North Eastern Regional Power Committee

Agenda

For

113rd OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 11th September, 2015 (Friday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 112nd MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 112nd meeting of Operation Sub-committee held on 06th August, 2015 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2015/4556-4591 dated 28th August, 2015.

No observations or comments were received from any of the constituents. The Sub-committee may discuss & confirm minutes of 112nd OCCM of NERPC.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING AUG, 2015

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

NER PERFORMANCE DURING AUGUST, 2015

	Energy Met (MU)		w.r.t. May,15 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. May,15 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In June, 15
States	**Aug-15**	**Jul-15**		**Aug-15**	**Jul-15**		
Ar. Pradesh		36.7			38.6		
Assam		777.6			823.7		
Manipur		81.2			84.3		
Meghalaya		140.0			151.2		
Mizoram		36.7			38.3		
Nagaland		67.0			68.6		
Tripura		101.5			104.2		
Region		**1240.6**			**1308.8**		

	Demand Met (MW)		w.r.t. Apr,15 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Apr,15 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In May, 15
States	**Aug-15**	**Jul-15**		**Aug-15**	**Jul-15**		
Ar. Pradesh		108			110		
Assam		1326			1487		
Manipur		139			139		
Meghalaya		317			316		
Mizoram		78			79		
Nagaland		138			140		
Tripura		250			250		
Region		**2224**			**2355**		

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	**Aug-15**	**Jul-15**
Total Generation in NER (Gross)		1293.53
Total Central Sector Generation (Gross)		958.75
Total State Sector Generation (Gross)		334.78
Inter-Regional Energy Exchange		
(a) NER-ER		119.95
(b) ER-NER		64.06
© Net Import		-55.89

AVERAGE FREQUENCY (Hz)

Month---->	**Aug-15**	**Jul-15**
	% of Time	% of Time
Below 49.9 Hz		10.72
Between 49.9 to 50.05 Hz		70.26
Above 50.05 Hz		19.02
Average		49.99
Maximum		50.33
Minimum		49.56

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

During 112nd[h] OCC meeting, the status as informed by NTPC, NEEPCO and POWERGRID is as follows:

SN	Items	Status as given in 113rd OCC Meeting	Status as on 112nd OCC
1	Trial operation and CoD of Unit -I of Bongaigoan TPS of NTPC		COD is expected by December, 2015
2	315 MVA ICT of NTPC at Bongaigaon		August, 2015

3	Trial operation and CoD of STG –I & II of AGTPP of NEEPCO		CoD of STG-II is 29.07.2015. STG-I trial run with one boiler is August, 2015.
4	Trial operation and CoD of Monarchak GBPP of NEEPCO		Synchronization depends upon availability of gas. December, 2015 ***Refer to TCC***
5	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)		November, 2016 April, 2017
6	Pare HEP of NEEPCO (2 x 55 MW)		June, 2016
7	400KV D/C Silchar - Melriat line of PGCIL		December, 2015
8	800KV HVDC Bishwanath Chariali - Agra		August, 2015
9	132kV Rangia - Salakati of PGCIL		June, 2016
10	132kV Monarchak – Surjamaninagar D/C of TSECL		December, 2015
11	400/132 kV, 2nd 125 MVA ICT at Palatana		June, 2016

Concerned constituents may kindly intimate the status.

C.2 <u>CT Ratio of Transmission Lines in NER & Enhancement of Loadability of Lines</u>:

During 110th OCC meeting, the Sub-committee has requested NERLDC to compile the loadability of all the ISTS lines pertaining in tabular format considering NRCE and the present loading as per NERLDC, CT ratio etc., so that constituents can update their data accordingly. NERLDC agreed.

During 112nd OCC meeting, DGM (SO-II), NERLDC informed that NERLDC has already compiled the list in tabular format as suggested by the Sub-committee considering Planning Criteria, January, 2013 & NRCE and these figures are attached with earlier Minutes.

Further, DGM (SOII), NERLDC requested all constituents of NER to change CT ratio as per NRCE guidelines (e.g 495 A for 132 kV lines (Panther Conductor) at Design Temperature of 75^0). Members agreed.

Constituents/NERLDC may kindly intimate the status and members may deliberate.

C.2(a) Upgradation of CT ratio of 132 kV Gelephu - Salakati line to 600/1 A at Salakati:

NLDC, Bhutan have requested to upgrade CT ratio of 132 kV Gelephu - Salakati line to 600/1 A at Salakati for evacuation of Dagachu power through ER Grid of Bhutan in case of contingency in Western Grid of Bhutan. They have already upgrade CT ratio of 132 kV Gelephu - Salakati line to 600/1 at Gelephu.

During 111st OCC meeting, NERLDC informed that Bhutan has not changed the CT Ratio and they wanted shut down for the purpose. Accordingly, it has been decided to accord shut down of 132 kV Salakati – Gelephu line on 29.07.15 for carrying out the job of CT Ratio changing to 600/1A simultaneously by Bhutan and POWERGRID at both ends (i.e. Salakati & Gelephu).

During 112nd OCC meeting, the Sub-committee once gain requested NERLDC to take up the matter with NLDC Bhutan so that shutdown can be availed by NERTS to complete the work.

This is for information that CT ratio of 132 kV Salakati – Gelephu line changed to 600/1 A at Salakati (12.08.15) & Gelephu (on 05.08.15).

NERLDC & NERTS, POWERGRID may kindly intimate the current status.

C.2(b) 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 Lumnsnong – 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 Lumnsnong – Panchgram Line is to be enhanced.

During 111st 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.

The Sub-committee suggested AEGCL & MePTCL to resolve the issue bilaterally and inform the status of progress to the forum.

