARI
ADHUNIK(APNRL)	PURNEA(PUR)
BANGRIPOSHI	RAVANGLA(RAV)
DARLIPALLI	RAXAUL
DEOGARH (DEO)	SANTALDIH(SNT)
DIKCHU	TISCO (TIS)
DIKCHU	JINDAL
GARWA (GAR)	KURSEONG(KSG)
GMR(GMR)	NEW PUSAULI (NPS)
JAMTARA (JMT)	OPGC
JAPLA (JAP)	RAMMAM(RMM)
JINDAL (JIN)	SAGARDIGHI(SAG)
JORTHANG	STERLITE(SEL)
KALIMPONG(KLM)	STERLITE(SEL)
KENDOPOS (KEN)	STERLITE(SEL)
KHIZIRSARAI	TALCHER SOLAR(TLS)
LAUKAHI	TALCHER SOLAR(TLS)
MAITHON POWER LTD (MRB)	
MAITHON POWER LTD (MRB)	
MOTIPUR	
NABINAGAR	

All constituents are requested to prioritize the port opening preferably within 01 month such that entire AMR communication could be migrated to LAN based data transfer within next 06 months' time period.

Deliberation in the meeting

Powergrid representative submitted that presently AMR data is being received by ERLDC through LAN connection as well as GPRS. As of now 190 DCUs are connected with AMR; out of which 120 nos. locations are directly communicating with LAN and 70 nos. locations are communicating through GPRS. Out of the 120 nos. locations, 44 are PGCIL locations and remaining 76 are central and state sector locations. Out of the 70 nos. of locations, 22 are kiosk locations which would be integrated to LAN connection with some additional financial implications. In 33 nos. of locations LAN setup is available and port opening is required. In the remaining 15 nos. of locations proper information regarding availability of LAN setup is not available.

OCC advised all the respective SLDC's to provide the port opening details to Powergrid at the earliest.

Jharkhand representative submitted that fibre optic is unavailable at Deogarh, Garhwa, Jamtara, Japla, Kendposi and Nagaruntari.

Odisha representative suggested that as fibre optic cable laying is a lengthy project, Jharkhand may resort to using 2 Mbps radio modems as an interim arrangement till the OPGW cables are laid.

ITEM NO. B.15: Technical overview of AMR Data Center hardware and application refreshment program for Eastern Region

AMR Hardware and Software/ Application installed and running since 2013 at ERLDC for all the constituents of ER. All the Hardware equipment installed in the system has already elapsed almost 08 Years and being IT equipment, as per present CERC regulation already usable life is consumed.

Accordingly for running the system smoothly, with latest Cyber security aspects/compliances, both, Hardware and Software refreshment is required. New Hardware will be installed as per the CEA/CERC guideline for IT Network equipment along with New AMR application will be developed, with latest JAVA version and new features.

In view of above, M/S. TCS shall deliver a presentation on above for better understanding. Further, after finalization of technical aspects/features, necessary commercial offer shall be submitted.

In the 184th OCC meeting, Powergrid representative submitted that AMR Hardware and Software/ Application which have been running since 2013 at ERLDC for all the constituents of ER became old and have already consumed its usable life. He also added that as per CERC guidelines regarding Cyber security aspects/compliances both the Hardware & Software need to be updated.

M/s TCS representative gave a brief presentation on the same.

OCC agreed to give go ahead to Powergrid for finalizing the technical aspects so that financial cost assessment can be done. Powergrid representative informed that they would provide the cost estimate for the up-gradation project within 10 days.

Further, OCC advised Powergrid to co-ordinate with ERLDC for finalization of the technical aspects.

In the 185th OCC meeting, Powergrid representative informed that after having several meetings with M/s TCS a preliminary offer for both software and hardware part has been received amounting to Rs. 1 Crores 14 Lakhs. He added that for the detailed technical study another 1-week time would be required.

In the 187th OCC meeting, Powergrid representative informed that the comments had already been sent to ERLDC. Barring two/three points related to cyber security and meter manufacturer all other points are envisaged in the current proposal.

ERLDC representative informed that another comment has been received from Powergrid on 22.01.2022 and the reply for the same would be given by 24.01.2022.

In the 188th OCC meeting, ERLDC representative informed that the comments have been forwarded to Powergrid and all the proposed points have been accepted except for one pertaining to the communication link for AMR. Upon enquiring Powergrid about providing of communication channel for AMR, Powergrid representative submitted that their corporate guidelines don't permit them to disclose the AMR link elsewhere.

OCC advised Powergrid and ERLDC to resolve the issue related to cyber security bilaterally by convening a separate meeting.

It was deliberated that the in-principal approval would be given only after the bilateral meeting to discuss the cyber security issues is convened.

In the 189th OCC Meeting, It was informed that the issue regarding providing of communication link was resolved which would be provided by ERLDC.

Further, discussion regarding ensuring firewall for the links due to cyber security issues would be carried out between the representatives of Powergrid, ERLDC and TCS to reach a consensus.

Powergrid representative submitted that port opening details are not being provided for 54 locations and requested all constituents to provide the same.

Powergrid representative further raised a query of TCS representatives not being allowed in NTPC Talcher and Sterlite for AMC related works.

OCC advised NTPC and SLDC Odisha to take up the matter with Talcher and Sterlite respectively.

Powergrid informed that M/S TCS gave the offer in Nov-2021 and the subject matter was discussed since 185th OCC meeting. However, due to certain issues the unanimity could not be achieved and M/S. TCs had intimated that the offer price is not valid at present and new offer shall be provided by TCS.

Meanwhile it is requested to take the AMR H/W refreshment programme on first track basis for ensuring continuous reliability.

Members may discuss.

Deliberation in the meeting

Powergrid representative submitted that offer which was collected from M/s TCS had expired. The new offer would be provided with a tentative hike of around 15%.

OCC advised Powergrid and ERLDC to resolve the issue related to cyber security bilaterally by convening a separate meeting.

OCC further opined that as the hardware of the AMR system has completed its useful life, immediate replacement of the same may be done on priority basis.

ITEM NO. B.16: PLCC issue in Baripada-Kharagpur T/L.

In reference to the MOM of 184th OCC under Sl no (6) of item B9, PLCC related issues were discussed in reference to the Kharagpur-Baripada 400 kV line. SLDC, WB urged for following the all over India trend to settle the issue of who will rectify / replace the PLCC panels in respect to the mentioned line. Powergrid Orissa urged for following precedence for rectification / changing of PLCC panels at both ends by WBSETCL. The same was reflected in the minutes.

However, on careful scrutiny for other tie lines, it was noticed that normally the maintenance, fault rectification, panel replacement types of jobs for PLCC panel etc. are done by the utilities at their respective ends. For example, in case of STPS-Chandil line, JSEB is maintaining their end PLCC portion and WB for STPS end part.

Hence, continuing the same logic of SLDC, WB as was mentioned in 184th OCC, that different rules for different tie lines are not desired. So, the all-India trend should be maintained for the

Kharagpur-Baripada line also. Hence for changing the panels at Baripada end, Power Grid may please take up the matter, and WB will take care of the Kharagpur end panel replacement work to make both channels available and reliable.

In the 185th OCC meeting, West Bengal representative pointed out that different practice of maintenance for different tie lines is not desirable and there is a need for streamlining the procedure for all the tie lines. He further submitted that irrespective of the ownership of the PLCC, the maintenance work may be carried out by the utilities at their respective ends.

Powergrid Odisha representative stressed upon the fact that the maintenance work of both ends may be carried out by the respective owners of the PLCCs.

OCC opined that a uniform methodology has to be implemented for the maintenance of all the tie lines. OCC advised Powergrid representative to take up the matter with their higher management and share their views with ERPC for further deliberation on the issue. Powergrid Odisha vide mail dated 25.11.2021 informed that the said PLCC panels at Baripada are WBSETCL's property. Further the following details mentioned below were also furnished by Powergrid Odisha.

PART-I

1. 400 kV Rengali-Kolaghat line was pre-existing before LILO of the same at Baripada in 2005. During this LILO, PLCC panels at Rengali were diverted to Baripada Ss for PLCC link of Baripada-Kolaghat Line.
2. These panels were maintained by Gridco at Rengali S/s before diversion to Baripada Ss and were supposed to be maintained by GRIDCO at Baripada Ss after the said diversion.
3. These were old ABB make PLCC Panels.
4. IOM dtd 05.09.2009 by CM (O&M) Baripada to CM (OS), ER-II, Kolkata and Fax dtd 25.04.2005 from DGM Baripada to GM (Telecom), GRIDCO are relevant references for above mentioned details. Scan copy attached for reference.

PART-II

1. WBSETCL commissioned 400 kV Kharagpur Substation in 2012 by making LILO of the existing 400 kV S/C Baripada-Kolaghat line at Kharagpur.
2. During the above LILO, existing ABB PLCC panels meant for earlier Baripada-Kolaghat line was replaced by BPL Make PLCC Panels.
3. Fresh PLCC arrangement at Baripada Ss for above 400 kV Baripada-Kharagpur line was taken up by WBSETCL through their vendor M/s Alstom. Letter from M/s WBSETCL to POWERGRID vide letter no. TR. PROJ. /T-181/20 dtd 11.04.2012 is attached for reference.
4. The frequencies to be set for above PLCC link were communicated to Baripada Ss by M/s WBSETCL through Letter No. C/ED/PLCC/PGCIL/Kharagpur dtd 30.08.2010. Scan copy attached.

Further, it has also been learnt from previous employees posted at Baripada Ss that revenue bifurcation for maintenance of PLCC at Baripada Ss by POWERGRID has not been done and that the response from Kharagpur end for any rectification of PLCC panels for subject line was poor.

In the 186th OCC Meeting, Powergrid Odisha representative informed as the asset does not belong to them; the maintenance work shall not be carried out by Powergrid.

West Bengal representative stressed upon the fact that different practices of maintenance for different tie lines are not desirable and there is a need for streamlining the procedure for all the tie lines. He added that irrespective of the ownership of the PLCC, the maintenance activities should be carried out by the utilities at their respective ends.

MS, ERPC was of the view that in case of interstate tie lines having two different owners, the selection of the equipment should be on the basis of mutual consensus and cost sharing between the involved parties. Thereafter, the erection, commissioning and maintenance of PLCC could be taken up individually at respective utilities' ends. The above methodology may be taken up and finalized in the upcoming TCC & ERPC meetings and would be used as a reference for all such future cases.

In the 45th TCC Meeting, after detailed discussion TCC referred the issue back to OCC for further deliberation and consensus.

Members may discuss.

Deliberation in the meeting

Powergrid Odisha representative submitted that replacement and maintenance of PLCC's at their end is not possible as the asset does not belong to them. He further stressed upon the fact that while replacement of PLCC's it has to be ensured that both are of same make and are properly tuned.

He further submitted that Powergrid is ready to extend any kind of technical assistance to WBSETCL for the replacement and maintenance of the PLCCs. Powergrid would replace the PLCC at their end on chargeable basis solely to be borne by WBSETCL.

WBSETCL representative advised Powergrid to submit documents in support of ownership of the assets. In case the ownership of the asset lies with WBSETCL, they would replace the panels at both the ends. Otherwise, the replacement of the PLCC's to be done on cost sharing basis.

ITEM NO. B.17: Agenda by Rangit HEP

1) **Request for maintenance of 20 MVA, 132 KV/66 KV power transformer of Sikkim State Electricity Board installed at Rangit Power Station.**

   It was observed that the oil level of the above transformer is found very low, even the conservator tank was almost empty. It requires to be topped up immediately by Sikkim State Electricity Board.

2) **Shutdown required for replacement of 132 KV old breaker.**

   It was also observed that 132 KV SF6 gas circuit breaker installed at primary side of transformer is not working properly and it may result to breakdown someday. It requires urgent replacement with new one for which shutdown of above line is required. In this regard, shutdown of the said bay for 5 working days continuously had been requested vide letter no. NH/RPS/PHE/2020-21/1295 Dtd. 18.10.2021 & NH/RPS/PHE/2021-22/1904 Dtd. 10/01/2022. The same was not permitted by Sikkim SLDC due to non-availability of alternate power supply at Ravangala.

3) **Shutdown required for implementation of SCADA of 132 KV Rangit – Sagbari Line.**

   For implementation of SCADA and to bring the RTU data through SCADA, line shut down is

required on continuous basis for 5 days.

Rangit may update.

Deliberation in the meeting

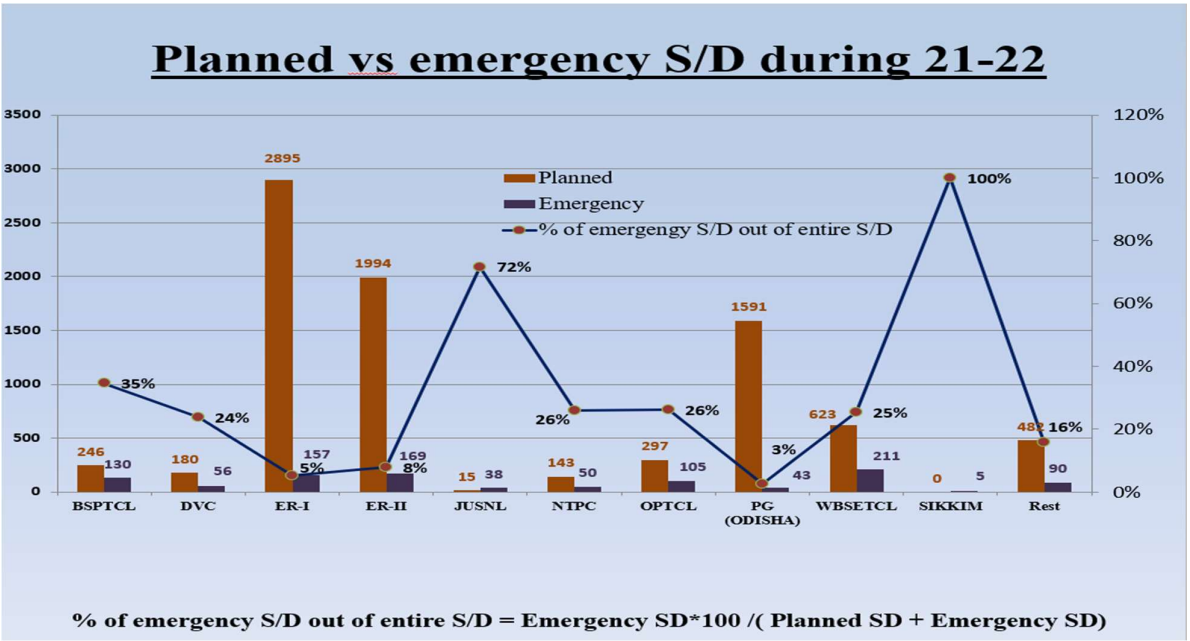
Sikkim representative submitted that approval regarding refilling of oil is under progress and would be completed within a month.

Further he added that shutdown of 132 KV Rangit-Sagbari line on continuous basis for 5 days cannot be granted. Rather, shutdown on daily basis may be provided for carrying out breaker replacement and SCADA implementation work simultaneously.

ITEM NO. B.18: Shutdown related issues.

B.18.1. Increased number of emergency shutdowns.

Emergency and planned, shutdown taken by different utilities during the last financial year is shown below.

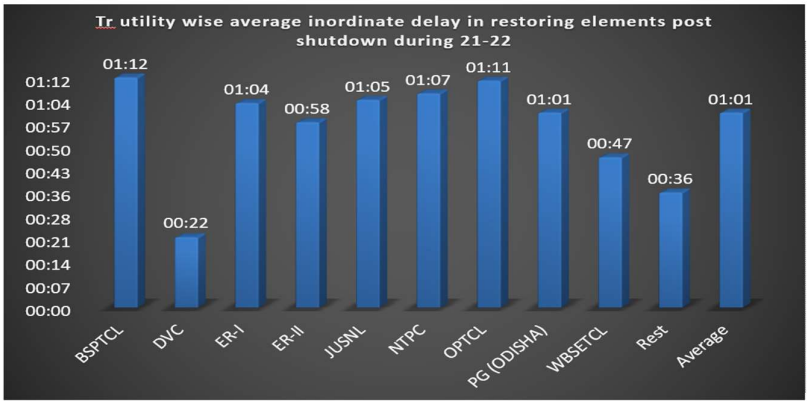


It can be seen that for Jharkhand and Sikkim percentage of the emergency shutdown is very high 72% and 100% respectively. The emergency condition normally arises in the case when maintenance work is not taken up on time. Further it is also observed that shutdown is sought on emergency grounds even when work doesn't fall under emergency.

B.18.2. Delay in returning of the shutdown on time.

Delay in returning of, shutdown taken by different utilities during the last financial year is shown below.

Delay in returning S/D



On an average 1-hour delay in returning from the shutdown is observed, which needs to be reduced.

Respective utilities may update.

Deliberation in the meeting

ERLDC representative advised all the utilities to approach ERPC first regarding approval of shutdowns which are not of emergency nature.

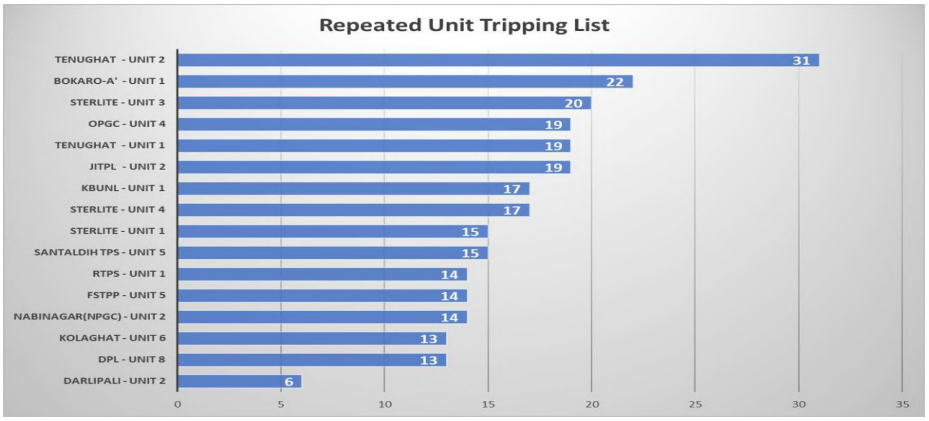
Further, all the utilities were advised to minimize the incidences of emergency shutdowns.

SLDC Odisha representative submitted that shutdown requested for tree cutting in order to maintain the line healthiness was denied by NLDC on grounds of not being an emergency situation even though the line was not loaded and requested ERLDC to have a clarification with NLDC regarding the same.

OCC further advised all the utilities to reduce the delays in returning of shutdown.

ITEM NO. B.19: Repeated unit tripping's – Impacting resource adequacy

In the past one year, it was observed that many units are tripping repeatedly on account of some similar nature of fault/events. This in turn impacts the resource adequacy and availability of units which will be critical as summer load. Units that have tripped multiple time is shown below.



Following observations are found.

