

**North Eastern Regional Power Committee**  
**Agenda For**

**156<sup>th</sup> OCC Sub-Committee Meeting**

Time of meeting : 10:00 Hrs.

Date of meeting : 15<sup>th</sup> May, 2019 (Wednesday)

Venue : "Hotel Nandan", Guwahati.

<b>A. CONFIRMATION OF MINUTES</b>
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**CONFIRMATION OF MINUTES OF 155<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

The minutes of 155<sup>th</sup> meeting of Operation Sub-committee held on 10<sup>th</sup> April, 2019 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 22<sup>nd</sup> April, 2019.

OTPC vide mail dated. 04.05.2019 has requested for the following amendments:

**C. 16 Reactive power capability/injection of generating stations:**

The following response of OTPC may please be added:

OTPC informed to forum that OTPC generators are varying the MVAR as per the Grid voltage requirement and the data for the same was submitted by OTPC; however as per NERLDC; OTPC generators are absorbing very less MVAR during High voltage. OTPC also informed that OTPC EMD team working on it and in consultation with OEM, OTPC also inform that OTPC is planning to reduce the TAP position of its Gas Turbine generation transformers.

**C. 17 Metering Status Review:**

OTPC raised the requirement of SEM for OTPC, OTPC representative again forwarded the mail communication done by Mr. Mitangshu on 15<sup>th</sup> March 19.

**D.4 RGMO performance analysis of events:**

**OTPC Response:** OTPC informed to forum that OTPC generators are responding well during frequency transients and data for the same was submitted by OTPC previously, However OTPC is keeping his stand on the issue same as given in previous OCC (154<sup>th</sup> OCC).

NERLDC vide mail dated. 07.05.2019 has requested for the following modifications:

**C.4. Extended C Band VSAT for power system communications in NER:**

In deliberation of the sub-Committee, first sentence "CGM, NERLDC informed that the pilot project has been awarded to M/s KPTCL and is slated for completion in May'2019" may please be replaced as below:

"After detailed deliberation in 155<sup>th</sup> OCC meeting, the OCC decided that since the project was a pilot one, the order may be given to M/s KPTCL. Accordingly, CGM-NERLDC was requested to convey the same to M/S KPTCL".

***The Sub-committee may confirm the minutes of 155<sup>th</sup> OCCM of NERPC with the above amendments as no other comments/observations were received from the constituents.***

**ACTION TAKEN -ITEMS**

**B.1. ACTION TAKEN:**

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

The status as informed in 155<sup>th</sup> OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Could not be updated due to absence of DoP Ar. Pradesh representative	Tender to be published by April'19	-	TESG queries submitted.	-
Nagaland	Could not be updated due to absence of DoP Nagaland representative		To re-submit proposal to NERPC for Study.	TESG queries <b>to be submitted.</b>	Lines identified. Under DPR preparation stage.
Mizoram	Could not be updated due to absence of P&ED Mizoram representative		To re-submit proposal to NERPC for Study.	TESG queries submitted.	Lines not yet identified. To be taken up in Sub-group.
Manipur	LOAs issued. Completion by Jun'19.		Submitted to NERPC for Study before sending to NPC/NLDC.	TESG queries <b>to be submitted.</b>	Lines not yet identified. To be taken up in Sub-group.
Tripura	90% completed. Remaining by May'19		To submit proposal to NERPC for Study.	TESG queries submitted.	Lines not yet identified. To be taken up in Sub-group.
Assam	LOAs issued. Completion by Jun'19.		-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL LOAs issued. Completion by Jun'19. MePGCL - Erection complete by Mar'19		-	Appraisal Committee approved.	DPR already submitted and awaited approval.

The entities may also be advised to furnish 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.***

**2. Long Outage of Important Grid Elements:**

Name of the Element	Name of Utility	Status as informed in 155 <sup>th</sup> OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	NERPC will write to CEA for inclusion in NERSCT's MoM.	
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	The completion schedule can only be provided once the ROW issue of Kohima portion is resolved by Nagaland.	
220kV Sonabil-Samaguri-I	AEGCL	LOA by March, 2019	
420kV 63 MVAR Line Reactor at 400 kV Bongaigaon S/S for 400kV Bongaigaon- Azara( out since Nov'18)	NERTS	Testing of Reactor is completed. Clearance from OEM is awaited. Expected to be charged by 15th April'19	

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

**3. Submission of various data pertaining to reliable operation of the grid:**

Details of the data required	Name of Utility	Status of submission as per 155 <sup>th</sup> OCC	Latest status
Primary response testing of generators: The make, vintage, kind of governor and whether facility for simulated signal input to governor is there or not	NTPC, NHPC	By 30 <sup>th</sup> April, 2019	
Data for Wind Turbine Generator	All SLDCs	By 30 <sup>th</sup> April, 2019	

**B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING APRIL, 2019**

As per the data made available by NERLDC, the grid performance parameters for April, 2019 are given below:

