



भारत सरकार Government of India

विद्युत मंत्रालय Ministry of Power

उत्तर पूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee

एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय

NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006, Meghalaya



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No. NERPC/OP/Committee/2016/ 2437-512

Date: December 05, 2016

To,

1. Hon'ble Chief Minister & In-charge of Power, Govt. of Assam, Guwahati - 781 006
2. Hon'ble Chief Minister & In-charge of Power, Govt. of Mizoram, Aizawl - 796 001
3. Hon'ble Chief Minister & In-charge of Power, Govt. of Arunachal Pradesh, Itanagar - 791 111
4. Hon'ble Minister of Power, Govt. of Meghalaya, Shillong - 793 001
5. Hon'ble Minister of Power, Govt. of Nagaland, Kohima - 797 001
6. Hon'ble Minister of Power, Govt. of Tripura, Agartala - 799 001
7. Member (GO&D), CEA, Sewa Bhavan, R.K. Puram, New Delhi - 110 066
8. Secretary (Power), Govt. of Arunachal Pradesh, Itanagar - 791 111
9. Addl. Chief Secretary (Power), Govt. of Assam, Dispur, Guwahati - 781 006
10. Commissioner & Secretary (Power), Govt. of Manipur, Imphal - 795001
11. Commissioner & Secretary (Power), Govt. of Meghalaya, Shillong - 793001
12. Secretary (Power), Govt. of Mizoram, Aizawl - 796001
13. Secretary (Power), Govt. of Nagaland, Kohima - 797001
14. Principal Secretary (Power), Govt. of Tripura, Agartala - 799001
15. Chairman & Managing Director, Me.ECL, Lumjingshai', S.R. Road, Shillong - 793 001
16. Chairman & Managing Director, TSECL, Agartala - 799001
17. Chairman & Managing Director, NEEPCO Ltd., Lower New Colony, Shillong - 793 003
18. Chairman, APDCL/AEGCL/APGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
19. Director (Finance), NHPC Ltd., NHPC Complex, Sector-33, Faridabad - 121 003
20. Director (Operation), POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon, Haryana - 122 001
21. Director (Marketing & BD), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi - 110066
22. Director (Coml.), NTPC Ltd. NTPC Bhawan, Scope Complex, Institutional Area, Lodhi Road - 03
23. Managing Director, OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi - 110019
24. Executive Director (SO), NLDC, B/9, Qutub Institutional Area, Katwaria Sarai, New Delhi - 16
25. CEO, NRVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi - 03
26. Managing Director, APDCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
27. Managing Director, APGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
28. Managing Director, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati - 781 001

Sub: Minutes of 17th TCC & 17th NER Power Committee Meetings held at Imphal

Sir,

Please find enclosed herewith the minutes of 17th TCC meeting held at "Hotel Classic Grande", Imphal, Manipur on 3rd October, 2016 and 17th NERPC meeting minutes by circulations for your kind information and necessary action. The minute is also available on the website of NERPC, www.nerpc.nic.in.

Encl: As above

(P. K. Mishra)
Member Secretary

Copy to:-

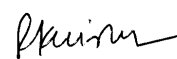
1. PS to Chairman, NERPC and Hon'ble Chief Minister & I/C of Power, Govt. of Manipur, Imphal - 795 001
2. TCC Chairman and Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal - 795 001.

Copy for kind information to:

1. Director (Distribution), Me. ECL, Lumjingshai, S.R. Road, Shillong – 793 002
2. Director (Transmission), Me. PTCL, Lumjingshai, S.R. Road, Shillong – 793 002
3. Director (Generation), Me. PGCL, Lumjingshai, S.R. Road, Shillong – 793 002
4. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
5. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
6. Managing Director, MSPDCL, Electricity Complex, Keishampat, Imphal – 795 001
7. Director (Tech.), NEEPCO Ltd., Lower New Colony, Shillong-793 003.
8. Regional ED (East –II), NTPC, 3rd Floor, OLIC Bldg., Pl No- N.17/2, Nayapalli, Bhubaneswar-12
9. Executive Director, NERTS, PGCIL, Lapalang, Shillong - 793006
10. Executive Director (Comml.), NEEPCO Ltd., Lower New Colony, Shillong-793003.
11. Executive Director (O&M), NEEPCO Ltd., Lower New Colony, Shillong-793003.
12. Executive Director (Comml.), NHPC, NHPC Office Complex, Faridabad-121003.
13. Executive Director (O&M), NHPC, NHPC Office Complex, Faridabad-121003.
14. Executive Director (Marketing), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110066
15. Chief Engineer (GM), CEA, 6th Floor, Sewa Bhawan, R.K.Puram New Delhi-110066.
16. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi - 110016
17. Engineer-in-Chief, P&E Dept., Govt. of Mizoram, Aizawl – 796 001
18. Chief Engineer (E Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111.
19. Chief Engineer (W Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111.
20. Chief Engineer (TP&MZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 1
21. Chief Engineer (Power), Dept. of Power, Govt. of Nagaland, Kohima – 797 001.
22. GM, NERLDC, Lapalang, Lower Nongrah, Shillong - 793006
23. GM (AM), NERTS, POWERGRID, Lapalang, Shillong – 793006
24. GM (Plant), OTPC, Pallatana, Udaipur, Kakraban Road, South Tripura – 799116
25. GM (BD), NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi – 03
26. Chief Engineer, Loktak HE Project, NHPC, Komkeirap, Manipur-795124.
27. CGM, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
28. CGM, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
29. CGM, APDCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
30. CGM (LDC), SLDC Complex AEGCL, Kahelipara, Guwahati-781019.
31. Head of SLDC, Me. ECL, Lumjingshai, S.R. Road, Shillong-793001
32. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111
33. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur
34. Head of SLDC, Dept. of Power, Govt. of Manipur, Keishampat, Imphal-795001
35. Head of SLDC, P&E Dept., Govt. of Mizoram, Aizawl-796001
36. Head of SLDC, TSECL, Agartala – 799001

Special Invitee(s):

37. Chairperson, CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
38. Member (Power Systems), CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
39. Secretary, North Eastern Council, Nongrim Hills, Shillong – 793 003
40. Secretary, DoNER, 258, 1st Floor, Vigyan Bhawan Annexe, New Delhi – 110011
41. Member Secretary, ERPC, 14 – Golf Club Road, Tollygunge, Calcutta – 700 033
42. Member Secretary, NRPC, NRPC Complex, 18-A, S.JS.S. Marg, Katwaria Sarai, New Delhi – 16
43. Member Secretary, WRPC, MIDC Area, Marol, Andheri (E), Mumbai – 400 093
44. Member Secretary, SRPC, 29 – R.C. Cross Road, Bangalore – 560 009
45. Director, NETC, 1st Floor, Corporation Tower, AMBIS Mall Complex, NH-8, Gurgoan – 122001.
46. Chairman & Managing Director, ONGC, Jeevan Bharti, Tower –II, Indira Chowk, New – Delhi – 1;
with a request to nominate the suitable officer concerning North Eastern States.



Member Secretary

भारत सरकार **Government of India**

विद्युत मंत्रालय **Ministry of Power**

उत्तर पूर्वी क्षेत्रीय विद्युत समिति **North Eastern Regional Power Committee**



RECORD NOTE OF DISCUSSION

OF

17TH TCC MEETING

(UNDER THE AEGIS OF mspci)

Venue : Hotel Classic Grande, Imphal

Date (TCC) : 04th October, 2016

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SUMMARY RECORD OF DISCUSSIONS
17TH TECHNICAL COORDINATION COMMITTEE MEETING

The 17th TCC Meeting of NER Power Committee meeting was held on 04th October, 2016 at Hotel "Classic Grande", Imphal. The meeting was hosted by Manipur State Power Company Ltd. (MSPCL).

The list of participants is enclosed at **Annexure - I**.

I : PROCEEDINGS OF THE 17TH TCC MEETING

The meeting started with rosette & bouquets presentation to the dignitaries followed by keynote address by Shri. P.K. Mishra Member Secretary, NERPC. Shri Mishra expressed his sincere thanks to MSPCL for making excellent arrangement and comfortable stay for all the participants. He then highlighted the achievements of NERPC & N.E. Region during the last six months. Speech of Member Secretary, NERPC is attached at **Annexure - II**.

Shri S.D. Dubey, Chairman, Central Electricity Authority (CEA) highlighted about the power system planning especially in N.E. Region and mentioned that Govt. of India has given due weightage for capacity addition in both transmission, generation and distribution. Further, he mentioned about the importance of single grid and power system and stated that the country is now operated in single grid and single frequency and it's important for all the stake holders to abide by the rules and guidelines for smooth operation of the system.

Thereafter, Chairman, NERPC & Hon'ble Chief Minister of Manipur, Shri O.I. Singh stressed about the importance of completion of projects in time so that the region could move ahead in fast track of development. He appreciated CEA & NERPC Secretariat for guidance and planning for the power system in the region. He expressed concern about slow progress of works under NERSIP Scheme and advised to find a way to expedite the works at the earliest for the benefit of N.E. Region. He wished the 17th TCC meeting a grand success. Speech of Chairman, NERPC & Hon'ble Chief Minister of Manipur is attached at **Annexure - III**.

The TCC meeting was concluded with the vote of thanks by Shri Ng. Sarat Singh, Executive Director, MSPCL.

**RECORD NOTES OF DISCUSSION
OF
17TH TCC MEETING**

II : CONFIRMATION OF THE MINUTES OF 16TH TCC MEETING & 16TH NERPC MEETING (S)

The minutes of the 16th TCC and 16th North Eastern Regional Power Committee (NER Power Committee) meetings held on 29th & 30th January, 2016 at Guwahati were circulated vide letter no. NERPC/OP/Committee/2016/9854-9929 dated 22.02.2016.

No comments or observations were received from any constituents and hence, TCC and NERPC may confirm the minutes of above meetings.

Deliberation of the TCC

TCC confirmed the minutes of 16th TCC meeting.

Deliberation of the RPC

The RPC confirmed the minutes of 16th NERPC meeting.

CATEGORY – A : ITEMS DISCUSSED AND APPROVED BY THE TCC

ITEM NO. A.1 : SETTING-UP/UP-GRADATION OF SLDCs IN NER - NERPC

Setting up of SLDCs in NER was agreed in 14th TCC/NERPC Meeting. Accordingly, works have been taken up by POWERGRID and the present status is as given below:

SN	UTILITY	PRESENT STATUS	TARGET DATE OF COMPLETION
UPGRADATION OF SLDCs			

1	Assam	Completed: Main SCADA/EMS system in April 2016 Balance: EMS data tuning (as per PRM) & DG Set & RTUs-new requirement.	31.12.2016
2	Tripura	Completed: Main SCADA/EMS system in April 2016. Balance: EMS data tuning (as per PRM). New Spare/RTU	31.12.2016
3	Meghalaya	Completed: Main SCADA & EMS system in April 2016 Balance: EMS data tuning (as per PRM) & DG set ,New Spares	31.12.2016
4	NERLDC	WIP: SCADA, EMS (90% completed)	31.12.2016
NEW SLDCs			
5	Manipur	Completed: Main SCADA/ EMS system in September 2016. Balance: DG Set, New Spare	31.12.2016
6	Nagaland	WIP: Building Construction to be completed by November 2016	28.02.2017
7	Mizoram	Work In Progress	31.12.2016
8	Arunachal	WIP: EMS & SCADA	28.02.2017
9	B/UP NERLDC	80% completed Balance: DG Set & others.	31.12.2016

During 3rd & 4th NETeST, it was requested by forum to AP SLDC team for handing over of complete space for fast execution of SLDC set up project. Similarly Dimapur SLDC end was requested for early completion of building which is under construction. AMC signing by left over utilities to be expedited. Further it is to inform that SLDC implementation-operation start/DOCO date is considered with due information in NETeST/OCC (whichever earlier) with mutual discussion with respective beneficiary/state utility and so separate certification from NERLDC is not required.

GPRS connectivity (under SLDC up gradation project cost) for RTU-SLDC: SCADA:

Further as suggested by Different utilities, POWERGRID may explore connectivity of

different RTU locations of different states through GPRS connectivity. Tentative Cost Estimate as intimated by POWERGRID is Rs 1.0 Crore (Approx). POWERGRID intimated that there is poor response from parties in this regard for NER. However, tender has been floated & Bid Opening (OBD) is under extension. It is anticipated that executable cost at present may vary.

Deliberation of the TCC

During deliberation DoP, Nagaland informed that the Building will be handed over to POWERGRID by 1st Week of November 2016.

POWERGRID informed that DoP, AP has partially handed over the building for which the execution is hampered. Since, there was no representative from Arunachal Pradesh the forum advised NERPC to write to DoP, AP for handing over entire space of the building earmarked for SLDC Setup.

On request of POWERGRID, MSPTCL, Manipur confirmed that TOC of completed portion of SLDC, Manipur works will be issued soon. Further it is to inform that SLDC implementation-operation start/DOCOCO date is considered with due information in NETeST/OCC (whichever earlier) with mutual discussion with respective beneficiary/state utility and so separate certification from NERLDC is not required.

POWERGRID informed that consent from all constituents for GPRS connectivity has already been obtained and accordingly, POWERGRID will go ahead for implementation of scheme and recover the investment. Further, POWERGRID clarified that the running cost of the scheme to be borne by individual constituents.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.2	:	STATUS OF IMPLEMENTATION OF R&M WORKS SANCTIONED UNDER PSDF - NERPC
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The status of progress of R&M works under PSDF is being monitored every month by NERPC and the Sub-committee requested all constituents to complete the proactive actions like taking Board's approval, floating of NITs, selection of bidders etc., as directed by the Hon'ble CERC.

NERPC Secretariat was in constant touch with all the NER States for expediting the process, however, the progress is very slow.

The status as on date is as below:

Amount in Rs. Crores

SN	Constituent	Amount Sanctioned	Action Taken		Pending	
			NIT	LOA	NIT	LOA
1	Nagaland	39.96	39.96	39.96	0.00	0.00
2	Assam	352.89	273.69	250.56	79.20	102.33
3	MePTCL	69.19	32.00	32.00	37.19	37.19
4	MePGCL	32.53	3.64	3.64	28.89	28.89
5	Tripura	31.05	31.05	0.00	0.00	31.05
6	Mizoram	26.84	14.27	0.00	12.57	26.84
7	Ar. Pradesh	18.21	0.00	0.00	18.21	18.21
8	Manipur	33.50	0.00	0.00	33.50	33.50

The monthly OCC Sub-committee requested all the constituents to complete the works at the earliest. Further, the sub-committee directed that the status of progress of work be intimated to NERPC Secretariat every month so that the same can be submitted to Hon'ble CERC & CEA.

Deliberation of the TCC

MS, NERPC informed that the progress of works is very slow and requested all NER States to take necessary action to expedite the works as directed by MoP.

Manipur informed that sanctioned has just been received in September, 2016 however, Manipur assured that NIT & LOAs will be completed at the earliest.

Mizoram informed that tendering for diagnostic tools has already been issued and LOA will be issued within one month. NIT for other main equipments etc., will be taken up in next two months. Mizoram also informed that approval by Competent Authority is time consuming but assured that they will pursue rigorously so that the R&M works can be completed at the earliest.

MePTCL informed that NIT upto 50% has been completed and the rest will be awarded within the FY 2016-2017.

MePGCL informed that LOA for diagnostic tools have already been issued and the rest will be completed within FY 2016-17.

Assam informed that NIT for main equipments have already been issued and only the NIT for diagnostic tools is left and the same will be issued during October, 2016 and assured that all the NITs & LOAs will be completed within FY 2016-17.

Tripura informed that NIT for complete project has been issued on turnkey basis and the LOAs will be issued soon.

Nagaland informed that complete LOAs have already been issued and some of the equipments have already been received and hopefully the R&M works will be completed within one year.