- Tenughat units have tripped mostly due to Loss of evacuation or on external through fault and on BTL.
- More than 60% tripping's of Sterlite plants unit are due to Ash handling problem.
- JITPL -U2 more than 50% tripping's on High turbine vibration.
- Bokaro -Unit 1 more than 40% tripping's on Boiler tube leakage
- OPGC, NPGC-1, KBUNL-1, DPL-8, RTPS-1 are mostly tripping with Boiler Tube Leakage.

Detailed analysis is attached in **Annexure-B.19.**

Generators may update. Members may discuss.

Deliberation in the meeting

Upon querying about the frequent tripping of Bokaro Unit-1 due to boiler tube leakage, it was informed that the overhauling was overdue for the past one year. During the overhauling of the unit in December 2021, tube leakage rectification and DeNOx modification was done.

OCC advised all the generators to take necessary corrective actions to reduce such events in the future.

ITEM NO. B.20: Resource adequacy and ensuring Grid discipline under present Grid condition.

As summer has already set in a sharp rise in all India demand is witness from late March. With rise in mercury demand is expected to rise further in upcoming days. During the last few days, a very low frequency condition is observed in the grid, with it remaining below IEGC band for a significant amount of time as well as frequency going below 49.7 Hz almost on daily basis.

Date	Minimum Frequency	% of time below IEGC band
01-April-22	49.82	1.12
02-April-22	49.65	9.70
03-April-22	49.75	11.86
04-April-22	49.58	25.56
05-April-22	49.52	41.33
06-April-22	49.58	47.95
07-April-22	49.51	62.67
08-April-22	49.58	34.99
09-April-22	49.50	39.16
10-April-22	49.55	9.42
11-April-22	49.47	30.1

Constituents are requested to ensure that its interchange remains within approved scheduled. Any Physical regulatory measure initiated by ERLDC for ensuring grid security need to be complied at the earliest. Further healthiness of UFR also needs to be checked regularly.

Deliberation in the meeting

All the constituents were advised to ensure interchange within approved schedule and UFR healthiness.

ITEM NO. B.21: Agenda on Environmental norms.

As CEA is monitoring the compliance of Environment Emission norms, it is requested that the requisite information in the attached format **(Annexure B.21)** may kindly be furnished to email ID: **cetprm-cea@gov.in** with a copy to **ereb_cea@yahoo.co.in** on monthly basis.

Members may note.

Deliberation in the meeting

All the constituents were requested to furnish the requisite information to the given mails.

Members noted for compliance.

ITEM NO. B.22: Additional Agenda - Comments/inputs regarding Grid Standards.

The Central Electricity Authority is contemplating, reviewing, the Central Electricity Authority (Grid Standards) Regulations, 2010. In this regard, it is requested that comments/inputs may be compiled and sent to this division at the earliest.

Members may note.

Deliberation in the meeting

All the constituents were requested to send their comments/inputs regarding Grid Standards by 7th May 2022.

ITEM NO. B.23: Additional Agenda – Furnishing of daily/monthly generation and outages data online at National Power Portal.

As per relevant provisions of The Electricity Act, 2003, this office is entrusted with the responsibility to collect, compile & record the data concerning the generation of power and publish various reports like Daily Generation Report, Monthly Generation Report, PLF report etc. All these reports need to be prepared based on the information furnished by various generating stations/utilities on daily, monthly and yearly basis in a time bound manner.

To enable various Generating Companies to submit the aforesaid generation data to his office online, Login IDs and Passwords for the NPP Portal were issued a few years back to the nodal officers nominated by the respective Generating companies. Most of the Generating Companies have been submitting the generation data online. However, many of the Generating Company have still not switched over to online mode of submission of generation data despite repeated requests, leading to delay in preparation/issuance of related

reports. The list of the plants which are not updating data online on the NPP portal is attached as Annex-I. Further, the power position across the regions are being monitored on daily basis at highest level in MoP, as such the submission of data online is need of hour and is very much required to assess the situation on demand vis-a-vis supply in various regions and take necessary policy decisions

As RPCs interact very frequently with the various utilities in their region, on various platforms, it is requested that the matter may be taken up with them and accordingly, generating stations may be directed to update the data online on NPP portal regularly.

Further in case generating stations are facing any problem in online data feeding into the NPP Portal, they may contact this Division (Sh. Satyam Soni, Asst. Director, Tel: 011-26732656) or NIC Officers, Sh. Ajay Badola, (Mob. No. 9899382669) or Sh. Akash, (Mob. No. 9810496775) or may send email at npp.suppoprt@nic.in for assistance.

Deliberation in the meeting

All the generators were requested to update the daily/monthly generation and outage data online at the National Power Portal (NPP).

ITEM NO. B.24: Additional Agenda – Analysis of actual power availability during the months of April 2022 to September 2022 in LGBR 2022-23.

The shutdown program finalized as per the LGBR 2022-23 has to be strictly followed and in case on any deviation from the schedule, the same has to be intimated to the GM Division, CEA.

Also, keeping in view the present grid conditions, possibilities may be explored for maximization of generation.

Deliberation in the meeting

All the generators were advised to strictly adhere to the shutdown plans as given in the LGBR 2022-23.

ITEM NO. B.25: Non supply of power by JITPL (2X600 MW), Derang, Angul to GRIDCO as per PPA dated 05.01.2011.

As per the long term PPA signed by JITPL with GRIDCO dated 05.01.2011, the IPP is obliged to supply of 12% power sent out from the Thermal Power Plant at variable cost Energy Charge Rate (ECR). The COD of the generating station was attained on 19th April, 2015. JITPL was supplying power through CTU network, in absence of connectivity to STU network, by bearing POC charges and losses (as per the Supplementary PPA dated 23.07.2013 with GRIDCO) till 22.05.2019 at provisional ECR fixed by OERC from time to time in ARR orders of GRIDCO. GRIDCO availed power supply through inter-state STOA and scheduling was done by ERLDC.

However, under the garb of interim stay order dated 16.05.2019 of Hon'ble Orissa High Court in

WP© No. 18150 of 2018 (challenging the MOU, State Thermal Policy and PPA), JITPL has unilaterally stopped supplying power to GRIDCO, though there is no specific direction for non-supply of power to the State. A copy of the Hon'ble OHC is enclosed as Annexure-B24.

At present the generation from both the Units is to the tune of 1042 MW and is supplying power to States like, Kerala, Bihar, Karnataka, Gujrat, Tamil Nadu etc. whereas not supplying to the host State Odisha, even after availing concessional land, water and coal under the MOU with Govt. of Odisha.

GRIDCO has raised this issue through various correspondences with ERPC/ERLDC to take necessary action as per statute/law so that, JITPL shall supply power to the State.

In 189th OCC Meeting, GRIDCO explained the issue in brief. JITPL representative was not present in the meeting. After detailed deliberation OCC referred the issue to TCC for further deliberation.

In the 45th TCC Meeting, GRIDCO representative informed that JITPL has moved Hon'ble High Court of Odisha for termination of PPA & the Hon'ble court has not issued any order in this regard. But power scheduling to GRIDCO has been stopped unilaterally on request of JITPL. GRIDCO opined that Minutes of 45th ERPC Meeting_26.03.2022 13 the status quo should have been maintained. It was further requested by GRIDCO that the power scheduling to them as per PPA should be restored forthwith.

JITPL representative informed that the matter is under sub-judice.

TCC recommended to place this matter before ERPC for further deliberation.

In the 45th ERPC Meeting, GRIDCO representative submitted that JITPL had signed PPA and supplemental MoU with GRIDCO to supply the power to the state of Odisha. Subsequently, JITPL challenged the Govt. order dated 08.08.2008 against which the High Court gave an order of no coercive action to be taken against the petitioner till the next date. Based on the court's order JITPL stopped supplying power to the state. He further requested the forum that the power should be scheduled by ERLDC supplied by JITPL in favor of Odisha unless the issue is resolved.

JITPL representative submitted that the Power supply has been stopped as per an interim order issued by Odisha High Court. Further, it would be inappropriate to discuss the matter in the ERPC forum as the matter is sub-judice.

Upon enquiring about how no scheduling on behalf of Odisha was accepted by ERLDC, it was informed that ERLDC coordinates the schedule and has no control over the short-term applications. Further, being a sub-judice matter, ERLDC has no authority to interfere between the two parties.

Chairman, ERPC enquired whether GRIDCO was placing the same schedule to JITPL after the court's interim order. GRIDCO representative submitted that the application for schedule is filed by JITPL. Further, in absence of dedicated STU line, JITPL agreed to supply power through Inter State open access bearing all the transmission charges on day ahead basis. Further, JITPL stopped sending the application for supply of power which was also communicated to ERLDC.

The Committee was of the view that the matter is subjudice before the Hon'ble High Court of Odisha. It was further observed that as per the said order of Hon'ble High Court, there is no

specific direction for changing the status quo by either party.

Members may discuss.

Deliberation in the meeting

GRIDCO representative submitted that as per the decision taken in the 45th ERPC Meeting, GRIDCO had punched a short-term open access application on day ahead contingency basis on 13.04.2022 for the procurement of power from JITPL for 14.04.2022. The application was rejected by ERLDC stating that no consent has been received by JITPL for the supply of power. In the absence of long term PPA, power was drawn through STOA as an interim arrangement and therefore consent of JITPL was not required for the same. He further submitted that as per IEGC, RLDC is responsible for optimum scheduling and dispatch of electricity within the region, in accordance with the contracts entered into with the licensees or the generating companies operating in the region and requested for scheduling of power to GRIDCO with immediate effect.

ERLDC representative submitted that they have referred the case of GRIDCO to their legal team. Further, application of GRIDCO was rejected because as per the short-term regulations the power could not be scheduled until both the involved parties have a consent.

OCC was of the view that a separate meeting may be convened among the parties to for further deliberation of matter in this regard.

ITEM NO. B.26: Additional Agenda – 132/66 KV Spare ICT Planning at Gangtok.

132/66 KV GANGTOK SS is having 02 No's 50 MVA ICT in service. Going by the loading profile in last winter (From Dec-21 to Feb-22) it is observed that due to huge load growth around GANGTOK, both ICT's are loaded around 90% of the installed capacity.

Further, in downstream 66KV Feeders, most of the feeders are reconductored in recent past and already enhanced power transfer capacity, but mostly restricted due to limitation of ICT capacity.

Synopsis of loading of both ICT's are given below for reference:-

Date	ICT – I; Peak Load	ICT-II ; Peak Load	Remarks
27.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load
28.01.2022	43 MW	44 MW	Almost 90 % Loading during peak load
29.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load
30.01.2022	42 MW	43 MW	Almost 90 % Loading during peak load
31.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load

From above table it is clear that, N-1 contingency is not at all maintained in present scenario and probably, it may be estimated that in upcoming winter, Gangtok might face load shedding to keep

transformer loading in safe region.

To mitigate the issue, the available immediate option is to install 3rd 50 MVA ICT at Gangtok SS. Presently 01 No spare 50 MVA ICT is available at Rangpo SS. To make it work as 3rd 50 MVA ICT, followings are proposed: -

1. Nearby area just beside the boundary of Gangtok SS required to be urgently taken over by POWERGRID. Without having extra land, bus extension and installation of ICT is not possible.

2. Regarding taking over of land, EPD/Sikkim shall extend all necessary help to POWERGRID and will also escalate the matter to Govt. of Sikkim.

3. After handing over/Taking over of land to POWERGRID, both bus extension shall be done by POWERGRID along with making foundation of 3rd ICT to be placed in operation. Both side bay extension proposed in AIS mode only.

4. After installation of 3rd ICT at Gangtok SS, as per CEA guideline spare ICT also need to be procured.

5. Considering urgency of the situation, it is proposed to implement entire package under ISTS scheme (RTM) by POWERGRID.

6. On getting, necessary approval POWERGRID shall propose the financial implications for further approval.

Considering the load restrictions faced by Sikkim and also in view of limited time for implementation, it is recommended to consider the above proposal as deemed ISTS project (RTM) and may be processed for further execution by POWERGRID. Detail drawing and location details are attached as **Annexure B.26**.

Deliberation in the meeting

Powergrid representative submitted that in Gangtok S/s both the ICTs are of single main transfer scheme and have only TBC (Transfer Bus Coupler) in the redundant bay. Further, during the commissioning of the 3rd ICT, both sides' TBC would be engaged without having any redundancy with the ongoing feeders.

To mitigate the above issue he submitted that the spare transformer may be located in some vacant area and both sides' TBC bay could be used as Transformer HV and LV. Additionally, some areas adjacent to the Gangtok S/s boundary may be used for the construction of another TBC bay.

Sikkim representative gave their consent to the above proposal.

OCC opined that the above proposals would be shared with CTU for further discussion and approval.
OCC further advised Sikkim to take up the matter with their Government for the requirement of additional area.

ITEM NO. B.27: Additional Agenda of Powergrid – Installation of GIS system in the existing old AIS system in Malda S/s.

Powergrid representative submitted that the new GIS Bus duct is to be installed just below the 132 KV main bus 1 & 2. Therefore, clearance of the existing main bus is required. Some steps have proposed to minimize the shutdown for carrying out of the above works which are attached at **Annexure B.27**. The jumpers would be disconnected temporarily between ICT-1 & 2 and ICT-2 & 4.

Deliberation in the meeting

WBSETCL representative submitted that during approval of any shutdown N-1 criteria has to be ensured. Further, shutdown of 132 KV main bus from 06:00 Hrs. to 09:00 Hrs. may lead to the tripping of Gajol-Malda line as the lines are not HTLS and relatively old and carry around 137 MW

of load. This would result in interruption in power supply in Malda up to Kajuria.

Further, shutdown of 132 KV Malda circuit 1 & 2 are also not possible as these lines carry very high load.

PART C: ITEMS FOR UPDATE

ITEM NO. C.1: ER Grid performance during March 2022

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month March-2022 were as follows:

Average Consumption (MU)	Maximum Consumption (MU)/ Date	Maximum Demand (MW) Date/Time	Minimum Demand (MW) Date/Time	Schedule Export (MU)	Actual Export (MU)
469.38	523.2 MU 29-03-2022	24951 MW, 28-03-2022 19:58 Hrs.	15114 MW, 02-03-2022 at 04:23 Hrs.	4638	4689

ERLDC may highlight the performance of the ER grid.

Deliberation in the meeting

Member Secretary, ERPC, gave an overview of the performance of ER Grid.

ITEM NO. C.2: Performance of Primary Frequency Response of ER Generating Units.

Frequency response characteristics (FRC) have been analyzed pan India for one event of sudden frequency change that occurred in the month of March 2022. The details of these events and the overall response of the Eastern region have been summarized in Table below.

Event	Frequency Change	ER FRC
Event - 1 : At 12:47 Hrs. Dated 27th-March-2022,As reported due to multiple element tripping at 400kV Lapanga station 562 MW(Unit-3) Generation loss at OPGC and 1900 MW load loss at 400kV Sterlite(Vedanta) occurred .Effective Load loss of around 1338 MW has been considered in the event for FRC Calculation.	**49.99 Hz to 50.03 Hz.**	**56%**
Event - 2 : At 15:30 Hrs. Dated 15th-March-2022,As reported bus bar protection operated at 220 KV Raigarh CG S/S of Western Region and resulted in tripping of all elements at 220 KV Raigarh CG S/S. Load loss of around 936 MW reported in the event.	**49.92 Hz to 49.99 Hz.**	**-4.5%**

Members may note.

Deliberation in the meeting

Members noted.

ITEM NO. C.3: Review of implementation of PSDF approved projects of ER.

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-C.3**.

187th OCC advised all the utilities to update the status of project to the ERPC Secretariat.

Members may update.

Deliberation in the meeting

OCC advised all the utilities to update the status of PSDF projects if any to ERPC Secretariat at the earliest.

ITEM NO. C.4: 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.

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

In the 183rd OCC meeting, OPGC representative informed that work order has been issued to M/s Siemens for implementation of AGC. The work would be carried out during the unit shutdown which is scheduled from 18.10.2021.

State	Station/Unit	Deliberation in 184th OCC Meeting
DVC	Mejia unit#7 &8	DVC representative informed that NIT is to be floated.
Odisha	Unit#3 of OPGC	OPGC vide email dated 25th Oct'21 informed that some additional data is needed from SLDC Odisha and after getting the same AGC would be implemented.

In the 185th OCC meeting, DVC representative informed that the NIT for implementation of AGC will be floated by 9th December 2021.

OPGC representative was not present during the discussion.

In the 186th OCC meeting, DVC representative informed that the NIT would be floated by 31st December 2021.

In the 187th OCC meeting, OPGC and DVC representative were not present during the discussion.

In the 188th OCC meeting, DVC representative informed that NIT was floated on 29th December 2021 and the bid opening would be done on 19th February 2022.

OPGC representative was not present during the discussion.

Members may update.

Deliberation in the meeting

DVC representative submitted that NIT would be re-floated due to some issues in the payment terms.

SLDC Odisha representative submitted that the order has been place to M/s Siemens for AGC implementation and the feasibility test would be conducted on 3rd May 2022.

ITEM NO. C.5: Primary Frequency Response Testing of ISGS Generating Units

In the 180th OCC meeting, ERLDC representative informed that as per communication received form GMR and JITPL PFR testing has been scheduled by Siemens in August'21.

MPL representative submitted that they would carry out the PFR testing in the month of July'21.

In the 181st OCC meeting, ERLDC representative informed that PFR testing of MPL got postponed due to some technical issue. He further informed that PFR testing is going on in APNRL and that of NPGC and BRBCL is scheduled in the last week of July'21 and 1st week of August'21 respectively.

In the 182nd OCC meeting, ERLDC representative submitted that During July – August 2021, PFR testing has been conducted at the following generating units:

1. Adhunik TPS Unit 1 & 2
2. BRBCL TPS Unit 2 & 3
3. Nabinagar STPS Unit 1
4. Kahalgaon STPS Unit 1

In the 183rd OCC meeting, ERLDC representative updated that PFR testing for Unit# 1 & 2 of GMR had been completed.

In the 185th OCC meeting, ERLDC representative informed that PFR testing of Dikchu is being

carried out.

In the 188th OCC meeting, ERLDC representative informed that updated status of PFR testing was received from MPL.

OCC advised all the members to provide the updated status of PFR testing, if any, to ERPC and ERLDC.

The updated status is enclosed at **Annexure-C.5**.

Members may update the status of PFR testing, if any, to ERPC and ERLDC.

Deliberation in the meeting

OCC advised all the members to update the status of PFR testing to ERPC and ERLDC.

ITEM NO. C.6: Testing of Primary Frequency Response of State Generating units by third party agency.

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 vide-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 +2 X 250 + 2X 500
6	RTPS Unit # 1 & 2	2 X 600

In the 185th OCC meeting, OHPC representative informed that testing of Primary Frequency Response of all the units of Rengali and Indravati will be done by the end of December 2021.

WBPDCL representative informed that they will place the order in the month of December 2021.

In the 186th OCC Meeting, OHPC representative informed that the testing of Primary Frequency Response of all the units of Rengali and Indravati would be done by the 2nd week of January 2022.

DVC representative informed that the bid opening had been done on 22nd December 2021.

In the 187th OCC meeting, OHPC and DVC representatives were not present during the discussion.

In the 188th OCC meeting, It was informed that PFR testing of all the 3 units of Budge-Budge are scheduled from 26th Feb 2022 to 3rd March 2022.

