



सत्यमेव जयते

भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
मेघालया स्टेट हाउसिंग फिनांस को-आपरेटिव सोसायटी लि. बिल्डिंग
Meghalaya State Housing Finance Co-Operative Society Ltd. Building
नांग्रिम हिल्स, शिल्लोंग - 793003
Nongrim Hills, Shillong - 793003.

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No. NERPC/AS/OCC/2009/5121-55

Date: 22nd January, 2010

To

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati - 781 001
2. Member (Tech), MeSEB, Lumjingshai, Short Round Road, Shillong - 793 001
3. Chief Engineer (WE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
4. Chief Engineer (EE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
5. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima - 797 001
6. Chief Engineer (P), Electricity Department, Govt. of Manipur, Keishampat, Imphal - 795 001
7. Chief Engineer (P&E), Department of Power, Govt. of Mizoram, Aizawl - 796 001
8. General Manager, TSECL, Agartala - 799 001
9. GM, NERLDC, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
10. ED (O&M), NERTS, PGCIL, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
11. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
12. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
13. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
14. ED (Commercial), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
15. Vice President, PTCIL, 2nd Floor, NBCC Tower, 15, Bhikaji Cama Place, New Delhi - 110022
16. AGM(BD), NVVN, Core5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003
17. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
18. Chief Engineer, GM Division, Central Electricity Authority, New Delhi - 110066

Sir,

Sub: Minutes of the 46th OCC Meeting held on 15th January, 2010 at Shillong.

The Minutes of the 46th OCC Meeting of NERPC held on 15.01.2010 at "NERLDC Conference Hall, Shillong is enclosed for favour of kind information and necessary action please.

The minutes is also available on the website of NERPC www.nerpc.nic.in

Encl: As above

भवदीय / Yours faithfully,

बी. लिंग्खोई 22/1/2010

बी. लिंग्खोई /B. Lyngkhoi)

सहायक सचिव / Assistant Secretary

Copy to:

1. SA to Member(GO&D), CEA, Sewa Bhawan, R.K. Puram, New Delhi - 110066
2. Chief Engineer, AEGCL, Bijuli Bhavan, Guwahati - 781001
3. Chief Engineer, APGCL, Bijuli Bhavan, Guwahati - 781001
4. MD, CA DISCOM, Bijuli Bhavan, Guwahati - 781001
5. MD, UA DISCOM, Bijuli Bhavan, Guwahati - 781001
6. MD, LA DISCOM, Bijuli Bhavan, Guwahati - 781001
7. S.E. (Trans. & Dist), MeSEB Lumjingshai, Short Round Road, Shillong - 793 001
8. Head of SLDC, MeSEB, Lumjingshai, Short Round Road, Shillong - 793 001
9. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
10. A.C.E. (Gen & Trans), Department of Power, Govt. of Nagaland, Kohima - 797 001
11. Head of SLDC, Department of Power, Dimapur, Nagaland
12. A.C.E. (Power-I), Electricity Department, Govt. of Manipur, Keishampat, Imphal - 795 001
13. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal - 795 001
14. S.E. (Trans & Dist), Department of Power, Govt. of Mizoram, Aizawl - 796 001
15. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl - 796 001
16. Head of SLDC, TSECL, Agartala - 799 001
17. Chief Engineer(Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124

North Eastern Regional Power Committee

MINUTES OF THE 46th

OPERATION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date: 15/01/2010 (Friday)

Time: 10:30 hrs

Venue: “NERLDC Conference Hall”, Shillong.

The List of Participants in the 46th OCC Meeting is attached at **Annexure - I**

Shri B.K. Jain, Member Secretary, NERPC welcomed all the participants to the 46th OCC meeting. He informed that many important decisions have already been taken during the 8th TCC & RPC meetings held on 11th & 12th January, 2010 at Imphal and RPC has asked OCC to monitor the progress of implementation of those decisions, which shall be discussed during the meeting.

