



भारत सरकार / Government of India
विद्युत मंत्रालय / Ministry of Power
केन्द्रीय विद्युत प्राधिकरण / Central Electricity Authority
प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग
System Planning & Project Appraisal Division
सेवा भवन आर के पुरम नई दिल्ली-110066
Sewa Bhawan, R. K. Puram, New Delhi-110066
वेबसाइट / Website: www.cea.nic.in



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Date: 11th Jan., 2012

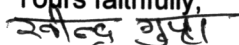
To,

- 1 The Member (PS),
Central Electricity Authority,
Sewa Bhawan, R. K. Puram,
New Delhi-110066.
- 2 The Member Secretary,
North Eastern Regional Power Committee,
Meghalaya State Housing Finance Co-
Operative Society Ltd. Building
Nongrim Hills, Shillong (Meghalaya) – 793003
Fax: 0364 – 22520030
- 3 The Director (Projects),
Power Grid Corp. of India Ltd., "Saudamini",
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Fax 0124-2571760/2571932
- 4 The Managing Director,
Assam Electricity Grid Corporation Limited,
Bijulee Bhawan; Paltan Bazar,
Guwahati (Assam) – 781001.
Fax: 0361 – 2739513 & 0361 – 2739989
- 5 The Chairman-cum-Managing Director,
Meghalaya Energy Corporation Limited,
Lum Jingshai, Short Round Road,
Shillong (Meghalaya) – 793001.
Fax: 0364 – 2590355
- 6 The Chief Engineer (Power),
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Itanagar (Arunachal Pradesh) – 791111.
Fax: 0360 – 2217302
- 7 The Chief Engineer, Department of Power,
Nagaland, Kohima
Fax: 0832 – 222354
- 8 Engineer-in-Chief
Power & Electricity Department,
Govt. of Mizoram,
Tuikhuahtlang, Aizawl (Mizoram)
Fax:0389-2320862
- 9 The Chief Engineer (Power),
Electricity Department,
Keisampat, Imphal (Manipur) -
Fax: 0385 – 2220702
- 10 The Chairman-cum-Managing Director,
Tripura State Electricity Corporation Limited,
Bidyut Bhavan, Banamalipur,
Agartala, Tripura.
Fax: 0381 – 2319427
- 11 The Chairman and Managing Director,
North Eastern Electric Power Corporation Ltd,
Brookland Compound, Lower New Colony,
Shillong (Meghalaya) – 793003.
Fax: 0364 – 2226417
- 12 The Executive Director (Engg.),
NTPC Ltd., Engg. Office Complex,
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Fax 0120-2410201/2410211
- 13 CEO, POSOCO,
B-9, Qutab Institutional Area, Katwaria Sarai,
New Delhi – 110016.
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Sub: Minutes of the 3rd Standing Committee Meeting on Power System Planning of North Eastern Region.

Sir,

The Standing Committee Meeting on Power System Planning of North Eastern Region was held on 21st December, 2011 at Katwaria Sarai, New Delhi-110 016. The minutes of the meeting are available on CEA website (www.cea.nic.in) at the following link: Home page-Wing specific documents-Power Systems-Standing Committee on Power System Planning-North Eastern Region).

Yours faithfully,

(Ravinder Gupta)
Director, SP&PA

Minutes of the 3rd Meeting of Standing Committee on Power System Planning of North Eastern Region held on 21st Dec., 2011