OHPC representative submitted that PFR testing of all the units of Rengali (5 units) and Indravati (4 units) would be carried out by M/s Solvina from 20th March 2022 onwards.

DVC representative informed that the work order for PFR testing has been placed.

Members may update.

Deliberation in the meeting

OCC advised all the state generating units to update the status of PFR testing to ERPC and ERLDC at the earliest.

ITEM NO. C.7: 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 the 186th OCC Meeting, Teesta –V representative informed that the PSS tuning would be conducted in the last week of January 2022.

It was informed in the OCC that PSS tuning of Rongnichu and Chuzachen had been completed.

DVC representative informed that PSS tuning of RTPS unit-1 & 2 would be done in the month of March 2022.

BRBCL representative informed that PSS tuning of BRBCL unit-1 has also been completed.

In the 187th OCC meeting, OCC advised ERLDC to send the updated status of PSS tuning to ERPC.

The updated schedule for PSS tuning of the units is attached at **Annexure-C.7**.

Members may update.

Deliberation in the meeting

OCC advised all the generators to update the status of PSS tuning to ERPC and ERLDC.

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

Members may update the status of UFR healthiness installed in Eastern Region.

Members may update.

Deliberation in the meeting

OCC advised all the members to update the status of UFR healthiness.

ITEM NO. C.9: Status of Islanding Schemes healthiness installed in Eastern Region.

As per the decision taken in the meeting held on 8th July 2021 and chaired by member (GO&D), CEA, data in prescribed formats may be submitted by concerned utilities to RPCs on monthly basis to certify the healthiness of the Islanding Schemes.

a. Format - I for RLDC/SLDCs

S.NO	Name of Islanding Scheme	Healthiness of Communication channel

b. Format - II for Generating Station

S.NO	Name of Islanding Scheme	Healthiness of Islanding Relay	Healthiness of Communication channel

c. Format - III for Transmission Utility/DISCOMs

S.NO	Name of Islanding Scheme	Elements 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#

* Where dedicated UFR relay have been installed for tripping of the feeders under Islanding scheme

Where UFR functions have been enabled within backup protection relay of the line.

d. Format - IV for collecting Relay details of the Islanding scheme.

The following format may be used to get Relay details of the Islanding scheme:

S.NO	Description	UFRs-for load relief (A)	df/dt -for load relief (B)	Relay for Island creation(C)
1	Relay location (S/s name)			

2	Relay make & model			
3	Frequency setting of the relay (at which load shedding is envisaged)			
4	Feeder name (voltage level and source-destination name) signaled by the Islanding Relay for separation /load shedding/separation from outside grid			
5	Quantum of load relief due to tripping of feeder (as per state's peak of previous year)			
6	Quantum of load (Min, Avg, Max in MW) on the feeder (as per state's peak of previous year)			

e. Format - V for Contact details of all Nodal Officer

Utility Name &Location	Name	Designation	Organization	Email ID	Mobile No.

It was deliberated in the 186th OCC meeting that except West Bengal all the entities are sending the report as per the new format.

In the 187th OCC meeting, it was informed that except for West Bengal all entities are sending the report as per the new format.

Members may update.

Deliberation in the meeting

OCC advised all the members to update the status of Islanding Scheme healthiness.

ITEM NO. C.10: Latest Status of States ATC/TTC declared by States for the month of May-2022.

To harmonise the ATC/TTC calculation methodology and timeline One to one meeting and hands on training with each SLDC was conducted in the month of Sep-21 and Oct-21. As per the common agreed procedure and timeline ATC/TTC calculation in three-month advance and reconciliation of the TTC/ATC figure for the upcoming month between RLDC and SLDC has started from month Dec-21. Reconciled ATC/TTC figures for May-2022 are as follows:

Sl No	State/Utility	TTC (MW)		RM(MW)		ATC Import (MW)		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	6876	--	138	--	6738	--	May-22

2	JUSNL	1685	--	60	--	1625	--	May-22
3	DVC	2040	3644	65	51	1975	3593	May-22
4	OPTCL	3356	1723	121	71	3235	1652	May-22
5	WBSETCL	5660	--	450	--	5210	--	May-22
6	Sikkim	170	--	2.18	--	167.82	--	May-22

As per the agreed philosophy the status of month wise ATC/TTC submission is as follows:

State / Month	Bihar	Jharkhand	DVC	Odisha	West Bengal	Sikkim
May-22	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
June-22	Submitted	Submitted	Submitted	Pending	Submitted	Pending
July-22	Submitted	Pending	Submitted	Pending	Submitted	Pending
Aug-22	Pending	Pending	Pending	Pending	Submitted	Pending

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	No	https://power.sikkim.gov.in/atc-and-ttc	No (Not updating)	Static Link-Excel file

All the sates having net export schedule should declare their export TTC. In view of the same West Bengal is once again requested to share export TTC.

It is observed that from Bihar, DVC and Sikkim submission of ATC/TTC and base case are not regular. All the states are once again requested to share ATC/TTC in timely manner.

Deliberation in the meeting

Members updated the status.

ITEM NO. C.11: 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	Done on 9th April'21		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	

SLDC, Odisha representative informed that they would go for Mock Black Start of Balimela in the 2nd week of August '21.

In the 182nd OCC meeting, OHPC representative submitted that Mock Black Start had been done for Rengali on 18th August'21 and they would go for Mock Black Start of Balimela in Sept'21.

OCC advised the concerned utilities to give prior intimation to ERLDC and ERPC regarding Mock Black Start.

In the 183rd OCC meeting, SLDC Odisha representative informed that mock black start for Balimela has been scheduled in Nov-21.

Teesta III HEP representative submitted that mock black would be carried out for their plant in Nov'21 as per the schedule.

In the 185th OCC meeting, SLDC Odisha representative was not present in the discussion.

JUSNL vide letter dated 25.11.2021 informed that the Mock Black Start exercise at Subarnarekha Hydel Power, Sikidiri is scheduled on 03.12.2021 (Friday) from 11:00 hrs. to 13:00 hrs.

In the 186th OCC meeting, ERLDC representative informed that Mock Black Start of unit-7 of Burla and TLDP unit-4 were successfully completed on 15th & 16th December 2021 respectively.

Teesta-III representative informed that Mock Black Start would be done after completion of LILO work of Teesta-III Kishanganj.

Jharkhand representative informed that Mock Black Start at Subarnarekha was completed on 3rd December 2021.

Odisha representative informed that the Mock Black Start of Balimela is planned in the 2nd week of January 2022.

In the 187th OCC meeting, ERLDC representative informed that the mock black start of Teesta-V would be conducted shortly.

In the 188th OCC meeting, SLDC Odisha representative informed that Black Start of Burla has been completed and Black Start of Balimela is scheduled in the month of March 2022.

Teesta-III representative informed that Black Start testing would be conducted after the Committee Report on Teesta-V incident.

Members may update.

Deliberation in the meeting

OCC advised all the generators to update the status of mock black start exercises.

ITEM NO. C.12: Status update on transmission constraint from the respective state.

In the meeting Chaired by Joint Secretary (OM & RR) dated 12.01.2022, transmission constraints for drawl of power by states were discussed.

In line with same it is required to update on approved plan, prospective schedule of the project completion and reasons for delay in commissioning if any. List of the lines is given in **Annexure-C.12.**

187th OCC advised all the concerned utilities to update the status of their approved plan and prospective schedule.

In the 188th OCC meeting, It was informed that comments are still awaited from all the constituents.

OCC advised all the constituents to review the annexure thoroughly and update the status of their approved plan and prospective schedule.

Members may update.

Deliberation in the meeting

OCC advised all the constituents to update the status of their approved plan and prospective schedule to ERLDC.

PART D: OPERATIONAL PLANNING

ITEM NO. D.1: Anticipated power supply position during May 2022

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of May 2022 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.

Members may update.

Deliberation in the meeting

*The updated Anticipated power supply position is provided at **Annexure D.1**.*

ITEM NO. D.2: Shutdown proposal of generating units for the month of May 2022

Generator unit shutdown schedule for May' 2022 is given in the table:

Proposed Maintenance Schedule of Thermal Generating Units of ER in the month of May' 2022								
System	Station	Unit No.	Capacity (MW)	Period (as per LGBR 2022-23)		No. of Days	Reason	Remarks
				From	To			
No any Thermal Unit is scheduled to be taken up for Planned Maintenance in this month								

DVC vide mail dated 31.03.2022 requested for shutdown of DSTPS unit # 1 from 31.03.2022 to 28.04.2022 (28 days) for BOH, FGD and $DeNO_x$ burner.

DVC vide mail dated 21.04.2022 requested for shutdown of MTPS unit # 6 (250 MW) from 06.05.2022 to 03.06.2022 (28 days) for AOH, Turb, BLR-RLA, FGD, DeNOx burner and Generator.

Members may update.

Deliberation in the meeting

OCC was of the view that shutdown of the above units may not be permitted due to prevailing power requirement and grid condition.

ITEM NO. D.3: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 17.04.2022)

a) Thermal Generating Stations outage report:

SL No	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	BARAUNI TPS	BIHAR	NTPC	7	110	Turbine problem	19-Feb-22
2	BARAUNI TPS	BIHAR	NTPC	8	250	Boiler Tube Leakage	17-Apr-22
3	DPL	WEST BENGAL	WBPDCL	7	300	Due to coal shortage	09-Apr-22
4	FSTPP	WEST BENGAL	NTPC	2	200	Boiler Tube Leakage	16-Apr-22
5	FSTPP	WEST BENGAL	NTPC	5	500	Bottom Ash Buildup.	17-Mar-22
6	KOLAGHAT	WEST BENGAL	WBPDCL	4	210	Poor Coal Stock	08-Apr-22
7	KOLAGHAT	WEST BENGAL	WBPDCL	5	210	Boiler Tube Leakage	17-Apr-22
8	RTPS	JHARKHAND	DVC	1	600	Boiler Tube Leakage	15-Apr-22
9	OPGC	ODISHA	ODISHA	4	660	Annual Overhauling	26-Mar-22

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:

S.NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	NIL						

b) Hydro Unit Outage Report:

S.NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	BALIMELA HPS	ODISHA	OHPC	4	60	SPARKING AT PMG	04-Apr - 2022
2	BALIMELA HPS	ODISHA	OHPC	5	60	Problem in excitation system	25-Jan-2022
3	RENGALI HPS	ODISHA	OHPC	3	50	Bearing problem	26-Nov-2021

It is seen that about 170 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	29.04.2018	TOWER COLLAPSE AT LOC 44,45
2	220/132 KV 100 MVA ICT II AT LALMATIA	FSTPP/JUSNL	22.01.2019	FAILURE OF HV SIDE BREAKER
3	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 PANDIABILLI END (LOC 156) TO LOC 58
4	220KV BARAUNI-HAJIPUR CKT-1	BSPTCL	28.09.2019	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	30.04.2020	ICT BURST AND DAMAGED AFTER FIRE REPORTED
6	400KV/220KV 315 MVA ICT 2 AT MEERAMUNDALI	OPTCL	21.02.2021	FIRE HAZARD
7	400KV/220KV 315 MVA ICT 4 AT JEERAT	WBSETCL	09.04.2021	VERBALLY CONFIRMED BY WB THAT NEW TRANSFROMER PROCUREMENT UNDER PIPELINE AND SHALL BE REPLACED IN THE NEAR FUTURE.
8	220KV-FSTPP-LALMATIA	JUSNL	21.04.2021	THREE TOWER COLLAPSED NEAR LALMATIA
9	220KV-GAYA-CHANDAUTI (PMTL)-DC	BSPTCL	25.05.2021	FOR DISMANTLING OF TOWER NO 51 UNDER LILO WORK AT BODHGAYA.
10	400KV-BINAGURI-TALA-1	BHUTAN	12.11.2021	S/D TAKEN BY BHUTAN
11	400KV-BINAGURI-TALA-2	BHUTAN	17.03.2022	FIRE ON THE GIS TERMINATION OF THE B-PHASE
12	400KV-MAITHON-MAITHON RB-1	PGCIL	15.04.2022	RE-CONDUCTORING WORK
13	400KV/220KV 315 MVA ICT 4 AT RANGPO	PGCIL	14.03.2022	HIGH C2H2 CONTENT (8.7 PPM) HAS BEEN OBSERVED IN PHASE
14	400KV-DARBHANGA (DMTCL)-KISHANGANJ(PG)-1&2	PGCIL	24.03.2022	TERMINATION OF LOOP IN AND LOOP OUT LINE AT SAHARSA
15	400KV-NABINAGAR(NPGC)-PATNA-1&2	BSPTCL	26.03.2022	FOR MAKING LILO OF 400 KV NPGC - PATNA TRANSMISSION LINE AT JAKKANPUR (NEW) GIS S/S.
16	400KV-GORAKHPUR-MOTIHARI-1&2	PGCIL	03.04.2022	DMTCL HAS PROPOSED TO SHIFT 4 TOWERS WHICH ARE ON OPEN CAST FOUNDATION (27/4,27/5 OF MOTIHARI – GORAKHPUR LINE AND 26/4 & 26/5 OF MOTIHARI – BARH LINE)

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)

Members may update.

Deliberation in the meeting

Members updated.

ITEM NO. D.4: Commissioning of new units and transmission elements in Eastern Grid in the month of March-2022

The details of new units/transmission elements commissioned in the month of March-2022 based on the inputs received from beneficiaries:

NEW ELEMENTS COMMISSIONED DURING MARCH-2022							
GENERATING UNITS							
SL. NO.	Location	OWNER/UNIT NAME		Capacity added (MW)	Total/Installed Capacity (MW)	DATE	REMARKS
NIL							
ICTs/GTs/STs							
SL. NO.	Agency/Owner	SUB-STATION	ICT NO	Voltage Level (kV)	CAPACITY (MVA)	DATE	REMARKS
1	JUSNL	PATRATU	1	400/220	315	3-Mar-22	400KV Side charged on 24-FEB-2022.220KV Bay Charged and first time ICT loaded at 17:32 Hours on 03-MAR-22.
2	OPTCL	MEERAMUNDALI-B	1	400/220	500	23-Mar-22	Idle charged from 220 kV side dated 23-MAR-2022,
3	BIHAR/BGCL	NAUBATPUR	2	400/220	500	17-Mar-22	
TRANSMISSION LINES							
SL. NO.	Agency/Owner	LINE NAME		Length (KM)	Conductor Type	DATE	REMARKS
1	OPTCL	220KV-BOLANGIR (PG)-KESINGA-1		80.596	ACSR Zebra	9-Mar-22	
2	BSPTCL	220KV-SAHARSA(PMTL)-KHAGARIA(NEW)-1		73	ACSR Zebra	9-Mar-22	
LILO/Re-Arrangement OF TRANSMISSION LINES							
SL. NO.	Agency/Owner	LINE NAME/LILO at		Length (KM)	Conductor Type	DATE	REMARKS
1	BIHAR/BGCL	LILO of 400 KV PATNA-BALIA-3 AT NAUBATPUR(BGCL) (400KV-NAUBATPUR(BH)-BALIA-1)		155.818	QUAD Moose	17-Mar-22	400KV-NAUBATPUR (BH)-BALIA-1 Section.
2	BIHAR/BGCL	LILO of 400 KV PATNA-BALIA-3 AT NAUBATPUR(BGCL) (400KV-PATNA-NAUBATPUR(BH)-1)		25.452	QUAD Moose	17-Mar-22	400KV-PATNA-NAUBATPUR (BH)-1 Section.
3	BIHAR/BGCL	LILO of 400 KV PATNA-BALIA-4 AT NAUBATPUR(BGCL) (400KV-NAUBATPUR(BH)-BALIA-2)		155.818	QUAD Moose	17-Mar-22	400KV-NAUBATPUR (BH)-BALIA-2 Section.
4	BIHAR/BGCL	LILO of 400 KV PATNA-BALIA-4 AT NAUBATPUR(BGCL) (400KV-PATNA-NAUBATPUR(BH)-2)		25.452	QUAD Moose	17-Mar-22	400KV-PATNA-NAUBATPUR (BH)-2 Section.
5	Sikkim	220KV-NEW MELLI-		18.8	ACSR Zebra +	25-Mar-22	220KV Tashiding-Legship including

		TASHIDING-2		ACSR Twin Moose		Jumpering Section 8.33 kM(ACSR Zebra). 220KV New Melli-Legship jumpering section end 9.773 kM(ACSR Twin Moose).
BUS/LINE REACTORS						
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**REMARKS**
NIL						
HVDC /AC Filter bank / FACTS DEVICE associated System						
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**	**Voltage Level (kV)**	**DATE**	
NIL						
Bays of Line/ICT/Reactor associated System						
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**REMARKS**
1	PGCIL	220KV MAIN BAY OF 400KV/220KV 315 MVA ICT 1 AT PATRATU	PATRATU	220	3-Mar-22	400KV Side charged on 24-FEB-2022.220KV Bay Charged and first time ICT loaded at 17:32 Hours on 03-MAR-2022.
2	BIHAR/BGCL	400KV MAIN BAY OF PATNA -1 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
3	BIHAR/BGCL	400KV MAIN BAY OF PATNA -2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
4	BIHAR/BGCL	400KV MAIN BAY OF BALIA-1 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
5	BIHAR/BGCL	400KV TIE BAY OF BALIA-1 AND PATNA-2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
6	BIHAR/BGCL	400KV MAIN BAY OF BALIA-2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
7	BIHAR/BGCL	400KV MAIN BAY OF 500 MVA ICT-2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
8	BIHAR/BGCL	400KV TIE BAY OF BALIA -2 AND 500 MVA ICT-2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
9	OPTCL	220KV MAIN BAY OF 400KV/220KV 500 MVA ICT 1 AT MERAMUNDALI B	MERAMUNDALI-B	220	23-Mar-22	
10	OPTCL	400KV MAIN BAY OF 400KV/220KV 500 MVA ICT 1 AT MERAMUNDALI B	MERAMUNDALI-B	400	28-Mar-22	
BUS						
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**REMARKS**
1	BIHAR/BGCL	400KV MAIN BUS - 2 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	
2	BIHAR/BGCL	400KV MAIN BUS - 1 AT NAUBATPUR(BH)	NAUBATPUR	400	17-Mar-22	

Members may update.

Deliberation in the meeting

Members updated.

ITEM NO. D.5: UFR operation during the month of March 2022.

Frequency profile for the month as follows:

Month	Max (Date/Time)	Min (Date/Time)	Less IEGC Band (%)	Within IEGC Band (%)	More IEGC Band (%)
March, 2022	50.30 Hz on 03.03.2022 at 06:01 Hrs.	49.54 Hz on 22.03.2022 at 22:21 Hrs.	14.50	73.41	12.09

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

Members may note.

Deliberation in the meeting

Members noted.

