

North Eastern Regional Power Committee

MINUTES OF THE 116th OPERATION COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 16/12/2015 (Wednesday)
Time : 10:00 hrs
Venue : "Hotel Nandan", Guwahati.

The List of Participants in the 116th OCC Meeting is attached at **Annexure - I**

Shri P.K. Mishra, Member Secretary, NERPC welcomed all the participants to the 116th OCC meeting. He informed the house that considering the importance of Seminar of NERLDC on metering the OCC & PCC Sub-committee meetings were interchanged. He also highlighted the outcome of meeting of Assam, NERPC & Hon'ble CERC on PoC Charges in New Delhi on 11.12.2015 where the views raised by Assam & NERPC have been noted by CERC and final hearing is likely to be held in February, 2016. Further, he informed the house about the PSDF meeting held on 11.12.2015 and requested that Assam, Meghalaya, Nagaland, Mizoram & Tripura to complete all the all the NER States to complete all the NITs, LOA by 31.12.2015 so that funding can be availed during the FY 2015-2016. He also requested the remaining States of Ar. Pradesh & Manipur to complete the formalities viz. Board's Approval, NITs within January, 2016 so as to enable to avail the fund within FY 2015-16. He then requested all the members to actively participate in the meeting.

Thereafter, Member Secretary requested Shri B. Lyngkholi, Director/SE(O) to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 113th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

SE(O) informed that minutes of 115th meeting of Operation Sub-committee held on 24th November, 2015 at Tawang were circulated vide letter No. NERPC/SE (O)/OCC/2015/4556-4591 dated 9th December, 2015.

Since no comments/observations were received from the constituents, the Sub-committee confirmed the minutes of 115th OCCM of NERPC.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING NOVEMBER, 2015

As per the data made available by NERLDC, the grid performance parameters for November, 2015 are given below:

NER PERFORMANCE DURING NOVEMBER, 2015

States	Energy Met (MU)		w.r.t. Oct,15 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Oct,15 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Nov, 15
	Nov-15	Oct-15		Nov-15	Oct-15		
Ar. Pradesh	57.84	57.43	0.71	58.96	58.77	0.32	-1.94
Assam	661.46	771.68	-14.28	671.70	811.01	-17.18	-1.55
Manipur	71.15	68.63	3.67	72.42	70.27	3.06	-1.78
Meghalaya	145.96	134.65	8.40	151.78	146.86	3.35	-3.99
Mizoram	38.64	36.42	6.10	39.62	37.51	5.63	-2.54
Nagaland	58.85	64.51	-8.77	59.88	65.82	-9.02	-1.75
Tripura	107.39	118.20	-9.15	108.56	119.88	-9.44	-1.09
Region	1141.28	1251.52	-8.81	1162.92	1310.11	-11.23	-1.90

States	Demand Met (MW)		w.r.t. Oct,15 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Oct,15 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In Nov, 15
	Nov-15	Oct-15		Nov-15	Oct-15		
Ar. Pradesh	118	125	-5.60	120	129	-6.98	-1.69
Assam	1378	1329	3.69	1379	1491	-7.51	-0.07
Manipur	163	147	10.88	164	146	12.33	-0.61
Meghalaya	335	322	4.04	336	323	4.02	-0.30
Mizoram	89	81	9.88	90	81	11.11	-1.12
Nagaland	120	119	0.84	121	122	-0.82	-0.83
Tripura	242	269	-10.04	243	269	-9.67	-0.41
Region	2352	2301	2.22	2372	2401	-1.21	-0.85

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

AVERAGE FREQUENCY (Hz)

Month---->	Nov-15	Oct-15	Month---->	Nov-15	Oct-15
Total Generation in NER (Gross)	1064.97	1203.83		% of Time	% of Time
Total Central Sector Generation (Gross)	808.78	854.62	Below 49.9 Hz	11.48	14.05
Total State Sector Generation (Gross)	256.19	349.21	Between 49.9 to 50.05 Hz	67.06	69.60
Inter-Regional Energy Exchange			Above 50.05 Hz	21.46	16.35
(a) NER-ER	161.26	36.16	Average	49.99	49.98
(b) ER-NER	67.64	178.45			
(c)NER-NR	20.58	-	Maximum	50.28	50.33
(d)NR-NER	251.51	-			
© Net Import	137.31	142.29	Minimum	49.64	49.62

The Sub-committee noted as above.