AEGCL & Me. PTCL may kindly inform the latest status.

C.3 Single Line Diagram of Sub-stations, Switching Stations & Power Stations of NER:

During 112nd OCC meeting, the status of SLDs was reviewed and the following constituents given below are to furnish the status of SLDs:

Status of submission of data related to Single Line Diagram of Sub-stations			
Sl No	***Name of Constituent***	***Data Submitted***	***Remarks***
1	***AEGCL***	*Partially*	*BRPL, Ghoramari, HPC, Jagiroad, HPC, Panchgram, Star Cement & CALCOM not submitted*
2	***MePTCL***	*Partially*	*Sai Prakash not submitted*

After detailed deliberation, the Sub-committee had decided that above information should be sent by remaining constituents to NERLDC/NERLDC latest by 31.08.2015. All constituents agreed.

Assam/Meghalaya/NERLDC may kindly update the status.

C.4 Latest status of FGMO/RGMO implementation in different generating stations:

To update the available record of FGMO/RGMO implementation in NER it is requested that the latest unit-wise status of implementation of FGMO/RGMO in different Central & State sector generating stations may please be furnished to NERLDC at the earliest as per Annexure circulated in earlier minutes**.**

During 109th OCC meeting, DGM (SO-I), NERLDC intimated about the latest CERC Petition No. 84/MP/2015 relating to inadequate operation of FGMO/RGMO. He informed that the Commission has directed all the constituents to file the following details/clarification through Affidavit latest by 12.06.2015:

During 111st OCC meeting, NHPC informed that work for implementation of FGMO will commence from 22.07.2015 for 15 days and requested the forum to grant the shutdown if required during commissioning of FGMO.

SE(O), requested NHPC to inform to CERC about their plan of installing FGMO and get the exemption from the Hon'ble CERC during the period where FGMO was not in place. NHPC agreed.

NHPC may kindly intimate the current status.

C.5 Submission of list of feeders connected to essential load:

As per clause no 5.8.c of IEGC, essential loads are to be restored on priority during restoration process.

During 112nd OCC meeting, the status of essential feeders was reviewed and the following constituents given below are to furnish the status:

Status of submission of data related to list of feeders connected to essential load			
Sl No	***Name of Constituent***	***Data Submitted***	***Remarks***
1	*MSPCL*	*Yes*	*Manipur partly furnished furnish the essential load in 33 kV level*

After detailed deliberation, the Sub-committee had decided that above information should be sent by MSPCL to NERLDC/NERLDC latest by 31.08.2015.

Manipur/NERLDC may kindly update the status.

C.6 Progress Report of Ongoing Projects:

Progress reports of ongoing generation and transmission projects of NER need to be communicated to NERLDC by all constituents on monthly basis as per format. The progress of different elements are necessary for incorporation in Operational Feedback and other reports as also for preparation of Base Case for system study in NER. Accordingly, constituents are requested to furnish the progress report of their elements by 10th of every month for the previous month.

During 110th OCC meeting, the Sub-committee requested NERLDC to compile the list of Progress Report of ongoing projects to be submitted by constituents in tabular format. Accordingly, NERLDC has furnished the latest status as given below:

Status of submission of Progress Report of Ongoing Projects			
Sl No	***Name of Constituent***	***Data Submitted***	***Remarks***
1	***DoP, Arunachal Pradesh***	*Submitted for April & May'15*	*Details as per format not submitted*
2	***AEGCL***	*Submitted for April & June'15*	
3	***APGCL***	*Submitted for Mar'15*	
4	***MSPCL***	*Submitted for April'15*	
5	***MePTCL***	*Submitted for May'15*	
6	***MePGCL***	***Not submitted***	
7	***P&E Deptt, Mizoram***	*Submitted for Jul'15*	

8	***DoP, Nagaland***	*Submitted for Jul'15*	
9	***TSECL***	*Submitted for Jun'15*	*July'15 to be submitted in format*
10	***POWERGRID***	*Submitted*	
11	***NEEPCO***	*Submitted regularly for each month*	
12	***NTPC***	*Submitted regularly for each month*	
13	***NHPC***	***Not submitted for Lower Subansiri***	*NHPC requested to take up the matter with Corporate regarding Lower Subansiri HEP*
14	***OTPC***	-	*Status of 2nd ICT at Palatana to be submitted*

Constituents/NERLDC may kindly update the status.

C.7 Installation of dedicated auxiliary power supply arrangement at Pallatana.

It has been observed that in various occasions the Generation of Pallatana interrupted due to disturbance in Auxiliary Power Supply taken from Tripura system. OTPC informed that their transformation capacity in existing dedicated auxiliary power supply is limited to 16MVA and so, a part of auxiliary load is connected to Tripura system.

During 111st OCC meeting, OTPC informed that they will explore the capacity enhancement of Unit Auxiliary Transformer (UAT) for dedicated station auxiliary power supply & final report will be submitted shortly.

DGM, OTPC informed that consultant has already been engaged to look into the matter and the status will be informed accordingly.

During 112nd OCC meeting, OTPC informed that installation of 2nd 125 MVA, 400/132 kV ICT is in progress, which is required for Auxiliary Consumption instead of depending on Tripura system. The matter can be reviewed after commissioning of above ICT.

OTPC may update the status.

C.8 Conversion of line reactors of 400kV Balipara – Bongaigaon I&II to switchable line Reactors at Balipara & Bongaigoan:

During 110th OCC meeting, DGM (AM), NERTS informed that conversion of line reactor of Balipara-Bongaigaon – I & II to switchable line reactor, the procurement of switching equipments is under progress and it may take atleast 6 (six) months to complete the above work. The tentative date is November, 2015.

