

# North Eastern Regional Power Committee

## Agenda For

### 171<sup>st</sup> OCC Sub-Committee Meeting

**Time of meeting : 10:30 Hrs.**

**Date of meeting : 16<sup>th</sup> October, 2020 (Friday)**

**Venue : "NERPC Conference Hall", Shillong.**

<b>A. CONFIRMATION OF MINUTES</b>
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#### **CONFIRMATION OF MINUTES OF 170<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

The minutes of 170<sup>th</sup> meeting of Operation Sub-committee held on 11<sup>th</sup> September, 2020 at Shillong were circulated vide letter No. NERPC/SE (O)/OCC/2020/3052-3089 dated 30<sup>th</sup> September, 2020.

NERLDC vide letter dtd. 05.10.2020 has requested for modification for item No. **D.21** of the 170<sup>th</sup> OCC minutes:

#### **Deliberation of the 170<sup>th</sup> OCCM:**

#### **D.21 Requirement of RIO clearance for Shutdown:**

GM(SO-II), NERLDC informed that for any shutdown involving configuration change(temporarily/permanently) RIO clearance must be obtained. After detailed deliberation the forum decided the following:

- a. For temporary configuration change to facilitate any shutdown, RIO clearance may not be obtained.
- b. For elements which were in shutdown/outage for a period greater than 6 months, RIO clearance would have to be obtained before putting the element back into service.
- c. For permanent configuration change (where the change would be for a period greater than 6 months) RIO clearance would have to be obtained.

#### **Comments from NERLDC:**

**As per Clause no 43(4) of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010.**

"The owner of any installation of voltage exceeding 650 V who makes any addition or alteration to his installation shall not connect to the supply his apparatus or electric supply lines, comprising the said alterations or additions unless and until such alteration or addition has been approved in writing by the Electrical Inspector"

**Also as per Clause no. 43.1(a) of CEA (Measures relating to Safety & Electric Supply) Amendment Regulations, 2018**

"Every electrical installation of notified voltage and below shall be inspected, tested and self-certified by the owner or supplier and consumer, as the case may be, of the installation before commencement of supply or recommencement **after shutdown of 6 months and above** for ensuring observance of safety measures specified under these regulations and such owner or supplier or consumer, as the case may be, shall submit the report of self-certification to the Electrical Inspector in the formats as framed and issued by the Authority.

Provided that the electrical installation so self-certified shall be considered fit for the commencement of supply or recommencement after shutdown for six months only after the report of self-certification is duly received by the office of Electrical Inspector.

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Further provided that the owner or supplier or consumer, as the case may be, has the option to get his installation inspected and tested by the electrical Inspector of the Appropriate Government."

Hence, from the above clauses, RIO clearance is to be furnished to RLDC in the following cases:

- a) For any configuration change to facilitate any shutdown (even in case of temporary change in configuration)
- b) Prior to restoration of an element which was under shutdown/outage for a period greater than 6 months
- c) In case of replacement & upgradation work of any substation equipment.
- d) Prior to First Time Charging of any new element

Also, please find attached Letter from Chief Engineer, CEA issued to NRPC regarding mandatory inspections of all elements under CEA (Measures relating to Safety and Electric Supply) amendment Regulations, 2015 for kind reference.

It is requested to make necessary modifications in the deliberation pertaining to **Item no. 1121 Requirement of RIO clearance** of 170<sup>th</sup> OCC Meeting Minutes in line with the provisions of CEA (Measures relating to Safety & Electric Supply) Regulations, 2010 **and** amendments thereof, mentioned above.

***The Sub-committee may confirm the minutes of 170<sup>th</sup> OCCM of NERPC as no other comments/observations were received from the constituents.***

<b>ACTION TAKEN -ITEMS</b>
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**B.1. ACTION TAKEN:**

**1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:**

The status as informed in 170<sup>th</sup> OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I (Diagnostic tools) Materials supplied. P-II (for PLCC & communication) LOA issued. P-III (Substation equipment) NIT by Sep'20  Work delayed due to COVID situation. Station-wise status to be updated	PFMS issues to be addressed and 2 <sup>nd</sup> tranche to be disbursed by Sep'20.	-	TESG approval awaited	-

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Nagaland	All completed except for PLCC package. Delayed due to COVID situation Station-wise status to be updated.	Requisition for second tranche of 60% submitted.	-	TESG approval awaited	Lines identified. Under DPR preparation stage.
Mizoram	Completed. 10% remaining claim to be submitted ASAP.	2 <sup>nd</sup> tranche 60% funds disbursed. Final 10% requisition to be submitted immediately	To reply to TESG queries.	TESG approval awaited.	Lines identified for installation of DPR viz.  132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.
Manipur	Package-II: completed Package-I: WIP Delayed due to COVID situation Station-wise status to be updated.	60% disbursed. Final 10% requisition to be sent immediately.	PSDF approved. NIT to be floated.	TESG approval awaited.	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Under DPR preparation stage.
	33kV System Integration with SLDC	In tendering stage			
	Reliable Communications for grid connectivity	In tendering stage			
Tripura	Work completed. 10% remaining claim to be sent ASAP. Station wise status to be updated.	A/c opened. Requisition sent for 1 <sup>st</sup> tranche.	Study results to be submitted alongwith DPR	TESG approval awaited.	Only single line 132kV 79Tilla to Budhjangn agar. DPR to be prepared.

Assam	LOA issued. WIP, delayed due to COVID situation Station-wise status to be submitted.	1 <sup>st</sup> tranche of funds received.	-	Under finalization stage for LOA.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Completed in all respects** MePGCL – 10% claim to be submitted ASAP. Station-wise status to be updated.	Final tranche of 10% received.	-	Under finalization stage for LOA.	WIP. Delayed due to COVID situation

All state utilities are requested to furnish latest status station-wise as per format by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC, POSOCO) with a copy to NPC & NERPC. The LOAs of R&M Scheme are to be furnished to NERLDC/NERPC regularly.