**NER PERFORMANCE DURING APRIL, 2019**

States	Energy Met (MU)		w.r.t. Mar, 19 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Mar, 19 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Apr, 19
	Apr-19	Mar-19		Apr-19	Mar-19		
Ar. Pradesh	66.12	60.49	9.31	66.47	60.87	9.20	-0.53
Assam	708.86	656.48	7.98	766.33	679.52	12.78	-7.50
Manipur	66.84	67.51	-0.99	67.86	68.13	-0.40	-1.50
Meghalaya	159.74	172.78	-7.55	169.77	173.24	-2.00	-5.91
Mizoram	53.14	49.37	7.64	53.58	49.80	7.59	-0.82
Nagaland	53.71	57.29	-6.25	54.16	58.48	-7.39	-0.83
Tripura	120.04	89.94	33.47	121.50	90.25	34.63	-1.20
<b>Region</b>	<b>1228.44</b>	<b>1153.87</b>	<b>6.46</b>	<b>1299.66</b>	<b>1180.30</b>	<b>10.11</b>	<b>-5.48</b>

States	Demand Met (MW)		w.r.t. Mar, 19 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Mar, 19 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Apr, 19
	Apr-19	Mar-19		Apr-19	Mar-19		
Ar. Pradesh	136	131	3.82	139	133	4.51	-2.16
Assam	1667	1508	10.54	1712	1539	11.24	-2.63
Manipur	188	199	-5.53	197	204	-3.43	-4.57
Meghalaya	337	357	-5.60	336	357	-5.88	0.30
Mizoram	113	105	7.62	116	108	7.41	-2.59
Nagaland	131	125	4.80	157	127	23.62	-16.56
Tripura	291	249	16.87	292	249	17.27	-0.34
<b>Region</b>	<b>2780</b>	<b>2535</b>	<b>9.66</b>	<b>2848</b>	<b>2540</b>	<b>12.13</b>	<b>-2.39</b>

**REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU**

**AVERAGE FREQUENCY (Hz)**

Month---->	Apr-19	Mar-19
Total Generation in NER (Gross)	1292.409	1240.164
Total Central Sector Generation (Gross)	1022.260	977.118
Total State Sector Generation (Gross)	270.149	263.046
<b>Inter-Regional Energy Exchange</b>		
(a) NER-ER	<b>369.78</b>	<b>312.59</b>
(b) ER-NER	<b>12.19</b>	<b>5.13</b>
(c) NER-NR	<b>0.00</b>	<b>0.00</b>
(d) NR-NER	<b>433.00</b>	<b>381.85</b>
© Net Import	75.41	74.39

Month---->	Apr-19	Mar-19
	% of Time	% of Time
Below 49.9 Hz	7.48	7.23
Between 49.9 to 50.05 Hz	74.66	70.92
Above 50.05 Hz	19.99	21.85
Average	50.00	50.00
Maximum	50.29	50.26
Minimum	49.65	49.68

**C. ITEMS- STATUS REVIEW**

**1. Status of Generating Units, Transmission Lines in NER:**

During 156<sup>th</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 155 <sup>th</sup> OCC Meeting		Status as given in 156 <sup>th</sup> OCC Meeting	
		Timeline for completion	Furnishing of detail parameters	Timeline for completion	Furnishing of detail parameters
<b>a. New elements</b>					
1	250 MW BgTPP Unit #III	DoCO on 26.03.2019	To be submitted to NERLDC.		
2	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	By Apr'19	To be submitted to NERLDC.		
3	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	By July'19	Already submitted.		
4	132kV Monarchak – Surjamaninagar D/C of TSECL	by Jun'19	To be submitted to NERLDC.		
5	220/132 kV, 160MVA ICT-II at Balipara	Apr'19	To be submitted to NERLDC.		
6	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Apr'19	To be submitted to NERLDC.		
7	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	To be taken up with MePDCL. SLDC to kindly meditate.	Not applicable.		
8	Replacement of 315 MVA ICT-II with 500 MVA ICT at Misa (PG)	ICT – II Expected by June'19	ICT-I submitted		
9	220kV Balipara-Sonabil-2	AEGCL will intimate the status in next OCC Meeting	-		

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10	Bay at Agia S/S for 132kV Agia-Nangalbibra Ckt#II by AEGCL	LOA by May'19	To be submitted to NERLDC.		
<b>b. Elements under breakdown/upgradation</b>					
10	Up-gradation of 132 kV Lumshnong-Panchgram line	DPR sent to NLDC/NPC	Not applicable.		
11	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	May'19	Not applicable.		
12	Replacement of CTs and installation of Bus Bar Protection at 220 kV Misa	Expected Completion : Apr'19	Not applicable		
13	Upgradation of 132 kV Bus Bar at Umiam Stg-III to ACSR Zebra	DPR will be submitted soon.	Not applicable		
14	220/132 kV 30 MVA ICT at Mokokchung	Mar'19(LOA date) to be reviewed later on.	To be submitted to NERLDC		

***Concerned constituents may kindly intimate the status.***

**C.2. Update on Real Time Energy Assessment for Effective Grid Management:**

In 155<sup>th</sup> OCC meeting, the following were decided:

- CDAC to complete installation of TARA devices for replaced SEMs by 30.04.2019.
- Integration of WBES schedule & SMS alert app to be deployed by CDAC by April'19

***NERPC/CDAC may please update the status.***

**C.3. Ensuring proper functioning of Under Frequency Relays(UFR) & df/dt Relays:**

In 7<sup>th</sup> NPC meeting held on 08.09.17 it was agreed that mock test is good enough to test the healthiness of the UFR & df/dt relays. The frequency of site inspection was proposed to be upto six months. RPC may carry out periodic inspection, in line with provisions of IEGC and furnish inspection reports to NPC.