NERTS may kindly update the status.

C.9 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	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	72	72	67	67	67
Assam	720	710	700	700	680
Manipur	75	75	75	75	80
Meghalaya	150	180	190	202	215
Mizoram	42	43	43	45	47
Nagaland	70	72	72	69	65
Tripura	120	130	110	120	125
NER	**1249**	**1282**	**1257**	**1278**	**1279**

Availability:

Name of State	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	74	61	50	45	48
Assam	630	600	605	550	590
Manipur	85	79	70	65	70
Meghalaya	274	260	220	200	180
Mizoram	54	50	40	40	42
Nagaland	64	56	60	55	55
Tripura	192	194	190	195	200
NER	**1373**	**1300**	**1235**	**1150**	**1185**

C.10 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	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	143	143	128	128	133
Assam	1480	1455	1400	1460	1400
Manipur	149	154	149	149	165
Meghalaya	400	400	410	425	375
Mizoram	85	85	90	95	90
Nagaland	135	130	135	130	125
Tripura	285	300	280	255	250
NER	**2677**	**2682**	**2592**	**2642**	**2538**

B. Peak Availability in MW

Name of State	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	145	145	127	126	118
Assam	1164	1210	1200	1200	1195
Manipur	159	160	140	128	145
Meghalaya	488	480	380	350	325
Mizoram	105	105	95	90	85
Nagaland	104	110	100	90	95
Tripura	403/230	403/230	403/230	403/230	403/230
NER	**2570**	**2600**	**2445**	**2445**	**2375**

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

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

Name of State	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	72	76	70	70	73
Assam	830	950	900	920	910
Manipur	75	95	97	95	95
Meghalaya	165	226	231	234	230
Mizoram	42	55	59	62	60
Nagaland	70	80	78	80	85
Tripura	202	214	184	180	190
NER	**1374**	**1696**	**1439**	**1641**	**1638**

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

Name of State	Sep15	Oct15	Nov15	Dec15	Jan16
Ar. Pradesh	79	76	60	60	65
Assam	900	930	850	840	850
Manipur	97	111	95	90	90
Meghalaya	420	400	350	300	275
Mizoram	55	70	65	60	60
Nagaland	81	71	60	55	70
Tripura	194	240	240	240	240
NER	**1626**	**1898**	**1720**	**1645**	**1650**

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				
Kopili				
Kopili-II				
Ranganadi			Subject to inflow	
Doyang				
Loktak				
AGBPP			-	-
AGTPP			-	-

Hydro generation planning for lean hydro period - Proper planning is required to utilize the available water for entire high hydro period, say upto October, 2015.

The Committee may discuss and approve the proposed shutdown by Generating Stations.

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.

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for September - October, 2015 as enclosed at Annexure- D.2.

D.3 Status of SLDCs in NER:

The status of setting-up of SLDC as informed by POWERGRID during 112th OCC meeting is given below:

UPGRADATION OF SLDCs

SN	State	Completion Target
1	Assam	30.09.2015
2	Tripura	31.10.2015
3	Meghalaya	31.10.2015
4	NERLDC	30.09.2015

NEW SLDCs

SN	State	Completion Target
5	Manipur	30.11.2015
6	Nagaland	31.03.2016
7	Mizoram	31.03.2016
8	Arunachal Pradesh	31.12.2015

POWERGRID may kindly intimate the current status.

D.4 Updated Operating Procedures of NER July 2015 (Draft)

During 112nd OCC meeting, DGM (SO-II), NERLDC informed that **Operating Procedures of NER July 2015** was updated and the same was uploaded in the website of NERLDC. The Password was informed to constituents during the meeting.

SLDC, AEGCL informed that Operating Procedure of Assam will be submitted to NERLDC/NERPC within one week.

The Sub-committee once again requested all SLDCs of NER to submit Draft Operating Procedure of the State by **31st August, 2015** for approval of the forum.

Latest status of approval of these documents from OCC forum of NERPC is as follow:-

Sl 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	Not 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

Constituents/NERLDC may kindly intimate the current status.

D.5 Nomination of Nodal Officers for Disaster Management:

The names of Nodal Officers for Disaster Management as updated during 111st OCC meeting is given below:

DISASTER MANAGEMENT - LIST OF CONTACT DETAILS OF NODAL OFFICERS/SECOND IN COMMAND- 2015						
Region/SLDC	**Name**	**Designation**	**Tel. Nos.**	**Mobile No.**	**Fax No.**	E-mail Address
NERLDC						
Nodal Officer	V Kaikhochin	DGM(SL)	0364-2535710	9436302712	0364-2537470	kaikhochin@gmail.com
Second in Command	A Mallick	DGM(SO-2)	0364-2535481	9436302720	0364-2537470	amaresh65@gmail.com
Arunachal Pradesh SLDC						
Nodal Officer	N. Perme,	EE, SLDC	-	9436288643	-	sldcitnagar@gmail.com
Second in Command	Domo Kamduk,	JE (E)	0360-2292160	9436671717	0360-2214358	sldcitanagar@gmail.com
Assam/ AEGCL SLDC						
Nodal Officer	Bimal Chandra Borah	DGM	0361-2382263	9435119248	0361-2387929	bimalchandraborah@gmail.com
Second in Command	Tirtha Sharma	DGM	0361-2382263	9435007369	0361-2387929	sldcaseb@rediffmail.com
Manipur SLDC						
Nodal Officer	M. Budha Chandra Sharma	GM, Transmission	03852451172 / 03852447278	9436020911	-	sldcmanipur@yahoo.com & sldcmanipur@gmail.com
Second in Command	S. Joykumar Sharma	OSD(Tech)/SLDC	03852451172 / 03852447278	9612950771	-	-Do-
Meghalaya/ MeSEB SLDC						
Nodal Officer	Mr. T. Gidon	EE SLDC	-	9774479956	0364-2551967	sldc.shg@gmail.com, gidon@rediffmail.com
Second in Command	Mr.R. War	EE (T&T), Division, Umiam	-	9436103088	0364-2550020	rupertwar@gmail.com
Mizoram SLDC						
Nodal Officer	Vanlalrema	SE(SLDC)	0389-2311397	9436140353	0389-2311394	sldc_mizoram@rediffmail.com
Second in Command	Lalbiaksanga	SE(T&R)	0389-2311170	9436140932	0389-2320862	seeinc@gmail.com
Nagaland SLDC						
Nodal Officer	Atoho Jakhalu	Executive Engineer	0386-2230117	9436002696	0386-2230118	atoho.jk@gmail.com
Second in Command	Rokobeito Iralu	S.D.O	0386-2230118	9436832020	-	sldc.ngl@gmail.com