***States may please intimate the latest status.***

## **B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING SEPTEMBER, 2020**

NERLDC shall present the operational performance for the month of September, 2020.

## **C. ITEMS- STATUS REVIEW**

### **C.1 Auto-reclosure issues at Azara:**

In 169<sup>th</sup> OCCM, the following works were decided to be completed by Aug'20:-

- (i) Checking of PLCC panel wirings at 400kV Azara S/S.
- (ii) Investigating reasons for Channel 1 for 400kV Silchar going into disabled mode at times
- (iii) Thorough testing of carrier communication channel end-to-end for 400kV Silchar-Azara

***AEGCL/NERTS may please inform the latest status.***

### **C.2 Restoration of Assets damaged at Kopili HEP due to failure of Penstock:**

As per decisions in previous meeting(s):

- (i) Detailed ownership and scope of work finalized in the 168<sup>th</sup> OCC meeting
- (ii) Immediate restoration of one 220kV line, one 132kV line and 160MVA ICT at Kopili S/S via AIS by NERTS – deadline: November'20.
- (iii) Kiosk arrangement/ hardware which is being presently used and shall also be a part of permanent restoration shall be jointly decided by NERTS/NEEPCO.
- (iv) Prior to permanent restoration the BoQ shall be shared by NERTS with the forum.

***NERTS may please inform the status.***

### **C.3 Status update of important grid elements under prolonged outage impacting system**

**operation:**

Sl. No	Element	Owner	Status as informed in the 170 <sup>th</sup> OCCM	Latest status
1	63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	10% funds received. Tendering in process.	
2	132kV Dimapur - Imphal	NERTS	Delayed due to ROW clearance issues. Expected to completed by October 20.	
3	220kV Sonabil-Samaguri-I	AEGCL	Line is in idle charged condition from Sonabil end. RoW issue at location near Samaguri to be resolved shortly.	
4	132kV Srikona-Panchgram	AEGCL	Line to be rerouted through HPC Campus. Confirmation awaited.	
5	63MVAR L/R for 400kV Palatana-SilcharCkt-I	OTPC	Oct'20	
6	132kV Jiribam – Rengpang	MSPCL	Oct'20	
7	220KV-Agia-BTPS-I	AEGCL	Line ready to be charged	
8	132KV-Pare-Itanagar-1	Arunachal Pradesh	By 15.10.2020	
9	132KV-Ranganadi-Itanagar-1	Arunachal Pradesh	By 15.10.2020	
10	20MVAR tertiary reactors at Balipara	NERTS	Filtration and oil parameter healthiness to be checked by Sep'20.	

***Concerned utilities may please inform the status.***

**C.4 Status of commissioning for Upcoming projects:**

Sl. No	Name of the element	Utility	Status as informed in previous OCC meeting	Latest status
1	LILO of 132kV Surjamaningar-Budhjungnagar-I at Surjamaningar(ISTS)	TSECL	October'20	
2	LILO of 132kV P.K.Bari-Ambassa at P.K.Bari(ISTS)	TSECL	October'20	
3	400kV Palatana-Surjamaningar D/C	NERTS	Dec'20	
4	400kV Silchar – P.K.Bari D/C	NERTS	Dec'20	
5	PLCC for 132kV Loktak-Ningthoukong and 132kV Loktak-	MSPCL	Dec'20	

	Rengpang			
6	Construction of 2 <sup>nd</sup> bay at Balipara for 220kV Balipara-Sonabil-2	AEGCL	Estimate prepared.	
7	Unit#3 & 4 of Kameng HEP	NEEPCO	-	
8	Bay at 132kV Agia S/Sn for 132kV Agia-Nangalbibra-II	AEGCL	Oct'20	
9	80MVAR B/R at RHEP	NEEPCO	Tender by May'20	
10	Upgradation of 132kV Lumshnong – Panchgram line	MePTCL	TESG approved	
11	Diversion of 132kV Bawktlang-Sihhmui	NERTS	June'20	

**Concerned utilities may please inform the status.**

**C.5 Tripping of 220kV BTPS-Salakati D/C on 05.08.2020:**

In 170<sup>th</sup> OCCM, CGM(AM), NERTS informed that for re-conductoring of 220kV BTPS-Salakati D/C currently cost estimates are being prepared.

***NERTS may please inform the status.***

**C.6 Implementation of SPS-1&3 for Bangladesh:**

In Sub-group meeting held on 10.09.2020 the scheme for SPS-1&3 for Bangladesh was discussed in detail and NERTS was requested to explore any additional infrastructure required for implementation of the Indian part of SPS-1&3.

***NERTS may please inform the status.***

**C.7 Mapping of NERLDC Tripping portal and PDMS tripping portal:**

In 170<sup>th</sup> OCCM NERPC informed that Techno-Commercial offer has been received from M/s PRDC. Following are the activities for integration:

1. Mapping of NERLDC fields to PDMS Tripping incident fields (that are required for PDMS)
2. Identification of RESTful end points for each Create/Update/Delete operation performed in Tripping incident portal
3. Development of RESTful API
4. Setting up an integration with SFTP for attachment association Techno Commercial Proposal for NERPC tripping portal integration
5. Integration & Testing
6. Deployment
7. Acceptance Testing

Further upon suggestion of Member Secretary i/c, NERPC it was decided that the quoted amount of INR 12lakh may be booked under PDMS project subject to PSDF approval.

***NERPC may please intimate the status.***

**C.8 Preparation of List of Important Grid Elements:**

In the Special Meeting (for improvement of Data Availability) held on 18<sup>th</sup> August,2020 it was decided that List of Important Grid Elements has to be prepared by NERLDC(for ISTS and important intra-state elements) and by SLDCs(for intra-state elements).