Discussions as per previous meetings:-

- Inspection for Mawphlang completed.
- Inspection for Baghjap, Sankardevnagar and Sipajhar under Assam would be tentatively done by Apr'19.

UFR inspection and testing was carried out for 132kV Sankardevnagar on 29.04.19 and for 132kV Rangia and 132kV Rowta on 30.04.19.

In the next stage UFR inspection may be done for Tripura in the following locations:

i) Badarghat ii) Rabindranagar iii) 79Tilla.

***Members may please discuss.***

#### **C.4. Extended C Band VSAT for power system communications in NER:**

The 155<sup>th</sup> OCCM decided that since the project was a pilot one, the order may be given to M/s KPTCL. Accordingly, CGM-NERLDC was requested to convey the same to M/S KPTCL

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

#### **C.5. DIMAPUR PG telemetry out since Feb'18.**

In 155<sup>th</sup> OCCM NERTS informed that voice communication is available at the moment and telemetry would be made available by July'2019.

***NERTS may please update the latest status.***

#### **C.6 Update on PDMS:**

As per deliberation in the previous meeting(s) the following status/decisions:-

- SAT for Assam system from 06<sup>th</sup> May, 2019 to 10<sup>th</sup> May, 2019.
- One representative from each of the states and NEEPCO, NERTS, NERLDC and NERPC.
- Operational load flow feedback to be given by the SLDCs and NERLDC by 30.04.19.

***NERPC/PRDC may please update the status.***

#### **C.7 Non-availability/ Non-functioning of synchronization facility at numerous stations**

As per deliberations in the previous meetings the following is the status for synchronization facility at stations of different utilities:

- AEGCL – Sync check not available for 132kV stations. Procurement of synchronizing trolley and associated equipments(sockets etc.) to be completed. LOA date to be intimated by AEGCL. ***AEGCL status*** - Tender in May'19
- DoP Ar. Pradesh – Sync check not available at Lekhi and Chimpu. Would be in place by Sep'19. ***DoP Ar. Pradesh no representative.***

***NERLDC/NERTS/AEGCL/DoP Ar. Pradesh may please update the status***

**C.8 Phase shift errors in PMU:**

In 155<sup>th</sup> OCCM Director, NERPC informed that in the Sub-group meeting held on 05.04.19, it was agreed that the matrix of phase comparison for each of the stations vs Bongaigaon will be prepared by NERLDC. NERLDC informed that work is underway and would be completed by April'19.

***NERLDC may please update the status.***

**C.9 Compensation for Heat Rate degradation and Auxiliary Energy Consumption in case of gas based power plants:**

In 154<sup>th</sup> OCCM it was decided that a Special Meeting would be convened prior to discuss the Heat Rate Degradation and Compensation Calculation for Thermal Power Plants.

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

**C.10 Operation of RHEP units in Synchronous condenser mode**

In 155<sup>th</sup> OCCM, Sr. Manager, NEEPCO informed that there has been no response from BHEL in this regard. He requested NERPC to intervene in the matter with BHEL. Member Secretary assured that the matter would be taken up strongly with BHEL through CEA.

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

**C. 13 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019**

In 155<sup>th</sup> OCCM the mock black start schedule was agreed as below:

AGTCCPP completed

LOKTAK to be decided

Khandong 07-05-19

KOPILI 06-05-19

RHEP 1<sup>st</sup> week of June'19

DOYANG 2<sup>nd</sup> week of June'19

***NEEPCO/NHPC may please intimate the status.***

**C. 14 DVAR and PSS at AGTCCPP:**

In 155<sup>th</sup> OCCM Sr. Manager, NEEPCO informed that AGTCCPP Unit#4 would be returned by the end of April'19. Subsequently old AVR will be replaced with DAVR along with PSS tentatively by June 2019 as minimum 10 days required for installation of DAVR per unit.

***NEEPCO may please intimate the status.***



**C. 15 Bus Configuration issues for various sub-stations:**

In 155<sup>th</sup> OCC Meeting Director, NERPC stated that communication regarding bus configuration has been sent to TSECL, NHPC and NEEPCO vide letter dated. 01.04.19. Sr.GM(AM), NERTS once again reiterated that at Surjamaninagar only matching of phases between the buses needs to be done prior to connection. The forum requested TSECL to immediately complete the work since it requires minimum time and effort. This matter will be reviewed in Meeting of 2nd and 3rd May, 2019 at Agartala, in presence of members from NERPC, NERLDC, Power grid, Tripura, and other states. Manager, NHPC informed that CEA Inspection Application has been done for the 132kV Transfer Bus. NEEPCO stated that the work would be completed by 30.04.19.

***TSECL/ NEEPCO/NHPC/NERPC may please inform the status.***

**C. 16 Reactive power capability/injection of generating stations:**

As per discussion in previous meeting(s) the following needs to be updated:

- Reactive power capability testing date for Pare HEP to be confirmed by NEEPCO.
- OTPC to inform roadmap for improvement in reactive power generation/absorption.
- OTPC to inform status of reducing tap position of GTG generation transformers.