Tripura SLDC						
Nodal Officer	Uddharan Debbarma	DGM, SO	0381-2356470	9436462842	0381-2350795	uddharan.agt@gmail.com
Second in Command	Mrinal Pal	Manager, SO	0381-2356470	9436137022	0381-2350795	mrinalpaulnit@gmail.com
NERTS						
Nodal Officer	A. Patir	GM		9436302529		apatir@gmail.com
Second in Command	P. Kanungo	DGM		9436302823		kanungo_p@yahoo.com
NEEPCO						
Nodal Officer	B. Goswami	Sr. Mgr.		9436163983	0364-2221789	bhaskargoswami@rediffmail.com
Second in Command	Joypaul	Sr. Mgr.	0364-2226707	943557772	0364-2221789	joypal_roy@rediffmail.com
NHPC						
Nodal Officer	Md. Sajid Akhter	Manager (E&C)	08974000839, 03879261237	9436678603	03879261237	loktakphop@gmail.com, loktakphem@gmail.com
Second in Command	Ch. R. C. Singh	Manager (E)	08974000839, 03879261237	9436894889	03879261237	loktakphop@gmail.com, loktakphem@gmail.com
NETC						
Nodal Officer	Narottam Chakraborty	Assistant Manager	0361-2490063	7896022335	-	narottamchakraborty@netcindia.in
Second in Command	K. K. Roy	Head-Projects	0124-4716063	9999019661	-	kkroy@netcindia.in
NTPC						
Nodal Officer	J. Bhattacharya	AGM		9435720036		jb201413074@gmail.com
Second in Command	S. Das	AGM				
OTPC						
Nodal Officer	Mukul Banerjee	GM				mukul.banerjee@otpcindia.in
Second in Command	Narendra Gupta	Manager	03821-265261	9774233426		nk.gupta@otpcindia.in
NERPC						
Nodal Officer	B. Lyngkhoi	Director/SE		9436163419		b_lyngkhoi@yahoo.com
Second in Command	S. Mukherjee	AD-I/AEE		8794277306		nerpc@ymail.com

Members may like to note- For kind information only.

D.6 Identification of Nodal Officers for Weather related issues:

The names of Nodal Officers for Weather Management as updated during 112nd OCC meeting is given below:

List of Nodal Officers for weather related information			
Constituent	**Name of Nodal Officer**	**Contact No**	**Email id:**
Ar. Pradesh	N. Perme, EE, SLDC	9436288643	sldcitanagar@gmail.com
	A.K Yadav, JE(E) SLDC	9436666226	sldcitanagar@gmail.com
Assam	Bimal Chandra Borah, DGM	9435119248	bimalchandraborah@gmail.com
	Tirtha Sharma, DGM		sldcaseb@rediffmail.com
Manipur	B.C. Sharma, GM	9436020911	sldcmanipur@gmail.com
	S.J. Sharma, OSD	9612950771	sldcmanipur@gmail.com
Mizoram	Vanlalrema, SE(SLDC)	9436140353	sldc_mizoram@rediffmail.com
	Lalbiaksanga, SE(T&R)	9436140932	seeinc@gmail.com
Meghalaya	F.E. Kharshiing, SE, SLDC	09612170657	sldc.shg@gmail.com
	R. Majaw, SE, MRT	09436110871	hector_fd@rediffmail.com
Nagaland	A. Jakhalu, EE, SLDC	9436002696	atoho.jk@gmail.com
	Roko Iralu, SDO		sldc.ngl@gmail.com
Tripura	Debrata Paul, Sr. Manager	9436500244	d_pal1966@rediffmail.com
	Mrinal Paul, Manager	9436137022	mrinalpaulnit@gmail.com
NERLDC	T.S.Singh, General Manager	9436302717	tssingh4@yahoo.co.in
	N.R.Paul, DGM (SO-I)	9436302723	nrpaul.123@gmail.com
	A.Mallick, DGM (SO-II)	9436302720	amaresh1965@yahoo.co.in
	Momai Dey (Engineer, SO-II)	9436302716	m.dey1403@gmail.com

Constituent	Nodal Officers	Stations where data is desired	Weather Parameters desired
Arunachal Pradesh	Yes	Yes	Yes
Assam (AEGCL)	Yes	Yes	Yes
Manipur (MSPCL)	Yes	Yes	Yes
Meghalaya (MePTCL)	Yes	Yes	Yes
P&E Dept. ,Mizoram	Yes	Yes	Yes
DoP, Nagaland	Yes	Yes	Yes
Tripura (TSECL)	Yes	Yes	Yes
NEEPCO	Yes	Yes	Yes
NHPC	Yes	Yes	Yes
OTPC	Yes	Yes	Yes
NTPC	Yes	-	-
NERTS	Yes	-	-

Further, DGM (SO-II), NERLDC informed that workshop regarding weather related will be conducted soon in consultation with IMD and requested all the constituents to go through the questioners sent by NERLDC and any clarifications will be furnished by IMD. The exact date will be intimated shortly.

