



**AGENDA
FOR
180th OCC MEETING**

Date: 22.06.2021

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700033

EASTERN REGIONAL POWER COMMITTEE

AGENDA FOR 180th OCC MEETING TO BE HELD ON 22.06.2021(TUESDAY) AT 10:30 HRS

PART – A

ITEM NO. A.1: Confirmation of Minutes of 179th OCC Meeting held on 21st May 2021 through MS Teams online platform.

The minutes of 179th Operation Coordination sub-Committee meeting held on 21.05.2021 was circulated vide letter dated 02.06.2021

Members may confirm the minutes of 179th OCC meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B.1: Availability of 24x7 uninterrupted SCADA Data in view of implementation of Ancillary Service Regulation.

CERC has published draft CERC (Ancillary Services), Regulations, 2021 where mainly two types of ancillary services – Secondary Reserve Ancillary service (SRAS) & Tertiary Reserve Ancillary service (TRAS) have been dealt with.

The deployment of SRAS will be depending upon Area Control Error (ACE). For each region ACE would be auto-calculated at the control center of the Nodal Agency based on Telemetered values (SCADA Data)

For payment of variable charge or compensation charge, average of SRAS-Up and SRAS-Down MW data shall be calculated for every 15 minutes time block in MWh for every SRAS Provider by the Nodal Agency using the archived SCADA data at the Nodal Agency and reconciled with the data received at control centre of the SRAS Provider and shall be used for payment of variable charge or compensation charge

For payment of incentive average of SRAS-Up and SRAS-Down MW data shall be calculated by the Nodal Agency for every 5 minutes in absolute terms using archived SCADA data at the Nodal Agency and reconciled with the data received at the control centre of the SRAS Provider and shall be used for payment of incentive

As per the regulation accounting of SRAS shall be done by the Regional Power Committee on a weekly basis, based on SCADA data.

Thus, deployment, performance assessment & payment settlement of Secondary Reserve Ancillary service (SRAS) depends upon quality and uninterrupted SCADA data emphasis as there will be commercial implication now with this implementation.

Utilities are requested to take necessary steps to set right the telemetry, ensuing quality and uninterrupted SCADA data availability as there will be commercial implications once the Ancillary Service Regulation gets implemented.

Members may note.

ITEM NO. B.2: Reliable Power Supply to Lalmatia/Godda/Dumka areas of JUSNL

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 179th CC meeting, ERLDC representative stressed over the fact that commissioning of 220kVTenughat-Govindpur line would increase the system reliability and the said line may be commissioned at the earliest.

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 view of above, the following issues need to be discussed:

1. Restoration of 220 kV Farakka-Lalmatia S/C line
2. Commissioning of 220 kV Tenughat-Govindpur lines
3. Status of O & M agreement with Powergrid for bay equipments at Maithon end and resolution of autorecloser issues in the 220 kV Maithon-Dumka Lines.

JUSNL may respond.

ITEM NO. B.3: Draft Technical Specifications (TS) of 5/15 minutes IEM with AMR,MDP System

As per NPC, CEA letter dated 02.12.2020; a Joint Committee comprising of members from RPCs, CEA, and PGCIL/CTU & POSOCO has been constituted to finalize the Technical Specification (TS) of the 5/15 minute IEMs (Interface Energy Meters) with AMR, MDP system.

Subsequently NPC, vide email dated 28.01.2021, has circulated a draft Technical specification (TS) in two parts. The 1st meeting of the joint committee held on 05th February'2021, where it was decided for further deliberation at RPC level on Technical Specifications with states/Utilities for consolidated comments of RPCs. It is further informed that ERPC Secretariat vide email dated 04.02.2021, sought comments from States/Utilities, but no comment has been received till date.

In the 179th OCC meeting, OCC advised all the concerned utilities to go through the draft Technical Specifications and submit their comments within a week. But till now no comments has been received.

Members may update.

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

1. 132kV Sagbari–Melli.

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

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

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

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

In the 179th OCC meeting, Sikkim submitted that patrolling of the line has been completed and necessary maintenance in this regard has already been carried out for 80% of the line section. For the rest 20%, pruning and cutting of trees are to be done and for this they need clearance from the Forest Department.

OCC advised Sikkim to expedite the matter with the Forest Dept. of Sikkim and update the status to ERPC/ERLDC at the earliest.

Sikkim vide mail dated 09.06.2021 updated the following status:

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

Sikkim may update the status.

2. 400 KV main bay of Patna-1 at Kishanganj S/s.

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

In the 178th OCC meeting, Powergrid informed that the restoration work would be completed by May' 21 and added that 5-6 days of shutdown for 400 kV Kishanganj-Patna D/C lines would be required for completion of the work.

It was informed that shutdown of 400 kV Kishanganj-Patna lines have already been approved for the month of May-21 for LILO work of Saharsa and for shifting of line on pile foundation at Kankai river. OCC advised Powergrid to optimize their plan for shutdown of 400 kV Kishanganj-Patna D/C lines and complete the work before high hydro period.

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

In the 179th OCC meeting, Powergrid submitted that due to the prevailing Covid pandemic and in view of the ongoing lockdown the team of engineers was unable to come at Kishanganj S/s for the rectification work. The said work is expected to be completed in June 2021 if the lockdown restriction is removed.

Powergrid may update.

3. 400KV New Purnea-Gokarna & 400KV New Purnea-FSTPP.

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

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

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

In 178th OCC, Powergrid informed that the work could not be completed due to non-availability of shutdown by SLDC, West Bengal.

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

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

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

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

In the 179th OCC meeting, Powergrid submitted that the work is in progress and is expected to be completed in the 1st week of June 2021.

On query about slow progress, Powergrid informed that one no. of tower is in the mid-stream of the river Ganges and due to high current in the river; they have to carry up the work very carefully.

Powergrid may update.

ITEM NO. B.5: Repeated disturbances at 132/66 kV Melli S/S in March 2021

The occurrence of repeated grid events at 132/66 kV Melli S/S has been reported in March 2021 resulting in power failure at Melli and Kalimpong areas. In 101st PCC Meeting held on 13.04.2021, the agenda was placed for discussion. PCC referred the issue to OCC for discussion as Sikkim representative were not present in the meeting.

In the 178th OCC meeting, OCC decided that a complete review protection system of Melli S/s may be carried out by a team comprising of the technical experts from Powergrid, West Bengal and Sikkim tentatively in the last week of April'21 and the team has to submit its report to ERPC. Further, OCC advised respective utilities to nominate one representative preferably from the nearby areas.

A site visit by the Team comprising of Powergrid, West Bengal and Sikkim was carried out on 05-05-2021.

In the 179th OCC meeting, Powergrid informed that the team comprising of experts from Powergrid, WBSETCL and Sikkim visited the site on 05.05.2021 but as the lockdown had been announced from 6th May 2021 in Sikkim, major testing could not be done. The following were pointed out by the team:

- It was found that from the Melli end for Zone-2 fault of 132 kV Rangpo-Melli line, the distance protection relay is not operating in desired manner.
- As they could not perform major testing due to paucity of time they could not access the healthiness of distance relay. However, as a temporary measure, the Zone 2 settings had been changed from 350 ms to 100ms and kept in observation for any further tripping.
- Whenever the lockdown restriction eases, Powergrid would mobilize the workforce and do a thorough testing of the said relay. In case there is any problem found during the testing, the relay would be replaced by a spare one.
- There is single DC source for all the 132 kV elements in Melli S/s which is an EHV S/s. It is suggested that for ensuring reliable protection operation, there should be one more redundant set of DC supply, which is also as per CEA standards.

Regarding DC supply, OCC advised Sikkim to check the PSDF proposal for Melli S/s, whether there is proposal for two sets of DC supplies. Sikkim representative informed that as of now there is only single DC source. OCC further advised Sikkim to include dual DC supplies under PSDF renovation proposal.

On query, Powergrid informed that they had checked the breaker and some minor issues had been found which were already rectified. Regarding the repeated faults at a particular location, Powergrid informed that they had visited the site and it had been found that there was some clearance issue at that particular location and to mitigate the issue some temporary measures had been taken. Powergrid further suggested that in case of further tripping, restringing of the conductor has to be done for that particular location where the fault is occurring.

In conclusion, OCC advised Powergrid to send updates about the issues observed at Melli S/s, if any, to ERPC/ERLDC so that the issue can be followed up in the PCC forum. Further OCC advised Sikkim to check the PSDF scheme for Melli whether there is proposal for two sets of DC supplies or not. If not, the proposal for dual DC supplies may be included under PSDF proposal.

Sikkim vide mail dated 09.06.2021 updated that provision for double dc backup system has been included in the PSDF project.

Powergrid and Sikkim may update.

ITEM NO. B.6: Repair/rectification of D/C tower at location 79 of 132kV Rangpo-Melli and 132 kV Rangpo –Gangtok line.

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

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

In 43rd ERPC Meeting, Powergrid informed that the tower at location no. 79 is in vulnerable condition and needs immediate attention so as to avoid any further devastation.

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

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

In the 178th OCC meeting, Sikkim informed that they would communicate the status of the proposal for rectification of the defective tower within a month.

In the 179th OCC meeting, Sikkim representative informed that, they had already prepared the estimate which had been placed for approval in CMO office. As soon as the approval gets accorded by the Govt. they would start the work. He further added that the team is also ready for retrofitting.

OCC advised Sikkim to expedite their internal approval and place the work order as soon as possible.

Sikkim may update.

ITEM NO. B.7: List of Important Elements in ER

In compliance with IEGC 5.2 (c) List of Important Grid Elements of Eastern regional Grid has been prepared and draft version of the same was circulated via mail on 12-May-2021. Constituents were requested to review and give input by 25th May so that it can be finalized by month end.

Subsequently the list of important elements of ER is finalized, based on comments received. The updated list is available on the ERLDC website and can be directly accessed through the following link:

https://app.erldc.in/Content/Upload/System%20Study/Important%20Elements%20in%20ER/List%20of%20Important%20Element_2021.pdf

Members may note.

ITEM NO. B.8: Review of implementation of PSDF approved projects of ER.

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

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

Concerned utilities may update the present status of the project as given in the **Annexure-B8**.

Members may update.

ITEM NO. B.9: Status of implementation of AGC as a pilot project in States.

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

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

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

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

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

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

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

Latest Status of implementation:

State	Station/Unit	Deliberation in 179 th OCC Meeting
DVC	Mejia unit#7 &8	DVC informed that fresh indent to be placed in May21.
West Bengal	Unit-5 of Bakreswar TPP	SLDC West Bengal informed that at present there is no relevant regulation by WBERC for implementation of AGC in state generators. SLDC further informed that FOR should give necessary directions to WBERC on the issue and They would proceed for AGC implementation only after getting direction from WBERC. After detailed deliberation it was decided that the matter would be placed in forthcoming TCC meeting.
Odisha	Unit#3 of OPGC	OPGC informed that a meeting with M/s Siemens is schedule to be held on 25.05.2021 and after sharing necessary technical details with Siemens it would be finalized.

Members may update.

ITEM NO. B.10: Monthly Data on Category-wise consumption of electricity in states.

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

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

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

In the 179th OCC meeting, Odisha informed that they had submitted the data. Jharkhand and DVC submitted that they would update the data after getting it from their commercial team. West Bengal informed that they would submit the status by 24th May 2021.

Members may update.

ITEM NO. B.11: Reactive power performance of Regional Generators during May 2021

A. Performance of Regional Generators

Based on ERLDC SCADA data, it has been observed that reactive power absorption of following regional generating stations was not satisfactory during high voltage condition.

SL.No.	Name of generating unit	Maximum MVAR absorption	Voltage
1	Kahalgaon STPS Stage II - 500 MW Unit -6	<10 MVAR	417 kV
2	Kahalgaon STPS Stage II - 500 MW Unit -7	<20 MVAR	417 kV
3	Barh STPS Stage II - 660 MW Unit -4	<100 MVAR (sometimes absorbing less also)	420 kV
4	Barh STPS Stage II - 660 MW Unit -5	<100 MVAR (sometimes absorbing less also)	420 kV
5	BRBCL - 250 MW Unit -1	Unit is injecting VAR of around 50 MVAR	412 kV
6	BRBCL - 250 MW Unit -2	Unit is injecting VAR of around 50 MVAR	412 kV
7	Nabinagar STPP Stage I - 660 MW Unit -1	<50 MVAR	423 kV
8	MPL - 525 MW Unit -1	<30 MVAR	416 kV
9	MPL - 525 MW Unit -2	<40 MVAR	416 kV
10	JITPL - 600 MW Unit -1	Unit is injecting VAR of around 200 MVAR	415 kV
11	JITPL - 600 MW Unit -2	Unit is injecting VAR of around 200 MVAR	415 kV

MVAR absorption/injection by above generating units at different MW and voltage level as per ERLDC SCADA data is shown in **Annexure-B11**.