FOLLOW UP ACTION

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

During 116th OCC meeting, the status as informed by NTPC, NEEPCO and POWERGRID is as follows:

SN	Items	Status as given in 116 th OCC Meeting	Status as on 115 th OCC
1	Trial operation and CoD of Unit -I of Bongaigoan TPS of NTPC	COD is expected by March, 2016. Infirm power injection to the grid in same month. Extension period has already been applied to CERC	COD is expected by March, 2016. Infirm power injection to the grid in same month. Extension period has already been applied to CERC
2	400/220kV, 2x315 MVA ICT of NTPC at Bongaigaon	31.03.2016	31.03.2016
3	Trial operation and CoD of Monarchak GBPP of NEEPCO	Trial run within December, 2015 & CoD is 31.03.2016	CoD depends upon availability of gas.
4	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	November, 2016 March, 2017	November, 2016 March, 2017

5	Pare HEP of NEEPCO (2 x 55 MW)	June, 2016	June, 2016
6	400 kV D/C Silchar - Melriat line of PGCIL	September, 2016	December, 2015
7	220kV Rangia - Salakati of AEGCL	June, 2016	June, 2016
8	132kV Monarchak – Surjamaninagar D/C of TSECL	March, 2016	March, 2016
9	400/132 kV, 2nd 125 MVA ICT at Palatana	June, 2016	June, 2016
10	132kV Pasighat – Aalong of Ar. Pradesh	March, 2016	March, 2016
11	132kV Surjamaninar (India)- South Commila (Bangladesh)	08.12 2015	December, 2015
12	132kV Doyang- Wokha	-	To be intimated by Nagaland
13	220 kV, 20 MVAR Bus Reactor at AGBPP	February, 2016	December, 2015
14	132 kV, Surjamaninagar Bay at OTPC	June, 2016	June, 2016
15	63 MVAR Bus Reactor at Byrnihat	SE, SLDC informed that Estimated Cost approval from Board is awaited. The status will be intimated in next OCC meeting.	-

The Sub-committee noted as above.

Action: All concerned Utilities above.

C.2 CT Ratio of Transmission Lines & Enhancement of Loadability of lines in NER:

During 115th OCC meeting, the Sub-Committee decided that the CT would be changed in a phased manner depending on severity of criticality as per priority list drawn up by NERLDC. The list has been circulated along with Minutes of 115th OCC meeting and also the list has been posted in NERPC website as requested by the Sub-committee. The status is to be intimated to NERPC by the respective agencies and will be reviewed in OCC meetings.

Deliberation of the Sub-Committee

The Sub-Committee decided that the CT would be changed in a phased manner depending on severity of criticality as per priority list drawn up by NERLDC. The status is to be intimated to NERPC by the respective agencies and will be reviewed in OCC meetings.

The Sub-Committee noted as above.

C.2 (a) Load-ability of 132 kV Lumshnong - Panchgram line:

It has been observed from system study that 132 kV Badarpur – Khliehriat line will be highly loaded in case of 700 MW Palatana generation. To reduce the loading of 132 kV Badarpur – Khliehriat line, 132 kV Lumshnong – Panchgram Line is to be connected in loop. However, it has been seen that loading of 132 kV Lumshnong – Panchgram Line will be around 80 MW in case of tripping of 132 kV Badarpur – Khliehriat line. Hence, loading capacity of 132 kV Lumshnong – Panchgram Line is to be enhanced.

During 113rd OCC meeting, AGM, AEGCL informed that DPR from MePTCL has not been received till date and requested MePTCL to forward the same at the earliest. MePTCL agreed.

SE, SLDC stated that Competent Authority has not approved the scheme since the power flow on this line at present is very less.

DGM (SO-II) informed that renovation of this line is very important for system operation since loading at this line will increase once Pallatana is generated to full capacity. Moreover, this line will add as redundancy to the system. He requested Meghalaya to take proactive action in the matter.

Deliberation of the Sub-Committee

SE, SLDC, Meghalaya informed that Transmission wing is preparing DPR. MePTCL would be taking up the matter with AEGCL shortly.

The Sub-committee noted as above and requested NERPC to keep the list in item C.1 of OCC Sub-committee.

Action: Assam & Meghalaya

C.3 Conversion of line reactors of 400kV Balipara – Bongaigaon I&II to switchable line Reactors at Balipara & Bongaigoan:

During 115th OCC meeting, DGM (AM), NERTS informed that immediately two nos. of NGR by-pass equipments (Isolator & CT) of Ranganadi # 1 & 2 Feeder at Balipara will be available due to LILO of 400kV Balipara-Ranganadi Line at BNC. NERLDC suggested to install those in Bongaigaon Line Reactor # 1 & 2 at Balipara. Further, POWERGRID informed that balance items like 336kV LA & CSD is under procurement and the scheme will be installed by January, 2016.