NERLDC may kindly intimate the status.

D.7 Persistent over voltage at Palatana:

NERLDC informed that it has been observed that bus voltage at Palatana is persistently remaining above the upper limit of IEGC band which is not desirable from system operation point of view. The 80 MVAR bus reactor installed Palatana has not yet been put in service. OTPC is requested to take action for early operation of the Reactor so that the same can be used for maintaining voltage at desired level.

DGM, OTPC stated that reactor is in healthy condition still they had sent a communication to NERLDC seeking clearance for charging. NERLDC informed that they look into the matter and revert back to OTPC.

Further, OTPC is also requested to restore the 125 MVA ICT, which is under long outage for strengthening connectivity of Tripura system which will help to control voltage to certain extent.

The Sub-committee requested OTPC & NERLDC to resolve the issue for early charging of faulty 125 MVA ICT and 80MVAR reactor.

During 112nd OCC meeting, DGM, OTPC informed that oil filtration is under progress and the reactor will be put into service by **31.08.2015.**

OTPC & NERLDC may kindly intimate the current status.

D.8 Power evacuation problem of Loktak Power Station:

NHPC informed that there are Four Nos. of 132 kV feeders installed at Loktak Power Station and details are as follow:

I. Loktak – Ningthoukhong 132 kV Feeder (MSPCL)
II. Loktak – Imphal 132 kV Feeder (PGCIL)
III. Loktak – Rengpang 132 kV Feeder (MSPCL)
IV. Loktak – Jiribam 132 kV Feeder (PGCIL)

It kindly intimated that out of four feeders at LPS, most of the time Feeder No. III as indicated above i.e. Loktak – Rengpang 132 kV Feeder (MSPCL) usually kept under shut down due to fault in the feeder. However, this feeder does not help LPS for power evacuation as the total transmitted energy through this feeder in the year 2014-15 was 6.6 MU and for first four month of 2015-16 is only 2.6 MU. Also, maximum power flow is usually in the range of 2-3MW only.

In this monsoon season, various tripping of all the above mentioned feeders has been observed. Due to tripping of above said feeders or grid constraint, the generation of Loktak Power Station is always backed down by the NERLDC due to limitation of the Power Flow in the available feeders. For the same a data has been compiled for the month of July and August 2015 and it can be seen that approx. 3.9 MU generation loss has been faced by the loktak Power Station only due to backing down of generation on account of feeder tripping or grid disturbance. Therefore, it is prudent to mention that inspite of high water inflow and spillage, Loktak Power Station is not able to generate it's Declared Capacity.

Members may kindly deliberate and necessary action to be taken to resolving the power evacuation problem of Loktak Power Station as early as possible.

D.9 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.

Members may like to discuss and MSPCL should install PLCC Panels in both the feeders as early as possible.

D.10 Scheduling of ISGS Generation:

NHPC informed that as per the notification issued by CERC in the amendment of IEGC 2010, Regulation 6.5.17 of Principal Regulations shall be substituted with the following: *"In case of any grid disturbance, scheduled generation of all the ISGSs supplying power under long term / medium term/short term shall be deemed to have been revised to be equal to their actual generation and the scheduled drawals of the beneficiaries/buyers shall be deemed to have been revised accordingly for all the time blocks affected by the grid disturbance. Certification of grid disturbance and its duration shall be done by the RLDC"*. The same has been followed by the RLDC and ISGS.

In this regard, it is kindly inform that after stabilization of the system, Loktak Power Station usually send the "**Actual Ex-Bus**", and accordingly NERLDC revise the schedule based on the data sent by the LPS. But while calculating schedule, NERLDC add / subtract the proportionate portion of IEX (i.e. Indian Energy Exchange of Meghalaya share) block-wise. Since the energy sent by the Power Station is actual Ex-Bus (Which also included the portion of IEX), It is therefore the revise schedule should be exactly same as LPS Actual Ex-Bus.

Members may like to discuss and necessary action is to be taken by NERLDC to resolve this ambiguity of scheduling in case of grid disturbance.

D.11 Estimated Transmission Availability Certificate (TAC) for the month of July, 2015.

NETC and POWERGRID, NERTS have submitted TAC data of July, 2015 in the first/second week of August, 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.

D.12 Non-reporting of RTUs of Constituents:

a) AEGCL:

Only 14-18 RTUs out of 50 are reporting partially with 10 to 20 % data. It is very difficult to run the GRID without proper real-time data. So AEGCL may confirm the realistic time by which all 50 RTUs is expected to be restored and real-time data can be provided for Grid Management.

The following Generating Stations and Sub-stations need utmost attention.

