



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



(आई.एस.ओ.: 9001.2000)

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No. NERPC/AS/Committee/2010/ 5048-117

Date: 21st January, 2010

To,

1. Hon`ble Chief Minister & Minister of Power, Govt. of Mizoram, Aizawl - 796 001
2. Hon`ble Minister of Power, Govt. of Arunachal Pradesh, Itanagar - 791 111
3. Hon`ble Minister of Power, Govt. of Assam, Guwahati - 781 006
4. Hon`ble Minister of Power, Govt. of Nagaland, Kohima - 797 001
5. Hon`ble Minister of Power, Govt. of Meghalaya, Shillong - 793 001
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. Commissioner (Power), Govt. of Assam, Dispur, Guwahati - 781 006
10. Secretary (Power), Govt. of Manipur, Imphal - 795001
11. Principal Secretary (Power), Govt. of Meghalaya, Shillong - 793001
12. Secretary (Power), Govt. of Mizoram, Aizawl - 796001
13. Secretary (Power), Govt. of Nagaland, Kohima - 797001
14. Secretary (Power), Govt. of Tripura, Agartala - 799001
15. Chairman, ASEB Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
16. Chairman, McSEB, Lumjingshai, S.R. Road, Shillong - 793 001
17. Chairman & Managing Director, TSECL, Agartala - 799001
18. Chairman & Managing Director, NEEPCO Ltd., Lower New Colony, Shillong - 793 003
19. Chairman & Managing Director, NHPC Ltd., NHPC Complex, Sector-33, Faridabad - 121 003
20. Director (Op.), POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon, Haryana - 122 001
21. Executive Director (SO), NLDC, B/9, Qutub Institutional Area, Katwaria Sarai, New Delhi - 110016
22. CEO, NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110 003
23. Managing Director, AEGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
24. Managing Director, APGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
25. Managing Director, DISCOM (CA), Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
26. Managing Director, DLF, Guwahati - 781 001

Sub: Minutes of 8th TCC & 8th NER Power Committee Meetings held at Imphal.

Please find enclosed herewith the minutes of 8th TCC and 8th NERPC meetings held at "The Classic Hotel", Imphal, Manipur on the 11th & 12th January, 2010 respectively for your kind information and necessary action. The minutes of the above is made available in the website of NERPC, www.nerpc.nic.in.

भवदीय / Yours faithfully,

(बी. के. जैन / B. K. Jain)

सदस्य सचिव / Member Secretary

Copy for kind information to:-

1. PS to Chairperson, NERPC and Hon`ble Minister of Power, Govt. of Manipur, Imphal - 795 001
2. Chairman TCC, NERPC & Chief Engineer (Power), Dept. of Power, Govt. of Manipur, Imphal - 795 001.

Copy to TCC Members:-

1. Director (Tech.), NEEPCO Ltd., Lower New Colony, Shillong-793 003.
2. Director (Tech.), TSECL, Agartala – 799 001
3. Member (Tech.), ASEB, Bijulee Bhawan, Paltan Bazar, Guwahati -781 001
4. Member (Tech.), MeSEB, Lumjingshai, S.R. Road, Shillong-793 001.
5. Executive Director, NERTS, PGCIL, Lapalang, Shillong – 793 006
6. Executive Director (Comml.), NEEPCO Ltd., Lower New Colony, Shillong-793 003.
7. Executive Director (O&M), NEEPCO Ltd., Lower New Colony, Shillong-793 003.
8. Executive Director (Comml.), NHPC, NHPC Office Complex, Faridabad-121 003.
9. Executive Director (O&M), NHPC, NHPC Office Complex, Faridabad-121 003.
10. GM, NERLDC, Lapalang, Shillong – 793 006
11. AGM (O&M), NERTS, POWERGRID, Lapalang, Shillong – 793 006
12. Chief Engineer (GM), CEA, 6th Floor, Sewa Bhawan, R.K.Puram New Delhi-110 066.
13. CGM (LDC), SLDC Complex, AEGCL, Kahelipara, Guwahati-781 019.
14. Chief Engineer (E Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791 111.
15. Chief Engineer (W Zone), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791 111.
16. Chief Engineer (P&E), P&E Dept., Govt. of Mizoram, Aizawl-796 001.
17. Chief Engineer (Power), Dept. of Power, Govt. of Nagaland, Kohima-797 001.
18. Chief Engineer, Loktak HE Project, NHPC, Komkeirap, Manipur-795 124.
19. Chief Engineer, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
20. Chief Engineer, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
21. Chief Engineer, DISCOM (CA), Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
22. Chief Engineer, DISCOM (UA), Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
23. Chief Engineer, DISCOM (LA), Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
24. SE (T&D), MeSEB, Lumjingshai, S.R. Road, Shillong – 793 001
25. Head of SLDC, MeSEB, Lumjingshai, S.R. Road, Shillong – 793 001
26. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar – 791 111
27. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur.
28. Head of SLDC, Dept. of Power, Govt. of Manipur, Keishampat, Imphal – 795 001
29. Head of SLDC, P&E Dept., Govt. of Mizoram, Aizawl – 796 001
30. Head of SLDC, TSECL, Agartala – 799 001

Special Invitee(s):

31. Chairperson, CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
32. Member (Power Systems), CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110066
33. Secretary, North Eastern Council, Nongrim Hills, Shillong – 793 003
34. Adviser (Power), Planning Commission, Yojana Bhawan, Rafi Marg, New Delhi – 110 001
35. Member Secretary, ERPC, 14 – Golf Club Road, Tollygunge, Calcutta – 33
36. Member Secretary, NRPC, NRPC Complex, 18-A, S.JS.S. Marg, Katwaria Sarai, New Delhi – 16
37. Member Secretary, WRPC, MIDC Area, Marol, Andheri (E), Mumbai – 93
38. Member Secretary, SRPC, 29 – R.C. Cross Road, Bangalore – 560 009
39. C.E.O, OTPC, 1st Floor, Mahindra Towers, 2A, Bhikaji Cama Place, New Delhi – 110066
40. Director (Operation), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110022
41. Director (Coml.), NTPC Ltd, NTPC Bhawan, Core -7, Scope Complex, 7 – Institutional Area, Lodi Road, New Delhi – 110 003
42. Director, NETC, 1st Floor, Corporation Tower, AMBIS Mall Complex, NH-8, Gurgaon – 122 001

Summary Record of Discussions

8th Technical Coordination Committee

&

8th North Eastern Regional Power Committee Meeting

The 8th TCC meeting was held on 11th January 2010 at “The Classic Hotel”, Imphal, Manipur. The meeting was hosted by Department of Power, Government of Manipur.

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

Proceedings of the 8th TCC meeting

The meeting started with the lighting of Lamps by Shri N.Sarat Singh, Chairman TCC & Chief Engineer, Dept. of Power, Govt. of Manipur, Shri B.K.Jain, Member Secretary, NERPC, Shri K. Chakrabarty, Director, TSECL, Shri P.K. Singha, Executive Director, NEEPCO & Shri T.S. Singh, Addl. General Manager, NERLDC. Thereafter, TCC Chairman & Chief Engineer, Department of power, Government of Manipur gave welcome address. He on behalf of Department of Power, Govt. of Manipur welcomed all TCC members of NER Power Committee. Shri N. Sarat Singh said that Department of Power, Govt. of Manipur was honored and encouraged by the opportunity provided to them by the NER Power Committee to host the 8th TCC & RPC meetings of NERPC at Imphal. He wished all the participants a pleasant stay at Imphal. He briefed about the importance of strengthening the transmission lines & urgency to complete the ongoing power projects in the region as the region is facing acute shortage of power. He requested all the participants to participate in the discussion so that the meeting bears a fruitful outcome.

Shri B.K.Jain, Member Secretary NERPC on behalf of NERPC welcomed all the TCC members and the participants to the 8th TCC meeting of NERPC. He thanked the officers of Power Dept. of Manipur for making excellent arrangements for comfortable stay of the members and participants of the meeting.

Member Secretary, NERPC said that considering the Hydro & Gas potential of the NE Region, commissioning of ongoing power projects like Lower Subansiri (2000 MW), Kameng HEP(600 MW), Bongaigoan TPS (750 MW), Pallatana GBP (740 MW), need to be put on fast track. Signing of BPTA and implementation of ATS as approved by North Eastern States was very urgent. Also for safe and secure operation of the regional grid strengthening of SLDCs with latest state of art technology and communication facilities was needed.

Before taking up the agenda item, Member Secretary requested NERLDC to make a presentation on the performance of NER grid during the last one year. NERLDC in their presentation highlighted the performance of regional grid during 2009 – 10 as compared to 2008 – 09 in regards to frequency profile, availability of power and demand in various states, performance of generating stations, reservoir levels, export/import of power to/from Eastern Region and need for special protection scheme for safe and secure operation of the grid. Presentation by NERLDC is at **Annexure-II**.

Thereafter, agenda items were then taken up with the permission of Chairperson, TCC.

Proceedings of the

8th North Eastern Regional Power Committee Meeting

The 8th NERPC meeting was held on 12th January 2010 at “The Classic Hotel”, Imphal, Manipur. The meeting was hosted by Department of Power, Government of Manipur.

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

The meeting commenced with the lighting of lamp by Shri I. Obobi Singh, Hon’ble Chief Minister, Govt. of Manipur, Shri Phunzathang Tonsing, Hon’ble Power Minister of Manipur & Chairperson, NERPC, Shri Manik Dey, Hon’ble Power Minister, Govt. of Tripura, Shri. D.Y.Sema, Hon’ble Power Minister, Govt. of Nagaland & Shri. B.K. Jain, Member Secretary, NERPC and address by Hon’ble Chief Minister of Manipur, Hon’ble Power Minister, Manipur & Chairperson NERPC, Shri Phunzathang Tonsing, Hon’ble Power Minister of Tripura, Shri Manik Dey and Hon’ble Minister of Power Nagaland, Shri D.Y. Sema. Shri Pradyut Bordoloi, Hon’ble Minister of Power Assam and Shri Lal Thanzara Hon’ble Parliament Secretary I/c Power & Electricity, Mizoram could not attend the meeting due to some important engagement and their speeches were taken as read.

Hon’ble Chief Minister, Govt. of Manipur in his address stressed upon the need for timely completion of ongoing generation projects and associated transmission system as economic development of the region largely depends upon the power demand which is growing day by day. The power demand shall further increase after completion of RGGVY scheme and APDRP – II. He urged Assam to also sign BPTA for transmission associated with Pallatana GBPS & Bongaigoan TPS as agreed in the 6th NERPC held on 8th August, 2008 considering the long term power transfer requirement for another 20 – 25 years.

The full text of the speech of Hon’ble Chief Minister of Manipur is enclosed at **Annexure – IV**.

Shri L.P. Gonmei, Principal Secretary (Power), Government of Manipur welcomed the Hon’ble Chief Minister, Govt. of Manipur, Hon’ble Power Minister, Govt. of Manipur & Chairperson, NERPC, Hon’ble Power Minister, Govt. of Tripura, Hon’ble Power Minister, Govt. of Nagaland and all other dignitaries and senior officers of the NERPC. He expressed his gratitude to NER Power Committee for providing an opportunity to them for hosting NERPC meeting at Imphal.

Hon’ble Minister of Power Manipur & Chairperson, NERPC in his address welcomed the participants to the 8th Meeting of NERPC. He mentioned about the unsatisfactory power scenario in the region, peak power shortage being faced by the region in spite of availability of rich hydro and thermal potential. He suggested that this forum may request Govt. of India to enhance the fund flow for development of hydro power generation for economic upliftment of NE region and meet power demand of the country. He urged all the beneficiary states to implement the resolution adopted in the 6th NERPC meeting on the proposed new transmission lines and associated transmission system for Pallatana GBPP & Bongaigoan TPS.

He also advised all the States for early up-gradation/setting up of SLDCs in the respective States in line with the decision taken in the NERPC meeting. Hon’ble Minister also stressed for review of methodology of allocation of power from central sector projects giving due weightage to level of infrastructure development, difficult terrain, per capita consumption of electricity etc.

The full text of the speech of Hon’ble Power Minister of Manipur is enclosed at **Annexure – V**.

Hon'ble Minister of Power Tripura, Shri Manik Dey in his address mentioned about the National objective of power for all by 2012 and hoped that meeting would give a boost to the endeavour for making power availability to every home and villages in the country.

He expressed concern over the quantum of sanctioned funds and requirement of actual fund for achieving the objective of RGGVY. He stressed for the need to strengthen the transmission network in the region and early completion of transmission system associated with Pallatana GBPP and Bongaigoan TPS and liberal in-fusion of capital as grant to the extent up to 90% by the Central Govt. He also expressed concern in delay of awarding work for Monarchak GBPP (104 MW) which has resulted in cost escalation and stressed for early clearance for the revised cost estimates of the project by the Central Govt.

The full text of the speech of Hon'ble Power Minister of Tripura is enclosed at **Annexure – VI**.

Hon'ble Minister of Power Nagalnd, Shri D.Y. Sema mentioned that because of power shortages and power perception about law and order problem in the region, investors, from other part of the country are reluctant to invest in setting up infrastructure projects and industry in the region resulting in poor industrialization and infrastructure development in the region. He urged industry & people to come forward and invest in the region as region has plenty of natural resources.

The texts of speeches of Hon'ble Minister of Power Assam, Shri Pradyut Bordoloi and Hon'ble Parliament Secretary I/C Dept. of Power, Mizoram, Shri Lal Thanzara are endorsed at **Annexures VII & VIII** respectively.

Thereafter, Member Secretary, NERPC to took up the agenda items for discussions with the permission of Chairperson.

Record Notes of Discussions of the 8th TCC & 8th North Eastern Regional Power Committee Meeting(s)

ITEM NO. 1 **Confirmation of the minutes of 7th TCC and 7th NERPC meetings held on 23.02.2009 and 24.02.2009 at Shillong and Special TCC meeting of NERPC held on 03.07.2009 at Guwahati**

Deliberation of TCC

Member Secretary, NERPC stated that the minutes of the minutes of the 7th TCC and 7th North Eastern Regional Power Committee (NER Power Committee) meetings held on 23.02.2009 & 24.02.2009 respectively at Shillong and Special TCC meeting held on 03.07.2009 at Guwahati were circulated vide letter no. NERPC/AS/Committee/2008/682-755 dated 01.04.2009 and NERPC/AS/Committee/2009/2108-162 dated 20.07.2009 respectively.

Since no comments were received TCC confirmed the minutes of the 7th TCC and Special TCC meetings.

Deliberation of the RPC

The minutes of the 7th NERPC Power Committee meeting held on 24th February, 2009 at Shillong were confirmed by the Committee as no comments were received from any constituent members.

ITEM NO. 1.1	Follow-up actions on discussion of 7th NER Power committee & Special TCC meetings.
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Status on follow up of the decisions of the 7th NERPC meeting is as discussed below:

ITEM NO. 1.1.1	Transmission System associated with Evacuation of power from Pallatana GBPP and Bongaigaon TPS.
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(a) Item No. 1:

Deliberation of TCC

Member Secretary NERPC informed that transmission system associated with evacuation of power from Pallatana GBPP and Bongaigoan TPS was discussed and approved in the Standing Committee on Power System Planning in its meeting held on 25th June, 2008 & later in 6th NERPC meeting held on the 7th & 8th August, 2008 at Gurgoan. All the constituents except Assam have signed the BPTA with POWERGRID. Assam have signed the BPTA excluding the following 4 Nos. 400 KV lines.

1. Silchar - Imphal 400kV D/C line (initially operated at 132 kV)
2. Silchar - Melriat 400kV D/C line (initially operated at 132 kV)
3. Silchar - P. K. Bari 400kV D/C line (initially operated at 132 kV)
4. Pallatana - Surajmaninagar 400kV D/C line (initially operated at 132 kV)

The issue was subsequently discussed in the 7th TCC & NERPC meetings held on the 23rd & 24th February, 2009 at Shillong, but no decision could be arrived as Assam was of the view that the above 400 KV lines initially charged at 132 KV may not be utilized for a long time to their optimum capacity and cost of construction of 400 KV lines would be very high and some other alternative like 132 KV lines of higher conductor size may be considered. The matter was discussed in Ministry of Power on 30th November, 2009 and Ministry of Power has referred the matter back to NERPC for selection of conductor and voltage level for the above 4 Nos. transmission lines.

POWERGRID has given comparative statement of reduction of cost and power carrying capacity in the agenda for 3 alternatives i.e.

- i) 400 KV initially operated at 132 KV
- ii) 220 KV initially operated at 132 KV &
- iii) 132 KV with higher capacity conductor.

There would be saving of about Rs. 110 Crore & Rs. 119 Crore in alternative ii) & iii) as compared to alternative i) but the power transfer capacity would also reduce by 1/4th & 1/6th respectively.

Chairperson, TCC stated that this issue had been discussed many times and the same was approved in the 6th NERPC meeting held at Gurgoan and keeping in view the urgency in completion of transmission system the issue should not be delayed further. He requested Assam to sign the BPTA at the earliest so that the generation projects do not get stranded.

Member Secretary requested for the views of other NER constituent States about the issue.

Representatives of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura stated that they have already signed the BPTA and do not want any change in the scope of work. Keeping in view the right of way problem and future requirement of transmission capacity, the above transmission lines may be constructed as 400 KV lines (initially charged at 132 KV) only. They requested Assam to sign the BPTA at the earliest.

Assam stated that 400 KV lines would be under utilized and their high cost would be passed on to the consumers. Although they agreed to technical need of the lines, but felt that these should be constructed with suitable grant/funding from Central Govt. They also opined that different options like deferred recovery by POWERGRID may also be explored.

POWERGRID stated that unless BPTA was signed by all beneficiary States, they would not be able to proceed further on construction of the lines. They also stated that they would be working under very tight schedule for completion of transmission lines due to delay in signing of BPTA and any further delay may lead to bottling up of generation at Pallatana GBPP. Tariff to be paid by all the beneficiaries would be as decided by CERC. Chief Engineer (GM), CEA stated that issue of grant by Central Govt. and signing of BPTA should not be linked. NER States may approach Central Govt. for funding after signing of BPTA.

After long and detailed deliberation it was agreed that keeping in view the right of way problem and long term requirement the above 4 transmission lines would be constructed as 400 KV lines (initially charged at 132 KV). Assam agreed to sign BPTA in overall Regional interest.

Deliberation of the RPC

NERPC endorsed the decision of TCC and Chairperson, NERPC requested Assam to sign the BPTA within a week keeping in view the commissioning schedule of Pallatana GBPP & Bongaigoan TPS so that construction of transmission lines could be taken up by POWERGRID immediately to match with commissioning schedule of generating stations.

b) Item No. 2: Modification in the Scope of work

Deliberation of TCC

i) Imphal (New) Substation

Manipur informed that they have taken up the matter with Govt. of Manipur to allot the required land to POWERGRID and land would be available for establishment of new S/S. POWERGRID agreed to retain the scope of work as already agreed except that in place of LILO of Loktak – Imphal (PG) at Imphal (New); it shall be LILO of 132 KV Loktak – Ningthoukhong – Imphal (Manipur) at Imphal POWERGRID (new/extended) Substation. This shall provide 2nd interconnection between Imphal (PG) and Imphal (Manipur). Manipur agreed to POWERGRID proposal.

Deliberation of the RPC

The RPC noted as above.

ii) Modification of transformation capacity

Deliberation of the TCC:

TCC agreed to the POWERGRID proposal for single phase units of 7 x 10 MVA instead of three phase transformer of 2 x 50 MVA capacity at Melriat and Mokokchung S/S due to transportation constraints. The reduced transformer would be adequate to meet the load requirement of these sub-stations.

Deliberation of the RPC

The RPC endorsed the decision of TCC.

ITEM NO. 1.1.2	Comprehensive scheme for strengthening of Transmission System in NER.
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The final approved list of transmission works as furnished by PGCIL is given at **Annexure 1.1.2 (i)**. PGCIL also intimated that DPR has been submitted to DONER for approval.

Deliberation of the TCC:

Mizoram enquired about possibility of inclusion of any new transmission element in the scheme. POWERGRID informed that DPR has been submitted to DONER and they would send the DPR to all NER States for their comments/consent. If any State desires any modification in the scope of work, they would have to approach CEA for the same.

Deliberation of the RPC

Hon'ble Minister of Power, Govt. of Nagaland enquired if 220 kV S/C on D/C New Kohima – Kiphere line, 220 kV S/C on D/C New Kohima – Mon (Naginimora) & 132 kV S/C Wokha – Zunheboto – Mokokchung lines have been included in the DPR. POWERGRID replied that all these lines have been taken care in the DPR.

The RPC noted as above.

ITEM NO. 1.1.3	Setting-up/up-gradation of SLDCs in NER.
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Deliberation of the TCC:

POWERGRID stated that all the four constituents i.e. Mizoram, Manipur, Arunachal Pradesh & Nagaland have been sent the proposals for preparing the Detailed Project Reports for setting up the SLDCs. All the above four states stated that they were agreeable to the proposals sent by POWERGRID and would be sending the formal agreement to the proposal by the end of January 2010.

POWERGRID further stated that the requirement received from Tripura, Assam & Meghalaya was also discussed in the Special TCC meeting held at Guwahati on 03-07-2009. However, no formal requests have been received for preparing the DPRs from these constituents. MS NERPC requested these states to expedite the matter and send their consent to POWERGRID in order to consolidate the requirements of

all the states for preparation of DPR and proceeding further in execution of these projects. Assam informed that they would prepare DPR for up-gradation of their SLDC themselves.

Deliberation of the RPC

RPC endorsed the decision of TCC and Chairperson, NERPC requested Meghalaya & Tripura also to furnish the request to POWERGRID by January, 2010 to enable them to prepare the DPR.

ITEM NO. 1.1.4	Vacation of 2.3–2.4 GHz frequency band and establishment of Fiber Optic Communication Scheme in lieu of existing Microwave Links in NER - PGCIL (LD&C – Corporate Engg.).
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Deliberation of the TCC:

POWERGRID stated that laying of fiber optic network had been agreed by NERPC in the 7th NERPC meeting for Central Sector and Assam portion. The details of the fiber optic networks are as under:

Central Sector – 227 kms.

AEGCL - 759 kms.

TCC agreed that the investment made by POWERGRID for the above network would be capitalized and the project would become part of commercial agreement already signed by POWERGRID with respective constituents of NER for ULDC project and tariff would be as determined by CERC. Further, the tariff of ULDC project including Microwave links would continue to be recovered as per prevailing CERC order till replacement by fiber optic network.

Mizoram, requested for additional fiber optic link between Badarpur – Aizawl which is approximately 150 Kms of length, to be covered under the Central Sector fiber optic network. TCC agreed to Mizoram proposal to add the said link in the Central Sector scope.

Deliberation of the RPC

RPC endorsed the TCC recommendation. The length of fiber optic network in Central Sector would be now: 227 + 150 = 377 KMs.

ITEM NO. 1.1.5	R & M scheme for various substations of POWERGRID in NER.
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The special TCC held on 3rd July, 2009 had recommended the proposed R&M work and requested PGCIL to submit the modified proposal on the above basis along with equipment details and the cost for approval by the NER Power Committee in this 8th NERPC meeting.

Deliberation of the TCC:

POWERGRID requested for more time to finalize the scope of work. TCC decided to defer the agenda item for next meeting.

Deliberation of the RPC

RPC noted as above.

ITEM NO. 1.1.6	Foreign training status
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Deliberation of the TCC:

NERLDC informed that the balance as on date amounting to Rs. 2.0 Crores was available in the Reactive Pool Account of NERPC.

TCC recommended for sending two more batches for training abroad as proposed in the Agenda. However, it was decided that possibility of arranging training in Countries other than Norway would be explored by NERPC Secretariat. Member Secretary, NERPC stated that besides arranging training abroad, training in the field of finance & commercial management, grid operation and security may also be arranged for engineers of North Eastern States at IIMs/NPTI etc. Keeping in view the financial & commercial matters which shall need to be handled by engineers due to reforms being introduced in the power sector.

Deliberation of the RPC

RPC endorsed the recommendation of TCC. NERPC Secretariat would explore the possibility of arranging training abroad and also through IIMs/NPTI. The proposal for training and cost of training shall be got approved by Member Secretary from Chairperson NERPC.

ITEM NO. 1.2	New Issues for discussion.
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ITEM NO. 1.2.1	Corrosion of Kopili Unit # 1 & 2 due to Low pH value of water inflows at Kopili Reservoir.
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Deliberation of the TCC:

Executive Director (O&M), NEEPCO made a detailed presentation on the extraordinary situation created due to abnormally low pH value of water flowing into Kopili reservoir. The acidic water has caused serious damage to the under water parts of the machines. The problem was appreciated by TCC. NEEPCO requested TCC members to suggest course of action to be taken by NEEPCO.