Deliberation of the sub-Committee:

DGM (AM), NERTS informed that procurement of by-pass scheme and CSD relays in small quantity will take some more time and hence, time frame for installation may be considered upto March, 2016.

The Sub-committee noted as above

Action: NERTS, POWERGRID

C.4 Finalization of Operating Procedures of State Grid of NER:

As per clause no 5.1.g of IEGC, detailed operating procedures for each state grid shall be developed and maintained by the respective SLDC.

SI No	Description	Status of approval from OCC forum of NERPC
1	Operating Procedure of Ar. Pradesh 2015	Not submitted
2	Operating Procedure of Assam 2015	Submitted
3	Operating Procedure of Manipur 2015	Not submitted
4	Operating Procedure of Meghalaya 2015	Submitted
5	Operating Procedure of Mizoram 2015	Not submitted
6	Operating Procedure of Nagaland 2015	Not submitted
7	Operating Procedure of Tripura 2015	Not submitted

Deliberation of the sub-Committee:

Status as intimated during 116th OCC forum of NERPC is as follow:-

SI No	Description	Status of approval from OCC forum of NERPC
1	Operating Procedure of Ar. Pradesh 2015	Not submitted
2	Operating Procedure of Assam 2015	Submitted
3	Operating Procedure of Manipur 2015	By 31.12.2015
4	Operating Procedure of Meghalaya 2015	Submitted
5	Operating Procedure of Mizoram 2015	By 31.12.2015
6	Operating Procedure of Nagaland 2015	Not submitted
7	Operating Procedure of Tripura 2015	Not submitted

The Sub-committee noted as above.

Action: All constituents as above.

C.5 No PLCC Panels in two feeders of MSPCL:

NHPC informed that at Loktak Power Station, no PLCC Panels are installed in two nos. of 132 kV feeders of MSPCL i.e. Loktak – Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder. Since PLCC Panel is very important equipment for Protection of the feeders and even communication between two station. This issue was already raised in the previous meetings several times.

During 113rd OCC meeting, representatives of MSPCL informed that the PLCC Panels for said lines has already been included in the scope of ongoing R&M works of their Substations. The forum requested Manipur to verify the detail scope and inform in next OCCM.

Subsequently during 38th PCC meeting, MSPCL informed that sufficient progress has been made and the above works have been awarded to ABB as a Turnkey Project. Commissioning of PLCC panels will take place within the stated deadline i.e. 30.11.15.

Deliberation of the sub-Committee:

MSPCL representative informed that the above work will now be completed within 31.03.2016.

SE(O), NERPC informed that as per directive of Hon'ble CERC, MSPCL has to complete the R&M associated with Substations of Manipur within November, 2016. He requested MSPCL to adhere to the direction of CERC and complete the R&M works within the stipulated time. MSPCL representatives informed that they will take up the matter with the Competent Authority and inform about the CERC Order accordingly.

The Sub-Committee noted as above.

Action: MSPCL

C.6 Monthly MU requirement & availability of each state of NER as per format:

The following figures of state wise MU requirement and availability were taken from draft LGBR 2015-16 of NERPC. State wise MU requirement and availability for these months are to be checked. Constituents may kindly verify if the above data are correct.

Requirement:

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	67	67	57	70	
Assam	700	680	650	700	
Manipur	75	80	70	75	
Meghalaya	202	215	185	190	
Mizoram	45	47	40	45	
Nagaland	69	65	65	70	
Tripura	120	125	100	125	
NER	1278	1279	1167	1275	

Availability:

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	45	48	40	50	
Assam	550	590	550	600	
Manipur	65	70	60	65	
Meghalaya	200	180	145	140	
Mizoram	40	42	40	45	
Nagaland	55	55	50	50	
Tripura	195	200	150	170	
NER	1150	1185	1035	1120	

The Sub-Committee noted as above.

C.7 Monthly MW requirement & availability of each state of NER:

The following figures were taken from LGBR 2015-16 of NERPC. These figures are to be reviewed.