Ar. Pradesh: Status could not be updated as there was no representative.

NLDC informed that as per Central Government guidelines 10% of the fund will be disbursed once the IA is signed and subsequently 20% will be disbursed once the LOAs are issued.

Forum expressed concern that 10% is not sufficient to meet the initial works and requested CEA & NLDC to highlight the issue.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.3 : STUDY TOUR FOR NER CONSTITUENTS - NERPC

During 16th NERPC meeting; it was decided that NERPC may initiate process for organizing study tour programme "on integration of renewal energy resources" in European Countries for Officers from NER Constituents to be funded from PSDF.

To comply with the decision of NERPC; NERPC Secretariat took up the matter with NLDC & NIT has already been published through NERTS, POWERGRID portal for funding from PSDF after getting approval from Hon'ble Chief Minister, Govt. of Manipur & Chairman, NERPC.

Deliberation of the TCC

Member Secretary, NERPC informed that Techno-commercial part of tender has already been examined with the help of NERTS/NERLDC and price bid is under examination. Simultaneously for funding from PSDF, proposal has already been sent to NLDC. He also requested NLDC to release the fund at the earliest so that tour could be undertaken before December 2016

NVVN sought clarification if the above study tour would also include the traders viz. NVVN & PTC.

Director NERPC clarified that as decided in the 16th NERPC, traders would also join the study tour at their own expense.

NVVN and PTC also mentioned that they are also NERPC members and requested the forum to include them also in the study tour.

After detailed deliberation it was agreed that both PTC & NVVN will also be a part of the above study tour.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.4	: NON - PARTICIPATION OF TRIPURA & NHPC IN PCC & NETeST MEETINGS OF NERPC - NERPC
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It has been observed that Tripura and NHPC are not participating in PCC & NETeST meetings regularly despite earlier decision of NERPC for participation. As a result many important issues often could not be discussed and resolved in stipulated time frame for the benefit of NER grid.

Issue may be discussed for regular participation and also to nominate the Nodal Officers and give standing instructions for attending the meetings.

Deliberation of the TCC

Member Secretary informed that inspite of assurance given by all the constituents to attend the sub-committee meetings regularly; the same has not been complied by Tripura & NHPC in PCC & NETeST.

Director (Tech), TSECL strongly raised the issue and mentioned that the meeting notice was not addressed to him earlier and after the same has been communicated to NERPC, regular participants were been nominated for all the sub-committee meetings. He requested to drop the agenda item.

Director, NERPC informed that earlier meeting notice was communicated to CMD, TSECL and also stated that even after notice was sent to Director (Tech), TSECL but the PCC & NETeST were not attended by Tripura and the same can be verified from the attendance sheet of above sub-committee meetings.

TCC Chairman requested both Tripura and NHPC to attend all the sub-committee meetings of NERPC regularly for the benefit of the region.

Both Tripura & NHPC agreed to send the representative regularly from next meeting.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.5	: GRANT OF LONG TERM ACCESS (LTA) OF 225 MW TO SUZLON POWER INFRASTRUCTURE LTD. (SPIL) FOR WIND FARMS (3X300 MW) IN KAYATHAR DISTRICT OF TAMIL NADU IN SOUTHERN REGION - TSECL
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A communication was received from PGCIL for providing consent to allow Long Term Access (LTA) to Suzlon Power Infrastructure Ltd (SPIL) for supply of wind power to NER constituents. It is understood that NER constituents do not have any allocation of power from this plant and also not signed any PPA. But the SPIL has applied for grant of advance LTA.

Booking of advance LTA without allocation of power and signing of PPA may create congestion in the transmission corridor in future. Therefore, matter needs discussion before issuance of any consent by NER constituents.

Deliberation of the TCC

CE,SPA Div, CEA informed that the issue has been deliberated in the 6th SCM and stated that realistic figure has been sought on what basis they have come out for a figure of 105 MW for NER. He mentioned that with reference to corridor, the above 105MW can be easily drawn by the region.

Tripura raised the issue and stated that the LTA issue should be discussed in NERPC forum since matter involved all the NER constituents.

After detailed deliberation, Member Secretary, NERPC requested all NER States to give their comments/suggestions so that the same could be forwarded to CEA.

All NER States agreed to above suggestion for furnishing their comments to NERPC at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.6	:	COMMISSIONING OF 2ND ICT (125 MVA) AT PALLATANA - TSECL
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To ensure reliable and uninterrupted power supply to Tripura during the ensuing Puja days 7th Oct' 2016 to 11th Oct' 2016 and availability of power at state grid to meet the peak demand of about 300 MW besides meeting the cross border commitment of 100 MW to Bangladesh, commissioning of 2nd ICT at Pallatana was taken up by OTPC and needs early commissioning. OTPC may appraise the latest status on the progress of commissioning work.

Deliberation of the TCC

MD, OTPC informed that OTPC will try to commission the 2nd 125MVA ICT by 6th October 2016 subject to RIO Clearance. Member Secretary, NERPC informed that he has already discussed with Director, RIO(NER) to expedite the inspection process..

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.7	:	NON-AVAILABILITY OF CS DATA DUE TO FREQUENT OUTAGE OF SCADA SYSTEM - TSECL
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Tripura is facing difficulties in maintaining regular system operation (particularly during system failure, tripping and synchronization, monitoring of ICT etc) due to non-availability of Central Sector Data from the NER SCADA System. It is understood that

frequent failure of SCADA equipments and communication links is causing such non-reporting of CS Data at SLDC, Agartala. NERLDC/PGCIL may elaborate the issue.

Deliberation of the TCC

TCC Members suggested that the above issue should be discussed first in NETeST sub-committee meeting of NERPC and put up in the next TCC Meeting.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.8	:	NER COMMON DATA CENTRE (DC) AND DISASTER RECOVERY (DR) CENTRE - TSECL
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As per R-APDRP Scheme the cost of DC & DR beyond the sanctioned amount of GOI and other associated costs to run & operate both the DC & DR is to be shared by all the NER States on the basis of No. of Towns approved under the R-APDRP Schemes. It is noticed that there is inordinate delay in receiving the share from various beneficiary states against the claim raised by APDCL & TSECL. This is causing difficulties in managing the regular O&M operation. Matter may be discussed for expediting the release of money by all the NER states.

Deliberation of the TCC

TCC Members suggested that the above issue should be discussed first in OCC sub-committee meeting of NERPC and put up in the next TCC Meeting.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.9	:	IMPLEMENTATION OF AUTOMATIC DEMAND MANAGEMENT SCHEME (ADMS) - NERPC
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CERC in its order dated 31.12.15 (Petition No. 5/SM/2014) directed to submit PERT charts & action plans for Implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER and to implement ADMS by 30.06.16. Hon'ble CERC also directed RLDCs to submit the report of status of implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER by 31.08.16.

Accordingly, constituent States of NER were requested to furnish monthly report of

status of implementation of Automatic Demand Management Scheme (ADMS).

However, States of NER were facing problems in implementation of ADMS. Therefore, NERPC had arranged workshops on ADMS so that NER States can understand the implementation process. This issue was discussed in several OCC meetings and during 121st OCC meeting, the forum suggested as below:

- Identifying minimum two substations from each state to enabled ADMS functionalities on pilot basis.
- Surveying those substations which are identified for ADMS function to understand the actual status of those stations.
- Preparing the Bill of materials (BOM) and get the cost estimate.

The OCC forum requested NERPC to communicate to Hon'ble CERC regarding problems faced by NER states to implement ADMS and requested for extension of time and funding from PSDF. The same has been communicated to Hon'ble CERC.

In order to comply the Hon'ble CERC's Order, the OCC of NERPC agreed to implement the ADMS in atleast one sub-station of each state in NER on pilot basis (preferably in State Capitals) initially and accordingly the estimates were prepared and the cost is given as below:

SN	State	Estimated Cost (Crore)	Scope of work
1	Arunachal Pradesh	4.5	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation & 2 no. of 33kV Substations including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns - (Chimpu).
2	Nagaland	5.0	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation & 2 no. of 33kV Substations including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns- (Nagarjan).
3	Mizoram	5.1	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation & 2 no. of 33kV Substations including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns - (Luangmual)

4	Manipur	6.5	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation & 2 no. of 33kV Substations including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns - (Kongba) .
5	Tripura	6.0	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation & 2 no. of 33kV Substations including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns - (S.M. Nagar).
6	Assam	5.0	Supply, installation and commissioning of RTU System in 1 no. of 132/33kV Substation including ADMS Software and hardware with Fibre Optic communication link & accessories between 33kV and 132kV S/Stns - (Kahilipara).
7	Meghalaya	1.9	Supply and Commissioning of ADMS Software with necessary hardware in SLDC - (NEHU).

Deliberation of the TCC

During the 125th OCC meeting, the Sub-committee unanimously agreed and requested to get it endorsed in the next TCC/NERPC Meetings.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

Member Secretary, NERPC requested all NER States to send the proposal to NLDC/CEA at the earliest for funding from PSDF so that ADMS can be implemented in the region as directed by Hon'ble CERC.

TCC recommended for approval of RPC.

Deliberation of the RPC

The RPC endorsed the recommendation of TCC.

ITEM NO. A.10 : DEDICATED VOICE COMMUNICATION - NERLDC

During 113rd OCC meeting, NERLDC informed that under existing VOIP communication system (executed by ORANGGE Ltd) NERLDC requested to provide two nos. of voice links in all 132kV station and four no of voice communication channel at important station like BNC HVDC, all 400kV stations such as Bongaigaon, Balipara,

Misa, Silchar (currently Single Channel voice communication), BYRNIHAR, AZARA, Palatana and all CGS (NTPC-BTPS, Ranga, Kopili, Khandong, Kathalguri, Doyang, RC Nagar) stations.

POWERGRID proposed that dedicated voice connectivity given to all POWERGRID stations by now (land line, mobile, one no. ULDC phone analog connected to VOIP Exchange on analog mode) wherever POWERTEL is available. Further Voice communication link providing is not covered by VOIP exchange project. However with FO Expansion project equipment in place, further linking will be possible and the Cost will be booked to ULDC up gradation.

Regarding additional cost for bandwidth proposed by POWERGRID and since matter involves financial approval; members requested to take up the matter in next TCC/NERPC meeting.

Deliberation of the TCC

ED (LD&C) of POWERGRID informed that two channels for voice and two channels for data would be confirmed for POWERGRID stations.

GM-NERLDC stated that the requirement of 4 channels for voice between SLDC-NERLDC is essential.

Except Tripura all states of NER agreed for implementation of 4 channels.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.11	: FIBER OPTIC COMMUNICATION SCHEME(ADDITIONAL) UNDER CENTRAL SECTOR FOR NORTH EASTERN REGION - POWERGRID
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Fiber Optic connectivity from following sub-stations is required to be established for data and voice communication to NERLDC for efficient grid management.

SN	Name of Station	Voltage level	OPGW Required for	Length in Kms.
1	Hailakandi	132	Silchar-Hailakandi Link	17

2	Roing	132	Roing _-Passighat Link	103
3	Teju	132	Teju-Roing Link	73
4	Tuirial HPS	132	Tuirial-Kolasib Link	70
5	Kameng NEEPCO	132	Kameng-Balipara Link	75
6	Byrnihat Me ECL (400kV)	132	Byrnihat -Bongaigaon Link	200
Total				538

POWERGRID has worked out the 538 Kms OPGW based Communication Scheme for these stations which are presently not connected through OPGW. The estimated cost of the scheme is ₹14 Crs. proposed for implementation on cost plus basis. Tariff for the investment made is to be shared by all constituents as per CERC notification. The scheme shall become part of existing Commercial Agreement signed for ULDC Project. This will also include all as recommended in 4th NETST MOM agenda B.17.7

Deliberation of the TCC

TCC approved the 538 Km as detailed above. Further, in line with recommendation of 4th NETST MOM (B.17.7), TCC also approved inclusion of 217Km FO link over Silchar - Byrnihat Line with additional cost in proportion.

TCC recommended for approval of NERPC

Deliberation of the RPC

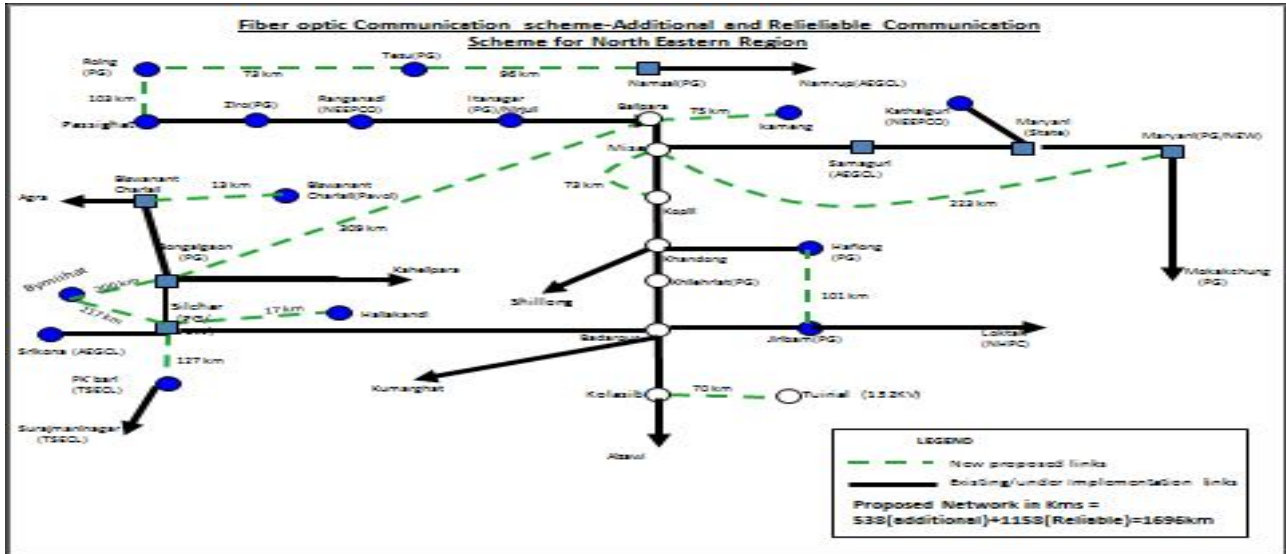
The RPC endorsed the recommendation of TCC.

ITEM NO. A.12	: FIBER OPTIC COMMUNICATION REQUIREMENT FOR REDUNDANCY AND REPLACEMENT OF ULDC OPGW LINKS UNDER CENTRAL SECTOR AFTER USEFUL LIFE - POWERGRID
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OPGW network (962 Kms) implemented under ULDC project by POWERGRID has completed more than 13 years after commissioning. This will achieve its useful life of 15 years in 2018. There is a need to take up replacement of the same so that the replacement is in place by the time 15 years period is complete and data communication is not hampered. Also, around 1158 Kms OPGW is also required to be established on various lines of Central Sector to provide redundancy in the system. It is proposed to constitute a Committee comprising members from various constituents

to study the requirement in detail and come out with their recommendations for implementation of the OPGW requirement. (i.e.1158+962km).