****

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति
Eastern Regional Power Committee
14, गोल्फ क्लब रोड, टालीगंज, कोलकाता-700033
Tel. No.: 033-24239651,24239659 FAX No.:033-24239652, 24239653 Web: **www.erpc.gov.in**

Annexure B.2.1

ERPC/Operation/IS/2022/ 97

Date: 18.04.2022

To

As per Distribution List

Sub: Constitution of "Technical Committee for finalizing Patna & Ranchi Islanding Scheme"-reg

Sir,

In the 45th TCC/ERPC meeting held on 25.03.2022 & 26.03.2022 respectively, it was decided that technical committees are to be formed for finalizing Patna & Ranchi Islanding Scheme. For Patna Islanding scheme, the committee members will be from BSPTCL, SLDC Bihar, NPGCL(NTPC), Powergrid, ERLDC and ERPC whereas for Ranchi Islanding Scheme the members will be from JUSNL, SLDC Jharkhand, TVNL, Powergrid, ERLDC and ERPC. Based on the receipt of nominations from the concerned utilities, the composition of the technical committees are as follows:

Organization	Name	Member
ERPC	S Kejriwal, SE	Member (For Both Patna & Ranchi Islanding Scheme)
	P. P. Jena, EE---Convenor	
ERLDC	A.P. Singh, Manager	
Bihar	A K Choudhury, CE(SO)	Member (For Patna Islanding Scheme)
	S. N. Kumar. CE (O &M)	
NTPC	B K Pandey, AGM(EM)	
	Bipin Kumar, Manager(EM)	
Powergrid	H C Gupta, Chief Manager, Patna S/s	
Powergrid	R K Srivastava, Chief Manager, N. Ranchi S/s	Member (For Ranchi Islanding Scheme)
Jharkhand	Ajeet Kumar, DGM(STU)	
	Rimil Topno, Sr Manager(SLDC)	
TVNL	Sarvesh Prasad, HOD (Electrical)	
	Bhaskar Kumar, HOD(C&I)	
	Ashish Kr. sharma, ESE(Electrical)	
	Imroz Alam, ESE(Turbine division)	

(Cont.)

The committee may co-opt/associate any other expert in the field as they feel necessary. The Committee may also consult OEM/Vendor as and when required for any inputs.

Th committee may submit the report by 15th May'2022.

This issues with approval of Member Secretary, ERPC.

Yours faithfully,

18.04.2022

(P. P. Jena)
Executive Engineer(PS)

Distribution List:

- All Members of the Technical Committee for Patna & Ranchi Islanding Scheme
- Member Secretary, ERPC-for kind information

Annexure-B.10

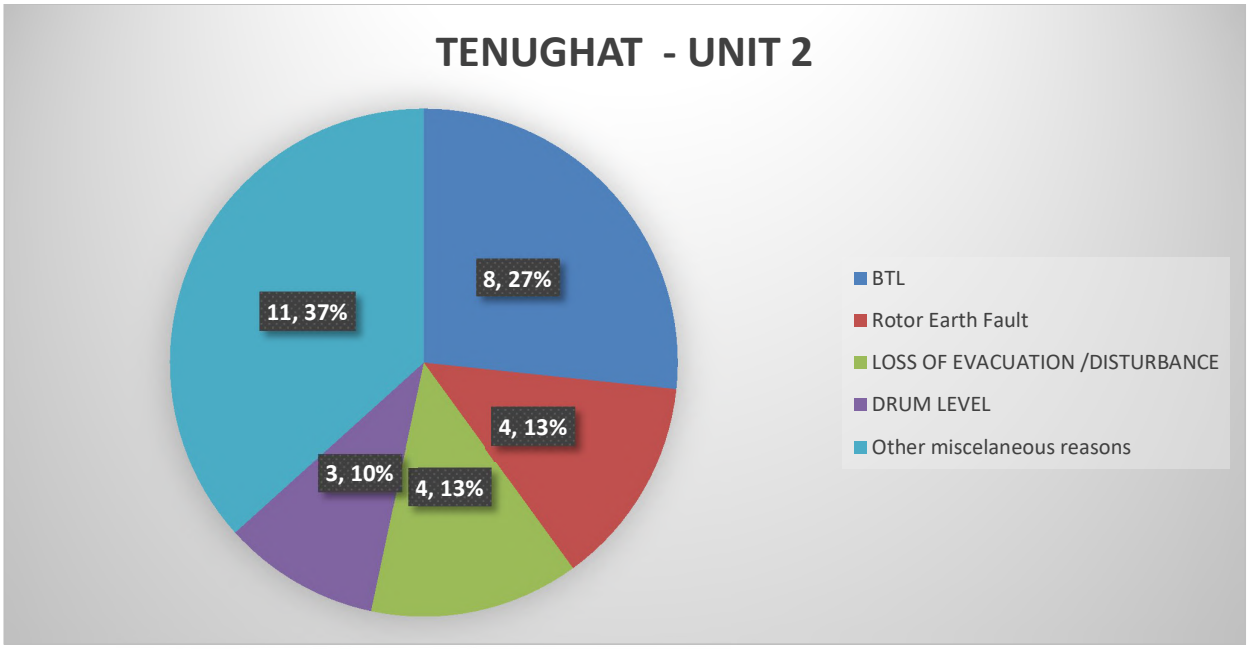
ISTS feeders to be disconnected at 49.4 Hz and OD
Odisha Feeder list for Disconnection
132 kV Baripada-Bangriposi D/C
132 kV Baripada-Bhogarai/Jaleswar D/C
220 kV Bolangir-New Bolangir D/C
West Bengal Feeder list for Disconnection
220 kV Dalkohla (PG)-Dalkohla(WB) D/C
132 kV Malda (PG)-Malda(WB) D/C
132 kV Birpara(PG)-Birpara(WB) D/C
DVC Feeder list for Disconnection
220 kV Maithon-Dhanbad D/C
220 kV Maithon-Kalyaneswari D/C
220 kV Parulia-Parulia D/C
Jharkhand Feeder list for Disconnection
220 kV Daltonganj- Gardwa D/C
220 kV Daltonganj- Chatra D/C
220 kV Maithon-Dumka D/C
Bihar Feeder list for Disconnection
132 kV Sitamarhi (PG)-Runnisaidpur D/C
132 kV Banka (PG)-Sultanganj D/C
132 kV Banka (PG)-Banka D/C

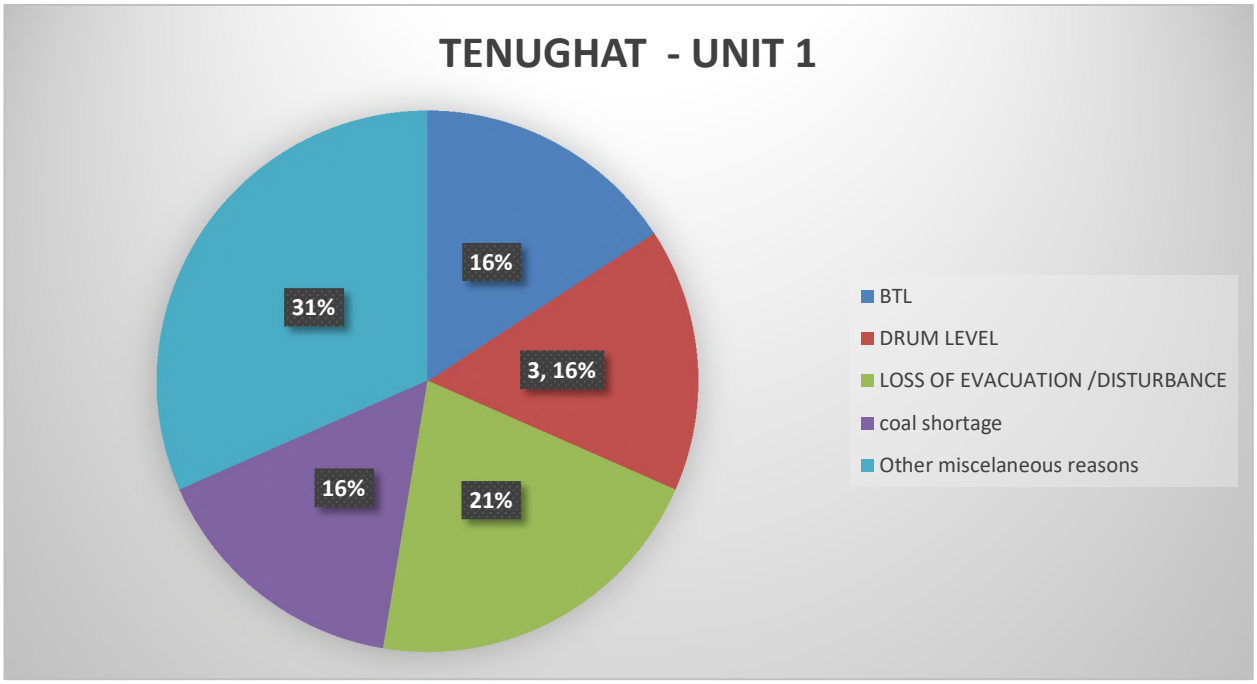
Annexure-B.19

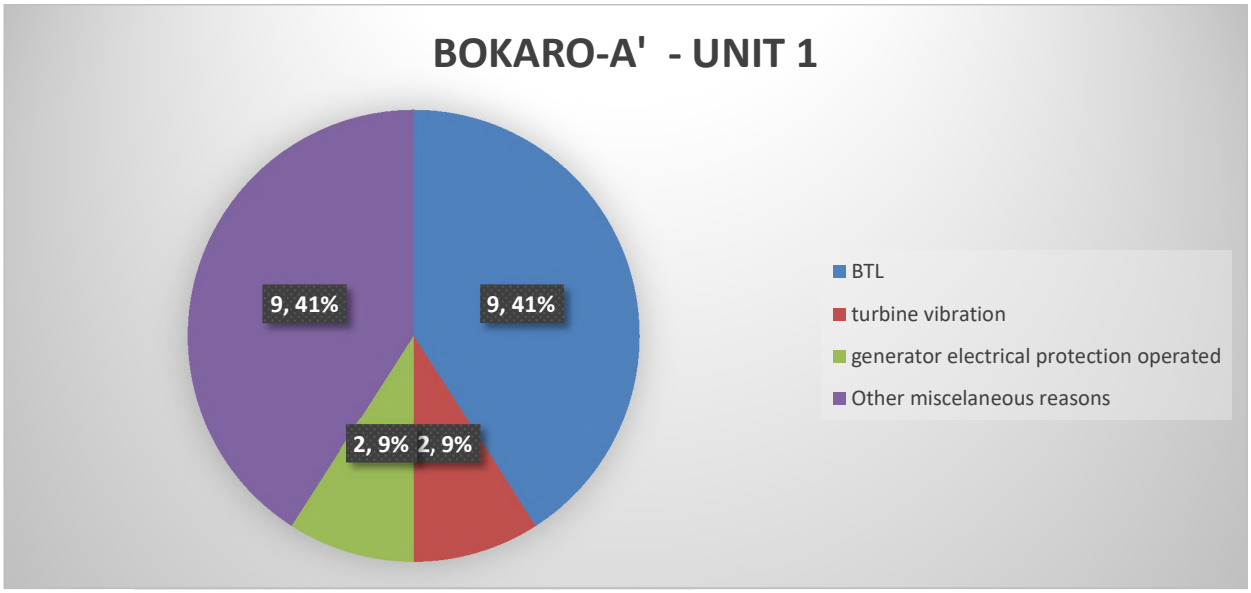
Multiple Units Tripping Mar2021-March 2022

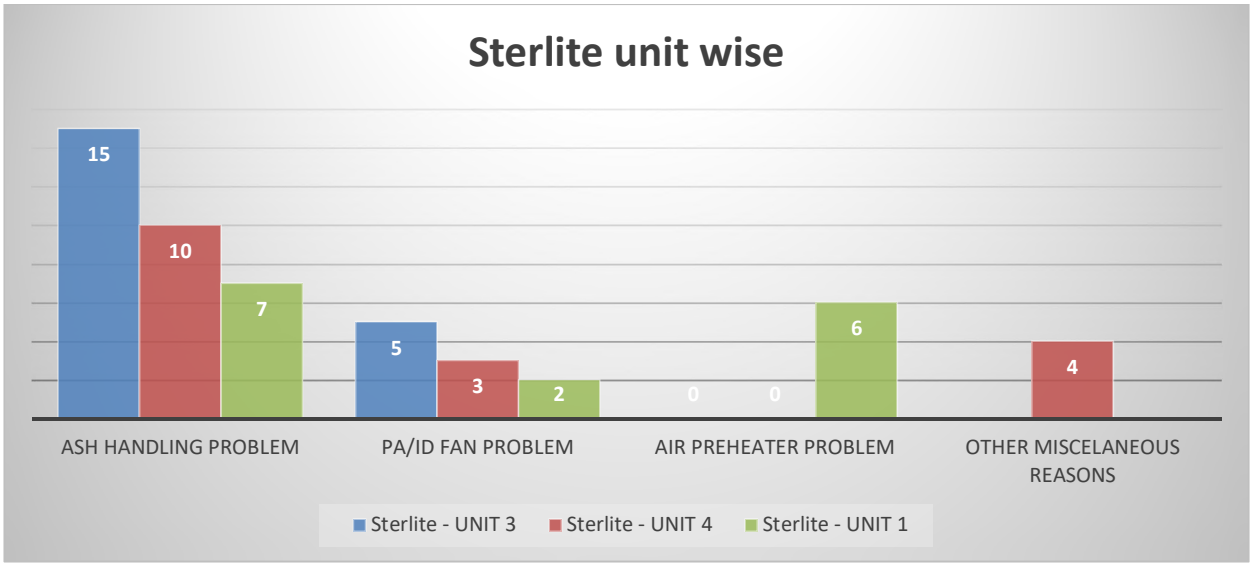
Sr.No	Element Name	No of tripping	Major reason	Owner	Impact States
1	TENUGHAT - UNIT 2 (210 Mw)	31	Rotor Earth fault, Tube leakage,loss of evacuation and other reasons	TVNL	Jharkhand
2	BOKARO-A' - UNIT 1 (500 Mw)	22	BTL,Low drum level , turbine vibraion	DVC	DVC
3	Sterlite - UNIT 3 (600 Mw)	20	PA fan problem, Ash handling problem, ID Fan problem	Vedanta-IPP	Orissa
4	JITPL - UNIT 1 (500 Mw)	19	High turbine vibration , turbine gov issue	JITPL-IPP	Orissa and Other
5	TENUGHAT - UNIT 1 (210 Mw)	19	Various tube leakages, Low drum level, Loss of fuel	TVNL	Jharkhand
6	OPGC - UNIT 4	19	BTL, Generator protection		Orissa and Other
7	KBUNL - UNIT 1 (195 Mw)	17	Various tube leakages, Flame failure, Electrical Fault	NTPC	Bihar
8	Sterlite - UNIT 4 (600 Mw)	17	PA fan problem, Ash handling problem, ID Fan problem	Vedanta-IPP	Orissa
9	Sterlite - UNIT 1 (600 Mw)	15	PA fan problem, Ash handling problem, ID Fan problem	Vedanta-IPP	Orissa
10	SANTALDIH TPS - UNIT 5 (250 Mw)	15	BTL,Various reasons	WBPDCL	West Bengal
11	NABINAGAR(BRBCL) - UNIT 3 (250 Mw)	14	Flame failure, low vacuum	BRBCL	Railway
12	DPL - UNIT 8 (210 Mw)	13	Tube leakage	WBPDCL	West Bengal
13	DPL - UNIT 7 (250 Mw)	13	BTL, coal feeding problem	WBPDCL	West Bengal
14	NABINAGAR(BRBCL) - UNIT 1 (250 Mw)	12	BTL, Low drum level	BRBCL	Railway
15	GMR - UNIT 1 (350 Mw)	11	Bottom ash ,ID fan trip,Various reasons	GMR-IPP	Orissa and Other
16	FSTPP - UNIT 5 (500 Mw)	11	LOSS OF VACCUM , CW pump tripping,low drum level	NTPC	ER states

