



Agenda

for

44th TCC Meeting

of

EASTERN REGIONAL POWER COMMITTEE

Date: 29th September, 2021

Time: 11:00 Hrs

The Vedic Village, Kolkata

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EASTERN REGIONAL POWER COMMITTEE, KOLKATA
AGENDA FOR 44th TCC MEETING

Date: 29th Sept, 2021(Wednesday), at 11:00 Hrs

The Vedic Village, Kolkata

ITEM NO.A1:	CONFIRMATION OF THE MINUTES OF 43rd TCC MEETING
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The minutes of the 43rd TCC meeting held on 23rd March, 2021 through MS Teams Platform was circulated vide letter no. ERPC/TCC&COMMITTEE/2020-2021/44 dated 9th April, 2021.

Members may confirm the minutes of 43rd TCC meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B1:	Categorization of Thermal Power Plants as per the new MOEF&CC notification dated 31.03.2021 for implementation of new emission norms.
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As per new MoEF & CC Gazette Notification dated 31.03.2021 regarding Amendment to Environment (Protection) Rules, 1986 wherein thermal power plants have been categorized into A, B & C categories on the basis of their location from nearest Million plus population city, critically polluted areas and Non-attainment city for implementation of new emission norms as notified in 2015. To comply with the emission norms, time limit is as follows:

Sl.	Category	Location/Area	Non-retiring Units	Retiring Units
1.	Category-A	Within 10 km radius of cities having Million plus Population	Upto 31 st Dec, 2022	Upto 31 st Dec, 2022
2.	Category-B	Within 10 km radius of Critically Polluted Areas or Non-attainment Cities	Upto 31 st Dec, 2023	Upto 31 st Dec, 2025
3.	Category-C	Other than those included in Category A & B	Upto 31 st Dec, 2024	Upto 31 st Dec, 2025

As per the Notification, after the time limit, there shall be levied environment compensation based on per unit electricity generated on the non-retiring thermal power plant.

In Eastern Region, plants fall under Category-A & B are:

Category-A: APNRL (2x270 MW), Jojobera TPS (2x120 MW), Dishergarh TPS (1*12 MW), Southern TPS (2x 67.5 MW), Titagarh TPS (4x60 MW).

Category-B: KBUNL (2x110 MW + 2x 195 MW), GMR (3x 350 MW), Durgapur Steel TPS (2x500 MW), Waria TPS (1x 210 MW), Hiranmayee TPS (2x150 MW), DPL (1x300+1x250 MW).

Thermal power stations may expedite the installation of FGD to avoid any financial penalty.

Members may note for compliance.

ITEM NO. B2:	Inadequate coal stock in most of the Thermal Power Plants in ER
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Since the month of August, 2021, it is observed that many thermal units of the country have been forced to shut down due to inadequate coal stock which led to extreme low frequency operation in Indian Grid. Such low frequency makes the grid vulnerable and it became utmost important to bring maximum possible units on bar to ensure resource adequacy and to maintain adequate spinning reserve.

Inadequate coal stock was also observed in most of the Thermal Power Plants of Eastern Region which resulted into forced shutdown and later forced to go for unscheduled annual overhauling.

Thermal power stations should ensure coal stock as per the norms, i.e. 15 days coal stock for pit head plants and 20 days coal stock for load centred plants.

Members may deliberate.

ITEM NO. B3:	Governor Response of State Control Area Generating units and Frequency Response Characteristics of SLDC
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It has been observed that few generating units of State Control Area are being run at more than MCR on various occasions. Those units are not able to provide adequate primary frequency response due to the unavailability of PFR margin. As per IEGC section 5.2 (h), generating units are to run by ensuring adequate PFR margin.

In this regard a meeting was convened on 31.08.2021 wherein it was suggested that generating units must avoid running units in VWO mode or without PFR margin.

ERPC secretariat advised that each SLDC must ensure the monitoring of generating units to avoid any over generation and utilization of primary response margin.

TCC may advise state generators for necessary compliance.

ITEM NO. B4:	Implementation of Islanding Schemes in Eastern Region
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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.

1. 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.

BSPTCL may update.

2. 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.

JUSNL may update.

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

3. Chandrapura Islanding Scheme

The scheme detail in brief is as follows:

- The CTPS-B islanding scheme is to be 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.

DVC was advised to prepare the detail action plan for implementation of the scheme along with time line for each milestone and submit it to ERPC secretariat within fortnight. They were also advised to take all measures in expediting the implementation work.

The time line for implementation of Chandrapura Islanding Scheme is March-22.

DVC may update.

4. KBUNL Islanding Scheme

In special meeting held on 08.06.2021, following deliberations were made:

1. KBUNL Islanding scheme would be designed considering both units of KBUNL stage-II (2x195 MW) as participating generator and connected radial loads at Gopalganj along with in-house load of KBUNL.
2. The islanding frequency will be at 48.6 Hz and this is subject to revision based on the suggestion received from KBUNL/OEM on under frequency settings of the generator units.
3. KBUNL would expedite the construction work related to implementation of Islanding scheme in switchyard. They would also take up with concerned OEM for testing and commissioning of islanding relay panel at their end.

In 106th PCC Meeting following deliberations were took place -

Regarding bay construction work at KBUNL switchyard, NTPC informed that civil work would be completed by October-21 & further testing & commissioning would be completed by January-21.

ERPC secretariat informed that time line for implementation of KBUNL islanding scheme had been decided as December-21 and advised NTPC to complete the bay construction work as well as other pending works related to implementation of the islanding scheme at the earliest.

KBUNL may update.

5. 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.

The target date for implementation of the islanding scheme is April-22.

OPGC may update.

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 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.

In the 183rd OCC Meeting, JUSNL representative updated that the proposal has been placed before the BoD of JUSNL. Taking over of the FLTS system would be completed after getting necessary approval from BoD of JUSNL.

JUSNL may update.

B5.2: Status of O & M agreement for bay equipments at Maithon end of 220 kV D/C Maithon-Dumka Lines with Powergrid

In 103rd PCC meeting, during discussion of tripping of 220 kV Maithon-Dumka line-2 on 15/05/21, it was informed that the auto-recloser in the said line is not in operation due to some issues in PLCC. It was also come to notice that there was no formal agreement between JUSNL & Powergrid for O & M of the bay equipment at Maithon end. As a result, bay equipment at Maithon end for 220 kV Maithon-Dumka D/C lines are not being maintained properly.

In 181st OCC Meeting, Jharkhand representative submitted that some queries along with few finance observations had been raised to Powergrid in this regard. However, complete reply from Powergrid side is yet to be received and as soon as they receive the response from Powergrid, they would proceed for the agreement. However, in principle they are ready for the agreement.

ERPC opined that as Farakka-Lalmatia line is not in service at present, Maithon-Dumka line is of vital importance and healthiness of PLCC at both ends is to be ensured.

OCC advised Jharkhand to take up the necessary rectification work for ensuring the healthiness of the PLCC. In this regard, Powergrid has also given consent to Jharkhand for the necessary PLCC work at Maithon end.

Jharkhand representative assured that the PLCC would be restored by 15th August 21.

In the 182nd OCC meeting, JUSNL representative submitted that Powergrid had submitted the revised estimate and the same is in the process for approval by competent authority. He further informed that it would be completed by 1st week of September'2021.

In 183rd OCC Meeting, JUSNL representative submitted that in principle approval for the above agreement had already been accorded and signing of the agreement would be completed by 30th September'2021.

JUSNL may update.

ITEM NO. B6:	Frequent tripping of 400 kV Baripada-Kharagpur line.
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It has been observed that 400 kV Baripada-Kharagpur line had tripped multiple times in recent months mostly on single phase to earth fault. Details of line tripping for from April'2019 till date is attached at **Annexure-B6**. As per relay indications from Baripada end, 57 out of 58 instances of tripping occurred in West Bengal jurisdiction. Number of tripping with distance from Baripada is summarised below where it can be observed that repeated fault is occurring at same location:

Distance from Baripada (Km)	No. of trippings
0-10	1
30-40	2
40-50	11
50-60	10
60-75	7
75-85	14
90-100	10
More than 100	3

In 106th PCC meeting, it was observed that most of the trippings had occurred within section of 40-60 Km & 75-100 Km of the line.

WBSETCL representative informed that the tripping of the line in their control area is due to vegetation issue & mainly on account of eucalyptus tree. They further informed that they are facing local issues in clearing the tree/vegetation in the concerned section of the line.

They added that they are planning to resolve the issue in coordination with district administration.

PCC advised WBSETCL to take up the issue with local district administration and referred this to forthcoming TCC meeting.

WBSETCL may update.

ITEM NO. B7:

Implementation of AGC as a pilot project in West Bengal

SLDC, West Bengal representative informed that for implementation of AGC among state generators there are two parts to sort out.

Firstly, a quantum of DC of WBPDC plants has to be kept as a hot spinning reserve out of 100% allotment to WBSEDCL for utilization under AGC. In present regime, the capacity charge of the plants for that quantum spinning reserve cannot be claimed from WBSEDCL. So, there should be a regulation of WBERC to cover these financial settlements of state generators scheduled to its beneficiary and actually declared by the plant under AGC after implementation of AGC as per direction of WBERC.

Secondly, the capital cost involved to implement AGC in different state generators and in SLDC should be approved by WBERC to adjust in tariff.

Accordingly, necessary orders /regulations need to be issued by WBERC to cover the above points. After detailed deliberation it was decided that the matter would be placed in forthcoming TCC meeting.

SLDC, West Bengal may update on the status.

ITEM NO. B8:

Procurement of 01 No, 105 MVA, 400/220/33 KV Spare Single-phase ICT for Rangpo S/S

400/220/132 KV Rangpo is one of the most important and critical substation of Eastern region –II. It is the gateway between all hydel generations of Sikkim to rest of India. This station has either direct or indirect connectivity with Teesta-III, Teesta-V, Rangit, Dikchu, Tashiding, JLHEP, Rangnichu & Chuzachen.

Total 5 nos. 400/220 KV 315 MVA (3*105MVA) ICT and four nos. 220/132KV 100MVA ICTs are present at Rangpo. During hydel, all these ICTs are considerably loaded.

All 400/220/33 KV, 315 MVA units are Single phase units (3 X 105 MVA) and total 15 Units (05 X 03) No's are in service. Overall for total 15 Units only 01 spare units (Cold spare) are earlier considered for Rangpo SS.

Already due to internal problem one unit of ICT-4 has been taken out in August-20 and presently under repairing. Further the only spare has been utilized as Y-Phase of ICT-4 in last year. As the spare unit at Rangpo itself is a cold spare, putting it in the service includes dragging of the unit and afterwards includes complete commissioning activity.

Further, if we go by construction of Rangpo SS it can be seen that, entire SS built in 05 different layers. Even in 400 KV level itself, there are 02 different levels and transportation of spare unit from lower level to higher level itself require complete transportation arrangement as considerable slope is present.

A bird's eye view of Rangpo SS is given for reference:-



Any kind of transport of heavy consignments takes long time due to limited accessibility of road, frequent landslide, non-availability of strong bridges for heavy consignment etc. In case of any element outage, like transformer/Reactor for major repairing works, transportation time is much larger due to all above mentioned constraints.

Reference picture of road conditions around Rangpo and in general Sikkim stretches are given below for reference:-





From the above pictures it is evident that in case of any major repairing and subsequent Transportation involved it may take enormous time in view of prevailing road conditions. Rather, keeping another spare unit is much preferable for the activity.

In view of the above, to ensure maximum grid availability, to enhance the flexibility towards the beneficiaries, to provide ease operation of grid in critical area, one more spare unit of same capacity is required at Rangpo.

Total financial implications excluding Freight, Insurance and GST is around **Rs. 4.50 Crores**, as per offer received from OEM.

In view of above, it is proposed for in-principle approval for procurement of 01 No spare single phase, 400/220/33 KV, 105 MVA ICT at Rangpo SS, considering the difficulty for transportation at hilly areas, as Cold Spare to meet any exigency and enhancing reliability of the grid.

In 183rd OCC Meeting, Powergrid representative explained the need for 400/220/33 KV Spare Single phase ICT for Rangpo Substation citing the limited accessibility of road, frequent landslide, non-availability of strong bridges for heavy consignment etc. He added that the 400 kV GIS switchyard is spread over two different spatial levels due to hilly terrain which makes it difficult to shift the spare ICT from one level to another. Further on query he informed that the only spare ICT is being under repair on site.

After detailed deliberation OCC felt the necessity of additional one no. spare single phase 105 MVA ICT in case of any exigency to enhance the reliability of the Grid. The matter was referred to TCC for further concurrence.

Members may discuss.

ITEM NO. B9:

Commissioning of elements by PMTL under ERSS XXI affected due to failure of 132 kV Bus extension module at DMTCL Motihari Sub-station

315 MVA, 400/132 kV ICT-III at Motihari S/s was charged at no load on 18.04.2021 and first time loaded from 132 kV side through Bus-1 on 21.04.2021 at 19:00:09 Hrs. At 19:01:02:971 Hrs on the same day, 132 kV Bus-1 got tripped due to internal flashover in 132 kV Bus-1 extension module of DMTCL used for connecting new GIS Bus and ICT-III side 132 KV bay. During the incident all lines/ ICT connected to Bus 1 tripped.

315 MVA, 400/132 kV ICT-III at Motihari S/s, which is out since failure of 132kV Bus-1 on dated 21.04.2021. The repair of failed extension module and restoration of 132KV Bus-1 has not been done till date by DMTCL. It may be mentioned that the failed 132KV Bus Bar extension module was supplied for future extension as part of original package for construction of 400/132KV substation of M/S DMTCL.

Till date neither any action for repair of 132KV Bus-1 has been taken nor has permission been given for charging of PMTL 400/132KV ICT-III through 132KV Bus-II until 132KV Bus-1 is restored.

In view of this, following options for charging of the ICT-III are suggested for taking ICT in service-

1. Rectification of Bus-I extension module by DMTCL (Owner) at the earliest.
2. Charging through 132kV Bus-II till restoration of Bus-I.

Matter may be deliberated for an early resolution for re-charging of 315 MVA, 400/132 kV ICT-III at Motihari S/S and putting it in service.

PMTL may elaborate.

Members may discuss.

ITEM NO. B10:

Renewal of Contract for all installed SEMs of Phase-1 & 2 including AMR of Eastern Region.

Existing AMC contract period for all installed SEMs of Phase-1 and Phase-2 including AMR has expired on 30-Jun-2020. Total 656 SEMs and 120 locations (129 DCU) are out of AMC scope since 30.06.2020. Currently, maximum SEMs are out of AMC support (66% SEM, out of AMC). On a special request from PGCIL, TCS is continuing the AMC support for all 656 SEMs till now but further contract is required to be renewed.

Considering the lockdown period since the end of March-2020, maximum possible support has been provided by TCS and there is no disruption in weekly data availability of SEM.

TCS has submitted a techno-commercial proposal for renewal of their AMC Contract for another 5 years. Proposal value is total 4.98 Cr. This proposal includes 5 years of comprehensive AMC support for all 656 meters and 129 DCUs including DCU replacement in 60 Locations. As currently there is no active contract present with TCS for the AMC support, placing of AMC renewal LOA needs to be completed on priority basis. Based on the offer price submitted by TCS, now it is proposed to finalise the AMC contract on single tender basis with M/S. TCS.

Brief Scope of Work:

1. Comprehensive AMC support for the meters (656 SEM and 129 DCU) which have been installed in AMR Phase1 and Phase2.
2. AMC support includes replacement of Hardware which are installed at various Sub Stations (like DCU, Cables, PVC pipes, MOXA converters etc). Hardware replacement will be done as and when required.
3. As all DCU have already covered the service period (05 years plus), DCU replacement will be required. 60 numbers of DCUs have been considered for replacement in this proposal. (By considering the present scenario and future planning for faulty DCU replacement).
4. If more DCUs are required, then separate proposal will be submitted for the DCU replacement.
5. Connection of replaced meters will be done.

In view of the above, the proposed value of AMC contract is ₹ 4.98 Cr which includes

- 5 years of comprehensive AMC support for all 656 meters and
- 129 DCUs including DCU replacement in 60 Locations

In 170th OCC in-principle agreed for renewal of contract for all installed SEMs of Phase-1 and 2 including AMR since it is very much required in the interest of grid maintenance.

In 43rd CCM Powergrid representative informed that the existing contract period for Support of AMR/AMC of Phase-1 and Phase-2 has been completed on 30-Jun-2020. All 656 SEM and 120 locations (129 DCU) are out of AMC scope since 30.06.2020.

Further, he added that offered price of AMC amounting ₹ 4.98 Cr maybe negotiated and the final price would be intimated to ERPC Secretariat.

Members of Commercial Sub-Committee recommended for financial approval and also advised POWERGRID to place the revised value of AMC contract after negotiation before ERPC Secretariat.

43rd TCC/ERPC agreed to the proposal of POWERGRID for AMC contract of

- 1) 5 years of comprehensive AMC support for AMR of 656 meters and
- 2) AMC support for 129 DCUs including DCU replacement in 60 Locations.

43rd TCC advised POWERGRID to pursue with the concerned vendor proactively and intimate the final negotiated cost in the forthcoming ERPC meeting. 43rd ERPC accorded in-principal approval for the above AMC contract as per the decision of TCC and directed Powergrid to expedite the price negotiation.

In 44th CCM, PowerGrid representative informed that the LOA for the AMC contract has already been placed with M/s TCS and the same is valid till 31st March 2026. The value of the contract has been negotiated to ₹ 4.77 crores (excluding GST) from the pre-negotiated value of ₹ **4.98 crores** (excluding GST). Hence, the total value of the AMC contract is ₹ **5,63,01,576/-** including GST.

POWERGRID may further update the latest status.

Powergrid may update.

TCC may approve.

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

In 39th CCM, Powergrid requested other utilities to share their Fiber details to explore possibilities of using their own optical fiber network, wherever it is available, for communicating with AMR for smooth functioning of AMR.

In 40th CCM, POWERGRID requests all the constituents to share the available optical fiber network connectivity for further configuration to Optical connectivity. This will also help to reduce the maintenance cost of AMR, as recurring cost towards SIM cards may be avoided in that case.

POWERGRID also informed that optical fiber for AMR has been implemented for 38 locations out of 40 and rest would be completed by August'19. However, M/s TCS has confirmed that total 35 locations out of 40 was connected with LAN.

In 41st CCM, BSPTCL representative informed the required details of optical fiber network connectivity have been shared to POWERGRID for configuration AMR Optical connectivity. POWERGRID informed that they have not received any response from other constituents on this matter. All the constituents were advised to explore the possibility of Optical fiber network connectivity instead of GPRS for communication AMR system as this will significantly enhance the reliability of the system.

In 42nd TCC Meeting, TCC advised all the other constituents to share the details of optical fiber in TeST Meeting scheduled to be held on 20th December 2019, so that Powergrid could carry out the configuration of AMR connectivity.