- 1.0 The 3rd meeting of the Standing Committee on Power System Planning of North Eastern Region was held on Wednesday the 21st December, 2011 at NRPC, Katwaria Sarai, New Delhi. The list of participants is at Annex – 1.
 - 1.1 The meeting was chaired by Member (PS), CEA. Member (PS), CEA welcomed all the participants to the meeting. He requested Director (SP&PA) to take up the agenda items.
- 2.0 **Confirmation of the minutes of previous meeting of the Standing Committee on Power System Planning in North Eastern Region (SCPSPNER) held on 25th June, 2008 at Guwahati.**
 - 2.1 The minutes of the previous SCPSPNER held on 25th June, 2008 at Guwahati issued vide CEA letter No.81/4/2003-SP&PA/706-716 dated 23rd July 2008 were confirmed.
- 3.0 **Review of Progress on Earlier Agreed Transmission Schemes**
 - 3.1 Director (SP&PA), CEA requested POWERGRID to intimate the latest status of progress of ongoing / earlier agreed transmission schemes.
 - 3.2 AGM, POWERGRID intimated that presently transmission system associated with Lower Subansiri (2000 MW) and Kameng (600 MW) hydro electric Projects has been awarded and are under implementation. The 2nd 400/220 kV 315 MVA transformer at Misa has been commissioned. The transmission system associated with Pallatana GBPP (726.6 MW) and Bongaigaon TPS (750 MW) for delivery of shares to various North Eastern Region (NER) implemented by POWERGRID is under construction and would be implemented matching with the commissioning of Pallatana GBPP. The details of the status of implementation of the earlier agreed schemes under construction / approved furnished by Powergrid is enclosed as Annexure-II.
 - 3.3 Member (PS) enquired about the status of the HVDC terminals at Biswanath Chariyalli-Agra HVDC line and Silchar sub-station. AGM, POWERGRID informed that the HVDC terminals at Biswanath Chariyalli and Agra has been awarded and would be implemented matching with commissioning of Lower Subansiri HEP. HVDC terminal at Alipurdwar has also been awarded and would be implemented in matching time frame of Punatsangchuu-II HEP in Bhutan. Silchar sub-station along with transformer, three no. 132 kV D/C lines to Assam (Srikona, Hailakandi and Badarpur) would be implemented matching the commissioning of 1st module of Pallatana GBPP.
 - 3.4 CMD, TSECL informed that 132 S/C line from Udaipur to Pallatana for providing startup power to Pallatana GBPP has been commissioned on 17.08.2011. Nine no. 132 kV bays at Surajmaninagar S/S including 2 bays for receiving power from Pallatana would be ready by April 2012. For drawl of power at Surajmaninagar the 2x50 MVA 132/33 kV transformers would be commissioned by August 2012. He expressed apprehension about the absorption of power from Pallatana during off

peak hours and requested for expediting the construction of P. K. Bari-Surajmaninagar 400 kV D/C line (initially operated at 132 kV) to improve the grid stability and provide alternate path for evacuation of power from Pallatana to Silchar via Pallatana-Surajmaninagar-P.K. Bari-Silchar 400 kV D/C (initially operated at 132 kV).

- 3.5 Director (SP&PA) informed that Surajmaninagar-P. K. Bari 400 kV D/C line (initially operated at 132 kV) has been covered as a part of comprehensive scheme for strengthening of transmission and distribution system in NER & Sikkim for state of Tripura. The funding arrangement for the scheme is yet to be decided by the Government. On evacuation of power from Pallatana during off peak hours, AGM (POWERGRID) informed that the commissioning of module-1 of Pallatana GBPP will meet the load requirement of Tripura and South Assam and the power from Kathalguri which was earlier feeding these areas would get displaced.
- 3.6 Member (PS) enquired about the status of Silchar-Bongaigaon 400 kV D/C line. AGM (POWERGRID) informed that Silchar-Bongaigaon 400 kV D/C line is scheduled for commissioning by June 2012. However, forest clearance for certain section of this line is awaited. Member Secretary (I/C), NERPC informed that Power Ministers of Assam and Meghalaya has assured full cooperation in getting forest clearance for this line.
- 3.7 CMD (TSECL) said that provision of only one 100 MVA, 400/132 kV ICT has been made by OTPC at Pallatana generating switchyard, whereas two transformers has been agreed. Further no space provision for 2 no. 400 kV bays has been made by OTPC at generating switchyard for up gradation of Pallatana-Surajmaninagar D/C line to 400 kV, which is initially charged at 132 kV. POWERGRID clarified that the issue has been brought to the notice of OTPC and they have agreed to take up the same.
- 3.8 CMD (TSECL) said that the Udaipur- Pallatana 132 kV S/C line would initially provide start up power to Pallatana and after commissioning of Pallatana GBPP they would be drawing power through this line. He requested POWERGRID to provide ABT compliant meters at both ends. POWERGRID informed that Special Energy Meters (Main / Standby /Check) are provided by CTU at all ISTS connectivity points including the arrangement for startup power and the cost of the same are accordingly booked in the tariff.