Thereafter, he requested Shri B. Lyngkhoi, Executive Engineer (O) NERPC to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 45th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

Shri Lyngkhoi stated that the minutes of 45th meeting of Operation Sub-committee held on 11th December, 2009 were circulated vide letter No. NERPC/AS/OCC/2009/1465 - 1500 dated 17th December, 2009. He informed that NEEPCO has furnished comments vide letter No. NEEPCO/AGTP/HOP/T-1(B)/Vol-V/2009-10/791 dated 23.12.2009 on Item No. C.4 page No. 6 of the Minutes under the heading “Single Phase Auto-Reclosure of transmission lines” as below:

Quote “wherever SPAR facilities is not available the same shall be provided”.

Unquote “NEEPCO stated that they will check the existing single phase auto-reclosure protection facility wherever available and for this purpose NEEPCO requested to initiate a joint inspection with PGCIL for checking and operationalization of the single phase auto-reclosure protection system”.

Since, POWERGRID would re-examine the necessity of providing single phase auto-reclosing scheme (SPAR) on the lines where replacement of breaker is required; the minutes shall be modified as given below:

“NEEPCO stated that they would check the existing single phase auto-reclosure protection facility wherever available and for this purpose NEEPCO requested for joint inspection with PGCIL on the PGCIL lines which are terminating in NEEPCO switchyard and operationalize single phase auto-reclosure scheme. POWERGRID agreed to the same”.

With the above amendment the minutes of the 45th OCC Meeting were confirmed.

ITEMS FOR DISCUSSION

B. Operational Performance & Grid Discipline during December, 2009.

EE, NERPC requested NERLDC to give their presentation on the grid performance for the month of December, 2009. NERLDC gave their presentation and the sub-committee noted the grid performance as follows:-

- i) **Average frequency** during December, 2009 was 49.78 Hz compared to 49.89 Hz for the previous month.
- ii) **Minimum frequency** in December, 2009 was 48.83 Hz (15.12.09 at 17:42 hrs) compared to 48.87 Hz for the previous month.
- iii) **Maximum frequency** was 50.57 Hz (31.12.09 at 03:23 hrs) as against 50.58 Hz in the previous month.
- iv) **System frequency** remained within permissible range of 49.2 Hz to 50.3 Hz for 97.49 % of the time, below 49.2 Hz for 1.45 % and above 50.3 Hz for 1.06 % of time as against the corresponding values of 94.24 %, 0.17% and 5.59 % in the previous month i.e. November, 2009.

- v) **Regional peak** demand in December, 2009 was 1678 MW as compared to 1624 MW, in November, 2009 an increase of 3.33 % over the previous month.
- vi) **Energy requirement** was 789.35 MUs in December, 2009 compared to 750.9 MUs in the previous month.
- vii) **Regional energy availability** in December, 2009 was 732.06 MUs compared to 687 MUs in the previous month- an increase of 6.56 % over the previous month.
- viii) **Rise in demand met** was highest of (6.67%) in Mizoram followed by Assam (2.97 %), Meghalaya (2.36%) and Nagaland (2.13 %) over the previous month.
- ix) **Drop in demand met** was recorded in Tripura (12.10 %) followed by Ar. Pradesh (7.69 %) and Manipur (2.04 %) over the previous month viz. November, 2009.
- x) **Over Voltages** at 400 kV substations were observed at Bongaigaon, Balipara and Misa where maximum voltage observed was 424 kV, 428 KV and 429 KV respectively.
- xi) **No Over Voltages** at 220kV S/S was observed. Aizawl 132 kV S/S experienced **low voltage of 113 kV**.
- xii) **Regional Generation & Inter-regional Exchanges:** During the month of December, 2009 compared to November, 2009 is given below:

SN	Parameter	December 2009	November 2009
REGIONAL GENERATION & INTER - REGIONAL EXCHANGES (in MU)			
1	Total Generation in NER (Gross)	628.646	656.040
2	Total Central Sector Generation in NER (Gross)	388.492	413.460
3	Inter-Regional Energy Exchanges		
	(a) NER - ER	0.00	8.270
	(b) ER - NER	121.365	71.550
	(c) Net Import	121.365	63.280

The detail of grid performance during the month of December, 2009 is enclosed at **Annexure-II**.