Generating Stations: NTPS, LTPS, Karbi Langpi

Sub-stations: Sarusajai, Samaguri, Mariani, BTPS, Dhaligaon, Rangia (Bhutan line data not available), Badarpur, Pailapool, Haflong, Dullavchera, Bokajan.

b) Me.ECL:

Generating Stations: Umiam-II (18 MW), Umiam, Leshka (84 MW) , Umtru
Sub-stations: 132 kV Khliehriat, Byrnihat S/S.

c) TSECL:

Generating Stations: 1. Gumti (since January, 2011), 2. Baramura (partial, U-5 data NA, CB status N/S) and 3. Rokhia (U-3 N/A, all CB status suspect)

Substations: Dharmanagar, Badharghat, Kamalpur, Jirinia, Budhjungnagar, Ambasa, Udaipur (Palatana line not connected) 7-8 RTUs are reporting against 15 RTUs.

d) Manipur: 4 RTUs

e) Nagaland: 3 RTUs

f) Mizoram: 1 RTU

g) MARIA_PG unstable.

h) Kopili and Doyang RTU not reporting.

i) Kathalguri and RC Nagar *50 pc data available*.

During 111st OCC meeting, GM, NERTS, POWERGRID informed that old RTUs are to be replaced immediately. Services required for these RTUs cannot be supported by the suppliers. All the constituents of NER are requested to replace their old RTUs at the earliest.

The Sub-committee requested all constituents of NER to procure new RTUs and replaced the old RTUs at the earliest so that real time data can be monitored for the benefit of the grid.

During 112nd OCC meeting, DGM (SOII), NERLDC requested all constituents of NER to furnish timeline of installation of new RTUs.

Constituents may intimate the current status.

D.13 Frequent tripping of 220 kV New Mariani-Mokokchung D/C line on over voltage:

Since commissioning of 220 kV New Mariani-Mokokchung D/C line it is observed the lines are tripping very frequently due to over voltage, The over voltage problem is so acute that even one circuit cannot be kept in operation on continuous basis. This is creating problem in smooth operation of the grid as a result of which power supply to Nagaland through this route is getting affected.

Concerned utilities are requested to take corrective actions immediately so that system security can be ensured alongwith trouble free operation of the grid.

D.14 Transformer Tap optimization:

System study was conducted by NERLDC considering load, generation and network pattern of September, 2015 during Peak & Off Peak periods. Suggested taps position of important transformers in NER for maintaining bus voltages within permissible limit as well as to minimize system losses are attached at **Annexure D.14.I.**

All constituents are requested to furnish details of present Tap- Position of Transformers as per format in **Annexure D.14.II.**

Members may like to discuss.

D.15 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 withdrawl 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/withdrawl 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.

Implementing Agency letter in this regard has been issued and is attached in **Annexure D.15.**

Constituent	Forecasted Nodal injection/withdrawal	Maximum injection/withdrawal of last 3 years
Arunachal Pradesh	Yes	Yes
Assam (AEGCL)	Yes	-
Manipur (MSPCL)	Yes	Yes
Meghalaya (MePTCL)	-	-
P&E Dept. ,Mizoram	Yes	Yes
DoP, Nagaland	Yes	Yes
Tripura (TSECL)	Yes	Yes
NEEPCO	Yes	Yes
NHPC	-	-
OTPC	Yes	Yes
NTPC	-	-

It is also requested to all the utilities to submit the data as per formats for Quarter 4 of 2015-16 (January- March '16) by 31st October, 2015.

D.16 Submission of Daily Hourly Shortfall along with Demand Forecast

At present day-ahead hourly demand forecast data on daily basis sent by SLDCs are available. For scheduling of ISGS power, load forecast data are also required. It is requested to furnish day-ahead hourly Shortfall data along with demand forecast data on daily basis by 2000 Hr of previous day. Day ahead load forecasting will be done on daily basis for which both the data are required (Load forecast = Demand Forecast - Shortfall).

At present Arunachal Pradesh, Assam and Tripura are furnishing these data.

D.17 Constraint in inter-state corridor & intra-state elements of Tripura System in case of exporting 100 MW power to Bangladesh under certain scenarios

It has been agreed to provide 100 MW power to Bangladesh through 132 kV Surjamaninagar (TSECL) – Comilla (Bangladesh) D/C lines.

Presently, one circuit of 400 kV Palatana – Surjamaninagar D/C (Charged at 132 kV) & One 400/132 kV, 125 MVA ICT at Palatana are under operation. Other circuit of 400 kV Palatana – Surjamaninagar D/C (Charged at 132 kV) could not be completed yet since the bay originally designated for this line was used by 132 kV Palatana – Udaipur line (which was used by Palatana for drawing start-up power in commissioning phase).

It has been observed from system study results that there will be constraint in inter-state corridor & intra-state elements of Tripura System in case of exporting 100 MW power to Bangladesh under certain scenarios.

To address these constraint, it is required to expedite commissioning of 2nd 400/132 kV, 125 MVA ICT at Palatana & second circuit of 400 kV Palatana – Surjamaninagar(TSECL) D/C (Charged at 132 kV) for short term measures and to commission of 400 kV Palatana – Surjamaninagar (TBCB) D/C line & 400/132 kV, 2x315 MVA ICT at Surjamaninagar(TBCB) & 132 kV Surjamaninagar(TSECL) – Surjamaninagar (TBCB) D/C line with high capacity/HTLS.

During 5th Standing Committee Meeting held at Imphal on 08.08.15, OTPC informed that procurement of 2nd ICT at Palatana is under progress. During 5th Standing Committee Meeting, Director, CEA stated that about 100 MW power is planned to be exported to Bangladesh from Tripura by December, 2015 and for reliable transfer of power to Bangladesh both the circuits from Palatana to Surajmaninagar are required. He requested TSECL to disconnect their 132 kV line to Udaipur from Palatana so that the other circuit of Palatana-Surajmaninagar can be connected. Construction of 3rd 132 kV line bay at Palatana was approved in this meeting.

Members may like to discuss.