In view of the above generating plant to share the following details:

- Reason for not providing VAR absorption in line with capability curve
- Reason for not changing of scheduled voltage for power plant to ensure higher var absorption
- Whether GT tap change required to utilize maximum var support (absorption/injection)

Generators may update

B. Inadequate reactive power support from Mejia TPS during cyclone Yaas.

During cyclone Yaas, load in Jharkhand and DVC area became very low. As a result, high voltage condition occurred at Maithon. Though MVAR support was expected from nearby generating stations like Mejia B, MVAR absorption was very low by those generating stations (in order of 10-20 MVAR by 500 MW unit). DVC was requested to share reason for inadequate VAR absorption by Mejia B unit 7 & 8 vide mail dated 27th May 2021.

DVC SLDC in coordination with generating station may share reactive power performance of Mejia B and share plan of action in order to improve MVAR support of this generating station.

Reactive power performance of other generating units may also be checked by SLDC.

SLDCs may update

ITEM NO. B.12: Submission of Status of installation of Harmonics meter at the connection point of bulk consumers

- i. The limits of voltage harmonics by the distribution licensee in its electricity system, the limits of injection of current harmonics by bulk consumers, point of harmonic measurement, i.e., point of common coupling, method of harmonic measurement and other related matters, shall be in accordance with the IEEE 519-2014 standards, as

amended from time to time.

- ii. Measuring and metering of harmonics shall be a continuous process with meters complying with provisions of IEC 61000-4-30 Class A.
- iii. The data measured and metered as mentioned in sub-paragraph (ii) with regard to the harmonics, shall be available with distribution licensee and it shall also be shared with the consumer periodically.
- iv. The bulk consumer shall install power quality meter and share the recorded data thereof with the distribution licensee with such periodicity as may be specified by the appropriate Electricity Regulatory Commission: Provided that the existing bulk consumer shall comply with this provision within twelve months from the date of commencement of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2018.
- v. In addition to harmonics, periodic measurement of other power quality parameters such as voltage sag, swell, flicker, disruptions shall be done as per relevant International Electro-technical Commission Standards by the distribution licensee and the reports thereof shall be shared with the consumer.
- vi. The distribution licensee shall install power quality meters in a phased manner within three years from the date of commencement of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019 covering at least 33% of the 33 kV substations each year.”

Therefore SLDCs are requested to coordinate with all the distribution licensees and get the latest status.

Members may note for compliance.

ITEM NO. B.13: Activation of Transient data record facility in the AVR, if available and sharing the information with RLDC whenever required.

Monitoring of response of all dynamic elements of the grid is extremely important for analyzing various events in the grid and validating dynamic models of the elements.

Modern AVR are having transient data recording facility and can record very high-resolution data. Therefore all generating station must activate the facility for understanding the dynamics of the grid in a much better way. Therefore all generators are requested to submit the following details:

Generator Name	AVR manufacturer	Transient Data recording facility available (Yes/No)	IS the data recording facility activated (Yes/No)

In the 179th OCC meeting, ERLDC submitted that they had received the data from some of the constituents.

ERLDC further suggested that all the generators having the transient data record facility in the

AVR should activate the same facility at their end. Also in the upcoming new generators or in the generators where R& M work is going on, possibility of incorporating this feature should be explored.

OCC advised all the concerned utilities to submit the data at the earliest.

Information is yet to be received from following plants

- **Central Sector**
 - Rangit
 - Barh
 - Darlipalli
 - NPGC
 - BRBCL
 - MPTS St- II
- **West Bengal**
 - Kolaghat
 - Sagardighi
 - TLDP-4
 - PPSP
- **Odisha**
 - Hirakud
 - Chiplima
 - Balimela
 - Upper Kolab
 - Indravati
 - Rengali
 - Sterlite
- **Jharkhand**
 - Tenughat
 - Subarnarekah
- **DVC**
 - Bokaro-B
 - DSTPS
 - Mejia-A
 - Waria
 - Raghunathpur
 - Mejia-B
 - Chandrapura
 - Bokaro-A
 - Koderma
 -
- **Bihar**
 - MTPS St- I
 - Barauni TPS

It is further suggested that all generating station must activate the facility where ever available for understanding the dynamics of the grid in a much better way. Data for the same may be shared with ERLDC when need for analysis arises.

Members may update.

ITEM NO. B.14: Healthiness of 89T isolator of ICT-V at Malda

On 13.03.21 400/220kV 315MVA ICT#5 at Malda required emergency outage (hand tripped), as 400kV side CB lockout occurred. POWERGRID informed via mail that 315 MVA ICT - V cannot be charged through 400 kV TBC because, it was observed that B-ph 89 T PG Isolator spring has broken and is not operational, which compelled for forced manual tripping of ICT-5. On 14.03.2021 early morning, during emergency restoration of ICT-5 through 400kV TBC bay, some shorting arrangement at 89T isolator of ICT-5 was made to restore ICT-5 through TBC.

On 19.04.2021 at 13:15 hrs, 315MVA, 400/220kV ICT- V at Malda has been Emergency hand tripped due to sudden flash over at 89T isolator. ICT -V was restored through Main Bay.

In the 179th OCC meeting, Powergrid representative informed that problem in 89T isolator still persists, and for that they have already applied shutdown for normalization from TBC bay to Main Bay after isolating the faulty isolator.

Powergrid representative further added that as 89T is a line side Isolator, any maintenance of it

would require shutdown of ICT 5. Upon query he mentioned that all the other isolators and breakers of the TBC have been replaced and there is no issue related to the operation. But the said bay isolator has problem due to ageing problem and it was planned to be replaced during the ICT augmentation work. However, Powergrid has planned for phase wise replacement of 89T and 89 M2 under O&M activity which will be done on daily basis shutdown and it would require 7-8 days in order to get the work done.

OCC advised Powergrid to submit the detailed replacement plan to ERPC/ERLDC for further action.

Powergrid may update.

ITEM NO. B.15: Agenda by DGPC

1. Test Charging of 400kV Jigmeling – Alipurduar Quad Moose Line

At present, the evacuation of power from Mangdechhu HEP is being done through the 400kV Jigmeling – Punatshangchu – Alipurduar lines, an interim arrangement made till the direct 400kV Jigmeling – Alipurduar Quad Moose line is commissioned.

With the completion of work on the 400kV Jigmeling – Alipurduar direct lines by POWERGRID, the test charging of 400kV Jigmeling – Alipurduar Quad Lines has been started from June 16 to 18, 2021 as per the FTC (first time charging) clearance provided by POSOCO vide email dated June 15, 2021 and by BPSO vide No. 10B/BPC/BPSO/PSOD/Vol-1/2021/148 dated June 08, 2021. After the successful test charging, both lines shall be used for evacuation of Mangdechhu power from thereon. The 400kV Jigmeling – Punatshangchu – Alipurduar lines (interim line for evacuation of Mangdechhu power) shall be kept as standby to ensure alternative power evacuation route for MHEP power during contingencies. Prior information shall be intimated while using this interim line.

The testing of the main and check energy meters at both Jigmeling and Alipurduar end for the Quad Moose lines has been carried out by the concerned stakeholders and the initial reading of the energy meters has been recorded jointly.

With the charging of the 400kV Jigmeling – Alipurduar Quad Moose Lines, the energy accounting for the energy export by Mangdechhu to PTC India Ltd. through the direct Jigmeling – Alipurduar lines shall have to be accordingly taken care in the REA as per the PPA.

Submitted for kind information.

2. Shut Down of 400kV Tala - Siliguri Feeder – 1

Tala-Siliguri 400kV Feeder 1 tripped on June 4, 2021 at 23.40 (BST) on L3-E fault. During the tripping incident heavy spark and loud sound was observed at the POTHEAD YARD premises. At the time of feeder tripping, there was heavy rain with severe lightning and thunders around the powerhouse premises from the evening and throughout the night of 04.06.2021. On detailed inspection of the associated equipment of the feeder at POTHEAD YARD, severe external burnt marks were observed on the Outdoor Termination of the XLPE Cable on Y-Phase.

The matter was discussed with M/s Sudkabel, Germany, the supplier of the XLPE cable and associated equipment. Sudkabel has informed that the failed termination has to be replaced but

they will be able to attend it only after the global improvement of COVID-19 pandemic situation. DGPC has explored the availability of the failed components with the projects which are currently under construction in Bhutan. The required components with exactly same specifications are available with one of the projects and have agreed to spare, but there is no person in Bhutan who can carry out this specialized work.

DGPC is constantly in touch with Sudkabel and trying the best to restore the feeder at the earliest possible. However, it is likely that the feeder can be restored only by the end of 2021 in view of challenges posed by the prevailing COVID-19 pandemic in arranging the experts from Germany in time.

The remaining three 400 kV feeders are in service and can cater to the full evacuation of Tala power even during the peak generation season.

Submitted for kind information.

ITEM NO. B.16: Status of CEA regulation compliance of grid-connected RE (33kV & Above)

With the steady growth of RE integration, it has become extremely important to closely monitor the compliance of various connectivity standards by the RE plants and Distributed Generation Resources.

As per CEA connectivity regulation: "Compliance of regulations"

1. It shall be the responsibility of the concerned licensee to ensure that before connectivity to the grid, all the provisions with regard to the connectivity stipulated in these regulations are complied with by the applicant.
2. The user may be disconnected from the grid by the licensee for non-compliance of any provision of these regulations, under-report by the licensee to the appropriate Electricity Regulatory Commission."

Therefore SLDC's are requested to submit the following compliance status for each RE plant separately:

- a. Communication status with SLDC
- b. Metering status
- c. LVRT status
- d. Active power control in case of frequency event
- e. Cyber security compliance status
- f. Harmonics measurement sharing status
- g. Modelling details submission status

**The above points are not inclusive of all the technical compliance, SLDC should ensure all other technical compliance as well

SLDCs may update.

PART C: ITEMS FOR UPDATE

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

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

Average Consumption (MU)	Maximum Consumption (MU)/ Date	Maximum Demand (MW) Date/Time	Minimum Demand(MW) Date/Time	Schedule Export (MU)	Actual Export (MU)
426	497 23-05-2021	24347 MW, 23-05-2021 22:41 Hrs.	11348 MW, 27-05-2021 10:08 Hrs.	3396	3289

ERLDC may present performance of Eastern Regional Grid.

ITEM NO. C.2: Performance of Primary frequency response of ER generating units

A meeting to discuss and deliberate on the performance of governor response of ISGS and IPPs generating power plants of the Eastern Region was organized by ERLDC on 31st May 2021. **Some of the major issues and important points deliberated during the meeting are as follows:**

1. It is observed that before the events some generating units were being run at more than maximum continuous rating (MCR). It reduced the margin available for primary frequency response. As a result, sufficient response could not be obtained during the events.
2. It was reported by units like NTPC Kahalgaon and Farakka that their boiler pressure correction loop is limiting the governor's response. ERLDC intimated that as per IEGC, any controller should not inhibit the governor RGMO/FGMO function and generating units if observes such issues should rectify the same without any delay.
3. During the meeting held on 23rd July 2020, all generating stations were strictly advised not to operate their units in valve wide open (VWO) mode as this reduces the margin for primary frequency response expected from the generators. During the deliberation, it has been observed that responses from some generating units are unsatisfactory because of running units in VWO mode. It was again informed by ERLDC during the meeting that running the unit continuously in valve wide open will be treated as a violation of IEGC and will be informed to ERPC forum and CERC.
4. Response of some generating units was satisfactory during testing. But sufficient response was not observed for those generating units during the events that occurred after the testing. ERLDC advised plants for implementing the necessary changes and fine-tuning in the governor setting as suggested by the testing agency.
5. It was informed that the tuning of the governor in generating plant is a continuous process and response to be checked for each event. Grid is changing from time to time with an increase in generation, load, and RE penetration. Therefore sudden frequency change detection has to be done at regular intervals.
6. It was intimated by ERLDC during previous meetings that as per CERC TCT 2019-2024 Clause 30.2.i & ii.