A. NEW REQUIREMENT (ADDITIONAL LINK-538-KM & FOR RELIABLE COMMUNICATION1158KM)



B. OLD CENTRAL SECTOR LINKS OF ULDC PROJECT CS:

LIST OF OLD CS LINKS: SC&C--ULDC Project Central sector OPGW (running with 12F only) which are to complete 15years in 2018

	FROM	TO	KM RL
1	Kahelipara	Umiam III (ASEB/MESEB)	59.132
2	Umiam III	Umiam I(MESEB)	17.455
3	Umiam I	NEHU(MESEB)	10.257
4	NEHU	Shillong***UNDER GROUND FO	6.23
5	NEHU (MESEB)	Khliehriat (MESEB)-ckt-1	64.094
6	Khliehriat (MESEB)	Khliehriat (PGCIL)**	7.791
7	Khliehriat	Khandong(PGCIL)	40.99
8	Khandong(PGCIL)	Kopliili (PGCIL)	11.191
9	Misa(PGCIL)	Kopliili(PGCIL)	73.186
10	Misa(PGCIL)	Balipara(PGCIL)	94.046

11	Misa(PGCIL)	Dimapur(PGCIL)	119.192
12	Badarpur(PGCIL)	Khelihiriat(PGCIL)	73.183
13	Badarpur(PGCIL)	Kumarghat(PGCIL)	117.519
14	Agartala Gas(PGCIL)	Kumarghat(PGCIL)****	99.817
15	Agartala (PGCIL)	Agartala Gas(PGCIL)****	7.416
16	Dimapur (PGCIL)	Kohima(PGCIL)	59.8
17	Kohima(PGCIL)	Imphal(PGCIL)	105.64
Sub Total SC&C			966.94

Deliberation of the TCC

TCC opined that matter is important in nature and hence, requested NERPC to constitute a Sub-committee to discuss and finalize the requirement of FO links.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.13 : PHASE -I, URTDSM PROJECT - POWERGRID

During deliberation of 21st UCC meeting POWERGRID proposed connectivity from POWERTEL as Stop Gap Arrangement for 2.5 Years to have connectivity of PMU-to--PDC,

PDC-to-PDC and

PDC-to-Super PDC as per scheme of project (detailed in NETeST)

The financial implication for the POWERTEL connectivity will be approximately 2 Crores per year which is to be booked against URTDSM Project Cost as an interim stop gap arrangement for 2.5 years till new SDH/PDH of ULDC FO Expansion (Package-4A,4C) projects are installed and new channels are established.

The constituents of NER agreed in-principle and recommended for further deliberation and approval of TCC & NERPC

Deliberation of the TCC

Tripura intimated that approach may be taken to minimize & optimize cost. Assam requested to book the cost in to the ULDC running/O&M cost. POWERGRID intimated that they will revert back soon in the next meeting.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.14 : CONNECTIVITY FOR SLDC-NERLDC IN RESPECT OF ICCPS & VC-FROM POWERTEL - POWERGRID

During 3rd NETeST meeting POWERGRID proposed that for connectivity from ICCPs & VC (to optimize use of VC for SLDC-NERPC meetings) from POWERTEL as a stop gap arrangement for 2 years at a cost of Rs. 1.87 Crores per year (including Manipur SLDC). This is being done as star type network topology facility with VLAN connectivity at Ethernet level is not available with the existing equipment of ULDC/State telecom node. However, by 2yrs, new eqpt will be in place after Package4A, 4C under FO Expansion scheme for the nodes as covered under said package.

Since there is no common Central sector head in SLDC project head (as executed by POWERGRID for SLDC project) matter will be looked into by POWERGRID during cost booking. The detailed cost break up is again given below:

SN	Location	Bandwidth	VLAN-1 ICCP	VLAN-2 ICCP	VLAN-3 ICCP	Total
1	Main-NERLDC	10Mbps	693621	693621	693621	2080863
2	B/U-NERLDC	10Mbps	693621	693621	693621	2080863
3	Assam SLDC	10Mbps	693621	693621	693621	2080863
4	Tripura S5LDC	10Mbps	693621	693621	693621	2080863
5	Meghalaya SLDC	10Mbps	693621	693621	693621	2080863

6	Arunachal SLDC	10Mbps	693621	693621	693621	2080863
7	Mizoram SLDC	10Mbps	693621	693621	693621	2080863
8	Nagaland SLDC	10Mbps	693621	693621	693621	2080863
9	Manipur SLDC	10Mbps	693621	693621	693621	2080863
TOTAL ANNUAL CHARGES						18727767

In 3rd & 4th NETeST meeting reasons were well-deliberated and all constituents agreed in principle and requested POWERGRID to provide cost justification from POWERTEL to the constituent so that they can take up the matter with their higher managements. POWERGRID communicated cost justification (over email Dtd.22.08.16) as the rates being as per standard rates of TRAI"

Deliberation of the TCC

TSECL expressed reservation for cost implication and hence, Tripura SLDC-NERLDC link in respect of ICCPS & VC will not be implemented by POWERGRID.

Members approved implementation of SLDC-NERLDC Links for ICCPS & VC by POWERGRID for all the NER States from POWERTEL.

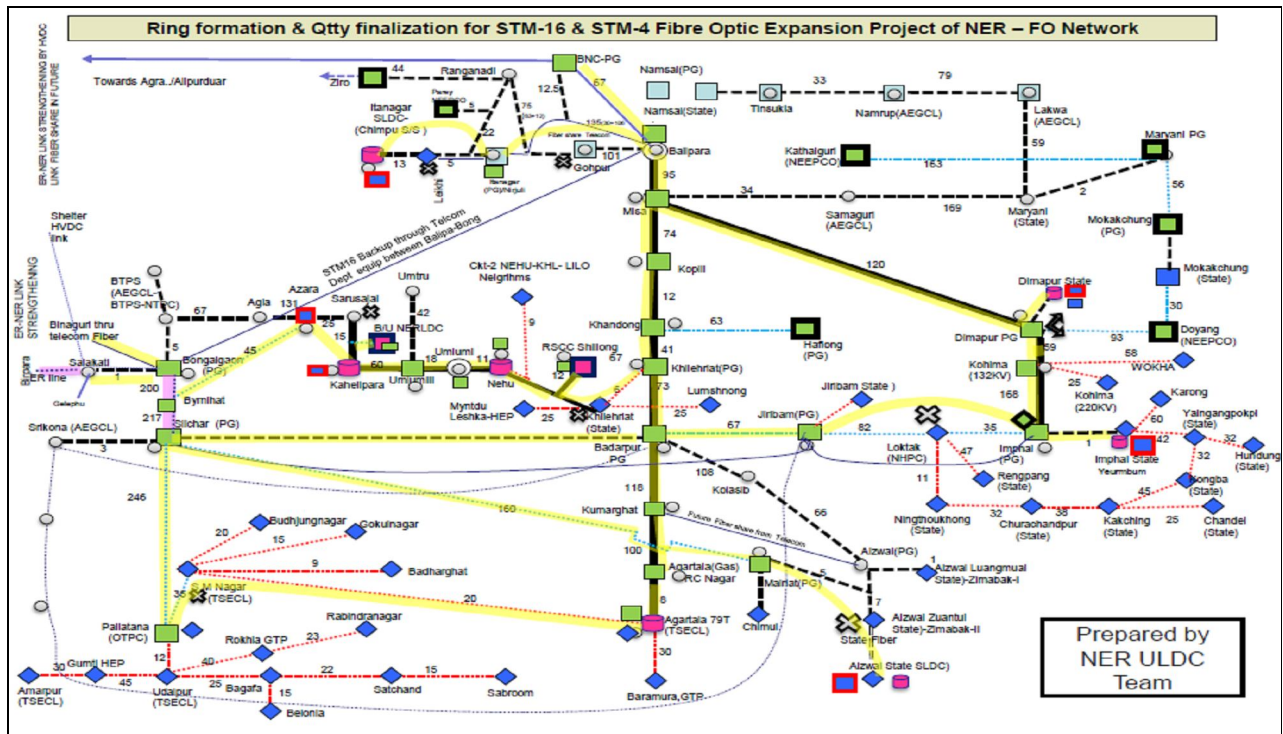
TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.15 : REDUNDANCY OF EQUIPMENT & FIBRE OPTICS FOR NER FO EXPANSION-ULDC FO NETWORK - POWERGRID

During the 4th NETeST meeting, it was proposed that Equipment Level Protections at critical nodes/links is necessary in NER Power-FO network backbone to remove data congestion & redundancy considering PMU, SCADA, VOICE network/project. For achieving the scheme, apart from 3pair of fibers as earlier meant for ULDC purpose, another 2pairs (1st pair-STM4ring, 2nd pair-protection, 3rd pair-spare,4th pair-STM16 ring, 5th -Protection/spare of STM16) will be required from CS& State sectors for grid operation & telemetry as per FO network diagram and is revised for ULDC purpose as given below:



LEGEND

- NER MW replacement FO
- .-.- Proposed FO links under NER Expansion CS Lines!
- Existing ULDC FO
- Telecom Fiber
- Fiber in NEA-W/ Other project
- - - State owned Fiber
- NERLDC
- SLDCs
- Microwave Replacement Nodes under Expansion / STM-4-ECI
- CS Nodes under Expansion-STM-4
- CS Nodes under Expansion STM-16
- ◆ State Nodes under Expansion stm4
- State Nodes under Expansion STM-16
- ⊗ Back to back fiber patch for STM 16 ring continuation wrt nodes of both ends
- ⊗ Back to back fiber patch for STM 4 ring continuation wrt nodes of both ends
- Yellow Highlighted Links are STM-16 under NER Expansion
- Pink links are required for STM16 ring (to be proposed additionally under NER FO Expansion)

All constituents agreed and requested to put in TCC & NERPC for approval.

Deliberation of the TCC

It was discussed that additional fibers are not required in general. ED (LD&C) informed that the item may be dropped and POWERGRID will take necessary action to provide necessary channel planning in totality including projects of NER. Tripura representative told nos. of fibers are sufficient in line with Phase-1 ULDC. However, fibers if additionally required on technical grounds, same would be used with due permission from competent authority/sub-committee from case to case basis.

Director, NERPC also requested POWERGRID, while finalizing planning, necessary main & standby criteria (if required) may be taken care in line with latest international standard & as followed for power system communication. Further, Matter of

remoteness, tough terrain & high time required for restoration in stations & so back up/Main-1&2 criteria of NE region may also be considered.

On a specific query by GM NERLDC whether the scheme will cater the requirement of Back-Up RLDC [at Guwahati], POWERGRID NERTS replied in the affirmative"

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.16 : TRADER MEMBERSHIP - NERPC

At present there are two power trading companies operating in NE Region i.e. M/s PTC and NVVN and are permanent members of NERPC as approved in 9th NERPC meeting. CEA vide letter dated 23.08.2016 have intimated that M/S JSW Power Trading Co. Ltd will be the trader for NER for FY 2016-2017.

Deliberation of the TCC

TCC members agreed to include M/S JSW Power Trading Co. Ltd., as additional trader of NER for FY 2016-17

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC endorsed the recommendation of TCC.

ITEM NO. A.17 : NETC MEMBERSHIP - NERPC

NETC vide letter dated 28.09.2016 has intimated that North East Transmission Company Limited (NETC) is a JV of PGCIL & six other states of NER. They have requested to obtain full membership of NERPC forum for better coordination of their transmission lines.

Deliberation of the TCC

TCC members agreed to grant NETC full membership of NERPC and requested NERPC Secretariat for further necessary action.

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC endorsed the recommendation of TCC.

ITEM NO. A.18 : SIGNING OF PPA FOR KAMENG HEP (KaHEP) - NEEPCO

Kameng HEP (600 MW) is scheduled to be commissioned during the middle part of 2017. Allocation of power from KaHEP has been made by the Ministry of Power, Govt. of India vide letter No. 11/1/2002-DO (NHPC) dated 14.07.2009. Apart from the Northern and Western region, allocation to NE states is detailed below for appraisal of the house.

Allocation to Northern & Western region	50%	300 MW
Free to Home State and unallocated share (12+15=27%):	27%	162 MW
Balance Power to be shared among NE States:	23%	138 MW
Total	100%	600 MW

Details of NE States:

Name of Beneficiary	% Allocation	MW Allocation (out of 138 MW)
Assam	47.27	65.00
Manipur	9.86	14.00
Meghalaya	11.23	15.00
Nagaland	6.62	9.00
Tripura	11.03	15.00
Arunachal Pradesh	7.65	11.00
Mizoram	6.34	9.00
Total	100.00	138.00

Draft PPAs alongwith salient features of the project including estimated cost, first year tariff, levellized tariff etc. were sent to all the beneficiaries of the project of NE region, except Assam and Arunachal Pradesh, who have already signed the PPA, vide letter dated 11-03-2016. The urgency of the matter was also discussed in the 29th CC meeting held on 22/06/2016 at Kohima. Reminders on the matter were also sent to all the beneficiaries of NE region on 08-09-2016. However, no response has yet been received from any of the beneficiaries.

Therefore, all NER beneficiaries of the project are requested to kindly expedite the execution of the PPAs in order to freeze the commercial aspects within October 2016 to facilitate further subsequent action by NEEPCO.

Deliberation of the TCC

GM, NEEPCO informed that Kameng HEP is in advance stage of commissioning and therefore requested that PPA should be signed by NER States at the earliest.

All NER States agreed to look into the matter on top priority and will get the consent from the competent authority soon whether to sign the PPA or not and the same will be communicated to NEEPCO.

TCC members requested NEEPCO to pursue and visit all states of NER and give clarification if any, so that the PPA can be completed at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.19	: OUTSTANDING DUES OF POWERGRID AGAINST NER CONSTITUENTS - POWERGRID
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The total outstanding dues of POWERGRID's NER beneficiaries as on 06.09.16 is as under-

SN	CONSTITUENTS	Outstanding against Non PoC bills	Outstanding against PoC bills	Outstanding more than 60 days	Total outstanding
1	Arunachal Pradesh	-0.45	3.75	0.00	3.30
2	AEGCL (Assam)	0.58	222.64	146.25	223.22
3	MSPDCL (Manipur)	-0.17	7.42	0.00	7.25
4	MeECL (Meghalaya)	-0.22	40.34	25.79	40.12

5	Mizoram	-0.05	12.01	4.86	11.96
6	Nagaland	-0.24	2.43	0.00	2.19
7	TSECL (Tripura)	0.02	3.90	0.00	3.92
TOTAL		-0.54	292.48	176.90	291.94

The total outstanding as on 06/09/2016 is Rs. 291.94 Crore. Out of total outstanding, it may be seen that outstanding against AEGCL & MeECL are on much higher side amounting to Rs 223.22 Crores & Rs. 40.12 Crores respectively. The outstanding amounts are almost 05 months receivable. AEGCL & MeECL are requested to liquidate the outstanding.

Deliberation of the TCC

All constituents agreed to liquidate the outstanding dues at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.20 : STATUS OF LETTER OF CREDIT - POWERGRID

Status of Letter of Credit as on 06.09.16 is as under:

SN	DIC Name	LC		Validity
		Required	Available	
1	Arunachal Pradesh	2.45	0.00	NA
2	AEGCL(Assam)	29.11	19.95	31.05.17
3	MSPDCL (Manipur)	2.37	2.13	15.09.16
4	MeECL (Meghalaya)	6.05	0.00	NA
5	Mizoram	2.70	2.70	04.05.17
6	Nagaland	2.84	2.84	21.03.17
7	TSECL (Tripura)	2.72	1.83	14.02.17

Deliberation of the TCC

All constituents agreed to enhance the LC at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.21 : DEVIATION CHARGES OUTSTANDING – NERLDC

Status of major Deviation charges outstanding as on 15.09.2016 are Assam (Rs. 42.70 Crores), Ar. Pradesh (Rs. 5.49 Crores), and Tripura (Rs. 3.07 Crores).

Assam, Ar. Pradesh and Mizoram have outstanding of more than 13 weeks (90 days).

CERC in order dated 02.09.2015 in Petition No: 142/MP/2012 with I.A. 7/2013 has stipulated denial of Open Access in case of default in payment of UI/deviation charges, transmission charges, reactive energy charges, congestion charges and RLDC fees and charges for more than 90 days.

Deliberation of the TCC

All constituents agreed to clear the outstanding dues at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.22 : NON PAYMENT OF NERLDC FEES AND CHARGES BILLS – NERLDC

NERLDC is raising the bills on monthly basis on the 1st working day of every month in Terms of the CERC (fees and charges of RLDC and other related matters) Regulation, 2015.