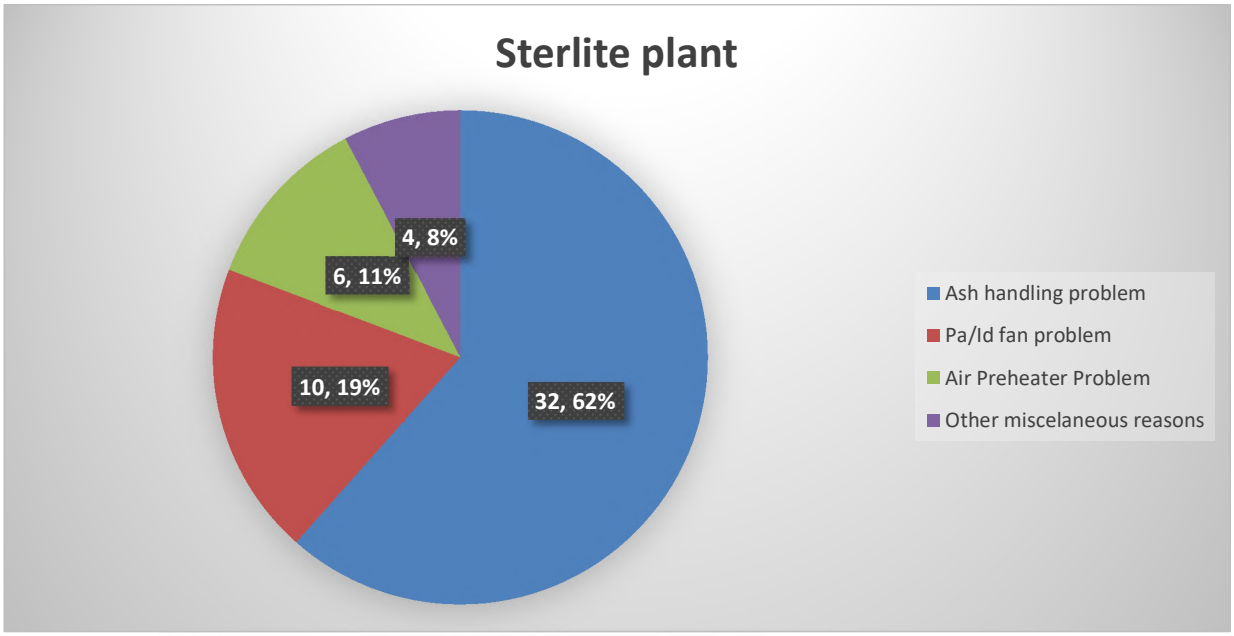
Unit wise Reasons for Repeated Tripping

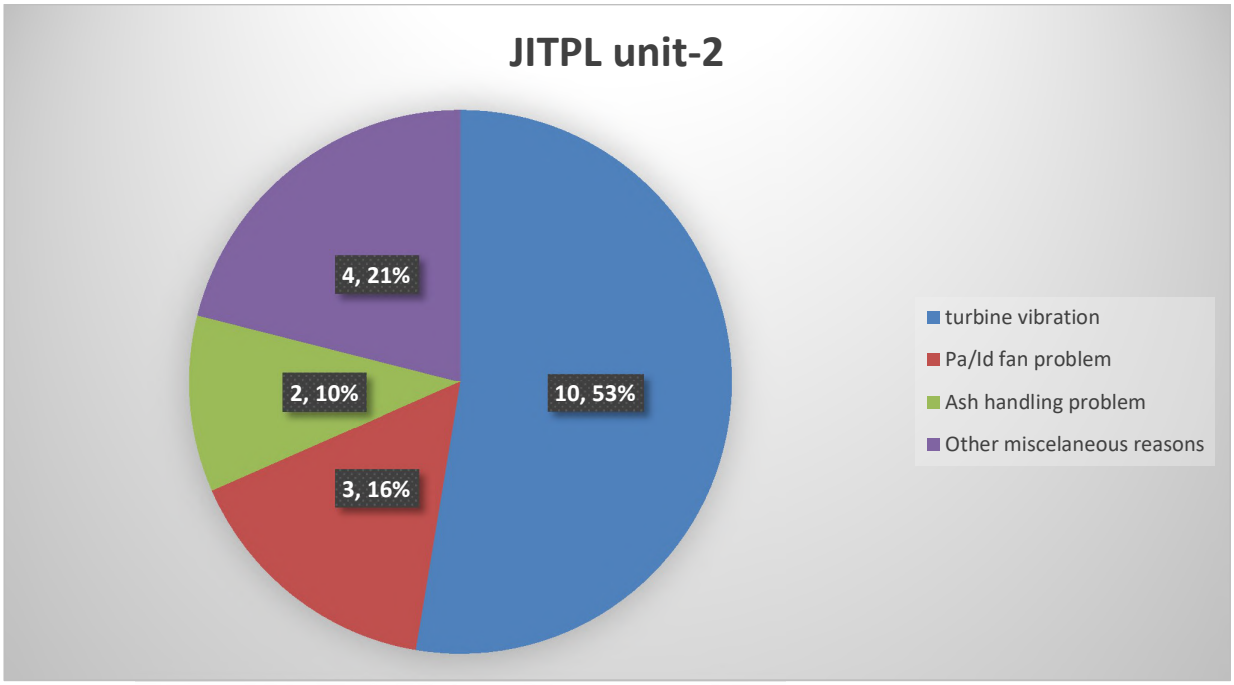


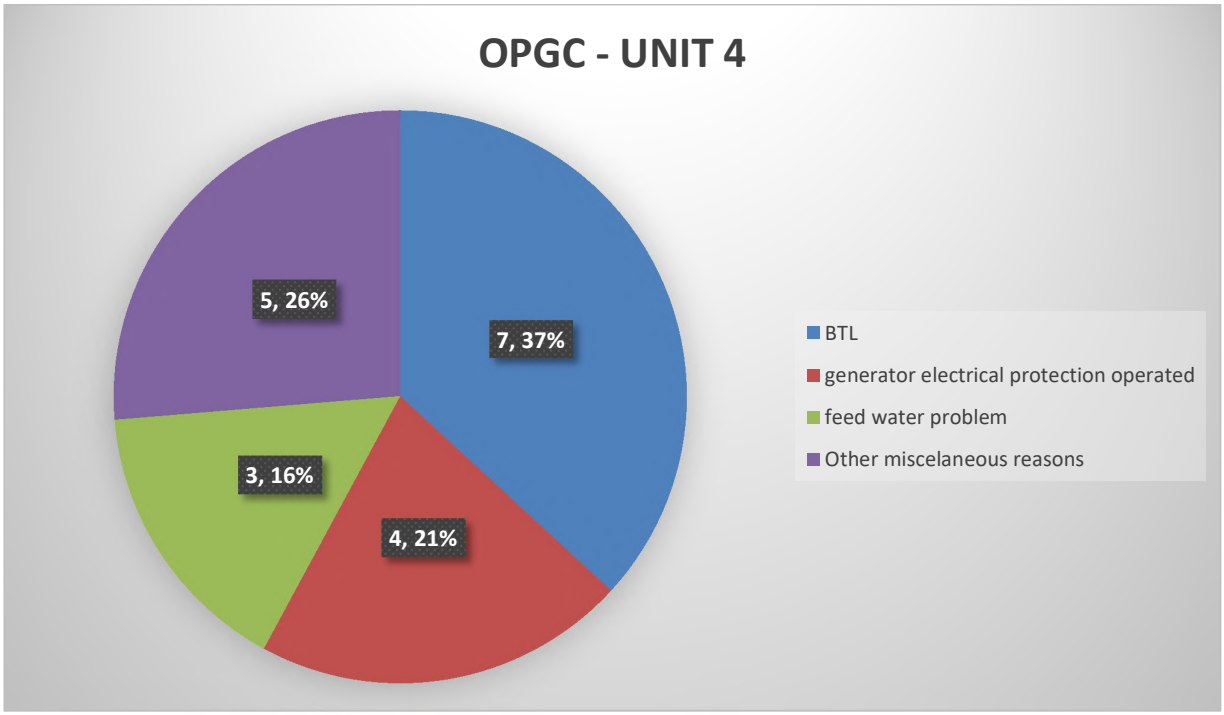


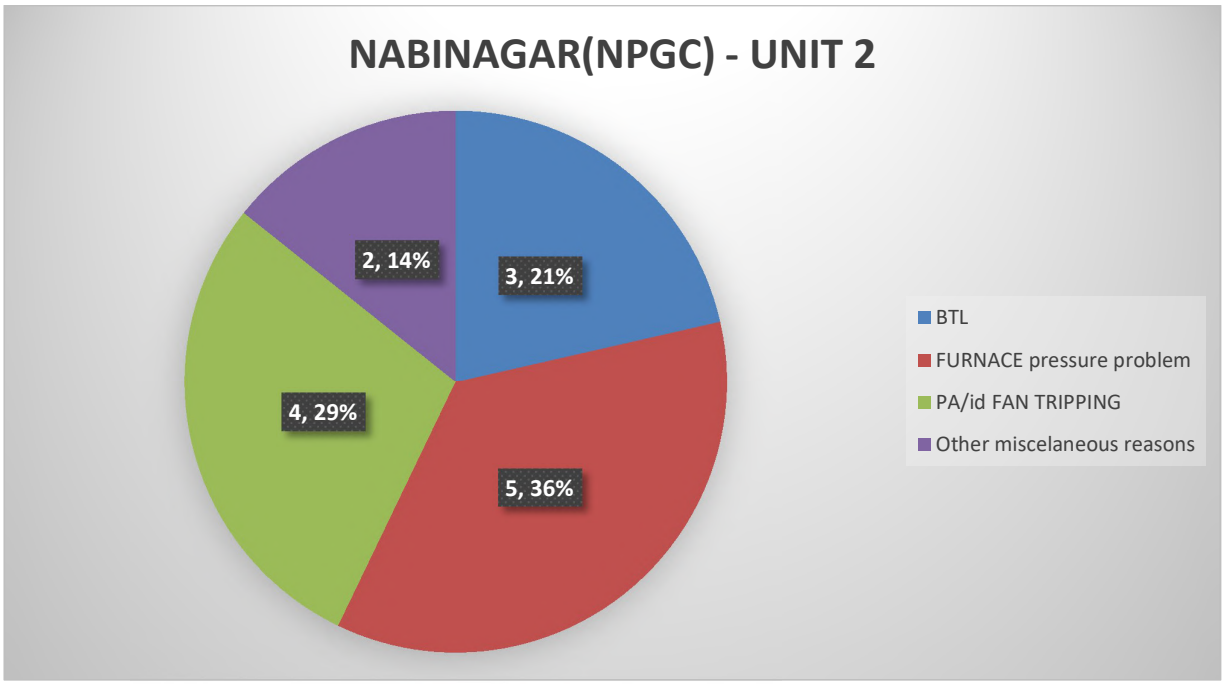

BOKARO-A' - UNIT 1
9, 41%
9, 41%
2, 9%
2, 9%
BTL
turbine vibration
generator electrical protection operated
Other miscelaneous reasons


Sterlite unit wise
15
10
7
5
3
2
0
0
6
4
ASH HANDLING PROBLEM
PA/ID FAN PROBLEM
AIR PREHEATER PROBLEM
OTHER MISCELANEOUS REASONS
Sterlite - UNIT 3
Sterlite - UNIT 4
Sterlite - UNIT 1

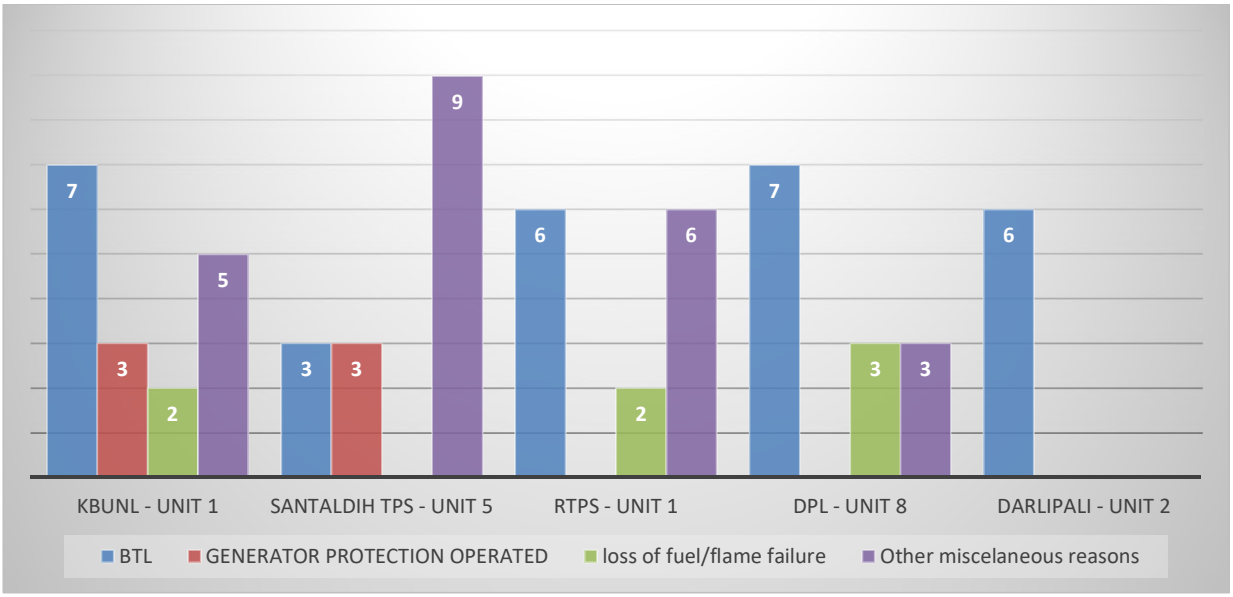

Sterlite plant
4, 8%
6, 11%
10, 19%
32, 62%
Ash handling problem
Pa/Id fan problem
Air Preheater Problem
Other miscelaneous reasons


JITPL unit-2
4, 21%
2, 10%
10, 53%
3, 16%
turbine vibration
Pa/Id fan problem
Ash handling problem
Other miscelaneous reasons


OPGC - UNIT 4
5, 26%
7, 37%
3, 16%
4, 21%
BTL
generator electrical protection operated
feed water problem
Other miscelaneous reasons


NABINAGAR(NPGC) - UNIT 2
2, 14%
3, 21%
4, 29%
5, 36%
BTL
FURNACE pressure problem
PA/id FAN TRIPPING
Other miscelaneous reasons

Rest Unit tripping Reasons



Annexure B.21

	Add units in this direction ----------->	1	2	3
	Power Station Details			

Under 'A', please provide the general details of each unit of the power station.

A	Details of the thermal power unit	Value	Value	Value
A1	Developer			
A2	Name of Project			
A3	Sector (State / Central /Private)			
A4	District			
A5	State			
A6	Region (NR, ER, NER, SR, WR)			
A7	Unit No	1	2	3
A8	Unit Capacity (MW)			
A9	Date of Commissioning (DD-MM-YYYY)			

	Add units in this direction ----------->	1	2	3
	SOx			

Under 'A', please provide the details regarding De-SOx technology.

A	Details of De-SOx technology (FGD)	Value	Value	Value
A1	Current level of SOx emission (mg/Nm3)			
A2	Applicable SOx norms (100, 200 or 600 mg/Nm3)			
A3	Whether FGD Installed (Y/N)			
A4	Whether FGD planned (Y/N)			
A5	De-Sulphurisation Technology Used / proposed (use Annexure if required)			
A6	FGD Phasing Plan for Implementation (DD/MM/YYYY)			

Under 'B', please provide the dates of De-SOx equipment installation milestones

If the milestone has been achieved, right Y for Yes and provide date of achievement.

If the milestone has not been achieved yet, right N for No and provide the target date.

B	De-SOx equipment installation milestones - dates	(Y/N) Date (DD-MM-YYYY)	(Y/N) Date (DD-MM-YYYY)	(Y/N) Date (DD-MM-YYYY)
B1	Feasibility Study Started			
B2	Feasibility Study Completed			
B3	Tender Specifications Made			
B4	NIT Issued			
B5	Bids Opened			
B6	Bids Awarded			
B7	% Progress of FGD Installation			
B8	FGD Commissioned			

Under 'C', please offer any comments/ remarks you may have.

C	Current Status & Remarks			

	Add units in this direction ----------->	1	2	3
	SPM			

Under 'A', please provide the details regarding ESP technology.

A	**Details of ESP upgradation technology**	**Value**	**Value**	**Value**
A1	Current level of Suspended Particulate Matter (SPM) (mg/Nm3)			
A2	Applicable SPM norms (30, 50 or 100 mg/Nm3)			
A3	Whether ESP upgradation planned (Y/N)			
A5	ESP Technology Used / proposed (use Annexure if required)			
A6	ESP Phasing Plan for Implementation (DD/MM/YYYY)			

Under 'B', please provide the target dates of ESP equipment installation milestones

If the milestone has been achieved, right Y for Yes and provide date of achievement.

If the milestone has not been achieved yet, right N for No and provide the target date.

B	**ESP equipment installation milestones - dates**	**(Y/N) Date (DD-MM-YYYY)**	**(Y/N) Date (DD-MM-YYYY)**	**(Y/N) Date (DD-MM-YYYY)**
B1	Feasibility Study Started			
B2	Feasibility Study Completed			
B3	Tender Specifications Made			
B4	NIT Issued			
B5	Bids Opened			
B6	Bids Awarded			
B7	% Progress of upgraded ESP Installation			
B8	Whether upgraded ESP Commissioned			

Under 'C', please offer any comments/ remarks you may have.

C	**Current Status & Remarks**			

	Add units in this direction ----------->	1	2	3
	NOx			

Under 'A', please provide the details regarding De-Nox technology.

A	**Details of De-NOx Equipment**	**Value**	**Value**	**Value**
A1	Current level of Nox emissions (mg/Nm3)			
A2	Applicable NOx norms (100, 300 or 600 mg/Nm3)			
A3	Whether SCR planned (Y/N)			
A5	Details of Nox control technology and other measures planned (use Annexure if required)			
A6	DeNOx Phasing Plan for Implementation (DD/MM/YYYY)			

Under 'B', please provide the target dates of De-NOx equipment installation milestones

If the milestone has been achieved, right Y for Yes and provide date of achievement.
If the milestone has not been achieved yet, right N for No and provide the target date.

B	**De-Nox equipment installation milestones - dates**	**(Y/N) Date (DD-MM-YYYY)**	**(Y/N) Date (DD-MM-YYYY)**	**(Y/N) Date (DD-MM-YYYY)**
B1	Feasibility Study Started			
B2	Feasibility Study Completed			
B3	Tender Specifications Made			
B4	NIT Issued			
B5	Bids Opened			
B6	Bids Awarded			
B7	% Progress of De-NOx equipment Installation			
B8	De-Nox equipment commissioned			

Under 'C', please offer any comments/ remarks you may have.

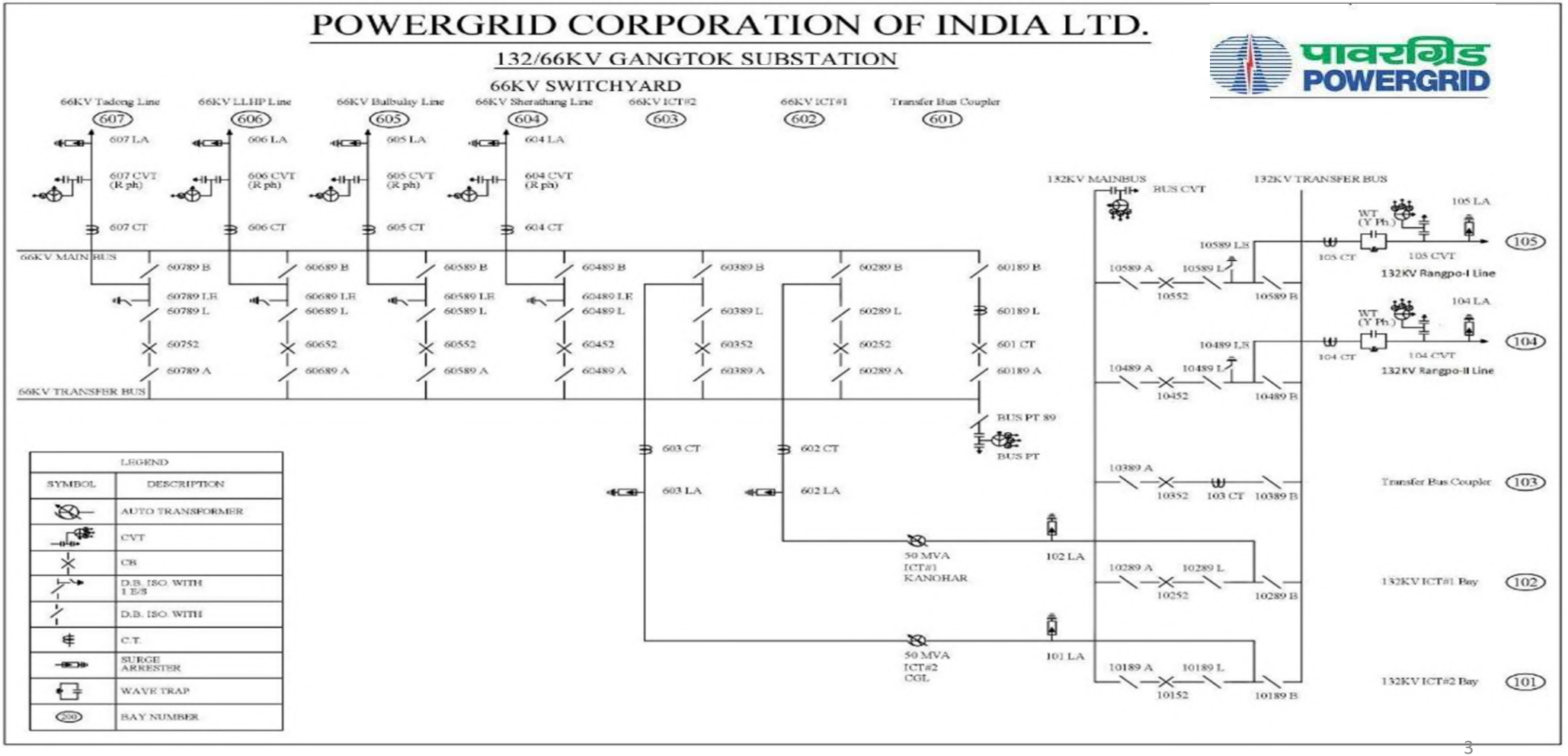
C	**Current Status & Remarks**			

Annexure D.26

ICT Details Of Gangtok 132/66 KV SS

Equipment	Make	Voltage Rating	MVA RATING	STATUS
50 MVA ICT-I	KANOHAR	132/66 KV	50 MVA	IN SERVICE
50 MVA ICT-II	CGL	132/66 KV	50 MVA	IN SERVICE
SAPRE 50 MVA ICT	KANOHAR	132/66 KV	50 MVA	AS SPARE