- i. "In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;"
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

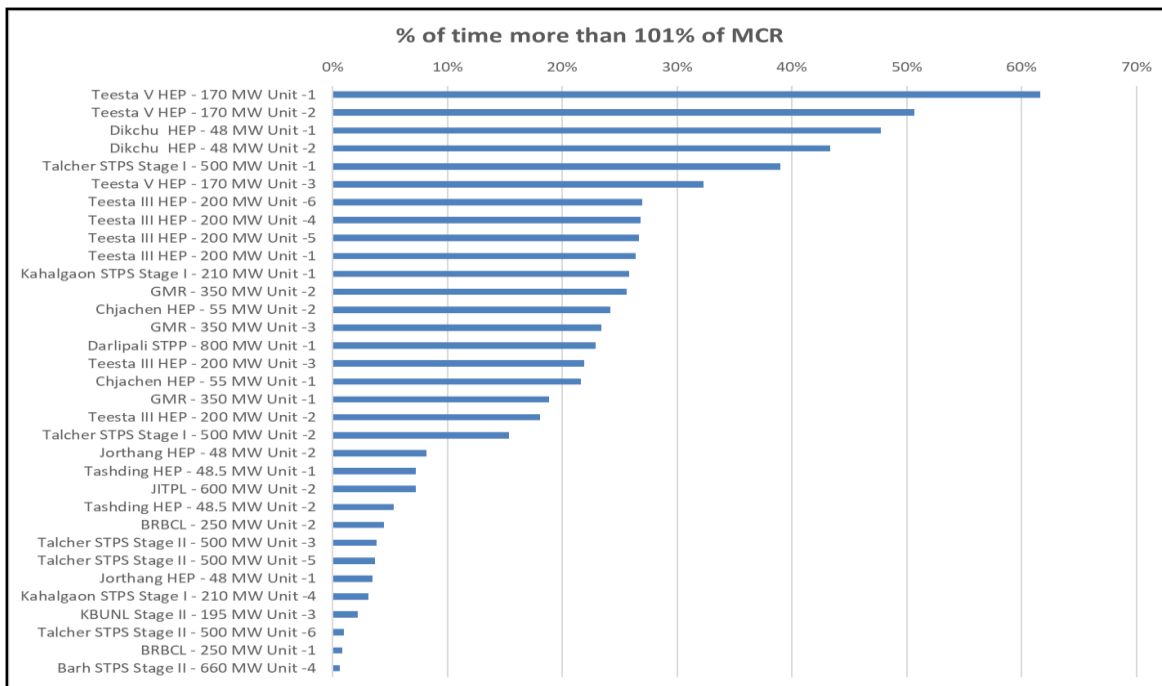
It has further been elaborated that in case of insignificant improvement and persistent violation for governor response in line with IEGC regulations, ERLDC will send their report to CERC for taking suitable action in view of maintaining Indian power system reliability and security.

Based on the discussion, ERLDC advised all power plants:

1. Take all corrective actions as discussed during the meeting without any significant delays to improve their response.
2. Performing PFR test at earliest and check issues along with their timely resolution at earliest for adequate governor response their units.
3. Resolving issues related to RGMO logic tuning, pressure correction loop logic, optimal run of the power plant to keep the margin for primary response, valve wide open operation, running unit above MCR without keeping primary response.

ITEM NO. C.3: Running Generating units at more than MCR

During meeting held on 31-05-2021 to discuss primary frequency response of ER generating units, it was learnt that generating units could not provide sufficient primary frequency response during the event of sudden frequency change as machines were being run at more than MCR or at VWO. As per IEGC section 5.2(h), generating units are not to run their units in VWO. During May 2021, instances of running units at more than MCR have been captured in ERLDC SCADA data. Generating units whose generation was more than 101% of MCR (1% measurement error of SCADA data is considered) has been shown in following chart.



In view of inability of generating units to deliver adequate primary frequency response during generation at more than MCR,

- Thermal generating units are advised not to run at VWO and sufficient margin for primary frequency response may be ensured to compliance of IEGC and CERC regulations of Terms and conditions of Tariff, 2019
- Hydro generating stations are advised not to run their generating units at more than MCR except at water spillage condition. During water spillage condition, ERLDC control room may be informed in advance so that extra precaution may be taken to ensure margin for primary frequency response at other generating units.

Members may note.

ITEM NO. C.4: Primary Frequency Response Testing of ISGS Generating Units

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

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

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

In the 178th OCC meeting, GMR updated that the PFR testing for their units have been scheduled in the month of May'21 and the date of scheduling would be intimated shortly.

In the 179th OCC meeting, GMR updated that the PFR testing for their units have been scheduled in the month of May'21 but due to the prevailing pandemic situation and lockdown restriction it has been delayed. On query GMR further updated that, once confirmed, the next date would be intimated to the OCC forum. The status of the testing schedule for the generators is enclosed at **Annexure-C4**.

Generators may update.

ITEM NO. C.5: Testing of Primary Frequency Response of State Generating units by third party agency.

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

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

Sl. No.	Name of the Units	Capacity (MW)
1	BTPS-A	500
2	CTPS Unit #7&8	2X250
3	DSTPS Unit#1&2	2X500

4	KTPS Unit # 1&2	2X500
5	MTPS Unit # 3 to 8	2 X 210 +2 X 250 + 2X 500
6	RTPS Unit # 1 & 2	2 X 600

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

In the 176th OCC meeting, OPGC informed that they would finalize the order with Siemens by end of Feb'2021. SLDC, DVC informed that indent has been placed for PFR testing of their generating units. On request from WBPDC, OCC advised ERLDC to share all relevant documents related to selection of the vendor for PFR Testing along with contact details of the vendors to West Bengal SLDC for further sharing by them with their state generators.

In 177th OCC Meeting, SLDC, Bihar informed that PFR testing for Barauni TPS would be completed by April '2021. OHPC informed that PFR testing is being planned to be carried out for units of Indravati & Rengali. OCC advised OHPC to submit a schedule for testing to ERLDC/ERPC secretariat.

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

In the 178th OCC meeting, WBPDC informed that they have received some of the relevant documents from SLDC West Bengal. Further they informed that they are collecting some other information to finalize the scope and purchase order for PFR testing.

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

In the 179th OCC meeting, WBPDC submitted that they are in contact with Siemens in this regard and once they get any update, they would intimate the same in the next OCC meeting.

Members may update.

ITEM NO. C.6: PSS tuning of Generators in Eastern Region.

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

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

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

In the 178th OCC meeting, ERLDC informed that PSS tuning for APNRL units were carried out however it was not successful due to some technical issue at APNRL end.

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

In the 179th OCC meeting, on query ERLDC submitted that they are yet to receive update from APNRL and JITPL.

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

Members may update.

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

UFRs healthiness status has been received from West Bengal.

Members may update.

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

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

Details received from the constituents are as follows:

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

Members may update.

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

Latest status of State ATC/TTC declared by states during the month of Sept-2021

SI No	State/Utility	TTC (MW)		RM(MW)		ATC Import (MW)		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	6075	--	122	--	5953	--	May-21

2	JUSNL	1577	--	52	--	1525	--	July-21
3	DVC	1728	3343	68	54	1660	3289	July-21
4	OPTCL	2767	1340	90	61	2677	1279	Aug-21
5	WBSETCL	5490	--	400	--	5090	--	Aug-21
6	Sikkim	315	--	2.44	--	315.56	--	Feb-21

Declaration of TTC/ATC on SLDC Website:

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

After collecting state ATC/TTC value from SLDCs, NLDC is publishing all value at a single location in their website; it is available under monthly ATC subsection of Market section. As some of the states in Eastern Region are not declaring ATC/TTC on 3- Month ahead while few don't declare constraint, it becomes very difficult to publish the values uniformly for all the states in a timely manner.

A meeting with the state reliability coordinators was held on 22nd April for harmonizing the TTC declaration process and to remove all the gaps. Following that meeting, response is yet to be received from any of the states. All states are requested to comply with the TTC declaration requirement with highest priority.

Members may update.

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

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

Sl. No	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U. Kolab	Last week of Oct 2021		Second Week of Feb 2022	
2	Balimela	Second week of Nov 2021		First Week of March 2022	
3	Rengali	Second week of Nov 2021		First 2eek of March 2022	
4	Burla	Second week of Nov 2021		First Week of March 2022	
5	U. Indravati	Last week of Oct 2021		Second Week of Feb 2022	
6	Maithon	Third Week of Nov 2021		First Week of March 2022	
7	TLDP-III	Second week of Nov 2021		Second Week of Feb 2022	
8	TLDP-IV	Third Week of Nov 2021		First Week of March 2022	
9	Subarnarekha	Second week of Nov 2021		Second Week of Feb 2022	
10	Teesta-V	Third Week of Nov 2020		Third Week of March 2022	
11	Chuzachen	Second week of Nov 2021		First Week of March 2022	
12	Teesta-III	Third Week of Nov 2021		First Week of March 2022	
13	Jorethang	Third Week of Nov 2021		First Week of March 2022	
14	Tasheding	Second week of Nov 2021		First Week of March 2022	
15	Dikchu	Second week of Nov 2021		Second Week of Feb 2022	

In the 179th OCC meeting, ERLDC submitted that Chuzachen had done the Mock Black Start on 9th April 2021.

Members may update.

ITEM NO. C.11: Updated Operating Procedure of Eastern Region, 2020

The Operating Procedure of every region must be updated and revised annually by the concerned RLDC, in compliance to section 5.1(f) of the IEGC.

To discuss the revised operating procedure of Eastern Region, one special meeting was held on 27-11-2020. Based on the deliberation in the meeting, operating procedure of Eastern Region has been revised and the final procedure was shared with all regional utilities vide mail dated 04-01-2021. The final procedure is also uploaded on the ERLDC website.

It is almost a year since the Operating Procedure has been put for approval. It is proposed to approve the same.

Members may update.

ITEM NO. C.12: LDC Excellence Award

Institution of “LDC Excellence Award” to recognize the exceptional work done by the Load Despatch Centres (LDCs) in the Indian Power Sector. Further , 1st LDC Excellence award would be presented in the 9th ICPS 2021 which is scheduled to be held at IIT Kharagpur during 16-18 December 2021. Notification of the Award by ICPS organising committee is notified at the official website of ICPS 2021, and can be accessed at the following link:

<http://www.icps2021.iitkgp.ac.in/awards.html>

In this regard, the respective LDC is requested to submit entries as per the nomination form detailed in the “Report on Selection Criteria and Sustainability Model for ‘Load Despatch Centre (LDC) Excellence Award”. The report/application format can be accessed at the following URL. (The application format is annexed in the pages 11-17 of the report)

https://forumofd.in/wp-content/uploads/2021/02/Final-Report_LDC-Excellence-Award_NPSC_ICPS_17-01-2021.pdf

The complete application may be submitted to the FOLD Secretariat from 01st March 2021 till 15th July 2021 at the fold@posoco.in .

Members may note.

ITEM NO. C.13: Ensuring reliability of the transmission network and adhering to best operation and maintenance practice during ongoing pandemic.

NLDC vide letter dated 07th June 2021 on the above subject shared analysis of line faults for important transmission lines during the last 3 months. Where it was found that tripping of the lines taking place more during the mid-day i.e. hour of 1000hrs to 1600 Hrs when ambient temperature is high and vegetation may be a reason for such faults.

It was requested that concerned officials may please be advised to look into these issues and take necessary measures of preventive line maintenance/vegetation management and/or other best practices to enhance transmission system reliability. A copy of measures taken in this regard may please be shared with us as well.

Members may note.

PART D: OPERATIONAL PLANNING

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

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of June 2021 were prepared by ERPC Secretariat on the basis of LGBR for 2021-22 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc. is enclosed at **Annexure-D1**.

Members may update.

ITEM NO. D.2: Shutdown proposal of transmission lines for the month of July' 2021.