In 42nd CCM, POWERGRID informed that the cost estimate for AMR implementation of BSPTCL system has been received. POWERGRID representative intimated that the cost estimate needs to be further updated.

All other constituents were again advised to explore the possibility of Optical fiber network connectivity instead of GPRS for communication with AMR system as this will significantly enhance the reliability of the system.

POWERGRID was advised to submit the updated status in the upcoming TCC.

Thereafter, the required details of optical fiber network connectivity have been received from OPTCL and DVC for configuration AMR Optical connectivity.

However, M/s TCS has confirmed that LAN connection has been done at 40 locations.

In the 8thTeST meeting ERLDC informed that necessary details have been received from all the state utilities except for Sikkim.

In 43rd TCC/ERPC, POWERGRID informed that necessary details from all the state utilities except for Sikkim have been received for 69 locations. POWERGRID was requested to share the details of 69 locations to ERPC.

TCC advised Sikkim to share the necessary details at the earliest. Further 43rd TCC/ERPC also approved the proposal of replacement of GPRS communication with Optical Fiber for AMR with estimated cost of **Rs. 10.73 lakhs** (excl. GST) for 69 locations (except Sikkim).

In 44th CCM, the Committee expressed serious concern over non-receipt of location details from Sikkim despite repeated persuasion from various fora of ERPC. Sikkim representative agreed to send the details by 15th July, 2021. The Committee advised Powergrid to coordinate with Sikkim on this issue.

Powergrid informed that they have already started the work experimentally at Jeerat S/s and are initially planning to complete the work in the locations of West Bengal and nearby areas of Odisha and Jharkhand in the month of July, 2021. Subsequently, the locations in DVC and Bihar would be completed by the end of August, 2021.

Powergrid and Sikkim may update.

ITEM NO. B12:	Proportionate cost sharing by substation bays owners (M/s PMTL and ATL) for boundary wall work carried out by Darbhanga substation owner(DMTCL)
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As appraised by DMTCL to ERPC Secretariat in various monthly OCC meetings that the boundary wall work has been completed by DMTCL at Darbhanga Substation as directed by ERPC & other substation bay owners to avoid the situation experienced in the monsoon of 2020. Initially upon receipt of instructions from EPRC & other authorities, DMTCL already informed to all the authorities that there are 02 more no. of stake holders i.e. M/s ATL & M/s PMTL who are having their assets within the premises of Darbhanga substation from whom DMTCL requested for their co-operation in terms of taking up this work jointly. DMTCL tried their best to pursue and involve M/s ATL & M/s PMTL from design stage itself so that work could be completed with full co-ordination and consensus with all 03 parties. However, both- M/s ATL & M/s PMTL did not supported DMTCL by any means and indicated their inability for this.

As the cost of the above boundary wall is significantly high and it is difficult for any single stakeholder, who is operating transmission asset under TBCB- Tariff Based Competitive Bidding mode, to bear the entire cost. Hence, DMTCL request intervention at TCC level to coordinate among all the stakeholders of DMTCL Darbhanga Substation for bearing the proportionately cost of the substation boundary wall work. Committee to note that the construction of same has been completed in June 2021 by DMTCL at their own without waiting for the support from other bay owners.

DMTCL may explain.

ITEM NO. B13:	Requirement of additional MiP-PSCT License key with Laptop
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JUSNL vide email dated 16/09/21 intimated that only 02 (two) nos. of Mi-PSCT license has been provided to them under the scope of protection database project. They informed that as JUSNL transmission network is consistently expanding day by day, they would require additional 04 (four) nos. of Mi-PSCT license with Laptop under the project “creation and maintenance of web-based protection database management system and power system calculation tool for eastern region Grid” for system study i.e. load flow analysis, relay coordination, DR file analysis etc.

JUSNL may elaborate. Members may discuss.

ITEM NO. B14:	Extension of AMC/support period for the project “Creation & Maintaining a web based Protection database and desktop based Protection setting calculation tool for Eastern Regional Grid”
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The PSDF funded project of ERPC “*Creation & Maintaining a web-based Protection database and Desktop based Protection Setting calculation tool for Eastern Regional Grid*” was implemented and declared Go-line on 31.10.2017. Presently 4th year support period is in progress. As per the contract of the project, the support service will be provided for 5 yrs after declaration of the Go-Live of the project which is till 31.10.2022.

The online database(PDMS) as well as the offline PSCT tool are being utilized by all utilities of ER for analysing the grid disturbances, carrying out various studies i.e. load flow, short circuit, relay coordination, DR analysis etc. , sharing the disturbance report/DR/EL through online portal for compliance etc.

It is proposed to extend the AMC/support service of the project for further period of 5 yrs starting from 31.10.2022. For funding of the above requirement, a proposal may be submitted to PSDF secretariat for consideration of the same and approval.

Members may discuss.

ITEM NO. B15:	Draft CERC (DSM & Related matters)Regulations’2021
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Draft DSM Regulation, 2021 was circulated by Honorable CERC on 07th Sept, 2021 for wider publication and stakeholder’s comments by 08th October’2021 for implementation in pan India. The provisions of this regulation are completely changed from the existing DSM mechanism in place.

ERPC Secretariat shall give a brief presentation on the various provisions of the draft DSM Regulation’2021.

ITEM NO. B16:**Non Payment of Outstanding dues in respect of Bhutan Transaction**

PTC India Limited (PTC) has been designated as the nodal agency by Ministry of Power, Govt for supply of surplus power from the four hydroelectric power stations in Bhutan namely Chukha HEP, Tala HEP, Kurichhu HEP and Mangdechhu HEP. These HEPs have been setup under the Inter-Government Agreements between the Royal Government of Bhutan and the Government of India. Power supply from these HEPs to the Indian beneficiaries takes place as per the allocations and tariff decided by the Ministry of Power.

However, the beneficiaries of Eastern Region namely Bihar and Sikkim are irregular in making payment to PTC. It is to mention that since these are cross border transactions involving Royal Government of Bhutan and Government of India, PTC is making regular payments to the generating company namely Druk Green Power Corporation Limited irrespective of receipt of payments from the Procurer(s). For this purpose, PTC has to mobilise additional resources for the working capital mismatch and continued delays are causing liquidity crunch to PTC.

As on 31st Aug, 2021, the following payments are outstanding:

Sl. No.	Name of the State Utility/ Discom	Energy Outstanding dues for power supply from Chukha HEP	Energy Outstanding dues for power supply from Tala HEP	Energy Outstanding dues for power supply from Mangdechhu HEP	Total
1	NBPDCL (Bihar)	Rs 29.30 Cr. (Outstanding since May 2021)	Rs 35.64 Cr. (Outstanding since June 2021)	Rs 110.43 Cr. (Outstanding since May 2021)	Rs 175.37 Cr.
2.	SBPDCL (Bihar)	Rs 37.91 Cr. (Outstanding since May 2021)	Rs 50.54 Cr. (Outstanding since May 2021)	Rs 138.69 Cr. (Outstanding since Apr 2021)	Rs 227.14 Cr
3.	Energy and Power Department of Sikkim (Sikkim)	Rs 16.94 Cr. (Outstanding since Nov 2019)			Rs 16.94 Cr.
	Total	Rs 84.15 Cr.	Rs 86.18 Cr.	Rs 249.12 Cr.	

The agreements for sale of power by PTC to utilities provide for reallocation of power if the bills remain unpaid for 7 days in case of Chukha and Tala HEP and 30 days in case of Mangdechhu HEP. Excerpts from the agreements are as below:

- Chukha HEP: As per clause 8.7 of the agreement, "If any bill remains unpaid for a period exceeding 7(seven) days from the date of presentation of bill, Member Secretary, EREB may reallocate the share of power of such Bulk Power Customer(s) if so advised by PTC. "
- Tala HEP: As per clause 7.2 of this agreement, "If any bill remains unpaid for a period exceeding 7(seven) days from the date of presentation of bill, Member Secretary,

ERPC may reallocate the share of power of such Bulk Power Customer(s) if so advised by PTC. "

- Mangdechhu HEP: As per clause No. 7.2 of this agreement, "If any bill remains unpaid for a period exceeding 30(thiây) days from the date of presentation of bill, Member Secretary, ERPC may reallocate the share of power of such Bulk Power Customer(s) if so advised by PTC".

Agreements between PTC and beneficiaries for Chukha HEP, Tala HEP and Mangdechhu HEP have provisions to open Letter of Credits (LCS) for the transactions and reallocation of power in case beneficiaries fail to do so.

Chukha HEP: As per Article 8.6 of the Agreement: "In the event of failure to establish LC within 1 (one) month after the signing of this agreement, or issue of Govt. of India order assigning trading for Chukha power to PTC, whichever is later, Member Secretary, EREB may reallocate share of the defaulting state to some other state if so advised by PTC".

Mangdechhu HEP: As per Article 6.6 of the Agreement: "In the event of failure to establish LC within 2 (two) weeks after the signing of this agreement, Member Secretary, ERPC may reallocate share of the defaulting state to some other state as may be advised by PTC. "

Though NBPDC and SBPDC have provided LC information for Chukha HEP and Tala HEP, however, these are not operative as PTC has not received copy of the LCS. Also, the LCS are of insufficient value. NBPDC and SBPDC have not provided LC for Mangdechhu HEP. Energy and Power Department of Sikkim has not provided LC for Chukha HEP.

In view of above, it is requested ERPC may advice NBPDC, SBPDC and Energy and Power Department of Sikkim to liquidate the outstanding, make regular payments and open LCS as per the agreements or else PTC will be left with no other option but to request ERPC for reallocation of power as per the provisions of the agreements dated 21.08.2002, 27.09.2006 and 30.08.2019 respectively."

NBPDC, SBPDC & Sikkim may update their action plan to liquidate the outstanding dues.

TCC may discuss.

ITEM NO. B17:	Scheduling of Chuzachen HEP and Tashiding HEP
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Scheduling of Chuzachen HEP and Tashiding HEP is carried out by ERLDC, as per Indian Electricity Grid Code Clause 6.4.3. The clause 6.4.3 states

Quote...

"There may be exceptions with respect to above provisions, for reasons of operational expediency, subject to approval of CERC. Irrespective of the control area the jurisdiction, if a generating station is connected both to the ISTS and the STU, the load dispatch centre of the control area under whose jurisdiction the generating station falls, shall take into account grid security implication in the control area of the other load dispatch centre. "

...Unquote

Presently for net injection of Chuzachen, Gangtok(PG) and Rangpo(PG) end meter is used and for Tashiding net injection , New Melli(PG) and Rangpo(PG) end meter is being used.

In 135th OCC it was decided that related issues of control area jurisdiction, scheduling, etc may be discussed in a separate meeting. A meeting was also held in this regard with ERPC and ERLDC on 04.09.2017.

In 36th TCC, Sikkim agreed to issue the NoC for scheduling of Tashiding HEP by ERLDC. It was also decided in the 36th TCC/ERPC meeting that Tashiding would approach CERC and obtain the approval from Hon'ble commission regarding the scheduling of Tashiding HEP by ERLDC. Tashiding HEP and Chuzachen HEP are yet to approach CERC for the said approval.

In 37th CCM, the followings were decided:

- i) The metering points for Chuzachen and Tashiding HEPs would be at CTU end.
- ii) As Chuzachen and Tashiding HEPs are embedded generators of Sikkim, both need to seek approval from CERC regarding scheduling by ERLDC.

38th TCC further advised Chuzachen and Tashiding HEP to file petition with CERC for obtaining NOC for scheduling of generation by ERLDC. The accounting of power shall conform to the methodology listed in the agenda.

In 44th CCM, Chuzachen representative informed that they are under the process of filing the petition with CERC and the same will be done by 17th July 2021. Further, he added that due to Covid-19 pandemic and nationwide lockdown they could not file the petition on time.

Tashiding representative informed that they would also file the petition with CERC by 14th July 2021. The Committee expressed serious concern over the issue and advised Chuzachen and Tashiding to intimate ERPC and ERLDC after filing the petition. It was also decided to place this agenda in the forthcoming TCC meeting.

Tashiding & Chuzachen may please update the latest Status.

TCC may discuss.

ITEM NO. B18:	Nomination of Settlement Nodal Agency for Cross Border Transactions
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NVVN has been nominated as Settlement Nodal Agency (SNA) vide MoP order dated 26th Nov-2019 as per the clause 8.8 of the guide lines for Import/Export (Cross Border) of Electricity 2018.

It is primarily for settlement of Grid operation related charges with neighboring countries like Bangladesh, Nepal, Bhutan and Myanmar. However, the functions of Nodal agency and modalities of settlements have not yet been finalized.

In 42nd CCM, NVVN representative was present in the meeting. He drew the attention of the members in the meeting regarding the order issued by MoP, GoI wherein NVVN has been designated as Settlement Nodal Agency for import and export(Cross Border) of power. In this connection he informed that NVVN is already a nodal agency as far as Bangladesh and Nepal transactions are concerned. Further, in case of Bhutan, the hydro stations like Tala, Chukha, and Kurichhu & Mangdechhu do not come under DSM regulations. However, Dagachhu HEP is included within the ambit of DSM with TPTCL acting as the nodal agency.

Based on the MoP order, NVVN proposed to become the nodal agency for Dagachhu transactions w.e.f. 01.04.2020 and take up the scheduling and accounting responsibility w.r.t. Dagachhu HEP.

The proposal of NVVN was discussed in the 42nd Commercial sub-Committee meeting. Commercial Sub-Committee advised NVVN to enter into necessary agreement with TPTCL to take over all the responsibilities of nodal agency from TPTCL for Dagachhu HEP transactions. NVVN was also advised to complete the necessary registration process with ERLDC (POSOCO). After this, all matters pertaining to scheduling, payment & settlement shall be taken care of by NVVN. It was decided to place this agenda in forthcoming TCC meeting for further approval.

However, on request of NVVN-SNA-Bhutan, ERLDC has registered them and issued acceptance letter on 13.05.2020.

As per the decision taken in 43rd CCM, MS, ERPC wrote a letter dated 07.10.2020 to NVVN for updating the status of agreement with TPTCL to ERPC secretariat.

NVVN vide letter dated 10.03.2021 to TPTCL has sought confirmation for execution of revised SNA Agreement. The same is placed at **Annexure-B18**.

In 43rd TCC/ERPC, NVVN informed that they had received a letter from CEA, wherein CEA enquired about the status of revised SNA agreement from NVVN.

TCC opined that CEA is the designated authority for cross border power transactions and the matter is already being dealt with by CEA. Therefore, it would be appropriate for NVVN to approach CEA for resolution of the issue.

In 44th CCM, NVVN representative informed that the matter was already taken up with CEA. As advised by CEA, NVVN is in the process of signing SNA agreement with TPTCL for Dagachhu HEP transactions.

Further, it was informed by NVVN, they have written a letter to Bhutan and TPTCL and reply from them is awaited in this regard. CCM advised NVVN to update any progress in this regard to ERPC and ERLDC.

NVVN & TPTCL may update the status.

ITEM NO. B19:	Provisioning of STM-16 Channel between Darbhanga (ATL-Coriant) – Darbhanga (PMTL-ECI)- Muzaffarpur (PG-Coraint) Equipment
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A redundant path of Malda- Farakka was provisioned by POWERGRID as per advice of the forum, in the form of Kishanganj (PG-Coriant) - Darbhanga (ATL- Coriant) STM-16 link and Darbhanga (ATLCoriant) - Muzaffarpur (PG-Coriant) STM-4 link. An SLD of OPGW Connectivity is attached at **Annexure-B19.1**. The capacity of STM-4 provisioned between Darbhanga (ATL- Coriant) - Muzaffarpur (PG Coriant) & Kishanganj (PG-Coriant)- Dalkhola (PG-Coraint) is becoming a bottleneck in utilization of optimum capacity of Kishanganj (PG-Coriant)- Darbhanga (ATL- Coriant) STM-16 link and providing redundancy with optimum capacity. It is proposed to provision a new STM-16 Connectivity between Darbhanga (ATL-Coriant)- Darbhanga (PMTL-ECI) - Muzaffarpur (PG-Coraint) Equipment & Kishanganj (PG-Coriant)- Dalkhola (PGCoraint) STM-4 link may be upgraded to STM-16, which will enable use of the network for redundancy purpose at optimum capacity i.e.STM-16. A revised schematic of the proposed Upgradation is shown at **Annexure-B19.2**. The tentative cost of the proposed Upgradation will be **₹ 3.5 Lacs approx.**

9th TeST committee approved the proposal and referred it to the Commercial Committee meeting.

In 44th CCM Meeting, PowerGrid representative informed that in principle agreed in the 9th Test meeting for the proposal for STM-16 Channel between Darbhanga (ATL-Coriant) – Darbhanga (PMTL-ECI)- Muzaffarpur (PG-Coraint).

The estimated expenditure for the proposed upgradation work will be ₹ 3.5 Lacs approx. has been agreed by the Commercial Committee.

The matter was referred to forthcoming TCC meeting for concurrence.

TCC may concur.

ITEM NO. B20:	Payment/receipt status from various pool accounts in ER
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1) Payment of Deviation Charge – present status

Deviation Pool Account Fund of ER is being maintained & operated by ERLDC, in accordance with the CERC Regulations. As per Regulations 10 (1) of “Deviation Settlement Mechanism and related matters” the payment of charges for Deviation shall have a high priority and the concerned constituents shall pay the indicated amounts within 10 days of issue of statement of Charges for Deviation including Additional Charges for Deviation by the Secretariat of the respective Regional Power Committee in to the “Regional Deviation Pool Account Fund” of the concern region.

The status of Deviation Charge payment as on 15.09.2021 is enclosed at **Annexure-B20.1**. The current principal outstanding Deviation Charge of BSPHCL, JUVNL and SIKKIM is **₹ 218.84 Cr, ₹ 35.81 Cr, & ₹ 4.48 Cr** respectively considering bill up to 05.09.2021. ERLDC is regularly giving reminders to BSPHCL, JUVNL & SIKKIM and others defaulting entity to liquidate the outstanding Deviation charges.

In 44th CCM, Bihar representative informed that due to Covid Pandemic they were facing severe financial crisis. He informed that the outstanding charges would be liquidated by September 2021. JUVNL informed that they would liquidate the charges by the end of July 2021.

The CCM Committee advised the respective constituents to liquidate the dues at the earliest.

BSPHCL, JUVNL, & SIKKIM may confirm the program for payment of outstanding dues.