The Sub-committee noted as above.

FOLLOW UP ACTION

C. 1. Installation of Under Frequency Load-shedding Relays (UFRs) in NER

Member Secretary informed that this issue has been discussed in the 8th RPC meeting held on 12th January, 2010 and RPC has approved implementation of the scheme. He informed that Nagaland, Mizoram, Tripura & Assam have furnished the list of feeders identified for installation of UFRs and the remaining constituents have agreed to furnish the necessary details by the end of January, 2010. He requested the remaining constituents to furnish the details by end of January, 2010.

The sub-Committee noted as above.

C. 2. Non-functioning of SCADA in Arunachal Pradesh state

Arunachal Pradesh representative informed that new compatible modem was not readily available in the market and therefore they have decided to get the old modem repaired as procurement of new modem would take time. They requested NERLDC/POWERGRID to help them in getting it from BSNL, Shillong so that the same could be given for repair.

Member Secretary suggested that Arunachal Pradesh may try to get the modem repaired if feasible or procure new modem to operationalize the SCADA.

POWERGRID mentioned that if new modems are procured then set of two modems would be required, one at BSNL end and another at NERLDC end.

It was decided that Arunachal Pradesh would explore the possibility of getting the defective modem repaired or procure new modem if required and intimate the progress in the next OCC meeting.

C. 3 Energy metering issues in NER

PGCIL informed that meters are under type test at Bangalore and informed that the installation of remaining meters would be carried out after receiving them from Bangalore. Installation is likely to be completed by end of February, 2010.

The sub-Committee noted as above.

C. 4 Single Phase Auto-reclosure of Transmission lines.

POWERGRID informed that they would re-examine the matter and the same will be intimated in the next OCC meeting as decided in the 8th RPC meeting.

The sub-Committee noted as above.

C. 5 Special Protection Schemes (SPS) for Vulnerable 132 kV Pockets in NER.

Member Secretary informed that during the 8th NERPC meeting held at Imphal, Manipur had agreed to keep the 132 KV Manipur – Ningthoukhong line open from January to April as 60 – 65 MW flow of power through 132 KV Imphal (PG) – Imphal (Manipur) line was possible during peak period.

PGCIL informed that the CT of appropriate ratio would be installed by them within a week on 132 KV Imphal (PG) – Imphal (Manipur) line.

The Sub-committee noted as above.

C. 6 Status of gravelling work by AEGCL at Balipara substation

Since no representative from Assam was present the current status could not be ascertained. However, PGCIL informed that AEGCL has not completed the work so far.

C. 7 Non-functioning of 48 V DC supply at Kopili HEP.

NEEPCO informed that they have placed the order for both the battery & charger and the work will be completed within 2 months.

The sub-Committee noted as above.

C. 8 Status of Loktak – Jiribam Ckt - II.

Member Secretary informed that during the 8th NERPC meeting, Manipur had informed that the work is in progress and out of 82 Km about 60 KM line has been completed and the work on the remaining portion of the line would be completed soon.

The sub-Committee noted as above.

C. 9 Status of Total Harmonic Distortion (THD) in NE grid.

Member Secretary informed that 8th TCC/RPC has agreed to POWERGRID request for availing shutdown of inter-regional link with Eastern region for two hours during off-peak period for measurement of harmonics in North Eastern grid. PGCIL would give at least 3 days notice to NERLDC for necessary co-ordination.

PGCIL informed that they have to tie up with CPRI and the dates for harmonic measurement would be intimated to NERLDC as decided above.

The sub-Committee noted as above.