The Shutdown proposals of the transmission lines for the month of July, 2021 was discussed and finalized in the Shutdown meeting of Transmission line held on 15.06.2021.

Members may note.

ITEM NO. D.3: Shutdown proposal of generating units for the month of July' 2021.

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

Proposed Maintenance Schedule of Thermal Generating Units of ER during 2020-21 in the month of July'2021 (as finalised in LGBR meeting for 2020-21)

System	Station	Unit	Capacity (MW)	Period (as per LGBR 2020-21)		No.of Days	Reason
				From	To		
TUVNL	Tenughat TPS	1	210	10.07.2021	31.07.2021	22	R&M+OH
NTPC	FSTPS	6	500	01.07.2021	09.08.2021	40	Boiler+FGD+DeNOx
	KhSTPS	3	210	15.07.2021	13.08.2021	29	Boiler
	Darlipalli STPS	1	800	01.07.2021	12.07.2021	12	TG PG Test
	Nabinagar TPS	1	250	25.07.2021	08.09.2021	15	OH
KBUNL	KBUNL	3	195	01.07.2021	05.08.2021	36	LPT+Boiler
IPP	APNRL	1	270	05.07.2021	20.08.2021	46	AOH

Members may update.

ITEM NO. D.4: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 11.06.2021)

a) Thermal Generating Stations outage report:

Sl. No	Station	State	Agency	Unit No.	Capacity in Mw	Reason(s)	Outage Date
1	KOLAGHAT	WEST BENGAL	WBDCL	1	210	ESP R & M	07-Jun-18
2	KOLAGHAT	WEST	WBDCL	2	210	ESP & Ash Handling R & M	26-Dec-19

		BENGAL					
3	BOKARO'B'	DVC	DVC	3	210	INITAILLY OUT DUE TO ASH PONDAGE PROBLEM UPTO 31/12/21. LATER OUT DUE TO POLLUTION CLERANCE ISSUE	21-Oct-20
4	BARAUNI TPS	BIHAR	BSPHCL	6	110	ABNORMAL TSI PARAMETER	17-Mar-21
5	BANDEL TPS	WEST BENGAL	WBPDC	1	82.5	Furnace wall tube leakage	20-Apr-21
6	TENUGHAT	JHARKH AND	TVNL	1	210	Maintenance Work	24-Apr-21
7	KOLAGHAT	WEST BENGAL	WBPDC	6	210	Low System Demand	02-May-21
8	BARAUNI TPS	BIHAR	BSPHCL	7	110	Low System Demand	18-May-21
9	MEJIA TPS	DVC	DVC	2	210	Low System Demand	25-May-21
10	DPL	WEST BENGAL	WBPDC	8	250	Boiler Tube Leakage	31-May-21
11	KOLAGHAT	WEST BENGAL	WBPDC	4	210	Low System Demand	06-06-2021
12	MEJIA TPS	DVC	DVC	6	250	Boiler Tube Leakage	10-06-2021
13	SAGARDIG HI	WEST BENGAL	WBPDC	3	500	Maintenance Work	11-06-2021

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

Generators/ constituents may to update the expected date of revival of the units.

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

S.No	Station	State	Agency	Unit No.	Capacity in Mw	Reason(s)	Outage Date
1	KOLAGHAT	WEST BENGAL	WBPDC	6	210	Low System Demand	02-May-21
2	BARAUNI TPS	BIHAR	BSPHCL	7	110	Low System Demand	18-May-21
3	MEJIA TPS	DVC	DVC	2	210	Low System Demand	25-May-21
4	KOLAGHAT	WEST BENGAL	WBPDC	4	210	Low System Demand	06-Jun-21
5	KOLAGHAT	WEST BENGAL	WBPDC	5	210	Low System Demand	12-Jun-21
6	MEJIA TPS	DVC	DVC	1	210	Low System Demand	14-Jun-21
7	RTPS	DVC	DVC	1	600	Low System Demand	12-Jun-21
8	Muzaffarpur-TPS	BIHAR	BSPHCL	1	110	Low System Demand	12-Jun-21

c) Hydro Unit Outage Report:

Sl. No.	Station	State	Agency	Unit No	Capacity	Reason(s)	Outage
1	BALIMELA HPS	ODISHA	OHPC	1	60	R & M WORK	05-Aug-2016
2	BALIMELA HPS	ODISHA	OHPC	2	60	R & M WORK	20-Nov-2017
3	BURLA HPS/HIRAK UD I	ODISHA	OHPC	5	37.5	R & M WORK	25-Oct-2016
4	BURLA HPS/HIRAK UD I	ODISHA	OHPC	6	37.5	R & M WORK	16-Oct-2015
5	BURLA HPS/HIRAK UD I	ODISHA	OHPC	7	37.5	ANNUAL MAINTENANCE	20-Jan-2020
6	BALIMELA HPS	ODISHA	OHPC	5	60	STATOR EARTH FAULT	13-Dec-2020
7	RENGALI HPS	ODISHA	OHPC	2	50	Heavy oil leakage in cylinder of first gate	20-Mar-2021
8	U.KOLAB	ODISHA	OHPC	2	80	TGB PAD VIBRATION HIGH	19-Mar-2021
9	CHIJPLIMA HOS	ODISHA	OHPC	1	24	CLOSURE & DRYNESS OF POWER CHANNEL FROM HEAD REGULATOR TO CHIPLIMA PH	19-Jun-2021
10	CHIJPLIMA HPS	ODISHA	OHPC	2	24	CLOSURE & DRYNESS OF POWER CHANNEL FROM HEAD REGULATOR TO CHIPLIMA PH	15-Jun-2021
11	CHIJPLIMA HPS	ODISHA	OHPC	3	24	CLOSURE & DRYNESS OF POWER CHANNEL FROM HEAD REGULATOR TO CHIPLIMA PH	15-Jun-2021

It is seen that about 494.5 MW hydro capacities in Odisha is under forced outage / planned outage and therefore not available for providing the much needed peaking support during evening peak. SLDC / OHPC may please indicate restoration plan of the units.

d) Long outage report of transmission lines:

SL NO	Transmission Element / ICT	Agency	Outage DATE	Reasons for Outage
1.	400 KV IBEUL JHARSUGUDA D/C	IBEUL	29-04-2018	TOWER COLLAPSE AT LOC 44,45
2.	220/132 KV 100 MVA ICT I AT LALMATIA	FSTPP/JUS NL	22-01-2019	FAILURE OF HV SIDE BREAKER

3.	220 KV PANDIABILI - SAMANGARA D/C	OPTCL	03-05-2019	49 NOS OF TOWER COLLAPSED.AS REPORTED BY SLDC OPTCL, TOTAL 60 NOS OF TOWER IN BETWEEN 220KV PANDIABILI – SAMANGARA LINE IN WHICH 48 NOS TOWERS FULLY DAMAGED AND 12 NOS TOWERS PARTIALLY DAMAGED. WORK UNDER PROGRESS.PRESENTLY CHARGED FROM PANDIABILLI END (LOC 156) TO LOC 58
4.	220kv Barauni-Hajipur Ckt-1	BSPTCL	28-09-2019	TOWER COLLAPSE AT LOCATION 38 & 39. CKT-2 IS ON ERS SINCE 13.01.2020.
5.	220/132 KV 100 MVA ICT 3 at Chandil	JUSNL	30-04-2020	ICT BURST AND DAMAGED AFTER FIRE REPORTED
6.	220KV/132 KV 100 MVA ICT 4 AT RANGPO	PGCIL	08-04-2021	HAND TRIPPED AFTER TRIPPING OF ALL 400/220 ICTS AT RANGPO ON 8.4.21 AFTER DISTURBANCE AND THERAFTER DEVELOPED RELAY RESET PROBLEM
7.	400KV/220KV 315 MVA ICT 2 AT Meeramandali	OPTCL	21-02-2021	FIRE HAZARD
8.	400KV/220KV 315 MVA ICT 4 AT JEERAT	WBSETCL	09-04-2021	TRIPPED ON DIFFERENTIAL AND PRD PROTECTION PROTECTION OPTD, ICT. ICT CURRENTLY UNDER BREAKDOWN DUE TO BUSHING FAILURE.
9.	132KV MAIN BUS - 1 AT MOTIHARI	DMTCL	21-04-2021	BUS EXTENSION MODULE SF6 GAS PRESSURE LOW
10.	220 KV GODDA-LALMATIA D/C	JUSNL	21-04-2021	TOWER COLLAPSED AT LOC. NO. 4
11.	220KV-FSTPP-LALMATIA-1	JUSNL	21-04-2021	THREE TOWER COLLAPSED NEAR LALMATIA
12.	400/220KV 315 MVA ICT 1 AT RANGPO	PGCIL	13-05-2021	SF6 GAS LEAKAGE RECTIFICATION WORK IN 315MVA 400/220KV ICT-1 BAY-409 UPTO 17/06/21
13.	400KV-INDRAVATI(PG)-INDRAVATI(GR)-1	OPTCL	01-06-2021	CONTINUOUS SD UP TO 8TH JUNE FOR REPLACEMENT OF EQUIPMENTS UNDER PSDF SCHEME DUE TO LEAKAGE IN EXISTING TIE -2 CT AND LINE CVT AT INDRAVATI (GR)
14.	765KV-JHARSUGUDA-ANGUL-4	PGCIL	04-06-2021	VOLTAGE REGULATION
15.	400KV-BINAGURI-TALA-1	PGCIL	04-06-2021	BINAGURI: B-N, FC- 2.035 KA, FD-174.7 KM; TALA: B-N, FC- 1.12 KA, FD-85.4 KM; LATER TAKEN EMERGENCY S/D ON 07-06-21 10:07HRS TO ATTEND BURNT MARKS OBSERVED IN THE XLPE CABLE TERMINATIONS
16.	400KV-TALCHER-MERAMUNDALI-1	PGCIL	06-06-2021	UNDER CONTINUOUS S/D UPTO 15.06.2021. LINE DIVERSION WORK FOR CONSTRUCTION OF RAILWAY TRACK BY RVNL FROM LOC:116 TO LOC:120.
17.	400KV-TALCHER-MERAMUNDALI-2	PGCIL	06-06-2021	UNDER CONTINUOUS S/D UPTO 15.06.2021. LINE DIVERSION WORK FOR CONSTRUCTION OF RAILWAY

				TRACK BY RVNL FROM LOC:116 TO LOC:120.
18.	400KV/220KV 315 MVA ICT 2 AT DURGAPUR	PGCIL	08-06-2021	UNDER CONTINUOUS S/D UPTO 15.06.2021 FOR REPLACEMENT OF 01 NO 220 KV & 01 NO 52 KV BUSHING OF ICT.
19.	765 KV JHARSUGUDA-RAIPUR PS (DURG)-1	PGCIL	08-06-2021	VOLTAGE REGULATION
20.	400KV-LAPANGA-OPGC (IB THERMAL)-1	OPTCL	11-06-2021	LAPANGA: Z-1, R-PH, 2.37KM, IF=25.52KA; LINE IS UNDER PATROLLING

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

ITEM NO. D.5: Commissioning of new units and transmission elements in Eastern Grid in the month of May-2021

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

Monthly commissioning List of Transmission element and generators: May 2021					
SL NO	Element Name	Owner	Charging Date	Charging Time	Remarks
1	765KV TIE BAY OF (262 MVAR B/R-1 AND GT1) AT DARLIPALI (DSTPS)	NTPC DSTPP	08-05-2021	14:45	
2	220KV-SITAMARHI-MOTIPUR-1	BSPTCL	19-05-2021	12:28	Synchronized at Sitamarhi end.

Members may update.