In 170<sup>th</sup> OCC meeting NERLDC presented the List of Important Grid Elements as prepared by NERLDC. The 170<sup>th</sup> OCC forum ratified the decision of the Special

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Meeting and requested all the SLDCs to prepare the List of Important Grid Elements for the respective Intra-state elements

**All SLDCs may please intimate the status.**

<b>D. ITEMS FOR DISCUSSION</b>
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**D.1 Generation Planning (ongoing and planned outages)**

a. Present per day MU and projected number of days of operation.

Plants	Reservoirs level in meter	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II			<b>0</b>	
Kopili			<b>0</b>	Will be “0” until further intimation.
Doyang			<b>1.113</b>	
Loktak			<b>2.487</b>	

The outage of other generating stations may be approved considering the present water levels in reservoirs and long term outage of Kopili HEP.

**The Committee may discuss and approve the proposed shutdown by Generating Stations as given in Annexure – D.2 which is available in NERPC website.**

**D.2 Outage Planning Transmission elements**

It was agreed in the 99<sup>th</sup> OCC meeting that shutdown will be availed only after approval is given by the OCC forum. It was also agreed that deferment/revision of outages elements other than already approved in OCC will be henceforth put/displayed in the website of NERPC (**under Operational Activities/OCC Approved shutdown**) as per CERC regulations/ CEA guidelines etc for ensuring smooth & secure grid operation.

**Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC:** Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10<sup>th</sup> of the month, the shutdown availing agency would reconfirm to NERLDC on 7<sup>th</sup> of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

It was decided in the previous OCCM that shutdown would be granted from the 1<sup>st</sup> day of the following calendar month to the 30<sup>th</sup>/31<sup>st</sup> day of the same month.

**The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for 01<sup>st</sup> November,2020 to 30<sup>th</sup> November,2020 which is available in the website of NERPC.**

**D.3 Estimated Transmission Availability Certificate (TAC) for the month of September,2020:**

NETC and POWERGRID have submitted the outage data for the month of September, 2020. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

**D.4 Charging of 132kV Sihhmui S/S and related issues:**

Decisions as per deliberation in previous meeting(s):

- Present condition of idle charging from Melriat end as anti-theft measure to remain in place. For charging of 132 kV Bays of Melriat – Sihhmui D/C at Sihhmui Substation, 132 kV Sihhmui Bus and 132/33 KV, 12.5 MVA Transformer at Sihhmui Substation, fresh application is to be applied to NERLDC and approval to be obtained.
- NERTS-POWERGRID to apply afresh for charging clearance/First Time Charging and Trial operation certificate for 132kV Melriat-Sihhmui including bays at both ends after obtaining clarification from NERPCTP, CEA.
- NERTS, P&ED Mizoram to inform about the conclusions of their bilateral discussions regarding tariff.
- Subsequently a special meeting to be held.
- Meanwhile till the matter is resolved, NERTS and P&ED Mizoram to abide by the decisions of the Special Meeting held on 24.07.2020

***Members may please discuss.***

**D.5 RGMO analysis for events dated 11<sup>th</sup> June, 2020**

Decisions as per discussions in previous meetings:

- OTPC- Discussions ongoing with OEM for anomaly in unit response.
- NTPC – All three units tuned in July'20.

***Members may please discuss.***

**D.6 Charging of 33kV Khupi-Kimi line at 132kV:**

Decisions as per discussion in the 170<sup>th</sup> OCC meeting:-

(i) Insulator, line inspection of 132kV Khupi –Kimi line would be carried out by DoP Ar.Pradesh by Oct'20.

(ii) NEEPCO to approach the highest level of DoP Ar.Pradesh for handing over of the said line.

(iii)Subsequent to handing over application of FTC to NERLDC needs to be done.

***Members may please discuss.***

**D.7 Immediate restoration of 220kV Bus-Coupler Bay at Samaguri(AEGCL) & keeping both buses in service at 220kV Sub-stations in Assam power system:**

Emergency shutdown of both 220 kV buses at Samaguri S/S was availed by AEGCL on 27.08.20 for restoration of 220 kV elements at Samaguri by bypassing bus coupler. Bypassing was done due to problem in 220 kV bus coupler bay.

Single bus operation of 220 kV Samaguri is affecting the safe and secure operation of the NER grid especially Assam Power System.

Also, Single bus operation is observed in other 220 kV substations of Assam Power system like Mariani (AEGCL), Sarusajai etc.

In 170<sup>th</sup> OCC meeting, DGM, SLDC, AEGCL informed that double bus is present in all 220kV S/Sn of Assam. However, the exact reason for operation on Single bus would be informed by him at the earliest.

***Members may please discuss.***

**D.8 Renewal of Maintenance and Support Contract for PSS/E user licenses:**

During the 159<sup>th</sup> OCCM of NER, NERLDC informed that Maintenance and Support(M&S) Contract for PSS/E User Licenses used by NLDC/RLDCs/SLDCs had expired in 2018 and requested all SLDCs to give their consent for price negotiation by NLDC with M/s Siemens on their behalf.

Accordingly, consent had been received from the SLDCs and the same had been forwarded to NLDC, POSOCO for taking up with M/s Siemens for the price. The price had been negotiated with M/s Siemens. The same had been communicated with the utilities by NERLDC vide letter NERLDC/SO-II/270 dated 02.07.2020.

POSOCO has already procured for 5 RLDCs and 1 NLDC at the negotiated price and hence the updated versions of PSS/E are available with POSOCO.

SLDCs are requested to mention the status of the plan of procurement so that the updated versions are available for all. This would enable smooth system studies for safe and secure operation of the Grid.

In 170<sup>th</sup> OCC meeting NERLDC informed the forum that only Assam and Meghalaya have taken the initiative for contract procurement.