A. Peak Demand in MW

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	128	133	130	135	
Assam	1460	1400	1260	1410	
Manipur	149	165	148	155	
Meghalaya	425	375	350	400	
Mizoram	95	90	85	90	
Nagaland	130	125	120	130	
Tripura	255	250	240	275	
NER	2642	2538	2333	2595	

B. Peak Availability in MW

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	126	118	110	130	
Assam	1200	1195	1150	1170	
Manipur	128	145	128	140	
Meghalaya	350	325	280	250	
Mizoram	90	85	85	80	
Nagaland	90	95	90	95	
Tripura	403/230	403/230	403/230	403/230	
NER	2445	2375	2243	2268	

**Tripura indicates 400/230 if Pallatana available/if not available*

B.1. Off Peak Demand in MW (08:00 Hrs)

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	70	73	70	80	
Assam	1020	1030	1020	1050	
Manipur	95	95	90	95	
Meghalaya	234	230	220	220	
Mizoram	62	60	55	55	
Nagaland	80	85	75	80	
Tripura	180	190	170	180	
NER	1641	1638	1700	1760	

B.2. Off Peak Availability in MW (08:00 Hrs)

Name of State	Dec15	Jan16	Feb16	Mar16	Apr16
Ar. Pradesh	60	65	60	70	
Assam	840	850	900	950	
Manipur	90	90	80	85	
Meghalaya	300	275	245	230	
Mizoram	60	60	60	55	
Nagaland	55	70	60	65	
Tripura	240	240	240	240	
NER	1645	1650	1645	1695	

SE(O), NERPC informed that since LGBR for 2016-2017 is under preparation, the data for April, 2016 onwards will be furnished once the above LGBR is finalized. He informed that data for LGBR for 2016-2017 has been received from NEEPCO only and requested OTPC, NHPC & NTPC to send the data within 31.12.2015. Further, he requested all the constituents, CTUs to furnish the generation, transmission data along with planned shutdown/maintenance etc. within 31.12.2015. All constituents agreed to furnish by 31.12.2015.

The Sub-Committee noted as above.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

NEEPCO/NHPC/OTPC may kindly intimate the availability for hydro stations:

Generating Station	Units running	MW	MU	Reservoir
Khandong	1	38	0.1235	713.75
Kopili	4	184	1.704	601.25
Kopili-II	1	18	0.054	713.75
Ranganadi	3	401	Subject to inflow	
Doyang	3	56.6	0.1692	314.55
Loktak	2	70	1.638	768.24
AGBPP	-	-	-	-
AGTPP	-	-	-	-

Hydro planning

In view of outage of Kopili units, proper planning is essential for utilization of available water of other reservoir based stations so that adequate generation can be maintained upto April/May, 2016.

The Committee discussed and approved the proposed shutdown by Generating Stations and the same is given in Annexure - D.2.

D.2 Outage Planning Transmission elements

It was agreed in the 99th 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 10th of the month, the shutdown availing agency would reconfirm to NERLDC on 7th 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.

Deliberation in the meeting

The sub-Committee discussed and approved the proposals received from the constituents regarding transmission elements for December, 2015 - January, 2016 and the same has already been uploaded in website of NERPC. Also the committee has decided that no shutdown will be entertained henceforth unless discussed in OCC meeting, except on emergency basis.

D.3 Furnishing Reactive Power Absorption Data for last one year:

As per Para no. 9.9.1 of Recommendations of Enquiry Committee on Grid Disturbance, the regulatory provisions regarding absorption of reactive power by generating units needs to be implemented.

It is requested that you may please furnish instances when Reactive Power support was provided by Generators for last one year.

The latest Capability Curve of each generator in Soft Copy may also be provided.

Deliberation in the meeting

The Sub-Committee requested NEEPCO, OTPC and NHPC to furnish the data to NERLDC/NERPC latest by **31.12.2015**.

Action: NEEPCO, OTPC, NHPC.

D.4 Furnishing of Technical & Commercial Data for Computation of PoC Charges & Losses for 3rd Quarter of 2015-16 (Oct'15- Dec'15):

As per provisions of the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time, the following data are required for Computation of PoC Charges & Losses for **3rd Quarter of 2015-16 (Oct'15- Dec'15)**

1. Technical details of new transmission elements and generating units which are expected to commence commercial operation during **Oct'15- Dec'15**
2. Yearly Transmission Charges
3. Nodal Generation information and forecast withdrawal data

As per provisions of the CERC (Sharing of Inter State Transmission Charges and Losses) (Third Amendment), Regulations, 2015, the Designated ISTS Customers (DICs) are required to submit node-wise forecast injection/withdrawal information and maximum injection/withdrawal data for corresponding quarter of last three years to the Implementing Agency for computation of PoC Charges & Losses for **3rd Quarter of 2015-16 (Oct'15- Dec'15)**.