The status of latest outstanding is as below:

Assam : Rs 119.60 lacs and

Mizoram : Rs. 16.54 lacs

Deliberation of the TCC

Assam and Mizoram agreed to clear the outstanding dues at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.23 : PAYMENT OF OUTSTANDING AGAINST AMC OF OLD SCADA/EMS, OVERHEAD CHARGES & FERV(FOREIGN EXCHANGE VARIATION RATE) - NERLDC

The status is as below:

Amount is in Rs.

SN	Items	Assam	Meghalaya	Tripura
1	Main SCADA AMC	0.00	0.00	1247.00
2	Overhead Charges	495191.00	0.00	0.00
3	FERV bill	117007.00	0.00	108173.00
	Total Amount =	612198.00	0.00	109420.00

Note: OH Charges for Assam is due to less payment for Qtr nos 1-6 (Rs.359003) & Qtr no 15 (Rs.136188)

Deliberation of the TCC

Assam agreed to resolve soon the TDS of Rs. 217967/- with NERLDC bilaterally.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.24 : SIGNING OF PPA - NHPC

(i) Extension of existing BPSA with APDCL in respect of Loktak Power Station: -

NHPC is regularly following- up APDCL to extend the BPSA up to 35 years from COD of last unit or balance normative life of Loktak Power Station, whichever is later, on the existing terms and conditions. The existing BPSA is going to expire on 31.10.2016.

APDCL requested to give consent for extension of existing BPSA on the same terms & conditions.

(ii) Signing of Power Purchase Agreement (PPA) in respect of Tawang HE Project, Stage- I & II:-

Signing of Power Purchase Agreement (PPA) in respect of Tawang HE Project, Stage – I & II is pending with Assam, Manipur, Tripura & Mizoram.

Deliberation of the TCC

All NER States agreed to look into the matter on top priority and will get the consent

from the competent authority soon whether to sign the PPA or not and the same will be communicated to NHPC.

TCC members requested NHPC to pursue and visit all states of NER and give clarification if any, so that the PPA can be completed at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.25	: OUTSTANDING DUES OF NHPC AGAINST MeECL FOR MORE THAN 60 DAYS - NHPC
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MeECL, Meghalaya: - As per MOM of 29th CCM of NERPC, entire outstanding dues has to clear by August, 2016. But till date, neither we have received payment nor any communication from Meghalaya in spite of repeated reminders.

As on date an amount of Rs. 30.57 Crs (Including surcharge of Rs. 8.97 Crs up to 31.08.2016) is due for payment from MeECL, Meghalaya. As you are well aware that amount outstanding beyond a period of 60 days from date of billing is attracting late payment surcharge at the rate of 1.50% per month as per CERC (Terms & Conditions of Tariff) Regulations, 2014. Our auditor is pressing hard to settle the issue of pending huge outstanding dues at the earliest.

Deliberation of the TCC

MeECL informed that necessary action for clearing the outstanding dues have been initiated by them and hopefully all the outstanding dues not only NHPC but also other utilities would be liquidated soon.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.26	: OPENING / MAINTAINING OF LETTER OF CREDIT (LC) - NHPC
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Opening & maintaining of Letter of Credit of requisite value is essential as per requirement of PPA, allocation order issued by MOP, GOI in respect of Loktak Power Station, Tripartite Agreement and CERC (Regulation of Power Supply), Regulation,

2010. The existing LC's had already expired on 31.03.16 & 24.03.16 but Deptt. Of Power, Govt. of Arunachal Pradesh and Power & Electricity Deptt. Govt. of Mizoram has not provided LC of requisite value in spite of repeated reminders. Details of LC's are as under:-

Name of beneficiaries	Requisite amount	Validity expired on
Arunachal Pradesh,	Rs. 0.75 Crs.	31.03.2016
Mizoram	Rs. 0.76 Crs	24.03.2016

Dept. of Power, Govt of Arunachal Pradesh and Power & Electricity Deptt. Govt. of Mizoram is requested to furnish the "Letter of Credit (LC)" of requisite amount on top priority.

MSPDCL, Manipur:- In view of enhancement of share allocation including unallocated quota of power from Loktak Power Station, MSPDCL has to provide "Letter of Credit" amounting to Rs. 4.87 Crs. The existing LC of Rs. 3.05 Crs is going to expire on 15.09.2016.

Deliberation of the TCC

Mizoram & Manipur agreed to enhance the LC at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.27	: OUTSTANDING DUES OF NTPC AGAINST NER CONSTITUENTS - NTPC
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Outstanding of more than 60 days as on 15.09.2016 is Rs 76.18 Crore. Tripura is not paying the energy bill for the energy supplied since April 2016.

SN	Beneficiaries	Total Outstanding in Cr.	Outstanding more than 60 days
1	Assam, APDCL	187.09	37.61
2	MeECL, Meghalaya	44.09	23.75
3	TSECL, Tripura	22.72	14.82
Total =		278.23	76.18

Deliberation of the TCC

AGM, NTPC highlighted about the outstanding dues and non-payment by the constituents.

Tripura mentioned that they have written to NTPC that they are not willing to take power from BTPS of NTPC due to high cost and requested not to schedule to them.

TCC forum expressed concern about the issue and since the allocation rest with Ministry of Power, constituents may write to them. However, considering the importance of Bongaigaon Thermal Power Station, TCC members unanimously agreed to take a resolution with Govt. of India for reducing the high cost of BTPS.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.28	: STATUS OF LETTER OF CREDIT (LC) - NTPC
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The Status is as below:

SN	Beneficiaries	LC Required As per PPA (Cr.)	Remarks
1	MeECL, Meghalaya	9.36	Not yet opened
2	Arunachal Pradesh	5.36	Not yet opened
3	MSPDCL, Manipur	5.86	Not yet opened
4	TSECL, Tripura	5.95	Not agreeing to open.

Deliberation of the TCC

All constituents agreed to look into the matter at the earliest on priorities and revert back to NTPC.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.29	: OUTSTANDING DUES OF OTPC AGAINST NER CONSTITUENTS - OTPC
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The current total outstanding dues of OTPC against the NER beneficiary states (as on 19-09-2016) are as under:

(Amount in Rs Crores)

SN	Beneficiary	Outstanding Dues (>60 Days)	Total Outstanding
1	Arunachal Pradesh	0	3.24
2	Assam	0	66.1
3	Manipur	0	11.65
4	Meghalaya	16.75	39.71
5	Mizoram	0	6.21
6	Nagaland	0	0
7	Tripura	86.68	145.35
	Total	103.43	272.26

The total outstanding dues as on 19-09-2016 are Rs 272.26 Crores out of which outstanding beyond 60 days is Rs 103.43 Crores. Constituents are requested to clear at least the outstanding dues over 60 days, at the earliest.

Deliberation of the TCC

All constituents agreed to clear the outstanding dues at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.30	: STATUS OF PAYMENT SECURITY MECHANISM OF THE BENEFICIARIES REQUIRED AGAINST MONTHLY ENERGY BILLING AS PER POWER PURCHASE AGREEMENT AND CERC REGULATIONS- OTPC
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The Status is as below:

SN.	Beneficiary	Letter of Credit (LC) required as per PPA (Rs Crore)	LC amount status (Rs Crore)	Valid Upto	Remarks
1	Ar. Pradesh	11.62	11.62	31-Mar-2016	LC to be renewed with bank
2	Assam	40	40	27-Apr-2017	LC is in place
3	Manipur	16.519	3.7	15-Sept-2016	LC to be renewed with bank
4	Meghalaya	29.78	-	-	Meghalaya has never provided the LC even after continuous persuasion
5	Mizoram	7.5	5.81	7-May-2015	Yet to be renewed
6	Nagaland	14.26	14.26	20-Mar-2017	LC is in place
7	Tripura	46.53	18	19-Mar-2017	LC is in place

Deliberation of the TCC

All constituents agreed to enhance the LC at the earliest.

TCC noted as above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.31 : T-CONNECTION AT BHALUKPONG SUB-STATION - NERPC

The T-connection at Bhalukpong remains pending since long.

Arunachal may inform Action Plan.

Deliberation of the TCC

The issue could not be deliberated due to non-participation of Representatives from

Arunachal Pradesh. TCC members expressed concern about non-participation of Ar. Pradesh for the last TCC/NERPC and hence this issue could not be resolved and hamper the grid security of the region

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.32	: FREQUENT TRIPPING OF 33 KV SYSTEM OF DOP, ARUNACHAL PRADESH AT NIRJULI AND ZIRO SUB-STATIONS - NERPC
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The frequent tripping of 33kV system of DoP, Ar. Pradesh is a matter of concern. The issue was discussed since 9th TCC meetings. The present status of tripping of 33kV Feeders at Nirjuli and Ziro Sub Station is as below:

(a) No. of Trippings of 33kV Feeders at Ziro Sub-station

SN	Feeder	Jan'10 - Dec'15		Jan'16 - Aug'16	
		Total	per Month	Total	per Month
1	Kurung- Kamey	1288	17.88	184	18
2	Old Ziro Feeder	747	10.38	32	6
3	Kimin Feeder	2257	31.35	183	27
Grand Total =		4292	59.61	399	49.88

(b) No. of Trippings of 33kV Feeders at Nirjuli Sub-station

SN	Feeder	Jan'10 - Jul'15		Jan'16 - Aug'16	
		Total	per Month	Total	per Month
1	AP - 1	360	5	16	3
2	AP - 2	748	10.38	6	1
3	AP - 4	325	4.51	45	9
Grand Total =		1433	19.89	138	17.24

Necessary action is required to be taken on priority to reduce the no. of faults in 33kV downstream feeders to avoid frequent failure of transformers at Nirjuli and Ziro Sub Stations.

Corrective measures taken by Arunachal to reduce Tripping / failure of Transformers may please be intimated.

Deliberation of the TCC

The issue could not be deliberated due to non-participation of Representatives from Arunachal Pradesh.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.33	: COMPLETION OF ATS OF PALLATANA GAS POWER PLANT (GPP) IN AP - POWERGRID
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ATS of Palatana GPP in Arunachal Pradesh as scheduled by PGCIL for commissioning is as follows:

SN	Transmission System	Schedule Commissioning
1	132KV D/C Pasighat-Roing line including associated line bays at Pasighat and 132/33KV Roing Sub Station	December, 2016
2	132KV D/C Roing-Tezu line including 132/33KV Tezu Sub Station	December, 2016
3	132KV D/C Tezu-Namsai line including 132/33KV Namsai Sub Station	March, 2016

Urgently Arunachal Pradesh is required to complete 132KV Along-Pasighat line as well 33KV downstream system at Roing, Tezu & Namsai to match with the above schedule. The issue was deliberated in various OCC meetings. Ar. Pradesh may update the progress and tentative completion of 132kV Along – Pasighat line.

Deliberation of the TCC

The issue could not be deliberated due to non-participation of Representatives from Arunachal Pradesh.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.34	: ADDITIONAL REQUIREMENT OF RTUs & OPGW BASED COMMUNICATION NETWORK IN INTRASTATE GRID OF MANIPUR TO COVER NEW 132KV AND 400KV SUB-STATIONS - MSPCL
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15th NERPC Meeting held at Hotel Radission Blu, Guwahati on 20th and 21st August, 2015, PGCIL had approved the revision of OPGW connectivity for Manipur from 149

Km to 365 Km to link the following Nodes with investment is to be recovered as per tariff determined by CERC

SN	From	To	OPGW length in km
1	Yurembam	Yaingangpokpi	42
2	Yaingangpokpi	Kongba	32
3	Kongba	Kakching	45
4	Kakching	Churachandpur	38
5	Yaingangpokpi	Hundung	32
6	Katching	Chandel	25
7	Loktak(NHPC)	Rengpang	47
8	Jiribam (PG)	Jiribam	1
9	Ningthoukhong	Imphal(PG)	32
10	Loktak(NHPC)	Ningthoukhong	11
11	Imphal (Yurembam)	Karong	60
TOTAL =			365

In the said meeting MSPCL requested for inclusion of another 164 km in addition to the 365 km to cover the following ongoing 132 kV Nodes which was duly recorded in the minutes

SN	From	To	OPGW length in km
1	Churachandpur	Thanlon	70
2	Kakching	Moreh	45
3	LI-LO on Churachandpur-Kakching at Elangkhangpokpi		10
4	LI-LO on Kongba-Kakching at Thoubal		25
5	LI-LO on Jiribam (PG)-Aizawl(PG) at Tipaimukh		14

Now the line construction works for the above ongoing projects are in various stages of completion. However, during the construction of above lines as per final survey, some few Km. of line length is found to be increased as detailed below. Accordingly, for integration of the following left out intrastate grid Sub-Station into SLDC, Manipur,

estimated requirement of additional RTUs and OPGW connectivity are 4 nos. & 202 Km instead of 164 Km stated as above respectively.

SN	New SS for which RTU is Required	Line Section		Length (Km)	
				Original	Revised
1	NA	Yurembam	Thoubal (Via Nambol)	0.00	45.00
2	132/33KV Thanlon	Churachandpur	Thanlon	70.00	75.00
3	132/33kV Moreh	Thoubal	More (Via Kakching)	45.00	75.00
4	132/33kV Tipaimukh	LILO of 132kV Jiribam (PG) – Aizawl (PG) Line at Tipaimukh		14.00	3.00
5	132/33kV Elanghangpokpi	LILO of Churachandpur – Kakching at Elanghangpokpi		10.00	4.00
6	NA	LILO of Kongba – Kakching at Thoubal		25.00	0.00
TOTAL =				164.00	202.00

In the interest of Grid Security and safe & secure real time management of power supply system in Manipur, PGCIL may take up the OPGW connectivity of additional 202 Km (including providing of 4 RTUs) on tariff to be recovered as determined by CERC and the scope may be incorporated in the existing Commercial Agreement signed between States & PGCIL for UDC system, more particularly for Manipur,

TCC may kindly deliberate and approve the proposal of MSPCL in the interest of NER Grid Security and smooth power supply management in Manipur and may advise PGCIL to expedite the work as requested.

Deliberation of the TCC

POWERGRID informed that breakup of additional quantity was not communicated to them however, POWERGRID assured that quantity variation clause under on-going project will soon be explored for inclusion of 202km, if the same is not included in any other project like NERPSIP, 132kV scheme etc. The confirmation will be given in next NETeST meeting. MD, MSPCL requested POWERGRID to include the same as per the detailed break-up given above.

TCC Members noted above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. A.35	: IMPLEMENTATION OF WORLD BANK FUNDED NERPSIP – CONCERN FOR DELAY IN PROJECT IMPLEMENTATION - MSPCL
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The Road-map for development of power sector specifying the need for strengthening of overall Transmission, Sub-Transmission and Distribution system of NIER and Sikkim was brought out in the "Passighat Proclamation on Power" release during the first Sectorial Summit of North Eastern Council at Passighat in Arunachal Pradesh in January 2007. Accordingly, PGCIL, the Project Design & implementation Consultant prepared the "Comprehensive Scheme for Strengthening of Transmission and Distribution System of NER & Sikkim" at cost of Rs. 9890 Crores (Based on 2009 PL).

Tranche-1 of the Project at the cost Rs. 5111.33 Crore under the new version as "North Eastern Regional Power System Improvement Project (NERPSIP)" excluding Arunachal Pradesh and Sikkim was sanctioned by Ministry of Power, GOI on 01/12/2014 as Central Sector Scheme with 50:50 funding from world Bank & Government of India and PGCIL as Project implementing Agency, after a long protracted time since its inception in November 2010. Implementation/Participation MOU with PGCIL was signed on 18/04/2015.