4.0 Interim arrangement for termination of Silchar-Hailakandi (Assam) 132 kV D/C line.

- 4.1 Director (SP&PA) stated that Silchar-Hailakandi 132 kV D/C line was agreed as a part of evacuation system from Pallatana gas based power project (GBPP) and Bongaigaon TPS for delivery of share of Assam from these projects. The line is being implemented by POWERGRID and Hailakandi 132 kV sub-station is to be established by AEGCL. POWERGRID has intimated that 132 kV substation at Hailakandi by AEGCL may not be ready for the termination of the above line. Silchar-Hailakandi 132 kV D/C line is required for delivery of power from 1st unit of Pallatana. He informed that as Panchgram-Dullavchera 132 kV S/C line is passing near Hailakandi. POWERGRID, as an interim arrangement, have proposed loop in and loop out of this line at Hailakandi, so as to form Silchar-Panchgram 132 kV line and Silchar-Dullavchera 132 kV line. The arrangement would be restored to original after the commissioning of Hailakandi 132 kV Sub-station by AEGCL.

- 4.2 Member Secretary (I/C), NERPC informed that the AEGCL is agreeable to the above proposal.
- 4.3 CMD (TSECL) stated that Panchgram-Dullavchera-Dharamnagar 132 kV S/C line provides interconnection between Assam and Tripura. The line is a very old and to increase its utilization, they have already carried out reconductoring of portion of the line falling in Tripura. For better utilization of this line, it is desired that reconductoring is also carried out by AEGCL in the portion of line falling in Assam. Member Secretary (I/C), NERPC informed that AEGCL has requested POWERGRID to carry out studies to ascertain the power flow on this line. The study carried out by POWERGRID has suggested a flow 35 to 40 MW of power over this line. In view of this, AEGCL is not keen to take up the reconductoring work.
- 4.4 Member (Power System), CEA was of the opinion that Panchgram-Dullavchera-Dharamnagar being an interstate line, has to be maintained properly and the reconductoring needs to be carried out in the entire stretch.
- 4.5 After further deliberations, the interim arrangement was agreed. It was also decided that AEGCL should carry out the reconductoring of Panchgram-Dullavchera-Dharamnagar 132 kV S/C line for the section of the line falling in Assam.
- 5.0 Proposal of Mizoram for construction of 6 km, 400 kV D/C line (charged at 132 kV) from Melriat (POWERGRID) to Sihhmui (Mizoram) instead 132 kV D/C line from Melriat (POWERGRID) to Melriat (Mizoram).**
- 5.1 Director (SP&PA), CEA stated that the construction of Silchar-Melriat 400 kV D/C line (initially operated at 132 kV) along with Melriat (PG) 2x50 MVA 132/33 kV S/S (up gradable to 400 kV) to be implemented by POWERGRID, was agreed as a part of transmission system associated with Pallatana GBPP and for delivery of share of Mizoram from the project, Melriat (PG)-Melriat (Mizoram) 132 kV D/C was also agreed to be constructed by POWERGRID. Mizoram Government has proposed construction of Melriat (PG)-Sihhmui (Mizoram) 400 kV D/C line (initially charged at 132 kV) instead of Melriat (PG)-Melriat (Mizoram) 132 kV D/C line due to non-availability of space at Melriat (Mizoram). The proposal of Mizoram Government to construct another 400 kV S/S at Sihhmui at a distance of about 6 km from Melriat (PG) along with Melriat (PG)-Sihhmui 400 kV D/C line (charged at 132 kV) is not techno-economically desirable considering that the present total load demand of the Mizoram is of the order of 75 MW only.
- 5.2 He further stated that, in view of space constraint at Melriat (Mizoram) for termination of Melriat (PG)-Melriat (Mizoram) 132 kV D/C line, POWERGRID has been advised to construct Melriat (PG)-Sihhmui (Mizoram) 132 kV D/C line for delivery of share of Mizoram from Pallatana GBPP.
- 5.3 After further discussion, the proposal of Mizoram Govt. for the construction of Melriat (POWERGRID) to Sihhmui (Mizoram) 400 kV D/C line (initially operated at 132 kV) was not agreed. It was decided that POWERGRID would implement Melriat (PG)-Sihhmui (Mizoram) 132 kV D/C line matching with the commissioning of Sihhmui substation of Mizoram.
- 6.0 Deletion of 2x50 MVA 132/33 kV transformation capacity at Sakawrtuichhun / Melriat (PG) Sub-station in Mizoram.**
- 6.1 Director (SP&PA), CEA stated that construction of 2x50 MVA 132/33 kV sub-station (up gradable to 400 kV) at Melriat by POWERGRID has been agreed as a part of