***NERLDC/NEEPCO/OTPC may please inform the status.***

**AGENDA ITEMS FROM NERLDC:**

**C.17 Status review of upcoming projects by Sterlite Grid 4 for strengthening of Southern part of NER Grid by July'19**

1. 400 kV Misa – Silchar D/C
2. 400 kV P K Bari(Sterlite) - Surjamaninagar(Sterlite) D/C
3. 400/132 kV, 2x315 MVA ICTs at P K Bari (Sterlite)
4. 400/132 kV, 2x315 MVA ICTs at Surjamaninagar (Sterlite)
5. 132 kV AGTPCCPP – P K Bari(TSECL) D/C

Also, review of upcoming projects by TSECL for strengthening of Southern part of NER Grid:-

1. 132 kV P K Bari (TSECL) - P K Bari (Sterlite)
2. 132 kV Surajmaninagar(TSECL) - Surajmaninagar(Sterlite)

***NERLDC may please deliberate.***

**C.18 Status of CT upgradation:**

Name of the line	CT Ratio at either end (current)		CT Ratio at either end (required)		No. Of CTs required		Latest status
	Stn A	Stn B	Stn A	Stn B	Stn A	Stn B	
132 kV Jiribam-Aizwal	400/1	400/1	600/1	600/1	3 by PGCIL	4 by PGCIL	Feb'19
132 kV Jiribam-Haflong	400/1	400/1	600/1	600/1	3 by PGCIL	4 by PGCIL	Feb'19
132 kV Khandong-Umrangso-Haflong	300/1	400/1	600/1	600/1	3 at Khandong by NEEPCO, 3 at Umrangso by AEGCL	3 at Umrangso by AEGCL, 3 at Haflong by PGCIL	AEGCL-Under tendering process
132 kV D/C Doyang Dimapur	300/1	600/1	600/1	600/1	3 by PGCIL & 6 by NEEPCO		PGCIL-Feb'19 NEEPCO-tendering yet to be initiated
132 kV Khandong - Khliehriat- I	300/1	300/1	600/1	600/1	3 by NEEPCO	3 by PGCIL	PGCIL-Feb'19
132 kV Khandong - Kopili I & II	300/1	300/1	600/1	600/1			PGCIL-Feb'19
132 kV Dimapur-Dimapur	600/1	1200/1	600/1	600/1		3 by DoP, Nagaland	PGCIL-completed, DoP Nagaland-Apr'19

***AEGCL, NEEPCO, NERTS, DoP Nagaland may please intimate the status.***

**C. 19 Metering Status Review:**

Ref	Agenda Description	Anticipated Date	Remarks
153th OCC	Replacement of 1 no of SEM at NTPC	Yet to be installed	Status and progress may be discussed.

<i>Ref</i>	<i>Agenda Description</i>	<i>Anticipated Date</i>	<i>Remarks</i>
20th Metering meeting, dated:14.09.16	Procurement of additional 70 Laptops	As per 155 <sup>th</sup> OCC: LOA for software (laptops) would be issued by Apr'19. Laptops would be distributed by 15 <sup>th</sup> May'19.	Status and progress may be discussed.

***NERLDC/NERTS/All STUs may please intimate the status.***

## D. I T E M S FOR DISCUSSION

### **D.1 Generation Planning (ongoing and planned outages)**

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

<b>Plants</b>	<b>Reservoirs level in meter</b>	<b>MU content</b>	<b>Present DC (in MU)</b>	<b>No of days as per current generation</b>
Khandong + Kopili stg II			0.123	
Kopili			0.74325	
Doyang			0.048	
Loktak			0.366	

The outage of other generating stations may be approved considering the present water levels in reservoirs.

***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.

In the Special Meeting held at Palatana, OTPC on 02.05.19 it was decided that no shutdown would be granted to utilities not submitting DR/EL regularly.

***The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for May,2019 - June,2019 which is available in the website of NERPC.***

**D.3 Estimated Transmission Availability Certificate (TAC) for the month of January, 2019 - March, 2019:**

NETC and POWERGRID have submitted the outage data for the month of January, 2019 - March, 2019. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

**D.4 RGMO performance analysis of events**

In 155<sup>th</sup> OCCM, NERLDC highlighted the even on 12.03.2019. GTG 1 & STG 2 of OTPC Palatana and Unit 1 of BGTPP were found to be giving response less than the desired response, whereas, GTG 2 & STG 1 of OTPC Palatana and Unit 2 of BGTPP were found to be giving negative response. GM, NTPC informed that CMG tuning is being done by Honeywell and the subsequently errors would be rectified. Representatives from the generating utilities voiced in unison the concern that RGMO response is posing difficulties in maintaining the ZCV restrictions.

Kopili informed that for the event dated 5/2/19 since the RGMO was triggered 5min, prior to the event response in the opposite direction had started. So a negative response is noticed during the event.

The forum requested NEEPCO to give a presentation in the next OCCM on the logic of its units for RGMO along with case study for event dated 5/2/19 NHPC to give presentation on the impact of ZCV on RGMO.

***Members may please discuss.***

**D.5 Assessment of TTC, TRM & ATC by SLDC on respective Inter-State Transmission Corridor**

The forum requested all the SLDCs to carry out the TTC/ATC calculations and decided that SLDC Ar. Pradesh would give presentation in the next OCC.

NERLDC intimated that State-wise ATC/TTC calculated by NERLDC on behalf of SLDCs was mailed to all utilities on 09.04.19.