Filled up formats may be sent in soft copy to NLDC through e-mail to implementingagency@powergrid.co.in or implementingagency@posoco.in. A written communication confirming the furnishing of data by e-mail to NLDC may also be sent.

As discussed in 3rd Validation Committee Meeting held on 30th September, 2015, following dates were finalized for submission of data for **4th Quarter of 2015-16 (January -March, 2016)**.

SN.	Timeline	Remarks
1	31 st October, 2015	Data to be provided by DICs to IA
2	10 th November, 2015	Data to be sent by IA to RPC
3	25 th November, 2015	RPC to rectify the data through a meeting at RPC level and then send to IA by 25 th November, 2015
4	30 th November, 2015	Validation Committee meeting

In the 115th OCC meeting, the Sub-Committee decided that data required for rectification would be supplied to constituents well in advance by Implementing Agency (NLDC) so that rectification of data may be taken up in next OCC meeting.

The following figures for Demand and Generation projection for Q4 of 2015-16 have been agreed upon by the DICs of North-Eastern Region:

SI.No.	Entity	Demand	Generation
1	Arunachal Pradesh	103	-
2	Assam	1220	288
3	Manipur	150	-
4	Meghalaya	320	274
5	Mizoram	88	4
6	Nagaland	132	8
7	Tripura	220	87
8	AGTPP	-	84

9	AGTPP-Extn.	-	46
10	Doyang	-	35
11	Kopili	-	82
12	Khandong	-	37
13	Ranganadi	-	401
14	AGBPP	-	240
15	Loktak	-	105
16	Palatana	-	512

Deliberation in the meeting

All Utilities agreed to submit the data as per formats for Quarter 1 of 2016-17 (April- June, 2016) by 31st January, 2016.

The Sub-Committee also decided that Form-1 and Form-3 would be supplied to constituents well in advance by **NERLDC** so that rectification of data may be taken up in next OCC meeting.

Action: NERLDC, All constituents.

D.5 Petition No. 113/MP/2014:

OTPC vide mail dated 07.12.2015 has requested to discuss the petition No. 113/MP/2014 filed by NERLDC to Hon'ble CERC. Further, they informed that Petition was filed without any information/discussion/record in preceding or succeeding OCC meetings though there was no conflict among constituents, OTPC & NERLDC for implementation of SPS.

Deliberation in the meeting

DGM, OTPC mentioned that NERLDC should not file the petition to CERC as any issue can be discussed and resolved in the forum of NERPC. He mentioned that OTPC has been trying to comply and adhere to the decision of OCC/PCC Sub-committees of NERPC in every issue and as such filing a petition to CERC is not in the spirit of the forum. He however stated that since the matter has been filed to CERC, necessary action will be taken up by them in this regard.

The Sub-Committee noted as above.

Action: OTPC.

D.6 Shutdown of Block- #2 of OTPC:

OTPC intimated that Palatana Block-2 will undergo shutdown from 25th January, 2016 to 7th February, 2016 for CI & HRSG Licence renewal.

Deliberation in the meeting

The issue was discussed in detailed and the forum requested OTPC to keep in mind that any maintenance schedule should not be taken during lean hydro season. The forum requested OTPC to take up the matter with the concerned agency so that in future no shutdown will be granted to them during lean hydro season. The comfort period granted by the forum is **July to September**.

DGM, OTPC mentioned that he will take the matter with Competent Authority of OTPC so that the solution can be finalized in this regard.

The forum however approved the above shutdown since no sufficient gas is available to OTPC to run both the units.

The Sub-Committee noted as above.

Action: OTPC.

D.7 Inclusion of email ID of VP of OTPC:

OTPC requested to include the mailing Id of Vice President (Plant) of OTPC for all communication in future.

His email id is: sudin.chattopadhyay@otpcindia.in

Members may like to note.

D.8 Power Evacuation/flow on HVDC Line:

800kV Bishwanath Chariali - Agra HVDC line was commissioned on 31.10.2015 and the power flow on this line is being instructed by NERLDC without intimating to the constituents.

Deliberation in the meeting

NERLDC informed that COD was declared by asset owner and the same was informed to NERPC also. Moreover +/- 800kV Bishwanath Chariali - Agra HVDC is an inter-regional line and falls under the Jurisdiction of NLDC.