ITEM NO. D.6: UFR operation during the month of May 2021

Frequency profile for the month as follows:

Month	Max	Min	Less IEGC Band (%)	Within IEGC Band (%)	More IEGC Band (%)
	(Date/Time)	(Date/Time)			
May, 2021	50.28 Hz, 01-05-2021 18:02 Hrs.	49.63 Hz , 28-05-2021 22:39 Hrs	6.65	74.5	18.85

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

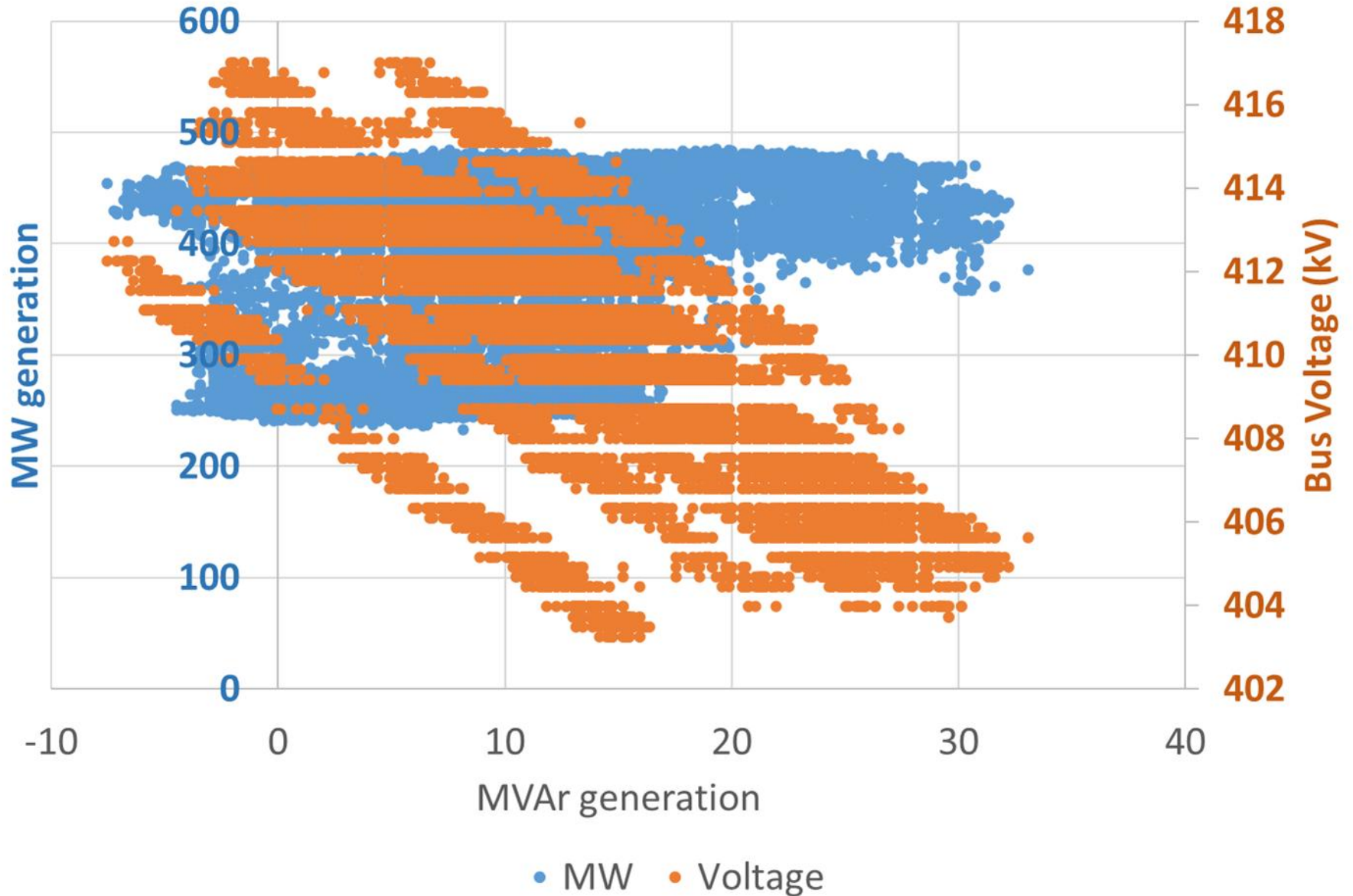
POWER SYSTEM DEVELOPMENT FUND												
Status of the Projects in Eastern Region												
Sl No	State	Entity	Name of the scheme	Grant Approved	Grant sanctioned on	1st Installment grant released on	Completion Schedule	Completion schedule w.r.t date of 1st instalment	Grant aviled so far	Under process of release	Total awards amount of placed of till date	Latest status
1	Bihar	BSPTCL	Renovation and Upgradation of protection system of substations. (18)	64.22	42135	42506	24	43236	56.04		69.195	90% grant availed on award cost.
2			Installation of Capacitor bank in 20 Nos of Grid Sub Station. (74)	18.882	42618	43550	24	44281	16.99		21.55	
			Total	83.10					73.03		90.745	
5	Jharkhand	JUSNL	Renovation & Upgradation of protection system of Jharkhad. (161)	138.13	15-Nov-17	28-Mar-19	16	28-Jul-20	114.68	1.01	145.674	90% grant availed on award cost. Project closure is expected by Q-2 of 2021-22.
6			Reliable Communication & data acquisition system upto 132kV Substations ER. (177)	22.36	24-May-19		24					Price bid has been opened. Tender on awarding stage.
			Total	160.49					114.68		145.674	
7	Odisha	OPTCL	Renovation and Upgradation of protection system of substations. (08)	162.50	11-May-15	22-Mar-16	24	22-Mar-18	46.04		63.31	Project Completed on Dec-20. Request for release of final 10 % fund has been placed.
8			Implementation of OPGW based reliable communication at 132 kv and above substations. (128)	25.61	15-Nov-17	29-Mar-19	36	29-Mar-22	23.04		51.22	90% grant availed on award cost.
9			Installation of 125 MVAR Bus Reactor along with construction of associated by each at 400kV Grid S/S of Mendhasal, Meramundali & New Duburi for VAR control & stabilisation of system voltage. (179)	27.23	27-Jul-18	1-Apr-19	18	1-Oct-20	8.17		8.166	30% grant availed
10			Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha. (196)	2.93	24-May-19	19-Feb-20	10	19-Dec-20	0.29		0.29	10% grant availed
11			Protection Upgradation and installation os Substation Automatic System (SAS) for seven nos of 220/132/33kV Substations (Balasore, Bidanasi, Budhipadar, Katapali, Narendrapur, New-Bolangir & Paradeep). (209)	36.63	24-May-19	13-Feb-20	18	13-Aug-21	8.87		8.87	30% grant availed
12		OHPCL	Renovation and Upgradation of protection and control system of OHPCL. (109)	22.35	22-May-17	25-May-18	24	25-May-20	10.96		17.983	90% grant availed on award cost.
			Total	277.25					97.37		149.839	
14		WBSSETCL	Installation of switchable reactor & shunt capacitor for voltage improvement. (88)	43.37	22-May-17	22-Jun-18	19	22-Jan-20	33.07		40.83	90% grant availed on award cost.
15			Renovation & Modernisation of Transmission System. (87)	70.13	22-May-17	25-Jun-18	25	25-Jul-20	63.12		96.44	
16			Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid. (210)	71.74	24-May-19	23-Oct-19	19	23-May-21	39.3		45.62	30% grant availed on award cost.
17			Project for establishment of reliable communication and data acquisition at different substation at WBSWTCL. (222)	31.19	24-May-19	23-Oct-19	25	23-Nov-21	3.12			Expected to be completed by Jul'22.
18			Implementation of Integrated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal. (197)	10.08	43910		12					10% grant not yet requested
19	WBPDCL	Renovation and Modernization of 220/ 132 kV STPS switch yard and implementation of Substation Automation System. (72)	23.48	5-Sep-16	18-May-17	18	18-Nov-18	21.13		32.09	Target date for completion of project is Sept., 21 subject to availability of S/D & Covid scenario. Request for release for final 10% grant has been placed.	
21		Renovation and Modernization of switchyard and related protection system of different power stations (BTPS, BKTSPS and KTSPS) of WBPDCL (155)	45.16	27-Jul-18	27-Mar-19	12	27-Mar-20	34.52		41.68	Target date for completion of project is Oct., 21 subject to availability of S/D & Covid scenario. 90% grant availed on award cost.	
			Total	295.15					194.26		256.661	

POWER SYSTEM DEVELOPMENT FUND												
Status of the Projects in Eastern Region												
Sl No	State	Entity	Name of the scheme	Grant Approved	Grant sanctioned on	1st Installment grant released on	Completion Schedule	Completion schedule w.r.t date of 1st instalment	Grant aviled so far	Under process of release	Total awards amount of placed of till date	Latest status
22	DVC	DVC	Renovation and Upgradation of the protection and control system of Ramgarh Sub Station. (81)	25.96	2-Jan-17	31-May-17	24	31-May-19	22.95	2.57	28.603	90% grant availed on award cost.
23			Renovation and Modernization of control and protection system and replacement of equipment at Parulia, Durgapur, Kalyanewari, Giridhi Jamsedpur, Barjora, Burnpur, Dhanbad and Bundwan substation. (106)	140.50	16-May-17	14-Dec-17	24	14-Dec-19	102.34	3.29	126.87	
Total				166.46					125.29		155.473	
24	Sikkim	ENPD, Sikkim	Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim. (173)	10.00	24-May-19		18		3.00		20	30% grant availed on award cost
Total				10.00					3.00		20.00	
26	ERPC	ERPC	Creation and Maintenance of web based protection database management. (67)	20.00	17-Mar-16	28-Jun-16	18	28-Dec-17	14.83		16.48	Project Completed
27			Study Programme on power trading at NORD POOL Academy for Power System Engineers of Eastern Region. (122)	5.46	27-Jul-18	27-Mar-19	13	27-Apr-20	4.61		5.37	
28			Traning Program for Power system Engineers of various constituents of Eastern Region. (117)	0.61	27-Jul-18	11-Apr-19	24	11-Apr-21	0.54		0.60888	90% grant availed on award cost.
Total				26.07					19.98		22.45888	
GrandTotal				1,018.53					627.61		840.85	

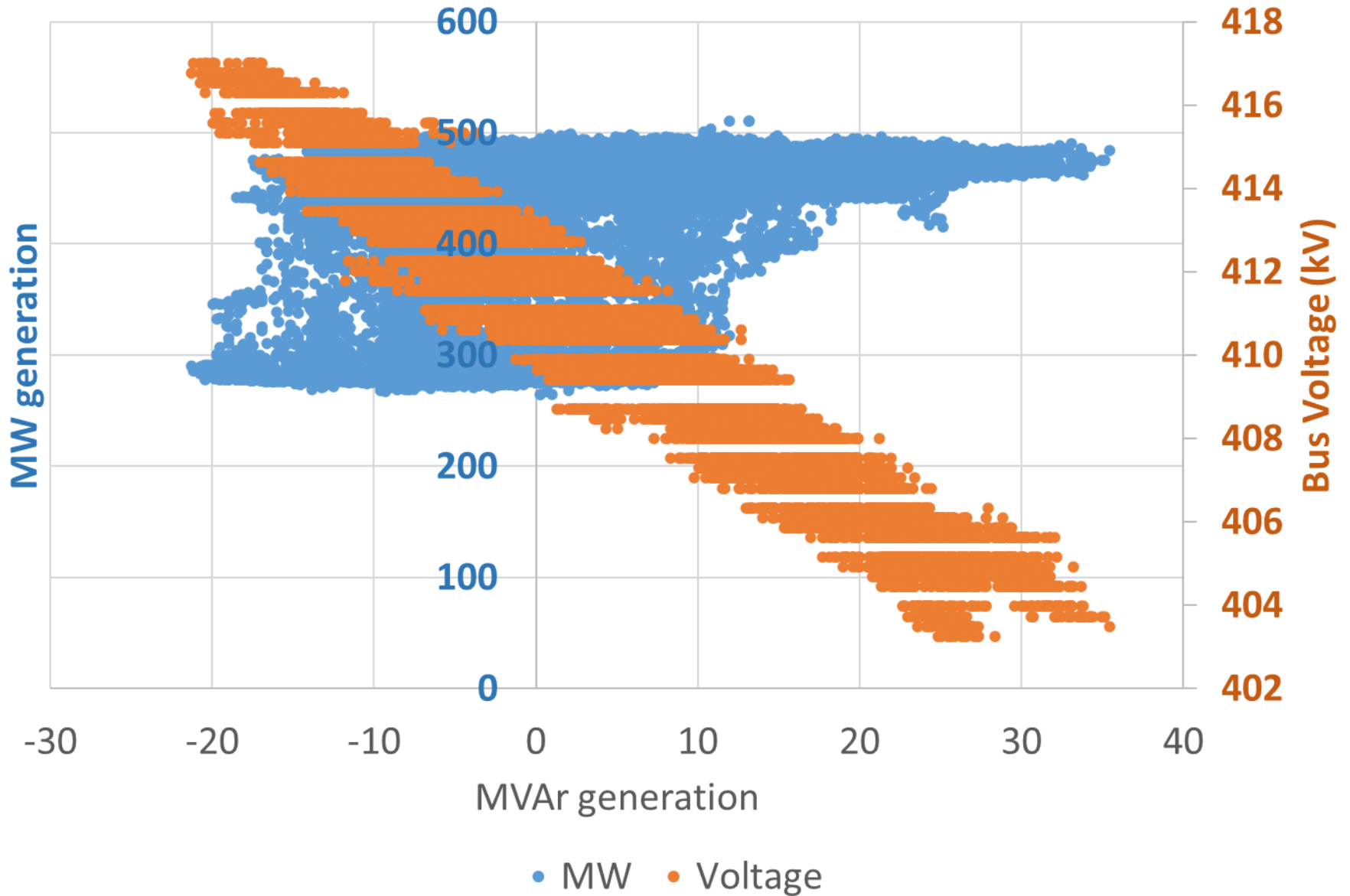
MVAr absorption/injection performance of regional generating units during May 2021