Now for Manipur NITs for the 8 (Eight) packages was floated in February 2015. Nothing could be finalized as of now and no work orders are issued except for 2(two) nos. of distribution packages. With the recent decision of the Government of India for repackaging of the project elements and subsequent floating of fresh NITs, the project implementation shall be inadvertently delayed further more.

It is to be noted that the state has proposed most of the priority transmission & sub-transmission projects of the prospective load centres in the NERPSIP due to poor financial health of the state in the hope that the scheme will be implemented in a time bound manner and our infrastructural requirements would be fulfilled in time. The above transmission & sub-transmission element of the NERPSIP was part and parcel of Vision Document essential for providing Power for all by 2019. Any further delay in

the implementation may derail the aspiration of General public. And MSPCL has also taken up few projects/work out of the proposed transmission / sub-transmission elements under NERPSIP on exigencies in commensurate with load growth of the state after obtaining formal clearance/approval from CEA from time to time.

The delay in the implementation of the World Bank funded NERPSIP project is a serious concern not only to Manipur but also all the states of NE.

The TCC may kindly deliberate for speeding up the scheme

Deliberation of the TCC

States/Constituents intimated that the rate quoted, though high, but are in line with prevailing market rates only. But as the estimate was prepared based on POWERGRID SOR (Schedule of Rates), there was a positive deviation. Constituents through this forum requested POWERGRID & NERPC to take up the matter with Govt. of India and World Bank as well as for early approval of rates/prices as quoted so that award can be placed at the earliest.

TCC Members noted as above.

Deliberation of the RCC

The RPC noted as above.

CATEGORY – B : ITEMS FOR APPROVAL

ITEM NO. B.1	: REAL TIME ENERGY ASSESMENT SYSTEM FOR EFFECTIVE GRID MANAGEMENT SOFTWARE BY C-DAC - NERPC
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To forecast the load & to plan the scheduling properly, CDAC has submitted a proposal for Real-Time Energy Assessment System for effective Grid Management. The Proposed system has three major components namely, real-time data acquisition system, real-time energy assessment system and short term load forecasting. This would be very useful for the SLDCs for forecasting the load and to plan the scheduling accordingly. This would also be useful for the users to have online information of the

schedule and DSM charges, this would help them to schedule and reduce their penalty and thereby contributing to the Grid stability. The project would approximately cost around 2 crores which would also require user contribution.

CDAC has informed that the cost of the software will be borne by CDAC. The cost of hardware needs to be shared by the user. (Constituents' share of cost is 20% of total cost of Rs. 2 Crores i.e. Rs. 40 lakhs approx.). PI refer **Annexure- B.1**

All constituent appreciated the initiative taken by NERPC/NERLDC and unanimously agreed in principle to avail the above software and requested CDAC to go ahead with their project.

Placed for approval of TCC/NERPC

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.2	: VLAN FOR RTU CONNECTIVITY OF CS STATIONS - POWERGRID
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During deliberation of 3rd NETeST Meeting POWERGRID proposed a 4mbps VLAN as stop gap arrangement for 2.5 Years to bring 2nd Channel in service for reporting of station data to NERLDC for Salakati, Bongaigaon, Balipara, Misa, Nirjuli, Mariani, Dimapur, Imphal, Aizwal, Kumarghat, Silchar, Badarpur, Khliehriat, Jiribam, BNC and Shillong (NERLDC/NTAMC] with additional cost of Rs. apx 54.65 Lac per year under ULDC scheme. NETeST members agreed in principle and requested to put up the same in TCC & NERPC for approval.

Placed for approval of TCC/NERPC

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.3 : ENHANCEMENT OF BOARD FUND CONTRIBUTION - NERPC

The present Annual Board Fund contributed towards NERPC by constituents are given below:

State Utilities: Rs. 50,000/annum each

Central Utilities: Rs. 2, 00,000/annum each

The above rate of contribution was approved by NERPC in the year 2009-10. But due to cost escalation, it would be very difficult for NERPC Secretariat to meet the expenditures incurred towards various Sub-Committee meetings of NERPC.

In view of the above it is proposed to enhance the contribution to Board Fund of NERPC as given below from FY 2016-2017 onwards:

State Utilities: Rs. 1, 00,000/annum each

Central Utilities: Rs. 4, 00,000/annum each

Placed for approval of TCC/NERPC

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.4 : IMPLEMENTATION OF DOCUMENT MANAGEMENT SYSTEM AND ANDROID APP FOR NERPC - NERPC

As per deliberation in 122nd OCC meeting of NERPC held on 09.06.2016 the sub-committee in-principle approved the commissioning of following packages for NERPC:

1. Android App
2. Asset Management System
3. Document Management System

The initial estimate for the item(s) in Sl.No.(1) & (3) is to the tune of (50 lakhs (appx.)

The contribution distributed among NERPC constituents in the ration of 4:1 among CPSUs and states/traders respectively is calculated as follows:

SN	Name of the Constituents	Contribution(in lakhs)
1.	POWERGRID	8.00
2.	NTPC	8.00
3.	NHPC	8.00
4.	NEEPCO	8.00
5.	OTPC	8.00
6.	Ar.Pradesh	1.11
7.	Assam	1.11
8.	Manipur	1.11
9.	Meghalaya	1.11
10.	Mizoram	1.11
11.	Nagaland	1.11
12.	Tripura	1.11
13.	PTC	1.11
14.	NVVN	1.11
TOTAL		50 Lakhs

Placed for approval of TCC/NERPC

Deliberation of the TCC



TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.5	: SHIFTING OF VULNERABLE LOCATION 118 (DB+0) OF ± 800KV HVDC BISWANATH CHARIALI-AGRA TRANSMISSION LINE & LOC.495 (DC+0) OF 400KV D/C BALIPARA-BONGAIGAON(QUAD) TRANSMISSION LINE ON PILE ON ACCOUNT OF UNPREDICTED CHANGE IN RIVER COURSE - POWERGRID
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The following tower locations of the transmission lines mentioned alongside have become vulnerable in view of unprecedented flood & resultant change in river course.

SN	Transmission line	Tower Location	River	Photographs
1	400KV D/C Balipara - Bongaigaon (Quad)	495 (DC+0) (Hanapara, Nalbari)	Pagladia	
2	± 800KV HVDC BNC - Agra	118 (DB+0) (Khanamukh, Sonitpur)	Maansiri	

It may be mentioned that during construction of the above lines, these rivers were at a safe distance from the locations. However, gradual change in course of the above rivers near the locations have been noticed during the last two Monsoons & particularly during the recent flood in the northern Bank of the River Brahmaputra, these rivers have dangerously eroded the bank on which the tower locations are situated- leaving them in highly endangered condition.

As an immediate action, anti-erosion / bank protection measure have been taken up by POWERGRID for protection of these locations during the current season. However, as long term measure & considering criticality of the above lines for the entire Grid, requirement of shifting these locations on Pile is unavoidably felt.

POWERGRID therefore proposes to proceed with immediate action for shifting the above locations on Pile so that the same can be completed before onset of the next Monsoon (2017). Booking of the expenditure (estimated at 5.5 Crore) is proposed under PoC Mechanism.

The issue was discussed during 125th OCCM and the members agreed to the proposal of POWERGRID.

Placed for approval of TCC/NERPC

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.6	: SHIFTING OF ANCHOR TOWER OF 400KV D/C BYRNIHAT-BONGAIGAON (PORTION) OF NETC LINE AT LOCATION NO. 1026 FROM OPEN CAST FOUNDATION TO PILE FOUNDATION AT BRAHMAPUTRA RIVER CROSSING IN RIGHT BANK NEAR JOGIGHOPA, GOALPARA, ASSAM - NETC.
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400 kV D/C transmission system from Palatana to Silchar and from Silchar to Bongaigaon was envisaged for evacuation of power from OTPC, Palatana. In the state of Assam the line is crossing Brahmaputra River near at Jogighopa, Goalpara, Assam. The pile foundation location No. 41/0 (final location No. 1025) was 32 m away from the bank edge and anchor tower location no 40B/0(final location no 1026) was 137 mtrs away from river bank edge during 2010.

In this area there is continuous erosion of bank and the distance between bank and tower (1026) is reducing continuously. Flow of water enters towards Loc.1026 and now river bank is around 40 mtrs from the location which was 137 mtrs during 2010. During this year this location was under river water.

Moreover, for unloading of Over Dimensional Cargos a channel has been prepared in between Loc. 1025 and Loc.1026 and as on date water has reached about 10 mtrs from Loc.1026 which was around 14 mtrs during the month of May 2016. This ramp is very close to two legs of tower and erosion of land mass is going on continuously.



Any further shifting of bank line or formation of any whirl pool in this area may cause

problem to the stability of tower No. 1026. Inland Waterways Authority of India has also suggested shifting the tower to a safer location.

Under the above circumstances, it is proposed to shift tower at Loc.1026 on a suitable pile foundation for problem free performance and safety of the line. This location has suddenly become very critical and NETC want to complete the shifting work by April 2017. Booking of the expenditure (estimated at 17.3 Crore including cost of pile foundation, de-erection and erection.) is proposed under PoC Mechanism.

The issue was discussed during 125th OCCM and the members agreed to the proposal of NETC.

Placed for approval of TCC/NERPC

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.7	:	CERTIFICATION OF MEGHALAYA STATE TRANSMISSION LINES AS ISTS - NERPC
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Based on initial studies by MeECL the following lines have been found to cater loads of other states in addition to Meghalaya, so they may be declared as ISTS line:

1. 220kV D/C Misa - Killing
2. 132 kV S/C Agia - Nagalbibra
3. LILO of 400kV D/C Pallatana - Bongaigoan at 400/220kV Killing S/S

The matter was discussed in one of the sub-group meetings and it was suggested that NLDC/NERLDC may conduct studies by WebNet software and inform the members of load flow patterns.

During 125th OCCM, NERLDC presented the details of the study results as follows:

- ☛ 400kV Silchar - Byrnihat : 12.9971 %
- ☛ 400kV Bongaigaon - Byrnihat : 10.1268%
- ☛ 220 kV Misa - Byrnihat I : 26.1397%
- ☛ 220 kV Misa - Byrnihat II : 26.1397%

The OCC members thanked NERLDC/NLDC for conducting the study and Meghalaya may approach SERC/CERC after TCC/RPC approval.

Placed for approval of TCC/NERPC

Deliberation of the TCC

Based on the study of NERLDC, TCC approved the declaration of:

1. 220kV Misa – Killing D/C Line and
2. LILO of 400kV, D/C Pallatana - Bongaigoan at 400/220kV Killing S/S as ISTS Line and recommended for approval of NERPC.

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.8	:	LILO OF ONE CIRCUIT OF 132KV BISWANATH CHARIALI (PG) – ITANAGAR AT GOHPUR – AGENDA BY ASSAM / NERLDC
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AEGCL vide letter no. AEGCL/MD/13th Plan/Tech-593/2014-15/6 dated 5th Aug., 2016 has informed that Biswanath Chariali (PG) – Pavo (AEGCL) 132kV D/C line is meeting the loads in Pavo, Gohpur and Depota areas of Assam. It has been observed that this line is carrying more than 135MW during peak hours.

Studies have been carried out for 2018-19 time-frame for both high hydro (Exhibits-1) and low hydro (Exhibits-2) conditions, considering Sonabil 220/132kV substation and Sonabil – Dhemaji – Behiating 220kV D/c line (one circuit of Sonabil-Dhemaji line via Narayanpur) (under construction by AEGCL) and Behiating - Tinsukia 220kV D/c line (under NERPSIP).

The study results are at Exhibit-1(A) & 2(A). Studies have been carried out considering the split bus at Gohpur as closed. It has been observed that with the LILO of one circuit of 132 kV Biswanath Chariali (PG) – Itanagar D/c line at Gohpur, the power flow on the Biswanath Chariali (PG) – Pavo (AEGCL) 132kV D/c line gets reduced by about 30MW [Exhibit-1(B) & 2(B)].

It is thus proposed to LILO one circuit of Biswanath Chariali (PG) – Itanagar 132kV D/c line at Gohpur to satisfy N-1 criterion and to improve security and reliability of the grid.

Deliberation of the 6th SCM

Members approved the proposal of LILO of one circuit of Biswanath Chariali (PG) – Itanagar 132kV D/c line at Gohpur Sub Station of AEGCL by TBCB.

Deliberation of the TCC

TCC also approved the proposal of LILO of one circuit of Biswanath Chariali (PG) – Itanagar 132kV D/c line at Gohpur Sub Station of AEGCL by TBCB and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.9	:	STRENGTHENING OF EVACUATION SYSTEM OF PARE HEP OF NEEPCO
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Power evacuation system from Pare HEP (2x55 MW), which is expected to be commissioned in Dec 2016, consist of the following:

- a) LILO of Ranganadi – Naharlagun / Nirjuli 132kV S/c line at Pare HEP by NEEPCO.
- b) LILO of one circuit of Ranganadi – Itanagar 132kV D/c line at Pare HEP by NEEPCO.

From above, it is seen that out of four 132 kV lines from Pare HEP, two are connected to Ranganadi HEP and two to the load centres viz. Naharlagun and Itanagar. System studies carried out in 2018-19 time-frame indicate that Ranganadi HEP injects power at Pare HEP through Pare – Ranganadi 132kV 2xS/c lines, thereby leaving only 2 no. 132kV S/c line sections i.e. Pare – Itanagar and Pare – Naharlagun / Nirjuli for evacuation of 110MW power from Pare HEP and additional power injected at Pare HEP from Ranganadi HEP. This causes overloading of Pare – Naharlagun / Nirjuli 132kV S/c line (Pare – Naharlagun: 129MW, Naharlagun – Nirjuli: 91MW).

Thus, in order to address the issue of power evacuation from Pare HEP, it is proposed to disconnect LILO of Ranganadi HEP – Naharlagun / Nirjuli 132kV S/c line from Pare HEP and utilize LILO line section to construct Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (high capacity). From the study result, it is seen that the power is reliably evacuated from Pare HEP, however the loading in the Ranganadi – Naharlagun line still remains on the higher side (92MW).

Though the loading on Biswanath Chariali (PG) – Pavo (AEGCL) 132kV D/c line is reduced by about 20MW with construction of Pare HEP – North Lakhimpur (AEGCL)

132kV D/c line (high capacity), keeping in view the future load growth in Upper Assam, it is proposed to implement both the schemes viz. LILO of one circuit of Biswanath Chariali (PG) – Itanagar 132kV D/c line at Gohpur and Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (high capacity).

As mentioned above, Ranganadi – Naharlagun 132kV S/c line is critically loaded as the combined load of about 70MW of Naharlagun and Nirjuli is fed from this line. Further, some demand of Gohpur is also fed through this line. Thus, it is proposed to LILO one circuit of Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (high capacity) at Nirjuli. Study results are enclosed at Exhibit-1(E).

In view of the above, following is proposed to be implemented:

- (i) Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra conductor) – through TBCB (ISTS)
- (ii) LILO of one circuit of Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra) at Nirjuli substation – through TBCB (ISTS)
- (iii) Reconductoring of LILO portion at Pare end (of Ranganadi – Naharlagun / Nirjuli 132kV S/c line) with HTLS (HTLS equivalent to ACSR Zebra) along with modification of 132kV bay equipments at Pare HEP – by NEEPCO.
- (iv) To bypass LILO of Ranganadi- Naharlagun / Nirjuli at Pare HEP so as to form direct Ranganadi- Naharlagun / Nirjuli 132 kV S/C line.