POWERGRID vide mail dated. 09.10.2020 has intimated that POWERGRID has renewed the M&S services of PSS®E license by SIEMENS Ltd. for further 5 years starting from August, 2020 for CERC, RPCs, CEA & STUs and POWERGRID shall bear the cost of above renewal alongwith issue of new dongles for PSSE ver 35(with back compatibility feature). The following details are required for the same:-

**Entity name:**

**Dispatch Address:**

**Primary contact:**

**Secondary contact:**

**Email Id:**

**Mobile Number:**

Details attached at **Annexure-D.8.**

***Members may please discuss.***

**AGENDA ITEMS FROM NPC:**

**D.9 Monitoring of Schemes funded from PSDF:**

Status of the schemes in NER on 31.08.2020 is as given below:

<b>POWER SYSTEM DEVELOPMENT FUND</b>						
<b>State wise -Status of proposals funded from PSDF as on 31.08.2020(amount in Rs. Cr)</b>						
<b>Sl No</b>	<b>State</b>	<b>No of proposals Sanctioned</b>	<b>Grant Sanctioned</b>	<b>Grant Released</b>	<b>% of Grant Drawn</b>	<b>Completed</b>
1	Arunachal Pradesh	2	20.18	3.49	17.29%	-
2	Assam	4	366.4	175.10	47.79%	-
3	Manipur	5	74.96	35.32	47.12%	-
4	Meghalaya	6	122.40	96.61	78.93%	1
5	Mizoram	2	28.81	27.31	94.79%	1
6	Nagaland	2	42.08	34.06	80.93%	-
7	Tripura	2	33.37	26.10	78.21%	-
8	NERPC	2	24.5	21.91	89.42	2
	<b>Total proposals</b>	<b>23</b>	<b>712.70</b>	<b>419.90</b>	<b>58.91%</b>	<b>4</b>

The following Schemes of NER are delayed and may be expedited. The status of the same may also be communicated to NPC, Division , CEA (cenpccea@gmail.com):

<b>S. N o.</b>	<b>Name of State/Entity</b>	<b>Name of Entity</b>	<b>Name of Scheme and Unique ID No</b>	<b>Grant Approved (Rs. Cr)</b>	<b>Date of 1<sup>st</sup> Instalment Released</b>	<b>Proposed Completion date as per sanction order</b>	<b>Grant Disbursed (Rs. Cr)</b>	<b>% of Grant disbursed</b>
1	Assam	AEGCL	R&U of protection system. (11)	299.37	31-Mar-16	30-Sep-17	149.87	50.06 %
2	Assam	AEGCL	Installation of BCU. (47)	53.52	25-Nov-16	25-May-18	24.63	46.02 %
3	Manipur	Manipur SLDC	33kV system Integration with SLDC system in Manipur. (093)	13.37	27-Mar-18	27-Sep-19	1.34	10.02 %
4	Manipur	Manipur MSPCL	Implementation of Automatic Demand Management proposal (ADMS) Pilot Projects at Three Power Substation in Manipur(140)	2.24	1-Jan-20	1-Oct-20	1.25	55.63 %
5	Manipur	Manipur MSPCL	Implementation of Reliable Communication and data Acquisition system upto 132kV substations in Manipur. (152)	4.08	25-May-18	25-Nov-19	0.408	10.00 %

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6	Manipur	MSPCL	Installation of Reactive Power Solution on 33/11kV Substation in Manipur. (204)	21.77	26-Aug-20	1-Oct-20	2.177	10.00 %
7	Meghalaya	MePTCL	Replacement of the 400kV, Bus Reator at 400/220/132kV Substations, Killing, Meghalaya. (199)	6.86	-	-	-	-
8	Nagaland	DOP	R&U of protection system	39.96	15-Mar-16	15-Sep-17	32.90	82.33 %
9	Tripura	TSECL	Implementation of Automatic Demand Management System (ADMS) in Tripura. (226)	2.32	-	-	-	-

***NERPC may please elaborate.***

**AGENDA ITEMS FROM OTPC:**

**D.10 Proposed Capital Expenditure for Palatana GBPP:**

As a prudent power plant operator, OTPC has been trying to maintain an uninterrupted power supply from Palatana Plant to the beneficiary States. To maintain this uninterrupted power supply to the states, OTPC has submitted to Hon'ble CERC to allow additional expenditure on the following preventive works to be undertaken for the Palatana plant machines. The expenses to be undertaken are listed in table as below.

OTPC team has been facing several geographical constraints in repairing of its machines at Palatana as procurement and maintenance of damaged parts at a short notice is a challenge due to the remote location of the plant. The geographical constraints are beyond the control of OTPC and unforeseen/unpredictable events may occur at any time, causing technological and machine failures at Palatana plant. Thus, acting as a prudent power plant operator is required by OTPC to necessarily invest in technological advancements that can help in early identification of the issues and accordingly prevent the machine failures through preventive maintenance.

<b>S.N</b>	<b>Description</b>	<b>Estimated Amount (Rs. In Lacs)</b>
1	Feed to GBC from 400 kV Transformer	75.00
2	Online GTG Rotor Flux Monitoring	150.00
3	Change of Obsolete Relays at OTPC Plant Switchyard	30.00
4	Replacement of Sodium Lights with LED Lights at Palatana Premises	30.00
5	GTG Rotor	1,382.00

<b>S.N</b>	<b>Description</b>	<b>Estimated Amount (Rs. In Lacs)</b>
6	Compressor Enhancement Package	4,380.64
7	Online Condition Monitoring of Transformers/Reactors	250.00
8	Upgradation of DCS and MARK-6 Software	2562.00

Details of each expenditure attached at **Annexure-D.10**.

It is humbly submitted to the OCC Forum of NERPC that OTPC is undertaking all the above expenses to improve the reliability and availability of the plant and the OCC forum is therefore requested to kindly provide their consent for the above works in the best interest of Palatana Plant of OTPC and the Beneficiary States.