evacuation system from Pallatana GBPP for delivery of share of Mizoram. Power & Electricity (P&E) Department, Mizoram has informed that they cannot absorb / wheel 100 MVA power at 33 kV from Melriat (PG) sub-station and has requested for deletion of 2x50 MVA transformation capacity addition at Melriat (PG).

6.2 Members agreed to the proposal of deletion of 2x50 MVA transformation capacity at Melriat (PG).

7.0 Additional arrangement for delivery of Pallatana GBPP share to Mizoram.

7.1 Director (SP&PA), CEA stated that POWERGRID has informed that the Sihhmui (Mizoram) 132 kV Sub-station proposed by Mizoram Government may not be ready for drawl of Pallatana GBPP share over Melriat-Sihhmui 132 kV D/C line. As an additional arrangement POWERGRID has proposed construction of LILO of one circuit of Aizawl (PG)-Zemabawk (Mizoram) 132 kV D/C line at Melriat (PG) for delivery of share of Mizoram. Two no. 132 kV bays released because of deletion of transformation capacity at Melriat (PG) would be utilized for the above proposed LILO work.

7.2 Members agreed to the above proposal.

8.0 Transmission system for Tuirial HEP (60MW) in Mizoram.

8.1 Director (SP&PA), CEA stated that the following transmission system has been agreed for evacuation of power from the Tuirial HEP (60 MW) in Mizoram:

- (i) Tuirial HEP-Aizawl (Mizoram) 132 kV S/C
- (ii) LILO of Jiribam-Aizawl 132 kV S/C line at Tuirial HEP

8.2 He added that NEEPCO has informed that though the Government of Mizoram has agreed to buy entire ex-bus power from the project, this being an inter state project, its allocation would be decided by Ministry of Power and therefore implementation of LILO of Jiribam-Aizawl 132 kV S/C line at Tuirial HEP should be done by POWERGRID. The transmission system for the project was planned in 1997 and the hill on which Aizawl (Mizoram) / Zuangtui sub-station is located has experienced massive land slides in the past. The land slides have created deep and long cracks in layout of sub-station and alignment of sub-station equipments and transformers has become distorted. Therefore, the transmission system associated with the Tuirial HEP needs revision.

8.3 In order to deliver power to Mizoram and other regional constituents, following transmission system for evacuation of power from the project is proposed:

- (i) Tuirial HEP–Kolasib 132 kV S/C line (to be implemented by P&E Deptt., Govt. of Mizoram)
- (ii) LILO of Jiribam-Aizawl 132 kV S/C line at Tuirial HEP (to be implemented by POWERGRID)

8.4 POWERGRID said that as Mizoram Government has signed PPA with NEEPCO to buy entire power from the project, the transmission system for evacuation of power should be constructed by Mizoram.