TCC recommended that NEEPCO may prepare detail scheme for replacement of damaged parts of the machines of Kopili H.E Project under R&M and submit their proposal to CERC for their approval. The cost incurred by NEEPCO may be recovered through tariff as approved by CERC.

However, the proposal of NEEPCO regarding relaxed operational norms i.e. deemed availability to Kopili project for outages due to corrosion was not agreed to by TCC and NEEPCO was advised to approach CERC in this regard also.

Deliberation of the RPC

RPC endorsed the recommendation of TCC.

ITEM NO. 1.2.2	Special Protection Scheme (SPS) for NER – NERLDC.
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Deliberation of the TCC:

NERLDC requested Manipur to keep Imphal-Ningthoukhong line open during lean hydro period (i.e. January to April); to operationalize the SPS. Chairman, TCC and CE, Manipur agreed to the same if 60-65 MW flow is allowed over 132 KV Imphal (PG)-Imphal (Manipur) line during evening peak hours. AGM (O&M), POWERGRID, NERTS clarified that same would be feasible but CT ratio would have to be checked. The same would be done within 15 days and if required CT of appropriate ratio would be provided.

MS, NERPC requested that entire scheme including shifting of UFRs should be completed by end of January, 2010 and thereafter the scheme would be tested by NERLDC.

Deliberation of the RPC

RPC endorsed the recommendation of TCC.

ITEM NO. 1.2.3	Installation of new UFRs in NER constituent systems and constituent-wise load relief quantum as recommended by the sub-committee - NERLDC.
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Deliberation of the TCC:

Member Secretary informed that scheme was approved in the special TCC meeting held on 3rd July, 2009 and being monitored in OCC regularly. Nagaland, Mizoram, Tripura & Assam have furnished the list of feeders identified for installation of UFRs and requested the remaining constituents to furnish the information at the earliest. All Constituents agreed to furnish the necessary details by the end of January, 2010.

Deliberation of the RPC

RPC approved the implementation of scheme. Member Secretary informed that the progress of the scheme shall be monitored in OCC meetings of NERPC.

ITEM NO. 1.2.4	Single-Phase Auto-Reclosure of Transmission Lines.
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Deliberation of the TCC:

Member Secretary NERPC apprised the TCC about the necessity of providing single phase auto-reclosing scheme (SPAR) on 132 KV lines as transmission system is predominantly at 132 KV and provision of SPAR would avoid tripping of lines and disruption in power supply due to transient faults and program made in implementation of the scheme as per decisions in OCC meetings.

TCC decided that POWERGRID shall re-examine the necessity of providing 1-phase auto reclosing on the lines where replacements of breakers is required and inform OCC. On an enquiry from NHPC regarding procurement of new breaker at Loktak, TCC suggested NHPC to procure breaker compatible with single phase auto-reclosing.

Deliberation of the RPC

RPC endorsed the decision of TCC and recommended that this issue should be discussed in OCC meeting and TCC/RPC maybe apprised in the next meeting.

ITEM NO. 2.0	Agenda items related to POWERGRID
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ITEM NO. 2.1	Declaration of Commercial Operation of 100 MVA, 220/132 kV Dimapur transformer.
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Deliberation of the TCC:

POWERGRID mentioned that 100 MVA, 220/132 KV ICT at Dimapur was ready for commercial operation and requested Nagaland not to insist on completion of LILO of 132 KV Dimapur – Kohima line at Kohima (PG) substation as work was held up due to problem in acquisition of land for putting up towers.

Nagaland requested TCC that this issue may be referred to RPC for decision which was agreed to.

Deliberation of the RPC

POWERGRID requested for declaring the 100 MVA, 220/132 KV ICT at Dimapur in commercial operation as the transformer was ready and not to link the same to completion of LILO of 132 KV Dimapur – Kohima line at Dimapur (PG).

Minister of Power, Nagaland informed that there was problem in land acquisition as the land compensation being demanded by the owner was very high. He informed that Deputy Commissioner, Dimapur was trying to settle this problem. He requested POWERGRID to bear with Nagaland till this issue is resolved.

NERLDC informed that due to non-availability of this transformer the present ICT was getting overloaded and facing frequent tripping especially during the lean hydro period.

After detailed deliberation Nagaland agreed for commercial operation of 100 MVA, 220/132 KV transformer. He also requested POWERGRID to complete the LILO of 132 KV Dimapur – Kohima line at Dimapur (PG) at the earliest. POWERGRID agreed to complete the LILO work as soon as the land acquisition issue for installation of transmission tower was resolved and requested Nagaland Govt. to help them in the matter. The ICT shall be declared in commercial operation w.e.f. 1st February, 2010.

ITEM NO. 2.2	Installation of Line Reactor at Kathalguri end of Misa - Kathalguri Line.
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Deliberation of the TCC:

NEEPCO informed that there was space constraint at Kathalguri switchyard and it may not be feasible to install bus reactor in the switchyard. TCC decided that NEEPCO would examine the space availability at Kathalguri switch yard for installation of the reactor and inform to NERPC secretariat.

Deliberation of the RPC

Member Secretary requested POWERGRID & NEEPCO to jointly visit Kathalguri site and examine the space availability at Kathalguri switch yard for installation of the reactor. POWERGRID & NEEPCO agreed. The reactor may be installed by NEEPCO on their own or as a deposit work by POWERGRID. The cost of reactor maybe capitalized and recovered through tariff as per CERC norms.

RPC requested POWERGRID & NEEPCO to furnish the joint inspection report to NERPC Secretariat and the issue can be discussed again if required in the next meeting.

ITEM NO. 2.3	Transfer facility in Bus Bar arrangement
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Deliberation of the TCC:

POWERGRID informed that they have to take line shutdown for breaker maintenance on the lines terminating in substations/switchyard owned by Assam/NEEPCO which do not have transfer bus facility as given in Annexure 2.3. They requested that either the transfer bus facility maybe created by the owning utility or they maybe given deemed availability for outage of such lines whenever shutdown has to be taken for breaker maintenance. Since provision of transfer bus shall require additional investment by the sub-station owning utilities. TCC requested POWERGRID to re-examine the issue and identify the critical substations where transfer bus facility is required and issue maybe discussed in OCC meeting. As regards deemed availability, Member Secretary informed that the same could be implemented only if all the beneficiaries agreed.

Deliberation of the Committee

RPC requested POWERGRID to furnish the list of critical sub-stations for further review by OCC before the matter is put up to TCC/RPC.

ITEM NO. 2.4	Security Assistance for Routine Patrolling/ Maintenance Activities of Transmission Lines due to adverse situation prevailing in the area.
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Deliberation of the TCC:

POWERGRID requested for assistance from respective state Governments for routine maintenance and patrolling of transmission lines given in the Agenda. The maintenance of lines would avoid breakdown of lines. POWERGRID also informed that they have received assurance from Govt. of Assam in connection with security assistance for routine patrolling/maintenance activities of their transmission lines. Regarding the transmission lines passing through Manipur, Chairman TCC & Chief Engineer Manipur requested that the matter maybe discussed in RPC.

Deliberation of the Committee

Hon'ble Ministers of Power, Tripura, Manipur & Nagaland agreed to provide the security to POWERGRID during patrolling & maintenance of their lines whenever required.

Minister of Power, Nagaland however requested POWERGRID to write to respective States for providing security and inform the number of security personnel required by them.

POWERGRID informed that the Secretary (P), Ministry of Power had written to the Chief Secretary of the respective States and a copy would be sent again. Regarding the number of security personals required they stated that it depends on the areas to be patrolled. POWERGRID also offered to bear the cost incurred by State Govt. in providing the security during maintenance/patrolling of their lines.

The RPC requested POWERGRID to write directly to all the Hon'ble Power Ministers of the State concerned with a copy to District Administration and Hon'ble Power Ministers of Manipur, Tripura & Nagaland assured that necessary assistance shall be provided to POWERGRID in the matter

ITEM NO. 2.5	Outstanding UI Payment:
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Deliberation of the TCC:

NERLDC informed latest outstanding as follows:

Nagaland : Rs. 4.3 Crores.
Meghalaya : Rs. 3 Crores.
Mizoram : Rs. 1.5 Crores.

Mizoram agreed to pay within a week. Meghalaya and Nagaland also agreed to take action regarding payment at the earliest.

Deliberation of the RPC

Chairperson, NERPC requested Meghalaya, Mizoram & Nagaland to pay by January, 2010.

ITEM NO. 2.6	Status of outstanding dues of Power Grid against NER constituents
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Status of outstanding against NER constituents as on 18.12.2009 is as follows:

Constituents	Outstanding (in Lakhs)
Ar. Pradesh	113.00
ASEB (Assam)	914.00
Manipur	186.00
MeSEB (Meghalaya)	1309.00
Mizoram	82.00
Nagaland	229.00
TSECL (Tripura)	216.00
TOTALS	3049.00

Deliberation of the TCC:

All Constituents agreed to liquidate outstanding dues at the earliest

Deliberation of the RPC

Chairperson, NERPC requested all the constituents to liquidate outstanding dues within a month.

ITEM NO. 2.7	Status of LC required by NER constituents
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Status of LC required vis-à-vis LC available as on 18.12.2009 is as under:

Constituents	Rs. in Lakhs	
	LC REQUIRED	LC AVAILABLE
Ar. Pradesh	170.00	252.00
ASEB (Assam)	1150.00	973.00
Manipur	180.00	160.00
MeSEB (Meghalaya)	300.00	250.00
Mizoram	95.00	116.10
Nagaland	175.00	163.00
TSECL (Tripura)	140.00	183.00
TOTALS	2210.00	2097.10

Deliberation of the TCC:

Constituents agreed to enhance LC as desired by POWERGRID.

Deliberation of the RPC

Chairperson, NERPC requested all the constituents to enhance LC within a month.

ITEM NO. 2.8	Training of System operators utilizing Reactive pool account:
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Deliberation of the TCC:

NERLDC informed training programs for the above have been successfully completed utilizing Reactive pool account in all the NER States, except Arunachal Pradesh. Further they informed that one day seminar in Ar. Pradesh would be held tentatively on 1st March, 2010.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 3.0	Agenda items related to Mizoram
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ITEM NO. 3.1	Annual Generation Schedule of Central Generating Stations in NER:
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Deliberation of the TCC:

MS, NERPC stated that generation targets for all generating stations are finalized by CEA for the next financial year in the month of January and data would be available in Load Generation Balance Report (LGBR) prepared by CEA. Peak/off peak data would only be available in day ahead schedule of generating stations. He requested all the States to plan their drawal schedule from grid and load accordingly.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 3.2	Missing Link Scheme by PGCIL in NER
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Deliberation of the TCC:

POWERGRID informed that the new 160 MVA ICT would be commissioned by 20th January, 2010. Kopili-Khandong 132 KV ckt-2 would be completed by April, 2010, if forest clearance was available.

Deliberation of the RPC

POWERGRID informed that forest clearance for 132 KV Kopili – Khandong ckt -2 is pending with Dept. of Environmental & Forest, Govt. of Assam.

Chairperson, NERPC requested POWERGRID to take up the matter with Govt. of Assam so that the line could be completed in time.

ITEM NO. 3.3	132 kV Loktak – Jiribam Line
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Deliberation of the TCC:

Chairman, TCC, NERPC informed that the work is in progress for restoration of the line.

Deliberation of the RPC

POWERGRID requested Manipur that not only the part portion of the line is to be restored but the entire line has to be restored.

Chairperson, NERPC requested Manipur to take up the matter and complete the work at the earliest.

ITEM NO. 3.4	Long outage of Rokhia Phase – II Unit #5 & 6 with effect from 31.01.2007 and 16.09.2006
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Deliberation of the TCC:

MS, NERPC advised Mizoram to resolve the issue of restoration of machine at Rokhia GPS bilaterally with Tripura. Regarding enhanced Central Sector allocation, MS, NERPC clarified that individual State would have to directly approach Ministry of Power.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 4.0	Agenda items related to Meghalaya
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ITEM NO. 4.1	Overhead Charges on AMC
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Deliberation of the TCC:

MS, NERPC suggested that uniform overhead charges should be taken by POWERGRID in all the Regions. It was decided that 8% overhead charges for AMC of SCADA/EMS as applicable in other Regions would be applicable in NER also. Constituents agreed to the same.

Deliberation of the RPC

The RPC endorsed the decision of TCC.

ITEM NO. 4.2	ULDC Scheme for NER
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Deliberation of the TCC:

POWERGRID informed that money related to the state portion has not been received by them from DONER and same could not be released to the States. They further informed that they would clarify the position within a month.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 5.0	Agenda items related to Manipur
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ITEM NO. 5.1	Forest clearance by Mizoram Government for Tipaimukh H.E. Project (1500 MW) in Manipur:
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Deliberation of the TCC:

Mizoram stated that the matter is being pursued with forest department and clearance is likely to be obtained shortly.

Deliberation of the RPC

Chairperson, NERPC requested Mizoram to pursue the matter rigorously with forest department and clearance should be obtained by January, 2010.

The RPC noted as above.

ITEM NO. 5.2	Construction of Imphal (PG) – Imphal (Manipur) 132 kV 2nd Circuit:
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Deliberation of the TCC:

POWERGRID intimated that the requirement of Manipur for another 2nd circuit of 132 kV Imphal (PG) – Imphal (Manipur) would be duly taken care of while constructing new Imphal S/S as mentioned at Item No. 1.1.1 (b).

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 6.0	Agenda items related to NEEPCO
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ITEM NO. 6.1	Renovation and Modernization of Kopili Unit # 1&2 and 220/132 KV Kopili & 132/33 KV Khandong Switchyards:
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Deliberation of the TCC & RPC:

As discussed in Item No. 1.2.1.

ITEM NO. 7.0	Agenda items related to OTPC
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ITEM NO. 7.1	Deed of Adherence of NETC not signed by Meghalaya and Nagaland
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Deliberation of the TCC:

Director and CEO, OTPC mentioned about the progress made by the transmission company (NETC) to match the completion of their portion of transmission works ahead of the synchronization of the first unit of Pallatana GBPS. Accordingly, he requested the NE States to complete the formalities required for signing the deed of adherence and payment of initial equity for NETC. Meghalaya and Nagaland intimated to OTPC/NETC their consent/willingness to sign the deed of adherence latest by January, 2010.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 7.2	Equity capital of Rs. 10.5 crores and Rs 15 crores not received from Mizoram and Assam Electricity Grid Corporation (AEGCL) towards upfront equity contribution for 400kV D/C Pallatana-Bongaigaon transmission system being developed by NETC.
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Deliberation of the TCC:

Mizoram and Assam stated that their equity contribution was being processed and the same would be paid latest by 1st. week of February, 2010.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 7.3	Construction of 400kV Pallatana-Surajmaninagar- P K Bari/Agartala/Udaipur transmission system for availing start up power for OTPC.
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Deliberation of the TCC:

Director and CEO, OTPC appraised the house about the progress of the generation project. He informed the following timeframe for the project:

Synchronization of Unit-1 of Pallatana	: 22.11.2011
COD of Unit-1	: 22.12.2011
Readiness of evacuation system	: 22.10.2011
Requirement of start-up power	: 01.07.2011

Accordingly, the requirement to complete the construction of Silchar-PK Bari-Surajmaninagar-Pallatana (400 KV line initially charges at 132 KV) is to be taken up on top most priority because different sections of lines and substations are to be completed by different agencies. TSECL was requested to co-ordinate with POWERGRID for timely completion of the above line.

Director, TSECL offered to examine the possibility to provide start-up power to Pallatana GBPS from Udaipur S/S of TSECL as an alternate source subject to technical feasibility.

POWERGRID informed that OTPC would have to pay transmission charges for early completion of line to provide start up power for Pallatana GBPS. OTPC agreed to the same if it was applicable to other generating projects also.

Deliberation of the RPC

RPC advised OTPC, TSECL & POWERGRID to take necessary action in the matter to provide start up power for Pallatana GBPS.

ITEM NO. 8.0	Agenda items related to NHPC
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ITEM NO. 8.1	Refund of transmission charges on UI
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Deliberation of the TCC:

POWERGRID informed that they would refund the transmission charges to NHPC by March, 2010.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 9.0	Agenda items related to NERPC
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ITEM NO. 9.1	Membership of NTPC Ltd. in NERPC
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Deliberation of the TCC:

TCC recommended for membership of NTPC in NERPC.

Deliberation of the Committee

The RPC approved the recommendation of TCC.

ITEM NO. 9.2	Bank interest on UI Account
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NERLDC informed that the amount earned on account of bank interest in UI account in case of NER has accumulated to Rs. 38 lakhs till date.

Deliberation of the TCC:

TCC recommended utilization of interest amount for training propose similar to Reactive Pool Account.

Deliberation of the RPC

The RPC endorsed the recommendation of TCC.

ITEM NO. 9.3	Board fund Contribution status
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Deliberation of the TCC:

Mizoram, Nagaland agreed to pay their contribution by the end of January, 2010.

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 9.4	Commissioning Schedule of Generation Projects in NER
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Deliberation of the TCC:

NHPC and OTPC informed that their units would be commissioned as per the time schedule given below:

NHPC	Lower Subansiri	3 units by March, 2012
NEEPCO	Kameng HEP	Slipped to 12 th Plan
NTPC	Bongaigaon TPS	August, 2011 (1 st unit) December, 2011 (2 nd unit) April, 2012 (3 rd unit)
OTPC	Pallatana GBPP	In 11 th Plan
NEEPCO	Tuirial HEP	In 12 th Plan

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 10.0	Any other Item
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i) Measurement of harmonics in NER System:

Deliberation of the TCC:

POWERGRID informed that they have carried out measurement of harmonics in the part of NER grid involving Arunachal Pradesh system (viz. Ranganadi HEP, Nirjuli substation, Gohpur substation, Balipara substation) during the month of February, 2009.

During the measurement, Total Harmonics Distortion (THD) with 5th harmonics were measured in the range of 15 – 20% which is abnormally high.

Subsequently, measurements were repeated during November, 2009 and high THD with predominantly 5th harmonics were found in the same system. POWERGRID informed that CPRI, Bangalore was being engaged to carry out field measurements for source identification so that necessary corrective action could be taken.

Accordingly, CPRI started measurements w.e.f. 05.01.2010 under different system condition with NER – ER connected. However, to verify whether the harmonics are getting into NER grid from ER system, certain measurements with ER – NER disconnected condition is to be done. In view of above, it is required to disconnect the ER – NER connectivity at least for two hours so that CPRI can take the last measurement and go ahead for analysis.

TCC agreed to POWERGRID availing shutdown for two hours during off-peak period. After giving at least 3 days notice to NERLDC for necessary co-ordination.

ii) Member Secretary informed RPC that NERPC Secretariat has started collecting data regarding protection philosophy and relay settings etc. for 132kv and above lines for all the constituents as decided in the OCC with a view to standardize the relay settings to avoid mal operation of protection system.

The standardization of protection relay settings has been done in Northern and Western region which has resulted in very few instances of mal operation of protection system. The data has already been received from Assam, Meghalaya, Mizoram, NEEPCO & NHPC only.

Other utilities may also expedite the information as per proforma circulated by NERPC Secretariat. The relay settings shall be standardized in consultation with all utilities

iii) Chairperson, NERPC has informed that Deptt. Of Power, Manipur has carried out study on prepaid meters to avoid revenue loss due to uncollected bills. He requested all the members to study the report and the same may be discussed in the next TCC/RPC meeting. The study report is at **Annexure – 10.0 (iii)**

Deliberation of the RPC

The RPC noted as above.

ITEM NO. 11.0	Date & Venue of the next meeting
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The next meeting of TCC & NERPC is proposed to be held in March, 2010. Exact dates and venue shall be intimated later. As per Roster Meghalaya (MeSEB) will be the host for the next 9th TCC/RPC Meetings

List of Participant in 8th TCC of NER Power Committee meeting

<u>Name</u>	<u>Designation</u>	
Organisation	Name S/Shri	Designation
Arunachal Pradesh	1. J. Tato 2. W. Rehman	Chief Engineer (Power) West Zone Executive Engineer (SLDC)
Assam	1. G.K. Das 2. H. Hazarika 3. R. L. Barua 4. M.K. Adhikary 5. K. Goswami 6. B. M. Saikia	GM, (Com), APDCL DGM, (LD&C), AEGCL DGM, AEGCL Sr. Manager (Com), APDCL Sr. Manager (Com), APDCL Sr. Manager (Com), APDCL
Manipur	1. N. Sarat Singh 2. L. Priyokumar 3. R. K. Kishore Singh 4. Ng. Birjit Singh 5. Aton Singh 6. Khamba Singh 7. Shanti Kumar 8. T. Tunlalian	Chief Engineer (Power) & Chairman, TCC Addl. Chief Engineer (P) Addl. Chief Engineer (P) Superintending Engineer (P) Superintending Engineer (Com) Superintending Engineer (P) Executive Engineer (P) Executive Engineer (P)
Meghalaya	1. K. Marbaniang 2. T. Passah 3. F. Kharshiing	Chief Engineer (T&T) Superintending Engineer (SLDC) Executive Engineer (SLDC)
Mizoram	1. C.L. Thangliana. 2. Jolly Newman 3. C. Lianlunga	Engineer-in-Chief (Power) Joint Secretary (P&E) Superintending Engineer (SLDC)
Nagaland	1. Koshe Sale 2. Kasho Chishi	Superintending Engineer (Power) Executive Engineer (P)
Tripura	1. K. Chakrabarty 2. M. Debbarma	Director, TSECL Additional General Manager, TSECL
NHPC	1. D. K. Ray 2. R. Raina 3. V. S. Sahi 4. Y. Surjamani Singh	General Manager (Loktak) Chief Engineer Chief Engineer Manager (E), (Loktak)
NEEPCO	1. P. K. Singha 2. Arup. Ch. Sarmah 3. D. K. Saikia 4. Bhaskar Goswami	Executive Director (O&M) Sr. Manager (E) Sr. Manager (E) Sr. Manager (E)
NERLDC	1. T.S.Singh 2. R. Sutradhar	Addl. General Manager Chief Manager
POWERGRID	1. Arun Kumar 2. Y.K. Sehgal 3. U. K. Tyagi 4. Ajoy Patir 5. Avinash. M. Pavgi 6. Prasanta Kanungo 7. H.S.Kaushal 8. S. I. Singh	Executive Director (Com) Executive Director General Manager Addl. General Manager, NERTS Addl. General Manager (Engg) Chief Manager (OS), NERTS Chief Manager (LD&C Corporate Office) Chief Manager

List of Participant in 8th TCC of NER Power Committee meeting


<u>Name</u>	<u>Designation</u>	
Organisation	Name S/Shri	Designation
PTC	1. Sanjeev Mehra	Executive Vice President
NVVN	No representative	
CEA	1. R. K. Grover 2. K. C. Chadha	Chief Engineer (GM) Director (GM)
OTPC	1. Alok Mukherjee 2. Anil Sah	Director & CEO DGM
NTPC	1. V. K. Padha 2. S. K. Kar	General Manager DGM (Com)
NETC	1. Umesh Chandra	Managing Director
IEDCL	No representative	
NERPC	1. B. K. Jain 2. P. D. Siwal 3. B. Lyngkhoi 4. D. K. Bauri	Member Secretary S.E (O) Assistant Secretary Asst. Executive Engineer



Presentation in 8th TCC
Meeting of NER at Imphal

NER Grid performance

NERLDC, POWERGRID
11th January 2010



Review of
Generation – Availability
during last two years



Year : 2008-09

- **C.S. Generation :** **5815 MU**
- **State Generation :** **3033 MU**
- **Total Region :** **8848 MU**



Year : 2008-09

- **Regional Energy Met :** **8134 MU**
- **Export to Eastern Region :** **714 MU**

Year : 2008-09

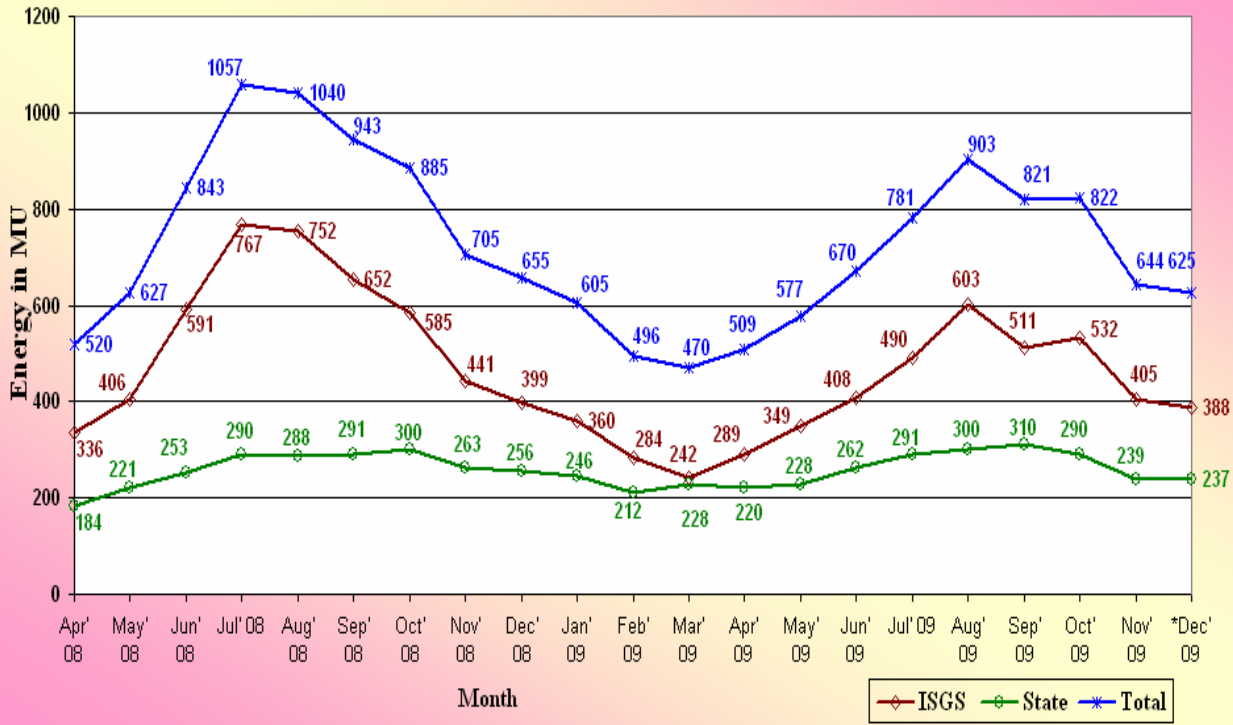
Central Sector Hydro-Thermal break-up :

- Hydro : 3445 MU (Design : 3735 MU)
- Thermal : 2370 MU (Avg. PLF 74%)

Power Market participation : 2008-09

- Bilateral Sale : 876 MU
- Bilateral Purchase : 199 MU
- Sale through Power Exchange: 135 MU
- Purchase through PX : 3 MU
- UI earning by the Region : Rs. 396 Cr.