Based on ERLDC SCADA data

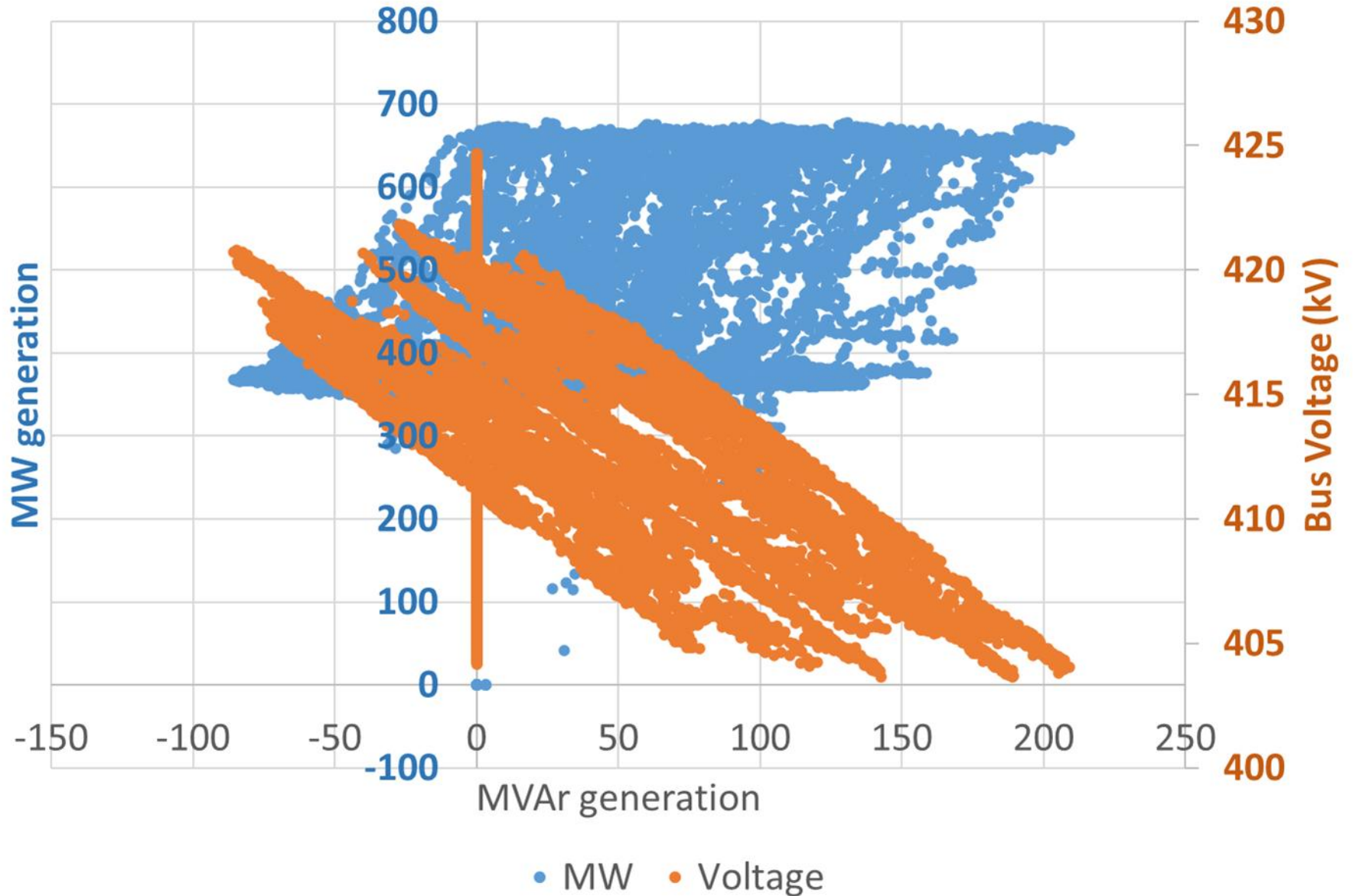
Kahalgaon STPS Stage II - 500 MW Unit -6



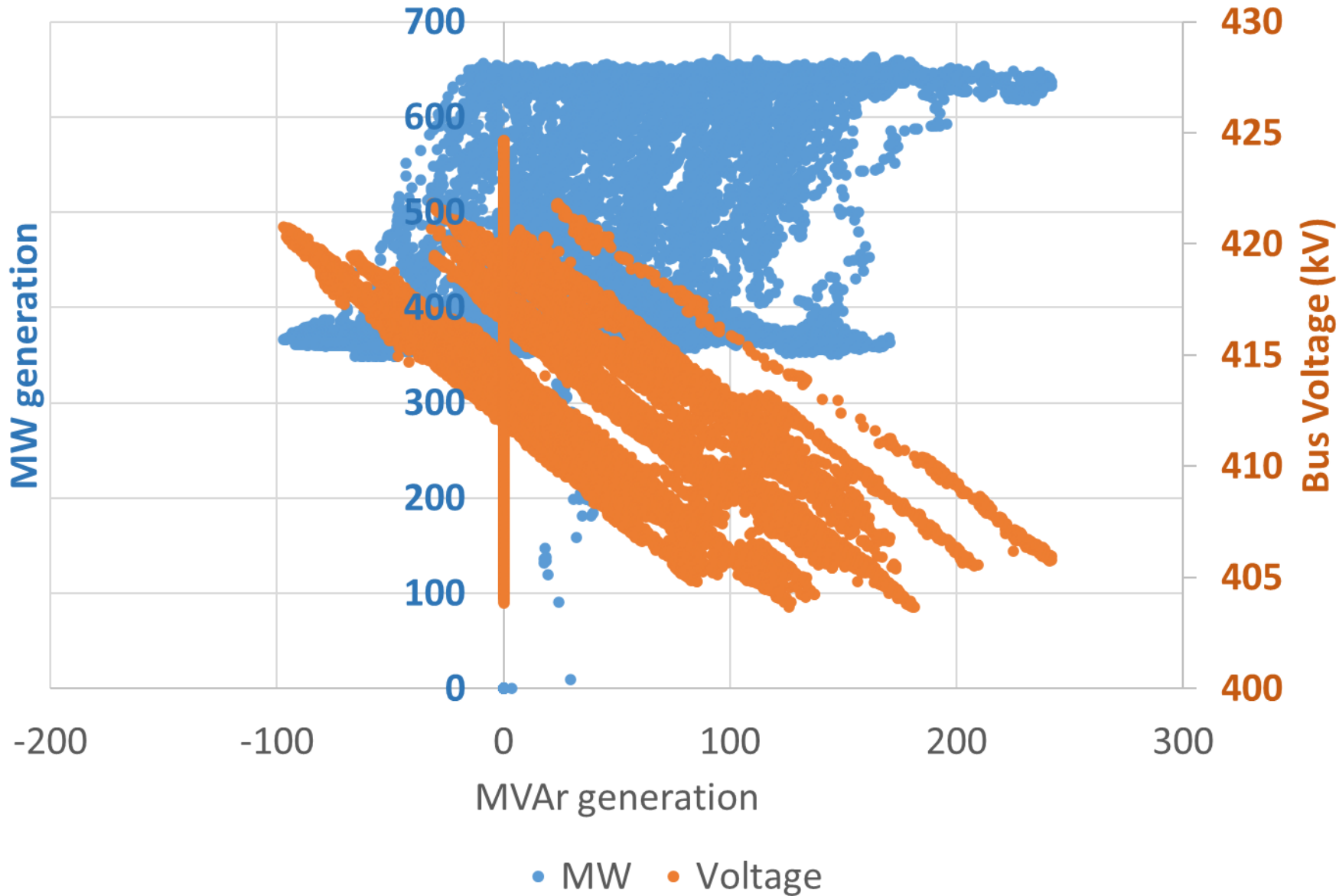
Kahalgaon STPS Stage II - 500 MW Unit -7