Assam representative raised the issue regarding flow of power from NR to NER through HVDC line. NERLDC informed that 400kV Farrakha-Malda-D/C is under S/D. Due to S/D of these lines import ATC of NER may reduce drastically, so to avoid any change in ATC during lean hydro season power flow from NR to NER is maintained.

SE(O) raised the issue stating that at present ATC/TTC has been enhanced to around 1100 MW and the issue of constraints did not arise during the current period. He also mentioned that during the 4th NPC meeting, the issue of co-ordination regarding of shutdown of Inter-regional which affect the other region has to be intimated accordingly. He mentioned that every time NERPC informed to ERPC whenever shutdown is being taken and he stated that the issue will be taken up with ERPC so that such problem does not occur in future.

Members are of the opinion that PoC charges may be imposed upon NER constituents once the HVDC link is being used by them. They requested the forum that such mechanism should be looked into so that burden should not fall on them.

The Sub-Committee noted as above.

D.9 Early Restoration of 63 MVAR line Reactor at Balipara:

The 63 MVAR line Reactor of 400 kV Bongaigaon – Balipara line –II at Balipara end is under outage since 19.07.2015. Early restoration of the reactor is very essential for containing over voltage problem which is very much on higher side after commissioning of Agra- BNC HVDC pole-I especially during operation of the pole. Presently the problem is being managed by opening 400 kV lines thereby system security is compromised.

Early commissioning of 80 MVAR 2nd Bus reactor at BNC is also very much essential in this connection.

During 115th OCC meeting, DGM (AM), NERTS informed that the above work will be completed by first week of December, 2015.

Deliberation in the meeting

DGM (AM), NERTS informed that the test charge has already completed and the above work will be completed within December, 2015.

The Sub-Committee noted as above.

Action: NERTS.

D.10 Assessment of Inter State Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor:

SLDCs of NER are requested to assess TTC, TRM & ATC on monthly basis, 5 months in advance (eg: TTC/TRM/ATC for the month of November to be calculated by 15th of July), for further assessment of TTC, ATC and TRM of NER –ER corridor by NERLDC and for assessment of TTC / ATC for a group of control areas, individual control areas within the region and state-control-area to state-control-area by NERLDC, if required.

SLDCs are also requested to send study results for Peak (Export & Import) & Off Peak (Export & Import) along with assumptions in details and 6 nos “.sav” case files (Base Case for Peak & Off Peak, Off Peak & Peak Export & Off Peak & Peak Import) to NERLDC by 15th of the month for the fifth month. All India “.sav” case files have been sent to SLDCs. SLDCs are requested to use this “.sav” case files while computing TTC, ATC & TRM for their state control area.

The study results for assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) have not been received from any SLDC of NER.

Updated Base Cases have been already mailed to all the SLDCs on 08.12.15. All the SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) and submit the cases to NERLDC for the month of April'16 by 15th December, 2015.

Deliberation in the meeting

The Sub-committee requested all the constituents to check the data prepared by NERLDC and give their comments/observations by 31.12.2015; else, the data is taken as final.

DGM (SO-II), NERLDC requested SLDCs of NER to furnish TTC, TRM and ATC on it's inter-state transmission corridor with sav case files for fifth month by 15th of the month. They have agreed to submit the above information/details.

The Sub-Committee noted as above and agreed to submit the data within the stipulated date mentioned above.

D.11 400kV, 80 MVAR Bus Reactor at OTPC Palatana

During the 116th OCC Meeting, OTPC informed that the 400kV, 80 MVAR Bus Reactor at OTPC Palatana is ready for recharging and sought clearance for charging of the same. NERLDC informed that the same can be taken into service subject to real time condition.

However, now after checking the relevant records at NERLDC it is seen that the reactor was never successfully put into service and the matter has to be look into considering that the element was out for a prolong period.

In this connection it is pertinent to mention that, as per Clause No. 43 of Measures Relating to Safety & Electric Supply Regulation 2010 by CEA, the electrical installations/line, before commencement of supply or recommencement after shutdown for six months and above shall not be charged/ energized without the approval of the Electrical Inspector in writing to ensure safety measures specified under the said regulations in the electrical installations.

OTPC may take action accordingly and certify fulfillment of other statutory requirements while permission for charging the reactor is sought.

Deliberation in the meeting

The Sub-committee requested OTPC to first test charge the reactor and then get the approval of EI of RIO (NE).After obtaining the required clearance apply to NERLDC for charging the reactor.

Action: OTPC.