- 8.5 NEEPCO informed that irrespective of the PPA signed, the final allocation from the project would be decided by Ministry of Power.
- 8.6 After further discussion, the above transmission system for evacuation of power from the Tuirial HEP was agreed. It was decided that Tuirial HEP–Kolasib 132 kV S/C line would be implemented by P&E Deptt., Govt. of Mizoram and LILO of Jiribam-Aizawl 132 kV S/C line at Tuirial HEP would be implemented by POWERGRID.
- 9.0 Open Access meeting on Connectivity and Long Term Open Access (LTOA) applications in North Eastern Region.**
- 9.1 The minutes of the Connectivity, Long Term Open Access cases discussed in the 1st meeting of NER constituents regarding Connectivity / Long Term Access (LTA) applications in North Eastern Region received from POWERGRID is enclosed at Annexure-OA.

The meeting ended with thanks to the chair.

List of Participants during the 3rd Meeting of Standing Committee of Power System Planning in NER held on 21.12.2011 at NRPC, Katwaria Sarai, New Delhi.

S.No.	Name (Shri/Smt)	Designation	Contact No	E-mail
CEA				
1	Ravinder	Member (PS)	09971568444	ravinders.only@gmail.com
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3	Ravinder Gupta	Director (SP &PA)	09968286184	ravindergpt@yahoo.com
4	A. K. Yadav	Dy. Director (SP&PA)	011-26732308	awd@rediffmail.com
5	O. K. Shukla	Asst. Director (SP&PA)	011-26732319	omkants@yahoo.com
POWERGRID				
6	Pankaj Kumar	GM (Engg.)	09873549049	pankaj@powergridindia.com
7	A. M. Pavgi	AGM (Engg & SEF)	09910378086	apavgi@ powergridindia.com
8	Ashok Pal	DGM (SEF)	09910378105	ashok@ powergridindia.com
9	Ramchandra	CM (SEF)	09910378128	ramachand@ powergridindia.com
NERPC				
10	P. D. Siwal	Member Secretary (I/C)	09436998378	pdsiwal@yahoo.com
NEEPCO				
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12	C. R. John Zeliang	Sr. Manager	09871955966	johnzeliang@yahoo.co.in
TSECL				
13	N. S. Chakrabari	CMD	09436138605	
14	M. K. Chakraborty	GM	09436457391	mkc.agartala@rediffmail.com
15	M. Debbaron	AGM	09436120134	ad_comm@rediffmail.com
POSOCO				
16	A. Sen Sarma	Chief Manager	09717296934	arindamsensarma@yahoo.com
17	M. Narayansamy	Engineer	09650598185	mnsamy17@gmail.com

1. North East Transmission Company Limited:

As on 01.12.11

Physical Progress:

LOA: July'09 Schedule Completion: Nov'11; Anti. Completion: Feb, 12 & Jun'12

S. No	Particulars	Unit	Qty	L2 Schedule up to Nov'11	Cum. progress up to Nov'11	Balance w.r.t. L2
1	Pallatana-Silchar Line (246 km) by M/s Gammon, KPTL and KEC -Schedule Completion: Nov'11; Anticipated Completion: Feb'12					
I	Survey	Km	246	246	246	Completed
Ii	Foundations	Loc	675	676	638	38
Iii	Tower Erection	Loc	675	676	518	158
Iv	Stringing	Km	246	246	115	131
2	Silchar-Bongaigaon Line (415km) by M/s Gammon, KPTL and KEC -Schedule Completion: Nov'11; Anticipated Completion: Jun'12					
I	Survey	Km	415	415	415	Completed
Ii	Foundations	Loc	1154	1160	765	389
Iii	Tower Erection	Loc	1154	1160	471	683
Iv	Stringing	Km	415	415	54	361

Critical Issues:

- State wise forest status is as given below:

Total Location under forest clearance: 300.Total forest Area: 130 km in Tripura, Assam and Meghalaya

A..400 kV D/C Pallatana-Silcher Transmission line:Tripura (Forest-Length: 81.08Km, Area: 372.98Ha):

The second stage forest clearance yet to be received for 3 new locations has been recently identified to be falling under forest area near to Pallatana Power Project. These were not envisaged in the initial proposal submitted to Forest Deptt. in 2006. The fresh proposal has been submitted on 04.03.2011. Case for route diversion to reduce forest in Sadar Division (10.856 km to 2.389 km) as per advice of PMC, POWERGRID has been submitted. Proposal has been forwarded to MoEF on 30.8.2011 & clearance of MoEF is awaited.