***OTPC may please deliberate.***

**D.11 Reconciliation of ZCV:**

OTPC was charged ZCV in following week...

- 13<sup>th</sup> July 2020 to 19<sup>th</sup> July 20 ” OTPC was charged Rs 2682/- for one ZCV violation on dated 15<sup>th</sup> July 2020. On 15<sup>th</sup> July 2020 OTPC Palatana Block-2 was tripped due tripping of GT-2 on loss of flame.
- “DSM Report from 27.07.2020 to 09.08.2020 (2Weeks)” OTPC was charged Rs 7390/- for one ZCV violation on dated 5<sup>th</sup> Aug 2020. On 5<sup>th</sup> Aug 2020 OTPC Palatana Block-1 was tripped due tripping of GT-1 on “Exhaust Temp High”.
- “DSM Report from 31.08.2020 to 06.09.2020, OTPC was charged Rs 21,056/- for one ZCV violation on dated 2<sup>nd</sup> Sept 2020. On 2<sup>nd</sup> Sept 2020 at 00:07 Hrs OTPC Palatana Block-1 was tripped due tripping of GT-1 on “loss of Flame”.

Kindly refer proviso of clause 4.5 of DSM 5th Amendment,

Quote

“Provided also that payment of additional charge for failure to adhere to sign change requirement as specified under clauses (a) & (b) of this regulation shall not be applicable to:

- a. renewable energy generators which are regional entities
- b. run of river projects without pondage
- c. any infirm injection of power by a generating station prior to CoD of a unit during testing and commissioning activities, in accordance with the Connectivity Regulations.
- d. any drawal of power by a generating station for the start-up activities of a unit.
- e. any inter-regional deviations.
- f. forced outage of a generating station in case of collective transactions on Power Exchanges.” Unquote

OTPC is falling under point d. and f. of proviso of clause 4.5 of DSM 5th Amendment, and additional charges for ZCV may not applicable to OTPC. Mail communication in this regard sent to NERLDC and NERPC.

In the view of above it is our humble request to kindly review the ZCV charges of mentioned period, and issue necessary guideline .

***OTPC may please deliberate.***

**AGENDA ITEMS FROM NERLDC:**

**D.12 Utilization of Transfer Bus and Bus Coupler Breaker during rectification of Main Circuit Breaker of 132 kV Dimapur-Doyang line 2 on 5th October'20:**

The emergency shutdown of 132 kV Dimapur-Doyang line 2 was availed by Doyang HEP from 22:30 Hrs of 05/10/2020 to 12:00 hrs of 06/10/2020 for attending to leakage in main CB of the said line. Shutdown of the line for availing outage of CB could have been avoided by utilizing the Bus Coupler Breaker for protection of the line during the unavailability of the main CB. Hence, necessary action is to taken to utilize the Bus Coupler Breaker at Doyang HEP for avoiding unwanted outage of lines. NERLDC vide letter no. NERLDC/S.O.-1/NEEPCO/DHEP/2020/28 dated 06-10-2020 had expressed the above mentioned concerns to Doyang HEP (NEEPCO).

***NERLDC may please deliberate.***

**D.13 Ensuring reliability of 132 kV Palatana-Surajmani Nagar 1 line :**

Tripping of 132 kV Palatana-Surajmani Nagar 1 line was observed several times due to operation of overreaching protection (Z-2/Z-3) for fault in Tripura system. Recently, same was observed during grid disturbance in Tripura Power System on 14.08.20 & 31.08.20.

NERLDC vide its letter dated 01.10.19 suggested few solutions in this regard and accordingly NERPC vide letter NERPC/Protection/ 5653-5655 dated 04.10.19 suggested TSECL to implement the same to avoid unwanted tripping of the line during upcoming festive season in Tripura state. As the festive season is approaching in Tripura, it is requested to attend the issue at the earliest as unwanted tripping of 132 kV Palatana-Surajmani Nagar disconnects Bangladesh load (as per SPS) and poses severe threat to reliability of the Tripura Power System.

***NERLDC may please deliberate.***

**D.14 Furnishing of data sheet on daily basis for preparation of daily PSP report:**

In compliance to Regulation 5.5.1 (b) of IEGC 2010, NERLDC is preparing Daily Power Supply Position (PSP) report pertaining to NER. Most of the NER constituents are furnishing the data required for preparation of PSP report in formats agreed in 148th OCC Meeting on Sept.'18, apart from the following:

- (i) Manipur
- (ii) Mizoram
- (iii) Nagaland
- (iv) Arunachal Pradesh
- (v) Pare HEP
- (vi) Kameng HEP
- (vii) BGTTPP\*

\*Data is being received but format is required to be changed as agreed in 148<sup>th</sup> OCCM.

All the above-mentioned constituents are requested to furnish the data for PSP report as per the formats circulated by NERLDC.

***NERLDC may please deliberate.***

### **Metering Agenda**

#### **D.15 SEMs to be Procured**

In 170<sup>th</sup> OCCM NERTS informed that Procurement of 100 SEMs and 20 DCDs have been completed.

Quantity variation order for procurement of 50 more SEMs has been given to mitigate the requirement of new Sterlite & KMTL projects

***NERTS may please inform the status.***

#### **D.16 SEM time drift:**

In 170<sup>th</sup> OCCM NERTS informed that they would try to replace the SEMs as listed in 170<sup>th</sup> OCC Meeting by Sep'20 but due to restricted movement, pace of works has been severely hampered. Director (Comml.), NERPC requested NERTS to study and table exhaustive report in the OCC forum for quick resolution of time drift issues.

***NERTS may please inform the status.***

#### **D.17 Integration of SEMs with laptop/PC for data downloading:**

Decisions as per deliberation in the previous OCC forum:

- i. Implementation of RS-485 scheme for data downloading in one station preferably a generating station
- ii. If trial operation is successful then the scheme is to be extended to all stations where SEM quantity is greater than 10.
- iii. Trial/Pilot to be set up at OTPC Palatana.
- iv. OEM support to be sought by NERTS.