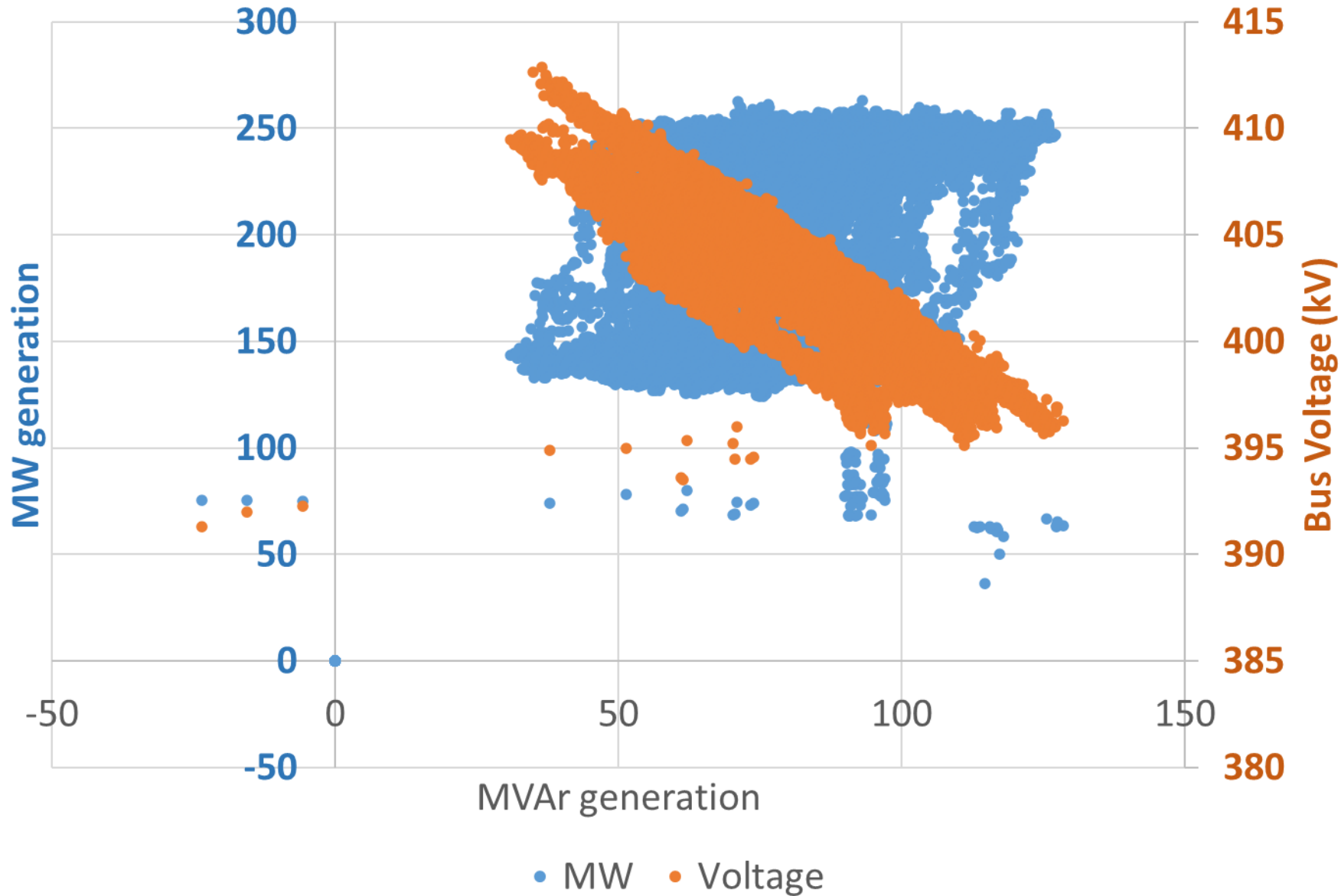
Barh STPS Stage II - 660 MW Unit -4



Barh STPS Stage II - 660 MW Unit -5



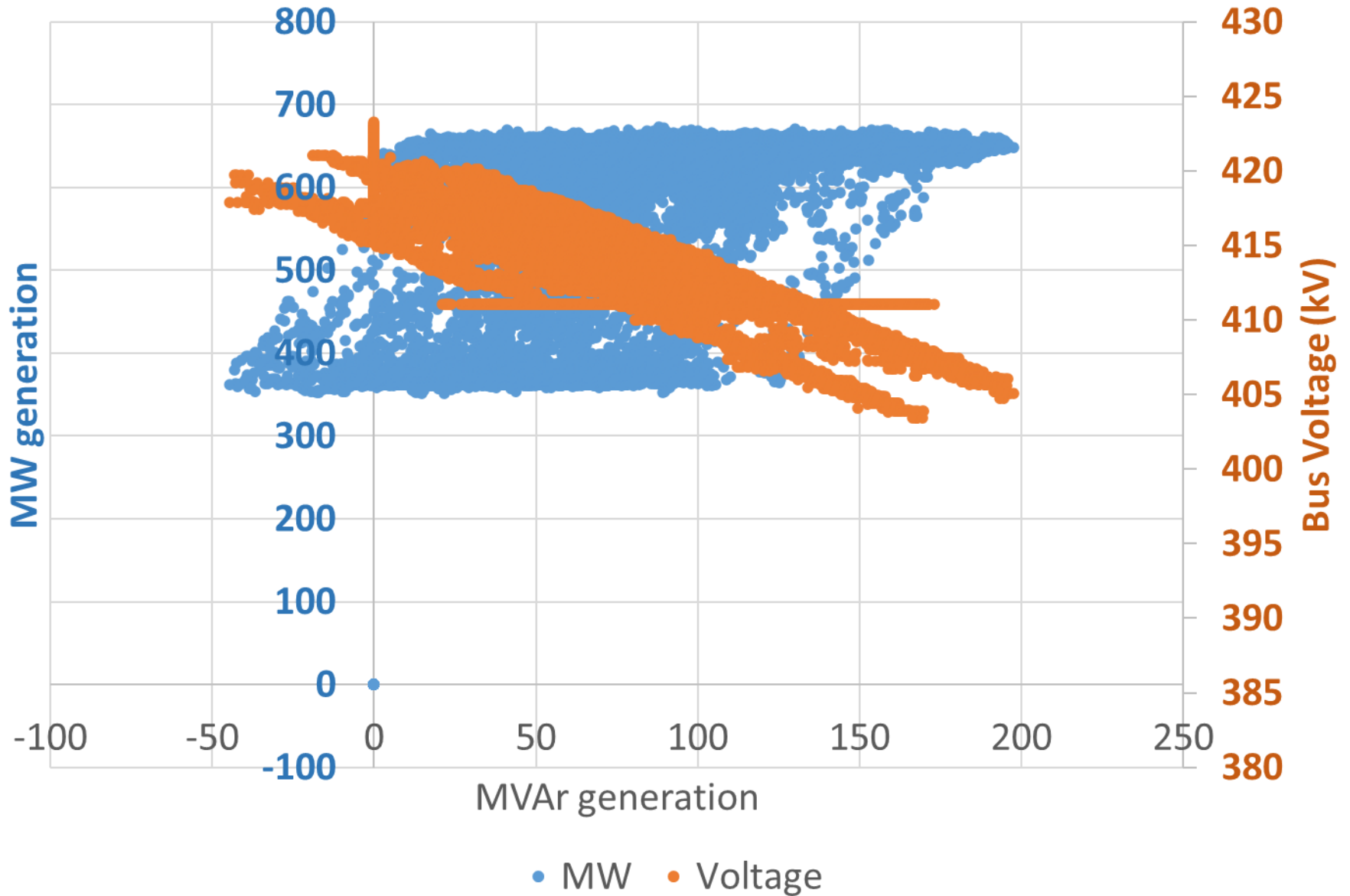
BRBCL - 250 MW Unit -1



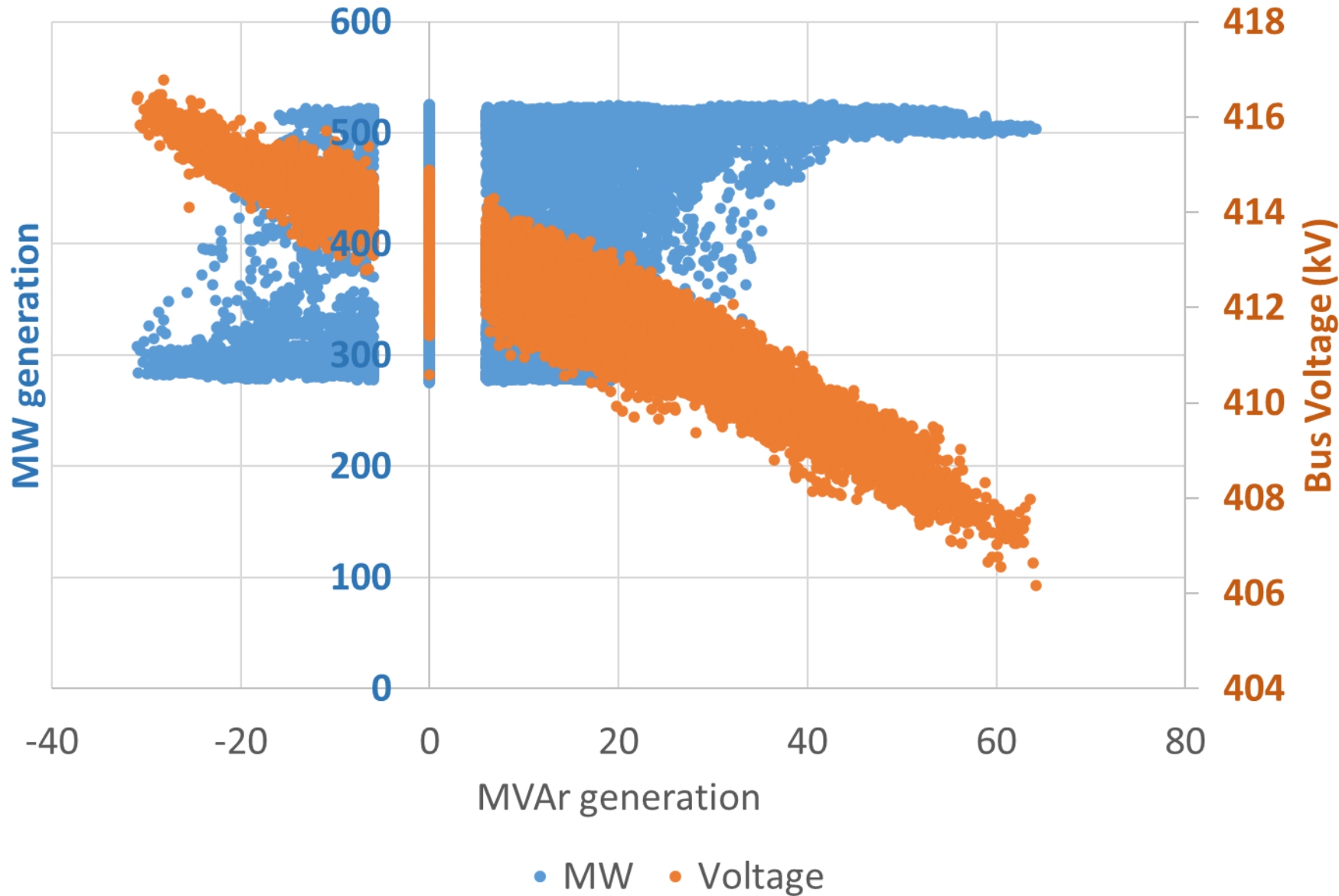
BRBCL - 250 MW Unit -2



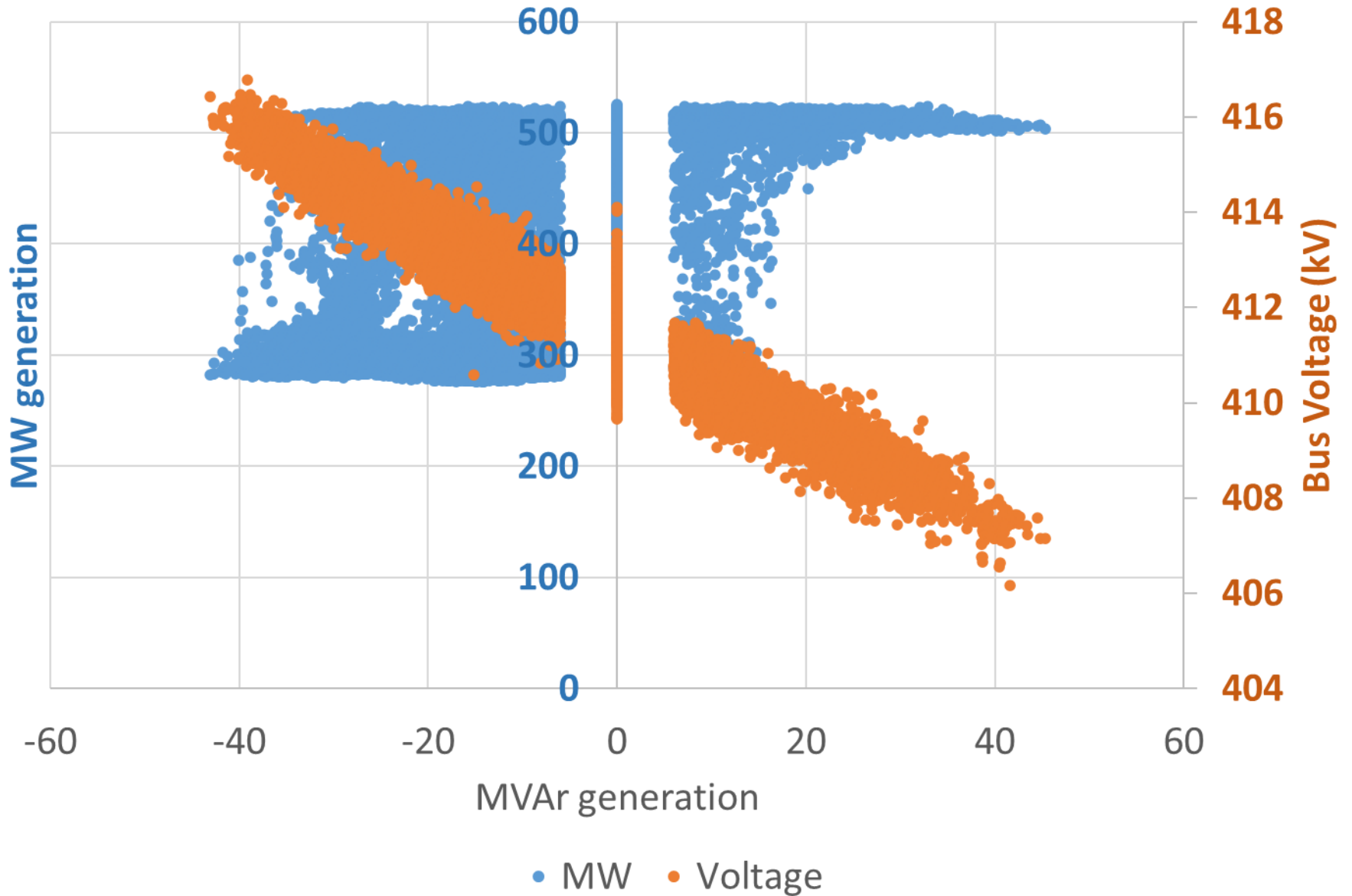
Nabinagar STPP Stage I - 660 MW Unit -1



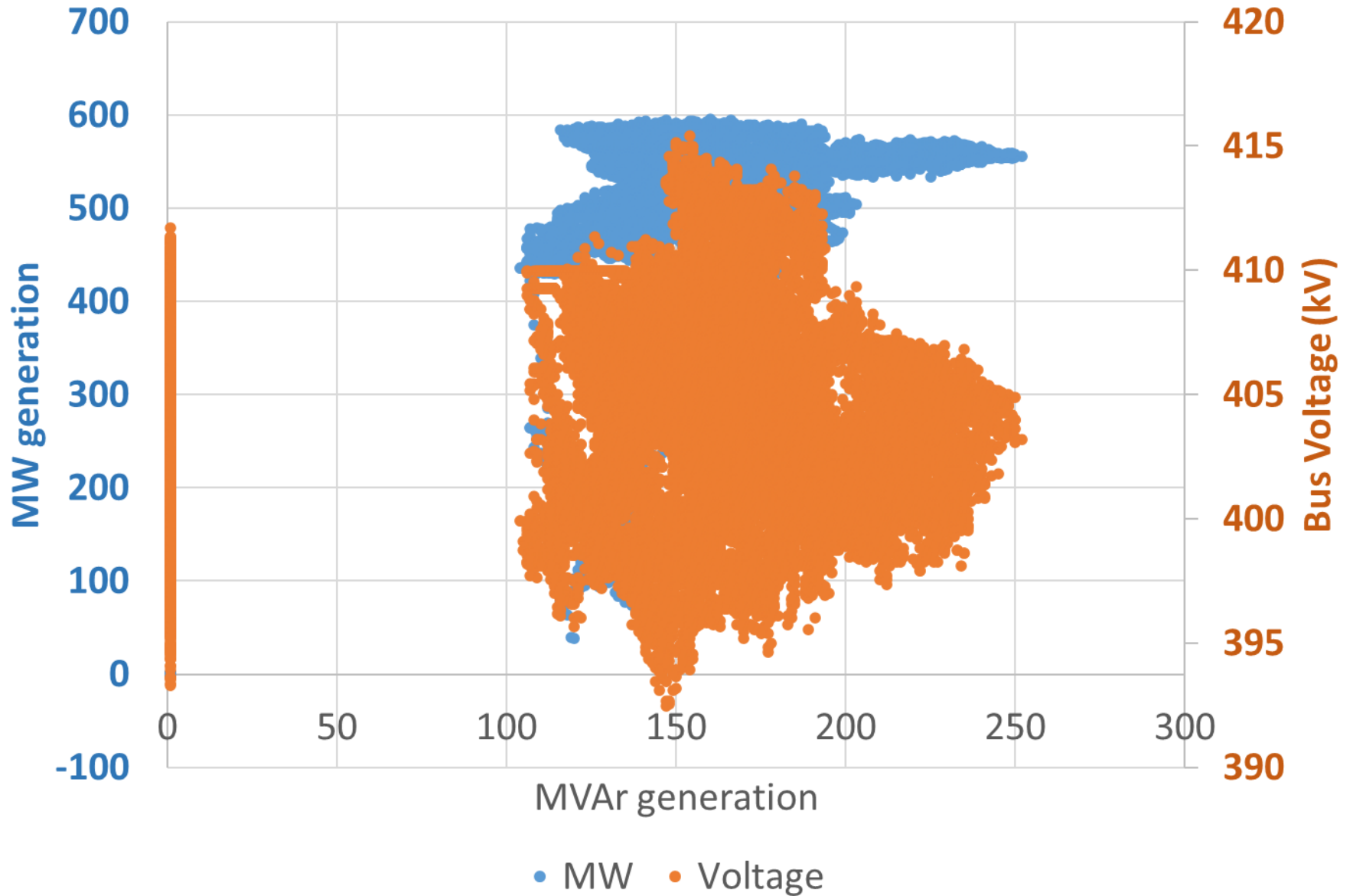
MPL - 525 MW Unit -1



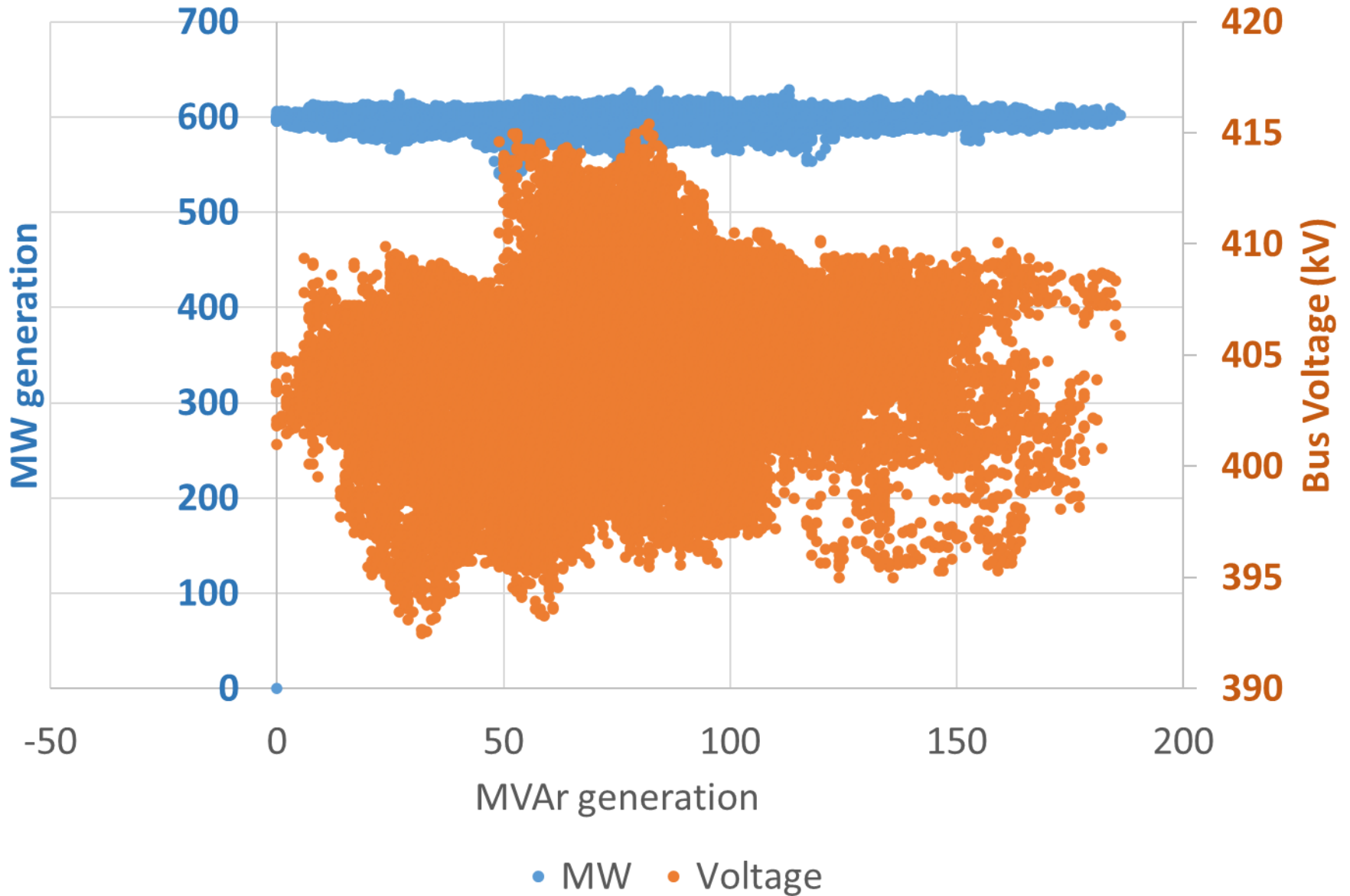
MPL - 525 MW Unit -2



JITPL - 600 MW Unit -1



JITPL - 600 MW Unit -2



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	23-02-2021 to 02-03-2021	Scheduled
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	11th – 20th March 2021	Scheduled
26		2		

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	Sep-21
Waria	4	Yes	Yes	2008	No	Yes	Unit Is out of Service
ISGS							
Kahalgaon NTPC	1	Yes	Yes	2017	Yes	Yes	Apr-21
Kahalgaon NTPC	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	July 2021 (As per SRPC decision)

Talcher Stage 2	4	Yes	Yes	No Details	No Details	Yes	July 2021 (As per SRPC decision)
Talcher Stage 2	5	Yes	Yes	No Details	No Details	Yes	July 2021 (As per SRPC decision)
Talcher Stage 2	6	Yes	Yes	2016	Yes	Yes	July 2021 (As per SRPC decision)
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	Mar-21
ADHUNIK	2	Yes	YES	2013	No	Yes	Mar-21
JITPL	1	Yes	Yes	2016	Yes	Yes	Jul-21
JITPL	2	Yes	Yes	2016	Yes	Yes	Jul-21
GMR	1	Yes	Yes	2013	No	Yes	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

		Demand (MW)	Energy (MU)
1	BIHAR		
	NET MAX DEMAND	6350	3605
	NET POWER AVAILABILITY - Own Sources	523	192
	Central Sector+Bi-Lateral	5541	3060
	SURPLUS(+)/DEFICIT(-)	-286	-353
2	JHARKHAND		
	NET MAXIMUM DEMAND	1670	943
	NET POWER AVAILABILITY - Own Source	292	131
	Central Sector+Bi-Lateral+IPP	1092	665
	SURPLUS(+)/DEFICIT(-)	-286	-147
3	DVC		
	NET MAXIMUM DEMAND	3225	2045
	NET POWER AVAILABILITY - Own Source	5560	3096
	Central Sector+MPL	414	313