Assam: (Forest-Length: 4.009Km, Area: 18.44Ha):

The second stage forest clearance to be expedited on top priority. In-principle forest clearance from Assam received on 23.4.2010. MoEF, through letter dated 15.4.2011, have sought clarifications from Assam Forest Deptt. regarding compliance of Forest Rights Act of 2006 as per MoEF circular dated 3.8.2009.

B.400 kV D/C Silchar – Bongaigaon Transmission line:Meghalaya (Forest-Length: 24.78Km, Area: 114.01Ha):

The second stage Forest clearance is still awaited. MoEF through letter dated 18.4.2011 has sought clarifications regarding compliance of Forest Rights Act of 2006 from Meghalaya Forest Department. Clarifications need to be expedited by pursuing Meghalaya Forest Department.

Assam (Forest-Length: 22.21Km, Area: 102.15Ha):

∴ Second Stage forest clearance of Assam is still awaited. MoEF through their letter dated 15.4.2011 has sought certain clarifications from Assam Forest Department regarding compliance of forest Right Act 2006 as per MoEF circular dated 3/8/2009.

- After getting second stage forest clearances, tree cutting is also to be taken-up on priority so that work can commence immediately thereafter.
- Aviation (Defence) Clearance awaited. Revised proposal based on comments of IAF submitted on 1.7.2011

Progress of pile & well foundations is as follows:

- Pile Foundation in Champabati River: Total-16, Completed-16, Balance- Nil, Tower erection to be completed on priority.
- Pile Foundation in Brahmaputra River: Total-36, Completed- 33, and Balance-3, to be completed on priority.
- Well Foundation in Brahmaputra River: Total-2, Completed: Nil Balance:2 to be completed by end of Dec'11 on priority.
- Pile Foundation in Barak River: River Crossing Towers at bank locations on opencast foundations shall be used. Truncated river crossing towers shall be used and shall be completed on priority.

Status of POWERGRID Projects under implementation in North Eastern Region

Sl. No.	Name of the Trans line	Progress of Construction				Completion Tgt.		Remarks / Constraints & assistance required.
		Locs. (no.)	Stubs Setting (no.)	Tower Erect. (no.)	Strng. (ckm)	Sch.	Ant./ Act.	
1	North East / Northern Western Interconnector -I Project	6380	4182	2273	251	Aug'13	Sep'14	
1.1	Part-A : North East - Northern/ Western Interconnector -I	4526	2739	1324	43	Aug'13	Sep'14	Completion likely to be delayed matching with Gen. Project.
	+/- 800KV HVDC Biswanath Chariyali - Agra Bi-pole line	4228	2495	1156		Aug'13	Sep'14	Award for converter station placed in Mar'11. Efforts shall be made to complete the matching with HVDC Converter Stn. completion delayed due to delay in award, expected by Sep'14.
	400KV Balipara - Biswanath Chariyali line	167	137	120	41	Aug'13	Aug'13	Matching with Gen. of Lower Subhansiri. (ant. in Dec'13).
	LILO of Ranganadi - Balipara 400KV D/C line at Biswanath Chariyali (Pooling Point)	76	70	33	2	Aug'13	Aug'13	Matching with Gen. of Lower Subhansiri. (ant. in Dec'13). Stringing commenced from Oct'11.
	132KV D/C Biswanath Chariyali - Biswanath Chariyali (AEGCL) line	55	37	15		Aug'13	Aug'13	
1.2	Part-B : Transmission System for immediate evacuation of Power from Kameng HEP	980	832	542	140	Feb'13	Mar'14	Kameng Gen. Project anticipated by 12th plan.. Efforts shall be made to match the Generation project.
	400KV D/C Kameng - Balipara line	142	54	4		Feb'13	Mar'14	Matching with Gen. of Kameng. * Gen. proj. delayed. Revised schedule yet to be confirmed by NEEPCO.