***NERTS may please inform the status.***

#### **D.18 Second Meter List for replacement:**

In 170<sup>th</sup> OCCM NERLDC presented a second list of 29 SEMs (in addition to first list of 22 SEMs approved in 169<sup>th</sup> OCC Meeting) consisting of 25 Elster make SEMs & 4 defective SEMs. NERLDC requested to replace all the Elster make SEMs as procurement of same was blacklisted in 2015 and vendor support is not available.

***NERTS may please inform the status.***

#### **D.19 New Meter and CMRI requirement:**

In 170<sup>th</sup> OCCM NERLDC submitted a list of requirements of SEM and CMRI for new locations. It was agreed that meters will be installed in new locations where check/backup meters are not available, and DCD will be provided from the recent procurement. Also, NERTS will give the details of meter requirement for their substation from where they draw power for aux. consumption and will install the meters (as decided in 39<sup>th</sup> CCM).

***NERTS may please inform the status.***

**D.20 SEM data collecting Laptop related issues:**

In 170<sup>th</sup> OCCM NERLDC presented the details collected from sites related to problem faced at sites regarding use of laptops, time drift correction problems with DCD etc.

After detailed discussion, it is decided that Laptops will be used for data collection only and time drift correction provision in the software will be kept disabled for safety of the meters. Time drift correction must be done through DCD. The required new DCD will be procured for the sites.

NERTS will resolve all the issues related to laptops which is under warranty period. The life span of laptop was decided as 5 years from the date of procurement. Post warranty period the maintenance of laptop shall be undertaken by the constituents. NERLDC will provide the details of requirement of new DCD after co-ordinating with the SLDC/Sites.

***NERTS may please inform the status.***

**D.21 Procurement of SEM & DCD/Laptop for future requirements:**

In 170<sup>th</sup> OCCM NERLDC presented the estimation 125 nos. SEMs and 15 nos. CMRIs shall be required for future projects and maintaining spare. List of SEMs and CMRIs was presented by NERLDC.

Regarding procurement of meter, the issue of black listing of M/s Elster was discussed and NERLDC highlighted various problem in Elster make meters. In view of this, the Forum already decided to replace all existing Elster meters. It was also mentioned by all utilities that L&T meters has been working well since numbers of year. There has been a plan to make RS-485 scheme with L&T meters in a location for which meter of one make is preferable. Also, DCD spread over the region are compatible with L&T meters and laptops distributed are loaded with L&T software.

In view of all above, Forum decided that procurement will be done on single tender basis from L&T to synchronize with the existing metering system.

**\*\*DCD REQUIREMENT**

Substation	State	New DCD Requirement	Final Requirement to be filled
Lekhi	Ar. Pradesh	Y	
Deomali	Ar. Pradesh	Data Not Sent*	
Agia	Assam	Y	
Azara	Assam	Y	
Sarusajai	Assam	Y	
Old Marani	Assam	Y	
Pailapool	Assam	Y	
Hailakandi	Assam	Y	
Btps	Assam	Y	
Kahilipara	Assam	Y	
Rangia	Assam	Y	
Gohpur	Assam	Y	
Tinsukia	Assam	Y	
Dullavchera	Assam	Y	

Agenda for 171<sup>st</sup> OCC Meeting to be held on 16<sup>th</sup> October, 2020

Pavoi	Assam	Y	
Srikona	Assam	Y	
Panchgram	Assam	Y	
Bokajan	Assam	Y	
Yurembam	Manipur	Y	
Umtru	Meghalaya	Y	
Khlieriat Meg	Meghalaya	Y	
Lumshnong	Meghalaya	Y	
Dimapur Ng	Nagaland	Y	
Imphal PG	Powergrid	Y	
Jiribam PG	Powergrid	Y	
Dimapur PG	Powergrid	Y	
Agartala	Tripura	Information Not Provided*	
Dharmanagar	Tripura	Data Sent By Powegrid*	
Surjamani Nagar	Tripura	Information Not Provided*	
Udaipur	Tripura	Data Not Sent*	
Pk Bari	Tripura	Data Sent By Powegrid*	

\*Other Substations included in this List may be discussed for the Requirement of New DCD

New Location Requirement as decided in 170th OCCM = 6

Total Requirement of DCDas reported by SLDC = 25

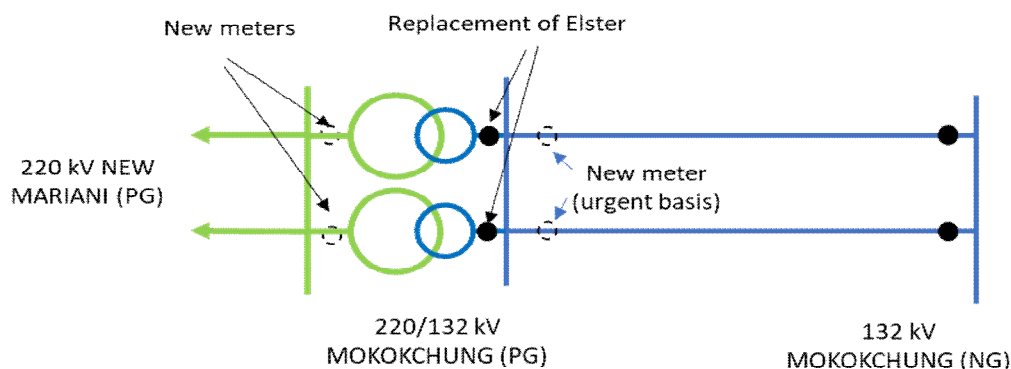
Number of Newly Procured DCD = 20

Distribution from Newly Procured 20 Nos. DCD may be Finalised

***NERLDC may please deliberate.***

**D.22 Replacement/Installation of new SEM at Mokokchung sub-station:**

Replacement/ New installation of SEM at Mokokchung-PG Substation shall be done as per the diagram below:



***NERLDC may please deliberate.***

**D.23 Sign Reversal Problem:**

Sign reversal problem is persisting in the following lines:

- a. Imphal (Man) end (NP-9544-A) of 132 kV Imphal (Man) - Imphal (PG) -I. Reported as per intimation received from Manipur SLDC and comparing with SCADA data.
- b. Karong end (NP-9667-A) of 132 kV Karong - Kohima line. Also, Kohima end of 132 kV Karong - Kohima line reads appx. 20-25% less than that of Karong end.