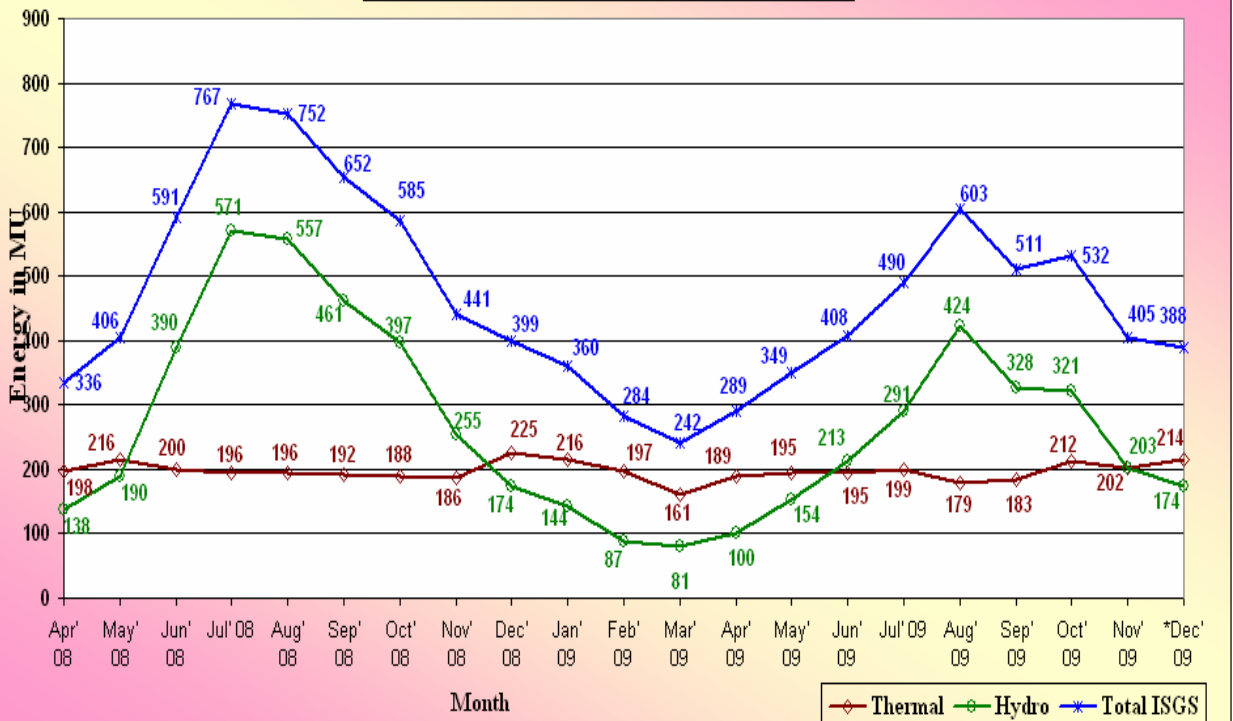
Monthwise Regional Energy Generation in NER



Total Regional Generation in 2008-09	8848 MU	(C.S. : 5815 + State :3033)
Total Regional Generation in 2008-09 (April to Dec)	7276 MU	(C.S. : 4929 + State :2347)
Total Regional Generation in 2009-10 (April to Dec)	6353 MU	(C.S. : 3977 + State :2376)

923 MU ↓

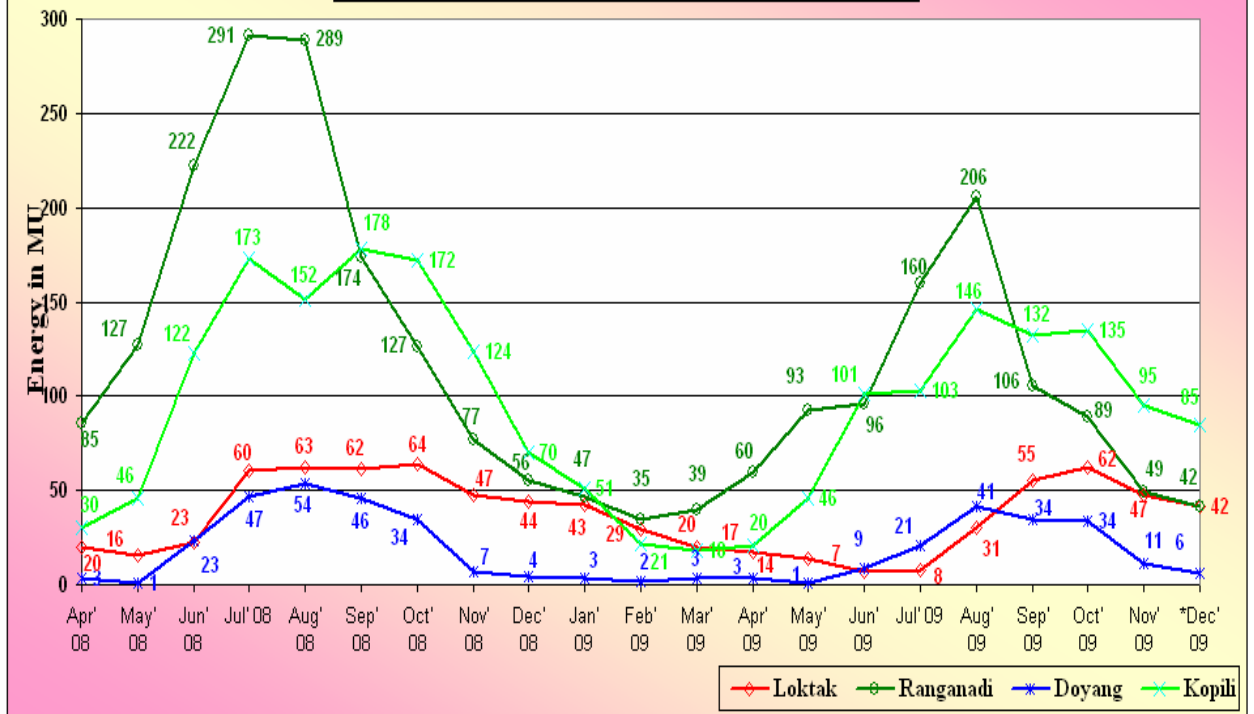
Monthwise ISGS Generation in NER



Total ISGS Generation in 2008-09	5815 MU	(Hydro : 3445 + Ther :2370)
Total ISGS Generation in 2008-09 (April to Dec)	4930 MU	(Hydro : 3133 + Ther :1797)
Total ISGS Generation in 2009-10 (April to Dec)	3977 MU	(Hydro : 2208 + Ther :1769)

953 MU ↓

Monthwise ISGS Hydro Generation in NER



Total ISGS Hydro Generation in 2008-09

3445 MU

Total Hydro Generation in 2008-09 (April to Dec)

3133 MU

Total Hydro Generation in 2009-10 (April to Dec)

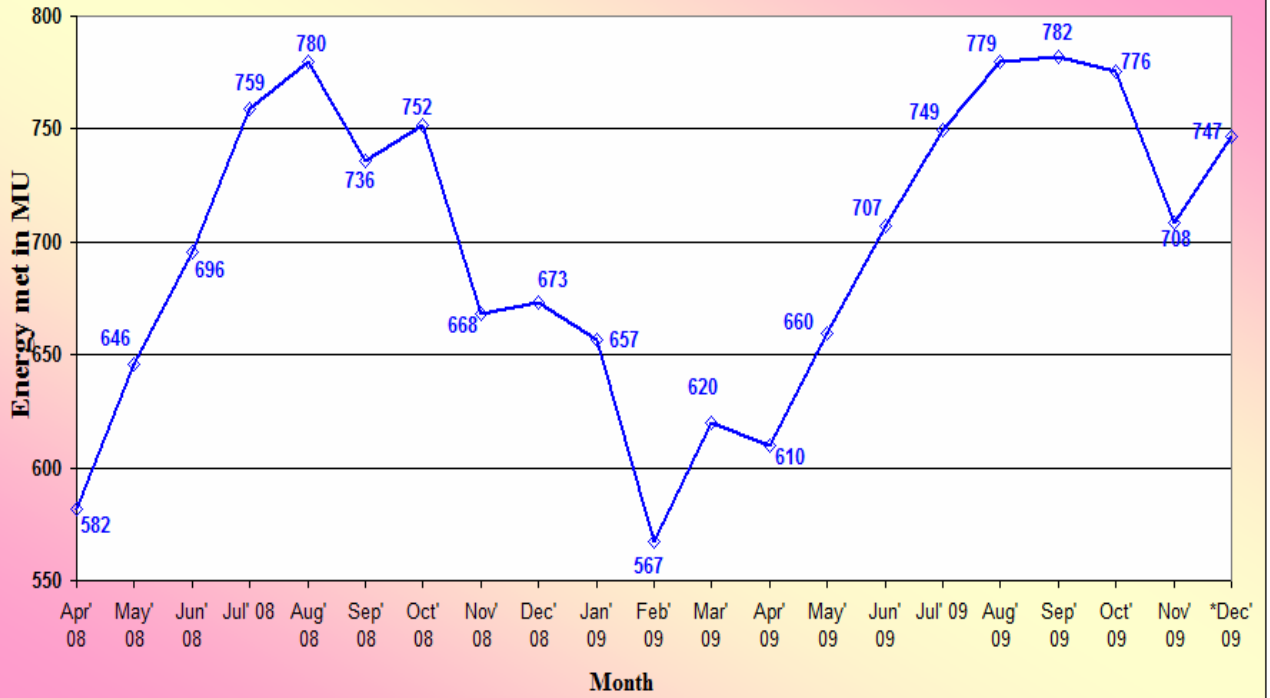
2208 MU

925 MU ↓

NER Hydro Generation Comparison during 2008-09 & 2009-10 (April to Dec)

Station	2008-09	2009-10	Difference	%
Loktak	398	283	-114	-29
RHEP	1448	901	-547	-38
DHEP	219	160	-59	-27
KHEP	1068	864	-204	-19
Total	3133	2208	-925	-30

Monthwise Regional Energy met in NER



Regional energy met in 2008-09

8134 MU

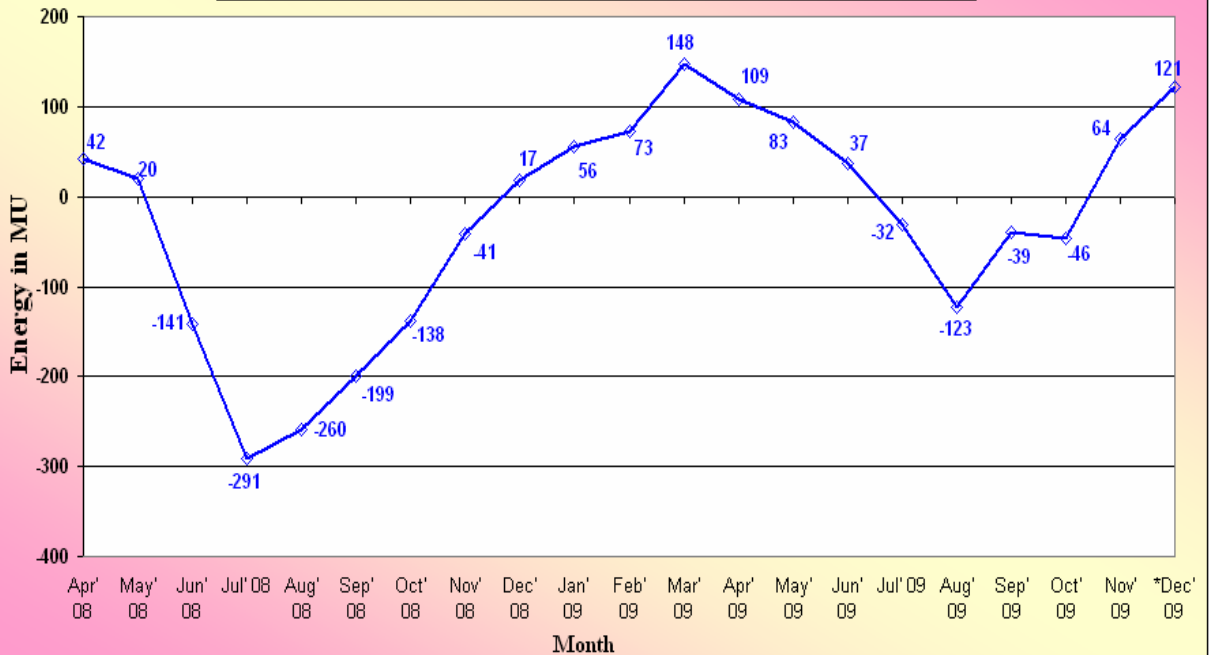
Regional energy met in 2008-09 (April to Dec)

6291 MU

Regional energy met in 2009-10 (April to Dec)

6518 MU 227 MU ↑

Monthwise Inter-Regional Exchange (-Export / +Import)



Net export to ER in 2008-09

714 MU

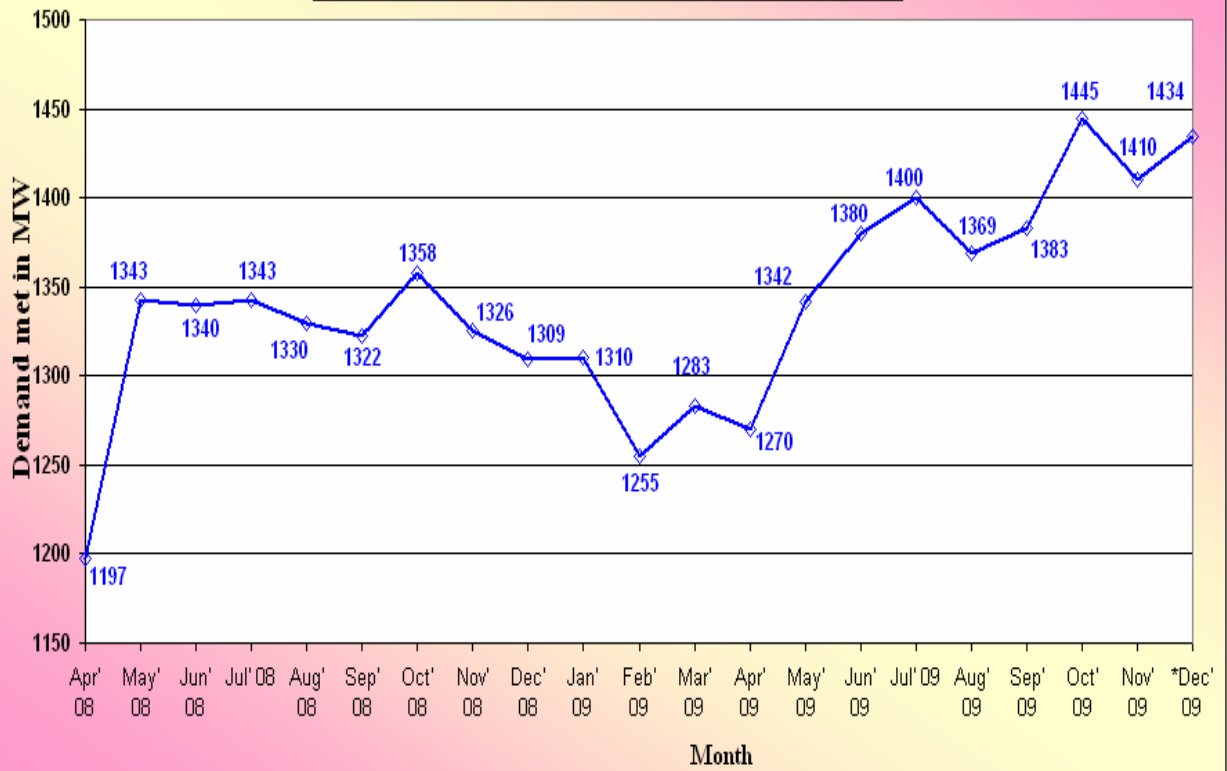
Net Export to ER in 2008-09 (April to Dec)

991 MU

Net Export to ER in 2009-10 (April to Dec)

-173 MU 1164 MU ↓

Monthwise Regional Demand met in NER

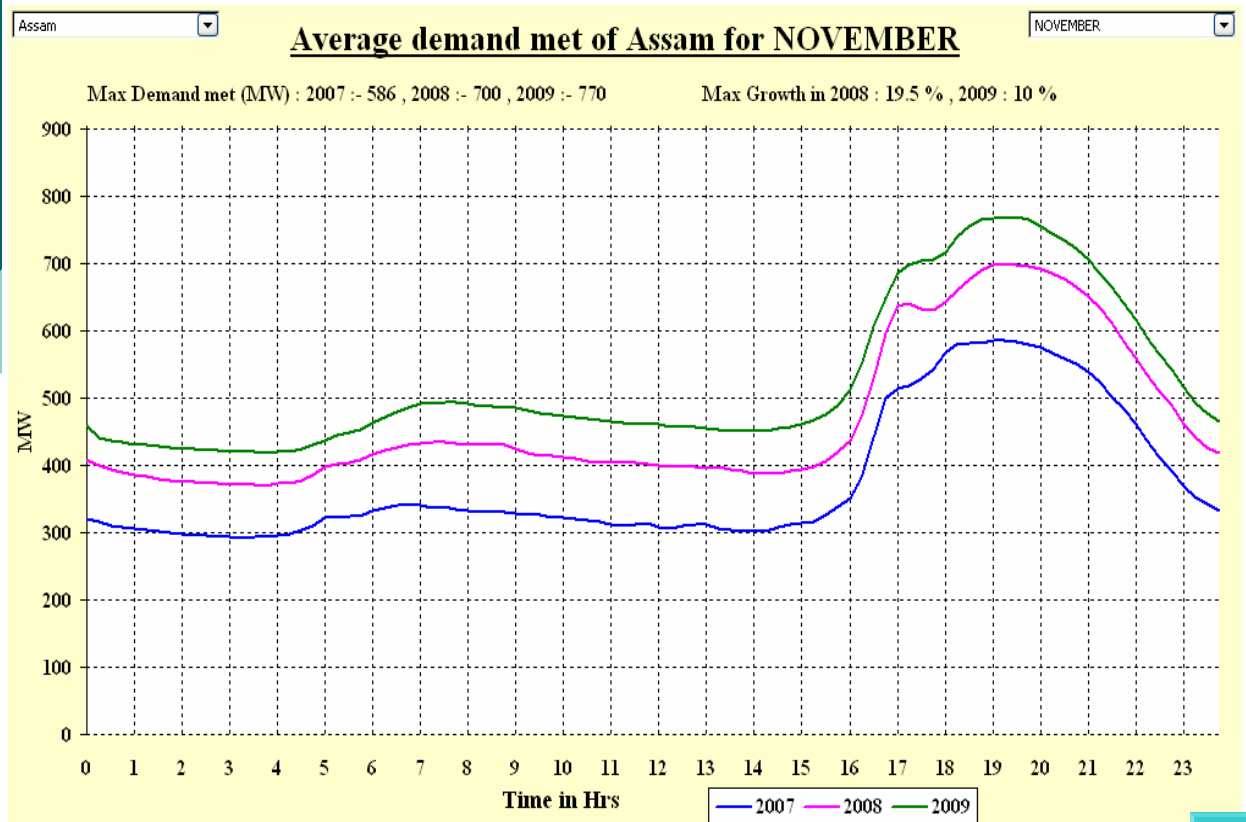


Maximum Regional Demand met in 2008-09 (April to Dec) 1358 MU
 Maximum Regional Demand met in 2009-10 (April to Dec) 1445 MU 6%