D.12 Up-gradation and Capacity Enhancement of 220/132kV Dimapur Substation on completion of 25 years age & capitalization during the tariff block 2014-19:

At present transformation capacity of the 220/132kV Dimapur Substation is 2x100MVA. One of the transformer unit is having 4x33.33 MVA, 220/132kV Single phase unit and about to complete 25 years of age which is the life of the transformer. The load requirement of Nagaland is expected to be 150MW at Dimapur and 30 MW at Kohima along with 80 MW for Assam at Bokajan. All these locations are catered through existing 220/132kV Dimapur Substation.

In view of completion of 25 years of Dimapur Substation and anticipating enhancement of load in near future, it is proposed to upgrade the Substation from AIS to GIS (SAS) with capacity enhancement as below:

- i) Replacement of existing 4 x 33.33MVA, 220/132kV Single phase unit transformers by 2x160 MVA, 220/132kV 3 phase Unit for capacity enhancement.
- ii) Conversion of 132kV Bus Bar Scheme from Single Main and Transfer to Double Main GIS along with future provision.
- iii) Conversion of 220kV Switchyard from AIS to GIS to accommodate additional transformer and also creation of space for future provision.

Note: The above works will be carried out by POWERGRID under regulated tariff Mechanism and tentative expenditure will be around Rs. 90 - 100.00 Crores.

Deliberation in the meeting

The Sub-committee unanimously agreed and requested NERETS to get it endorsed in the next TCC/NERPC Meetings.

Action: NERTS.

D.13 Modification of existing 132kV S/C Nirjuli –Ranganadi Transmission Line on account of Railway Track Construction:

The newly constructed Harmuti-Naharlagun Railway Track infringes with the 132KV Nirjuli-Ranganadi line between existing location 02 to loc.14 & crosses the track at 3 (three) locations. In order to do away with this infringement & at the behest of the District Administration, POWERGRID has carried out detailed survey for re-alignment of the complete line section from loc.134 to loc.23. The proposed line section shall now pass through Emchinallah-Lekhi village in Papumpare District.

Further, the contract for diversion of the line section from loc.134 to loc.23 has also been awarded by POWERGRID & erection work is expected for commencement very shortly. Subsequent to completion of the re-aligned section of the line(which is expected by April'2016), the existing line section passing through Doimukh area in Papumpare District shall be required to be disconnected & dismantled. It may be mentioned that the 132KV Nirjuli-Ranganadi line has been looped in & looped out at 132KV Lekhi Substation of DoP, AP at tower loc.11. Therefore, with disconnection of the existing line section from loc.134 to loc.23 as a result of its re-alignment,

connection of Lekhi Substation(DoP, AP) with Ranganadi & Nirjuli through the LILO portion shall be no longer available.

It is learnt that action has been taken by DoP, AP simultaneously for modification of the LILO line so as to ensure connectivity with 132KV Nirjuli-Ranganadi line after re-alignment is carried out by POWERGRID. Therefore, DoP, AP may look into for completion of this modification of LILO portion of the line matching with re-alignment of the line from loc.134 to loc.23(under execution by POWERGRID) in case it is felt necessary to maintain the existing configuration of LILO of line at Lekhi S/s(DoP, AP)

Deliberation in the meeting

The Sub-committee unanimously agreed to the proposal of NERTS.

Since no representative from Ar. Pradesh was present, portion pertaining to Ar. Pradesh could not be updated.

Action: NERTS & Ar. Pradesh.

D.14 Proposal for using 2 No. 63 MVAR Line Reactors available at Bishwanath Chariali Sub-stations as Bus Reactors:

4 No. 400KV, 63 MVAR Line Reactors, originally envisaged for use as Line Reactors with proposed 400KV D/C Lower Subansiri-Biswanath Chariali lines #1 & 2 are presently available at Biswanath Chariali Substation. Since, commissioning of Lower Subansiri H.E.P. is now expected to be delayed, hence the subject Shunt Reactors earmarked for use with the evacuating lines viz. 400KV D/C Lower Subansiri-Biswanath Chariali lines #1 & 2 do not find utilization at this moment.

On the other hand, it is seen that grid voltage at 400KV level at Biswanath Chariali, Balipara & Ranganadi remains very high(greater than 415 KV) for most part of the day. The situation aggravates in case of forced outage of any existing reactors or even shutdown of any existing reactor for preventive maintenance. It may be mentioned that one No. 400KV, 80MVAR Bus Reactor is in service at Biswanath Chariali presently while another 80MVAR Bus Reactor is proposed to be brought into service shortly. However, addition of the second Bus Reactor is expected to reduce the Bus voltage by 5 - 6 KV only. Moreover, forced outage of any of these Reactors is likely to lead to voltage shoot-up.