2) Interest due to delayed payment of deviation charges/RRAS

a) Due to delayed payment of deviation charges in DSM Pool interest was computed for all the DSM Pool Members. The statement of interest amount as on 31.03.21 is enclosed in **Annexure-B20.2**. DVC, Jorethang, GMR, KBUNL, NVVN-Bangladesh, PGCIL (HVDC Alipurduar), OPGC (GRIDCO), PGCIL (HVDC Sasaram) are requested to clear the dues.

b) CERC has approved detailed procedure for Ancillary Services Operations vide ref no.: 1/10/2012- Reg. Aff.(REC-Gen.)/CERC dated 21st November, 2016. As per para 13.9 & 13.10 of detailed procedure Interest for delay payment for RRAS Providers has been calculated upto 31st March, 2021. An amount of ₹ 11.70764 lacs was payable towards RRAS interest upto 31.03.2021 and the same has been disbursed to the constituents on 16.06.2021. The details are enclosed in **Annexure-B20.2**.

44th CCM advised all the constituents to liquidate the payment at the earliest.

Constituents, who are in payable mode, may please confirm the program for payment of Interest.

3) Reactive Energy Charges – Present Status.

As per decision taken in 43rd TCC/ERPC the methodology of Reactive energy billing has been revised and is implemented w.e.f. 05.04.2021 and bills are being issued to recipient states as well. The status of Reactive Energy Charges in the pool as on 15.09.2021 considering bill up to 29.08.2021 is indicated in **Annexure-B20.3**. The total outstanding receivable on account of Reactive charges from JUVNL is **₹2.80 Cr.** WBSETCL, DVC and GRIDCO are regularly paying the reactive charges. Sikkim and BSPHCL has cleared its long pending reactive charge outstanding.

In 44th CCM, Jharkhand informed that the Reactive Energy Charges shall be paid within a week.

JUVNL may confirm the program for payment of outstanding dues.

ITEM NO. B21:	Opening of LC by ER constituents for DSM payments
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Clause 10 (4) of CERC Deviation Settlement Mechanism and related matters Regulations, 2014 vide notification No. L-1/132/2013/CERC dated 6th January, 2014 to be implemented from 17.02.2014 is reproduced below:

Quote

All regional entities which had at any time during the previous financial year failed to make payment of Charges for Deviation including Additional Deviation Charges for Deviation within the time specified in this regulations shall be required to open a Letter of Credit (LC) equal to 110% of its average payable weekly liability for Deviations in the previous financial year, in favour of the concerned RLDC within a fortnight from the date these Regulations come into force.....

.....Provided further that LC amount shall be increased to 110% of the payable weekly liability in any week during the year, if it exceeds the previous LC amount by more than 50%.

Unquote

The details of LC amount required to be opened in 2021-22 by ER constituents is given in **Annexure-B21**. Letters to this effect has been issued by ERLDC to the defaulting entities.

At present there is no valid LC i.r.o BSPHCL, JUVNL, DVC, GRIDCO, WEST BENGAL SIKKIM,NVVN Bangladesh, TPTCL, POWERGRID(ER-I & ER-II), JITPL, KBUNL, JLHEP and TASHIDING. Dikchu has opened LC but original document yet to be received from the bank.

In 43rd TCC, GRIDCO had informed that they would open the LC in due course. BSPHCL was also informed by ERLDC to open LC in favour of DSM Pool A/C in SBI instead of Axis Bank. However LC is not opened till now. TCC advised all the concerned constituents to open requisite LC at the earliest.

Further 44th Commercial Sub-Committee advised all the constituents to open the requisite LC in time.

Opening of LC is the regulatory requirement as per provision of CERC DSM regulations for defaulting members. Defaulting members may please intimate the latest status of opening of LC.

TCC may guide.

ITEM NO. B22:	Default in payment of outstanding dues by beneficiaries
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B21.1 The total outstanding dues of ER beneficiaries towards POWERGRID portion as on 17.09.2021 are detailed below. Please note that these figures include both PoC as well as non-PoC outstanding amounts.

Rs. in Crores.

SI No.	DIC	Total dues	>45 Days dues
1	SOUTH BIHAR (SBPDCL)	246.67	180.54
2	NORTH BIHAR (NBPDC)	221.06	163.14
3	JHARKHAND	67.13	45.53
4	BANGLADESH	28.18	12.83
5	SIKKIM	14.25	11.31
6	DVC	9.73	0.11
7	WEST BENGAL	83.27	0.00
8	DANS ENERGY	1.08	0.00
9	ECR	2.25	0.00
10	SER	0.24	0.00
11	SHIGA ENERGY	1.21	0.00
12	JUSNL *	11.96	11.96
13	OPTCL *	55.24	55.24
14	ODISHA	19.79	19.79
15	OPGC *	18.91	18.91
16	TEESTA URJA LIMITED *	8.50	8.50
17	TEESTA VALLEY *	5.75	5.75
18	ENICL*	0.53	0.53
	Total	795.75	534.14

* Non PoC only

DICs may update.

B21.2 Opening of Letter of Credit

The following beneficiaries have to open/enhance LC as listed below:

(Rs in Crores)

DIC Name	LC Required	LC Available
East Central Railways-BRBCL	42.48	0.00
GRIDCO	59.29	0.00
South Eastern Railway_RGPPL	4.89	0.00
SOUTH BIHAR	72.91	15.27

NORTH BIHAR	62.11	9.73
JHARKHAND	14.66	11.52
SIKKIM	3.97	2.92

LC required values indicated above is as per CERC Sharing Regulation 2020 which came into effect w.e.f. 01.11.2020. As per the Sharing Regulation 2020, generator billing shifted to DISCOMs for the tied-up portion. Opening/Enhancement of LCs is being continuously pursued with the DICs.

The beneficiaries may renew LC for the requisite amount in favor of CTUIL.

DICs may update.

ITEM NO. B23:	Revised RTA for the period from 15.11.2014 to 07.03.2016 issued vide ERPC letter No. ERPC/COM-I/REA/2018/3780-3798 dated 11/12.01.2018
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Revised RTA for the period from 15.11.2014 to 07.03.2016 has been issued by ERPC in view of the Hon'ble CERC order dated 20.09.2016 in Pet. No. I 30/MP/2015 along with I.A. No. 67/2017 where Hon'ble Commission has set aside the COD of 15.11.2014 as declared by NTPC in respect of unit-IV of Barh Super Thermal Power Station Stage-II (660 MW) and has fixed 08.03.2016 as the revised date of COD of Unit-IV NTPC Barh- II.

From the said revised RTA, it is observed that the amount for transmission charges to be refunded to Bihar for the respective months/period do not match with the transmission charges mentioned in the original monthly RTA issued by ERPC considering 15.11.2014 as the COD of Unit-IV of NTPC Barh-II. Due to this mismatch, differential amount for the transmission charges is to be refunded in addition to the revised RTA to Bihar Discoms on account which may be due to the following points observed from the Revised RTA.

1. Withdrawal charge is not considered to calculate refundable Transmission charges to Bihar from the month of November-14 to April-15 and only injection charge is considered for the same.
2. Latest revision of RTA and POC slab rate approved by Hon'ble CERC applicable for the month of may- I 5, june-15, Jan-I 6, Feb-16 and March-16 has not been considered.

BSPHCL may explain.

ITEM NO. B24:	Additional Agenda if any.
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Additional agenda, if any, with the permission of the Chair.

PART C: ITEMS FOR INFORMATION

The following items are placed before TCC for noting and compliance:

ITEM NO. C1 :	Performance of ER grid during April-21 to August-21
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A) Real time operation:

During the period under review, power supply position in the region was as under:

	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Apr-21	May-21	Jun-21	Jul-21	Aug-21
Avg Freq. (Hz)	50.01	50.01	50.01	50.00	50.00	50.00	50.00	50.01	50.01	50.00
Peak Demand (MW)	17424	20596	21931	22914	23645	24656	24347	23504	24733	23737
Energy Consumption (MU/day)	321	357	422	445	445	492	425	456	496	492
ISGS Gen (MU)	4205	4286	4267	4606	4061	5345	5131	5238	5164	5453
Regional Gen including Bhutan Injection (MU)	12700	15161	17020	18932	18047	18361	17974	18944	19735	20055
% increase in Regional Gen.						44.6	18.6	11.3	4.2	11.1

All India COVID related lockdown was in place from 24th March 2020 – 31st May 2020. Subsequently phased wise unlock started from 1st June 2020

B) System Operational Discipline during the period from APR-21 to AUG-21:

i) The month-wise energy draws of ER constituents were as given hereunder:

Constituent	Apr-21		May-21		Jun-21		Jul-21		Aug-21	
	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT
BSPHCL	2928	2995	2760	2795	2981	2980	3554	3572	3442	3450
JUVNL	698	705	675	663	706	701	760	755	723	733
DVC	-	-	-	-	-1251	-1248	-	-1301	-1009	-968
OPTCL	1448	1435	1378	1374			1286			
OPTCL	1276	1284	995	992	1083	1093	1207	1221	976	982
WBSETCL	1257	1262	970	967	1107	1133	1524	1565	1677	1699
SIKKIM	45	45	41	45	36	42	43	45	43	44

C) Frequency & Voltage:

Frequency profile for the period during APR-21 to AUG-21 is given hereunder. The frequency mostly remained within the allowable range for the entire period

Month	% of time for which frequency			
	<49.9	49.9-50.05	> 50.05	IEGC band 49.9-50.05
Apr-21	7.97	75.06	16.97	75.06
May-21	6.64	74.50	18.86	74.50
Jun-21	6.10	74.53	19.37	74.53
Jul-21	5.35	75.05	19.60	75.05
Aug-21	7.68	76.92	15.40	76.92

Maximum and minimum voltages recorded at some important 765 KV and 400 kV sub-stations were as follows:

SUB-STATION/ POWER STN.	Apr-21		May-21		Jun-21		Jul-21		Aug-21	
	MAX	MI N	MAX	MI N	MAX	MI N	MAX	MI N	MAX	MI N
	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)	(KV)
ANGUL-765 KV	796	743	798	749	800	746	798	758	797	755
JHARSUGUDA-765 KV	803	773	804	775	801	769	801	770	801	771
NEW RANCHI-765 KV	789	759	803	762	794	762	791	752	791	759
GAYA-765 KV	785	747	787	746	785	743	794	744	782	744
SASARAM-765 KV	793	737	792	739	809	741	800	741	784	742
DARLIPALLI-765 KV	791	766	792	768	792	759	791	765	789	768
MIDNAPORE-765KV	774	747	785	743	790	740	789	740	785	740
BERHAMPORE - 400KV	419	400	420	401	418	405	420	404	419	405
BIHARSARIFF - 400KV	419	398	420	389	413	388	414	388	411	389
BINAGURI - 400KV	422	399	421	399	418	398	418	390	417	400
DURGAPUR - 400KV	413	399	413	391	405	391	404	388	406	391
MUZAFFARPUR - 400KV	418	389	418	388	419	387	419	387	417	389
RANGPO - 400KV	423	393	423	398	419	397	413	394	413	398
JAMSHEDPUR - 400KV	404	392	412	396	410	394	411	394	408	391
JEERAT - 400KV	420	390	422	389	421	392	420	394	418	393
JEYPORE - 400KV	421	403	422	400	417	396	418	400	418	397
MAITHON-A - 400KV	416	401	417	396	413	396	417	396	413	400
ROURKELA - 400KV	414	401	414	396	407	397	407	395	407	395
MERAMUNDALI - 400KV	418	401	424	395	420	402	421	403	420	402
SASARAM - 400KV	409	386	405	378	418	387	417	387	413	387
SUBHASHGRAM - 400KV	418	381	421	383	420	386	418	387	416	384

D) Constituent-wise demand met is given below:

		Apr-20	May-20	Jun-20	Jul-20	Aug-20	Apr-21	May-21	Jun-21	Jul-21	Aug-21
BSPHCL	AVG MAX DMD(MW)	4327	4877	5291	5496	5582	5611	5262	5786	6345	6023
	MU/DAY	77	89	100	105	109	109	95	107	121	117
JUVNL	AVG MAX DMD(MW)	1243	1299	1339	1375	1447	1564	1410	1483	1536	1459
	MU/DAY	22	23	25	26	27	29	25	27	29	29
DVC	AVG MAX DMD(MW)	1532	2306	2813	2922	2916	3187	2939	3128	3033	3081
	MU/DAY	30	48	60	63	63	69	62	66	64	66
ODISHA	AVG MAX DMD(MW)	3344	3805	3995	4229	4253	5056	4820	4774	5537	5245
	MU/DAY	69	78	84	88	85	105	98	100	110	109
W. BENGAL	AVG MAX DMD(MW)	6140	6191	7583	7858	7976	8814	7652	7784	8366	8341
	MU/DAY	121	118	152	161	160	179	145	155	168	170

E) Inter-regional energy exchange during the review period were as follows: (Figures in MU)

Region	Apr-21		May-21		Jun-21		Jul-21		Aug-21	
	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT	SCH	ACT
NER	327	34	124	-65	-81	309	-172	371	-200	155
SR	1725	2164	707	1888	745	1461	-396	878	55	1334
WR	-1643	-1283	105	-769	723	-952	617	-1110	997	-540
NR	1858	1205	2460	2235	2546	3022	3171	3184	2860	2731
TOTAL	2267	2120	3396	3290	3933	3841	3219	3323	3712	3681

F) Reservoir levels of important hydro stations in ER during **APR-21 to AUG-21**(as on last day of the month) is given below:

STATION	MDDL/ FRL	APR-21	MAY-21	JUN-21	JUL-21	AUG-21
BURLA	590/630 FT	607.15	604.21	605.91	605.23	619.79
BALIMELA	1440/ 1516 FT	1465.1	1463.7	1463.1	1465.8	1467.8
RENGALI	109.7/ 123.5 MTR	114.18	114.4	115.4	116.97	121.34
U. KOLAB	844/ 858 MTR	845.92	845.72	846.66	846.06	847.83
INDRAVATI	625/ 642 MTR	631.9	630.18	630.1	630.1	631.53
MACHKUND	2685/ 2750 FT	2725.7	2718.85	2718.3	2713.4	2715.05

G) New Element Charging:

Apr-21:

SI No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	220KV/132KV 100 MVA ICT 4 AT RANGPO	PGCIL	1/4/2021	17:39	
2	400KV-SITAMARHI-MOTIHARI-2	PMTL	2/4/2021	14:22	
3	400KV-SITAMARHI-DARBHANGA (DMTCL)-2	PMTL	2/4/2021	15:29	
4	400KV-SITAMARHI-MOTIHARI-1	PMTL	3/4/2021	17:51	
5	220KV/11KV 10 MVA ST AT RONGNICHU	MBPCL	4/4/2021	13:49	
6	125MVAR 400KV B/R-1 AT SITAMARHI	PMTL	4/4/2021	16:34	
7	220KV-DARBHANGA(DMTCL)-LAUKAHI-2	BSPTCL	6/4/2021	13:43	
8	400KV/220KV 500 MVA ICT 2 AT SITAMARHI	PMTL	8/4/2021	18:25	
9	400KV/220KV 500 MVA ICT 1 AT SITAMARHI	PMTL	8/4/2021	17:25	
10	220KV/132KV 200 MVA ICT 2 AT SITAMARHI	PMTL	9/4/2021	18:01	

11	220KV/132KV 200 MVA ICT 1 AT SITAMARHI	PMTL	10/4/2021	17:15	
12	220KV-SITAMARHI-MOTIPUR-2	BSPTCL	12/4/2021	17:01	
13	400KV/220KV 315 MVA ICT 3 AT JEYPORE	PGCIL	16/4/2021	16:55	
14	765KV 240 MVAR BR 1 AT DARLIPALI (DSTPS) along with Bays	NTPC Darlipali	22/4/2021	10:28	
15	400KV/220KV 315 MVA ICT 1 AT DSTPS(ANDAL)	DVC	23/4/2021	17:58	
16	33KV/0.415KV 0.630 MVA ICT 2 AT ROURKELA	PGCIL	28/4/2021	12:14	Tertiary transformer of 400/220 kV ICT 2 at Rourkela

May-21:

SI No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	220KV-SITAMARHI-MOTIPUR-1	BSPTCL	19/5/2021	12:28	Synchronised at Sitamarhi end.

Jun-21:

SI No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	400kV JEERAT - SAGARDIGHI- 2	PGCIL	21/06/21	20:27	LILO of 400 kV Subhasgram - Sagardighi S/C at Jeerat Substation
2	400kV JEERAT - SUBHASGRAM- 2	PGCIL	20/06/21	21:28	LILO of 400 kV Subhasgram - Sagardighi S/C at Jeerat Substation
3	132kV SITAMARHI - RUNNISAIDPUR- 2	BSPTCL	17/06/21	13:52	Bay at Sitamarhi end was charged on 11.04.21.
4	132kV SITAMARHI - RUNNISAIDPUR- 1	BSPTCL	17/06/21	13:50	Bay at Sitamarhi end was charged on 11.04.21.
5	400kV BHRAMPUR - BHERAMERA- 3	PGCIL	14/06/21	18:02	
6	400kV ALIPURDUAR - JIGMELLING 2	PGCIL	18/06/21	18:06	Link is direct circuit besides the alternative

					circuit through Punatsangchhu
7	400kV ALIPURDUAR - JIGMELLING 1	PGCIL	22/06/21	12:19	Link is direct circuit besides the alternative circuit through Punatsangchhu

Jul-21:

SI No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	220KV-JAYNAGAR-JEYPORE-3	OPTCL	01.07.2021	21:39	
4	220KV-JAYNAGAR-JEYPORE-4	OPTCL	08.07.2021	20:36	
5	132KV-NAGARUNTARI-SONENAGAR-1 (LILO of 132 KV RIHAND-SONENAGAR CKT-1 AT NAGARUNTARI)	JUSNL	14.07.2021	18:12	
6	132KV-NAGARUNTARI-RIHAND-1 (LILO of 132 KV RIHAND-SONENAGAR CKT-1 AT NAGARUNTARI TSS)	JUSNL	14.07.2021	20:02	First time loaded 17:12 hrs on 28-07-2021
7	400KV-DHANBAD-RANCHI-1 (LILO OF 400 KV RANCHI-MAITHON RB D/C)	NKTL	21.07.2021	13:42	
8	400 KV MAIN BUS I AT DHANBAD	NKTL	21.07.2021	13:42	
9	400 KV MAIN BUS II AT DHANBAD	NKTL	21.07.2021	14:34	
10	125 MVAR Bus Reactor-1 AT DHANBAD	NKTL	21.07.2021	14:47	
11	400KV-DHANBAD-MAITHON RB-1 (LILO OF 400 KV RANCHI-MAITHON RB D/C)	NKTL	23.07.2021	18:48	
12	400KV-BAHARAMPUR-BHERAMARA-4	PGCIL	25.07.2021	11:32	Line was charged from Baharampur up to termination tower of Bheramara
13	125 MVAR Bus Reactor-2 AT DHANBAD	NKTL	25.07.2021	15:12	

14	400KV-DHANBAD-RANCHI-2 (LILO OF 400 KV RANCHI-MAITHON RB D/C)	NKTL	27.07.2021	13:37	
15	400KV-DHANBAD-MAITHON RB-2 (LILO OF 400 KV RANCHI-MAITHON RB D/C)	NKTL	27.07.2021	19:46	
16	400KV-JEERAT-NEW JEERAT-1	PMJTL	31.07.2021	12:30	Line was charged along with 400 kV Bus 2 at New Jeerat
17	220 KV MAIN BUS II AT DHANBAD	NKTL	31.07.2021	12:30	
18	400KV-JEERAT-NEW JEERAT-2	PMJTL	31.07.2021	14:12	Line was charged along with 400 kV Bus 2 at New Jeerat
19	400 KV MAIN BUS II AT NEW JEERAT	PMJTL	31.07.2021	14:12	
20	400/220 kV 500 MVA ICT 2 AT DHANBAD	NKTL	31.07.2021	18:25	ICTs are charged on no-load as no downstream line commissioned yet.
21	220 KV MAIN BUS I AT DHANBAD	NKTL	31.07.2021	18:27	
22	400/220 kV 500 MVA ICT 1 AT DHANBAD	NKTL	31.07.2021	20:56	ICTs are charged on no-load as no downstream line commissioned yet.