Growth in demand met during last three years

Peak – Off Peak demand pattern in NER States

Average Demand met by NER States during 2007,2008 & 2009

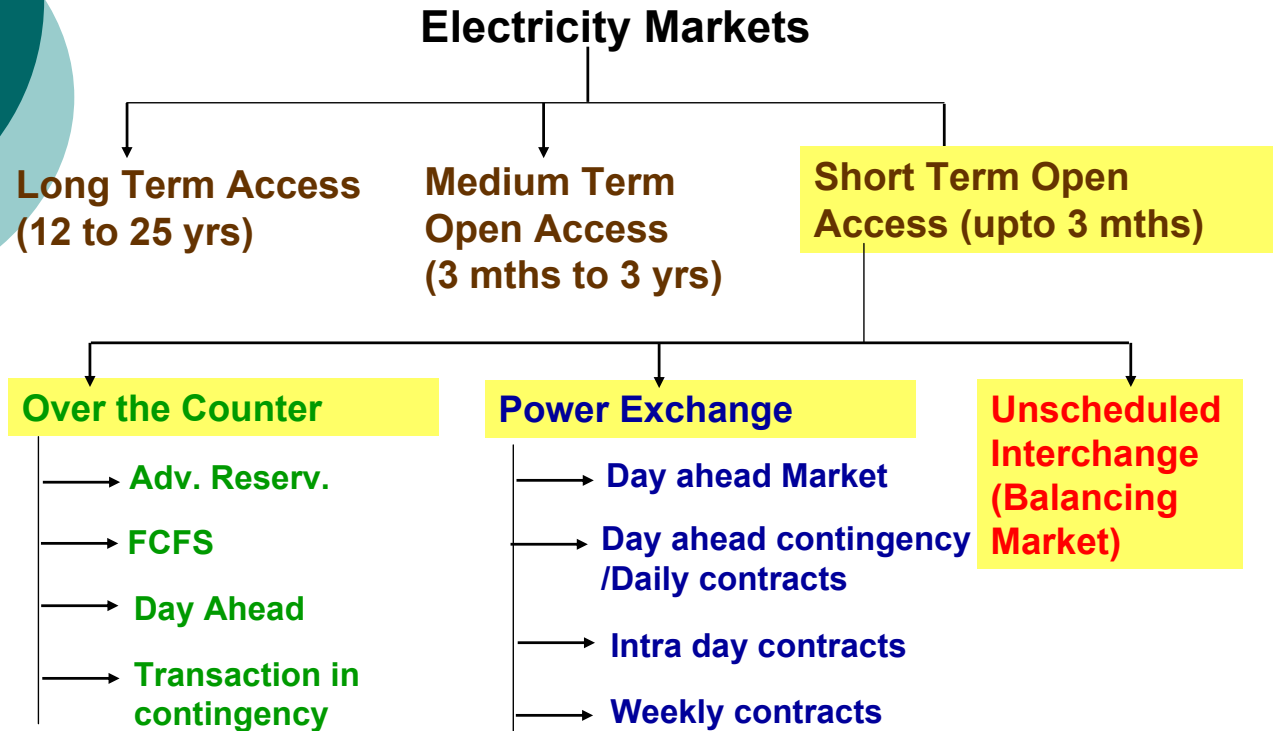


Electricity Market

Short Term Open Access segment

Performance of NER Constituents

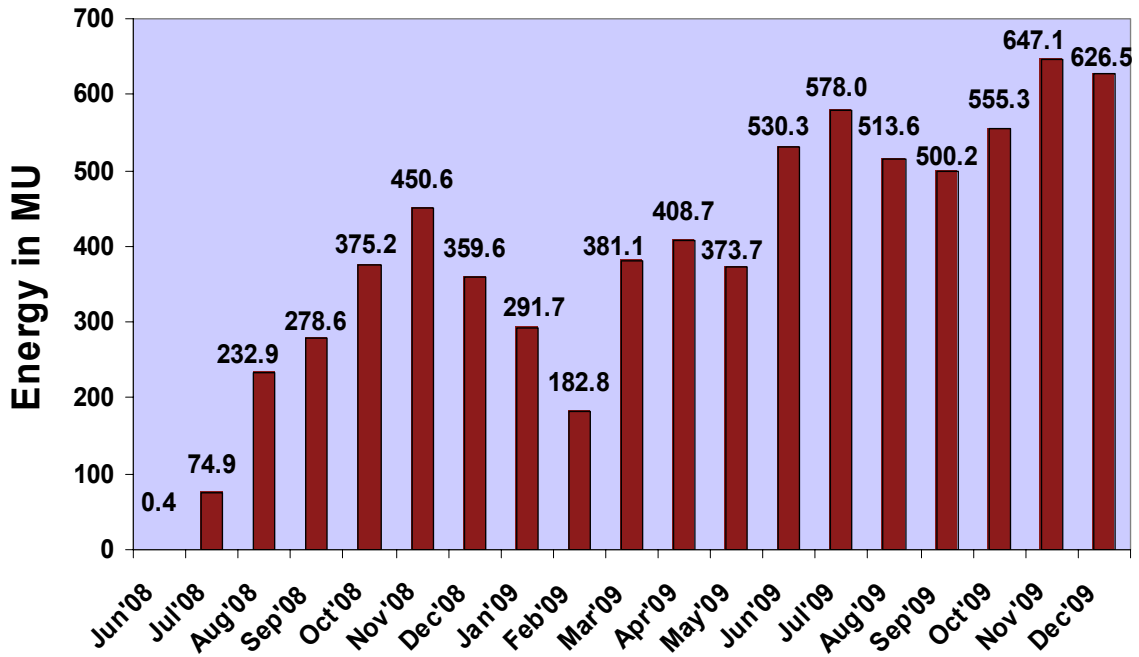
Segments of Electricity Market



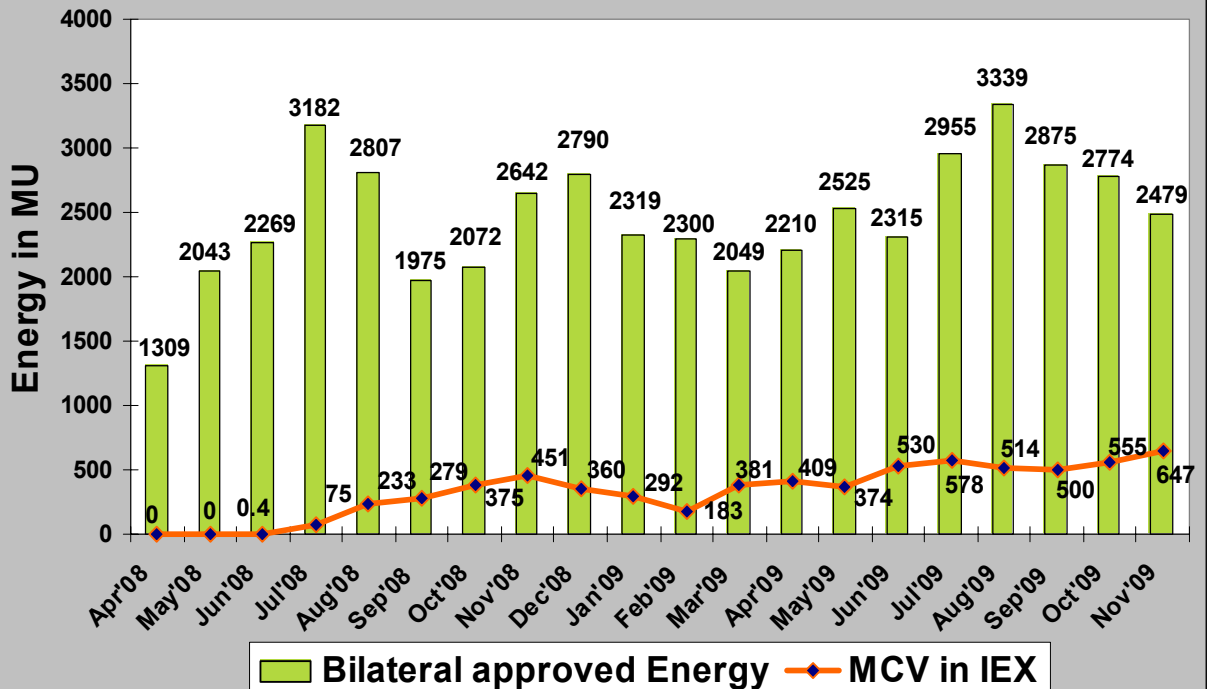
Power Exchange vs. Bilaterals

A Comparison

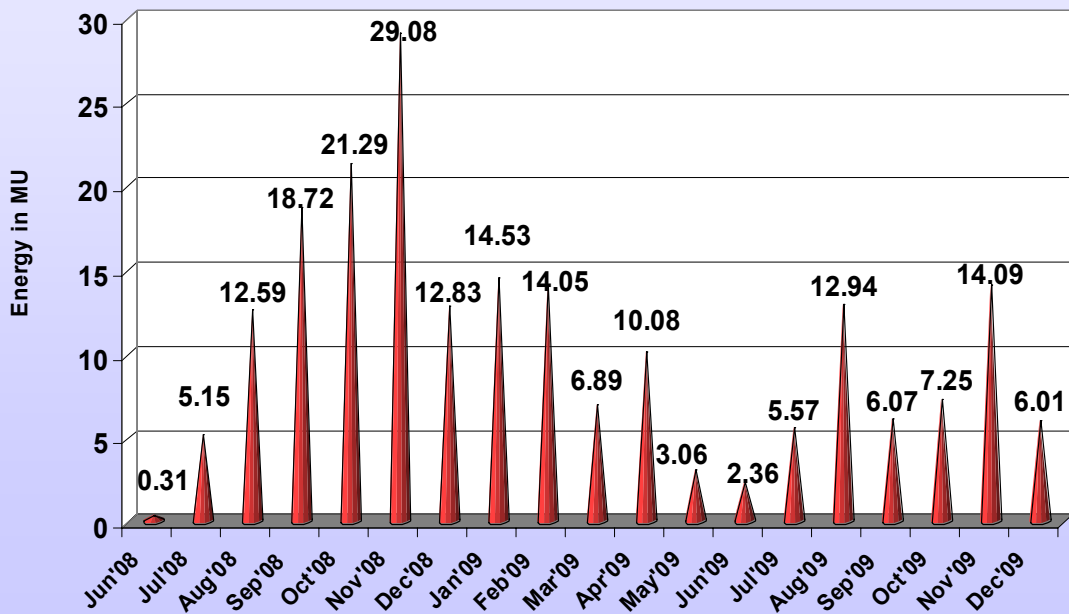
Indian Energy Exchange: Monthly MCV



Monthly MCV in IEX Vs All India Bilateral approved energy (Apr'08 to Nov'09)



Sale through Power Exchange in NER

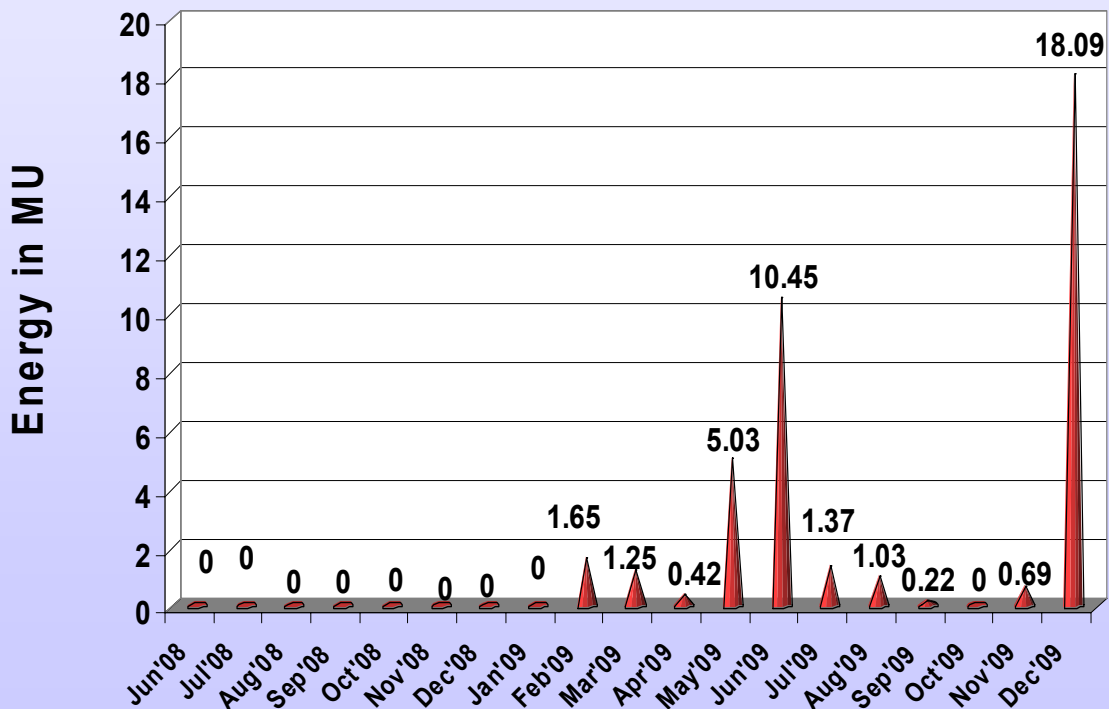


Total Sale through Px in 2008-09: 135.44 MU

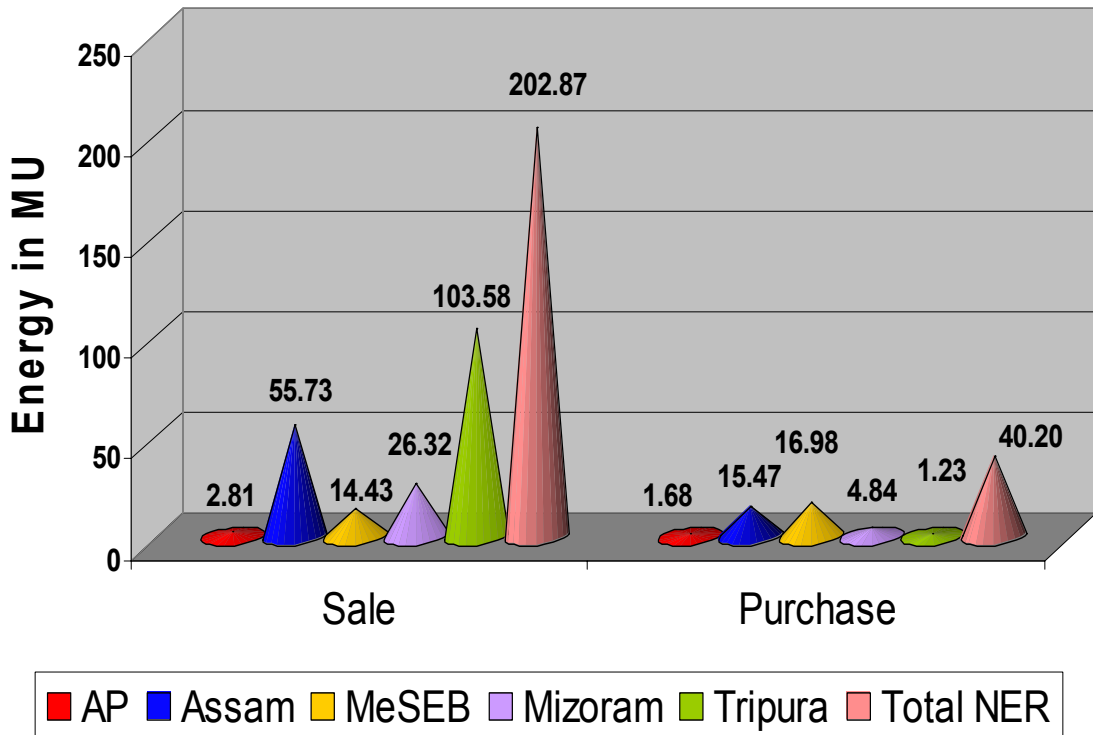
Total Sale through Px in 2008-09 (Apr to Dec): 99.98 MU

Total Sale through Px in 2009-10 (Apr to Dec): 67.43 MU

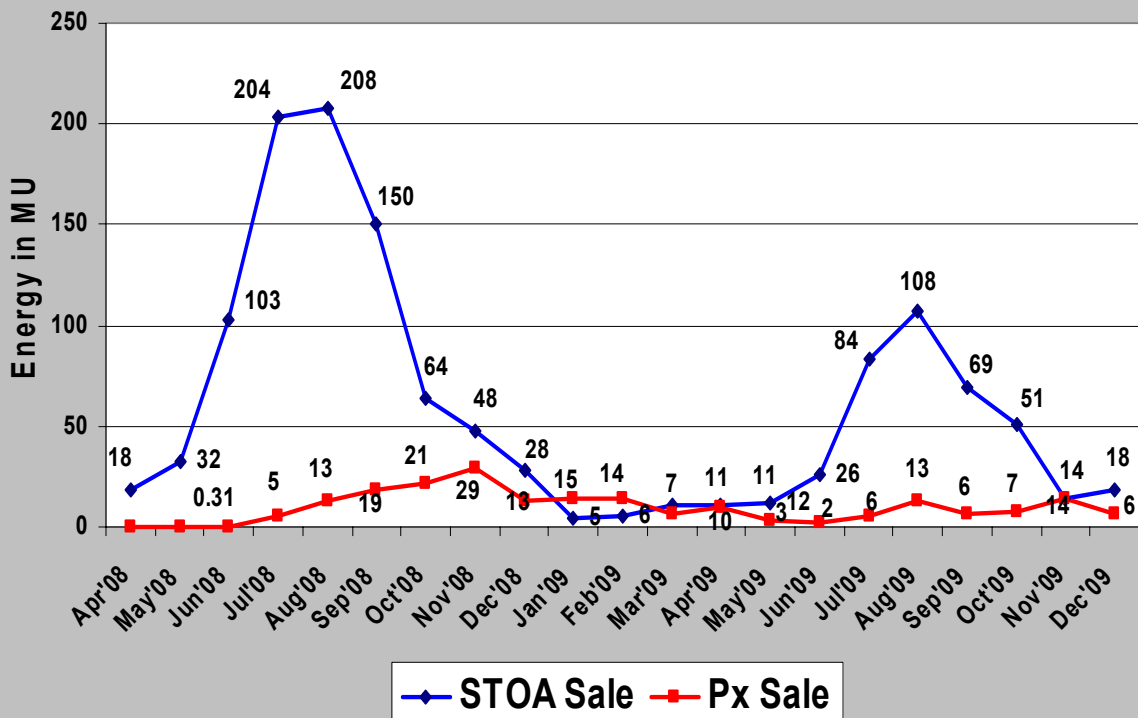
Purchase through Power Exchange in NER



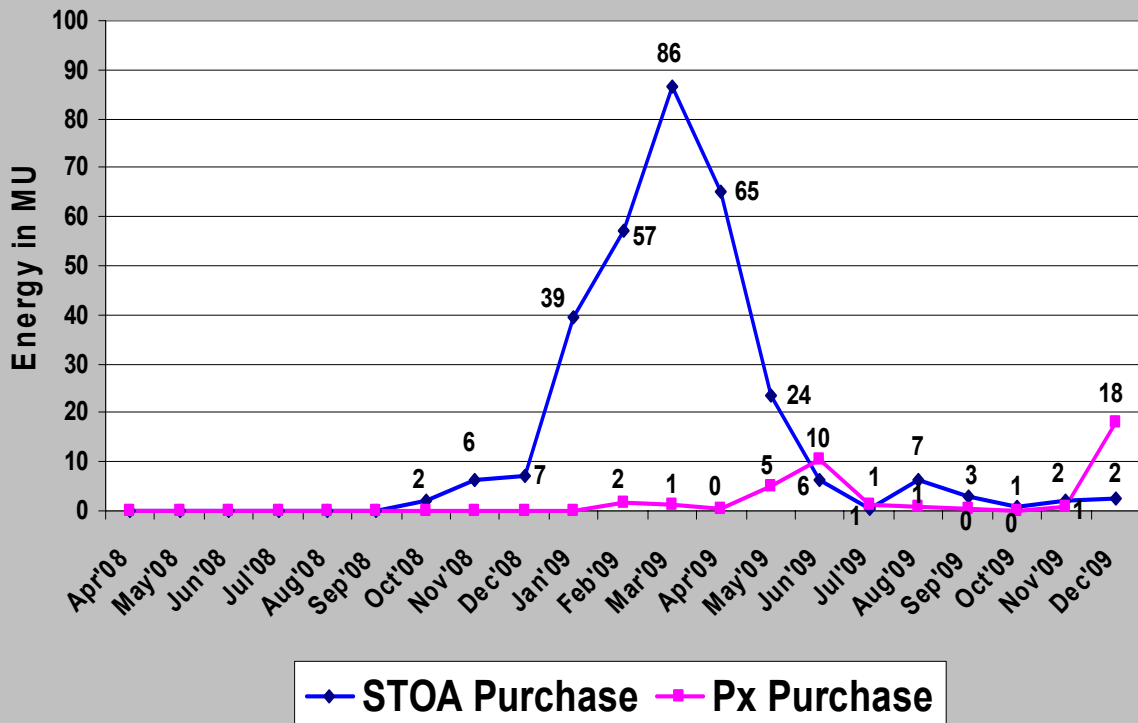
Transactions through Px in NER (Jun'08 to Dec'09)