D. NEW ITEMS

D. 1 Agenda from NERLDC

- i. NEEPCO's proposal to take shutdown of Khandong HEP for 3 months w.e.f. 01.02.2010 to 02.05.2010 for rectification / repair of the surge shaft gate which is now in upper expansion chamber and erection and commissioning of new surge shaft gate with hoisting system for both Khandong and Kopili stage-II Power stations was agreed under agenda **item D.3**. NERLDC gave a presentation regarding Availability Vs Load during the shutdown of Khandong HEP and the presentation is at **Annexure D. 1 (i)**. NERLDC also informed that they would request Tripura not to take shutdown of Rokhia & Baramura generating stations during the period of shutdown of Khandong.

Member Secretary requested NERLDC to prepare availability vs load plan when one machine of Khandong is out of service followed by another machine shutdown till all the machines were taken for shutdown as given in the presentation. He requested NERLDC to inform all the constituent states before the complete shutdown of Khandong HEP.

PGCIL informed that 2 days shutdown is required by them for Kopili – Khandong 132 KV line on 20th & 21st January, 2010 for connecting the 160 MVA ICT at Kopili. NERLDC requested PGCIL to complete the installation of ICT within the above two days as depletion of reservoir

level would start before complete shutdown of Khandong HEP so that an additional flow of power in the 132 KV pocket by at least 15 – 20 MW was possible. PGCIL agreed.

- ii. **Black Start exercise for Khandong & Doyang HEP:** NERLDC informed that they propose to carry out the black start exercise for Khandong & Doyang HEPs similar to Ranganadi HEP within a week's time and requested the OCC to consider the proposal. NERLDC gave a presentation regarding the procedure/action plan as given in **Annexure D.1 (ii)** has been agreed w.e.f. 01.02.2010.

The OCC agreed to the proposal by NERLDC and requested NERLDC to intimate and tie up with all the constituent states before carrying out the exercise.

NEEPCO requested NERLDC to carry out the mock exercise for Doyang HEP during January, 2010 before the water level gets depleted. NERLDC agreed. Planned shutdown of Doyang HEP as discussed under **Item D.3.**

The sub-Committee noted as above.

- iii. NERLDC informed that as per IEGC all the generating machines should be operated on Free Governing Mode (FGMO) and subsequently CERC vide order dated 20.08.2009 have ordered that FGMO should be complied w.e.f. 1st March, 2010. NERLDC gave a presentation on the CERC order and the same is enclosed at **Annexure D. 1 (iii).**

Member Secretary informed that once the guidelines have been issued by CERC the generators have no option but to comply with this order.

The sub-Committee noted as above.

- iv. NERLDC informed that most of the State RTUs of Mizoram, Nagaland, Manipur are not functioning/reporting unlike the Central RTUs which are 100% reporting and the non-functioning of these RTUs has created problem in getting the required data. Member Secretary requested NERLDC to furnish the list of all the non-functioning RTUs for further review and discussion in the next meeting.

D. 2 State-wise anticipated peak demand/requirement, shortage for January, February & March, 2010.

In respect of above, the sub-Committee reviewed the anticipated peak demand/energy requirement and the sub-committee finalized the same for the months of January, February & March, 2010.

January, 2010

February, 2010

March, 2010

S.No.	State	Peak Demand (MW)	Peak Availability (MW)	Peak Demand (MW)	Peak Availability (MW)	Peak Demand (MW)	Peak Availability (MW)
1	Ar. Pradesh	80	75	80	70	75	70
2	Assam	845	730	830	700	800	650
3	Manipur	95	80	90	80	85	80
4	Meghalaya	297	220	280	200	250	180
5	Mizoram	70	50	65	45	60	40
6	Nagaland	90	75	85	70	80	65
7	Tripura	140	131	135	125	125	120
	Region	1585	1330	1565	1290	1475	1205

D. 3 Generation Outage Planning (ongoing and planned outages)

The sub-committee discussed and approved the programme outages for generating station as proposed by NEEPCO and the same is enclosed at **Annexure – D. 3**. All the States are requested to plan their load as per the availability advised by NERLDC (**item D. 1 (i) of minute**) during shutdown of Khandong HEP

The sub-Committee approved the programme.