Matter was discussed in 170<sup>th</sup> OCCM (D-19 of MoM) and it was decided that Nagaland will explore different CT core for SEM connection as there is no error with SCADA data.

***Members may please discuss.***

**Any other item:**

**Date and Venue of next OCC**

**Annexure-1**

List of Organizations / Entities / STUs considered for M&amp;S for PSSE Licenses.

Sl. No.	State transmission Utilities	Licenses considered	Dongle No
1	Power Grid Corporation of India Ltd.	35	16261, 16706, 17260 16262, 16708, 17264 16263, 16711, 17265 16287, 16712, 17277 16314, 16713, 17279 16315, 16714, 17281 16316, 16736, 17283 16621, 16737, 17288 16622, 16738, 17307 16623, 17210, 17309 16624, 17232, 17320 16690, 17248
2	Central Electricity Authority	11	16641, 16642, 16643, 16644, 16645, 16646, 16647, 16648, 16649, 16650, 17274,
3	Central Electricity Regulatory Commission	2	16606, 16607
4	Eastern Region Power Committee	2	16298, 17302
5	North Regional Power Committee	2	16320, 17208
6	North-Eastern Regional Power Committee	2	16280, 17265
7	Southern Regional Power Committee	2	16348, 17270
8	Western Regional Power Committee	2	16256, 17189
9	AP Transco	2	16344, 16345
10	Bhakra Beas Management Board	2	16338, 16339
11	Damodar Valley Corporation	2	16292, 16293
12	Delhi Transco Ltd	2	16324, 16325
13	Government of Arunachal Pradesh	2	16285, 16286
14	Government of Nagaland	2	16268, 16269
15	Government of Sikkim	2	16719, 16720
16	Gujrat Energy Transmission Company Limited	2	16259, 16260
17	HP Power Transmission Company Ltd	2	16317, 16318
18	Jharkhand State Electricity Board	2	16299, 16300
19	Karnataka State Power Transmission Corporation. Ltd.	2	16353, 16354
20	Kerala State Electricity Board	2	16340, 16341
21	Meghalaya Energy Corporation Ltd	2	16276, 16277
22	Odisha Power Transmission Company Ltd	2	16681, 16682

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Support of Power System Analysis Software (PSS/E) from SIEMENS.

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23	Power Transmission Corporation Uttaranchal Ltd	2	16470, 16472
24	Punjab State Transmission Company Ltd	2	16332, 16333
25	Rajasthan Rajya Vidyut Prasaran Nigam Ltd.	2	16334, 16335
26	Union Territory Chandigarh	2	16585, 16586
27	Union Territory Dadar & Nagar Haveli	2	16674, 16675
28	Uttar Pradesh Power Transmission Company Ltd	2	16319, 16321
29	West Bengal State Electricity Company Ltd	2	16296, 16297
30	Assam Electricity Grid Corporation Ltd	2	16274, 16275
31	Bihar State Power Transmission Company Ltd	2	16294, 16295
32	Chhattisgarh State Power Transmission Company Ltd	2	16671, 16672
33	Government of Goa	2	16264, 16265
34	Government of Manipur	2	16272, 16273
35	Government of Mizoram	2	16356, 16357
36	Government of Puducherry	2	16342, 16343
37	Haryana Vidyut Prasaran Nigam Ltd	2	16322, 16323
38	Union Territory of Jammu & Kashmir	2	16336, 16337
39	Madhya Pradesh Power Transmission Company Ltd	2	16250, 16251
40	Maharashtra State Electricity Transmission Company Ltd	2	16248, 16249
41	Tamil Nadu Transmission Corporation Ltd	2	16346, 16347
42	Tripura State Electricity Corporation Ltd	2	16270, 16271
43	Union Territory of Daman & Diu	2	16257, 16258
	<b>Total Licenses</b>	<b>128</b>	

Note: The above dongle numbers are as per Siemens record as per the distribution in 2012/13 under the referred contract dated 12.08.2012. In case of any changes in dongle numbers, the same shall be re-validated by SIEMENS without any cost liability, however number of licenses per entity for M&S renewal remains same.

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Record Notes of Discussions in respect of Procurement of Maintenance &  
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The details of the expenses undertaken are as below:

1. **Feed to GBC from 400 kV Bus:** Presently power supply to GBC is done through 132 kV Bus. In case of any tripping in ICT as well as due to any tripping in Tripura System, the power supply to GBC is interrupted leading to the tripping of the Palatana Plant. As such, OTPC is proposing to arrange power supply to the GBC from 400 kV Bus with an estimated cost of Rs. 75 Lakhs.
  
2. **Online GTG Rotor Flux Monitoring system:** Palatana station was affected by a rotor fault recently which led to outage of one unit for an extended period of time. Transportation and repair from the remote location posed great challenge for OTPC to bring the machine back in operation at the earliest. To avoid recurrence of such faults and to continuously monitor the health of the Rotor, OTPC is proposing to install this system at an estimated cost of Rs. 150 Lakhs to enable OTPC to prevent any such eventuality in future.
  