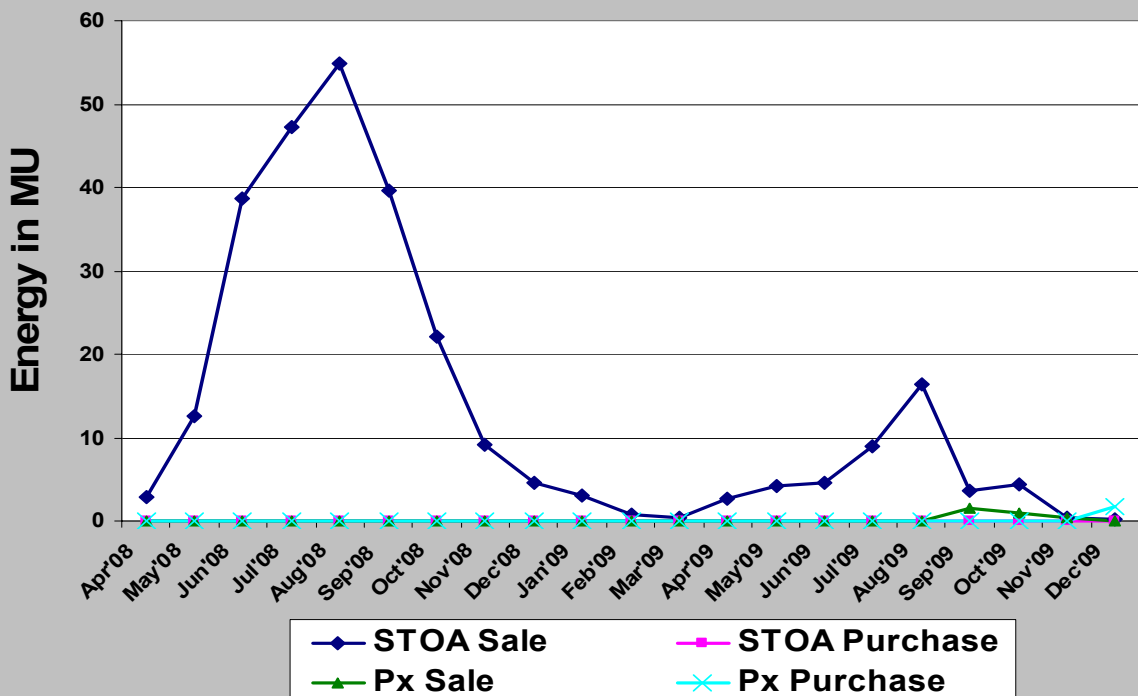
STOA Vs Px Sale in NER



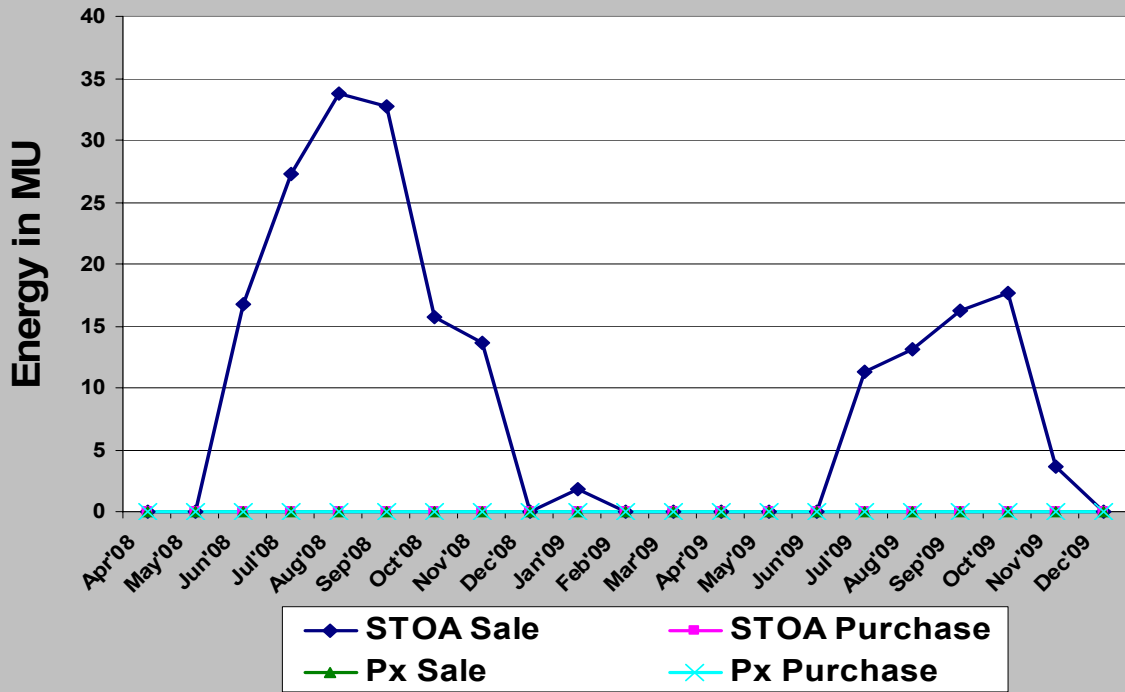
STOA Vs Px Purchase in NER



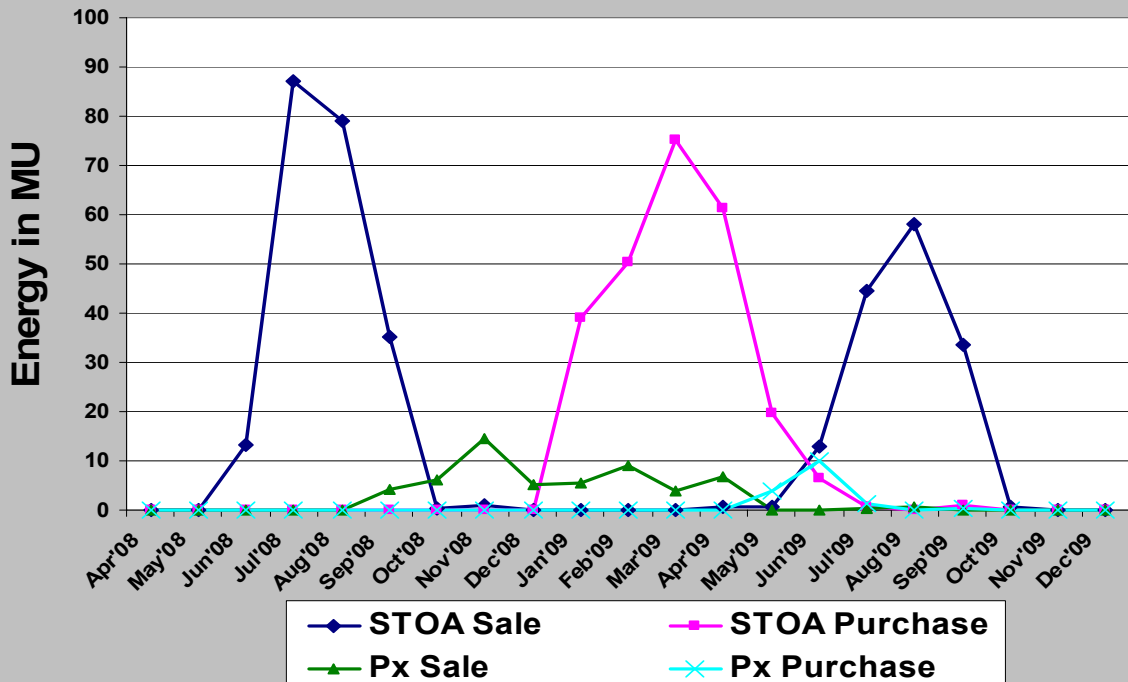
Ar. Pradesh: STOA Vs Px transactions



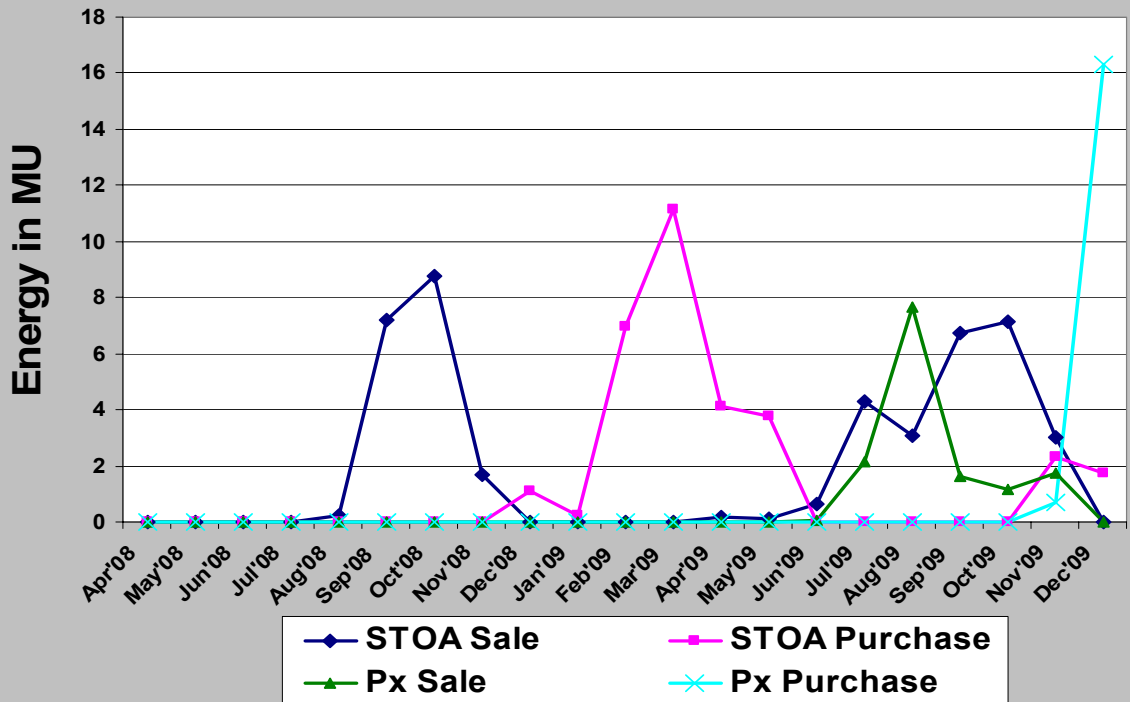
Nagaland: STOA Vs Px transactions



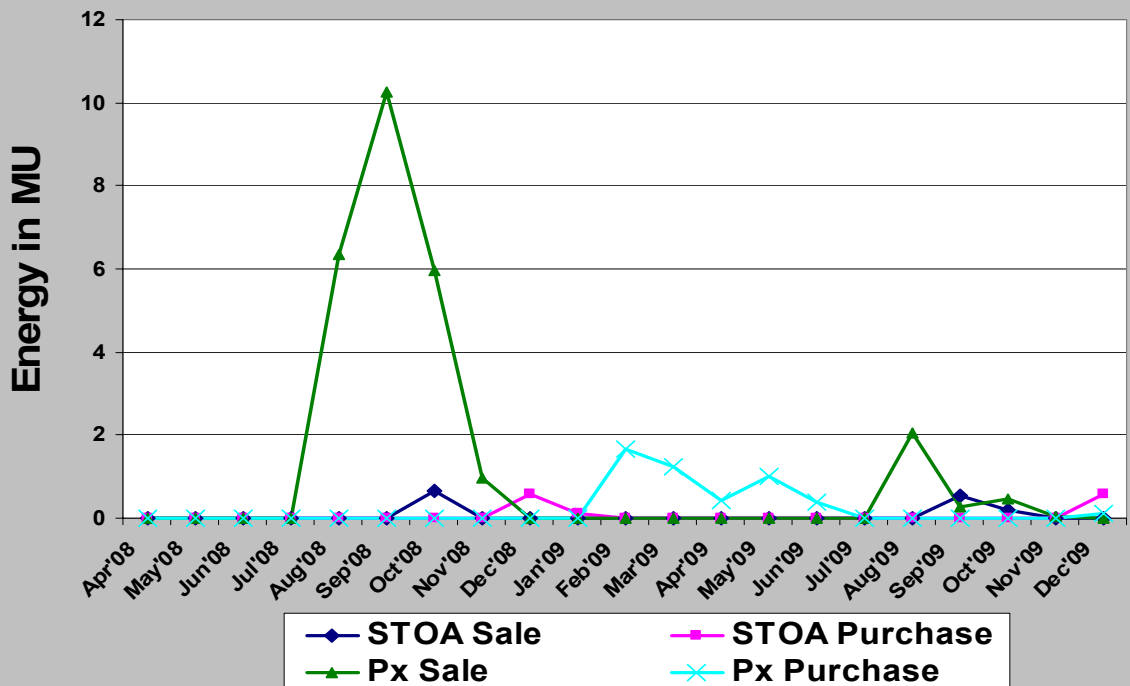
Assam: STOA Vs Px transactions



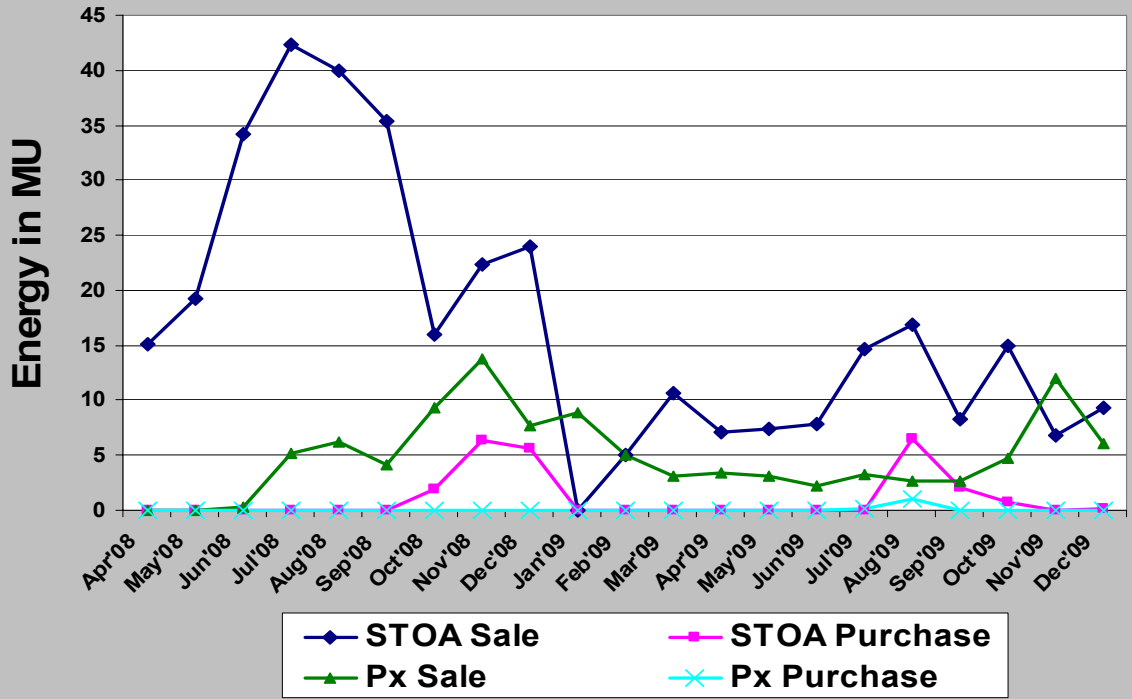
Meghalaya: STOA Vs Px transactions



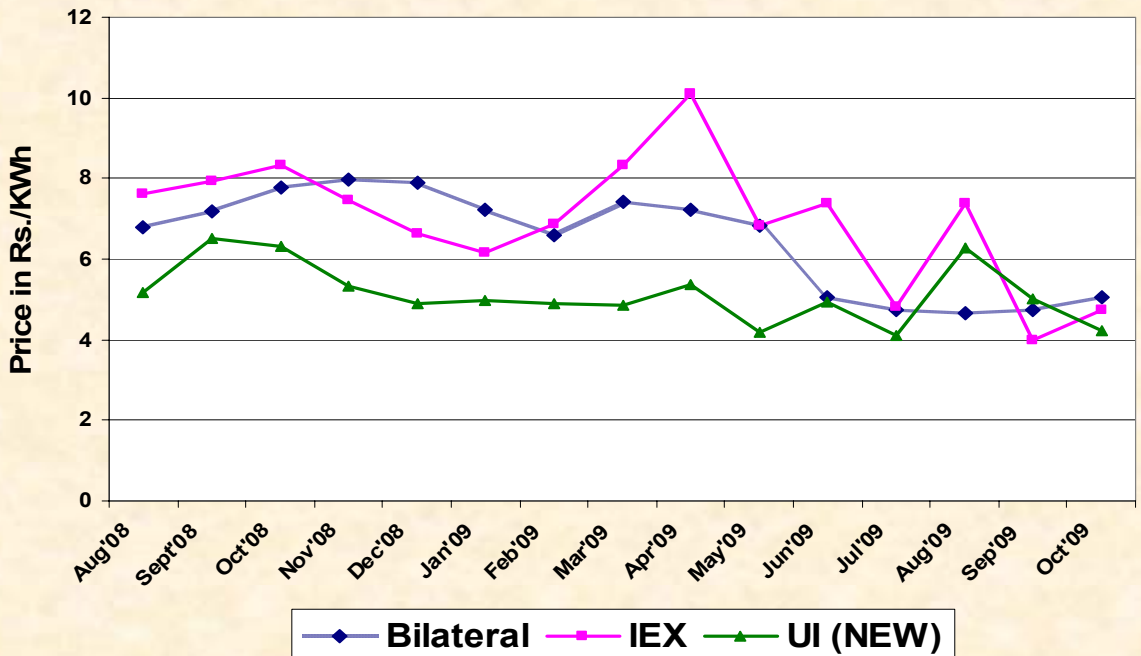
Mizoram: STOA Vs Px transactions



Tripura: STOA Vs Px transactions

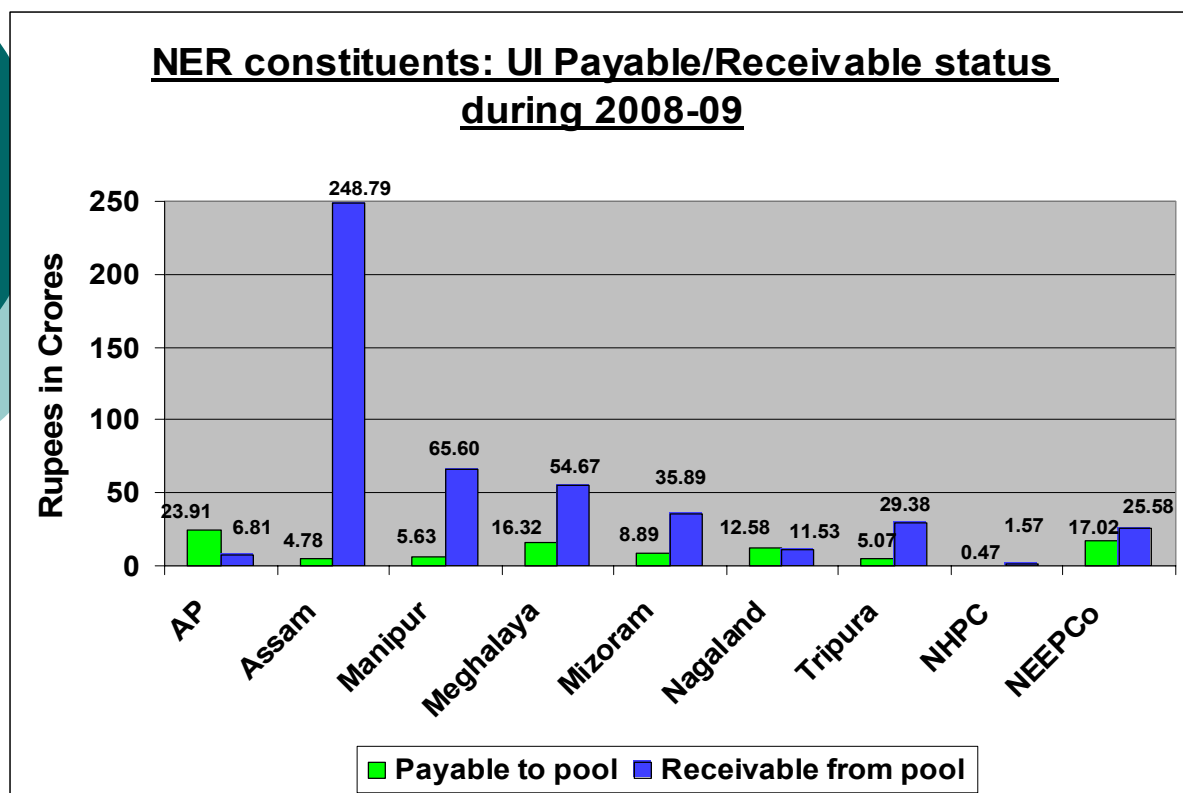


Price of Short Term transactions of electricity: Aug'08 to Oct '09



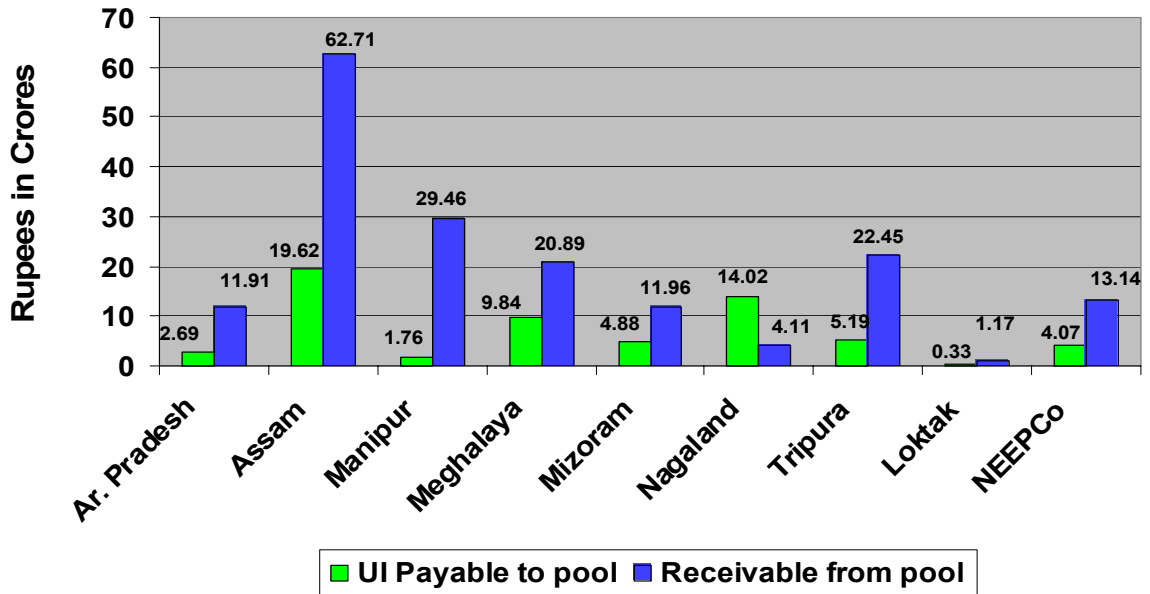
Unscheduled Interchange

Payable-Receivable status of two years
and
Latest outstanding status



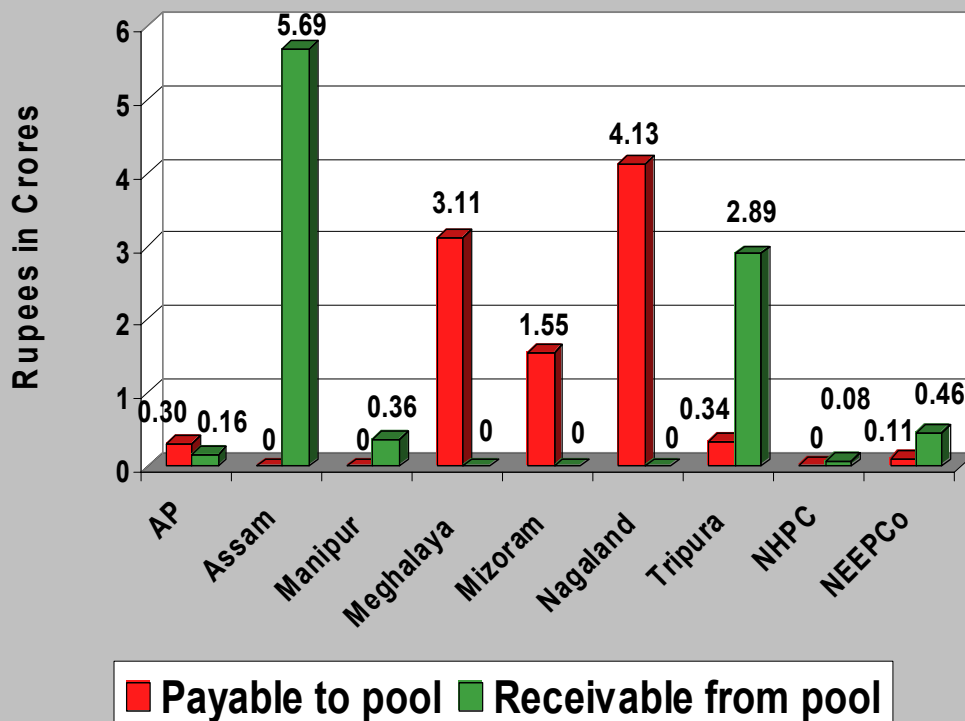
Net UI receivable from Eastern Region: Rs. 396.42 crs.

NER constituents: UI Payable/Receivable status during 2009-10 (till Week-39)



Net UI receivable from Eastern Region: Rs. 124.18 crs.

UI outstanding status as on 24.12.09 (Upto Wk-37)





Reactive pool Account Status

Expenditure on training of System Operators



Expenditure from reactive Pool fund on account of Training

1. Training on EMS/SCADA	: Rs.18,75,630
2. Seminar in NER states Capital	: Rs.6,00,000
3. Foreign Training for Batch-I	: Rs.50,20,361
4. Foreign Training for Batch-II	: Rs.68,55,919
5. Total Expenditure	: Rs.1,43,51,910

Reactive Pool Status : 2009-10

As on 07.01.2010
Upto Week 39 (21.12.09 to 27.12.09)
All figures in Rupees

Sl. No	States	Outstanding Amount (31.03.09)	Amount payable to pool	Amount paid to pool	Amount Receivable from pool	Amount Received from pool	Outstanding payable(+) / receivable (-) upto 31.03.09	Outstanding payable(+) / receivable (-) upto Wk-24
		1	2	3	4	5	6	7
1	Ar. Pradesh	325437	1509642	1158098	0	0	0	676981
2	Assam	-1098570	0	0	1730310	0	-1098570	-2828880
3	Manipur	1042	271340	223121	28309	0	0	20953
4	Meghalaya	2406175	124878	2406175	1813	0	0	123066
5	Mizoram	249965	131501	364869	760	0	0	15837
6	Nagaland	1894102	0	0	181464	0	1894102	1712638
7	Tripura	1040319	7740	0	102446	0	1040319	945613
TOTAL		4818470	2045101	4152263	2045101	0	1835851	666207

Amount in Reactive pool account as on 31.03.2009 23365012 (Including reactive interest amt.)

Reactive interest amount paid by const. During 2009-10 1153409

Amount paid to pool account during 2009-10 4152263

Amount paid to Constituents from pool during 2009-10 0

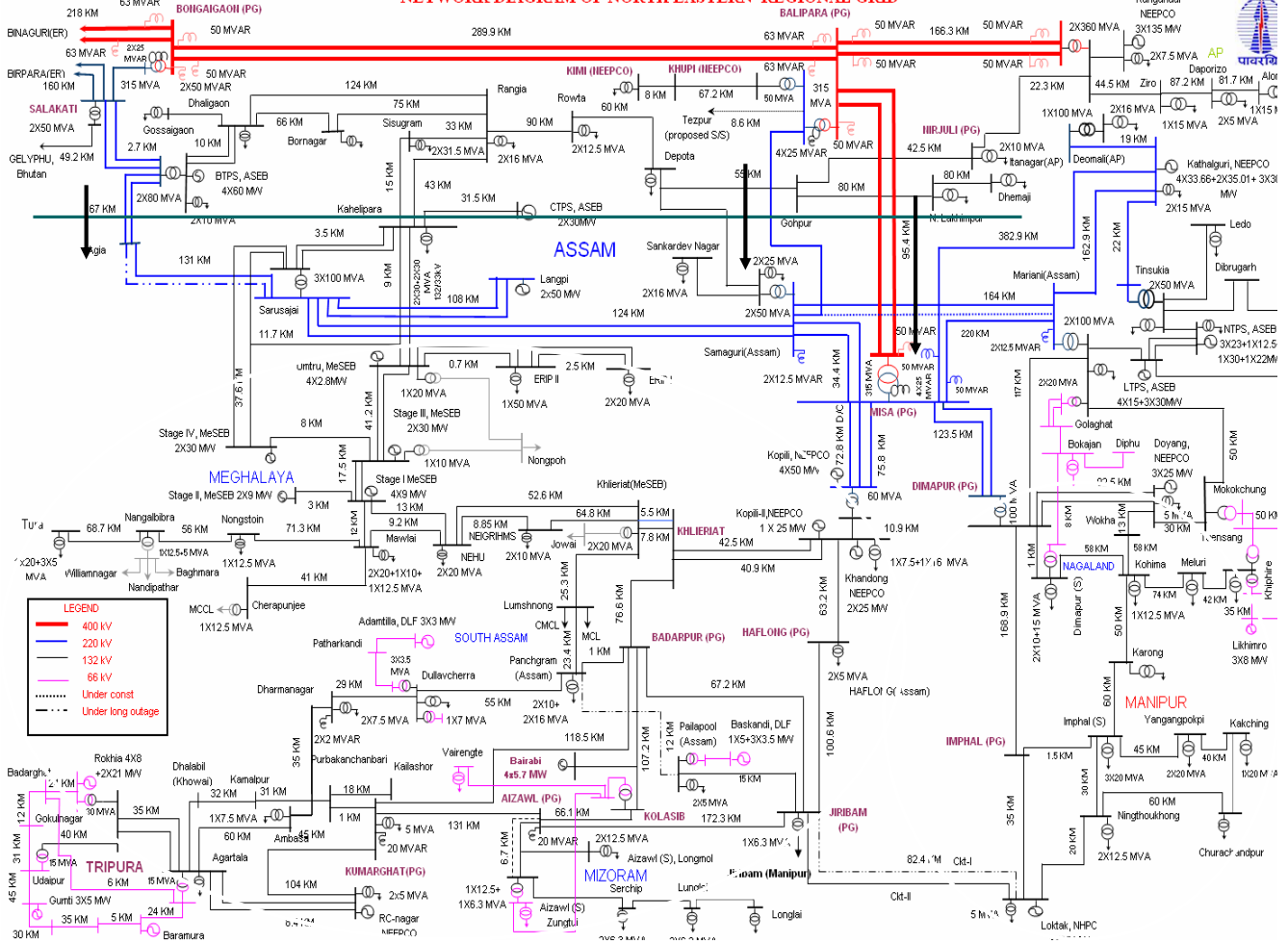
Amt. utilized for training purpose during 2009-10 8709794

Total Amt available in bank 19960889

* The billing figures are as per weekly Reactive Account issued by NERPC Secretariat.

NB : If Payable to pool is less than receivable in any week, Payable and Receivable are made equal by proportionately reducing the receivables.