D. 4 Outage Planning of Transmission elements

The Sub-committee discussed and approved the programme of outages for transmission lines as proposed by PGCIL for January, 2010. The same is enclosed at **Annexure D. 4**.

The sub-Committee approved the programme.

D. 5 Estimated Transmission Availability Certificate (TAC) for the month of December, 2009.

PGCIL have requested NERPC for putting the Provisional TAC data in NERPC website so that constituents can give their comments/observations if any. NERPC agreed.

The Final TAC certified by NERPC for the month of November, 2009 issued vide letter No: NERPC/AS/TAC/2009/4894 dated 31.12.2009 is **99.2507%**

The estimated Transmission System Availability for the month of December, 2009 furnished by PGCIL was intimated as **99.65%** as per details at **Annexure D. 5**. The constituents were requested to examine the outage details (Copy of CD were circulated during the meeting) indicated by PGCIL before 20.01.2010 so as to ensure issue of certification by NERPC before the stipulated date i.e. 31.01.2010.

The sub-Committee noted as above.

D. 6 Major grid disturbances in the previous month (December , 2009)

NERLDC informed that there was no major grid disturbance during the month of December, 2009.

The Sub-committee noted as above.

D. 7 Any other item

There was no additional item discussed

D. 7 Date and Venue of next OCC

It is proposed to hold the 47th OCC meeting of NERPC on 10th February, 2010 (Wednesday) at Shillong. The exact venue will be intimated in due course.

The meeting ended with a vote of thanks to the Chair.

List of Participants in the 46th OCC meeting held on 15/01/2010**Venue : “NERLDC Conference Hall”, Shillong.**

Sl. No	Name & Designation	Organization	Contact No. /e-mail ID
1.	W. Rehman, EE, SLDC	Arunachal Pradesh	09436050735
2.	No Representative	Assam	
3.	No Representative	Manipur	
4.	Sh. T. Gidon, AEE, SLDC,	Meghalaya	09436326178
5.	Sh. D. J. Lyngdoh, AEE, SLDC,	Meghalaya	
6.	No Representative	Mizoram	
7.	Sh. S.I. Asangba Tikhir, SDO (E)	P&E, Nagaland	09436819293
8.	No Representative	Tripura	
9.	Sh. T.S.Singh, A.G.M	NERLDC	09436302717
10.	Sh. N. R. Paul, DGM	NERLDC	09436302723
11.	Sh Anupam Kumar, AE	NERLDC	09436335379
12.	Sh. Ajay Patir, AGM	NERTS	09436302529
13.	Sh. P. S. Stafford, DGM	NERTS	09436302806
14.	Sh. Bhaskar Goswami, Sr. Mgr	NEEPCO	09436163983
15.	Sh. Amit Das, Mgr.	NEEPCO	09435566542
16.	No Representative)	NHPC	
17.	Sh. B.K.Jain, MS	NERPC	09436706436
18.	Sh.B. Lyngkhoi, AS	NERPC	09436163419
19.	Sh. D.K. Bauri, AEE	NERPC	09863317236

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ANNEXURE – D.3

The planned shutdown in respect of the following Generating units as discussed and approved by the OC sub-committee of NERPC during the 46th OCCM held on 15th January, 2010 at “NERLDC Conference Hall”, Shillong.