Aug-21:

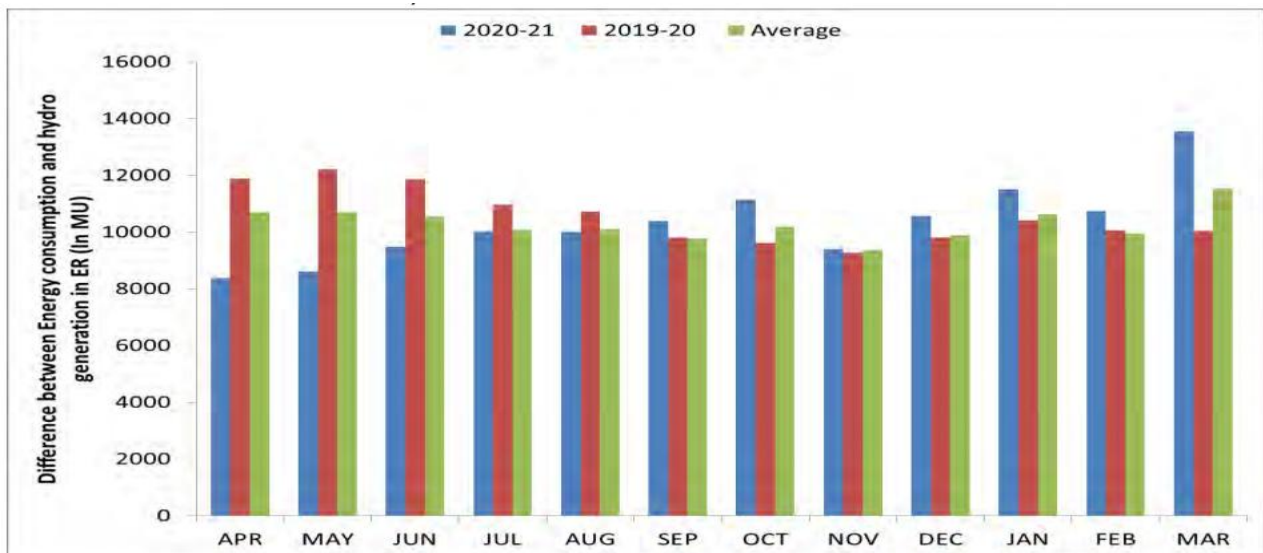
SI No	Element Name	Owner	Charging Date	Charging Time	Remarks
1	132 kV BARIPADA-BANGIRPOSHI-2	OPTCL	14.08.2021	14:36	Idle Charged from Bangirposhi end up to gantry of Baripada
2	220 kV-RANCHI-RAMGARH-1	DVC	21.08.2021	14:55	
3	220 kV-RANCHI-MTPS(DVC)-1	DVC	24.08.2021	13:59	Anti-theft charged up to 57.9 km

					from Ranchi end.
4	50 MVAR Line Reactor of 400 kV Maithon-Gaya 1 AT MAITHON	PGCIL	27.08.2021	20:06	LR replaced with Natural Easter Oil Reactor keeping rating same

ITEM NO. C2 :	Declaration of high demand/low demand season for 2022-23
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During 182nd ER OCC meeting, ERLDC presented energy consumption by Eastern Region in past five years along with hydro generation during same period. It was shown that monthly average difference between energy consumption and hydro generation in Eastern Region was high during the month of March, April and May.

As advised by ERPC the exercise was conducted again and the graph is attached below. It's reconfirmed that the high/peak demand period may be considered during April 2022 & May 2022 and March 2023.



As per above chart, difference between energy consumption and hydro generation in Eastern Region was high during following months

- **2019-20***: April-19, May-19 and June-19
- **2020-21***: Oct-20, Jan-21, Mar-21
- **Average of last five years**: March, April and May

*Due to COVID related lockdown, energy consumption was low during March – June 2020
As per trend in previous five years, difference between energy consumption and hydro generation in Eastern Region was high during March, April and May as demand was in higher side with less support from hydro generation.

Hence April-2022, May-2022 and March -2023 may be considered high demand seasons for 2022-23.

In 183rd OCC meeting, after detailed deliberation it was decided that **April-2022, May-2022 and June-2022** are to be considered as high demand seasons for 2022-23.

TCC may note.

ITEM NO. C3 :	Updated Operating Procedure of Eastern Region, 2021
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The Operating Procedure of Eastern Regional power system, developed and maintained by ERLDC in accordance with section 5.1(f) of the IEGC, has been updated in line with discussions taken place during special meeting as well as earlier OCC meetings.

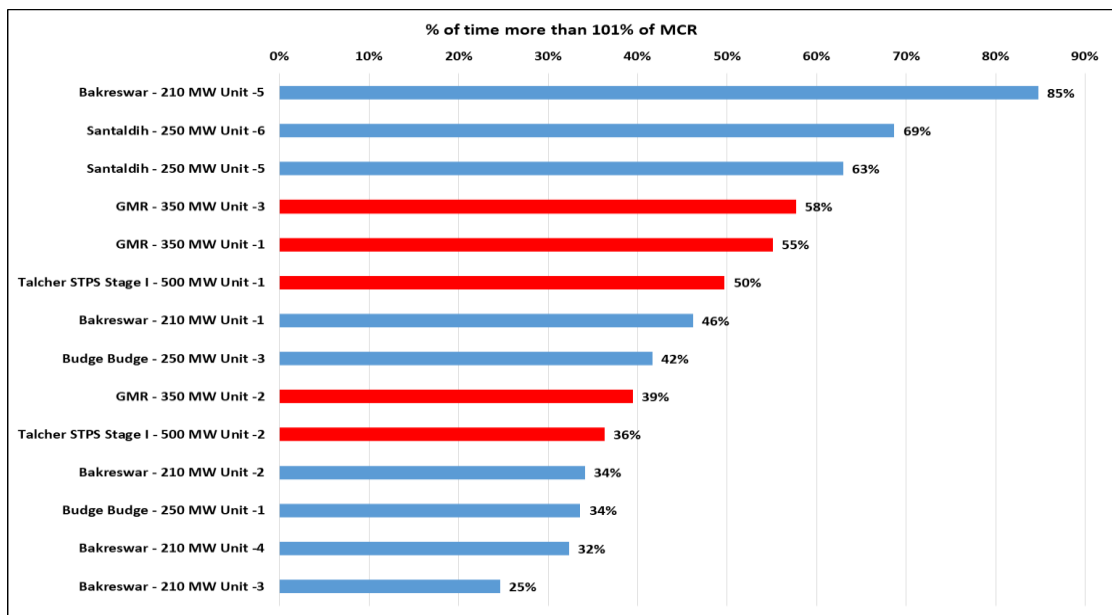
180th OCC advised ERLDC to publish the final Operating Procedure for Eastern Region – 2021 and share it with all the stakeholders of Eastern Region. In compliance of same updated operating procedure was published on 20th July 2021, and it is available at ERLDC website. It can be directly accessed from following link:

<https://app.erldc.in/Content/Upload/System%20Study/Operating%20Procedure/2021%20-Operating%20Procedure%20of%20Eastern%20Region.pdf>

Members may note

ITEM NO. C4 :	Running Generating units at more than MCR
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Since 180th ER OCC meeting, ERLDC highlighted the issue of over injection by generating units at more than MCR at every OCC meeting. Due to running unit at more than MCR, margin for primary frequency response gets exhausted and machine cannot provide sufficient primary frequency response during the event of sudden frequency change. As per ERLDC SCADA data, following thermal generating units generated at more than 101% of MCR (1% margin is considered to offset SCADA measurement error) for significant amount of time during August 2021.



■ Observed in this month ■ Observed in previous months also

Generation duration curve for above mentioned generating stations as per ERLDC SCADA data are shown in **Annexure-C4**. Vide email dated 03rd September 2021 and 06th September 2021, WBSLDC/WBPDCL/CESC, GMR/Odisha SLDC, Talcher STPS & GMR have been requested have been advised to avoid over injection in order to maintain margin for PFR. Issue of over injection at Talcher STPS and GMR TPS is being highlighted since 180th OCC meeting.

In 183rd OCC Meeting, OCC advised all the concerned generators to comply with the requirements for satisfactory performance of the primary frequency response.

Generators may note for compliance.

ITEM NO. C5 :	Status of Primary Frequency Response Testing of ISGS/IPP Generating Units
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The Hon'ble Central Electricity Regulatory Commission (CERC), vide notification dated 12th April 2017, had notified Indian Electricity Grid Code (Fifth Amendment) Regulations, 2017. As per this notification, following provision has been added at the end of Regulation 5.2 (g) of Part 5 of the Principal Indian Electricity Grid Code (IEGC) Regulations: "Provided that periodic checkups by third party should be conducted at regular interval once in two years through independent agencies selected by RLDCs or SLDCs as the case may be.

In line with same 36 numbers of ISGS/IPP units located in Eastern region were selected for PFR testing in first phase. Out of these 36 Units PFR testing of 25 numbers of units is already completed.

Details of PFR testing is given at **Annexure-C5**:

TCC may note.

ITEM NO. C6 :	Review of the PSS Tuning of Generators in Eastern Region
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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 182nd OCC meeting, WBPDC representative informed that PSS tuning for Sagardighi unit#2 PSS tuning had been done on 21st Aug'21. OCC advised WBPDC to share the report of the same to ERLDC & ERPC.

CESC representative submitted that PSS tuning for Budge Budge unit#1 & 2 was done on 16th & 17th Aug'21 respectively.

ERLDC representative informed that PSS tuning for Mejia unit#4, Mangdechu unit#3 & 4, DPL unit#7 and Kahalgaon unit#2 was done satisfactorily. However PSS tuning for APNRL was not successful.

DGPC Bhutan representative submitted that for Chuka, Tala and Mangdechu they had shared their report to ERPC.

In 183rd OCC Meeting, ERLDC informed that PSS tuning for NPGC Unit 2, Talcher St-II units and KTPS Unit I has been completed.

The updated schedule for PSS tuning of the units is attached at **Annexure-C6**.

TCC may note.

ITEM NO. C7 :**Payment/receipt status from various pool accounts in ER****1) RRAS Account :Present Status.**

The updated position of Payments to the RRAS Provider(s) from the DSM pool and Payments by the RRAS Provider(s) to the DSM pool as on 15.09.2021 (considering bill up to 05.09.2021) is indicated in **Annexure – C7.1**.

This is for information to the members.

2) AGC Account : Present Status.

The updated position of Payments to the AGC Provider (i.e Barh) from the DSM pool and Payments by the AGC Provider to the DSM pool as on 15.09.2021 (considering bill up to 05.09.21) is indicated in **Annexure – C7.1**.

This is for information to the members.

3) Status of PSDF

An amount of ₹ 13.36 Cr from Reactive account & DSM account has been transferred to PSDF from the period 01.07.2021 to 15.09.2021. With this the total amount of ₹ 1349.59 Cr has been transferred to PSDF so far. The break up details of fund transferred to PSDF (till 15.09.21) is enclosed in **Annexure-C7.3**.

4) State Transmission Utility Charges and Losses applicable for STOA for FY 2021-22

Name of STU	Intra-State Transmission Charges	TRANSMISSION LOSS (For Embedded entities)
WBSETCL	Rs. 258.12 /MWh	3.10%
DVC	Rs. 143.7 / MWh	2.28%
OPTCL	Rs. 280 / MWh	3.00%
JUSNL	*	#
BSPTCL	Rs. 263 / MWh	3.00%
SIKKIM	*	#

N.B:

* Indicates rates yet to be furnished by concerned State Utilities. Transmission Charges for use of state network shall be Payable @ Rs.80 per MWh as per subsequent Amendment regulation 2009-dated 20.05.2009.

Not yet intimated by the State Utility.

5) State Load Despatch Centre Operating Charges for STOA for FY 2021-22

Name of SLDC	SLDC Operating Charge
West Bengal	**
DVC	**
Odisha	Rs. 2000
Jharkhand	**
Bihar	**
SIKKIM	**

N.B:

** Indicates rates yet to be furnished by concerned State Utilities. Operating charges at the rate of Rs 1000/-per day or part of the day for each bilateral transaction for each of the Regional Load Despatch Centre involved and at the rate of Rs 1000/- per day or part of the day for each State Load Despatch Centre involved shall be payable by the applicant as per subsequent Amendment regulation 2009-dated 20.05.2009.

This is for information to the members.

SI No	Description	Event Start		Event End		Fault Distance
1	400 KV Baripada-Kharagpur AR Successful	30-08-2021	10:08:59	30-08-2021	10:09:00	400KV BPD KGP AR Successful on 300821 at 10:08:59Hrs from BPD End. M-I-Z2 Carrier aided trip,F/L-81.44KM,IR-3.905KA M-II-Z2 carrier aided trip,F/L-80.91KM ,IR-3.326 KA
2	400 KV Baripada-Kharagpur Trip	24-08-2021	11:16:59	24-08-2021	11:43:00	400KV BPD-KGP AR Trip on 240821 at 11:16:59 Hrs due to fault persists in reclaim time. MAIN-I Z-2 Aided trip(Y-G),IY-3.07KA,F/L-77.37KM From BPD End M-II Z-2 Aided trip(Y-G),IY-3.11,F/L-78.61KM From BPD End
3	400 KV Baripada-Kharagpur AR Successful	23-08-2021	10:06:20	23-08-2021	10:06:21	400KV BPD KGP AR successful on 230821 at 10:06:20 Hrs M-I-Carrier Aided Trip,F/L-84.32KM,BPH-N,IB-3.989KA M-II-Carrier Aided Trip,F/L-82.59KM,BPH-N,IB-3.05KA
4	400 KV Baripada-Kharagpur AR Successful	14-08-2021	12:41:59	14-08-2021	12:42:00	400kv Baripada-Kharagpur line auto reclose successful due to Y phase to Ground transient fault. Fault details: Main-1: Y ph to G, Zone-1, Iy-4.133kA, Fault Distance-49.27 km Main-2: Y ph to G, Zone-1, Iy-4.067kA , Fault Distance-47.80 km
5	400 KV Baripada-Kharagpur Trip	13-08-2021	11:56:01	13-08-2021	12:14:00	400kv Baripada-Kharagpur line Tripped due to subsequent fault within reclaim time. Fault details: Main-1 : R ph to G, Zone-1, Ir-3.304 kA, Fault Distance-75.05 km Main-2: R ph to G, Zone-1, Ir-3.224 kA,
6	400 KV Baripada-Kharagpur AR Successful	07-08-2021	11:07:37	07-08-2021	11:07:38	AR successful with R/I at Baripada MAIN-I FAULT DETAILS: B PH TO G, ZONE-1, FL-45.94 KM, If-4.382 KA MAIN-II FAULT DETAILS: B PH TO G, ZONE-1, FL-45.40 KM, If-4.376 KA
7	400 KV Baripada-Kharagpur AR Successful	07-07-2021	18:57:26	07-07-2021	18:57:27	400KV BPD-KGP AR Successful on 07.07.21 M-I-R-G,Z1,IR-4.002KA,F/L-48.69KM From BPD End. M-II-R-G,Z1,IR-3.716KA,F/L-49.5KM From BPD End.
8	400 KV Baripada-Kharagpur AR Successful	26-06-2021	14:47:12	26-06-2021	14:47:13	400kv Baripada-Kharagpur line auto reclose successful at 14:47:12 hours of 26.06.2021 due to Y phase to Ground single phase transient fault in Zone-1, 64.42 km from Baripada end with fault current-3.096 kA.
9	400 KV Baripada-Kharagpur AR Successful	07-06-2021	14:38:20	07-06-2021	14:38:21	400kv Baripada-Kharagpur Line auto reclose successful at 14:38:20 hours of 07.06.2021 due to Y phase to ground transient fault with fault current Iy-3.759 kA, Fault distance-53.84 km from Baripada end. Line belongs to WBSETCL.
10	400 KV Baripada-Kharagpur AR Successful	23-05-2021	11:12:00	23-05-2021	11:12:01	400KV BPD-KGP AR on 23052021 at 11:12:00Hrs M-I-z1,BPH-N,IB-4.063KA,F/L-49.17KM from BPD End
11	400 KV Baripada-Kharagpur AR Successful	03-05-2021	19:33:22	03-05-2021	19:33:23	400KV BPD-KGP Line AR on 030521 at 19:33:22 Hrs M-I- R-N,Z-1,IR-2.474KA,F/L-58.30KM From BPD End M-II-R-N,Z-1,IR-3.835KA,F/L-58.37KM From BPD End
12	400 KV Baripada-Kharagpur AR Successful	03-05-2021	19:21:14	03-05-2021	19:21:15	400KV BPD-KGP Line AR on 030521 at 19:21:14 Hrs From BPD End. M-I-Z-1-IR-3.71KA,F/L-58.63KM From BPD End.
13	400 KV Baripada-Kharagpur AR Successful	03-05-2021	19:20:26	03-05-2021	19:20:27	400KV BPD-KGP Line AR on 030521 at 19:20:26Hrs From BPD End M-I-Z1,R-N,IR-3.812KA,F/L-59.71KM From BPD End.
14	400 KV Baripada-Kharagpur AR Successful	03-05-2021	19:14:31	03-05-2021	19:14:32	400KV BPD-KGP Line AR on 030521 at 19:14 M-I-Z1,R-N,IR-3.867KA,F/L-58.32KM From BPD End
15	400 KV Baripada-Kharagpur Trip	02-05-2021	16:23:48	02-05-2021	16:59:00	400KV BPD-KGP Line Tripped on 02052021 due to Fault persists in Reclaim time. 1st Fault-16:23:48 Hrs Z-1,R-G,IR-3.84KA,F/L-65.43KM From BPD end. 2nd Fault-16:23:58 Hrs Z-1,R-G,IR-3.98KA,F/L-58.54KM From BPD end.
16	400 KV Baripada-Kharagpur Trip	28-02-2021	12:13:21	28-02-2021	19:27:00	Auto reclose unsuccessful in 400KV Baripada-Kharagpur line due to subsequent fault within reclaim time and line tripped. FD-56.3 KM from Baripada, FC-3.467 KA
17	400 KV Baripada-Kharagpur AR Successful	28-02-2021	11:38:33	28-02-2021	11:38:34	Auto reclose successful in 400KV Baripada-Kharagpur line due to transient single phase Y to ground fault. Auto reclose successful in both main & tie CB. FD-48.030 KM from Baripada, Fc-3.984 KA