Deliberation of the 6th SCM

Members approved the following:

- (i) Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra conductor) – through TBCB (ISTS)
- (ii) LILO of one circuit of Pare HEP – North Lakhimpur (AEGCL) 132kV D/c line (with ACSR Zebra) at Nirjuli substation – through TBCB (ISTS)
- (iii) Reconductoring of LILO portion at Pare end (of Ranganadi – Naharlagun / Nirjuli 132kV S/c line) with HTLS (HTLS equivalent to ACSR Zebra) along with modification of 132kV bay equipments at Pare HEP – by NEEPCO.
- (iv) To bypass LILO of Ranganadi- Naharlagun / Nirjuli at Pare HEP so as to form direct Ranganadi- Naharlagun / Nirjuli 132 kV S/C line.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.10	:	AUGMENTATION OF 2X30MVA, 220/132KV SUBSTATION AT MOKOKCHUNG (PG)
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2x30MVA, 220/132kV Mokokchung (PG) substation is a vital node through which power from Mariani (PG) (in Assam) is fed to Mokokchung & other downstream areas of Nagaland through Mariani (PG) – Mokokchung (PG) 220kV D/C line.

POWERGRID has informed that maximum loading observed on 2x30 MVA ICTs is 32 MW. Under N-1 contingency of ICT at Mokokchung the other ICT would be over loaded and loading has to be restricted to 30 MW.

In view of the above, it is proposed to enhance the transformation capacity at Mokokchung (PG) by installation of third 220/132 kV ICT of 30MVA (3x10MVA) single phase units.

Deliberation of the 6th SCM

Members approved the installation of third 220/132 kV ICT of 30MVA ICT at 220/132kV Mokokchung (PG) Sub Station by POWERGRID:

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.11	:	CONVERSION OF 2 NOS. 63 MVAR LINE REACTORS AT BISHWANATH CHARIALI END OF BISWANATH CHARIALI – LOWER SUBANSIRI 400KV (1ST) D/C LINE TO BUS REACTORS
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Four (4) nos. 420kV, 63MVAR line reactors, originally envisaged for use as Line Reactors for proposed Lower Subansiri - Biswanath Chariali 400kV 2xD/c lines are presently available at Biswanath Chariali substation. As of now, the commissioning of Lower Subansiri HEP is indefinitely delayed, therefore, construction of Lower Subansiri - Biswanath Chariali has been put on hold and accordingly these reactors are not being used at this moment.

It has been observed that voltage at 400kV level at Biswanath Chariali, Balipara &

Ranganadi substations remains very high for most part of the day. To maintain the node voltages within IEGC band, numbers of 400 kV lines from Bongaigaon, Balipara, Biswanath Chariali, Ranganadi are usually kept open in off peak hours. There have been instances of tripping of 400 kV lines on overvoltage, which have resulted in near-miss incidents in NER Grid.

It may be mentioned that presently 2x80MVAR Bus Reactors are in service at Biswanath Chariali.

Therefore, in order to assuage this issue of high voltage, it is proposed that two out of four 420kV, 63 MVAR Line Reactors at Biswanath Chariali may be utilized as Bus Reactors. This will help to contain the issue of continuous high voltage.

Deliberation of the 6th SCM

Members approved utilization of two of four nos. 420kV, 63 MVAR Line Reactors at Biswanath Chariali for 2X400kV D/C BNC-Subansiri Line as Bus Reactors by POWERGRID.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.12	: INSTALLATION OF 80MVAR BUS REACTOR AT RANGANADI (NEEPCO) WITH GIS BAY - AGENDA BY NEEPCO
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To address high voltage at 400kV level at Ranganadi, installation of 80MVAR bus reactor at Ranganadi by NEEPCO was agreed in 5th Standing Committee Meeting of NER held at Imphal on 08-08-15.

But due to space constraints, it is now proposed to install the 80MVAR Bus Reactor at 400kV Ranganadi Bus with GIS bays instead of AIS by NEEPCO.

Deliberation of the 6th SCM

Members approved installation of 80MVAR Bus Reactor at 400kV Ranganadi Bus with GIS bays by NEEPCO.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.13	: REPLACEMENT OF EXISTING 220/132KV, 4X33.33 MVA SINGLE PHASE UNIT TRANSFORMERS BY 220/132KV, 1X160MVA 3-PHASE UNIT AND AUGMENTATION BY ANOTHER 1X160 MVA TRANSFORMER AND OTHER WORKS AT 220/132KV DIMAPUR (PG) SUBSTATION
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At present, the transformation capacity of the 220/132 kV Dimapur (PG) substation is 2x100 MVA. One of the transformer unit is having 220/132kV, 4x33.33 MVA single phase units, which is about to complete 25 years of age. The load requirement of Nagaland is expected to be about 150MW at Dimapur, 30MW at Kohima and 80MW for Assam at Bokajan. All the above mentioned areas are catered through 220/132kV Dimapur (PG) substation.

Maximum loading on 2x100MVA ICTs has been observed to be 100MW. However, keeping in view future load growth it is proposed to replace the existing 220/132kV, 4x33.33MVA single phase unit transformers by 220/132kV, 2x160MVA 3-phase unit for capacity enhancement. Thus, the final transformation capacity would be 220/132kV, 1x100MVA + 2x160MVA.

The above proposal has already been discussed and approved in the 16th NERPC meeting held on 29th – 30th Jan 2016. Additionally, in view of completion of 25 years of Dimapur S/s, upgradation of substation from AIS to GIS (SAS) with following scope of works has been approved in the 16th NERPC meeting:

- (a) *Replacement of existing 4x33.33MVA, 220/132kV Single phase unit transformers by 2x160 MVA, 220/132kV 3-phase unit for capacity enhancement.*
- (b) *Conversion of 132kV Bus Bar Scheme from Single Main and Transfer to Double Main GIS along with future provision.*
- (c) *Conversion of 220kV Switchyard from AIS to GIS to accommodate additional transformer and also creation of space for future provision.*

In addition to the scope mentioned above, provision of tertiary loading for auxiliary supply from 160MVA ICT is also proposed.

Thus, following is proposed to be implemented at Dimapur substation by POWERGRID:

- (a) Replacement of existing 4x33.33MVA, 220/132kV Single phase unit transformers by 2x160 MVA, 220/132kV 3-phase unit for capacity enhancement. Thus, the final transformation capacity would be 220/132kV, 1x100MVA + 2x160MVA.
- (b) Conversion of 132kV Bus Bar Scheme from Single Main and Transfer to Double Main GIS along with future provision.
- (c) Conversion of 220kV Switchyard from AIS to GIS to accommodate additional transformer and also creation of space for future provision.
- (d) Provision of tertiary loading for auxiliary supply from 160MVA ICT

Deliberation of the 6th SCM

Members approved the following to be done by POWERGRID:

- (a) *Replacement of existing 4x33.33MVA, 220/132kV Single phase unit transformers by 2x160 MVA, 220/132kV 3-phase unit for capacity enhancement. Thus, the final transformation capacity would be 220/132kV, 1x100MVA + 2x160MVA.*
- (b) *Conversion of 132kV Bus Bar Scheme from Single Main and Transfer to Double Main GIS along with future provision.*
- (c) *Conversion of 220kV Switchyard from AIS to GIS to accommodate additional transformer and also creation of space for future provision.*
- (d) *Provision of tertiary loading for auxiliary supply from 160MVA ICT*

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.14	: LILO OF 132 KV JIRIBAM (PG) – AIZWAL (PG) LINE AT TIPAIMUKH SUBSTATION (MSPCL) – AGENDA BY MSPCL
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Manipur State Power Company Limited (MSPCL) vide their letter no.14/6(SCM)/GM(PD)2016-MSPCL/2451-52 has informed that in view of power for all by 2019 programme, intensive electrification works of villages in Tipaimukh sub division of Churachandpur district is being taken up under RGGVY and DDUGJY. At present, power supply of Tipaimukh area is fed through 11 kV feeder from 33/11 kV substation at Thanlon (MSPCL) which is around 120km away from Tipaimukh and partly from 33/11 kV S/S at Shivapurikhal through long 11 kV lines. Further, 33/11 kV Thanlon (MSPCL) is 150km away from the nearest feeding point of 132/33 kV substation at Churachandpur (MSPCL). The area experiences very low voltage. MSPCL has taken up the construction of 2x12.5 MVA 132/33 kV S/s at Tipaimukh.

Construction of new line from Jiribam (PG) or Churachandpur (MSPCL) is not possible because of involvement of forest and RoW problem. The line is presently carrying about 20 MW, which is going to reduce further after the commissioning of Silchar – Melriat 400 kV D/c (initially operated at 132 kV).

Further, 132 kV Jiribam (PG) – Aizwal (PG) line owned by POWERGRID passes through Tipaimukh area. Therefore, it is proposed to construct LILO of 132 kV Jiribam (PG) – Aizwal (PG) line at 132/33 kV, 2x12.5 MVA substation at Tipaimukh (Manipur) by MSPCL.

Deliberation of the 6th SCM

Members approved the construction of LILO of 132 kV Jiribam (PG) – Aizwal (PG) line of POWERGRID at 132/33 kV, 2x12.5 MVA substation at Tipaimukh (Manipur) by MSPCL.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.15 : INSTALLATION OF 132/33KV TRANSFORMERS FOR STATION SUPPLY AT JIRIBAM, AIZAWL, KUMARGHAT AND HAFLONG SUB STATIONS DURING UPGRADATION TO GIS AS APPROVED IN 16TH NERPC MEETING
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Jiribam, Aizawl and Haflong are 132kV switching-stations and Kumarghat is 132/33kV 5MVA substation of POWERGRID, which have completed 25 years of service.

Up-gradation of these 132kV substations of POWERGRID viz. Jiribam, Aizawl, Kumarghat and Haflong from AIS to GIS with incorporation of Double Bus Arrangement, LBB & Bus Bar Protection has been approved during 16th NERPC meeting held on 30-01-2016 at Guwahati. On conversion to GIS, more space would be created at these sub-stations for future expansion.

These substations are part of the 132kV back-bone of the transmission system in NER and considering remoteness of these stations with poor availability of Auxiliary Power, it is proposed to install 132/33kV transformer in said stations during up-gradation. Subject 132/33kV ICTs shall be utilized to feed local loads as well as provide reliable auxiliary power supply at these substations.

Thus, following is proposed to be implemented by POWERGRID:

- (a) Up-gradation of Jiribam, Aizawl, Kumarghat and Haflong substations of POWERGRID from AIS to GIS with incorporation of Double Bus Arrangement, LBB & Bus Bar Protection and associated works.
- (b) Installation of 132/33kV, 10MVA transformer each at Jiribam, Aizawl, Kumarghat and Haflong substations to feed local loads as well as provide reliable auxiliary power supply.

Deliberation of the 6th SCM

Members approved the Up-gradation of Jiribam, Aizawl, Kumarghat and Haflong substations of POWERGRID from AIS to GIS with incorporation of Double Bus Arrangement, LBB & Bus Bar Protection and associated works by POWERGRID.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.16	: CONSTRUCTION OF 2ND 220KV BAY AT BALIPARA (PG) 400/220/132KV S/S BY AEGCL FOR BALIPARA - SAMAGURI 220KV D/C LINE
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AEGCL (Assam) had planned construction of a substation at Tezpur along with Samaguri – Tezpur 220kV D/c line and POWERGRID was to construct Balipara (POWERGRID) – Tezpur 220kV D/c line. The two transmission lines were constructed; however, Tezpur S/s could not be constructed by AEGCL. Thus, the two lines were joined to form Balipara – Samaguri 220kV line. Further, both circuits of Balipara – Samaguri 220kV D/c line are bunched and connected to one 220kV line bay at Balipara end. The Balipara – Samaguri 220kV D/c line is being LIL0ed at under-construction Sonabil S/s (AEGCL) by AEGCL. In this regard, a meeting was held on 09-10-2015 at CEA, New Delhi for construction of 2nd 220kV line bay at Balipara end for termination of Balipara – Sonabil – Samaguri 220kV D/c line into separate bays. Following decisions were taken in the above meeting:

- (a) AEGCL shall construct a 220kV bay at Balipara (POWERGRID) S/s for termination of one ckt of Balipara – Sonabil/Samaguri 220kV D/c line at its own cost. The bay would be constructed as per the standards and practices followed by POWERGRID.

- (b) POWERGRID will carry out the O&M of the 220kV bay at Balipara on behalf of AEGCL. AEGCL will enter into necessary agreements with POWERGRID for the same.

Deliberation of the 6th SCM

Members approved the following:

- (a) *AEGCL shall construct a 220kV bay at Balipara (POWERGRID) S/s for termination of one ckt of Balipara – Sonabil/Samaguri 220kV D/c line at its own cost. The bay would be constructed as per the standards and practices followed by POWERGRID.*
- (b) *POWERGRID will carry out the O&M of the 220kV bay at Balipara on behalf of AEGCL. AEGCL will enter into necessary agreements with POWERGRID for the same.*

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.17	: UTILIZATION OF 10MVA & 16MVA 132/33KV TRANSFORMERS AS REGIONAL SPARE - NERPC
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On up-gradation of 132/33kV Nirjuli (PG) Sub Station with 2X50MVA 132/33kV ICT, one of 16MVA 132/33kV ICT (Siemens) & one no. of 10MVA 132/33kV ICT (Andre Yule) has been taken out of service and the same will not be utilised as spare for against POWERGRID asset. However, during discussions held in 122-124th OCC meetings and 29TH CCM the NER constituents opined and agreed to covert the 16MVA & 10MVA ICT as Regional Spare for the constituents.

Further, during 125th OCCM the modalities for utilising the transformers by constituents are finalized as below:

- (a) The Transformers will be spared in case of major power crisis on account of Breakdown.
- (b) Dismantling, Packing, Commissioning including one way transportation to be done by users.
- (c) ALL RISK INSURANCE for transit (one way) and breakdown during service to be taken up by users to meet repairing cost, in case of damage during transit or service.
- (d) Installation of Fire Protection System Prior to putting the transformer in service.

- (e) Drying out and re-commissioning of Transformers to be done as per the standard practice followed by POWERGRID
- (f) During service annual preventive maintenance of the transformer to be carried out as per the standard procedure followed by POWERGRID.
- (g) Time frame for returning the transformer may also be obtained from users

Deliberation of the 6th SCM

Members approved for utilization of 10MVA & 16MVA 132/33KV TRANSFORMERS as regional spare for NER States.

Deliberation of the TCC

TCC Members approved the utilization of 10MVA & 16MVA, 132/33kV Transformers as NER regional spare and also approved modalities for utilization of the Transformers by NER Constituents as recommended in 125th OCC.

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.18	: LOOP-IN AND LOOP-OUT ON THE EXISTING SILCHAR - IMPHAL(PG) 400KV D/C LINE (CHARGED AT 132KV) AT 400/132KV SUBSTATION AT THOUBAL FOR SUPPLYING POWER TO 132KV BUS - AGENDA BY MSPCL
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MSPCL vide their letter no.14/6(SCM)/GM(PD)2016-MSPCL/2451-52 has informed that in order to manage the estimated peak demand of 400 to 500MW in next 4-5 years in Manipur, MSPCL has taken up the construction of 4x105MVA, 400/132kV substation with single phase transformer including one spare at Thoubal along with the construction of 400kV D/c line from Imphal (PG) to Thoubal via Nambol. The works are in advance stage of construction with target completion in October 2016 along with arrangement for power evacuation to different existing 132kV substations from the 132kV Bus at 400/132kV Thoubal substation.

With the objective of flexibility and reliability in the management of intrastate power supply system MSPCL intends to energize 400kV Substation at Thoubal. However, the upgradation of 2x50MVA, 132/33kV Substation at Imphal (PG) to 7X105MVA, 400/132kV along with construction of 400kV bays at Silchar substation (GIS) is expected by May 2018.

In order to energize the Thoubal S/S at 132 kV, MSPCL has proposed to connect their Imphal (PG) - Thoubal 400 kV D/C line by LILO of one circuit of existing Silchar-Imphal (PG) 400kV D/c line (charged at 132 kV) till the commissioning of 400kV Substation at Imphal (PG). This LILO point is in Konthoujam village at the existing tower location No. 372/0 of Silchar – Imphal (PG) D/C line.