Sl. No	Name of Generation Station	Units No	S/D Date		Purpose	Agency
			From	To		
1.	Ranganadi HEP	#3	10.01.10	25.01.10	APM	NEEPCO
2.	Doyang HEP	#1	01.02.10	20.02.10	APM	NEEPCO
3.	Doyang HEP	#3	10.03.10	30.03.10	APM	NEEPCO
4.	Khandong HEP	#1, 2 & (Kopili Stg. II) #2	01.02.10	02.05.10	Shutdown of Khandong water conductor system for inspection & erection of surge shaft gate	NEEPCO
5.	Kopili HEP	#4	11.01.10	20.02.10	APM	NEEPCO
6.	Kopili HEP	#2	25.02.10	25.05.10	Major repairing of damaged under water parts along with APM	NEEPCO

Annexure – D.4

The Shutdown Programme for the month of January, 2010 as approved in the 46th OCC Meeting held at NERLDC, Shillong on 15.01.2010 are as follows:

Sl. No	Name of T/L	S/D Date	S/D Time	Purpose	Areas/Feeder affected	Agency
1.	132 KV– Kumarghat- R.C. Nagar	23..01.2010	08.00 hrs to 16:00 hrs	AMP	Kumarghat- R.C. Nagar	PGCIL
2.	132 KV Imphal - Imphal	to be intimated			Imphal-Imphal	PGCIL
3.	132 KV Loktak - Imphal	to be intimated			Loktak - Imphal	PGCIL
4.	132 KV Rananadi – Itanagar	29.01.2010			Rananadi – Itanagar	PGCIL
5.	132 KV Misa - Kathalguri	05.02.2010 & 06.02.2010			Misa - Kathalguri	PGCIL
6.	220 KV Misa – Samaguri-I	27.01.2010 & 28.01.2010			Misa – Samaguri-I	PGCIL
7.	220 KV Misa – Samaguri-II	29.01.2010 & 30.01.2010			Misa – Samaguri-II	PGCIL
8.	400 KV Balipara – Bongaigaon-I	20.01.2010 & 21.01.2010			Balipara – Bongaigaon-I	PGCIL
9.	400 KV Balipara – Bongaigaon-II	22.01.2010 & 23.01.2010			Balipara – Bongaigaon-II	PGCIL
10.	132 KV Kopili – Khandong	20.01.2010 & 21.01.2010	09:30 to 16:00 hrs	Replacement of ICT	Kopili – Khandong	NEEPCO
11.	132 KV Khandong – Khliehriat-I	to be intimated	09:30 to 16:00 hrs	AMP	Khandong – Khliehriat-I	NEEPCO

Note: All the associates bays maintenance would be done during the shutdown of respective Transmission lines.

Sl. No	NAME OF SUB-STATION/BAYS/ICT/ REACTOR	S/D Date	S/D Time	Purpose	Areas/Feeder affected	Agency
1.	400 KV Bongaigaon-I Main Bay at Balipara	02.02.2010 & 03.02.2010	09:00 hrs to 15:00hrs	AMP	Nil	PGCIL
2.	400 KV Bongaigaon-II Main bay at Balipara	18.01.2010 & 19.01.2010			Nil	PGCIL
3.	Misa-I – Ranganadi-II Tie at Balipara	21.01.2010 & 22.01.2010			Nil	PGCIL
4.	Misa-II – Ranganadi-I Tie at Balipara	27.01.2010 & 28.01.2010			Nil	PGCIL
5.	33 KV Incomer bay & 1 MVA Transformer at Balipara	23.01.2010 & 25.01.2010			4x25 MVAR Tertiary Reactors & 1 MVA Transformer	PGCIL
6.	Tertiary reactor-III at Balipara	29.01.2010 & 30.01.2010			4x25 MVAR Tertiary Reactor-III	PGCIL
7.	220 KV Bus coupler bay at Misa	22.01.2010 & 23.01.2010	08:00hrs to 14:00 hrs	AMP	Nil	PGCIL
8.	33 KV Bus at Nirjuli	28.01.2010	08:00hrs to 16:00 hrs	To attend hot spot	All 33 kV AP feeders	PGCIL
9.	132 KV ICT-I at Nirjuli			PGCIL		
10.	132 KV ICT-II at Nirjuli			AMP		PGCIL