SI No	Description	Event Start		Event End		Fault Distance
18	400 KV Baripada-Kharagpur AR Successful	25-02-2021	03:28:38	25-02-2021	03:28:39	400KV BPD-KGP Line A/R Successful from BPD end at 03:28:38Hrs Fault Details; M-I-B PH-N(Carrier Aided Trip Z1),IB-4.12KA,F/L-85.143KM From BPD end M-II-B PH-N(Carrier Aided Trip Z1),IB-3.509KA,F/L-85.05KM From BPD End.
19	400 KV Baripada-Kharagpur AR Successful	16-02-2021	12:00:52	16-02-2021	12:00:52	400KV BPD-KGP AR Successful on 16.02.2020 at 12:00:52 Hrs due to Y-G Faults,Z-1,IY-3.48KA,Fault Distance-56.44KM from Baripada end.
20	400 KV Baripada-Kharagpur AR Successful	14-02-2021	13:12:00	14-02-2021	13:12:01	400KV BPD-KGP AR Successful to Y-Ph-N on 140221 at 13:12:00Hrs Fault Details Main-I-Z-1,IY-3.762KA,Fault Distance-50.59KM KM From BPD End. Main-II-Z-1,IY-3.482KA,Fault Distance-51.22KM KM From BPD End.
21	400 KV Baripada-Kharagpur AR Successful	31-01-2021	05:47:29	31-01-2021	05:47:30	Auto reclose operated successfully in 400KV Baripada-Kharagpur line, B-phase to ground fault occurred at a distance of 84 km from Baripada end. Fc-4.120 KA
22	400 KV Baripada-Kharagpur AR Successful	16-11-2020	11:11:29	16-11-2020	11:11:30	400KV BPD-KGP AR on successful on 161120 at 11:11:29Hrs From BPD end successfully. Fault Details; Y-N,Z2 Carrier aided trip,IY-3.725KA,F/D-93.45KM(MAIN-I) Y-N,Z2 Carrier aided trip,IY-2.949KA,F/D-92.00KM(MAIN-II)
23	400 KV Baripada-Kharagpur AR Successful	06-11-2020	11:13:52	06-11-2020	11:13:53	400KV BPD-KGP AR successful on 06112020 at 11:13:52Hrs from Baripada End. Fault Details M-I Z-2 Carrier Aided trip,Y-N,IY-3.782KA,F/D-95.74KM M-II Z-2 Carrier Aided trip,Y-N,IY-2.803KA,F/D-96.38KM
24	400 KV Baripada-Kharagpur AR Successful	27-10-2020	13:25:27	27-10-2020	13:25:28	400KV BPD-KGP Line AR successful on 27102020 at 13:25:27Hrs from Baripada end.Fault Details Z-1,R-N.IR-5.158KA,Fault Distance-35.72KM from Baripada end.
25	400 KV Baripada-Kharagpur Trip	10-10-2020	13:04:05	10-10-2020	13:29:00	400KV BPD-KGP Line Tripped on 10102020 at Baripada End due to Fault persists on reclaim time. Fault Details Y-N,Z1,IY-3.523KA,F/L-42.32KM From BPD End.
26	400 KV Baripada-Kharagpur AR Successful	19-09-2020	12:00:49	19-09-2020	12:00:50	400KV BPD-KGP Line AR on 190920 at 12:00:49 Hrs from Main & Tie Bay at Baripada SS. Fault Details R-N,Z2 Carrier Aided Trip,iR-3.948KA,Fault Dist-82.82KM From Baripada End.
27	400 KV Baripada-Kharagpur Trip	18-09-2020	05:47:36	18-09-2020	07:03:00	400KV BPD-KGP Line Trip on 180920 at 05:47 Hrs due to fault persists in reclaim time. Fault details 05:47:36 Hrs -Y-N,Z1,IY-3.533KA,Fault Distance-78.79KM from Baripada end 05:47:37 Hrs -Y-N,Z1(Carrier Aided Trip)IY-155A,F/ Distance-81.09KM
28	400 KV Baripada-Kharagpur AR Successful	18-09-2020	05:44:09	18-09-2020	05:44:10	400KV BPD-KGP Line AR successful on 18.09.20 at 05:44:09 Hrs from Baripada end. Fault Details Y-N,Z-1,IY-3.43KA,Fault Distance-79.44KM from Baripada end.
29	400 KV Baripada-Kharagpur AR Successful	17-09-2020	03:51:39	17-09-2020	03:51:40	400KV BPD-Kharagpur AR Successful on 17.09.20 at 03:51:39 Hrs. Fault Details Ir-5.986KA,Fault Distance-31.96KM From Baripada End.
30	400 KV Baripada-Kharagpur AR Successful	08-09-2020	16:14:06	08-09-2020	16:14:07	400KV BPD-KGP Line AR Successful from Main & Tie CB at 16:14:06Hrs on 08092020. Fault Details Y-N,Z-1,IY-3.554KA,Fault Distance-77.02KM From Baripada end.
31	400 KV Baripada-Kharagpur Trip	22-08-2020	12:31:18	22-08-2020	12:59:00	400KV BPD-KGP Line Tripped on 220820 at 12:31:18 Hrs due to Fault persists in Reclaim Time. 1st Fault-Z1,R-N Ir-3.286KA,Fault-Distance-44.83KM From BPD End(12:31:16) 2nd Fault-Z1,R-N Ir-3.504KA,Fault Distance-45.73 KM From BPD End(12:31:18)
32	400 KV Baripada-Kharagpur AR Successful	19-08-2020	13:12:14	19-08-2020	13:12:15	400KV BPD-KGP AR Successful on 190820 at 13:12:14Hrs Fault Details Y-N,Z-1,IY-2.926KA,Fault Distance-42.86KM From Baripada End.
33	400 KV Baripada-Kharagpur Trip	16-08-2020	13:54:21	16-08-2020	17:16:00	400KV BPD-Kharagpur Trip on 16082020 at 13:54:21 due to Y-B-N Fault in Z-1,IY-2.139KA,IB-316.0A. FD-40.60 KM

SI No	Description	Event Start		Event End		Fault Distance
34	400 KV Baripada-Kharagpur AR Successful	12-07-2020	13:54:14	12-07-2020	13:54:15	400KV BPD-Kharagpur AR successful on 12.07.20 at 13:54:14 (Z-2 Carrier aided trip)IFI-90.27KM & IR-3.142KA from Baripada End.
35	400 KV Baripada-Kharagpur Trip	30-06-2020	12:20:46	30-06-2020	20:31:00	400KV BPD-Kharagpur Trip on 30.06.2020 due to fault persists on reclaim time.Fault Details; R-N,(Z-2 Carrier aided trip)IR-2.204KA Fault distance-80.43KM from BPD end.
36	400 KV Baripada-Kharagpur AR Successful	30-06-2020	11:22:15	30-06-2020	11:22:16	400KV BPD-Kharagpur AR successful on 30.06.2020 at 11:22:15 Hrs from both Main & Tie CB at Baripada end. Fault Details M-I Y-N(z-2 Carrier Aided Trip) IY-3.516KA & Dist-77.34KM M-II Y-N(z-2 Carrier Aided Trip) IY-3.462KA & Dist-75.52KM
37	400 KV Baripada-Kharagpur AR Successful	09-05-2020	13:19:57	09-05-2020	13:19:58	400KV BPD-Kharagpur AR on 09.05.2020 at 13:19:57 with fault current 3.041 & a distance of 90.25KM
38	400 KV Baripada-Kharagpur AR Successful	05-05-2020	09:45:45	05-05-2020	09:46:45	KGP AR on 05052020 at 09:45:45 Hrs due to RPH-N with fault current 2.774KA & distance of 47.09KM.
39	400 KV Baripada-Kharagpur AR Successful	01-05-2020	15:57:33	01-05-2020	15:58:33	400KV BPD-Kharagpur AR on 01.05.2020 FD-90.90 KM,FC- 3.312 KA
40	400 KV Baripada-Kharagpur AR Successful	10-04-2020	13:21:55	10-04-2020	13:21:56	400KV BPD-Kharagpur AR on 10.04.2020 BN, FD-90.70 KM, FC-1.2 KA
41	400 KV Baripada-Kharagpur AR Successful	10-04-2020	13:12:15	10-04-2020	13:12:16	400kv BPD-KGP AR on 13:12 of 10.04.2020 YN, FD-95, FC-2.63 KA
42	400 KV Baripada-Kharagpur AR Successful	06-04-2020	10:44:45	06-04-2020	10:45:45	KGP AR successfully on 06042020 at 10:44 Hrs from BPD end.Z2 Carrier aided trip with Fault current 2.989 KA & 90.99KM from Bpd End.
43	400 KV Baripada-Kharagpur AR Successful	20-03-2020	13:46:07	20-03-2020	13:46:08	400KV BPD-Kharagpur AR on 20.03.2020 YN, FD-80.180, FC-2.82 KA
44	400 KV Baripada-Kharagpur AR Successful	10-03-2020	12:33:35	10-03-2020	12:34:35	400KV BPD-Kharagpur AR successful on 10032020 at 12:35 Hrs of both main & Tie bay from Baripada SS. YN, FD-88 KM, FC-1 KA
45	400 KV Baripada-Kharagpur AR Successful	02-03-2020	12:34:01	02-03-2020	12:34:02	Auto reclose of 400kv Baripada-Kharagpur Line on dated 02.03.2020 RN, FD-53.280, FC-3.037 KA
46	400 KV Baripada-Kharagpur AR Successful	19-02-2020	12:28:53	19-02-2020	12:29:53	FD-98.10, FC-3.665 KA, YN
47	400 KV Baripada-Kharagpur AR Successful	16-01-2020	11:51:06	16-01-2020	11:51:07	400 KV BPD-KGP Line A/R on 16.01.2020 FD-64.90, FC-3.301, YN fault
48	400 KV Baripada-Kharagpur AR Successful	13-01-2020	12:12:16	13-01-2020	12:12:17	400KV BPD-Kharagpur AR on 130012020 at 12:12:16 Hrs due to RPH-N distance 62.34 KM from Baripada End & Fault Current-3.414 KA
49	400 KV Baripada-Kharagpur Trip	03-01-2020	04:01:17	03-01-2020	04:01:20	400 KV BPD-KGP Line Trip on 03012020 at 04:00:53 Hrs Due to Fault persists on reclaim time Line tripped at 04:01:17 Hrs. FD-1 KM, FC-11.620 KA, BN Insulator decapping at loc. No-46 and cross arm bend at loc. No-45
50	400 KV Baripada-Kharagpur AR Successful	20-11-2019	11:28:02	20-11-2019	11:28:03	400KV BPD-Kharagpur AR Successful at 11:28:02 Hrs n 20.11.2019 FD-104.70, FC-1.560 KA, RN Fault
51	400 KV Baripada-Kharagpur Trip	15-11-2019	11:20:04	15-11-2019	11:55:00	FD-63.60 KM, FC-4.430 KA, YN Fault
52	400 KV Baripada-Kharagpur Trip	05-10-2019	11:12:10	05-10-2019	11:38:00	400KV KHARAGPUR Line Tripped due to persistence earth fault in R-Phase during reclaim time. FD-70.3 KM, FD-3.53 KA, RN Fault
53	400 KV Baripada-Kharagpur Trip	21-09-2019	12:20:23	21-09-2019	19:10:00	400kv Baripada- Kharagpur Line tripped 2nd time on 21.09.2019 due to R-Phase to Earth fault due to persistence earth fault within Reclaim Time. FD-67.650 KM, FC-3.103 Ka
54	400 KV Baripada-Kharagpur Trip	21-09-2019	10:31:13	21-09-2019	10:49:54	400KV Baripada-Kharagpur Line Tripped on 21.09.2019 due to persistence of fault within reclaim time. FD-69.070 KM, FC-4.035, RN Fault
55	400 KV Baripada-Kharagpur AR Successful	10-08-2019	12:08:04	10-08-2019	12:08:05	Z2, FD-112.9 KM, FC-3.561 KA

SI No	Description	Event Start		Event End		Fault Distance
56	400 KV Baripada-Kharagpur AR Successful	04-05-2019	01:27:34	04-05-2019	01:27:34	400kV Baripada-Kharagpur Line A/R Successful on 04/05/2019 at 01:27 Hrs. the fault was in R-Phase with a distance of about 90 KM from Baripada end. FC-3.413 KA
57	400 KV Baripada-Kharagpur AR Successful	28-04-2019	14:43:31	28-04-2019	14:43:31	400kV Baripada-Kharagpur Line Auto Reclosure Successful on 28/04/2019 at 14:43Hrs. The fault was R-N, at a distance of 105.8 KM from Baripada end with fault current of 1.4KAmp.
58	400 KV Baripada-Kharagpur Trip	02-04-2019	12:26:33	02-04-2019	12:49:00	400 kV Baripada-Kharagpur line tripped due to persistence of Y-N fault within reclim time at 12:26 hrs on 02.04.2019. FD-43.5, FC-2.349, UYN Fault



सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति

Eastern Regional Power Committee

14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता-700033
14 Golf Club Road, Tollygunj, Kolkata-700033



Tel No.: 033-24239651, 24239658 FAX No.: 033-24239652, 24239653 Web: www.erpc.gov.in

No. ERPC/ COM-I/CCM/2020-21/ 5122

Date: 07.10.2020

To

The General Manager (BD & PS)
NTPC Vidyut Vyapar Nigam Ltd.
7th Floor, Core-3, SCOPE Complex
Lodhi Road, New Delhi- 110003

Sub: Settlement Nodal Agency for Dagachhu HEP of Bhutan

Sir,

Please refer to the agenda item No. B6 of the 42nd Commercial Sub-Committee Meeting of ERPC held on 25.02.2020 in reference to the aforesaid subject. In the meeting, NVVN was advised to enter into necessary agreement with TPTCL to take over all the responsibilities of nodal agency from TPTCL for Dagachhu HEP transactions. NVVN was also advised to complete the necessary registration process with ERLDC (POSOCO).

Subsequent to this in the 43rd Commercial Committee Meeting held on 21.09.2020 ERLDC informed that on request of NVVN, they have registered NVVN and acceptance letter was issued on 13.05.2020.

However, the status of the necessary agreement with TPTCL to take over all the responsibilities of nodal agency from TPTCL for Dagachhu HEP transactions has not been communicated to us till date. NVVN representative was not present in the 43rd Commercial Committee Meeting.

In view of above, it is requested to intimate the status of the aforesaid agreement with TPTCL to us at the earliest.

Thanking You,

Yours faithfully,

N.S. Mondal
07.10.2020
(N.S. Mondal)
Member Secretary



पूर्वी क्षेत्रीय विद्युत समिति
Eastern Regional Power Committee
डाकरी सं० / Distry No- 973
दिनांक / Date 16/03/2021
भारत सरकार / Govt of India
14, गोल्फ क्लब रोड टाकॉणज
14, Golf Club Road
कोलकाता-33, Kolkata-33

एनटीपीसी विद्युत व्यापार निगम लिमिटेड
(एनटीपीसी लिमिटेड की पूर्ण स्वामित्व वाली सहायक कंपनी)

NTPC Vidyut Vyapar Nigam Limited
(A Wholly Owned Subsidiary of NTPC Limited)

केन्द्रीय कार्यालय / Corporate Centre

Ref. No.: NVVN/BD-7/S-1/TPTCL/01/

10th March '2021

To,
Shri. Bikram Singh
Head Revenue & Marketing
Tata Power Trading Company Ltd

Subject: Agreement between TPTCL and NVVN as Settlement Nodal Agency for Dagachu HEP of Bhutan

Ref: Email dated 15th Dec 2020 & 10th Feb 2021 for signing of SNA agreement between NVVN & TPTCL

Dear Sir,

This is in reference to 42nd & 43rd Commercial Committee Meeting held by ERPC dated 25.02.2020 & 21.09.2020 respectively. In the meeting NVVN was advised to enter into necessary agreement with TPTCL to take over all the responsibilities of nodal agency from TPTCL for Dagachu HEP transactions.

In view of this NVVN vide email dated 15th Dec 2020 has submitted Settlement Nodal Agency (SNA) agreement to TPTCL for further finalisation and execution with NVVN.

Further, to the "Guidelines for Import / Export (Cross Border) of Electricity-2018" issued by MoP, Procedure for approval and facilitating Import/Export (Cross Border) of Electricity by the Designated Authority (DA), has been issued on 26.02.2021. In line with this, the SNA agreement submitted earlier by NVVN has been revised (Clause 2(h) added) to include the responsibilities to be performed by NVVN as a Settlement Nodal Agency under the DA Procedure issued by CEA on 26.02.2021.

We request you to kindly confirm for further execution of SNA Agreement at the earliest.