***Members may please discuss.***

**D.6 Reliable power supply to Manipur system**

The following status was informed in the 155<sup>th</sup> OCCM:-

(a) 132 kV Jiribam – Jiribam (MA) – Rengpang – Loktak link - By April'19

(b) Restoration of 132 kV Dimapur – Imphal line – Can be ascertained after resolve of ROW issue by Nagaland

(c) Upgradation of 132 kV Kohima – Karong – Imphal (MSPCL) link - Upgradation of 132kV Karong-Kohima by July'19.

***Members may please discuss.***

**D. 7 Overloading of 132kV Pare-Lekhi line:**

To limit the overloading of 132kV Pare-Lekhi line, 132kV Itanagar-Lekhi line has to be kept closed. As reported by SLDC Arunachal Pradesh during real time, they are unable to close the 132kV Itanagar-Lekhi line. Status review of CT ratio of 132kV Itanagar-Lekhi (Study results enclosed as Annexure-D.7)

***NERLDC may please deliberate.***

**D.8 Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation**

In 155<sup>th</sup> OCCM NERLDC presented the RMSE for the month of Feb'19:

% Error with Actual Data (Forecasted by States)							
	Ar Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
<b>Median</b>	<b>10</b>	<b>8</b>	<b>11</b>	<b>12</b>	<b>10</b>	<b>12</b>	<b>8</b>

Forum decided that load forecast error will be monitored in OCC Meeting till the RMSE comes below 5%

CGM, NERLDC informed that presently NERLDC is pursuing Industry - Academia partnership for better load forecasting. SLDCs may also join since the facility would not entail any expenditure on their part.

***Members may please discuss.***

**AGENDA ITEMS FROM NERPC**

**D.9 Shutdown related to upgradation of 132kV Motonga Sub-station in Bhutan:**

PTC has informed vide letter dated. 23.04.2019(attached at **Annexure D.9**) that shutdown (for two months) of 132kV Motonga Substation would be taken by Bhutan for additional 132kV Bus. This would necessitate shutdown of 132kV Rangia-Motonga for shifting to ERS so that 132kV Rangia-Dothang line is through.

***Members may please discuss.***

**D.10 Shutdown related to 132kV Bus Extension Works at AGTCCPP, NEEPCO by M/s STERLITE:**

M/s STERLITE vide letter dated. 20.03.2019 has requested for Shut Down of existing 132kV Main Bus I & II at AGTCCPP, NEEPCO sequentially each for maximum 2 hours to fix hardware & Insulators with arrangement of Stringing Twin Bull AAC from the Low-Level Bus Towers preferably within shortest possible time.

Shut Down is required for 2 hours for each Bus either on the same day or on consecutive days by sharing load from one Bus or complete shut down as deemed fit

***Members may please discuss.***

**D.11 Maintenance of coal stock at BgTPP:**

MoP vide letter dated. 07.02.2019 has informed that "in view of expected increased power demand in the next few months upto monsoons, all Pithead generation and consequently coal and rake supply (as needed) should be maximized immediately for meeting the needs of the current year/next few months and all pit head plants be given full priority in coal and rake allotment for full PLF irrespective of their ACQ/FSA, in this period."

NTPC may please inform the current scenario.

*Members may please discuss.*

#### **AGENDA ITEMS FROM NERLDC**

##### **D.12 Replacement of GO CBs by Single Pole CBs in 132kV System:**

Proposal to replace gang operated circuit breaker by single pole circuit breaker in 132 kV ISTS lines for reliable grid operation. Eg: 132 kV Palatana - Surajmaninagar line (Gang operated CB at Palatana), 132 kV lines emanating from 132 kV Kumarghat (PG), 132 kV Jiribam (PG) etc.

*NERLDC may please deliberate.*

##### **D.13 Ratification of PoC data:**

Ratification of Technical and Commercial data for computation of PoC Charges and Losses for Jul to Sep'19 (Q2 of 2019-20) –To be ratified by utilities.

*NERLDC may please deliberate.*

#### **Metering Agenda**

##### **D.14 METER ERRORS:**

1. Pair checks error observed in following locations, CT / PT error at State end suspected.
  - a. 132 kv Pare-Lekhi feeder, Lekhi end reading lower by 20%
  - b. 132 kv Imphal-Ningthoukhong, Ningthoukhong end reading very low, less than 10%.
  - c. Sign reversal observed at Kohima end of 132 kv Kohima-Dimapur
  - d. Jiribam (man) end of Jiribam(pg)feeder, Jiribam(man) end reading low, error more than 15%.
  - e. Dimapur(s) end of Dimapur (pg) I line, Dimapur(s) end reading less than 20%.
  - f. Dimapur(s) end of Dimapur (pg) II feeder, Dimapur(s) end reading less than 20%.

*NERLDC may please deliberate.*

##### **D.15 High SEM Time Drift:**

Time drift in SEMs may result in computational errors in Regional energy accounts & Weekly Loss. All constituents in whose premises the meters are installed are required to take corrective action for time correction whenever meter time drift > 1minute and submit weekly compliance report of the same to NERLDC.

The compliance report of many locations as detailed in Annexure A, are not received by NERLDC and Annexure B provides location details of Drift correction action not being done / weekly SEM data not sent.