MSPCL has requested approval of Standing Committee for the proposed temporary LILO arrangement by MSPCL.

Deliberation of the 6th SCM

Members approved temporary LILO of one circuit of existing Silchar-Imphal (PG) 400kV D/c line (charged at 132 kV) at Thoubal Sub Station by MSPCL till commissioning of 400kV Substation at Imphal (PG) and 400kV Bays at Silchar by POWERGRID.

Deliberation of the TCC

TCC also approved the proposal of 6th SCM and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.19 : CONSTRUCTION OF 220 KV D/C TRANSMISSION LINE FROM DIMAPUR TO ZHADIMA

NERPC has informed that DoP, Nagaland is undertaking 220 kV D/C Transmission line from Dimapur to Zhadima with 220/132 kV Substation at Zhadima, with funding of Transmission line by DoNER and sub-station by NEC.

In the process of the survey, it has been found that the transmission line at tapping point at Dimapur requires crossing of inhabited land and marshy river banks leading to very high cost for erection of transmission line.

DoP, Nagaland reconducted the survey changing the tapping point location to another place located at Kashiram, Dimapur at 220 kV Misa (PG)- Dimapur(PG) line tower location No. 155 or 156. As per the revised survey report the line from the tapping point shall be crossing a little portion of Assam in Nagaland- Assam border behind Rangapahar cantonment Dimapur.

The proposed line falling under Assam would be around 5.50 km. DoP, Nagaland has requested PGCIL to implement the said portion of the line on deposit work basis.

Deliberation of the 6th SCM

DoP, Nagaland informed that the issues of construction of 220kV, D/C Line at tapping point at Dimapur has already been resolved and they will take up the construction as per the original survey avoiding Assam Area.

Members approved the LILO of one Circuit of 220kV D/C Misa (PG) – Dimapur (PG) Line at 220/132 kV Zhadima Substation by DoP, Nagaland.

Deliberation of the TCC

TCC also approved the LILO of one Circuit of 220kV D/C Misa (PG) – Dimapur (PG) Line at 220/132 kV Zhadima Substation by DoP, Nagaland and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

ITEM NO. B.20	:	INSTALLATION OF AUTOMATIC CAPACITOR BANK/REACTIVE POWER IN MIZORAM & NAGALAND
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The issue of installation of automatic capacitor bank/reactive power has been discussed in several OCC meeting of NERPC in line with the decision of 4th NPC meeting of NPC, i.e. States should adopt a proactive approach in the matter of reactive power planning, and that the provisions regarding reactive power planning similar to those mandated in the IEGC for the CTU should be included in the respective State Grid codes.

During 123rd OCCM, Mizoram & Nagaland have informed that that DPR is being prepared and proposal would be sent after finalization. NERPC requested other states to estimate requirement and communicate the same so that it can be approved in the forthcoming TCC/NERPC meetings.

The DPR cost furnished by Mizoram & Nagaland is Rs. 16.87 Cr and 25 Cr respectively and the system study has been carried out by ERDA, New Delhi.

Deliberation of the TCC

The TCC approved the above DPR cost of Mizoram & Nagaland and recommended for approval of NERPC.

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

CATEGORY – C: ITEMS FOR INFORMATION

ITEM NO. C.1	: COMMISSIONING SCHEDULE OF ONGOING PROJECTS IN NER - NERPC
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The Sub-committee also reviewed the status of commissioning of various ongoing projects in NER during OCC Meetings. The status as on last 125th OCC Meeting is as below:

GENERATION

SN	AGENCY	PROJECT	COMMISSIONING SCHEDULE
1	NHPC	Lower Subansiri	12th Plan
2	NEEPCO	Kameng HEP	Unit I & II: March 2017
3	NEEPCO	Tuirial HEP	12th Plan
4	NEEPCO	Pare HEP	30.06.2017
5	NEEPCO	Trial operation and CoD 36MW STG of Monarchak GBPP	31.12.2016 (subject to gas availability).
6	NTPC	Bongaigaon TPS	Unit II: 31.03.2017
7	NEEPCO	Tawang HEP	13 th Plan

TRANSMISSION

SN	AGENCY	PROJECT	COMMISSIONING SCHEDULE
1	NTPC	400/220kV, 2x315 MVA ICT at Bongaigaon	31.10.2016
2	POWERGRID	400 kV D/C Silchar - Melriat line of PGCIL	31.03.2017
3	AEGCL	220kV Rangia – Salakati Line	31.12.2016
4	TSECL	132kV Monarchak – Surjamaninagar D/C Line	31.12.2016

5	OTPC	400/132 kV, 2nd 125 MVA ICT at Pallatana	08.10.2016
6	DoP, AP	132kV Pasighat – Aalong Line	31.12.2016
7	DoP, Nagaland	132kV Doyang– Wokha Line	Charged on 31.08.2016 from Nagaland end
8	POWERGRID	220 kV, 20 MVAR Bus Reactor & bay at AGBPP	30.09.2016
9	OTPC	132kV Surjamaninagar Bay at Pallatana	31.12.2016
10	POWERGRID	400kV D/C Balipara – Kameng Line	31.03.2017 (Indemnification to be signed by NEEPCO & PG)
11	NEEPCO	RHEP 80 MVAR Bus Reactor	Referred to next SCM of CEA.
12	POWERGRID	400/220 kV 315 MVA ICT-II at Bongaigaon	31.08.2017
13	POWERGRID	220/132 kV, 2x160 MVA ICTs at Balipara	31.08.2017
14	POWERGRID	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	31.08.2017
15	POWERGRID	400/132 kV, 1x315 MVA ICT-III at Silchar	31.12.2017
16	POWERGRID	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)	31.12.2017
17	Under TBCB	400 kV Silchar – Misa D/C	-
18	POWERGRID	1 x 125 MVAR Bus Reactor at 400 kV Bongaigoan	31.12.2017
19	POWERGRID	1 x 125 MVAR Bus Reactor at 400 kV Balipara	31.12.2017

20	POWERGRID	Bays at Hailakandi along with 132kV Silchar- Hailakandi D/C TL	28.02.2017
21	POWERGRID	LILO of 132kV Ranganadi – Nirjuli at Pare of NEEPCO by PGCIL	31.12.2016
22	DoP, AP	LILO of 132kV Ranganadi – Itanagar (Chimpu) at Pare of Ar. Pradesh	Bay 1: 31.12.2016 Bay 2: 31.03.2017

This is for Kind information

Deliberation of the TCC

TCC Members noted above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.2	:	ISSUES RELATED TO MULTIPLE TRIPPING AND PROTECTION SYSTEM; CO-ORDINATION IN STATE SYSTEMS OF NER - NERLDC
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The no. of Grid Disturbance during January 2016 to August 2016 is as below:

SN	Category	No. of Disturbance	Remarks
1	GD-I	219	
2	GD-II	4	
3	GD-III	0	
4	GD-IV	0	
5	GD-V	1	

This is for Kind information

Deliberation of the TCC

TCC Members noted above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.3	:	GRID DISTURBANCE OF CATEGORY-V ON 16TH APRIL'16 AND CATEGORY-IV ON 09TH JULY'16
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There were 2 major grid disturbances in NER Grid in 2016.

The disturbance of Category-V on 16th April'16 was primarily caused by fault due to lightning strike on 400 kV Bongaigaon – BgTPP (NTPC) I line, which could not be cleared by 400 kV Bongaigaon (PG) end of the line, resulting in tripping of several 400 kV lines at Bongaigaon (PG) from remote ends at 400 kV Binaguri, since as per R-X diagram the fault was lying in the 4th quadrant outside the reach of Distance relay.

The empowered committee for analysis of this disturbance noted that there was no differential protection installed on 400 kV Bongaigaon – BgTPP lines although they were short lines of around 3 kms each. Also, the time setting of Zone-II relays at New-Siliguri end of 400 kV Bongaigaon – New Siliguri Q/C lines were not as per recommendations of V. Ramakrishna Task Force report. Although there are 400 MW of UFR installed in NER Grid, the UFR operation was not sufficient as observed from PMU plots, even though frequency was below 49.2 Hz for several seconds.

The Disturbance of Category-IV on 09th July'16 was primarily due to multi-phase fault on account of simultaneous lightning strike at tower locations 466 & 467 on 400 kV Silchar – Azara and 400 kV Silchar – Byrnihat lines, and delay in backing down of generation from Palatana CCGT as per SPS-3.

The empowered committee suggested the following:

- Relay settings of all elements in NER Grid to be made as per recommendations of V. Ramakrishna Task Force report.
- All substations with List of long lines followed by short lines to be identified and relay settings implementation accordingly.
- Line differential protection to be installed in all short lines.
- UFR reports to be submitted by all constituents in case of any event, and periodic inspection of installed UFRs to be carried out for checking healthiness
- Constituents to ensure healthiness of communication equipment to ensure that real-time voice or data communication is available to NERLDC
- All requisite details like UFR operation reports, Relay indications, DR outputs, EL outputs, Generator DAS outputs, etc. to be furnished by constituents to enable proper analysis

This is for Kind information

Deliberation of the TCC

TCC Members noted above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.4	: PERFORMANCE OF PMUS IN NER INSTALLED UNDER "SYNCHROPHASOR PILOT PROJECT OF NER"- NERLDC
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As approved in the 11th NERPC meeting held at Kolkota, the Pilot project on Phasor Measurement Unit (PMU) in NER for installation of 6 Nos of PMUs was implemented with PMUs installed at Sarusajai (Assam), NEHU (Meghalaya), Agartala (Tripura) and in 3 substations of POWERGRID namely Imphal, Balipara and Bongaigaon. The PMUs are in service for almost three years and the data available are valuable in all aspect of system operation such as analysis of oscillation, protection malfunction, disturbance analysis etc.

This is for Kind information

Deliberation of the TCC

TCC Members noted above.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. C.5	: TIME LINE FOR UPGRADATION OF 2X50 MVA, 132/33KV SUBSTATION AT IMPHAL (PG) TO 400/132KV, 7X105MVA SINGLE PHASE TRANSFORMER - MSPCL
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Endorsing the decision of Stⁿ Meeting of Standing Committee on Power System Planning of North Eastern Region held on 8th August, 2015 at Imphal, NERPC in its 16th Meeting held at "Hotel Taj Vivanta", Guwahati on 29th & 30th January 2016 advised PGCIL to expedite the upgradation of 2x50 MVA, 132/33 KV Sub-Station at Imphal(PG) to 400/132 KV, 7x105 MVA single phase unit along with construction of 2nos. 400 kV GIS line bays at 400/132 kV Sub-Station Silchar for termination of Silchar Imphal(PG) 400 kV D/C line and operation of 400 kV D/C presently charged at 132 kV to its rated voltage to match with the completion of 3x105 MVA, 400/132 kV Sub-Station at Thoubal, Manipur with single phase unit including one spare. Considering the urgency of Manipur PGCIL was offered the option for contingency arrangement.

It is also learnt that PGCIL has initiated the construction works. Meanwhile the construction of 400/132 kV Sub-Station at Thoubal in Manipur along with associated 400 kV D/C line from Imphal(PG) to Thoubal is being targeted for commissioning by the end of current year whereas the upgradation taken up by PGCIL i/c GIS of Silchar will not match the completion of 400 kV Sub-Station at Thoubal

Deliberation of the TCC

Powergrid informed that LOAs for up-gradation of 2x50 MVA, 132/33 KV Sub-Station at Imphal (PG) to 400/132 KV, 7x105 MVA single phase unit along with construction of 2 nos. 400 kV GIS line bays at 400/132 kV Silchar sub-station for termination of Silchar - Imphal (PG) 400 kV D/C line have already been placed to M/S Sterling & Wilson and M/S ABB respectively. The time line for completion of Imphal sub-station is January 2018 and Silchar sub-station is December 2017.

TCC Members noted above.

Deliberation of the TCC

The RPC noted as above.

ITEM NO. C.6	: LONG OUTAGE OF 420KV, 63MVAR BUS REACTOR AT BYRNIHAT SUB STATION OF MEGHALAYA.
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The issue of faulty reactor at Byrnihat has been discussed in several OCC meetings of NERPC for the last one year and no action has been taken by MePTCL in this regard. POWERGRID informed that issue was discussed with Meghalaya and POWERGRID had already obtained and forwarded the offer of M/S CGL for supply of Winding and supervision of repair of reactor at site to Meghalaya. In spite of many request to them to avail the offer within the time bound, but the same was not responded by Meghalaya.

NERLDC also stated that Byrnihat is very important sub-station in the region, service of 63 MVA reactor is very much necessary for the NER grid.

Deliberation of the TCC

TCC members expressed concern about the delay of restoration of 63MVAR Bus Reactor of MePTCL at Byrnihat which is a threat to security of NER grid. The matter has been discussed in OCC Sub-committee every month but no concrete development has been achieved so far.

ACE, MePTCL informed that there was some contractual problem in earlier case and the firm could not carry out the work. He assured that now the issue has been resolved and the reactor will be in service within 6 months.

TCC Members noted as above.

Deliberation of the RCC

RPC noted as above.

CATEGORY – D : RESOLUTIONS TAKEN DURING THE 17TH TCC MEETING

The 17th TCC meeting of North Eastern Regional Power Committee (NERPC) held on 4th October, 2016 at Imphal unanimously resolved as follows:

That this North Eastern Regional Power Committee/Technical Co-ordination Committee (TCC) strongly urges upon Ministries of Government of India's concern for the following:

HIGH COST OF BONGAIGOAN THERMAL POWER STATION (BTPS) of NTPC

As you are aware that NTPC had declared CoD of Unit #I (250MW) of Bongaigoan Thermal Power Station (BTPS) on 01.04.2016. However, an average cost per unit is Rs. 5.70. The cost is comparatively high compared with the cost of other plants in the region and thus constitutes a huge liability and is not affordable for NER States. In order to have reliability, efficiency and affordable price to all the consumers of NER; the following concession may kindly be considered for above plant for the benefit of NER:

- 1. Subsidy/concession on coal price in line with the natural gas supplied by ONGC to ONGC/Tripura Power Corporation (OTPC), Palatana.***
- 2. Inclusion of power generating stations in the freight Subsidy Scheme, 2013 of the Ministry of Commerce and Industries.***
- 3. Waiver of cess/duties/taxes on coal used in the power stations in N.E. Region.***

DATE & VENUE OF THE NEXT MEETING

The next meeting of TCC & NERPC is proposed to be held in December, 2016/January, 2017. The exact date & venue will be intimated later.