D.18 Up-gradation of 220/132kV Salakati Sub-station from Conventional to SAS on completion of 25 years age and Capitalization during Tariff Block (2014-2019)

220/132kV Salakati Sub Station was commissioned in the year 1987 and thus, completed 28 years which is 3 years more than the age of Substation. At present, the condition of various equipments / items like LTAC, DCDB, Battery Banks, Power & Control Cable, CT, CVT, Isolator, Bus Post Insulators, String insulators, C&R Panels etc. have deteriorated considerably and requires replacement for further extension of Substation life. Meanwhile, only obsolete ABCBs are replaced with SF_6CBs.

In view of above, it is proposed to replace all the above mentioned obsolete equipments / items and up-grade the Substation from conventional to SAS on

completion of 25 Years under PoC Mechanism. The tentative expenditure will be around Rs 10.00 Crores.

Members may like to discuss.

D.19 Up-gradation of 132kV Halflong, 132kV Jiribam, 132kV Kumarghat and 132kV Aizawl Sub-station on completion of 25 years age and Capitalization during Tariff Block (2014-2019)

The up-gradation of Haflong, Jiribam, Kumarghat and Aizawl sub stations on completion of 25 Years from AIS to GIS/Hybrid with Double Bus Bar Arrangement, Bus Bar Protection and LBB Scheme in SAS configuration to enhance reliability / continuity of power supply has already been approved in 15th NERPC Meeting at Guwahati on 21st August 2015.

Accordingly, a committee of POWERGRID representatives from Region and Corporate Engineering & AM Department visited Aizawl Sub Station to explore the possibility of up-gradation from AIS to GIS/Hybrid without interruption of power flow during up-gradation works. After detailed study it is found that conversion to GIS will be preferable compared to Hybrid under following consideration:

(a) Up-gradation to GIS will have minimum outage compared to Hybrid. In case of GIS outage will be only during changeover of primary connection. However, in case of Hybrid, the outage will be during installation as well as changeover of Primary and secondary connection.

(b) Up-gradation to GIS will generate more space for future expansion which is non-existing in case of Hybrid. Further, due to space saving in case of GIS one transformer 132/33kV can be installed additionally for dedicated station supply.

Hence, it is proposed to up-grade the above stations from AIS to GIS in line with the approval during 15th NERPC Meeting. The tentative cost for Up-gradation will be Rs. 20.00 – Rs. 22.00 Crores for each station.

This for information and endorsement during 16th NERPC Meeting

D.20 Exemption of Telemetry & Speech for commissioning of Pasighat-Roing-Teju-Namsai – Provisional Clearance:

It may be noted that construction works of Passighat--Roing-Teju-Namsai(1) is going on through POWERGRID. Telemetry data of the same is not possible until Passighat-Along-Daporizo-Ziro(A) or Namsai-Rupai-Tinsukia(B) communication link is made available there with provision of optical/plcc which is presently not available. Also GPRS connectivity is not OK at these locations.

Hence it is proposed for provisional permission of commissioning of the above substations without Telemetry data (provisional clearance for1.5 year or connecting comm-link line readiness whichever is earlier). However, voice connectivity will be provided through Mobile phone while commissioning itself.

Members may like to discuss.

D.21 Line loading of 132kV Dimapur – Bokajan Line:

On 21/08/15 at 18:04 hrs line loading of 132KV Dimapur -Bokajan line increased up to 65 MW. As a result, NERLDC shillong instruct SLDC, Assam to open the line at Bokajan instantaneously. Instead of opening this line at Bokajan SLDC, Assam open this line at 132KV Golaghat substation where power flow was 18MW towards Mariani. As a consequence all LTPS machines tripped in operating under frequency relay. It is therefore requested you to place this incident in next OCC meeting for discussion whether the situation at that time was so alarming that NERLDC instrumental to open the 132 KV line at 65 MW of Load

Members may like to discuss.

Any other item:

Date and Venue of next OCC

It is proposed to hold the 114th OCC meeting of NERPC on first week of October, 2015. The date & exact venue will be intimated in due course.

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Transformer Tap Optimisation Data