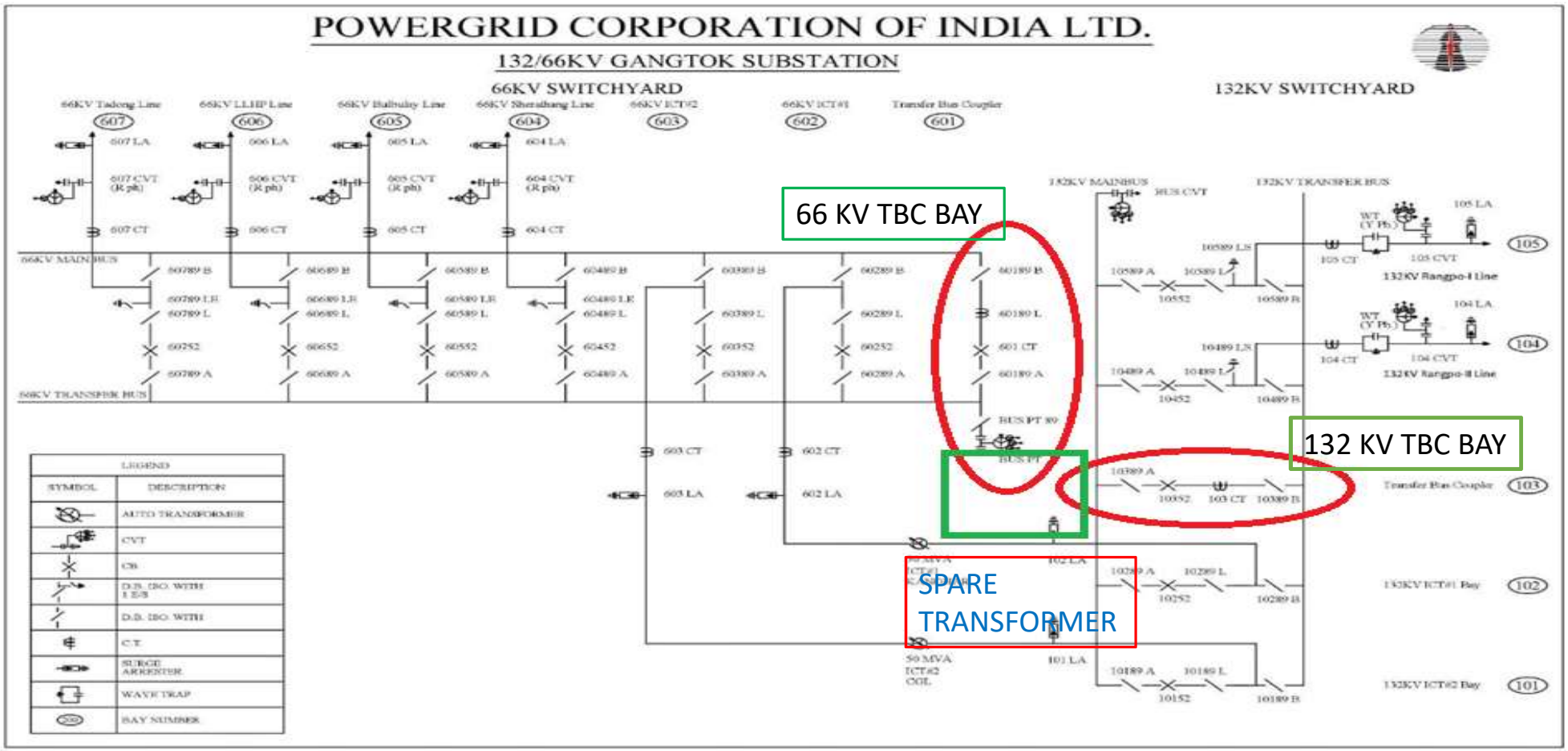
Single Line Diagram of the Station



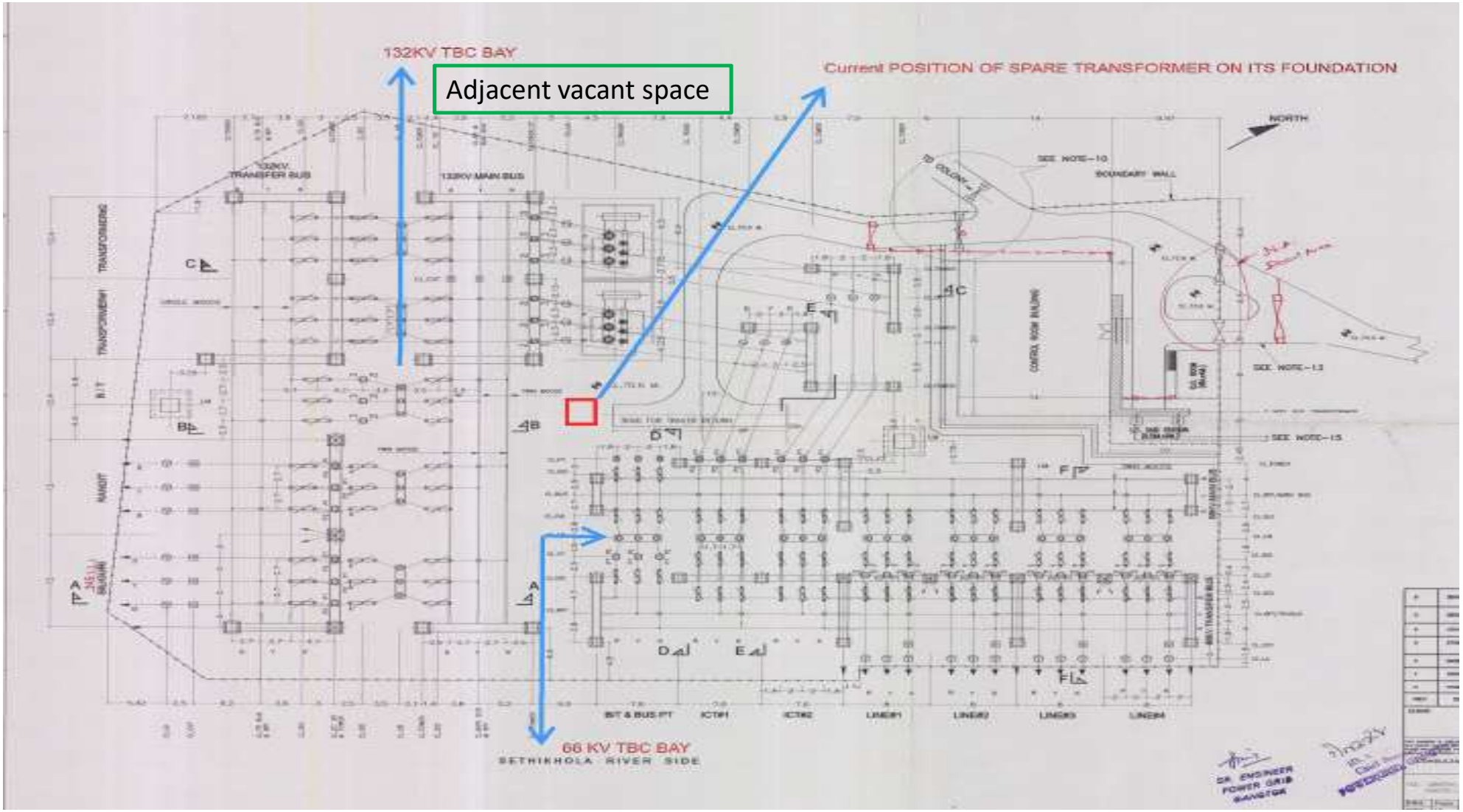
ICT POWER FLOW DATA SHEET DURING PEAK WINTER SEASON

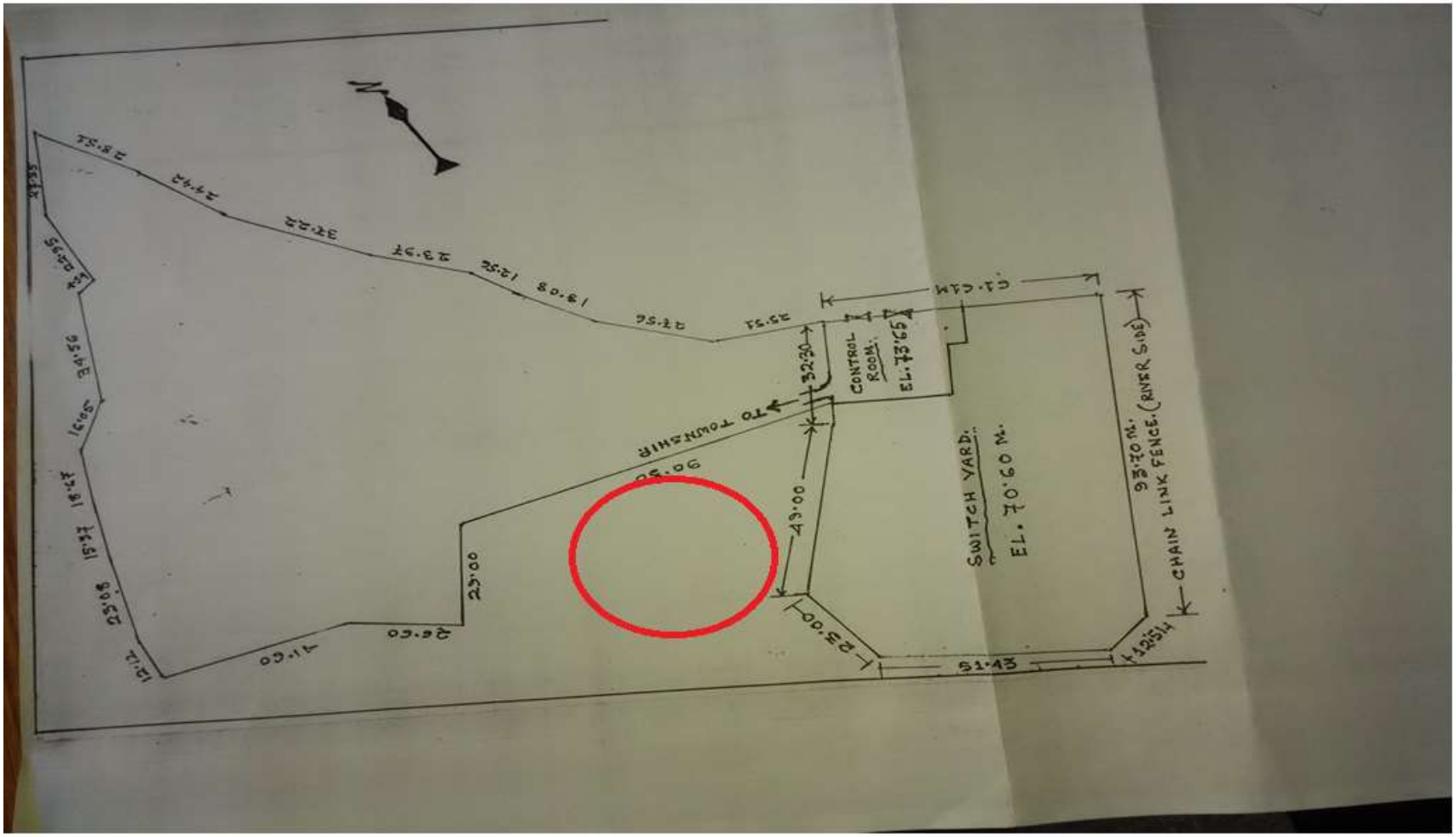
Date	ICT – I ; Peak Laod	ICT-II ; Peak Load	Remarks
27.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load
28.01.2022	43 MW	44 MW	Almost 90 % Loading during peak load
29.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load
30.01.2022	42 MW	432 MW	Almost 90 % Loading during peak load
31.01.2022	44 MW	45 MW	Almost 90 % Loading during peak load

Observation -: For Future LOAD Catering requirements and considering the importance of Gangtok and other urban critical load centers SPARE 50 MVA Transformer needs to be charged at the earliest.



Observation -: Existing 66 KV and 132 KV TBC Bays can be reconfigured to charge the spare ICT.


132KV TBC BAY
Adjacent vacant space
Current POSITION OF SPARE TRANSFORMER ON ITS FOUNDATION
66 KV TBC BAY
SETHIKHOLA RIVER SIDE

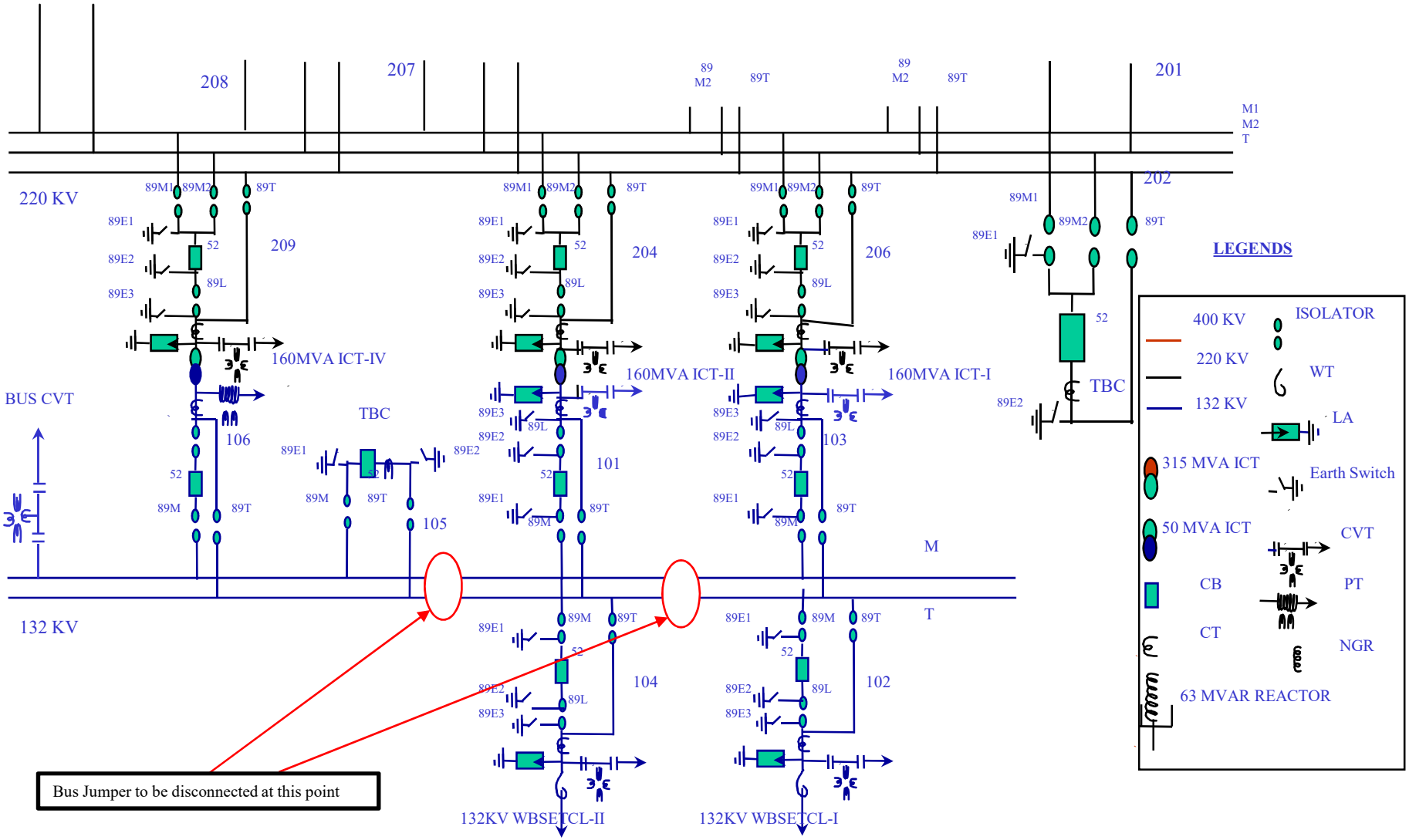


Adjacent space to Boundary wall on 132 KV Switch yard Side which needs to be acquired for future erection of 132 KV TBC Bay