Thanking You,

Yours faithfully,

Shyam Kumar
(Shyam Kumar) 10/03/2021

General Manager, BD



Cc:

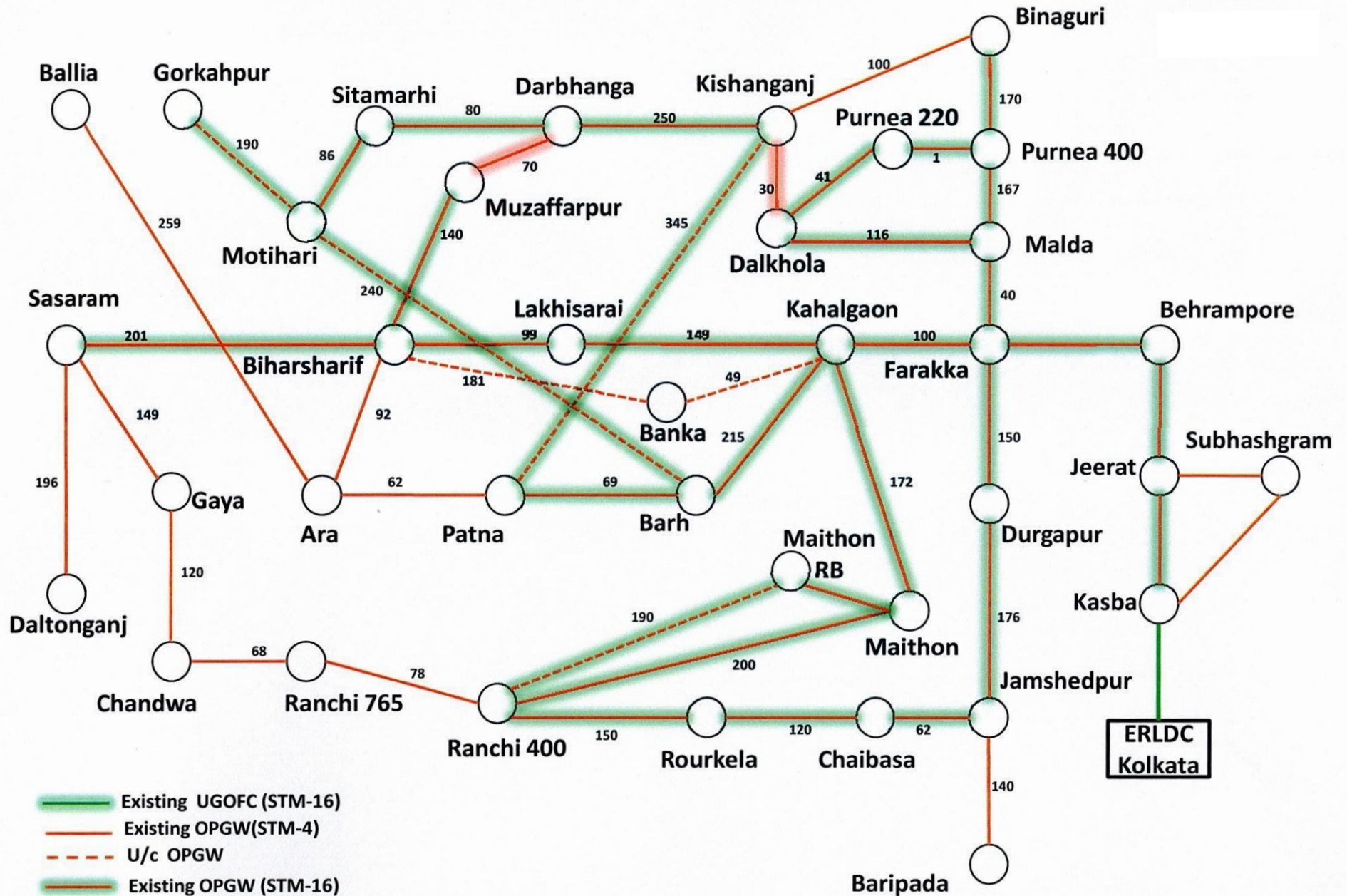
1. Member Secretary, ERPC
2. Chief Engineer, CEA
3. CEO, TPTCL

MS
15/3

SE (Comm.)

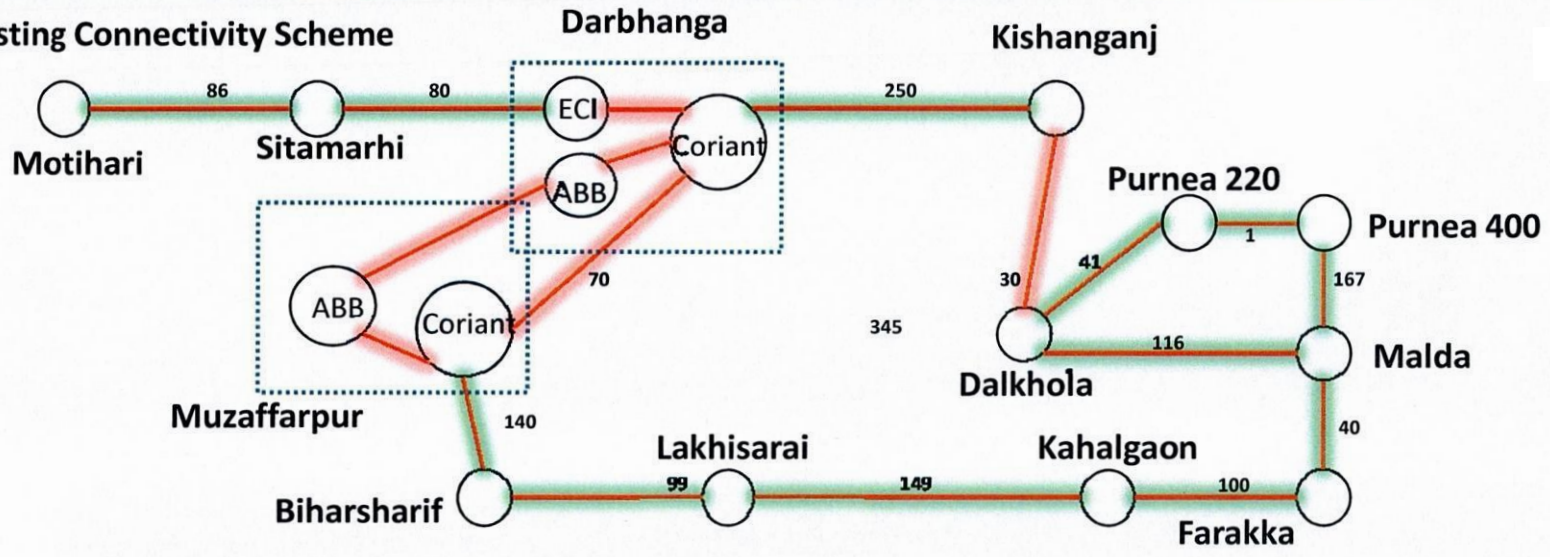
Pradhan (HEP)

SLD of OPGW Connectivity of ERTS-I Stations

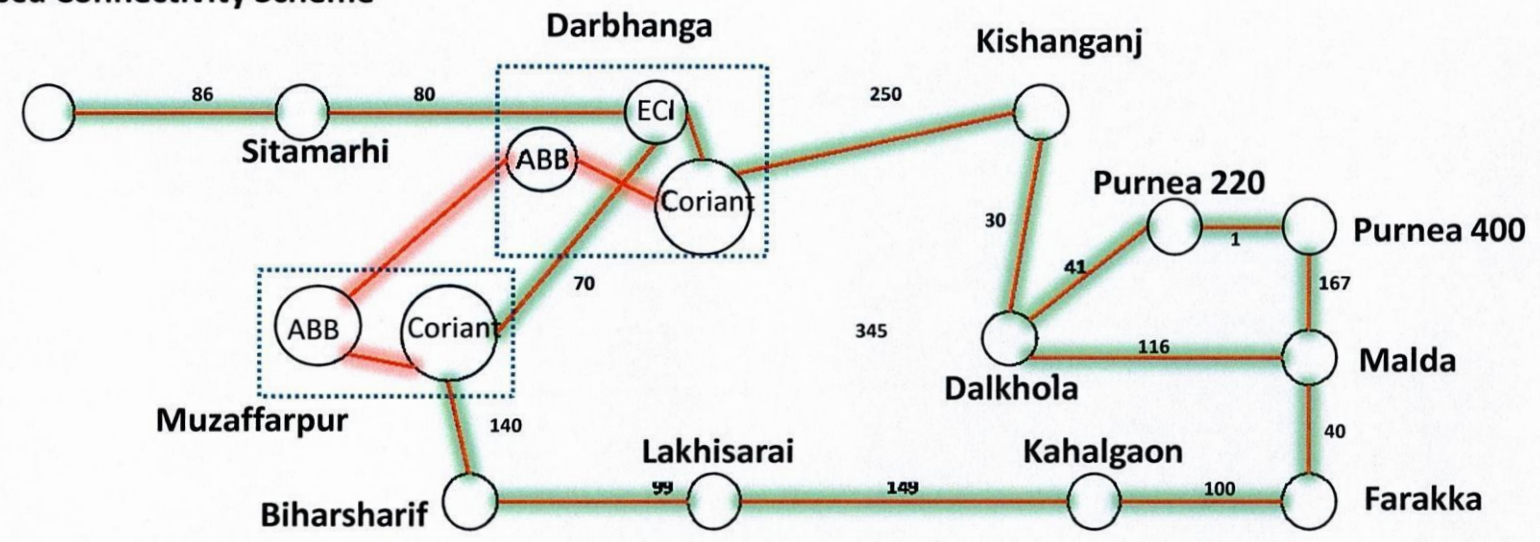


Proposed Provisioning/Upgradation

Existing Connectivity Scheme



Proposed Connectivity Scheme



SUMMARY OF DEVIATION CHARGE RECEIPT AND PAYMENT STATUS

BILL UPTO 05-09-2021 (W-23 of 2021-2022)
Last Payment Disbursement Date - 16-09-2021

Figures in Rs. Lakhs

CONSTITUENTS	Net outstanding for 2020-21	Receivable	Received	Payable	Paid	Outstanding for 2021-22	Total Outstanding
BSPTCL	7,539.21266	15010.7423	0	665.57371	0	14345.16859	21,884.38125
JUVNL	995.55299	2919.91444	0	334.24768	0	2585.66676	3,581.21975
DVC	0.00000	5075.63239	3409.86384	868.28382	868.28382	1665.76855	1,665.76855
GRIDCO	1.59243	1589.15774	1531.36136	2437.54286	2242.41391	-137.33257	-135.74014
WBSETCL	0.00000	7345.12157	6657.52228	105.53851	211.07702	793.1378	793.13780
Sikkim	100.49308	616.78283	0	268.51298	0	348.26985	448.76293
NTPC	0.00000	3688.06461	3536.66922	2689.97798	2456.59047	-81.99212	-81.99212
NHPC	0.00000	13.97527	13.97527	523.83079	504.69623	-19.13456	-19.13456
MPL	0.00000	108.48732	108.48732	205.10017	187.35984	-17.74033	-17.74033
APNRL	0.00000	215.32935	92.90845	279.54514	195.86008	38.73584	38.73584
CHUZACHEN	0.00000	18.77954	18.77954	62.21836	57.72322	-4.49514	-4.49514
NVVN-BD	0.00000	469.32547	469.32547	103.18574	90.88708	-12.29866	-12.29866
GMR	0.00000	42.36335	42.36335	772.64178	729.79371	-42.84807	-42.84807
JITPL	0.00000	383.60061	257.31567	84.15197	84.15197	126.28494	126.28494
TPTCL (Dagachu)	0.00000	1115.59231	1106.71803	0	0	8.87428	8.87428
JLHEP	0.00000	450.5715	338.7007	14.87015	14.87015	111.8708	111.87080
NVVN-NEPAL	0.00000	4558.76911	4558.76911	435.54902	289.39016	-146.15886	-146.15886
IBEUL	0.00000	0	0	0	0	0	0.00000
BRBCL	0.00000	515.43566	515.43566	94.19806	83.51982	-10.67824	-10.67824
PGCIL SASARAM	0.00000	16.88473	15.44172	4.15723	4.15723	1.44301	1.44301
TUL (Teesta-III)	0.00000	406.98808	319.69094	37.59267	37.59267	87.29714	87.29714
NERLDC	0.00000	45650.30766	33861.07488	17356.19479	17825.17612	12258.21411	12,258.21411
WRLDC	0.00000	14325.90702	14368.65026	201117.4338	175234.3119	-25925.86509	-25,925.86509
NRLDC	0.00000	27930.65901	28018.45644	39992.21981	40221.47654	141.4593	141.45930
SRLDC	0.00000	163506.7199	139707.3203	857.43235	857.43235	23799.39959	23,799.39959
VAE	0.00000	0	0	0	0	0	0.00000
Dikchu	0.00000	41.65839	41.65839	123.17898	121.0799	-2.09908	-2.09908
PGCIL-Alipurduar	0.00000	4.86114	0	4.3956	1.60673	2.07227	2.07227
Tashiding(THEP)	0.00000	359.3843	288.40031	46.09542	46.09542	70.98399	70.98399
OPGC	0.00000	0	0	0	0	0	0.00000
KBUNL	0.00000	189.74595	143.77282	174.75043	174.75043	45.97313	45.97313
NPGC	0.00000	358.51846	358.51846	164.37581	156.45208	-7.92373	-7.92373
NPGC-Infirm	0.00000	513.47235	505.41988	2937.80708	2937.80708	8.05247	8.05247
RONGNICHU	0.00000	80.04924	61.57116	120.69316	116.07019	13.85511	13.85511
Total	8,636.85116	2,97,522.80160	2,40,348.17084	2,72,881.29580	2,45,750.62612	30,043.96108	38,680.81224

Receivable:

Receivable by ER POOL

Payable by ER POOL

Received:

Received by ER POOL

Paid by ER POOL

'- ve' Payable by ER pool

'+'ve' Receivable by ER pool

Deviation Interest Bill due to delay payment

All figs in Rupees.

Sl No.	Constituent Name	Interest outstanding till Q4_2020-21	Interest Received by Pool against outstanding	Interest Paid by pool against Outstanding	Net Interest outstanding till Q4 2020-21
1	BSPTCL	91,05,608	91,05,608		0
2	DVC	23,718			23,718
3	GRIDCO	-2,79,466		2,79,466	0
4	JUVNL	4,34,61,973	4,34,61,973		0
5	Sikkim	11,76,865	11,76,865		0
6	WBSETCL	21,415	21,415		0
7	NHPC	-54,745		54,745	0
8	NTPC	0			0
9	APNRL	11,33,748	11,33,748		0
10	BRBCL	-1,316		1,316	0
11	JLHEP	1,28,853	1,15,968		12,885
12	CHUZACHEN	-3,119		3,119	0
13	GMR	1,73,96,828			1,73,96,828
14	IBEUL	26,75,383			26,75,383
15	JITPL	8,589	8,589		0
16	KBUNL	40			40
17	MPL	-33,428		33,428	0
18	NPGC-Infirm	0			0
19	NPGC	-10,953		10,953	0
20	NVVN-BD	24,603			24,603
21	NVVN-NEPAL	0			0
22	OPGC	24,209			24,209
23	PGCIL-Alipurduar	1,72,257			1,72,257
24	PGCIL SASARAM	1,686			1,686
25	Tashiding(THEP)	1,57,661	1,57,661		0
26	Dikchu	28,701	28,701		0
27	TPTCL (Dagachu)	0			0
28	TUL (Teesta-III)	-1,134		1,134	0

'- ve' Payable by ER pool

'+ ve' Receivable by ER pool

Note: Ind-bharath interest is calculated till 29.05.2019

RRAS interest details				
Constituents	Amount in ₹ Lacs	Interest Paid in 1st Quarter 2021-22	Balance	Payment Date
NTPC	-4.85430	4.85430	0.00000	16.06.2020
BRBCL	-0.60400	0.60400	0.00000	16.06.2020
KBUNL	-3.22746	3.22746	0.00000	16.06.2020
MPL	-2.22505	2.22505	0.00000	16.06.2020
NPGC	-0.79683	0.79683	0.00000	16.06.2020
Total	-11.70764	11.70764		

Annexure-B20.3

STATUS OF REACTIVE CHARGES (All amount in Rs)

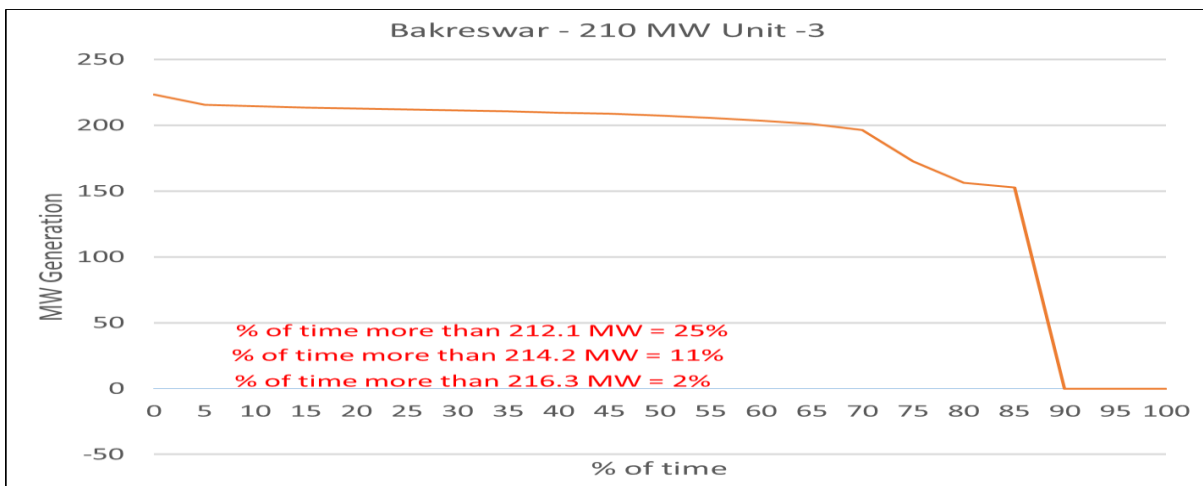
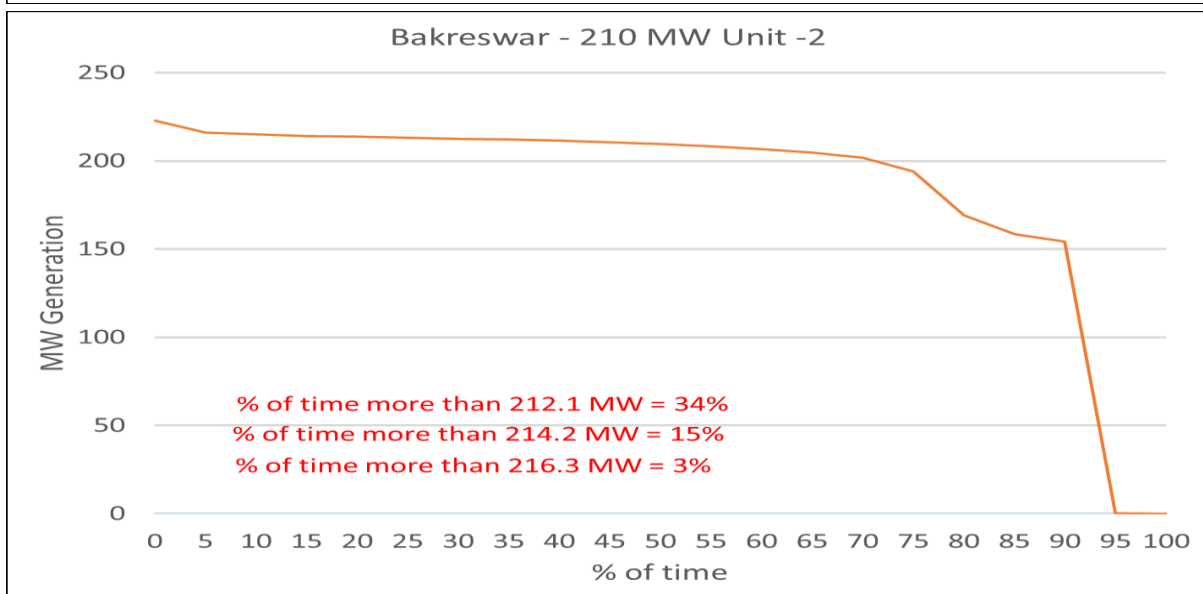
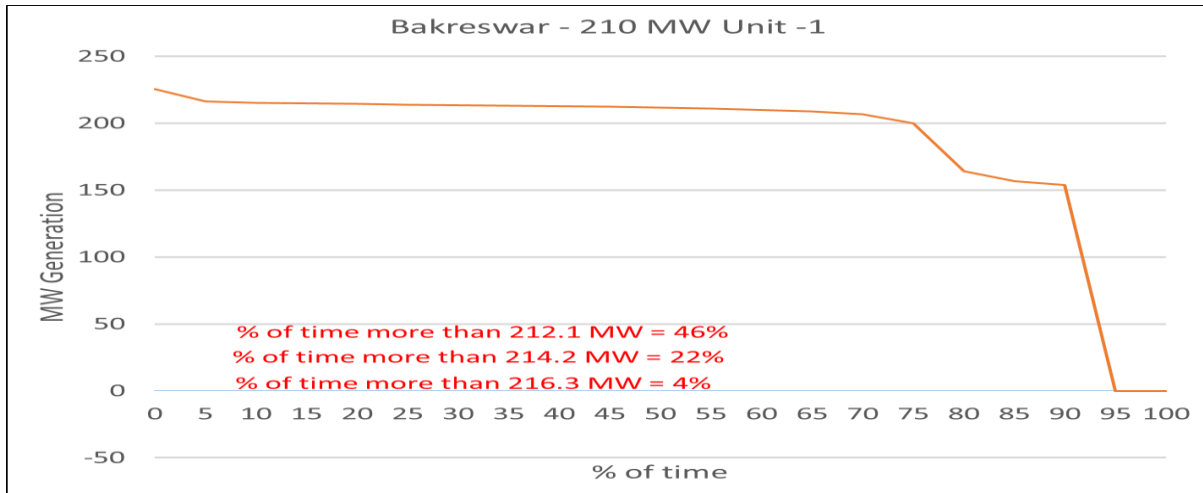
AS ON 15.09.21