Senario : September 2015 03-Sep-15

Sl. No.	Substation	Voltage Ratio (kV)	Transformer No.	Capacity in MVA	Controlled Bus	Tap Step (%)	Total Tap Positions	Nominal Tap	OFFPEAK Suggested	PEAK Suggested	Voltage Profile			
											Off-Peak		Peak	
											Pre-Opt	Post-Opt	Pre-Opt	Post-Opt
1	Balipara	400/220	1	315	400kV	1.25	17	9	NO+1	NO+1	421	420	424	424
		220/132	2	50	132kV	1.25	17	9	NO+2	NO+2	137	132	139	134
		220/132	3	50	132kV	1.25	17	9	NO+2	NO+2				
2	Bongaigaon	400/220	1	315	400kV	1.25	17	9	NO-2	NO-2	425	424	424	423
3	Salakati	220/132	1	50	132 kV	1.25	17	13	NO+1	NO+2	142	142	141	140
		220/132	2	50	132 kV	1.25	17	13	NO+1	NO+2				
4	Misa	400/220	1	315	400kV	1.25	17	9	NO-1	NO-1	421	420	425	423
		400/220	2	315	400kV	1.25	17	9	NO-1	NO-1				
5	RHEP	400/132	1	360	400 kV	2.5	17	9	NO-2	NO-2	417	416	423	421
		400/132	2	360	400 kV	2.5	17	9	NO-2	NO-2				
6	Azara	400/220	1	315	400kV	1.25	17	9	NO-1	NO-1	421	421	420	420
		400/220	2	315	400kV	1.25	17	9	NO-1	NO-1				
7	Silchar	400/132	1	200	400 kV	1.25	17	9	NO	NO	411	411	411	411
		400/132	2	200	400 kV	1.25	17	9	NO	NO				
8	Byrnihat	400/220	1	315	400 kV	1.25	17	9	NO	NO-2	424	424	426	424
		400/220	2	315	400 kV	1.25	17	9	NO	NO-2				
		220/132	5083/1	160	132 kV	1.25	17	9	NO	NO+2	141	141	143	140
		220/133	5083/1	160	132 kV	1.25	17	9	NO	NO+2				
9	Palatana	400/132	1	125	132 kV	1.25	17	9	NO+2	NO+2	135	134	135	133
10	Dimapur	220/132	1	100	220 kV	1.25	17	9	NO	NO	236	237	236	238
		220/132	2	100	220 kV	1.25	17	9	NO	NO				
11	Mokokchung	220/132	1	30	220 kV	1.25	13	9	NO-1	NO	238	238	238	239
		220/132	2	30	220 kV	1.25	13	9	NO-1	NO				
12	KOPILI	220/132	1	60	132 kV	1.25	17	9	NO	NO	139	140	140	140
		220/132	2	160	132 kV	1.25	17	9	NO	NO				
13	Sarusajai	220/132	1	100	132kV	1.25	17	9	NO-2	NO	134	139	139	139
		220/132	2	100	132kV	1.25	17	9	NO-2	NO				
		220/132	3	100	132kV	1.25	17	9	NO-2	NO				
14	Samaguri	220/132	1	50	132kV	1.25	17	9	NO+2	NO+2	140	137	140	137
		220/132	2	50	132kV	1.25	17	9	NO+2	NO+2				
		220/132	3	50	132kV	1.25	17	9	NO+2	NO				
15	Mariani	220/132	1	100	220 kV	1.25	17	9	NO+1	NO	238	240	238	240
		220/132	2	100	220 kV	1.25	17	9	NO+1	NO				
16	Tinsukia	220/132	1	50	220 kV	1.25	17	9	NO-1	NO-2	242	242	240	241
		220/132	2	50	220 kV	1.25	17	9	NO-1	NO-2				
17	BTPS	220/132	HT1819/13078	160	220 kV	1.25	17	9	NO+2	NO	234	238	231	235
		220/132	6004522	80	220 kV	1.25	17	9	NO+2	NO				
18	Agia	220/132	T8265/4	50	220 kV	1.25	23	13	NO-1	NO	234	237	231	235
19	Boko	220/132	T09286/1	50	220 kV	1.14	17	9	NO-1	NO	233	236	232	234
20	NTPS (Local)	220/132	A.T.No.1	50	220 kV	1.25	17	9	NO	NO	242	242	240	240
		220/132	A.T.No.1	50	220 kV	1.25	17	9	NO	NO				

Note : a) NO indicates Nominal Tap position, b) NO-1 when HV bus is controlled bus, indicates transferring MVAR from HV bus to LV bus to reduce voltage of the HV bus and increase voltage of LV bus

Transformer Tap Optimisation Data **Annexure-D.14 .II**

AGENCY:

Sl. No.	Substation	Voltage Ratio (kV)	Transformer No.	Capacity in MVA	Controlled Bus	Tap Step (%)	Total Tap Positions	Nominal Tap	Present Tap Posn.	Readiness of OLTC

पावर सिस्टम ऑपरेशन कॉरपोरेशन लिमिटेड
(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A wholly owned subsidiary of POWERGRID)

पंजीकृत एवं केन्द्रीय कार्यालयः बी-9, प्रथम तल, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110 016
Registered & Corporate Office : B - 9, Ist Floor, Qutub Institutional Area, Katwaria Sarai, New Delhi - 110 016
Website : www.posoco.in, www.nldc.in, Tel: 011-26536832, 26524522, Fax: 011-26524525, 26536901

POSOCO/Trans. Pricing/ दिनांक: 21th August 2015

सेवा में,

All Designated ISTS Customers, ISTS Licensees and RPCs (As per list enclosed)

विषय: Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses), Regulations, 2010 and subsequent amendments – Furnishing of Technical and Commercial Data for October 2015 – December 2015.

Sir,

As per Regulation 16 of the Sharing Regulations 2010 and subsequent amendments thereof, the Designated ISTS Customers (DICs) are required to submit the data for New Transmission Assets, Yearly Transmission Charges, Forecast Injection and Withdrawal and Node-wise Injection/Withdrawal Data to the Implementing Agency for computation of PoC Charges & Losses for the Application period.

In line with the above provisions and to facilitate the computation of PoC Charges and Losses for the period October - December 2015, it is requested to furnish the following data to the Implementing Agency latest by 31st August, 2015:

1. Yearly Transmission Charges (As per Format I)
2. Technical Details of new Transmission elements and Generating Units which are expected to commence commercial operation during October - December 2015 (As per Format II)
3. Details of Long Term and Medium term contracts. (Format III(A))
4. Node-wise forecast maximum injection and withdrawal data. (Format III(B))
5. Maximum injection and withdrawal data for corresponding quarter of last three years. (Format III (C)).

The detailed data formats for the data submission are available on the website of Implementing Agency i.e. NLDC in MS Excel format and may be downloaded from the following link: http://posoco.in/transmission_pricing/formats

Data / information 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.

सादर धन्यवाद

भवदीय

एस एस बड़पंडा

(एस. एस. बड़पंडा)
अपर महाप्रबंधक,
रा. भा. प्रे. के.

प्रति: (1) Chief (Engg.), CERC