Annexure B.27

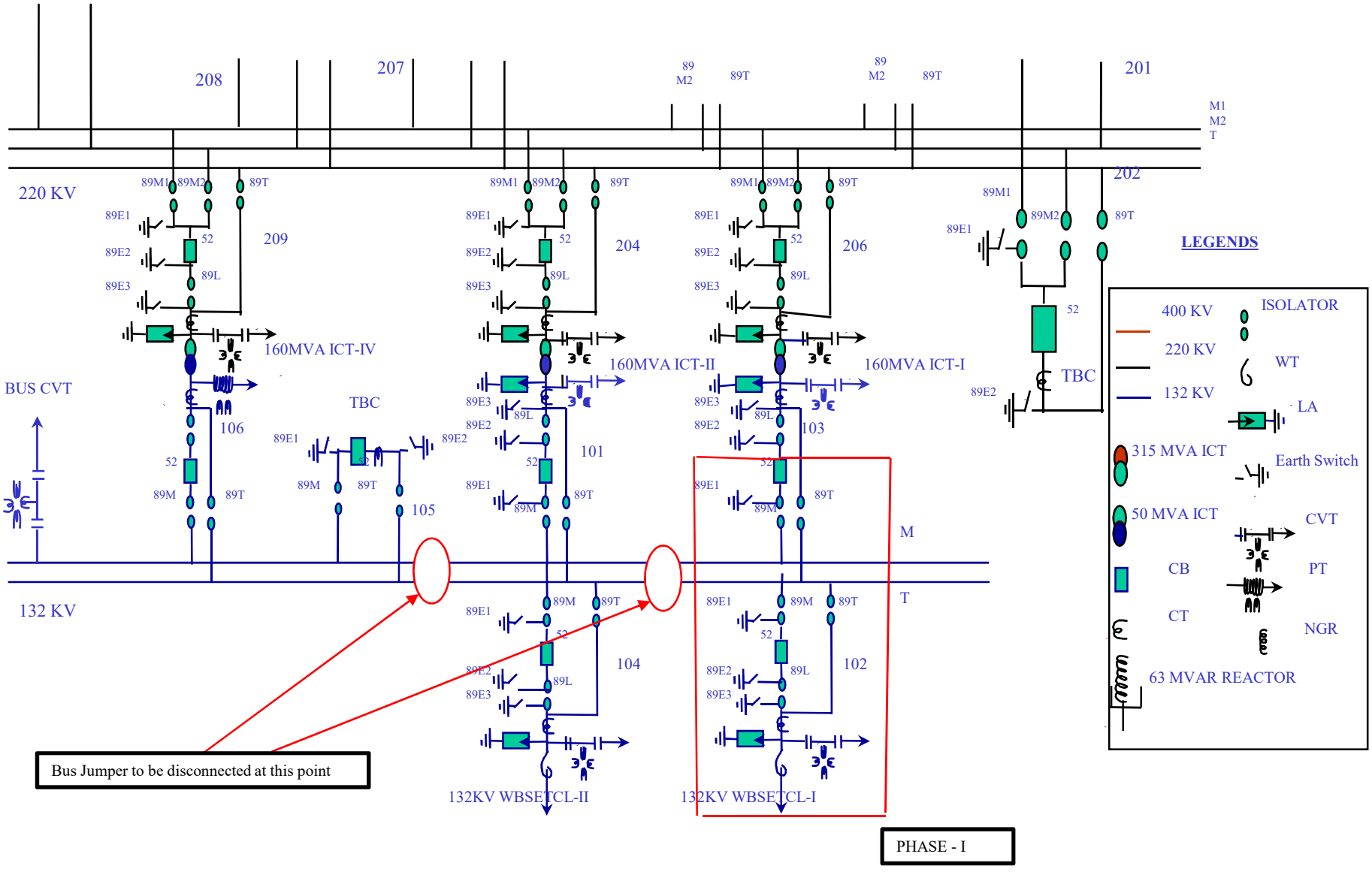
SINGLE LINE DIAGRAM

400/220/132 KV MALDA SUBSTATION



SINGLE LINE DIAGRAM

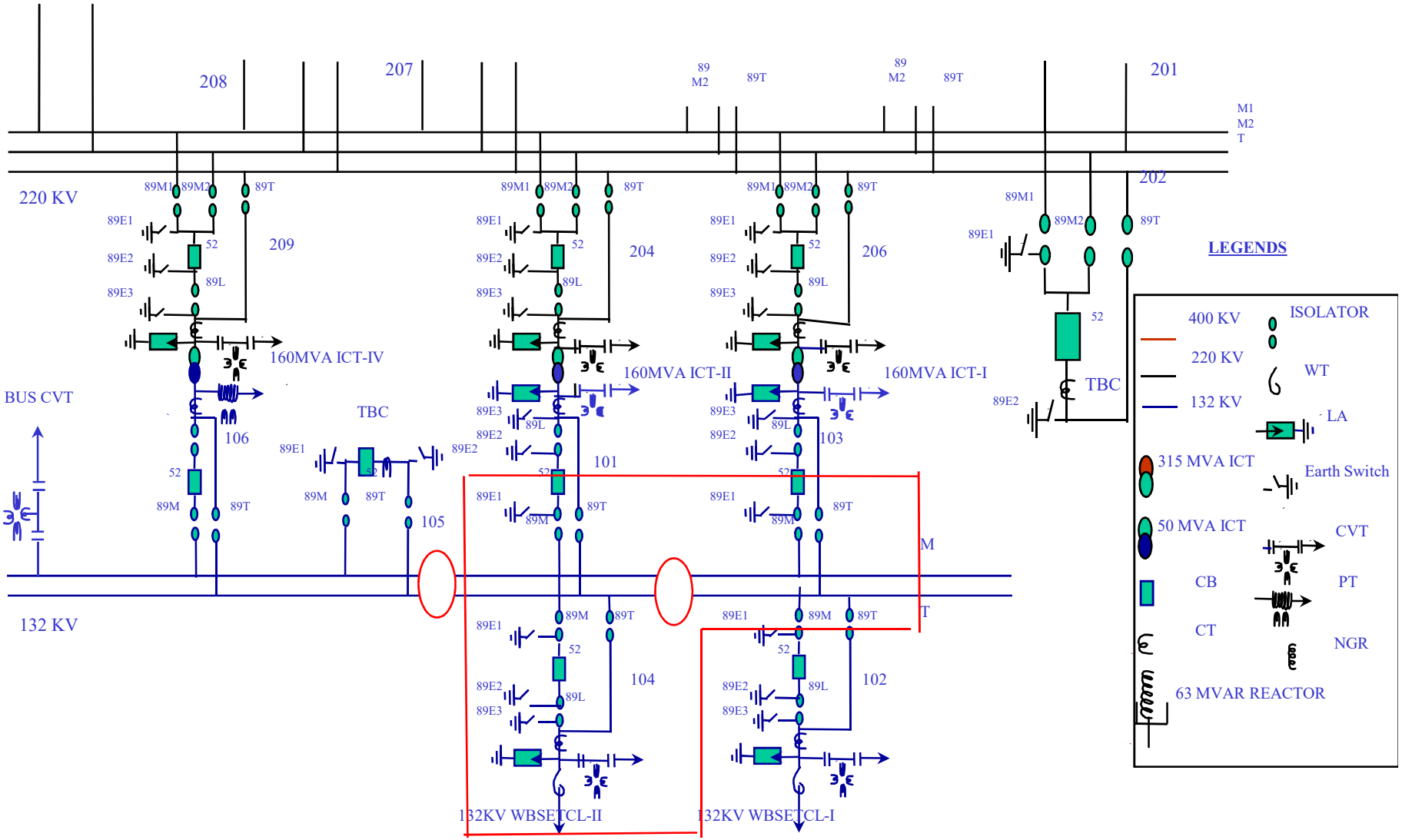
400/220/132 KV MALDA SUBSTATION



PHASE - I

SINGLE LINE DIAGRAM

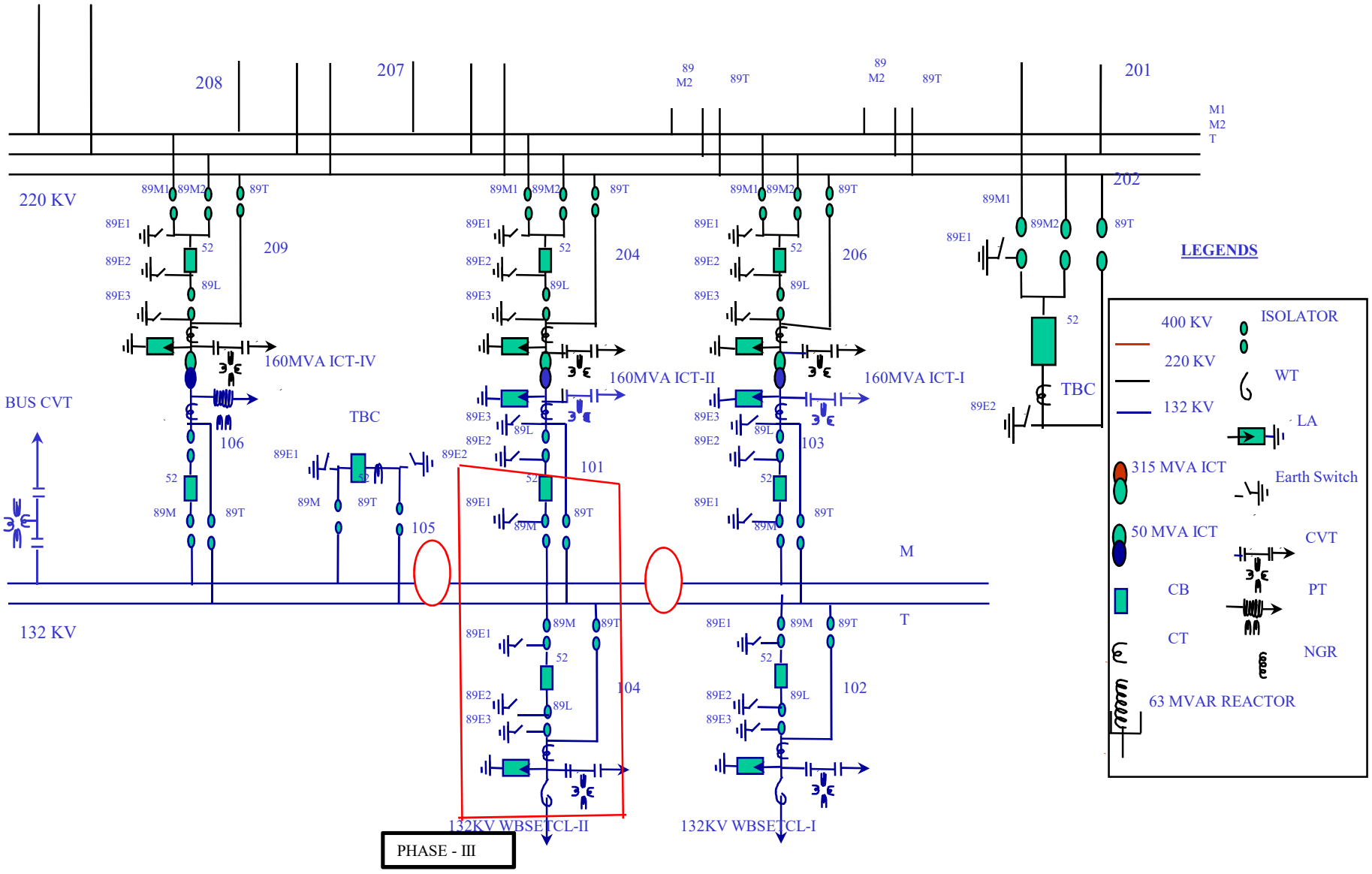
400/220/132 KV MALDA SUBSTATION



PHASE - II

SINGLE LINE DIAGRAM

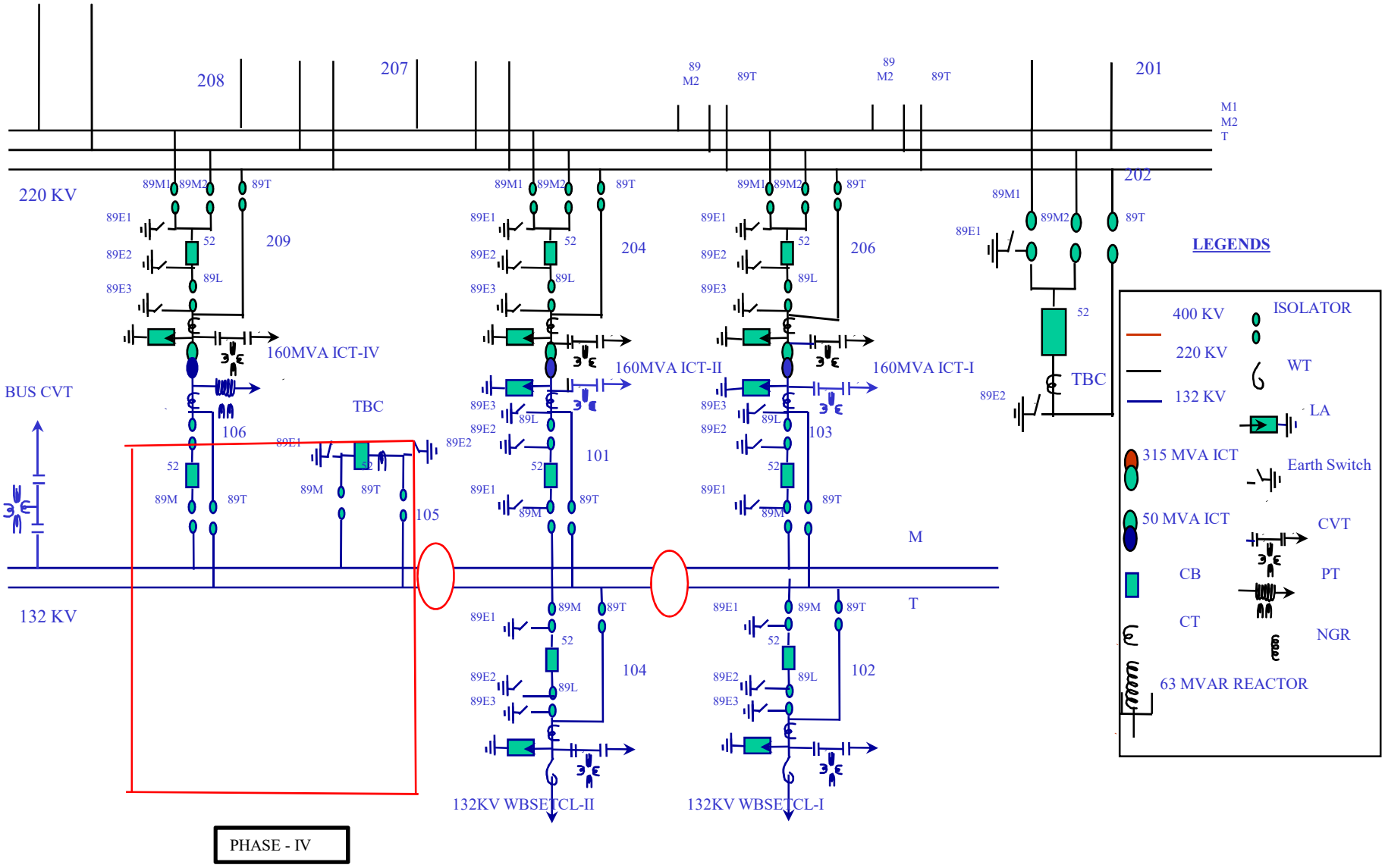
400/220/132 KV MALDA SUBSTATION



PHASE - III

SINGLE LINE DIAGRAM

400/220/132 KV MALDA SUBSTATION



PHASE - IV

Annexure-C.3

POWER SYSTEM DEVELOPMENT FUND

Status of the Projects in Eastern Region

Sl No	State	Entity	Name of the scheme	Grant Approved	Grant sanctioned on	1st Installment grant released on	Completion Schedule	Completion schedule w.r.t date of 1st instalment	Grant aviled so far	Under process of release	Total awards amount of placed of till date	Latest status
1	**Bihar**	**BSPTCL**	Renovation and Upgradation of protection system of substations. (18)	64.22	42135	42506	24	43236	56.04		69.195	90% grant availed on award cost.
2			Installation of Capacitor bank in 20 Nos of Grid Sub Station. (74)	18.882	42618	43550	24	44281	16.99		21.55	
			Total	**83.10**					**73.03**		**90.745**	
5	**Jharkhand**	**JUSNL**	Renovation & Upradation of protection system of Jharkhnad. (161)	138.13	15-Nov-17	28-Mar-19	16	28-Jul-20	114.68	1.01	145.674	90% grant availed on award cost. Project closure is expected by Q-2 of 2021-22.
6			Reliable Communication & data acquisition system upto 132kV Substations ER. (177)	22.36	24-May-19		24					Price bid has been opened. Tender on awarding stage.
			Total	**160.49**					**114.68**		**145.674**	
7	**Odisha**	**OPTCL**	Renovation and Upgradation of protection system of substaions. (08)	162.50	11-May-15	22-Mar-16	24	22-Mar-18	46.04		63.31	Project Completed on Dec-20. Request for release of final 10 % fund has been placed.
8			Implementation of OPGW based reliable communication at 132 kv and above substations. (128)	25.61	15-Nov-17	29-Mar-19	36	29-Mar-22	23.04		51.22	90% grant availed on award cost. Work In Progress
9			Installation of 125 MVAR Bus Reactor along with construction of associated by each at 400kV Grid S/S of Mendhasal, Meramundali & New Duburi for VAR control & stabilisation of system voltage. (179)	27.23	27-Jul-18	1-Apr-19	18	1-Oct-20	8.17		24.5	90% grant availed . Rest work in progress
10			Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha. (196)	2.93	24-May-19	19-Feb-20	10	19-Dec-20	0.29		0.29	10% grant availed
11			Protection Upgradation and installation os Substation Automatic System (SAS) for seven nos of 220/132/33kV Substations (Balasore, Bidanasi, Budhipadar, Katapali, Narendrapur, New-Bolangir & Paradeep). (209)	29.56	24-May-19	13-Feb-20	18	13-Aug-21	8.87		32.85	30% grant availed. Work in Progress.
12		**OHPCL**	Renovation and Upgradation of protection and control system of OHPC. (109)	22.35	22-May-17	25-May-18	24	25-May-20	14.94		21.25	90% grant availed on award cost.
			Total	**270.18**					**101.35**		**193.42**	
14	**West Bengal**	**WBSETCL**	Installation of switchable reactor & shunt capacitor for voltage improvement. (88)	43.37	22-May-17	22-Jun-18	19	22-Jan-20	33.07		40.83	90% grant availed on award cost. Will get completed by Oct'21
15			Renovation & Modernisation of Transmission System. (87)	70.13	22-May-17	25-Jun-18	25	25-Jul-20	63.12		96.44	90% grant availed on award cost. Will get completed by Mar'22
16			Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid. (210)	71.74	24-May-19	23-Oct-19	19	23-May-21	39.3		45.62	30% grant availed on award cost. 04 Nos. of Reactors will be commissioned by December 2021. LoA of the 5th Reactor is yet to be placed.
17			Project for establishment of reliable communication and data acquisition at different substation at WBSWTCL. (222)	31.19	24-May-19	23-Oct-19	25	23-Nov-21	3.12			The tender has been been cancelled for OPGW. Re-tendering has to be done.
18			Implementation of Integated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal. (197)	10.08	43910		12					10% grant not yet requested
19		**WBPDCL**	Renovation and Modernization of 220/ 132 kV STPS switch yard and implementation of Substaion Automation System. (72)	23.48	5-Sep-16	18-May-17	18	18-Nov-18	21.13		32.09	Target date for completion of project is Sept.'21 subject to availability of S/D & Covid scenario. Request for release for final 10% grant has been placed.
21			Renovation and Modernization of switchyard and related protection system of different power stations (BTPS, BKTPS and KTPS) of WBPDCL (155)	45.16	27-Jul-18	27-Mar-19	12	27-Mar-20	34.52		41.68	Target date for completion of project is Oct'21, subject to availability of S/D & Covid scenario. 90% grant availed on award cost.
			Total	**295.15**					**194.26**		**256.661**	

POWER SYSTEM DEVELOPMENT FUND												
Status of the Projects in Eastern Region												
Sl No	**State**	**Entity**	**Name of the scheme**	**Grant Approved**	**Grant sanctioned on**	**1st Installment grant released on**	**Completion Schedule**	**Completion schedule w.r.t date of 1st instalment**	**Grant aviled so far**	**Under process of release**	**Total awards amount of placed of till date**	**Latest status**
22	**DVC**	**DVC**	Renovation and Upgradation of the protection and control system of Ramgarh Sub Station. (81)	25.96	2-Jan-17	31-May-17	24	31-May-19	22.95	2.57	28.603	90% grant availed on award cost.
23			Renovation and Modernization of control and protection system and replecement of equipment at Parulia, Durgapur, Kalyanewari, Giridhi Jamsedpur, Barjora, Burnpur, Dhanbad and Bundwan substation. (106)	140.50	16-May-17	14-Dec-17	24	14-Dec-19	102.43	0.98	127.684	
			Total	**166.46**					**125.38**		**156.287**	
24	**Sikkim**	**ENPD, Sikkim**	Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim. (173)	10.00	24-May-19		18		3.00		20	30% grant availed on award cost
				10.00					**3.00**		**20.00**	
26	**ERPC**	**ERPC**	Creation and Maintenance of web based protection database management. (67)	20.00	17-Mar-16	28-Jun-16	18	28-Dec-17	14.83		16.48	Project Completed
27			Study Programme on power trading at NORD POOL Academy for Power System Engineers of Eastern Region. (122)	5.46	27-Jul-18	27-Mar-19	13	27-Apr-20	4.61		5.37	
28			Traning Program for Power system Engineers of various constituents of Eastern Region. (117)	0.61	27-Jul-18	11-Apr-19	24	11-Apr-21	0.54		0.60888	90% grant availed on award cost.
			Total	**26.07**					**19.98**		**22.45888**	
			GrandTotal	**1,011.46**					**631.68**		**885.25**	