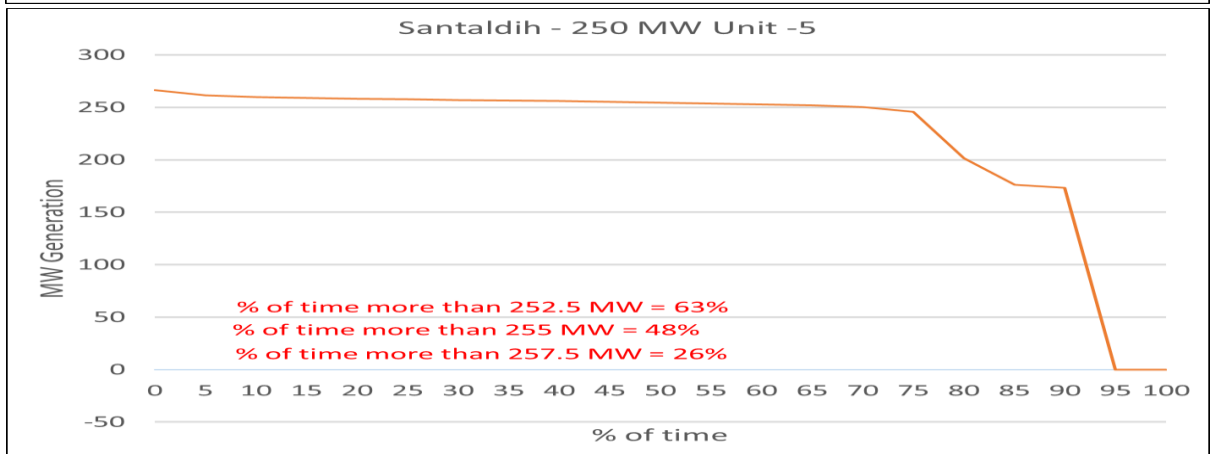
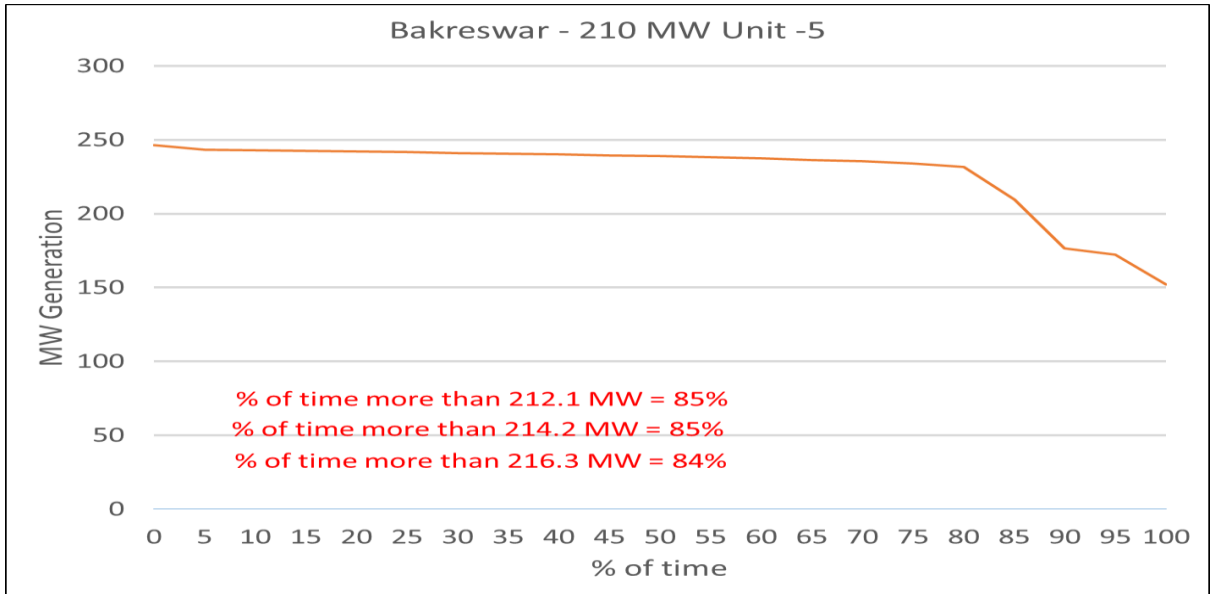
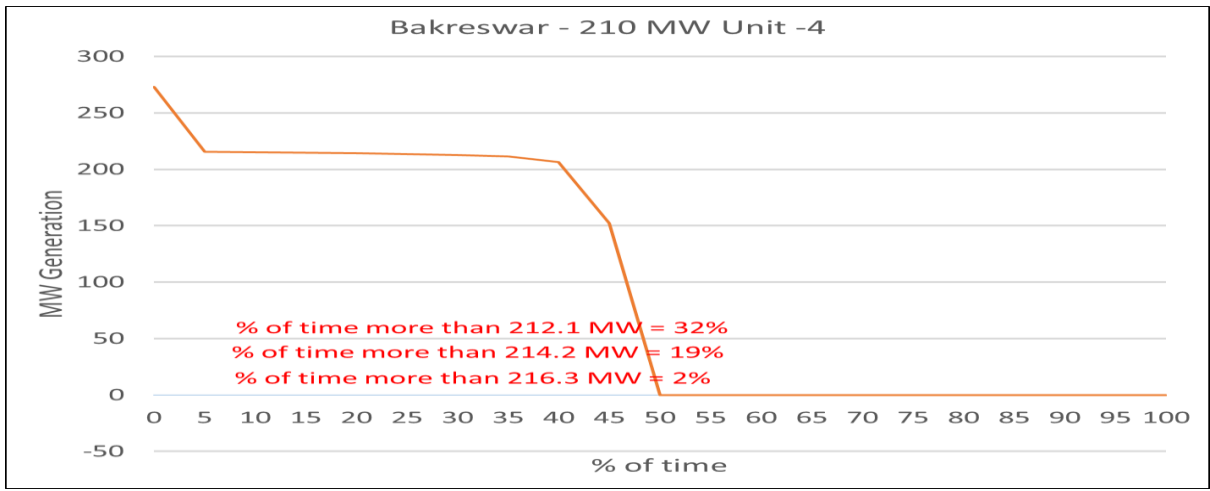
Name of Parties	Receivable Amount by pool	Received Amount by pool	Payable Amount by pool	Paid Amount by pool	Outstanding Amount Receivable(+Ve) / Payable by pool(-Ve)
BSPHCL	42460884	37904316	29972935	25416367	0
JUVNL	50217703	21430845	782704	0	28004154
DVC	17809284	14692466	14606738	13555441	2065521
GRIDCO	57350286	53841798	18660309	18660309	3508488
SIKKIM	413675	334815	413716	334856	0
WBSETCL	28851850	27602512	3665833	2761233	344738

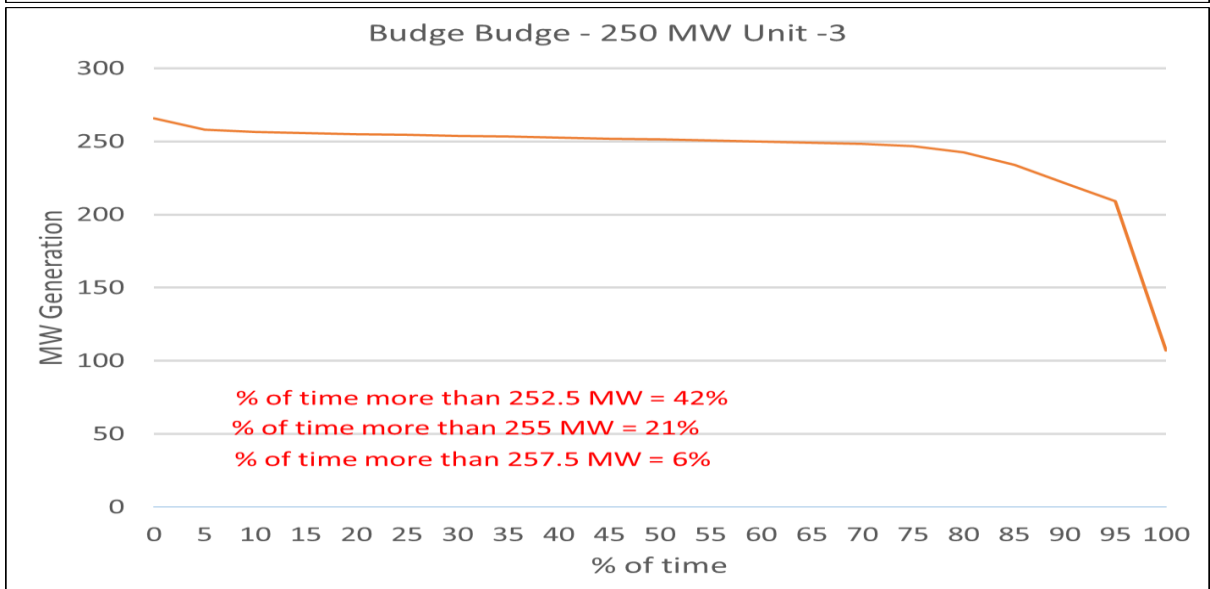
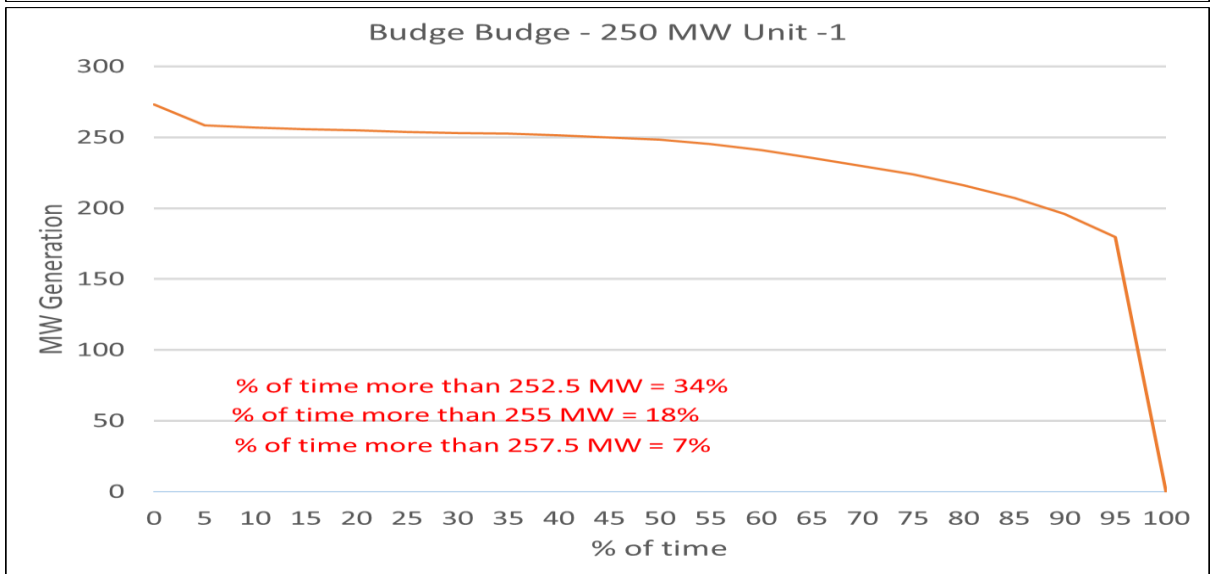
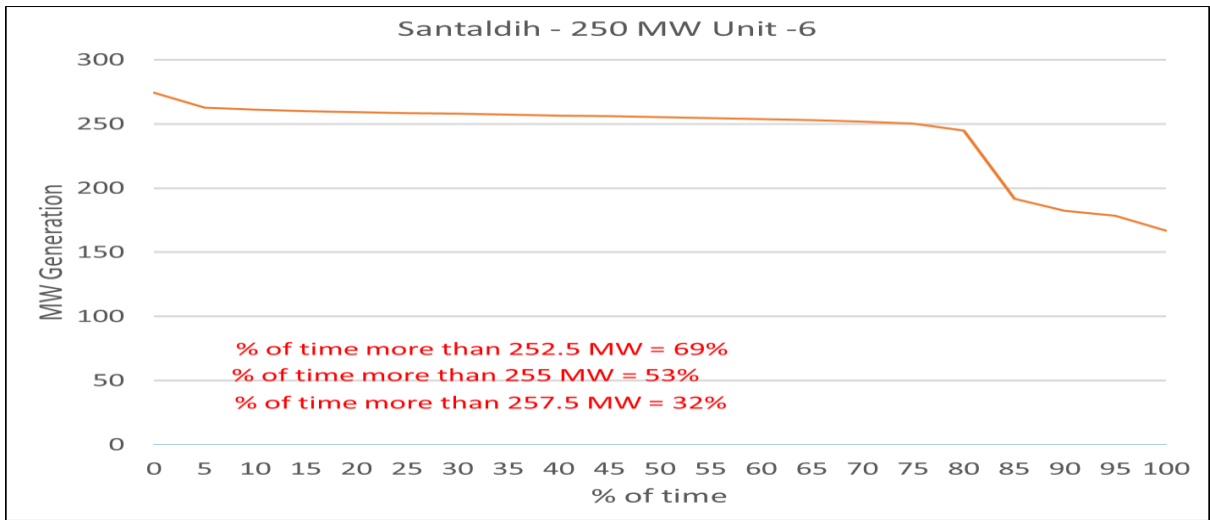
Current Status of Letter of Credit (LC) amount against DSM charges for ER constituents*Figures in Lacs of Rupees*