***NERLDC may please deliberate.***

**AGENDA ITEMS FROM AEGCL:**

**D.16 Voltage fluctuation of 132kV Khandong-Haflong line**

***AEGCL may please deliberate.***

**AGENDA ITEMS FROM NEEPCO:**

**D.17 Restoration of SCADA for control and annunciation:**

The SCADA for control and annunciation of 132 kV Kopili Khandong Feeder II and 220/132 kV, 160 MVA ICT is not in operation since a long period of time leading to difficulty in monitoring and operation. POWERGRID may be requested to restore the same or separate control and monitoring panel for the feeder at the earliest.

***NEEPCO may please deliberate.***

**D.18 Telemetry status of bays at Kopili:**

The transmission of the telemetry status of the following bays which will be shifted to the under construction GIS by PGCIL needs to be arranged by POWERGRID to transmit it separately through new RTU or by making additional arrangement in NEEPCO's existing RTU panel.

**160 MVA ICT I, 160 MVA ICT II, 5 MVA Tfr, 132 KV Bus, 132 kV Kopili Khandong Feeder I, 132 kV Kopili Khandong Feeder II**

***NEEPCO may please deliberate.***

**Any other item:**

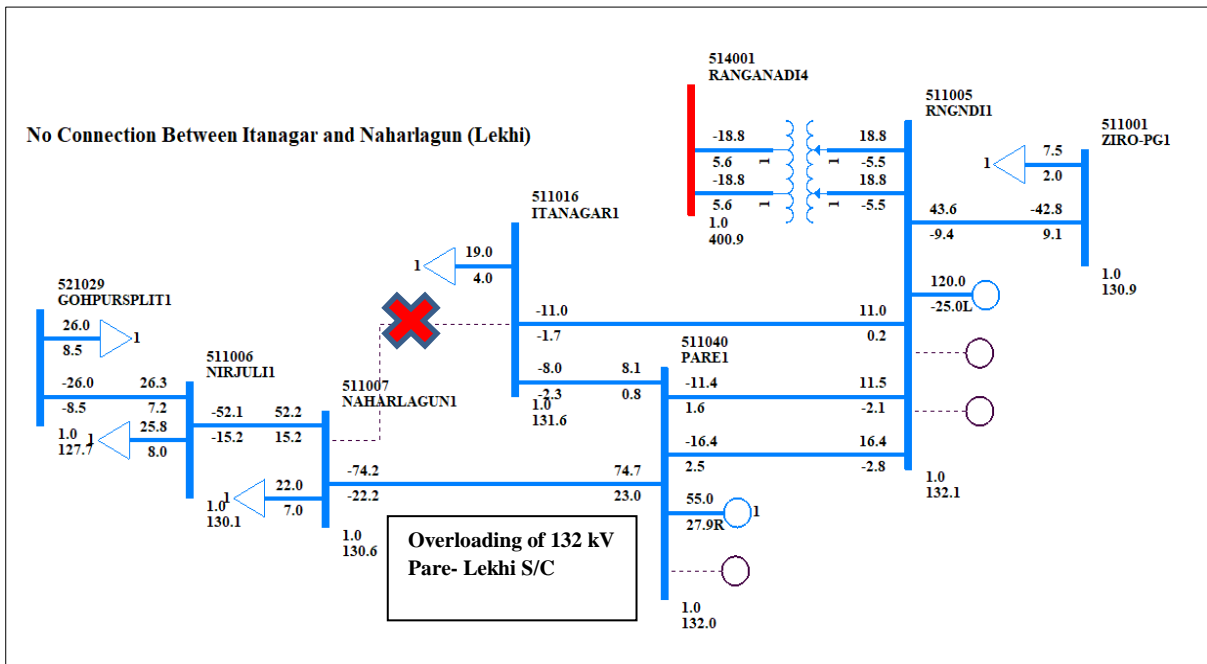
**Date and Venue of next OCC**

It is proposed to hold the 157<sup>th</sup> OCC meeting of NERPC on second week of June, 2019. The date & exact venue will be intimated in due course.

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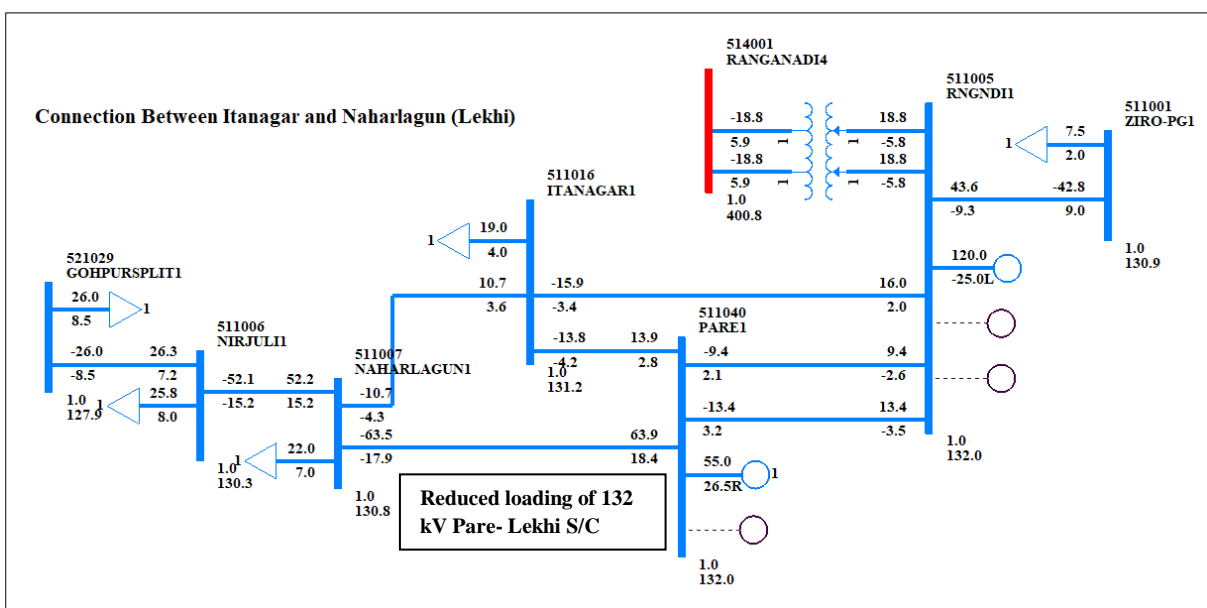
**Study for Connection of 132 kV Itanagar – Lekhi (Naharlagun) S/C**