Special Protection Scheme (SPS) of 132 KV pocket in NER Grid

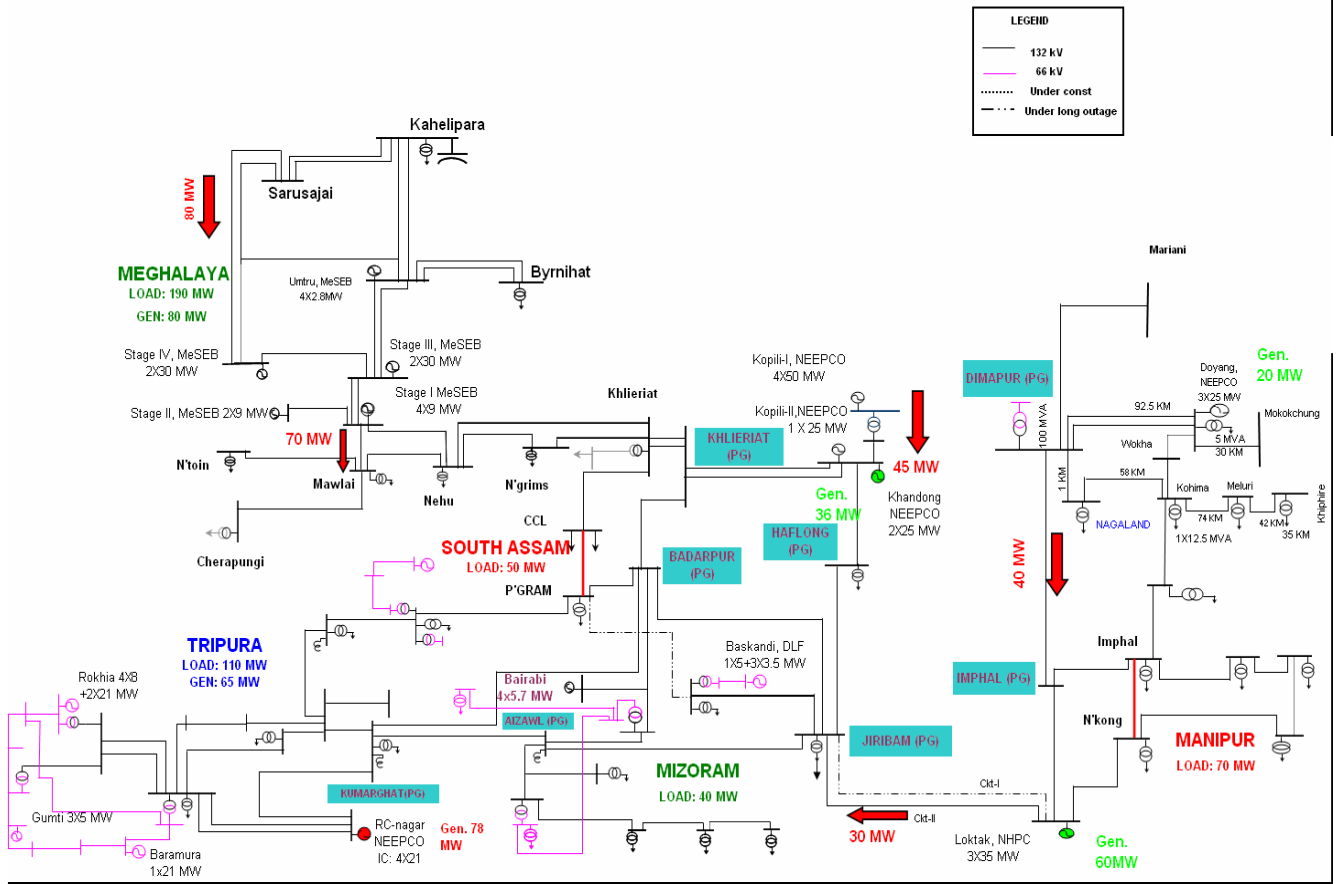


Grid Disturbances in the 132 KV Pocket in 2008

SR.NO.	NAME OF THE ELEMENT	NO. OF INCIDENTS
1	132 KV LOKTAK-JIRIBAM -II	1
2	132 KV DIMAPUR-IMPHAL	5
3	132 KV KOPILI –KHANDONG	2
4	132 KV R C NAGAR-KUMARGHAT	4
5	132 KV SIDE KOPILI M/C	1
6	100 MVA DIMAPUR ICT	1
7	132 KV BADARPUR-KHLIERIAT	1
8	FAULT AT KHLIERIAT (PG) S/S	1
9	R C NAGAR UNITS TRIPPING	1
10	132 KV ST-I ST-III CKT-I	1
11	132 KV SARUSAJAI-ST-IV LINE	1
12	132 KV NEHU-SUMER / NEHU-MAULAI	1
	TOTAL	20

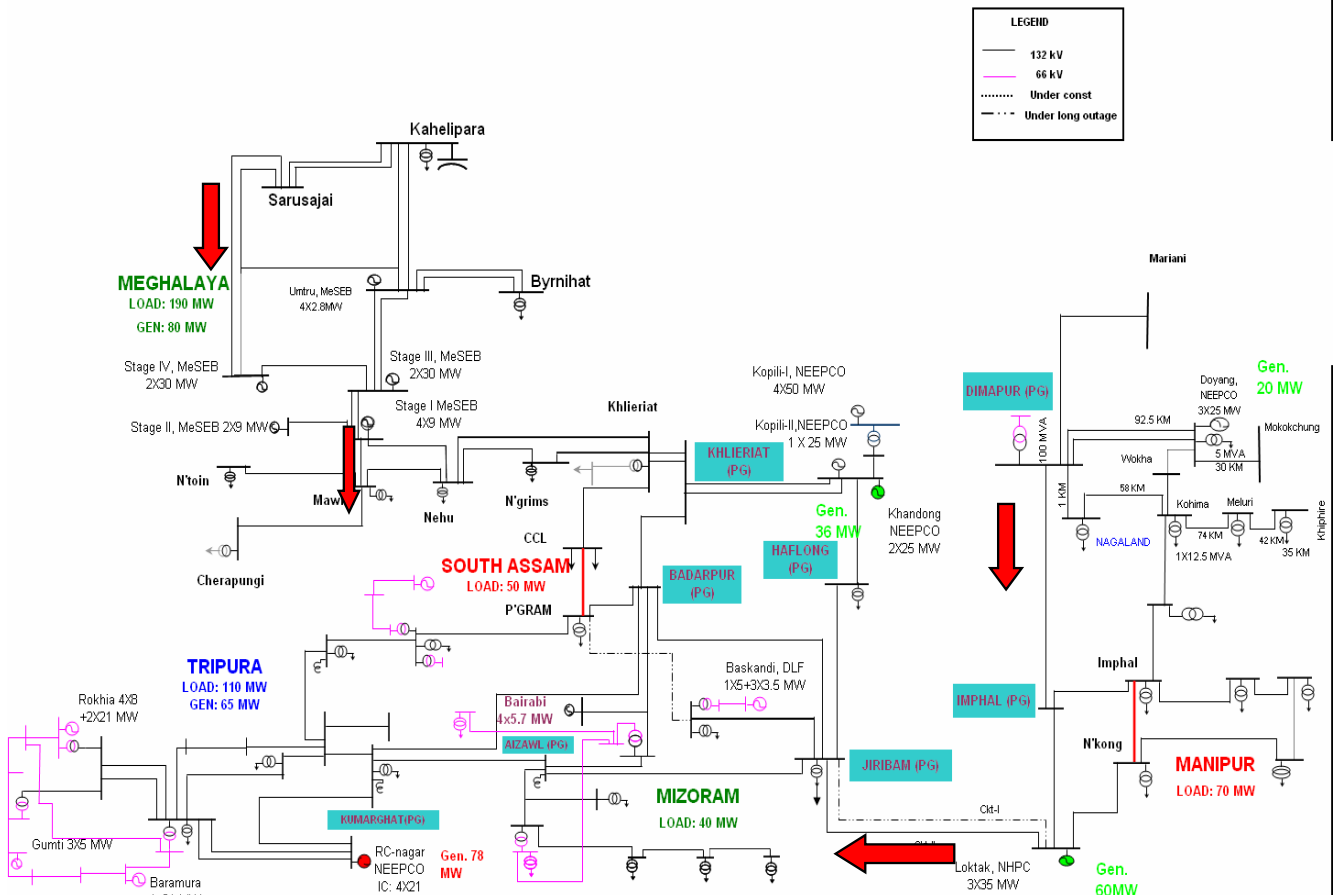
NORTH EASTERN REGIONAL GRID 132 KV POCKET

(PEAK LOAD HOURS - LEAN HYDRO)



NORTH EASTERN REGIONAL GRID 132 KV POCKET

(PEAK LOAD HOURS - LEAN HYDRO)



Grid Disturbances in the 132 KV Pocket in 2008

➤ **GD ATTRIBUTABLE TO TRIPPING OF
DIMAPUR-IMPHAL : 45%**

➤ **GD DUE TO TRIPPING OF LOK-JBM : 20%**

SPS to address the most credible contingencies

- **132 KV DIMAPUR-IMPHAL S/C LINE.**
- **132 KV LOKTAK-JIRIBAM S/C LINE.**
- **132 KV STAGE I – MAWLAI**
- **132 KV SARUSAJAI-UMTRU**

SPS FEATURES -

- 1. INTER-TRIP ON TRIPPING OF LINES**
- 2. UFR AT STRATEGIC LOCATIONS TO LIMIT FREQ FALL IN
CASE OF ISLANDING.**

SPS TO TRIGGER INTER-TRIP

1. **ON TRIPPING OF DIMAPUR-IMPHAL** (ACTION POWERGRID)
 - **IMPHAL-IMPHAL IS TRIPPED – IN LH PERIOD**
2. **ON TRIPPING OF LOKTAK-JIRIBAM** (ACTION POWERGRID)
 - **BADARPUR-PANCHGRAM IS TRIPPED**
3. **ON TRIPPING OF SARUSAJAI-UMTRU** (ACTION MeSEB)
 - **UMTRU-BYRNIHAT IS TRIPPED**
4. **ON TRIPPING OF STAGE-1 – MAWLAI** (ACTION MeSEB)
 - **NEHU-MAWLAI IS TRIPPED**

UFR TO RESTRICT FREQUENCY FALL - IN CASE OF NON-OPERATION / MALFUNCTION OF INTER-TRIP RESULTING IN ISLANDING

EXISTING UFRs IN NER – 3 NOs.

1. **NIRJULI – GOHPUR FEEDER - 48.4 HZ SETTING**
2. **RANGANADI-NIRJULI FEEDER – 48.2 HZ SETTING**
3. **SAMAGURI – 48.3 HZ SETTING** (AEGCL TO RETURN THE RELAY TO POWERGRID)

THESE UFRs WILL HAVE TO BE RELOCATED BY POWERGRID TO -

1. **MAWLAI-NONGSTOIN FEEDER – 48.6 HZ SETTING**
2. **LOKTAK-NINGTHOUKONG FEEDER – 48.4 HZ**
3. **AIZAWL-ZEMABAK FEEDER – 48.2 HZ SETTING**

Advantages of SPS

- GRID SECURITY IS ENHANCED
- DISTURBANCES & ASSOCIATED GENERATION LOSS IS MINIMISED.
- TIME DURATION OF LOAD LOSS IS REDUCED
- IN CASE OF CONTINGENCY, RESTORATION IS FASTER.

AVOIDABLE GRID DISTURBANCES THROUGH SPS

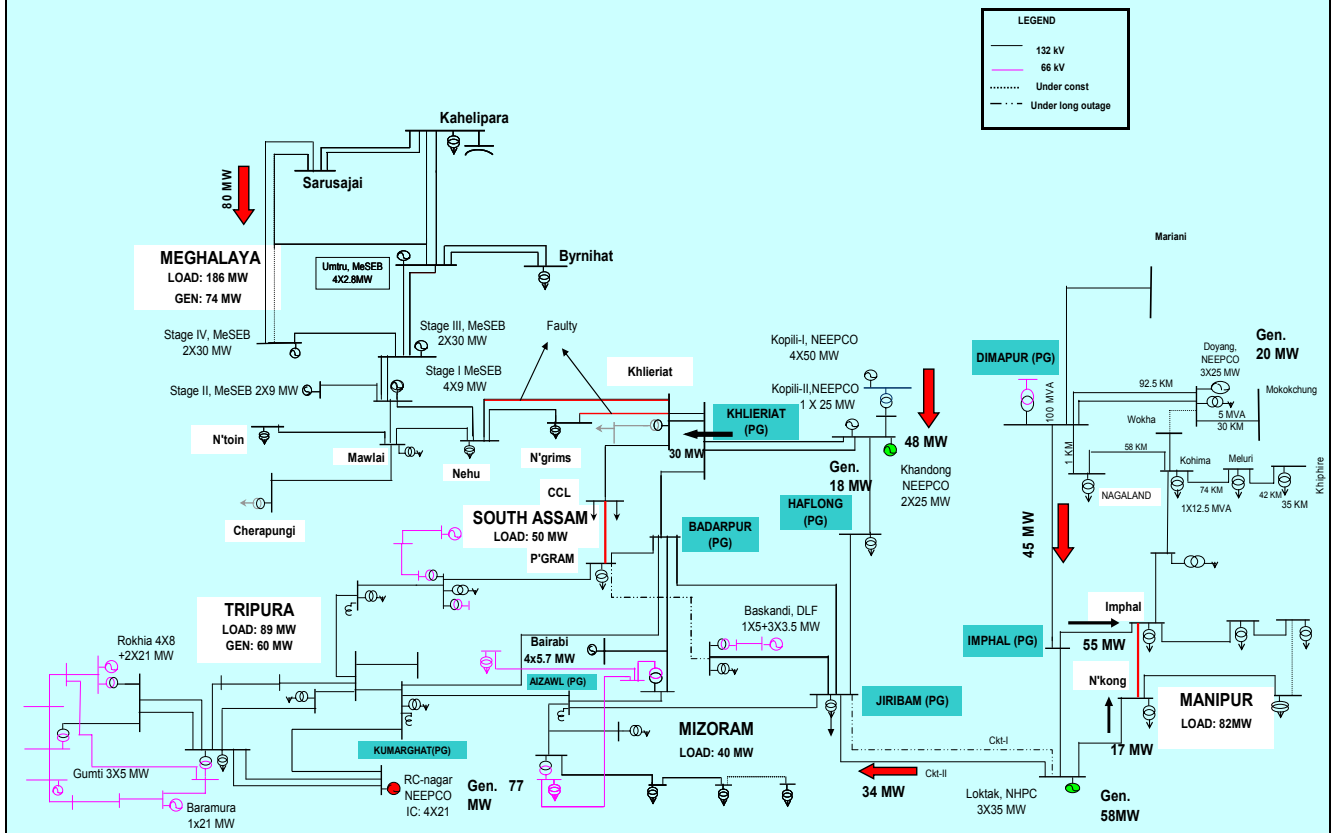
CASE -1

➤ On 19.12.09 at 21:06 hrs, 132 kV Dimapur - Imphal line tripped on DP, Z1,R-Y-Ph fault (132 Kv Nehu-Khlieriat D/C was faulty). Due to this tripping , 132 kV system comprising of Tripura, Manipur, Mizoram, South Assam and part of Meghalaya got isolated from rest of the grid and collapsed on to load - generation mismatch.

In this case SPS could have prevented the disturbance by load-shedding in Manipur through inter-trip of 132 kV Imphal-Imphal line (132 kV Ningthoukong-Imphal kept open).

NORTH EAST REGIONAL GRID 132 KV POCKET

(132 KV POCKET OF NER GRID 19.12.09, 21:06 HRS)



AVOIDABLE GRID DISTURBANCES THROUGH SPS

CASE -2

➤ On 06.10.09 at 1528 hrs, 132 kV Loktak -Jiribam -II tripped on DP Zone -1, causing tripping of 132kV Kopili - Khandong on over current (132 kV Stg-I – Stg-III D/C was open).

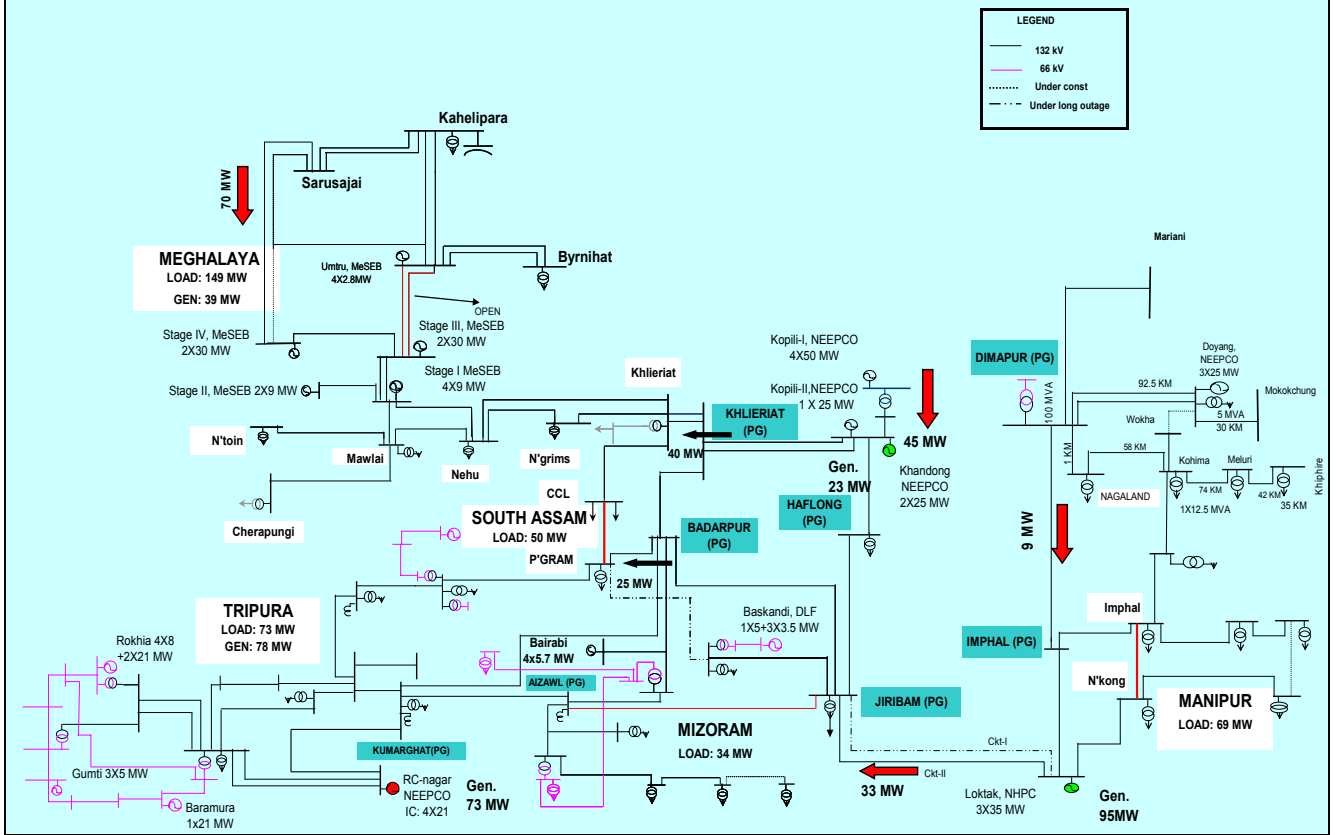
➤ This caused isolation and subsequent collapse of 132 kV system comprising of Mizoram, South Assam and part of Meghalaya due to load generation mismatch.

➤ Tripura system survived with AGTPP.

In this case SPS could have prevented the disturbance by stopping overload in 132 kV Kopili-Khandong line through inter-trip of 132 kV Badarpur-Panchgram line.

NORTH EAST REGIONAL GRID 132 KV POCKET

(132 KV POCKET OF NER GRID 06.10.09 15:28 HRS)



Thank You

List of Participant in 8th NER Power Committee Meeting

<u>Name</u> S/Shri	<u>Designation</u>
1. Phunzathang Tonsing	Hon'ble Power Minister, Assam & Chairperson, NERPC
2. Manik Dey	Hon'ble Power Minister, Tripura
3. D.Y.Sema	Hon'ble Power Minister, Nagaland

Organisation	Name S/Shri	Designation
Arunachal Pradesh	1. J. Tato 2. W. Rehman	Chief Engineer (Power) West Zone Executive Engineer (SLDC)
Assam	1. G.K. Das 2. H. Hazarika 3. R. L. Barua 4. M.K. Adhikary 5. K. Goswami 6. B. M. Saikia	GM, (Com), APDCL DGM, (LD&C), AEGCL DGM, AEGCL Sr. Manager (Com), APDCL Sr. Manager (Com), APDCL Sr. Manager (Com), APDCL
Manipur	1. L. P. Gonmei 2. N. Sarat Singh 3. L. Priyokumar 4. R. K. Kishore Singh 5. Ng. Birjit Singh 6. Aton Singh 7. Khamba Singh 8. Shanti Kumar 9. T. Tunlalian	Principal Secretary (P), Manipur Chief Engineer (Power) & Chairman, TCC Addl. Chief Engineer (P) Addl. Chief Engineer (P) Superintending Engineer (P) Superintending Engineer (Com) Superintending Engineer (P) Executive Engineer (P) Executive Engineer (P)
Meghalaya	1. K. Marbaniang 2. T. Passah 3. F. Kharshiing	Chief Engineer (T&T) Superintending Engineer (SLDC) Executive Engineer (SLDC)
Mizoram	1. C.L. Thangliana. 2. Jolly Newman 3. C. Lianlunga	Engineer-in-Chief (Power) Joint Secretary (P&E) Superintending Engineer (SLDC)
Nagaland	1. Koshe Sale 2. Kasho Chishi	Superintending Engineer (Power) Executive Engineer (P)
Tripura	1. Sanjeev Ranjan 2. K. Chakrabarty 3. M. Debbarma	Principal Secretary (P), Tripura Director, TSECL Additional General Manager, TSECL
NHPC	1. D. K. Ray 2. R. Raina 3. V. S. Sahi 4. Y. Surjamani Singh	General Manager (Loktak) Chief Engineer Chief Engineer Manager (E), (Loktak)
NEEPCO	1. P. K. Singha 2. Arup. Ch. Sarm 3. D. K. Saikia 4. Bhaskar Goswami	Executive Director (O&M) Sr. Manager (E) Sr. Manager (E) Sr. Manager (E)
NERLDC	1. T.S. Singh 2. R. Sutradhar	Addl. General Manager Chief Manager

SPEECH BY SHRI O. IBOBI SINGH, CHIEF MINISTER,
MANIPUR

Hon'ble Power Ministers of North Eastern Region, Board Members of North Eastern Regional Power Committee, officials of the Central and the State Governments as well as other Central and State Organizations, distinguished guests, ladies and gentlemen.

It is a great pleasure for me to be able to address the members of this august gathering on the occasion of the 8th NERPC meeting here at Imphal.

As we all know, the economic development of this region depends largely on the power demand which is growing day by day. The shortage of power has become a matter of serious concern of all North Eastern States. This has arrested the growth of economy in general and affected the quality of the life of people of this region particularly. Our concerted effort and thrust therefore, should be on the timely completion of power projects and the associated transmission systems interlinking the states of the region. The demand will further increase after the completion of the flagship programmes of village electrification under Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) in all the states and after implementation of Accelerated Power Development Reforms Programme- II (APDRP-II). So, I appeal all the Central and State Government organizations to explore all means to harness the untapped resources of power in the region.

Manipur Government has decided to implement (3 x 22) 66MW, Loktak Downstream Hydro Electric Project from the Fiscal Year 2010-11 as a joint venture project with NHPC. Tipaimukh H.E.P (6x250) MW is also finalised to take up by the State Government with NHPC and Satluj Jal Vidyut Nigam Ltd.

I believe the Central Sector Generating utilities, NEEPCO, NHPC, NTPC and OTPC will maintain strict schedule to commission their ongoing projects like Kameng HEP (600 MW), Lower Subansiri HEP (2000 MW), Bongaigaon (750 MW) and Pallatana (740 MW) respectively within scheduled commissioning time. The commissioning of your projects at Pallatana and Bongaigaon will definitely improve the much needed base load, improve the thermal-Hydro mix and transform the power scenario in the region during dry seasons.

I express my gratitude to the Government of India, specially the Central Electricity Authority (CEA), and PGCIL for their constant efforts in formulation and finalisation of Transmission system designed with high capacity corridor for every state taking into consideration of present transmission constraints being faced by some states particularly Manipur, and also for ensuring delivery of allocated power from above upcoming projects of Pallatana, Bongaigaon, to each beneficiary state. I once again appeal all stakeholders and beneficiary states for implementation of the important resolutions adopted in the 6th NERPC meeting held on 8th August 2008 at Gurgaon on the proposed new Transmission lines for NER System Strengthening and Associated Transmission System as proposed in the Transmission Plan of CEA linked with Pallatana GBPP (740 MW), Bongaigaon TPS (750 MW), Monarchak TGBPP (104 MW), Kameng HEP (600 MW), Subansiri lower (2000 MW). It should be our collective endeavour to implement the programme for development of Transmission System within the region as well as inter Regional links as the priority need for evacuation of power generated in the region as well from outside, in a way to accelerate the pace of Capacity addition in the region. I am given understanding of the request of CEA to MOP to take up the proposal with the Planning Commission for allocation of funds so that Transmission Schemes for NER, both inter-state, & intra state could be funded on the basis of 90% grant and 10% loan.