3. **Compressor Enhancement Package:**
  - i) There are several instances of precedence of issues in the 9FA machines pertaining to the R0 blades, compressor stall, shim migration for stator vanes/blades and corrosion pitting and failure of other downstream blades. Such failures have also been observed in Dabhol project (now RGPPL operated by NTPC, “**Dabhol Plant**”) wherein three gas turbines had catastrophic failure due to failure of compressor blades and in Pragati Power Plant at Bawana (“**Bawana Plant**”) wherein there had been a major failure in one of the gas turbines. On account of the problems arising in the 9FA machines, power stations have accordingly adopted mitigation measures to avoid the same. For instance, in 2017 Bawana Gas Power Plant installed compressor enhancement packages in two of its gas turbines to avoid such failures.
  - ii) During the Borescope inspection in the compressor of OTPC Plant it was observed that there are dents on several blades of three rows. Further, some deposits were also observed on various downstream blades of the rotor & stator. This is likely to lead to collateral damages to other compressor blades, turbine buckets / nozzles etc. OTPC has currently grinded the blades to minimize damages since rotor repair at

site is not feasible. However, the operations cannot be sustained for a longer period and may result in a major outage of the OTPC Plant.

iii) Therefore, in view of importance of reliability in operations for this station and geographical constraints which leads to delay in rectification work, OTPC plans to install the Compressor Enhancement Package to avoid such failures in future. The overall expenditure on the installation of the Compressor Enhancement Package is INR 4,380.64 Lakhs which will be undertaken in a phased manner i.e. during FY 2020-21 to FY 2022-23.

#### **4) Online Condition Monitoring of Transformers/Reactors:**

Similarly OTPC is proposing to undertake expenses on online condition monitoring system to prevent any possible breakdown in the transformers and reactors at the plant and result in outage of the plant. The critical operational parameters monitored by the Transformer / Reactor online condition monitoring system are as below:

- a. Dissolved Gas Analysis for 09 gasses (DGA Report),
- b. Breakdown Voltage (BDV) of insulating Oil,
- c. Top/Partial Discharge of HV Bushing and Main Tank,
- d. Bottom Tank and OLTC Oil Temperature,
- e. Winding and Bushing Tan Delta and Capacitance value, and
- f. Oil Moisture (ppm) Content value.

In the event any fault is detected in the Transformer, the online condition monitoring system will give early warnings for undertaking corrective actions on the same and can save the transformer from any potential breakdown. It is hence proposed to install the system at Palatana plant at an estimated cost of Rs. 250 Lakhs.

#### **5) Change of Obsolete Relays at OTPC Plant Switchyard:**

OTPC is also proposing to replace obsolete 30 series relays to 40 series relays at the switchyard of the OTPC Plant. It is submitted that 30 series relays are an old and obsolete model and the OEM doesn't support its service. Settings cannot be changed in 30 series relays due to firm wire conflict and settings are polygon type. 30 series

relays don't have PSL facility and there is communication issue in all the installed 04 relays. Hence the 30 series relays face both O&M issues and &defectivity issues. Thus, it is proposed to replace the 30 series relays by 40 series relays which have excellent fault detection. It is submitted that the replacement of the 30 series relays by the 40 series relays will substantially improve the reliability and efficiency of the OTPC Plant and will also prevent any breakdowns which is likely to happen on account of the obsolete equipment in the switchyard. It is submitted that an expenditure of INR30.00 Lakhs is expected in the installation of the 40 series relays.

#### **6. Replacement of Sodium Lights with LED Lights at Palatana Premises:**

OTPC is envisaging a complete replacement of all the sodium lights at the plant premises to LED lights in line with the energy efficiency and energy saving measures being promoted by the Government of India. It is proposed to replace the Sodium Lights with LED in the Palatana Premises at an estimated cost of Rs. 30.00 Lakhs as per Government Guidelines for Energy Efficiency and Energy Savings.

#### **7) GTG Rotor**

It is known to all the beneficiaries that due to the damage of J-Strap of GTG Rotor of Unit -1 of Palatana, the Unit was under shutdown for 6 Months and could not supply power to the beneficiaries. Opening the rotor at plant site itself posed challenges and could have lead to ingress of dust in critical components. Further, given the constraints at the site related to non-availability of tools and tackles, the rotor had to be taken the Sanand facility of GE for repairs. There was substantial generation loss for OTPC due to the rotor fault and the beneficiaries were also affected by unavailability of the unit at Palatana. The rotor repair too had taken an extended period of time due to remote location of the plant and various transportation problems.

OTPC had also engaged the services of an expert who suggested that to deal with any such eventuality in future and due to transportation problems involved in rectification of such faults, it is advisable that OTPC may keep a spare rotor at hand. OTPC is hence proposing to procure a spare Rotor at an estimated cost of Rs. 1382.00 Lakhs.

## **8) Upgradation of DCS and MARK-6 Software :**

The Control system plays a critical role in power plant operations. Operating the power plant on an obsolete software with no system support makes the plant vulnerable to potential operational issues and cyber threats which may lead to possible generation loss. Presently, OTPC has two control systems (MAXDNA and MARK-VI) and both systems are operating on Windows XP operating software (OS). The Windows XP OS got obsolete since 2009 and the extended support for the software also got expired in 2014. Further, the Ministry of Power (GOI) has issued Guidelines dated 9<sup>th</sup> October, 2018 for power sector entities to take preventive measures for Mitigation of risks arising out of Cyber Security Threats.

Considering the above aspects, OTPC is proposing to undertake capital expenditure to upgrade its operating system with a likely expense of Rs 2562 Lakhs.

It is humbly submitted to the OCC Forum of NERPC that OTPC is undertaking all the above expenses to improve the reliability and availability of the plant and the OCC forum is therefore requested to kindly provide their consent for the above works in the best interest of Palatana Plant of OTPC and the Beneficiary States.