Annexure-C.5

Date of PFR testing scheduled /completed for generating stations in ER

Sr. No	Station	Generating Unit	Test schedule	Remarks
1	TALCHER STAGE 2	3	Unit 3 - 5: 23-11-2020 to 28-11-2020	Testing for unit 6 yet to be conducted
2		4		
3		5		
4		6		
5	Farakka	2	01-02-2021 to 10-01-2021	Testing completed
6		3		
7		4		
8		5		
9		6		
10	Kahalgaon	1	August'21	Testing completed for Unit 1
11		5		
12		6		
13		7		
14	Barh	4	18-02-2021 to 21-02-2021	Scheduled
15		5		
16	Teesta V	1	07-01-2021 - 08-01-2021	Testing completed
17	Teesta III	1	30-01-2021 - 10-02-2021	Testing completed
18		2		
19		3		
20		4		
21		5		
22		6		
23	Dikchu	1	Unit#1: 6th & 7th April' 21 Unit#2: 8th & 9th April' 21	Scheduled
24		2		
25	MPL	1	-	Postponed due to some technical issue
26		2		
27	GMR	1	August'21	Testing Completed
28		2		
29		3		
30	JITPL	1	August'21	Scheduled
31		2		
32		3		
33	NPGCL	1	August'21	Testing Completed

34	BRBCL		1st Week of August'21	Testing Completed
35	APNRL	1&2	July'21-August-21	Testing Completed
36	BBGS	1,2&3	26th Feb 22 - 3rd Mar 22	Scheduled

Power Plant	Unit No	PSS tuned (Yes/No)	PSS in Service (Yes/No)	Last PSS Tuning Date	Whether Done in Last 3 Years	Whether Next to be planned	Planned Next PSS Tuning
West Bengal							
Kolaghat-WBPDCL	1	No	Yes	Long Back	No	Yes	Under retirement
Kolaghat-WBPDCL	2	No	Yes	Long Back	No	Yes	Under retirement
Kolaghat-WBPDCL	**3**	No	Yes	Long Back	No	Yes	To be done within Jan./Feb. 2022 after DAVR replacement.
Bakreshwar-WBPDCL	**2**	Yes	Yes	2019	Yes	Yes	PSS tuning to be done during Unit O/H in the month of November-December, 2021
Bakreshwar-WBPDCL	**4**	Yes	Yes	2019	Yes	Yes	BHEL offer received. PSS tuning to be done within Dec , 2021
Bakreshwar-WBPDCL	**5**	Yes	Yes	2019	Yes	Yes	BHEL offer received. PSS tuning to be done within Dec , 2021
DPL	8	No	Yes	No	No Detail	Yes	To be updated by WBPDCL/DPL
PPSP	1	No	Yes	2009	No	Yes	Dec-21
PPSP	2	No	Yes	2009	No	Yes	Dec-21
PPSP	3	No	Yes	2009	No	Yes	Dec-21
PPSP	4	No	Yes	2009	No	Yes	Dec-21
TLDP III	4 x 33			No Detail	No Detail	Yes	To be updated by WBSEDCL
TLDP IV	4 X 44			No Detail	No Detail	Yes	To be updated by WBSEDCL
DVC							
Bokaro B 210 MW	3				No Detail	Yes	Unit Is out of Service
Raghunathpur-DVC	1	No	No		No Detail	Yes	Will be done after AOH
Raghunathpur-DVC	2	No	No		No Detail	Yes	Jun-21
Waria	4	Yes	Yes	2008	No	Yes	Unit Is out of Service
ISGS							
Kahalgaon NTPC	1	Yes	Yes	2017	Yes	Yes	Apr-21
Kahalgaon NTPC	3	Yes	Yes	2016	Yes	Yes	Jul-21
Kahalgaon NTPC	4	Yes	Yes	2015	No	Yes	Mar-21
Kahalgaon NTPC	6	Yes	Yes	2009	No	Yes	Mar-21
Talcher Stage 2	3	Yes	Yes	2016	Yes	Yes	Nov-21
Talcher Stage 2	4	Yes	Yes	No Details	No Details	Yes	Nov-21

Talcher Stage 2	5	Yes	Yes	No Details	No Details	Yes	Nov-21
Talcher Stage 2	6	Yes	Yes	2016	Yes	Yes	Nov-21
Barh NTPC	4			2015		Yes	In Next AOH
Barh NTPC	5			During Unit commissioning		Yes	June 2021 (AOH)
Teesta V	1	Yes	Yes	2008	No	Yes	Oct-21
Teesta V	2	Yes	Yes	2008	No	Yes	Oct-21
Teesta V	3	Yes	Yes	2008	No	Yes	Oct-21
BRBCL	1	No	Yes	Vendor to Do	No	Yes	Jun-21
BRBCL	2	Yes	Yes	2019	Yes	Yes	Jun-21
BRBCL	3	No	Yes	Vendor to Do	No	Yes	Jun-21
KBUNL	1	Yes	Yes	2014	No	Yes	2021-22
KBUNL	2	Yes	Yes	2014	No	Yes	2021-22
KBUNL	3	Yes	Yes	Not Available	No	Yes	2021-22
KBUNL	4	Yes	Yes	Not Available	No	Yes	2021-22
Rangit	3 x 20			Not Available	No	Yes	To be updated by NHPC
IPP							
Jorethang	1	Yes	Yes	2015	No	Yes	Apr-21
Jorethang	2	Yes	Yes	2015	No	Yes	Apr-21
ADHUNIK	1	Yes	YES	2013	No	Yes	Mar-21
ADHUNIK	2	Yes	YES	2013	No	Yes	Mar-21
JITPL	1	Yes	Yes	2016	Yes	Yes	Jul-21
JITPL	2	Yes	Yes	2016	Yes	Yes	Jul-21
GMR	1	Yes	Yes	2013	No	Yes	Dec-21
GMR	2	Yes	Yes	2013	No	Yes	Dec-21
GMR	3	Yes	Yes	2013	No	Yes	Dec-21
Orissa							
IB TPS	1	Yes	Yes	2011	No	Yes	Mar'2021
IB TPS	2	Yes	Yes	2012	No	Yes	Mar'2021
Upper Indravati	1	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	2	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	3	Yes	No	2000	No	Yes	To be updated by OHPC
Upper Indravati	4	Yes	No	2001	No	Yes	To be updated by OHPC
Balimela	1 (60 MW)			No detail		Yes	To be updated by OHPC

Balimela	2 (60 MW)			No detail		Yes	To be updated by OHPC
Balimela	3 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	4 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	5 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	6 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	7 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	8 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Upper Kolab	1	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	2	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	3	Yes	Yes	2007	No	Yes	To be updated by OHPC
Upper Kolab	4	Yes	Yes	2007	No	Yes	To be updated by OHPC
Rengali	1	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	2	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	3	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	4	Yes	Yes	Not tuned	No	Yes	To be updated by OHPC
Rengali	5	No	Yes	Not tuned	No	Yes	To be updated by OHPC
Sterlite	4 X 600			No detail		Yes	To be updated by SLDC
Jharkhand							
Tenughat	1	Yes	Yes	2017	Yes	Yes	Dec-21
Tenughat	2	Yes	Yes	2017	Yes	Yes	Dec-21
Subarnrekha	2 X 65					Yes	To be updated
Bihar							
BTPS	6 (110)					Yes	To be updated by BSPGCL
BTPS	7 (110)					Yes	To be updated by BSPGCL
BTPS	8					Yes	To be updated by BSPGCL
BTPS	9					Yes	To be updated by BSPGCL
Bhutan							
Tala	1	No	Yes			Yes	To be updated by BPC
Tala	2	No	Yes			Yes	To be updated by BPC
Tala	3	No	Yes			Yes	To be updated by BPC
Tala	4	No	Yes			Yes	To be updated by BPC
Tala	5	No	Yes			Yes	To be updated by BPC
Tala	6	No	Yes			Yes	To be updated by BPC
Chukha	1	No	Yes	2005	No	Yes	To be updated by BPC

Chukha	2	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	3	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	4	No	Yes	2005	No	Yes	To be updated by BPC
Mangdechu	1	No	Yes			Yes	Sep-21
Mangdechu	2	No	Yes			Yes	Sep-21

Annexure C.12

Statewise transmission adequacy

Sl.NO.	Name of the state	Antecedent condition	Likely constraints	Future element to relieve constraints		Executing agency	Details of SCM/plan /forum	Date of approval	Expected date of commissioning	if delayed from SCOD, Reason	Revised expected date of commissioning	Other reason
1	Bihar	High drawal at Sipara (to meet the demand of City of Patna) by Bihar	N-1 non-compliant of **220kV Patna-Sipara T/c line**	**Intra State**	Creation of 400/220 kV Jakkanpur Substation by LILO of NPGC-Patna D/C Line at Jakkanpur	BSPTCL/BGCL	18th SCEM	13-Jun-16	Mar-22			
				Intra State	220 kV Down stream of Jakkanpur	BSPTCL/BGCL	2nd ERPCTP	30-Sep-20	NA			To be taken after commissioning of Jakkanpur Substation
				Intra State	LILO of 400 kV Patna-Balia DC at Naubatpur		2nd ERPCTP	30-Sep-20	NA			
				Intra State	220 kV Down stream of Naubatpur		2nd ERPCTP	30-Sep-20	NA			
				Intra State	Reconductoring of Patna-Sipara with HTLS Conductor		2nd ERPCTP	30-Sep-20	NA			
2	**Bihar**	During Peak demands of Bihar and Nepal	N-1 non-compliant of **2x200 MVA 400/132kV ICTs at Motihari**	**ISTS**	1x 315 MVA ICT at Motihari	PMTL	18th SCEM	13-Jun-16	Apr-22			Third 315 MVA ICT was being charged through 132 kV GIS Bus at Motihari on 21-04-2021. Just after charging of new ICT, 132kV Main bus-1 at Motihari tripped due to problem at Bus extension module. After this ICT could not be charged yet
3	**Jharkhand**	During Peak demand of Jharkhand	N-1 non-compliant of **2x315 MVA 400/220 kV ICTs** at Ranchi	**ISTS**	3rd 500 MVA ICT at Ranchi	Not yet allocated	3rd ERPCTP	09-Feb-21	Not available			
4	**Jharkhand**	During Peak demand of Jharkhand	N-1 non-compliant of **220 kV Maithon(PG)-Dumka D/C**	**Intra State**	LILO of 220kV Tenughat - Govindpur D/c line at Jainamore and Dhanbad	JUSNL	1st Consultation Meeting for	27-Dec-21	Dec-23			Dec 2023(for 02 bays at Dhanbad) Under administrative approval of State Goverment Level
5	DVC	1. Less generation at CTPS 2. Less generation at Koderma	N-1 non-compliant of **220 kV Maithon(PG)-Kalyaneswari D/C and Maithon(PG)-Dhanbad D/C**	Intra State	1. Construction of 400/220 kV Substation at RaghunatpurTPS	DVC	4th ERPCTP	09-Sep-21	Mar-23			
					2. LILO of 220 kV Kalyaneswari-CTPS D/C at RaghunatpurTPS			09-Sep-21	Mar-23			
					3.Construction of 400/220 kV Substation at Mejia-B TPS			09-Sep-21	Mar-23			
					4. LILO of 220 kV Mejia-A TPS-Barjora D/C at Mejia-B TPS			09-Sep-21	Mar-23			
6	**DVC**	Decommissioning of generators at Bokaro B	N-1 non-compliant of **2x315 MVA 400/220 kV ICTs** at Bokaro	**Intra State**	1. Construction of 400/220 kV Substation at RaghunatpurTPS 2. LILO of 220 kV Kalyaneswari-CTPS D/C at RaghunatpurTPS	DVC	4th ERPCTP	09-Sep-21	Mar-23			
7	**DVC and WB**	High Demand of WB and less generation at DPL	N-1 non-compliant of **220 kV Waria(DVC)-Bidhannagar(WB) D/C**	**Intra State**	3rd 315 MVA ICT at Bidhannagar (WB)	WBSETCL	8th SSCM/4th ERPCTP	NA	Jun-22			

8	WB	High Demand of West Bengal	N-1 non-compliant of **220 kV Rajarhat-Newtown AA3 D/C, 220 kV Jeerat Barasat D/C and 220 kV Subhasgram-EMSS D/C**	Intra State	1. Commissioning of Rajarhat (POWERGRID) –New Town AA2 220 kV D/c,	WBSETCL	18th SCEM	13-Jun-16	Dec-21 (ROW)	ROW	Rajarhat-Barasat 220kV DC May-22,	Due to ROW New town AA2 could not complied
					2. Rajarhat (PGCIL) –Barasat/Jeerat 220 kV D/c			13-Jun-16	Dec-21 (ROW)	ROW		
					3. Subashgram (PGCIL) –Baraipur 220 kV D/c.			13-Jun-16	Dec-21 (ROW)	ROW		
					4. Reconductoring of 220 kV Rajarhat-Newtown AA3 D/C			13-Jun-16	Dec-21 (ROW)	ROW		
9	**WB**	High Demand of West Bengal	N-1 non-compliant of **220 kV Subhasgram (WB)-Lakshmikantpur D/C**	**Intra State**	Commissioning of 220 kV Subhasgram Baruipur D/C	WBSETCL	18th SCEM	13-Jun-16	Dec-21 (ROW)	ROW	Apr-22	Baruipur substation is under-construction which is supposed to be completed by Dec, 2021 (SPS is available to take care of contingency for the time being)
10	**WB**	High Demand of West Bengal	N-1 non-compliant of **220 kV Subhasgram (PG) –Subhasgram (WB) D/C**	**Intra State**	Commissioning of 220 kV Subhasgram Baruipur D/C	WBSETCL	18th SCEM	13-Jun-16	Dec-21 (ROW)	ROW	Apr-22	Baruipur substation is under-construction which is supposed to be completed by Dec, 2021 (SPS is available to take care of contingency for the time being)
11	**Odisha**	High Drawl by Odisha at Rourkela	N-1 non-compliant of **220 kV Rourkela(PG)-Tarkera D/C**	**Intra State**	Construction of second 220 kV Rourkela(PG)-Tarkera D/C	OPTCL	1st Consultation	27-Dec-21	Not available			
12	**Improvement of Relibaility of System**	Good generation of MPL and high import from WR and High Export to NR	N-1 non-compliant of **400 kV MPL-Maithon D/C**	Inter State	Reconductoring of MPL-Maithon D/C with HTLS conductor	PGCIL	17th SCEM	25-May-15	Feb-22			

Annexure D.1

Anticipated Peak Demand (in MW) of ER & its constituents For May 2022

1	**BIHAR**	**Demand (MW)**	**Energy Requirement (MU)**
	NET MAX DEMAND	6400	3586
	NET POWER AVAILABILITY- Own Sources	450	212
	Central Sector+Bi-Lateral	5500	3713
	SURPLUS(+)/DEFICIT(-)	-450	339
2	**JHARKHAND**		
	NET MAXIMUM DEMAND	1700	990
	NET POWER AVAILABILITY- Own Source	405	181
	Central Sector+Bi-Lateral+IPP	904	770
	SURPLUS(+)/DEFICIT(-)	-391	-39
3	**DVC**		
	NET MAXIMUM DEMAND	3300	2110
	NET POWER AVAILABILITY- Own Source	5300	3222
	Central Sector+MPL	305	275
	Bi- lateral export by DVC	2200	1629
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	105	-242
4	**ODISHA**		
	NET MAXIMUM DEMAND (OWN)	4600	3021
	NET MAXIMUM DEMAND (In Case of CPP Drawal)	5700	3300
	NET POWER AVAILABILITY- Own Source	3808	2039
	Central Sector	1996	1379
	SURPLUS(+)/DEFICIT(-) (OWN)	1204	397
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	104	118
5	**WEST BENGAL**		
5.1	**WBSEDCL**		
	NET MAXIMUM DEMAND	7575	4560
	NET MAXIMUM DEMAND (Incl. Sikkim)	7580	4564
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5360	2760
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2594	1480
	EXPORT (To SIKKIM)	5	4
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	374	-324
5.2	**CESC**		
	NET MAXIMUM DEMAND	2260	1110
	NET POWER AVAILABILITY- Own Source	830	477
	IMPORT FROM HEL	540	383
	TOTAL AVAILABILITY OF CESC	1370	860
	DEFICIT(-) for Import	-890	-250
	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	9835	5670
	NET POWER AVAILABILITY- Own Source	6190	3237
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	3134	1863
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	-511	-570
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	-516	-574
6	**SIKKIM**		
	NET MAXIMUM DEMAND	109	48
	NET POWER AVAILABILITY- Own Source	8	1
	Central Sector	205	128
	SURPLUS(+)/DEFICIT(-)	104	81
	EASTERN REGION		
	NET MAXIMUM DEMAND	25435	15425
	NET MAXIMUM DEMAND (In Case of CPP Drawal of Odisha)	26514	15704
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	2189	1629
	EXPORT BY WBSEDCL TO SIKKIM	5	4
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	478
	NET TOTAL POWER AVAILABILITY OF ER	26005	15391
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
	SURPLUS(+)/DEFICIT(-)	565	-38
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	-514	-317

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ERPC::KOLKATA

ATTENDANCE SHEET

190th Operation Coordination sub-Committee (OCC) Meeting

VENUE: POWERGRID ER-II,REGIONAL HQ,KOLKATA TIME: 10:30 HRS DATE:21.04.2022 (THURSDAY)

Sl. No.	Name	Designation & Organisation	Contact Number	E-mail Id	Signature
1	N.S.Mondal	Member Secretary, ERPC	9958389967		
2	Rajib Sutradhar	ED (POSCO)	9436302714	rajibsutradhar@posco.in	
3	A.K. Maiti	ED - ER2 (Powergrid)	9434740036	akmaiti@powergrid.in	
4	B.B. Mehta	DIR OPTCL, SLDC	9438907008	dir.sldc@optcl.co.in	
5					
6					
7	D.K. JAVERI	CGM (AM) ER2 PGCIL	9425409535	javeri@powergrid.in	
8	S.K. Mohanty	GM (GO) SLDC, ODISHA	9438907383	skumohantyOPTCL@	
9	M.R. Samantaray	DGM (Elec), SLDC, OPTCL	9938907413	manas989@yahoo.co.in	
10	Madhusudan Sahoo	DGM(Elc), GRIDCO	9692427876	gridco.abc@gmail.com	M.S. Sahoo
11	H. K. Ghosh.	L.O. GRIDCO	8917347112	hemanta@gmail.com	
12	S.K. Panda.	EE(E), SLDC, DVC	6370134794	santosh.panda@dvc.gov.in	
13	PREETOSH GHOSH	EE(E), SLDC, DVC	9674299618	preetosh.ghosh@dvc.gov.in	P. Ghosh.
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