The meeting ended with vote of thanks to the Chair



ANNEXURES

LIST OF PARTICIPANT IN 17TH TCC MEETING

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1	ASSAM	Bimal Ch. Borah	DGM, SLDC
2		Gunajit Bhuyan	DGM, AEGCL
3		Karuna Sarma	DGM, AEGCL
4		U.N. Bora	CGM, AEGCL
5		B.C. Bordoloi	CGM, AEGCL, SLDC
6		S. Goswami	OSD, Power Dept.
7		K. Goswami	DGM, APDCL
8		M.K. Adhikary	CGM (TRC), APDCI
9		J.K. Baishya	DGM, SLDC
10		K. Talukdar	GM, APDCL
11	MANIPUR	N. Sarat Singh	TCC Chairman & MD, MSPCL
12		L. Priyokumar	ED, MSPDCL
13		Ng. Sarat Singh	ED, MSPCL
14		Ng. Birjit Singh	OSD(Trans)
15		Kh. Khamba Singh	MSPDCL
16		Satyajeet Singh	MSPDCL
17		Aton Singh	MSPDCL
18	MEGHALAYA	T. Passah	Director (Distn.), MePDCL
19		A. Kharpran	ACE (Comml.)
20		R. Syiem	SE (T&T)
21		F.E. Kharshiing	SE, SLDC
22		R. Majaw	SE (EM)
23		H.F. Shangpliang	EE (MRT), MePTCL
24	MIZORAM	L. Pachaua	EnC
25		F. Pualzakhwa	Chief Engineer
26		David Ramuansanga	SE
27		Vanlalrema	SE, SLDC
28		Zoramdina	AE, P&E Deptt.
29	TRIPURA	M.K. Choudhury	Director (Tech.)
30		Debabrata Pal	Sr. Manager

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
31	NEEPCO	Pradeep Kr. Singha	Executive Director (Com)
32		Paresh Ch. Barman	General Manager
33	NHPC	Chander Mohan	General Manager
34		KT Rajah Pandian	
35	NERLDC	T.S. Singh	GM
36		R. Sutradhar	DGM (MO)
37		A. Mallick	DGM (SO-II)
38		V. Kaikhochin	DGM
39	POWERGRID	Sunil Agrawal	ED (LD&C)
40		A. Choudhury	ED, NERTS
41		A. Patir	GM (AM), POWERGRID
42		Prasanta Kanungo	DGM (AM), POWERGRID
43		Ramchandra	DGM (CC), CTU
44		Supriya Paul	Manager (AM), POWERGRID
45	NTPC	Utpal Chakrabarti	GGM
46		A.K. Bhattacharjee	Addl. GM
47		Shankar Saran	Addl. GM
48		P.R. Jena	Addl. GM
49	NVVN	S.P. Datta	Addl. GM
50	NLDC	S.R. Narasimhan	Addl. GM
51	OTPC	S. Ganguly	MD
52		Arup Ch. Sarma	GM
53	NETC	S.N. Sunkari	MD
54		Narottam Chakraborty	Manager
55	PTC	Raghuram C. Soragau	Manager
56	CEA	Pradeep Jindal	Chief Engineer
57		Ravinder Gupta	Director
58	NERPC	P.K. Mishra	MS
59		B. Lyngkhoi	Director/SE
60		L.B. Muanthang	Director/SE
61		S.M. Aimol	Dy. Director/EE
62		Srijit Mukherjee	Asst. Director/AD-I

**KEYNOTE ADDRESS OF SHRI P.K. MISHRA, IES (CPES)
MEMBER SECRETARY, NERPC
ON THE OCCASION OF THE 17th MEETING
OF
TEACHNICAL CO-ORDINATION COMMITTEE OF
NORTH EASTER REGIONAL POWER COMMITTEE
HELD ON 04th OCTOBER, 2016 AT IMPHAL.**

Respected Chairman, NERPC & Hon'ble Chief Minister & I/C of Power, Govt. of Manipur, Shri Singh Ji, Shri Dubey Ji, Chairman, CEA, Shri R. Sudan, MD, MSPDCL, Shri N. Sarat Singh, TCC Chairman & MD, MSPCL, Shri S. Ganguly, MD, OTPC and all the Senior officers from NE States, Central Utilities, ladies and gentlemen.

On behalf of NERPC Secretariat, let me first extend a very warm welcome to all the dignitaries and the senior most officers from all the utilities to the 17th TCC meeting. I would also like to express my humble gratitude to all of you for sparing your valuable time to attend this very important NERPC meeting today. I hope you have a pleasant stay in Imphal. I am pleased to mention that under the dynamic leadership of Shri Singh Ji, Chairman, NERPC & Hon'ble Chief Minister & I/C of Power, Govt. of Manipur, the NER Power Committee meeting has taken many important decisions for the benefit of N.E. Region.

It gives me great pleasure in appreciating the efforts taken by Manipur State Power Corporation Limited in hosting not only TCC Meeting but also the Standing Committee meeting of NER at this beautiful city of Imphal. I, on behalf of NERPC would like to convey our heartfelt gratitude to Shri N. Sarat Singh, TCC Chairman, NERPC & MD (MSPCL) and especially his teams for helping NERPC in convening the meeting in Imphal. The way you have taken care of us and making comfortable arrangement is highly appreciated by all of us.

Since time is very short, I will not prolong my address, but I would like to highlight the major activities/achievements by NERPC during the last few months.

- As mentioned in the last NERPC Meeting, NERPC Secretariat had shifted to its own office-cum-residential complex at Lapalang, Shillong adjacent to NERTS, POWERGRID & NERLDC Complex w.e.f. November, 2014 and I would like to inform that Installation of EPABX, LAN, CCTV have been completed with the help of NERLDC/NERTS, POWERGRID and the construction of State of Art Conference Hall, Audio System, etc. are under progress with the help of NEEPCO on behalf of NERPC, and we are hopeful that by December, 2016 we would be able to inaugurate the NERPC Secretariat. We may need your support again in case of any shortage of fund for above works.
- With sincere and continuous efforts by NERPC, the funding sought from PSDF for R&M works in NER has been approved by Ministry of Power for all 7 States in NER. As directed by CERC to monitor the progress of the scheme, the same is being regularly monitored in sub-committee meetings of NERPC being held every month and I am pleased to inform that Assam, Meghalaya, Mizoram, Nagaland & Tripura have almost completed issue of NITs and Ar. Pradesh & Manipur will soon issue NITs. Once these R&M works are completed, it is expected that power system in the region will improve accordingly. Since the progress of NITs/LOAs is very slow, I therefore request all the NER constituents to complete all the formalities as advised by CERC so that R&M works can be completed in time.
- Setting up of new SLDCs in four states i.e. Ar. Pradesh, Manipur, Mizoram and Nagaland is in fast progress and it is expected that by March, 2017 all NER States SLDCs will be fully functional and this is one of the biggest achievements of our region.

- With continuous persuasion of NERPC, CDAC has agreed to prepare the software for Real-Time Data Acquisition System, Real-time Energy Accounting System and Short Term Load Forecasting free of cost. Only the bare minimum hardware cost will be borne by NER States. The software will help in proper forecasting which will reduce the DSM charges and maintain the grid discipline.
- Considering the difficulties faced by the constituents of NER to implement ADMS as directed by CERC; NERPC conducted workshops by inviting various agencies. This was helpful in preparing estimates to be incurred for implementation in one sub-station of each state on pilot basis.
- Commissioning of 400/220 kV Balipara ICT and Pole-2 of HVDC BNC-Agra was successfully achieved on 01.05.16 & 02.09.2016 respectively.
- Commissioning of 220/132 kV Sonabil substation with 2x100 MVA ICTs was completed in July, 2016 and 132 kV BTPS – Kokrajhar – Bilasipara – Gauripur S/C and 132/33 kV Kokrajhar and 132/33 kV Bilasipara S/S completed in June, 2016. With commissioning of these elements drawal capacity of Assam has been enhanced tremendously.
- Bongaigoan GTPP Unit #1 (250MW) of NTPC was successfully achieved on 01.04.2016 and power availability in the region has increased and the region is in comfortable position. I urge upon the forum to extend assistance to NTPC so that the cost per unit can be reduced for the benefit of NER and power generated can be affordable to all NER States.
- To comply the decision of 16th NERPC; NERPC Secretariat took up the matter with NLDC for funding from PSDF and NIT has already been published through NERTS, POWERGRID portal, after getting approval from Hon'ble Chief Minister, Govt. of Manipur & Chairman, NERPC.

Once the training is materialized it will give good exposure to power engineers of NE Region.

- Up-gradation of 132/33 kV Yurembam S/s of MSPCL completed, and after co-ordination of protective system with 132 kV side, number of trippings have been reduced to great extent.
- With sincere efforts by NERPC, the long pending issue of exporting power of Assam to Bhutan amounting to more than Rs. 2 Crores has been resolved and the first installment has already been released by ERPC to Assam.
- There were so many goals achieved during the last few months which I cannot mention all of them. Finally my sincere request is that all the constituents should try earnestly to liquidate their outstanding dues to the affected party so that both the parties can grow together. Unless financial transactions are happening and dues are cleared, it would be difficult to survive as utilities.

Before I conclude I would also like to mention that protection is one of the important components of power system and many important issues related to safety, stability and reliability of power system are discussed in NER Protection sub-committee. However, due to non-participation by the constituents, the issue could not be discussed and resolved and this has hampered the smooth operation of day to day activities. I request the senior officers of all the utilities to re-nominate the responsible officers for above meeting.

On behalf of NERPC, I once again extend my heartiest greetings to all the participants and look forward to meaningful deliberation.

I wish MSPCL well and the plenary a grand success.

**SPEECH BY SHRI O. IBOBI SINGH,
HON'BLE CHIEF MINISTER (I/C OF POWER),
GOVT. OF MANIPUR, ON THE OCCASION OF
THE 17TH MEETING OF
TECHNICAL COORDINATION COMMITTEE HELD
ON OCTOBER 4, 2016 AT IMPHAL**

Officials of Central and State Governments as well as other Central and State organizations, ladies and gentlemen.

It is indeed a great pleasure for me to be in this august gathering on the occasion of the 17th Technical Coordination Committee Meeting. I hope that this particular meeting addresses many of the troublesome issues affecting the power sector of the region. I am sure that the deliberations on various power sector issues will be helpful in resolving the infrastructure constraints, poor transmission and sub-transmission system, inadequate distribution network and problems in generation projects.

The requirement of power in the region increased manifold during the last couple of years and a steep rise in demand is expected in the coming years. As you are aware, geographical isolation of this region has made many issues region specific in nature. Meticulous planning to overcome the hurdles in generation, transmission and distribution of power in the region is essential to cater the demand of the region. We have many challenging tasks ahead to tackle and overcome the hurdles. I hope we shall be able to sort out critical issues amicably and other contentious issues which require special attention of the Government of India may be approached collectively.

My state depends entirely on Central Sector Generating Stations for the supply of power. The commissioning of the ATS 400 KV D/C line from Silchar to Imphal (PG) has given a huge relief to the Inter-State transmission constraints for the time being.

In order to meet tremendous load growth projected for the state of Manipur, we have opted for the higher transmission system voltage of 400 KV. Works for the construction of the new 400 KV sub-station coming up at Thoubal are in good progress. Power to this sub-station will be fed from the 400 KV sub-station at Imphal (PG). We are thankful to PGCIL for providing space for the construction of two extra sending end 400 KV bays at their 400 KV sub-station at Imphal (PG).

We wish to commission the new 400 KV sub-station coming up at Thoubal very soon. However, due to delay in the upgradation of Imphal (PG) sub-station, 400 kV supply from Imphal (PG) may not be available to match the commissioning target. It is apparent that even after completion of 400/132 kV sub-station at Thoubal, it will remain idle till the 400 kV sub-station at Imphal (PG) is commissioned. As an interim arrangement we have proposed LI-LO at Konthoujam village at the existing tower location No. 372/0 till the commissioning of 400 kV sub-station at Imphal (PG) in one circuit of existing 400 kV D/C line from Silchar (PG) to Imphal (PG) (presently charged at 132 kV). This may enable us to charge 132 kV Bus of the 400/132 kV sub-station at Thoubal for power evacuation to different 132 kV sub-stations of the state.

I hope that PGCIL pays priority to the construction of 2 nos. 400 kV GIS line bays at 400/132 kV sub-station Silchar for termination of Silchar – Imphal (PG) 400 kV D/C line for operation of 400 kV D/C line at its rated voltage. This will enable the 400 KV sub-station at Thoubal to receive power at the rated voltage. PGCIL is requested to kindly place the timeline for completion of upgradation of Imphal (PG) 132 kV sub-station to 400 kV sub-station and completion of 400 kV GIS bay extension at 400/132 kV sub-station at Silchar.

It has been the priority of my government to provide grid power to all the villages of the State for upliftment of society economically. However, it has always been a problem to supply reliable and good quality power to the electrified villages in Tipaimukh area of Churachandpur District in Manipur

bordering Mizoram. Presently the villages get electricity through long 11kV feeders from the 33/11 kV sub-station at Thanlon about 120 km away from the area. This 33/11 kV sub-station is again 150 km away from the nearest upstream 132/33 kV sub-station at Churachandpur. To mitigate low voltage problem in Tipaimukh area, it was decided to construct a new 132 kV sub-station at Tipaimukh. Works for the construction of the new sub-station are in good progress. We had proposed to insert Looping In and Looping Out in 132 kV Jiribam – Aizawl ISTS line at Tipaimukh for feeding the new 132/33 kV sub-station. This arrangement will not affect the overall power requirement of Mizoram since the expected loading of 132 kV sub-station at Tipaimukh is around 5 MW only. We hope RPC may agree to our proposal.

On the request of Manipur, PGCIL had approved the revision of OPGW connectivity for Manipur from 149 Km to 365 Km in the 15th NERPC Meeting held at Hotel Radisson Blu, Guwahati on 20th and 21st August, 2015. In the meeting MSPCL requested for inclusion of another 164 km in addition to the 365 km to cover the ongoing 132 kV Nodes. Now the line construction works for the above ongoing projects are in various stages of completion. During the construction of lines, the length of the lines have increased from 164 km to 202 km. Accordingly, for integration of the left out intrastate grid sub-station into SLDC, Manipur, the estimated requirement of additional RTUs and OPGW connectivity are 4 nos. & 202 Km instead of 164 Km stated as above respectively.

In the interest of Grid Security and safe & secure real time management of power supply system in Manipur, PGCIL may take up the OPGW connectivity of additional 202 Km (including providing of 4 RTUs) on tariff to be recovered as determined by CERC.

The main thrust or focus area of MSPDCL is to supply quality, reliable and affordable power for all by 2019. To achieve this goal Ujwal Discom Assurance Yojna (UDAY) scheme for Operational and financial turnaround of power distribution companies has been approved by the Govt. of India and

MOU was signed among the Ministry of Power Govt. of India, Govt. of Manipur and MSPDCL at New Delhi on 26th July 2016. With this assurance scheme MSPDCL shall endeavor to reduce AT&C losses from 47.17% to 15% by FY 2018-19. To reduce AT&C Losses MSPDCL is taking up different infrastructure Development Schemes, Renovation & Modernization Schemes funded by MOP, Govt. of India and State Plan project funded from the State Govt.

Ministry of Power (MoP), Government of India has committed 100% electrification of all villages by 2018 and access power to all household by 2019 and Manipur has achieved 88.26% village electrification out of 2582 villages. The remaining villages will be electrified under RGGVY XIIth Plan and DDUGJY schemes and 54 nos. Off Grid villages shall be electrified by MANIREDA. Under the Joint Initiative of Government of India & State of Manipur has committed to ensure 24x7 power supply to all villages of India latest by 2019 by taking- up projects like RGGVY/ DDUGJY & R-APDRP/ IPDS.

To ensure 24x7 Power supply for all about 1350 MU of annual energy may be required. At present the projected power allocation of Manipur from Central Power Sector Unit's (CPSU's) is 1,079.60 MU for the financial year 2016-17, the demand and supply gap shall be bridged through Power Banking & Trading of energy.

Tariff of MSPDCL is one of the cheapest rate in India with an average Tariff of Rs. 4.12 per Kwh with a committed subsidy of Rs.176 Crs. for the FY 2015-16 and Rs.4.46 per Kwh with a committed subsidy of Rs.145 Crs. from the State Govt. for the FY. 2016-17. Billing & collection efficiency is drastically improved due to installation of Pre-payment Energy Meters with stringing of AB Cables (LT).

Approximately 2.76 lakhs prepaid meters are installed & activated 2.33 lakhs against target of 3.12 lakhs household of 2011 census. All these consumers will be enjoying power supply through prepaid meters, with expected target of

completion by December, 2016. Average Monthly Revenue Collection is increased from 4 Crore (During 2013-14) to 13.4 Crore (during August 2016-17).

Before I conclude my speech, I desire that the foreign study tour proposed by NERPC forum from PSDF may be expedited by CEA & NLDC at the earliest so that the study tour can be materialised before November 2016 for the benefit of NER Engineers.

With these few words I extend my warm wishes to all participants here and once again thank the organizers for the excellent arrangement made for this meeting.

Jai Hind!