	Bi-lateral export by DVC	2213	1646
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	536	-283
4	ODISHA		
	NET MAXIMUM DEMAND (OWN)	4500	2723
	NET MAXIMUM DEMAND (In Case,600 MW CPP Drawal)	5100	2795
	NET POWER AVAILABILITY - Own Source	4060	2429
	Central Sector	1864	843
	SURPLUS(+)/DEFICIT(-) (OWN)	1424	549
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	824	477
5	WEST BENGAL		
5.1	WBSEDCL		
	NET MAXIMUM DEMAND	7600	4525
	NET MAXIMUM DEMAND (Incl. B'Desh+Sikkim)	7610	4616
	NET POWER AVAILABILITY - Own Source (Incl. DPL)	5326	2477
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2580	1608
	EXPORT (TO B'DESH & SIKKIM)	10	7
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	296	-531
5.2	IPCL		
	IPCL Demand	130	84
	IPCL Import	130	84
	SURPLUS(+)/DEFICIT(-)	0	0
5.3	CESC		
	NET MAXIMUM DEMAND	2050	1110
	NET POWER AVAILABILITY - Own Source	770	552
	FROM OTHER SOURCE (INCL. IPP/CPP-29-30 MU/M)	740	164
	IMPORT FROM HEL	540	394
	TOTAL AVAILABILITY OF CESC	2050	1110
	SURPLUS(+)/DEFICIT(-)	0	0
6	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	9780	5719
	NET POWER AVAILABILITY - Own Source	6096	3029
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	3860	2166
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	176	-524
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	166	-531
7	SIKKIM		
	NET MAXIMUM DEMAND	97	48
	NET POWER AVAILABILITY - Own Source	8	3
	Central Sector	199	119
	SURPLUS(+)/DEFICIT(-)	110	74
8	EASTERN REGION		
i)	NET MAXIMUM DEMAND	25120	15084
ii)	NET MAXIMUM DEMAND (In Case, 600 MW CPP Drawal of Odisha)	25708	15156
iii)	BILATERAL EXPORT BY DVC	2213	1646
iv)	EXPORT BY WBSEDCL TO SIKKIM & B'desh	10	7
v)	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	787
vi)	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)	29509	16045
vii)	SURPLUS(+)/DEFICIT(-)	1524	-1479
viii)	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	936	-1551