In the NERPC meeting held on 8th August, 2008 at Gurgaon the transmission system associated with Pallatana and Bongaigaon generation projects was discussed and agreed to be taken up as a regional project. To ensure that the new generation capacity does not get stranded it was decided that Constituents of NER would sign the Bulk Power Transmission Agreement (BPTA). Accordingly, all states have signed the BPTA. However, in the BPTA signed by Assam State Electricity Board (ASEB) (1) Silchar - Imphal 400kV D/C line (initially operated at 132 kV), (2) Silchar - Melriat 400kV D/C line (initially operated at 132 kV), (3) Silchar - P. K. Bari 400kV D/C line (initially operated at 132 kV) and (4) Pallatana - Surajmaninagar 400k V D/C line (initially operated at 132 k V) are excluded. The lines, (1) Silchar - Imphal, (2) Silchar - Melriat, (3) Silchar - P.K. Bari and (4) Pallatana - Surajmaninagar pass through difficult terrain, which make it difficult to find the Right of Way. Considering the long term requirements of transfer of power for delivery of share to NER states from Pallatana, Bongaigaon TPS as well as other generation projects in NER like Lower Subansiri and Kameng HEP, these lines have been planned as 400 kV lines to be operated initially at 132 kV. The main idea behind it is that new transmission lines coming up in the region should be able to transmit the required energy for another twenty to twenty-five years. For my state Manipur alone the estimated peak demand by the year 2021-2022 will reach 445 MW as per the Seventeenth Electric Power Survey.

For drawing Manipur's share from Pallatana and Bongaigaon generation projects, Silchar - Imphal 400 KV D/C line initially operated at 132 KV is the vital link. This line will terminate at Imphal (New) 132/33 KV sub-station. For the construction of the sub-station the required land adjacent to the existing Imphal 132 KV PGC I substation has already been acquired. I do hope that this forum takes a favourable decision for the construction of Silchar - Imphal 400kV D/C line (initially operated at 132 kV).

I believe today's deliberation shall address and finalize obtaining the necessary approval/signatures from all Hon'ble Power Ministers of NER to get appointment with Hon'ble Prime Minister of India for getting approval of funding. I also appeal to all central PSU'S and beneficiary states to extend mutual understanding and create an atmosphere of goodwill respecting the interest and aspiration of other constituents for a harmonious development of Inter-state Transmission, sub-transmission and Distribution System.

This will mitigate the problems encountered by some constituents on transmission line inadequacy and will help meeting the challenges of load growth.

I hope the deliberations in this meeting will be fruitful in addressing the shortfalls and difficulties at present being faced in the power sector of the region.

At the end my special thanks to the organizers of the NERPC meeting and the Electricity Department, Manipur who have taken pains to arrange and host the meeting at Imphal. I wish a comfortable stay for all of you.

JAI HIND.

Speech by Shri Phungzathang Tonsing, Minister of Power, Manipur & Chairperson, NERPC

My esteemed colleagues -

1. Shri Manik Dey, Hon'ble Minister of Power, Tripura
2. Shri D.Y. Sema, Hon'ble Minister of Power, Nagaland
3. Shri L.Thanzara, Hon'ble Parl.Secy. I/C Power, Mizoram,
4. Chairman of State Electricity Boards of Assam & Meghalaya
5. Chairman-cum-Managing Director of Tripura State Electricity Corporation Ltd.,
6. Senior Officials of both Central and State Governments and distinguished Guests.

It is indeed a great privilege for me to host this august gathering and take the opportunity to welcome you to the 8th Meeting of the North Eastern Regional Power Committee here at Imphal and to have a unique opportunity to exchange views on policies and programmes for more generation and transmission of power for upliftment of the North Eastern Region as well as to suggest steps relating to the regional and state interest in the power sector. The meeting was fixed earlier to be held in November, 2009, however, it has been postponed due to compelling circumstances. The delay in holding this meeting may be condoned.

The power scenario in our region is far below satisfactory. The present effective capacity of the region is about 2108 MW. Out of this 1268 MW is from Hydro generation and 840 MW from Thermal and Gas generations.

The projected peak demand in January, 2010 is about 1818.1 MW, but the projected availability is only 1413.2 MW leaving a deficit of 22.27%, in spite of availability of rich Hydro & Thermal potential. Though the hydro potential of the region is about 63,257 MW which is about 70% of the total potential of the country, we have harnessed only a small fraction of it. Major generation & transmission scheme of this region are implemented by the Public Sector Units of the Government of India. I suggest this forum may request the Government of India to enhance the fund flow for development of Hydro Power Generation on consideration of economic upliftment of this poor Industry region and reducing power crisis of the country.

I do hope the commissioning of the projects at Pallatana and Bongaigaon will definitely improve the much needed base load, the thermal-hydro mix and transform the power scenario in the region during dry seasons. In view of this, I would like to request the Central Sector Generating Utilities for early commissioning of these ongoing projects like Kameng HEP (600 MW), Lower Subansiri HEP (2000 MW), Bongaigaon (750 MW) and Pallatana (740 MW).

We are all aware that the management of Power Generation & Distribution in this region is a big issue. The export of surplus power during off-peak to the Eastern Region is much appreciated. This will improve the exceptionally low plant load factor of the generation stations in this region.

I appeal all stakeholders and beneficiary States to implement the important resolutions adopted in the 6th NERPC meeting held on 8th August, 2008 at Gurgaon on the proposed new Transmission Lines for NER System, Strengthening and Associated Transmission System as proposed in the Transmission Plan of CEA linked with Pallatana GBPP (740 MW), Bongaigaon TPS(750MW), Monarchak GBPP (104 MW), Kameng HEP (600MW), Subansiri lower (2000 MW). It should be our collective endeavour to implement the programme for development of Transmission System within the region. I am given understanding of the request of CEA to MOP to take up the proposal with the Planning Commission for allocation of funds so that Transmission Schemes for NER, both inter-state, & intra state could be funded on the basis of 90% grant and 10% loan.

The transmission system associated with Pallatana and Bongaigaon generation projects was discussed and agreed to be taken up as a regional project in the NERPC meeting held on 8th August, 2008 at Gurgaon wherein it was decided that Constituents of NER would sign the Bulk Power Transmission Agreement (BPTA) so that the new generation capacity does not get stranded. Accordingly, all states have signed the BPTA. However, in the BPTA signed by Assam State Electricity Board (ASEB) (1) Silchar - Imphal 400kV D/C line (initially operated at 132 kV), (2) Silchar - Melriat 400kV D/C line (initially operated at 132 kV), (3) Silchar - P. K. Bari 400 KV D/C line (initially operated at 132 kV) and (4) Pallatana Surajmaninagar 400kV D/C line (initially operated at 132 kV) are excluded.

It may be mentioned here that the lines, (1) Silchar - Imphal, (2) Silchar - Melriat, (3) Silchar - P. K. Bari and (4) Pallatana - Surajmaninagar are passing through difficult terrain having constraints in availability of Right of Way. These lines therefore have been planned as 400 kV lines to be operated initially at 132 kV, keeping in view the long term requirements of transfer of power for delivery of share to NER states from Pallatana, Bongaigaon TPS as well as other generation projects in NER like Lower Subansiri and Kameng HEP. I wish to re-iterate that it is a right decision since the demand of power in the region is increasing in leaps and bounds and transmission lines cannot be constructed every now and then as and when required. New transmission lines coming up in the region should be able to transmit the required energy for another 20 to 25 years. For my state Manipur alone, the estimated peak demand by the year 2021*2022 will reach 445 MW as per the 17th Electric Power Survey.

Silchar - Imphal 400kV D/C line (initially operated at 132 kV) is vital for drawing Manipur's share from Pallatana and Bongaigaon generation projects. This line will terminate at Imphal (New) 132/33 kV sub-station to be constructed adjacent to the existing Imphal 132 kV PGCIL sub-station. Land required for the construction of the sub-station has already been acquired. I do hope that this forum takes a favourable decision for the construction of Silchar - Imphal 400kV D/C line (initially operated at 132 kV).

The matter regarding setting-up/up-gradation of SLDCs in NER was discussed in the Special TCC meeting held on 03.07.2009 at Guwahati and PGCIL presented the feasibility plan. On the basis of the recommendation of special TCC of NERPC and in line with the decision taken in 7th NERPC meeting held on 24th February 2009, NER Power Committee may discuss and decide the process of DPR reparation by all NER States to establish upgraded/full-fledged SLDC in their respective states and approve preparation of the combined proposal on the lines of ULDC scheme. The states of Mizoram, Arunachal Pradesh, Nagaland & Manipur have requested POWERGRID for preparation of Detailed Project Report (DPR) for the establishment of SLDC.

The present methodology adopted for sharing the allocation of power from Central Sector Projects need further deliberation. The level of infrastructure development, difficult hilly terrains, and per capita consumption of energy of NER states are some of the parameters or yardstick to be given due weightage in allocation of the benefits from the central sector projects both Generating Stations, and in planning Associated Transmission lines. Absence of such similar parameters will further place the less-developed state in a disadvantageous level and the economic development will remain behind the rest of country. A committee may be constituted for looking into this aspect.

I thank each one of you for your kind participation in this meeting and hope that the deliberations of this meeting would be fruitful and promote the development of power sector in the region in the years to come.

Jai Hind

**SPEECH OF SHRI MANIK DEY, MINISTER OF POWER, TRANSPORT, RD
(PANCHAYAT), URBAN DEVELOPMENT, FOOD, CIVIL SUPPLY &
CONSUMER AFFAIRS & LABOUR, GOVERNMENT OF TRIPURA**

Hon'ble Power Minister of Manipur and Chairman of NERPC,

Hon'ble Power Ministers of North Eastern States, Hon'ble Chairperson of CEA, Officers of State Power Departments / State Power utilities, Central Power utilities, Senior officers of central and state Governments, Distinguished Guests & Special invitees, Ladies and Gentlemen.

It is indeed a great privilege for me to participate in the 8TH NERPC meeting being held today at Imphal. I would like to express my sincere thanks and gratitude to the Manipur Power & Electricity Department for making excellent arrangements for the meeting.

As we all are aware NERPC plays a vital role in ensuring that the power system is efficient and reliable in pursuing to achieve our National Objective of Power for all by 2012. I wish today's Conference will give a boost to the endeavour for making power availability to every home in every villages of the country including far-flung villages in the State of Tripura and elsewhere. It is also important that power should be available to all villagers in the region particularly to those who are financially weak.

RGVY now under implementation in the State and in the Region promises to provide access to power for all the citizen of the State particularly the BPL families living in partly electrified and for un-electrified villages in the State. There is of course a matter of concern with regard to the coverage quantum of sanctioned fund and the requirement of actual fund for achieving the objective of RGVY i.e. to provide power to all by the year 2011-2012. Even at a preliminary stage of survey now being conducted it is seen that the sanctioned cost may not match the required fund requirement for full coverage. This issue may be common to all the States and certainly not limited to Tripura alone.

I would request all the constituents of NERPC to deliver on this matter and take it up at the appropriate level so that implementation of RGVY does not create a division amongst the villagers where a part of them are not be covered by this scheme due to inadequacy of sanctioned fund and therefore may reasonably feel discriminated. This apart from creating frustration may belie their expectation as promised in the flagship scheme of RGVY'.

One major issue of concern to all of us in the North Eastern Region is the limitation of transmission network in the region which seriously impede transmission of power from State to the Grid and from Grid to the State and in matters of Inter-State transmission. The Ministry of Power has taken initiative for strengthening the transmission system with regard to enabling the system for evacuation of power from Palatana Gas Based Station, Bongaigaon Thermal Power Station and Kemeng Hydro Electric Power. Similarly the transmission system of the States which are linked with absorption of State power as would be available from the in-coming generating stations in Monarchak, Palatana, Bongaigaon etc. must also be strengthened and this can only be done only with liberal infusion of capital as grant to the extent of 90% to the respective States.

Ministry of Power has also advised to strengthen all the existing Sub transmission and Distribution system in the Region so that the same can match the higher level of power generation and subsequent transmission, distribution within the State and outside the State. Such schemes which are related to the 11th Plan and 12th Plan should be taken up immediately by the Govt. of India with funding of 90:10 (Grant: Loan). PGCIL is preparing the DPRs and they may be advised to complete this exercise speedily and submit to the Govt. of India for approval and also for investment concurrence.

Two Projects, both Gas Based, are in the pipe line for implementation in Tripura, namely Monarchak GBPP (104 MW) and Palatana GBPP (726.6 MW). Monarchak obtained PIB and CCEA clearance at an approximate cost of Rs. 400 crores but because of the delay in awarding the work now it is understood that the estimates have to be revised to more than Rs. 600 crores and may again require PIB clearance. The project cost has gone up because of the inordinate delay in according necessary clearances by the Govt. of India and to ensure that the people of the State get power at a reasonable rate and at the earliest the Ministry of Power needs to accord necessary clearances for the revised cost immediately. In case of Palatana the commissioning schedule is December 2011 (Unit-I) and Unit-II in March, 2012. As things stand now, it is very difficult to expect this commissioning schedule to be achieved. Govt. of India particularly OTPC authorities must take steps to expedite implementation of this Project since output of this power plant shall be enjoyed by all the States in the Region and give a major boost to power availability in the Region.

Before I conclude I must mention one very important issue, that is, the implementation of the Transmission System associated with evacuation of power from Palatana GBPP and Bongaigaon TPS. Generated power from both these Stations shall be enjoyed by all the beneficiaries of NE region. In appreciation of this the NERPC in its meeting held on 8th August, 2008 discussed and agreed that the transmission system associated with Palatana and Bongaigaon generation projects be taken up as a regional project. It was also decided there that constituents of NE region would sign the BPTA so that the new generation capacity does not get bottled up. The transmission system agreed to in the said 6TH NERPC meeting were the ones decided by the Standing Committee of Power System Planning of the NE region and minuted on 25:06.2008 from the meeting held at Guwahati. It is noted from the Agenda Note circulated by NERPC that all the States have signed the BPTA in its entirety. However, Assam has signed with exclusion of the following lines.

- 1) Silchar-Imphal- 400 KV D/C line (initially operated at 132 KV).
- 2) Silchar- Melriat 400 KV D/C line (initially operated at 132KV).
- 3) Silchar-P.K.Bari 400 KV D/C line(initially operated at 132 KV).
- 4) Palatana - Surjamaninagar 400 KV D/C line (initially operated at 132 KV).

I would like to impress upon all concerned to appreciate that the decision for the coverage of ATS and system of strengthening of transmission system/regional system proposed under PGCIL scope of works (Pooled system of NER) was agreed upon in the Standing Committee meeting of Power System Planning in the NER where representatives of all the constituents were present and was subsequently approved by the NERPC.

As far as Tripura is concerned we can only stress that 2(two) lines of **Palatana - - Surjamaninagar 400 KV D/C (initially charged at 132 KV) and Silchar - P.K.Bari (PG) 400 KV D/C (initially charged at 132 KV)** as also 132 KV Sub-station at P.K.Bari (PG) up-gradable to 400 KV Sub-station and the Surjamaninagar Sub-station itself are essential for not only Tripura, but also for Palatana Project since these will provide linkage to the State Grid and some redundancy for evacuation of Palatana Power and also the power to the Station to be used as start-up power. I would, therefore, strongly plead that all my colleagues in the NERPC may please approve / sign the BPTA in its entirety so that the work by Power Grid does not get held up.

I would once again like to thank you all. I am sure that today's deliberations would lead to certain actionable outcomes.

Thank you.

Annexure-VII

Speech of Shri Pradyut Bordoloi, Minister of Power, Industries, Commerce and Public Enterprises, Government of Assam

I would like to express my sincere gratitude to all the Members of North Eastern Power Committee for their help and co-operation in carrying on the business of the Committee during last year. Without your active involvement and sincere efforts, it would have been impossible for me to achieve the desired objectives of the Committee as its Chairman. I congratulate Honourable Minister of Power, Manipur on his becoming the Chairman and would assure full co-operation of my State in the development of Power Sector in the Region. I feel sorry for not having been able to attend this meeting due to my preoccupation with some other official responsibilities.

We are at a crucial phase of evolution of power supply industry. Path breaking changes are taking place worldwide in the way the business of power supply is carried on. A leading manufacturer of gas turbines has recently tested a very efficient combined cycle gas turbine with heat rate of as low as 1400 KCal/Kwh. In the transmission, more robust technologies are now available helping transfer of power in large volumes at a very high voltage. Some of us have already visited Nordpool last summer and witnessed for ourselves how competition is becoming the mantra in the electricity supply. Our country is also not aloof from these developments though we have a very different set of challenges of meeting the growing needs of the electricity. However, we are confident that under the able leadership of Dr Manmohan Singh, our Hon'ble Prime Minister we will see rapid strides in Power Sector.

Our region has immense potential for power generation from the natural resources of the region. Yet we face one of the worst shortages in the country. With all the villages getting electrified under RGGVY the power demand will go up exponentially. We have been sharing our power resources with each other being part of the NE grid. Believing the same philosophy, we have asked NTPC to develop the largest coal based thermal power station of the region at Bongaigaon as a regional power station handing over land and other assets free of cost so that power can be made available at affordable cost to all the seven States. Need of the hour is to ensure faster completion of ongoing projects and giving early clearance for new projects. This is the only way we can meet the demand of power.

Fostering the regional co-operation, we have agreed to the proposal of the Central Government for sharing the facilities from a common data center that is expected to be built in Guwahati under R-APDRP. We have agreed to provide land free of cost for data-center. Efficient implementation of R-APDRP will help all of us to control system losses and help introducing competition.

The cost of electricity is a concern for all of us as a large section of our people can not afford expensive electricity. Economy and efficiency in operating the power system is mandate given by the Electricity Act, 2003 to all the players in the sector. Basic objective of setting up this Committee is to agree on the matters concerning economy and efficiency of the power system. Though the region has cheap and clean sources of electricity generation like hydro and gas, yet we suffer from very high charges for the regional transmission system. This takes away whatever little advantage this region has as compared to other regions of the country. It is in this light that we should consider making future investments in transmission system of the region. Any further hike in the already high transmission charges will hurt all of us badly and is clearly unacceptable.

With these few words, I wish that the deliberations of the Committee will be fruitful.

**SPEECH OF SHRI LAL THANZARA, HON'BLE PARLIAMENTARY
SECRETARY (POWER & ELECTRICITY), MIZORAM
ON THE OCCASION OF THE 8TH NERPC MEETING
HELD AT IMPHAL ON 12TH JANUARY, 2010.**

Hon'ble Chairman, NERPC, Hon'ble Power Ministers of North Eastern States, and Delegates from various States and Central Utilities.

It is a great privilege for me to attend this 8th NERPC meeting. I take this opportunity to convey my thanks to the host constituent and NERPC secretariat for making all the arrangements for conducting this meeting. I hope the deliberations that would take place would focus on matters of common interests in Power Sector, and remove shortcomings so as to ensure optimum utilization of available resources for the benefit of the Constituent States.

Development in the North Eastern Region is still a nascent stage in all respects compared to other parts of the country. The centre has adopted certain steps for inducing early development of this region to bring NER at par with other parts of the country. There has been various seminars and conclaves in connection with power development. I urge the central Government through this forum to continue this spirit for overall development of this backward region.

Here, I would like to reiterate the hardship faced by Mizoram due to acute shortage of power. I understand that the downward revision of our unallocated share was based on the consideration that there was under drawal from Mizoram during high monsoon period. Mizoram still reels under the impact of acute power shortage even during this high monsoon season which adversely affects normal life. As you know, in absence of any significant local generation, Mizoram wholly depends on our share from the Central Sector Generating Stations which is presently inadequate to meet our demand. This has resulted into heavy load shedding in Mizoram, causing acute difficulties in all walks of life. The inadequacy of our share from Central Sector generation was basically due to the continual reduction of our unallocated share from 20% (37 MW) in December, 2004 down to 8% (13 MW) by July, 2007. Under this condition, within our present total share of 65 MW and the peak demand of 100 MW the power availability is about 30 to 40 MW at best only during lean period. Besides, the existing power entitlement of Mizoram from the Central Sector Generating Stations is at the level of 5.35% only which is found not adequate. The entitlement from the Central Sector Generating Stations for Mizoram needs review. I request this Committee to address this issue adequately to remove the hardship faced by Mizoram due to acute shortage of power.

Mizoram has been compelled to resort to load shedding some times even when power generation is high and the Grid frequency is around 50.50Hz due to inadequate inter-state transformation and transmission capacity in 132KV pockets of NER. This problem is experienced till date. This matter was taken up in various NERPC meetings. The beneficiary States like Mizoram, Tripura, Meghalaya and Southern parts of Assam are still suffering badly for this reason. PGCIL has been taking up installation work of 160 MVA, 220/132 kV and the construction of 132 kV Single Circuit Kopili-Khandong line to remove this shortcoming. The expected date of commissioning, as intimated by PGCIL in the 39th OCC meeting is 30.9.2009. I request PGCIL kindly to present a status report on this matter and to confirm the schedule date of commission.

Rokhia unit V & VI have been out of operation since 31.1.2007 and 16.9.2006 respectively due to machine problem. Mizoram has been deprived of its due share from the NEC funded project for such a long time due to non-procurement of spare parts, as reported by TSECL. Although this matter is bilateral issue, it is felt that this forum may intervene to enable Mizoram to benefit Rokhia-II alternatively by displacement of 8 MW from the Tripura share of Central Sector power.

As for hydel projects in Mizoram, DPRs are prepared for several mini and micro hydel projects for which Central Government's approval would be sought. Maicham Phase-II SHP- 3 MW was commissioned on 11th November, 2009 and the project under construction viz. Serlui 'B' SHP- 12 MW is expected to be commissioned shortly. Tuirial HEP-60 MW which met a stumbling block due to various reasons is now being under active consideration for its revival. DPR had been prepared and sent to Central Government for Tuivai HEP-210 MW, viability gap-funding is being sought from the Central Government. MOU has been signed between NTPC and Government of Mizoram for the construction of the biggest hydel project of Mizoram Kolodyne Phase-II, 460 MW and good progress of work is expected with the help of a strong Government at the Centre.

I have only touched upon the general issues; there are other items and vital issues on the Agenda, which I have not touched upon. I am sure the issues raised by me and the other colleagues will be discussed and taken note of by the NERPC. It is only through joint efforts that we can demonstrate and through sanity and tolerance we can live together in peace and harmony.

I do hope that the deliberations of this meeting would be fruitful and would promote the development of Power Sector in the region in the years to come.

Thank You.