In order to assuage this issue of high voltage, it is felt proposed that 2 out of existing 4 No. 400KV, 63 MVAR Line Reactors at Biswanath Chariali are utilized as Bus Reactors. This will help contain the issue of continuous high voltage & also fulfill the *n-1* criterion in case of outage of any other reactor.

Deliberation in the meeting

During the Meeting the issue of critical high voltage at Biswanath Chariali, Balipara and Ranganadi was discussed and NERLDC suggested to utilize 2 of 4 nos. of 63MVAR, 420kV, 3-Phase Line Reactors of 2 X 400kV D/C Lower Subansiri - Biswanath Chariali Line # 1 & 2 at Biswanath Chariali as Bus Reactor to have better control of voltage with redundancy / flexibility for reliable operation of HVDC and associated HVAC Lines. The members agreed to the proposal and decided to place the proposal for ratification of NERPC in next Meeting to be held in January 2016. Subsequently, the proposal will be placed by NERPC in the next Standing Committee Meeting of CEA for approval.

The Sub-committee noted as above.

D.10 Estimated Transmission Availability Certificate (TAC) for the month of November, 2015.

NETC and POWERGRID, NERTS have submitted TAC data of November, 2015 in the first/second week of December, 2015. This will enable issuance of verification by NERLDC and certification by NERPC on monthly basis within stipulated time frame. Both NETC and NERTS are advised to follow the agreed time schedule in future to avoid accumulation of reports and corresponding delay.

Date & Venue of next OCC meeting

It is proposed to hold the 117th OCC meeting of NERPC on first week of January, 2016. However, the exact date and venue will be intimated in due course.

The meeting ended with thanks to the Chair.

Annexure-I**List of Participants in the 116th OCC Meetings held on 16/12/2015**

SN	Name & Designation	Organization	Contact No.
1.	No Representative	Ar. Pradesh	
2.	Sh. T.N. Sarma, DGM, SLDC	Assam	09435007369
3.	Sh. J.K. Baishya, AGM	Assam	09435041494
4.	Sh. B.C. Borah, AGM,SLDC	Assam	09435119248
5.	Sh. J.P. Choudhury, AGM	Assam	09954055295
6.	Sh. K. Sarma, AGM, AEGCL	Assam	09435013532
7.	Sh. A.N. Dev Choudhury, AGM, APDCL	Assam	09954055295
8.	Sh. T. Jigdung, Dy. Manager, SLDC	Assam	09707134351
9.	Sh. N. Patir, Dy. Manager, SLDC, AEGCL	Assam	09707380294
10.	Ms. Laishram Ritu, Manager, SLDC	Manipur	09612882984
11.	Ms. Khoisnam Steela, Manager (Sys. Cont.)	Manipur	-
12.	Sh. F.E Kharshiing, SE (SLDC)	Meghalaya	09863066960
13.	Sh. B. Wankhar, EE (MOD)	Meghalaya	09436105914
14.	Sh. Lalduhawma, EE, SLDC	Mizoram	09436144113
	No Representative	Nagaland	
	No Representative	Tripura	
15.	Sh. M. Mancal, Sr. Manager	NERLDC	09436335243
16.	Sh. Anupam Kumar, Sr. Engineer	NERLDC	09436335379
17.	Sh. Rahul Chakrabarti, Sr. Manager	NERLDC	09402507543
18.	Sh. B.K. Chakraborty, DGM (E)	NEEPCO	09436309730
19.	Sh. Bhaskar Goswami, Sr. Manager (E/M)	NEEPCO	09436163983
20.	Sh. P. Kanungo, DGM (AM)	PGCIL	09436302823
	No Representative	NTPC	
21.	Sh. Atanu Nath, Associate Manager	ENICL	09547808241
22.	Sh. Suraj Kumar Gupta, Engineer (E)	NHPC	09402880218
23.	Sh. Thakor Prasad Pandey, DGM (O&M)	OTPC	08794718423
24.	Sh. P.K. Mishra, MS	NERPC	
25.	Sh. B. Lyngkhai, Director/S.E (O)	NERPC	09436163419
26.	Sh. S. Mukherjee, AD-I/AEE	NERPC	08794277306
27.	Sh. Shaishav Ranjan, AD-II/A.E	NERPC	08794276168