132 kV Itanagar – Lekhi (Naharlagun) S/C is kept open which leads to overloading of 132 kV Pare- Lekhi S/C under various conditions.



Connecting 132 kV Itanagar – Lekhi (Naharlagun) S/C leads to decrease in loading of 132 kV Pare – Lekhi by about 11 MW, the same power being transferred from 132 kV Itanagar to 132 kV Lekhi.

Also, in case of tripping of 132 kV Pare – Lekhi S/C, 132 kV Itanagar – Lekhi will act as an alternate path for power supply to Lekhi Area of AP Power system, thereby increasing the reliability of the grid.



It is therefore desired to kept the link 132 kV Itanagar – Lekhi (Naharlagun) closed in all conditions





PTC/MTFG/ERPC & NERPC/ 206-09

23<sup>rd</sup> April 2019

To,

**The Member Secretary,**  
Eastern Regional Power Committee  
14, Golf Club Road, Tollygunge, Kolkata- 700033

**The Member Secretary,**  
North Eastern Regional Power Committee Complex, Dong Parmaw  
Lapalang, Shillong – 793006 (Meghalaya)

**Subject: Shutdown of 132kV Motanga Substation for construction of additional 132 kV Bus.**

Dear Sir,

Druk Green Power Corporation Limited (DGPC) vide letter no. DGPC/O&MD/23/2019/451 dated 22<sup>nd</sup> April 2019 has informed that Bhutan Power Corporation (BPC) has written to DGPC regarding shutdown of 132 kV Motanga Substation for 2 months to construct an additional 132 kV Bus for providing power to upcoming industries in the area. The shutdown is required immediately to enable BPC to extend the supply to industries. The said letter from DGPC is enclosed herewith which is self-explanatory.

We request you to kindly advice in the matter so that DGPC may be intimated accordingly.

Thanking you,

Yours faithfully,

**Harish Saran**  
**Executive Director (Marketing)**

**CC:**

**The Executive Director,**  
Power Grid Corporation of India Limited,  
North East Region Transmission System,  
Dongtiah, Lower Nongrah, Lapalang, Shillong – 793006.

**The General Manager (O&M),**  
**Power Grid Corporation of India Limited,**  
North East Region Transmission System,  
Dongtiah, Lower Nongrah,  
Lapalang, Shillong – 793006.

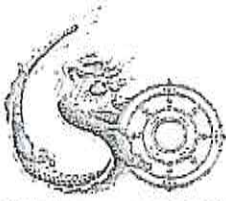
**PTC India Limited**

(Formerly known as Power Trading Corporation of India Limited)

CIN : L40105DL1999PLC099328

2nd Floor, NBCC Tower, 15 Bhikaji Cama Place New Delhi - 110 066 Tel: 011-41659138, Fax: 011-41659142

E-mail: harishsaran@ptcindia.com Website: www.ptcindia.com



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DrukGreen

DGPC/O&MD/23/2019/ ༥༥༡

April 22, 2019

Executive Director (Marketing)  
Power Trading Corporation of India Limited  
2<sup>nd</sup> Floor, NBCC Tower  
15 Bhikaji Cama Place  
New Delhi – 110 066

Kind Attn: Mr. Harish Saran

**Subject: Shutdown of 132kV Motanga Substation for construction of additional 132kV Bus**

Dear Sir,

Bhutan Power Corporation (BPC) vide their letter No. 85/TD/BPC/2019/Vol-1/78 dated March 26, 2019 has written to DGPC regarding shutdown of 132kV Motanga Substation for about 2 months to construct an additional 132kV Bus for providing power to upcoming industries in the area. The shutdown is required immediately to enable BPC to extend the supply to industries. At present there are only two 132kV feeders emanating from Motanga Substation i.e. 132kV Motanga – Rangia Feeder and 132kV Feeder to supply power to SD Silicon Factory in Samdrup Jongkhar (eastern Bhutan)

This is to inform that during the shutdown of 132kV Motanga Substation, the eastern grid will be disconnected from Rangia and Kurichhu Hydropower Plant (KHP) power can be evacuated via 132kV Gelephu - Salakati feeder only. However, when there is any fault in any of the link between 132kV Nangkhor SS to Jigmeling section, the whole eastern region will be under blackout and would cause generation loss since KHP power cannot be evacuated.