Annexure 1.1.2 (i)**ASSAM (List of Lines as cleared by CEA after deletion of some lines & S/S as per request of AEGCL)**

Sl.No	TRANSMISSION LINE	kV	Ckt.	Remarks
1	Rangia – Amingaon	220	D/C	
2	Tinsukia – Behiating (New Dibrugarh)	220	D/C	
3	LILO of one Ckt of Samaguri – Sarusajai line at Jawaharnagar	220	D/C	
4	Kahilipara – Guwahati Medical College	132	D/C	
5	Samaguri – Jakhlabandha	132	S/C on D/c	
6	Sibsagar – Moran	132	S/C on D/c	
7	Rupai-Chapakhowa (with 4KM river crossing via Dhola)	132	S/C on D/c	
8	Lanka - Lumding	132	S/C on D/c	
9	Dhemaji – Silapathar	132	S/C on D/c	
10	Silapathar – Jonai	132	S/C on D/c	
11	LILO of one Ckt of BTPS - Rangia at Bornagar	220	D/C	
12	LILO of one Ckt of Kathalguri - Tinsukia at Makum	220	D/C	
13	Bornagar - Barpeta	132	D/C	
14	LILO of Barnagar - Rangia at Pathsala	132	D/C	
15	LILO of Rangia - Rowta at Tangla	132	D/C	
16	LILO of one ckt of Rowta - Depota at Dhekiajuli	132	D/C	
17	Amingaon - Hazo	132	D/C	
18	Kukurmara - Mirza	132	D/C	
19	Kamakhya - Paltanbazar (UG cable)	132	S/C	
20	Jagi Road - Nagaon	132	D/c	
21	Nagaon - Dhing	132	S/c on D/c	
22	LILO of one Ckt of Samaguri - Lanka at Baithalangso	132	D/C	
23	LILO of Golaghat - Bokajan at Sarupathar	132	D/C	
24	LILO of Jorhat - Nazira at Teok	132	D/c	
25	LILO of one ckt. of Tinsukia-Margherita at Makum	132	D/c	
26	Sonabil - Tezpur New	132	D/C	
27	LILO of one ckt of Sonabil - Gohpur at Borgong	132	D/C	
28	LILO of Gohpur - N. Lakhimpur at Bihpuria	132	D/c	
29	Hailakandi - Karimganj	132	S/c on D/C	
30	Agia - Sonapur	132	S/c on D/C	

ASSAM						
Sl.NO	SUB-STATION (New)	Trf	No.	MVA	Total	Remarks
1	Amingaon	220	2	100	200	
2	Behiating (New Dibrugarh)	220	2	50	100	
3	Jawaharnagar	220/33	2	50	100	
4	Guwahati Medical College	132	2	40	80	
5	Jakhalabandha	132	2	16	32	
6	Chapakhowa	132	2	16	32	
7	Lumding	132	2	25	50	
8	Silapathar	132	2	16	32	
9	Jonai	132	2	16	32	
10	Bornagar	220/132	2	100	200	
11	Makum (Extension of Tinsukia)	220/132	2	100	200	
12	Barpeta	132/33	2	25	50	
13	Pathsala	132/33	2	25	50	
14	Tangla	132/33	2	25	50	
15	Dhekiajuli	132/33	2	25	50	
16	Hazo	132/33	2	25	50	
17	Mirza	132/33	2	25	50	
18	Paltanbazar	132/33	2	40	80	
19	Dhing	132/33	2	16	32	
20	Baithalangshu	132/33	2	16	32	
21	Sarupathar	132/33	2	16	32	
22	Teok	132/33	2	25	50	
23	Makum	132/33	2	25	50	
24	Tezpur New	132/33	2	25	50	
25	Borgong	132/33	2	25	50	
26	Bihpuria	132/33	2	25	50	
27	Karimganj	132/33	2	25	50	
28	Sonapur (Mancachar)	132/33	2	16	32	

S/S Augmentation & transformer replacement (Assam)						
Sl.No.	Augmentation Sub-station	Trf	No.	MVA	Total	Remarks
1	Samaguri	220/132	3	100	300	
2	Namrup	132/33	2	100	200	
3	Dhaligaon	132/33	2	40	80	
4	Narengi	132/33	2	40	80	
5	Samaguri	132/33	2	40	80	
6	Bokajan	132/33	2	25	50	
7	Sibasagar	132/33	2	40	80	

Mizoram- List as cleared by CEA (vide ref no. SP &PA/NER/83/1/2009/1051-1052 dtd. 09.10.2009

Sl.No	A : TRANSMISSION LINE	kV	Ckt.	Remarks
1	Melriat New PG -Melriat State (# 2)	132	D/c	<u>Revised against 132Kv D/C Melriat New PG - Melriat line</u>
2	Serchip - Melriat State (#1)	132	S/c	<u>Revised against 132Kv S/C Melriat New -Serchip line</u>
3	LILO of Zemabawk - W. Phaileng at Melriat State (#2)	132	D/c	Newly included
4	W. Phaileng - Marpara	132	S/c	
5	Melriat State (#1) - Lunglei	132	S/c	Newly included
6	Marpara - Lungsen routed via Thenhlum	132	S/c	<u>Revised against 132Kv S/C Marpara - Lungsen line</u>
7	Lungsen - Chawngte (charged at 33Kv)	132	S/c	Newly included
8	Chawngte - S. Bungtlang (charged at 33Kv)	132	S/c	Newly included
9	Lawngtlai - Tuipang (charged at 33 Kv)	132	S/c	Newly included
10	Lungsen - Tiabung (charged at 33Kv)	132	S/c	Newly included

Charging of existing 132kV lines at rated voltage

Sl.No	Transmission Lines	Kv	Ckt	Remarks
1	E. Lungdar - Khawawl	132	S/c	
2	Saitual - Khwazawl	132	S/c	
3	Serchip - E. Lundare	132	S/c	
4	Lunglei - Lungsen	132	S/c	
5	Lungei - Lawngtlai	132	S/c	
6	Zemabawk - W. Phaileng	132	S/c	

B. Substation

Sl.No.	New S/S	Trf	No.	MVA	Total	Remarks
1	Melriat State (# 2)	132/33	2	25	50	
2	W. Phaileng	132/33	2	12.5	25	
3	E. Lungdar	132/33	1	12.5	12.5	
4	Marpara	132/33	1	12.5	12.5	
5	Lungsen	132/33	1	12.5	12.5	
6	Lawngtlai	132/33	1	12.5	12.5	

C. S/S Augmentation & Transformer replacement

Sl.No.	Augmentation S/S	Trf	No.	MVA	Total	Remarks
1	Serchip	132/33	2	25	50	
2	Lunglei	132/33	2	25	50	
3	Kolasib	132/33	2	25	50	
4	Saitual	132/33	1	12.5	12.5	
5	Khwazal	132/33	1	25	25	

MEGHALAYA (List cleared by CEA vide ref no. SP&PA/NERR/83/1/2009/1051-1052 dtd. 09.10.2009)

A. Transmission Line				
Sl.No.	Name of Line	KV	Ckt	Remarks
1	Nagalbibra - Rongkhon (Tura)	132	S/C on D/C	
2	LILO of one Ckt of Umtru-Kyrdemkulai D/C line at Nongpoh	132	D/C	
3	Mawngap -Nongstoin - Nagalbibra	132	D/C	
4	Cherrapunjee- Ishamati	132	D/C	
5	Killing(Burnihat) - Nagalbibra (Separately for ATS of Nagalbibra) 400Kv D/C to be charged at 220Kv)	400	D/C	<u>Revised against 220Kv D/C Killing - Nagalbibra line.</u>
6	Mustem - Mawngap	220	D/C	<u>Revised against 132 Kv D/C Kkchiehriat - Jowai - Mawngap line</u>
7	LILO of both ckt of MLHEP - Khliehriat 132Kv D/C line at Minkre	132	D/C	
8	Killing (byrnihat) - Mawngap - New Shillong 220Kv D/C line	220	D/C	<u>Revised against 220Kv D/C Killing - Mawngap line to be routed via New Shillong & the section between Killing & New Shillong to be 400 Kv D/C</u>
9	Mendipathar - Phulbari	132	D/C	Newly included
10	Phulbari - Ampati	132	D/C	Newly included

B. Sub-station, New						
Sl.No.	Name of S/S	Trf	No.	MVA	Total	Remarks
1	Ishamati	132/33	2	20	40	
2	Mynkre	132/33	2	20	40	
3	Nongpoh	132/33	2	20	40	
4	Phulbari	132/33	2	20	40	
5	Mawngap (upgrading U/C 132Kv S/S to 220Kv)	220/132	2	160	320	
6	New Shillong	220/132	2	160	320	
7	New Shillong	132/33	2	20	40	
8	Mustem	220/132	2	160	320	
9	Nagalbibra	220/132	2	160	320	

C. Augmentation Sub-station & Transformer replacement						
Sl.No.	Name of Sub-station	Trf	No.	MVA	Total	Remarks
1	Umium	132/33	1	20	20	
2	EPIP-II	132/33	2	50	100	
3	Rongkhon	132/33	2	20	40	
4	Cherrapunjii	132/33	1	12.5	12.5	
5	Nongstoin	132/33	1	20	40	
6	Nagalbibra	132/33	2	20	40	

Manipur- List as Cleared By CEA.

Sl.No.	TRANSMISSION LINE	kV	Ckt.	Remarks
1	Keithelmanbi (Imphal New) - Ningthoukhong	132	D/c	
2	LILO of Yurembam - Yaingangpokpi 132kV both ckt at Keithelmanbi (Imphal New)	132	2xD/c	
3	Stringing of Yaingangpokpi - Kongba 132kV 2nd ckt	132	S/c	
4	Stringing of Kakching - Kongba 132kV 2nd ckt	132	S/c	
5	Stringing of Kakching - Churachandpur 132kV 2nd ckt	132	S/c	
6	LILO of Jiribam - Aizawal 132kV S/c line at Tipaimukh	133	D/c	
7	Rengpang - Tamenglong 132kV line	132	S/c on D/c	
8	Tamenglong - Karong 132kV line	132	S/c on D/c	
9	LILO of Imphal - Karong at Gamphajol	132	D/C	
10	Kakching - Thoubal	132	S/C on D/C	

Manipur					
Sl.No.	Sub-Station (NEW)	Trf	No.	MVA	Total
1	Tipaimukh	132/33	2	12.5	25
2	Tamenglong	132/33	1	20	20
3	Gamphajol	132/33	1	20	20
4	Thoubal	132/33	1	20	20

S/S Augmentation & transformer replacement					
Sl.No.	Augmentation S/S	Trf	No.	MVA	Total
1	Ningthoukhong (2nd tfr)	132/33	1	20	20
2	Rengpang (2nd tfr)	132/33	1	20	20
3	Jiribam (2nd tfr)	132/33	1	20	20
4	Kongba (2nd tfr)	132/33	1	20	20
5	Ukhrul (2nd tfr)	132/33	1	20	20

ARUNACHAL PRADESH(List cleared by CEA after deletion of 3(three) lines as per request of DoP , Arunachal Pradesh vide letter dated 20.07.09

Sl.No	A : TRANSMISSION LINE	kV	Ckt.	Remarks
1	Naharlagun - Seppa (charged at 33kV)	132	S/c on D/c	
2	Deomali - Khonsa	132	S/c on D/c	
3	Khonsa - Changlong	132	S/c on D/c	
4	Changlang - Jairampur	132	S/c on D/c	
5	Jairampur - Miao	132	S/c on D/c	
6	Miao - Namsai	132	S/c on D/c	
7	Pasighat - Niglok	132	S/c on D/c	
8	Khupi - Seppa (charging at 132kV)	132	S/c on D/c	
9	Roing - Anini (charged at 33kV)	132	S/c on D/c	
10	Along - Reying (charged at 33kV)	132	S/c on D/c	
11	Gerukamukh - Likabali	132	S/c on D/c	
12	Likabali - Niglok	132	S/c on D/c	
13	Along - Yingkiong (charging at 132kV)	132	S/c on D/c	

B. Substation						
Sl.No.	SUB-STATION (New)	Trf	No.	MVA	Total	Remarks
1	Pasighat	132/33	2	25	50	
2	Khonsa	132/33	2	12.5	25	
3	Changlang	132/33	2	12.5	25	
4	Jairampur	132/33	2	12.5	25	
5	Miao	132/33	2	12.5	25	
6	Seppa	132/33	2	12.5	25	
7	Niglok	132/33	2	12.5	25	
8	Likabali	132/33	2	12.5	25	
9	Yingkiong	132/33	2	12.5	25	
10	Naharlagun	33/11	2	5	10	
11	Tawang	33/11	2	5	10	
12	Roing	33/11	2	5	10	
13	Anini	33/11	2	5	10	
14	Reying	33/11	2	5	10	
C. Augmentation of S/S and transformer replacement						
Sl.No.	Sub-station	Trf	No.	MVA	Total	Remarks
1	Itanagar Augmentation	132/33	2	31.5	63	New S/S under scope of DoP, A.P.

NAGALAND (List as cleared by CEA vide ref no. SP & PA/NER/83/1/2009/1051-1052 dtd. 09.10.2009)

A. Transmission Line						
Sl.No.	Name of Line	KV	Ckt	Remarks		
1	LILO of one ckt of Dimapur - Misa 220Kv line at New Kohima	220	D/C	Newly included		
2	Mokokchung - Tuli	132	S/C			
3	LILO of Kohima- Wokha at New Kohima	132	D/C			
4	Dimapur- Jaluki- 132Kv S/C via Ganeshnagar (to be charged at 33Kv)	132	S/C	<u>Revised against 66Kv S/C Dimapur-Jaluki-Peren line</u>		
5	Jaluki - Peren 132Kv S/C (to be charged at 33Kv)	132	S/C			
6	New Kohima- Kiphre (to be charged at 132Kv)	220	S/C on D/C			
7	New Kohima- Mon (Naginimara) routed via Wokha and Mokokchung (to be charged at 132Kv)	220	S/C on D/C			
8	Wokha- Mokokchung(Nagaland) routed via Zunheboto	132	S/C on D/C			
9	LILO of Kohima-Kiphire 132 Kv D/C line at Pfutsero	132	2X D/C			
10	Mokokchung - Tuensang	132	S/C	Newly included		
B. Substation						
Sl.No.	Substation (New)	Trf	No.	MVA	Total	Remarks
1	Tuli	132/66	2	50	100	
		66/33	2	25	50	
2	Pfutsero	132/33	2	25	50	
3	New Kohima	220/132	2	100	200	
4	Tuensang	132/33	2	25	50	
5	Peren	33/11	2	10	20	
6	Jaluki	33/11	2	10	20	

C. S/S Augmentation & Transformer replacement						
Sl.No.	Name of S/S	Trf	No.	MVA	Total	Remarks
1	Dimapur (Nagaland)	132/66	2	100	200	
		66/33	2	50	100	
2	Kohima	132/33	2	25	50	
3	Wokha	132/33	2	25	50	
4	Meluri	132/66	2	25	50	
5	Mokokchung	132/66	2	25	50	
6	Kiphire	132/66	2	25	50	

Tripura - List as cleared by CEA

Sl.No.	A : TRANSMISSION LINE	kV	Ckt.	Remarks
1	Strengthening /Renovation/Reconductoring of PK Bari-Dharamnagar Durlavcherra-Panchgram-Khlieriat	132	S/c	
2	Agartala 79 Tilla - Surajmaninagar	132	S/c	
3	Surajmani Nagar - Rokhia	132	S/c	
4	Surajmani Nagar - Badarghat	132	D/c	
5	LILO of PK Bari-Ambasa at Monu	132	D/c	
6	Surajmani Nagar - Bodhjung Nagar	132	D/c	
7	Surajmani Nagar - Udaipur	132	S/c	
8	Kailashar - Dharamnagar	132	D/c	
9	Bodhjung Nagar - Jirania	132	S/c	
10	LILO of Agartala-Khowai at Haizamara	132	D/c	
11	Udaipur - Bagafa	132	D/c	
12	Bagafa - Belona	132	D/c	
13	Rabindranagar - Belonia	132	D/c	
14	Belonia - Sabroom 132kV charged at 66kV	132	D/c	
15	Rokhia-Rabindranagar	132	D/c	

B. SUB-STATION

Sl.No	New S/S	Trf	No	MVA	Total
1	Surajmaninagar (upgradable to 400kV)	132/33	2	25	50
2	Bodhjung Nagar	132/33	2	25	50
3	Udaipur	132/33	2	25	50
4	Monu	132/33	1	15	15
		132/33	1	10	10
5	Rabindra Nagar	132/33	2	25	50
6	Jirania	132/33	2	12.5	25
		132/11	1	10	10
7	Haizamara	132/33	2	12.5	25
		132/11	2	10	20
8	Bagafa	132/33	2	12.5	25
		132/66	1	30	30
		132/11	2	10	20
9	Belonia	132/66	1	30	30
		132/33	2	25	50
		132/11	2	10	20
10	Udaipur	132/66	1	30	30

S/S Augmentation & transformer replacement

Sl.No.	Augmentation S/S	Trf	No	MVA	Total
1	Kailashahar (Gournagar)	132/33	2	12.5	25
		132/11	2	7.5	15
2	Dhalabil(Khowai)	132/33	2	15	30
		132/11	2	15	30
3	79 Tilla (Agartala) incl. Augmentation of all 33kV bays	132/33	3	25	75
		132/11	2	15	30
		132/66	1	15	15
4	Mission Tilla (Dharamnagar)	132/33	2	25	50
		132/11	2	15	30
5	Ambasa	132/33	1	25	25
6	Kamalpur	132/11	2	10	20
		132/33	2	15	30

INTER-STATE (List of Lines as cleared by CEA)

Sl.No.	A : TRANSMISSION LINE	kV	Ckt.	Remarks
1	Imphal -New Kohima (Charge at 132kV)	400	D/c	
2	Silchar - Jiribam (charge at 132kV)	400	D/c	
3	Jiribam - Imphal (charge at 132kV)	400	D/c	
4	Jirbam - Melriate (charge at 132kV)	400	D/c	
5	LILO of 2nd ckt of Silchar - Bongaigaon 400kV D/c at Byrnihat	400	D/c	Ist ckt. LILO in Pallatana scope under state sector
6	Silcher - Misa	400	D/c	
7	LILO at Balipara-Khupi at Bhalukpong	132	D/c	
8	NER PP - Itanagar (Zebra conductor)	132	D/c	

Inter State					
Sl.No.	SUB-STATION	Trf	No	MVA	Total
1	Balipara second 400/220 transformer 315 MVA (Existing)	400/220	3	105	315
2	Balipara 220/132kV transformers (Existing)	220/132	2	100	200
3	Bhalukpong PG (New)	132/33	2	25	50

Substation against bay extension for new lines

1. Assam

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Rangia – Amingaon	220	D/C	40.00	
2	Tinsukia – Behiating (New Dibrugarh)	220	D/C	60.00	
3	LILO of one Ckt of Samaguri – Sarusajai line at Jawaharnagar	220	D/C	5.00	
4	Kahilipara – Guwahati Medical College	132	D/C	10.00	
5	Samaguri – Jakhlabandha	132	S/C on D/c	35.00	26.240
6	Sibsagar – Moran	132	S/C on D/c	40.00	
7	Rupai-Chapakhowa (with 4KM river crossing)	132	S/C on D/c	44.00	
8	Lanka - Lumding	132	S/C on D/c	35.00	
9	Dhemaji – Silapathar	132	S/C on D/c	50.00	
10	Silapathar – Jonai	132	S/C on D/c	70.00	
11	LILO of one Ckt of BTPS - Rangia at Bornagar	220	D/C	5.00	
12	LILO of one Ckt of Kathalguri - Tinsukia at Makum	220	D/C	15.00	
13	Bornagar - Barpeta	132	D/C	25.00	
14	LILO of Barnagar - Rangia at Pathsala	132	D/C	5.00	
15	LILO of Rangia - Rowta at Tangla	132	D/C	10.00	
16	LILO of one ckt of Rowta - Depota at Dhekiajuli	132	D/C	10.00	
17	Amingaon - Hazo	132	D/C	35.00	
18	Azara - Mirza	132	D/C	15.00	
19	Kamakhya - Paltanbazar (UG cable)	132	S/C	5.00	
20	Jagi Road - Nagaon	132	D/c	70.00	
21	Nagaon - Dhing	132	S/c on D/c	30.00	22.761
22	LILO of one Ckt of Samaguri - Lanka at Baithalangso	132	D/C	40.00	
23	LILO of Golaghat - Bokajan at Sarupathar	132	D/C	5.00	
24	LILO of Jorhat - Nazira at Teok	132	D/c	5.00	
25	LILO of one ckt. of Tinsukia-Margherita at Makum	132	D/c	10.00	
26	Sonabil - Tezpur New	132	D/C	20.00	
27	LILO of one ckt of Sonabil - Gohpur at Borgong	132	D/C	5.00	
28	LILO of Gohpur - N. Lakhimpur at Bihpuria	132	D/c	5.00	
29	Hailakandi - Karimganj	132	S/c on D/C	45.00	
30	Agia - Sunpora	132	S/c on D/C	80.00	

2. Arunachal Pradesh

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Naharlagun - Seppa (charged at 33kV)	132	S/c on D/c	70.00	
2	Deomali - Khonsa	132	S/c on D/c	31	
3	Khonsa - Changlong	132	S/c on D/c	40	
4	Changlang - Jairampur	132	S/c on D/c	40	
5	Jairampur - Miao	132	S/c on D/c	35	
6	Miao - Namsai	132	S/c on D/c	35	
7	Pasighat - Niglok	132	S/c on D/c	30	
8	Khupi - Seppa (charging at 132kV)	132	S/c on D/c	70	
9	Roing - Anini (charged at 33kV)	132	S/c on D/c	110	
10	Along - Reying (charged at 33kV)	132	S/c on D/c	40.00	
11	Gerukamukh - Likabali	132	S/c on D/c	80.00	
12	Likabali - Niglok	132	S/c on D/c	49.00	
13	Along - Yingkiong (charging at 132kV)	132	S/c on D/c	101.00	

3. MEGHALAYA

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Nagalbibra - Rongkhon (Tura)	132	S/C on D/C	80.00	
2	LILO of one Ckt of Umtru- Kyrdemkulai D/C line at Nongpoh	132	D/C	10.00	
3	Mawngap -Nongstoin - Nagalbibra	132	D/C	58.00	
4	Cherrapunjee- Ishamati	132	D/C	25.00	
5	Killing(Burnihat) - Nagalbibra	220	D/C	75.00	
6	Khliehriat- Jowai- Mawngap	132	D/C	55.00	
7	LILO of both ckt of 132Kv MLHEP-Khliehriat D/C line at Minkre	132	D/C	20.00	
8	LILO of both Ckt of Killing- Mawngap 400Kv and 200Kv D/C line at New Shillong	220	2 X D/C		
9	Killing (Byrnihat)- Mawngap 220Kv D/C line to be routed via New Shillong and section between Killing and New Shillong to be 400Kv D/C operated at 220Kv.	220	D/C	55	

4. MIZORAM

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Melriat New PG - Luangmual	132	D/c	55.00	
2	Melriat New PG - Melriat	132	D/c	30.00	
3	Melriat New - Serchip	132	S/c	60.00	
4	W. Phaileng - Marpara	132	S/c	70.00	
5	Marpara - Lungsen	132	S/c	70.00	

5. Manipur

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Keithelmanbi (Imphal New) - Ningthoukhong	132	D/c	50.00	
2	LILO of Yurembam - Yaingangpokpi 132kV both ckt at Keithelmanbi (Imphal New)	132	2xD/c	48.00	
3	LILO of Jiribam - Aizawal 132kV S/c line at Tipaimukh	133	D/c	5.00	
4	Rengpang - Tamenglong 132kV line	132	S/c on D/c	30.00	
5	Tamenglong - Karong 132kV line	132	S/c on D/c	70.00	
6	LILO of Imphal - Karong at Gamphajol	132	D/C		
7	Kakching - Thoubal	132	S/C on D/C	35.00	
8	2nd ckt Stringing of 132Kv D/C Yaingangpokpi - Kongba	132	S/C on D/C	32.28	
9	2nd Ckt Stringing of 132Kv D/C Kakchin - Kongba	132	S/C on D/C	44.95	
10	2nd Ckt. Stringing of 132Kv D/C Kakchin - Churachandpur	132	S/C on D/C	37.858	

6. NAGALAND

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Mokokchung - Tuli	132	S/C	57.00	
2	LILO of Kohima- Wokha at New Kohima	132	D/C	15.00	
3	Dimapur- Jaluki- Peren(charged at 33Kv)	66	S/C	80.00	
4	New Kohima- Kiphre	220	S/C on D/C	230.00	
5	New Kohima- Wokha-Mokokchung- Mon (Naginimara) (290 ckt km)	220	S/C on D/C	290.00	
6	Wokha- Zunheboto-Mokokchung (160 ckt.Km)	132	S/C on D/C	160.00	
7	LILO of 132Kv D/C Kohima-Kiphire at Pfutsero (5 ckt km.)	132	D/C	5.00	

7. Tripura

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Strengthening /Renovation/Reconductoring of PK Bari-Dharamnagar Durlavcherra-Panchgram-Khlieriat	132	S/c		
2	Agartala 79 Tilla - Surajmaninagar	132	S/c	20.00	
3	Surajmani Nagar - Rokhia	132	S/c	15.00	
4	Surajmani Nagar - Badarghat	132	D/c	5.00	
5	LILO of PK Bari-Ambasa at Monu	132	D/c	4.00	
6	Surajmani Nagar - Bodhjung Nagar	132	D/c	30.00	
7	Surajmani Nagar - Udaipur	132	S/c	39.00	
8	Kailashar - Dharamnagar	132	D/c	35.00	
9	Bodhjung Nagar - Jirania	132	S/c	18.00	
10	LILO of Agartala-Khowai at Haizamara	132	D/c	5.00	
11	Udaipur - Bagafa	132	D/c	30.00	
12	Bagafa - Belona	132	D/c	35.00	
13	Rabindranagar - Belonia	132	D/c	40.00	
14	Belonia - Sabroom 132kV charged at 66kV	132	D/c	35.00	
15	Rokhia-Rabindranagar	132	D/c	25.00	

8. Inter State

Sl.No	Name of Line	KV	Ckt	BOQ route length (in Km)	Approved Route length (in Km)
1	Imphal -New Kohima (Charge at 132kV)	400	D/c		
2	Silchar - Jiribam (charge at 132kV)	400	D/c		
3	Jiribam - Imphal (charge at 132kV)	400	D/c		
4	Jirbam - Melriate (charge at 132kV)	400	D/c		
5	LILO of 2nd ckt of Silchar - Bongaigaon 400kV D/c at Byrnihat	400	D/c	5.00	
6	Silcher - Misa	400	D/c		
7	LILO at Balipara-Khupi at Bhalukpong	132	D/c	5.00	
8	NER PP - Itanagar (Zebra conductor)	132	D/c		