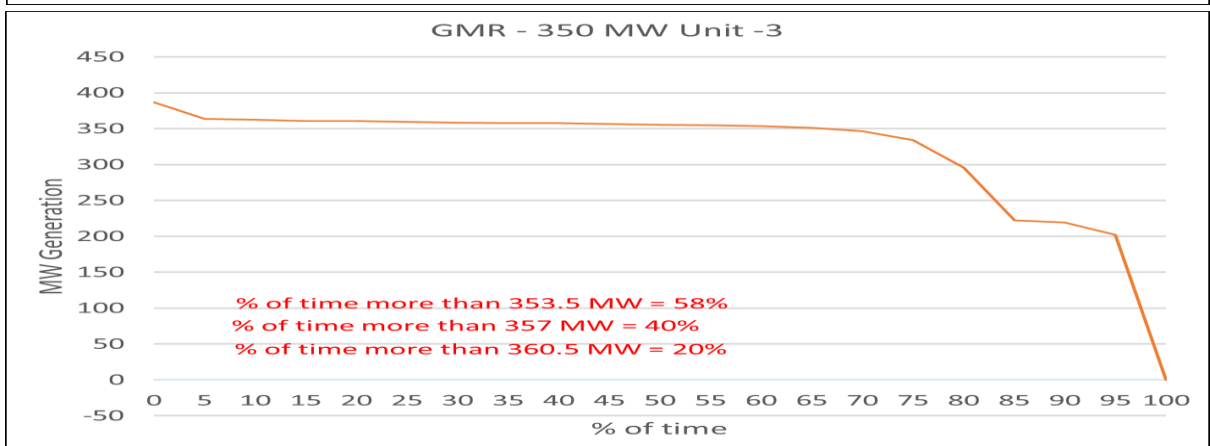
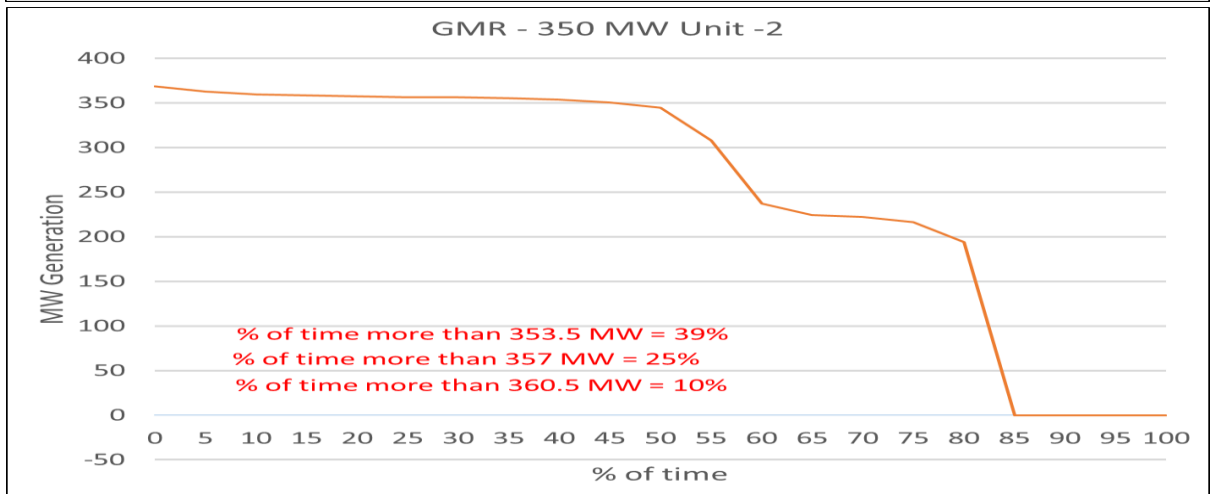
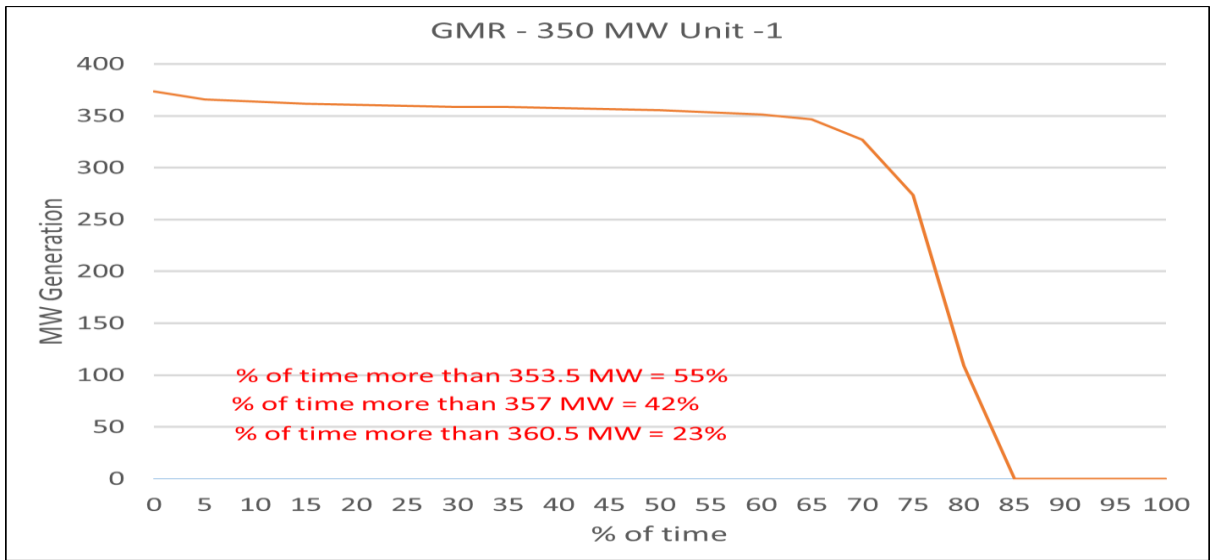
SI No	ER Constituents	No. of weeks in which Deviation Charge payable	No of times payment was delayed during 2020-21	Total Deviation charges payable to pool during 2020-21	Average weekly Deviation Charge liability	LC Amount	Defaulting Weeks	Due date of expiry	Remarks
					(C)/52 weeks	110% of (B)			
		(A)	(B)	(C)	(D)	(E)	(G)	(F)	(G)
1	Bihar State Power	44	44	15486.42232	297.81581	327.59740	All Weeks		Not opened
2	Jharkhand State	29	29	3249.42448	62.48893	68.73783	All Weeks		Not opened
3	Damodar Valley	39	10	5182.62395	99.66585	109.63243	Week-		Not opened
4	Gridco Limited / ग्रीडको	19	16	1491.44787	28.68169	31.54986	Week-3,6,7		Not opened
5	SLDC - UI FUND -	49	8	15847.84952	304.76634	335.24297	Week-40,45		Not opened
6	Power Deptt, Govt. of	17	17	316.50994	6.08673	6.69540	Week-1,14,15,26		Not opened
7	NTPC Vidyut Vyapar	49	3	1678.7775	32.28418	35.51260	Week-32		Not opened
8	Tata Power Trading Co. Ltd / तामाचु	50	1	1846.83267	35.51601	39.06761	Week-16		Letter given to waive off charges
9	DANS Energy Private	50	35	896.75536	17.24530	18.96982	Week-10,19,21,23		Not opened
10	Powergrid Corporation	16	7	13.28148	0.25541	0.28095	Week-		Not opened
11	Sneha Kinetic Power	13	6	94.76031	1.82231	2.00455	Week- 5,28,44	12-05-2022	Rs 2.01000 Lac Opened
12	Jindal India Thermal	34	20	771.65579	14.83953	16.32349	Week-5,11,18	expired on 30.06.21	Not renewed
13	PGCIL-Alipurduar /	24	24	6.91552	0.13299	0.14629	Week-3,4,5,15		Not opened
14	Shiga Energy Private /	40	35	435.95072	8.38367	9.22203	Week-4,10,19,22		Not opened
15	Kanti BijleeUtpadan	46	3	453.16224	8.71466	9.58612	Week-32		Not opened

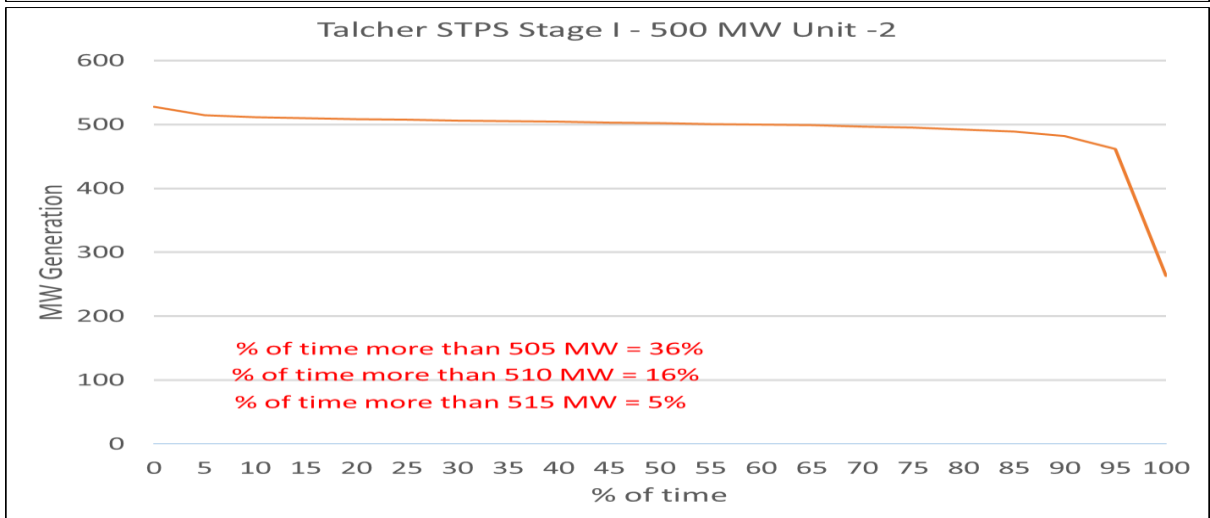
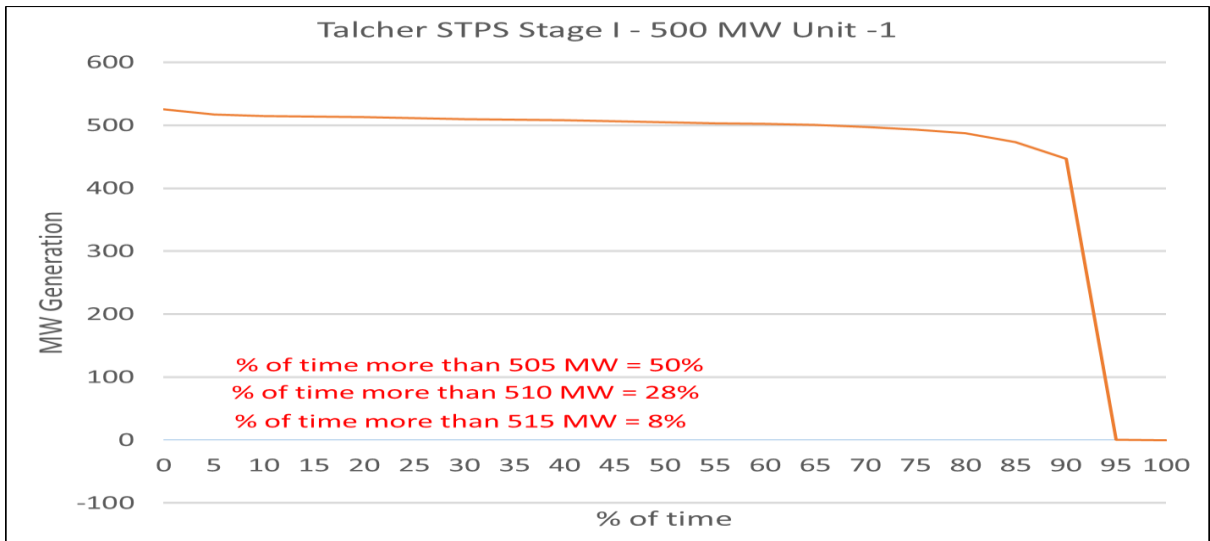
Generating units at more than MCR during August 2021











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	2 & 3	1 st Week of August'21	Testing completed
35	APNRL	1 & 2	July-August'21	Testing completed

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	When Unit will be on Bar
Sagardighi-WBPDCL	2	No	No	Long Back	No	Yes	When Unit will be on Bar
Bakreshwar-WBPDCL	2	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	3	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	4	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
Bakreshwar-WBPDCL	5	Yes	Yes	2019	Yes	Yes	Retuning to be done as from plot response is not good
DPL	7	No	No	N.A	No	Yes	Planned in March 2021
DPL	8	No	Yes	No	No Detail	Yes	To be updated by WBPDCL/DPL
PPSP	1	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	2	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	3	No	Yes	2009	No	Yes	To be updated by WBSEDCL
PPSP	4	No	Yes	2009	No	Yes	To be updated by WBSEDCL
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
CESC							
Budge Budge-CESC	1	Yes	Yes	2015	No	Yes	2021-22
Budge Budge-CESC	2	Yes	Yes	2015	No	Yes	2021-22
DVC							
Bokaro B 210 MW	3				No Detail	Yes	Unit Is out of Service
Mejia-DVC	4	Yes	Yes	2009	No	Yes	Jun-21
Raghunathpur-DVC	1	No	No		No Detail	Yes	Will be done after AOH
Raghunathpur-DVC	2	No	No		No Detail	Yes	Jun-21
Koderma-DVC	1	Yes	Yes	2013	No	Yes	Completed
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	2	Yes	Yes	2018	Yes	Yes	April 2021 (During AOH)
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	Completed
Talcher Stage 2	4	Yes	Yes	No Details	No Details	Yes	Completed
Talcher Stage 2	5	Yes	Yes	No Details	No Details	Yes	Completed
Talcher Stage 2	6	Yes	Yes	2016	Yes	Yes	Completed
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	Jun-21
Teesta V	2	Yes	Yes	2008	No	Yes	Jun-21
Teesta V	3	Yes	Yes	2008	No	Yes	Jun-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	Aug-21
ADHUNIK	2	Yes	YES	2013	No	Yes	Aug-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	May-21
GMR	2	Yes	Yes	2013	No	Yes	May-21
GMR	3	Yes	Yes	2013	No	Yes	May-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 Orissa
Jharkhand							
Tenughat	1	Yes	Yes	2017	Yes	Yes	No report has been submitted. So tuning to be planned
Tenughat	2	Yes	Yes	2017	Yes	Yes	No report has been submitted. So tuning to be planned
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	To be updated by BPC
Mangdechu	2	No	Yes			Yes	To be updated by BPC
Mangdechu	3	No	Yes			Yes	To be updated by BPC
Mangdechu	4	No	Yes			Yes	To be updated by BPC

Annexure - C7.1

SUMMARY OF RRAS CHARGE RECEIPT AND PAYMENT STATUS

BILL UPTO 05-09-2021 (W-23 of 2021-2022)

Last Payment Disbursement Date -15.09.21

Figures in Rs. Lakhs

CONSTITUENTS	Receivable	Received	Payable	Paid	Outstanding
NTPC	4924.41501	3640.41531	2290.43477	967.40031	-39.03476
MPL	402.52903	258.60505	611.43813	455.22695	-12.2872
BRBCL	958.88074	873.72469	81.22715	17.72635	21.65525
KBUNL	372.91767	128.91582	824.17211	555.32384	-24.84642
NPGC	358.6367	279.25994	341.60667	229.73287	-32.49704
TOTAL	7017.37915	5180.92081	4148.87883	2225.41032	-87.01017

Receivable: Receivable by ER POOL Payable Payable by ER POOL
 Received Received by ER POOL Paid Paid by ER POOL
 "- ve" Payable by ER pool "+ ve" Receivable by ER pool

SUMMARY OF AGC CHARGE RECEIPT AND PAYMENT STATUS

BILL UPTO 05-09-2021 (W-23 of 2021-2022)

Last Payment Disbursement Date - 15-09-2021

Figures in Rs. Lakhs

Name of Parties	Receivable Amount by pool	Received Amount by pool	Payable Amount by pool	Paid Amount by pool	Outstanding Amount Receivable(+Ve) / Payable by pool(-Ve)
NTPC	299.85455	183.53351	292.90065	292.90065	116.32104
NHPC	3.09676	2.77379	3.41016	3.4089	0.32171
MPL	408.82206	187.6179	21.84432	21.84432	221.20416
TOTAL	711.77337	373.92520	318.15513	318.15387	337.84691

Receivable: Receivable by ER POOL Payable Payable by ER POOL
 Received Received by ER POOL Paid Paid by ER POOL
 "- ve" Payable by ER pool "+ ve" Receivable by ER pool

DETAILS OF DISBURSEMENT TO POWER SYSTEM DEVELOPMENT FUND

SI No	Nature of Amount	Amount transferred to PSDF (Rs in Lac)	Date of Disbursement	Remarks
1	Opening Balance (upto 31.12.16)	90040.05774		
2	Reactive Energy Charge	248.26904	31.07.17	Reactive Charges_17-18
3	Reactive Energy Charge	128.44284	29.08.17	Reactive Charges_17-18
4	Reactive Energy Charge	103.22685	26.09.17	Reactive Charges_17-18
5	Reactive Energy Charge	249.14078	31.10.17	Reactive Charges_17-18
6	Reactive Energy Charge	172.20693	30.11.17	Reactive Charges_17-18
7	Reactive Energy Charge	200.00000	15.12.17	Reactive Charges_17-18
8	Reactive Energy Charge	100.00000	05.01.18	Reactive Charges_17-18
9	Reactive Energy Charge	558.45339	06.02.18	Reactive Charges_17-18
10	Reactive Energy Charge	171.95546	06.03.18	Reactive Charges_17-18
11	Reactive Energy Charge	129.35497	04.04.18	Reactive Charges_17-18
12	Reactive Energy Charge	126.21494	07.05.18	Reactive Charges_18-19
13	Reactive Energy Charge	183.31081	06.06.18	Reactive Charges_18-19
14	Reactive Energy Charge	215.58816	05.07.18	Reactive Charges_18-19
15	Reactive Energy Charge	176.54245	03.08.18	Reactive Charges_18-19
16	Reactive Energy Charge	39.54556	06.09.18	Reactive Charges_18-19
17	Reactive Energy Charge	34.03973	01.10.18	Reactive Charges_18-19
18	Reactive Energy Charge	74.57236	05.11.18	Reactive Charges_18-19
19	Reactive Energy Charge	40.66623	04.12.18	Reactive Charges_18-19
20	Reactive Energy Charge	236.89035	02.01.19	Reactive Charges_18-19 & 15-16
21	Reactive Energy Charge	300.04546	05.02.19	Reactive Charges_18-19 & 15-16
22	Reactive Energy Charge	233.27998	05.03.19	Reactive Charges_18-19
23	Reactive Energy Charge	105.79202	04.04.19	Reactive Charges_18-19
24	Reactive Energy Charge	287.48448	03.05.19	Reactive Charges_18-19 & 19-20
25	Reactive Energy Charge	129.69559	03.06.19	Reactive Charges_19-20
26	Reactive Energy Charge	207.83840	04.07.19	Reactive Charges_19-20
27	Reactive Energy Charge	94.91703	02.08.19	Reactive Charges_19-20
28	Reactive Energy Charge	188.53681	02.09.19	Reactive Charges_19-20
29	Surplus DSM amount transferred	32210.51998	24.09.19	DSM Charges_19-20
30	Reactive Energy Charge	173.06004	01.10.19	Reactive Charges_19-20
31	Reactive Energy Charge	273.15002	01.11.19	Reactive Charges_19-20
32	Reactive Energy Charge	401.09564	04.12.19	Reactive Charges_19-20
33	Reactive Energy Charge	252.53573	02.01.20	Reactive Charges_19-20
34	Reactive Energy Charge	148.65520	07.02.20	Reactive Charges_19-20
35	Reactive Energy Charge	205.22437	04.03.20	Reactive Charges_19-20
36	Bank interest from Reactive acct	0.21706	03.04.20	Bank interest from Reactive acct
37	Reactive Energy Charge	843.03166	03.06.20	Reactive Charges_19-20 & 20-21
38	Reactive Energy Charge	507.80481	07.07.20	Reactive Charges_17-18,18-19 & 20-21
39	Reactive Energy Charge	309.41068	06.08.20	Reactive Charges_17-18,18-19 & 20-21
40	Reactive Energy Charge	83.23955	02.09.20	Reactive Charges_19-20 & 20-21
41	Bank interest of DSM A/C-TDS por	251.65235	18.09.20	Bank interest TDS portion transferred from POSOCO,CC
42	Bank interest of DSM A/C-TDS por	15.64788	22.09.20	Bank interest TDS portion transferred from POSOCO,CC
43	Reactive Energy Charge	118.85979	06.10.20	Reactive Charges_20-21
44	Reactive Energy Charge	101.42971	04.11.20	Reactive Charges_20-21
45	Reactive Energy Charge	82.34791	04.12.20	Reactive Charges_20-21
46	Reactive Energy Charge	500.95333	06.01.21	Reactive Charges of 19-20 & 20-21
47	Reactive Energy Charge	92.51486	03.02.21	Reactive Charges of 19-20 & 20-21
48	Reactive Energy Charge	50.22963	04.03.21	Reactive Charges of 19-20 & 20-21
49	Reactive Energy Charge	32.15331	07.04.21	Reactive Charges of 19-20 & 20-21
50	Reactive Energy Charge	39.59760	05.05.21	Reactive Charges of 19-20 & 20-21
51	Reactive Energy Charge	18.96069	01.06.21	Reactive Charges of 20-21 & 21-22
52	Reactive Energy Charge	392.24613	12.07.21	Reactive Charges of 20-21 & 21-22
53	Reactive Energy Charge	214.22298	22.07.21	Reactive Charges 20-21
54	Addl. Dev	392.94201	25.08.21	DSM Charges of 19-20 received from Jharkhand
55	Addl. Dev	5.99326	03.09.21	DSM Charges of 19-20 received from Jharkhand
56	Reactive Energy Charge	330.73064	09.09.21	Reactive Charges 21-22
	Total	134958.85795		