Therefore considering the system reliability and huge generation losses, the following is proposed as temporary measures:

1. Connect both Silicon Factory as well as Rangia line from the ERS tower so that reliability of the eastern grid is not affected.
2. Since energy meter already exists at Deothang end for 132kV Deothang-Motanga line and also at Silicon Factory end, the energy exported to Rangia to be derived as:  
$$\text{Energy exported to Rangia (Er)} = \text{Energy recorded at Deothang end} - \text{Energy consumed by Silicon Factory}$$
3. The relay settings at Rangia and Deothang needs to be changed accordingly.

The above arrangement will not only solve the reliability issue but also provide an alternative route for KHP power evacuation in the event of any trippings. The total line length between Deothang to Motanga is 10.5KM only, hence the line losses may be considered low and negligible during the temporary phase when the export energy to Rangia is calculated as above. We also wish to inform you that at Deothang end for 132kV Deothang-Motanga Line, main and check energy meters already

OPERATION & MAINTENANCE DEPARTMENT  
DRUK GREEN POWER CORPORATION LIMITED

CORPORATE OFFICE: Post Box 1351, Thimphu, Kingdom of Bhutan. Tel # +975-2-336410/337110/337537.

Web: [www.drukgreen.bt](http://www.drukgreen.bt)



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**DrukGreen**

exists. However at the Silicon Factory end there is only one main energy meter and hence a check energy meter needs to be installed.

In consideration of above, we would like to request PTC to kindly accept the power evacuation to Rangia and energy accounting methodology as proposed above as temporary measure during the shutdown period of 132kV Motanga Substation. Upon confirmation of above, the exact date of shutdown will be intimated for joint recording of final readings from the energy meters as well as revision of relay settings at both ends before charging the line.

Thanking you,

Yours faithfully,

Munna Prasad  
Head, PMD  
O&M Department

Copy to:

1. Superintending Engineer, KHP, Gyelpoizing.
2. General Manager, Transmission Department, BPC, Thimphu for kind information.

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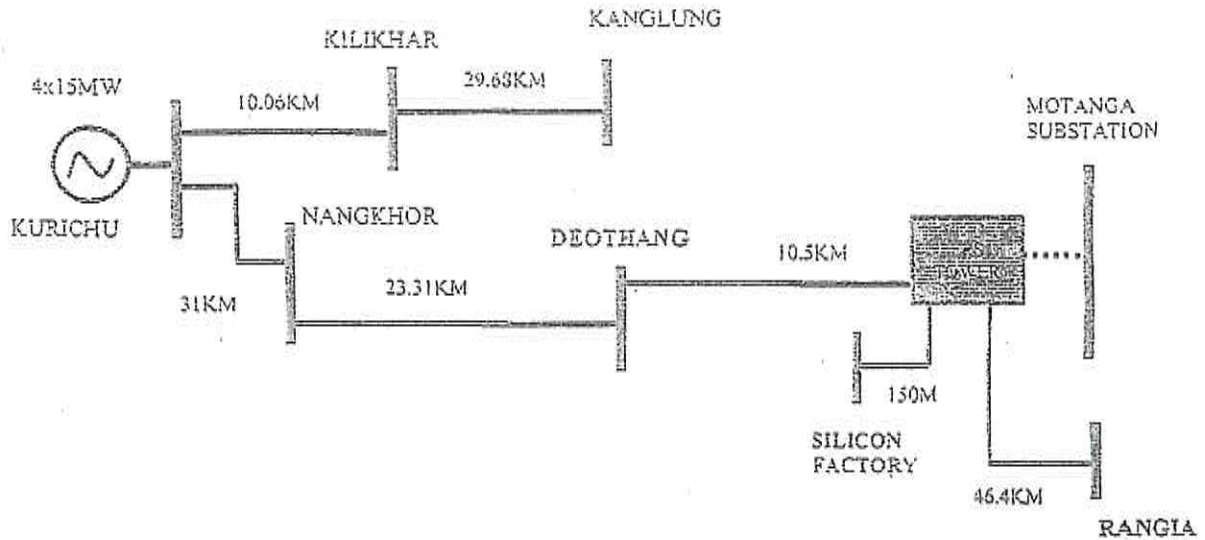
OPERATION & MAINTENANCE DEPARTMENT  
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CORPORATE OFFICE: Post Box 1351, Thimphu, Kingdom of Bhutan. Tel # +975-2-336410/337110/337537

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Connection Diagram of Rangia and Silicon Factory through ERS Tower



Energy Exported to be calculated as  
 $E_{RANGIA} = E_{DEOTHANG} - E_{SILICON FACTORY}$

Lines loss of Deothang – Motanga Line recorded for past one year:

Sl. No.	Month	Line Losses (%)
1	January, 2018	0.31
2	February, 2018	-0.01
3	March, 2018	0.02
4	April, 2018	0.08
5	May, 2018	0.22
6	June, 2018	0.33
7	July, 2018	0.45
8	August, 2018	0.44
9	September, 2018	0.44
10	October, 2018	0.26
11	November, 2018	0.11
12	December, 2018	-0.05

*fc*