	400KV D/C Balipara - Bongaigaon line (Quad)	838	778	538	140	Feb'13	Feb'13	Matching with Gen. of Kameng. (ant. in Feb'13).
1.3	Part-C : Transmission System for immediate evacuation of Power from Lower Subhansiri HEP	874	611	407	68	Feb'13	Dec'13	Lower Subhansiri project delayed (ant. in Dec'13)
	400KV Lower Subhansiri - Biswanath Chariyali line -I	432	297	213	38	Feb'13	Dec'13	Completion matching with Gen. proj. Work progress affected on a/c of local disturbance.
	400KV Lower Subhansiri - Biswanath Chariyali line -II	442	314	194	30	Feb'13	Feb'13	Completion matching with Gen. proj. Work progress affected on a/c of local disturbance.
2	Transmission System associated with Pallatana gas Based Power Project and Bongaigaon Thermal Power Station (BTPS)	2348	514	213	24	Dec'12	Mar'12	Completion Sch. - 34 months from Investment approval.
	400KV D/C Bongaigaon TPS - Bongaigaon line	11	5				Mar'12	Commissioning of Bongaigaon TPS delayed ant. in Jun'12.
	400KV D/C Pallatana - Surajmaninagar line (charged at 132KV)	87	70	31			Mar'12	Completion of Surajmaninagar by Tripura Govt. - Critical.
	400KV D/C Silchar - Purba Kanchan Bari line (charged at 132KV)	325	176	58			May'12	Severe ROW problem, Works under police protection. Ist stage forest clearance yet to be received.
	400KV D/C Silchar - Melriat (New) line (charged at 132KV)	400	121	56			Dec'12	Ist stage forest clearance yet to be received.
	400KV D/C Silchar - Imphal (New) line (charged at 132KV)	389	4				Dec'12	Completion likeley to be delayed (ant. By May'13). Foundation commenced from Oct'11.
	220KV D/C Mariani (New) - Mokikchung (PG)	160	7				Dec'12	All efforts shall be made to complete line matching with commissioning of unit#2 of Palatanna GBPP.

	132KV Silchar - Badarpur (PG) Switching station Interconnecting 132KV D/C line	71	67	63	24		Dec'11	Line shall be ready matching with commissioning of unit#1 of Palatanna GBPP.
	132KV D/C Melriat (New) - Sihhmui (Mizo) Interconnecting line	85						Line already awarded. Completion matching with Sihhmui S/s by Mizoram.
	132KV D/C Silchar - Srikona (AEGCL) line	10	7	5			Dec'11	Award placed in Feb'11. Engg. in progress.
	LILO of 132KV D/C Panchgaram - Dullovlong at Silcher line (contigancy arrangement)	86	10				Dec'11	
	132KV D/C Mokokchung(PG) - Mokokchung(Nagaland) line	4					Dec'12	All efforts shall be made to complete line matching with commissioning of unit#2 of Palatanna GBPP.
	132KV S/C Pasighat - Roing - Tezu - namsai line (on D/C)	550	47				Dec'12	Completion matching with S/Stn. Passighat s/s work yet to take up AP Govt.).
	LILO of 400KV S/C Kathalguri - Misa line at Mariani (New) (Charged at 220KV)	20					Dec'12	
	LILO of 132KV S/C Loktak - Imphal line at Imphal (New)	150					Dec'12	

Summary Record of 1st Meeting with NER Constituents for Connectivity and Long Term Access in ISTS for evacuation of power from IPP generation projects in Kameng basin of NER held at NRPC, New Delhi on 21-12-2011

The list of participants is enclosed at **Annexure-OA-1**.

POWERGRID welcomed all the participants in the meeting. It was informed that the LTA/LTOA/Connectivity of the generation projects in NER was discussed with IPP developers in a meeting held at POWERGRID office, Gurgaon on 01-07-2011. Looking into the progress of the projects applied for connectivity / LTA in Kameng Basin, it was decided that the transmission system for following generation projects would be taken up in the next standing committee meeting of North Eastern Region for approval of the constituents.

Sl. No	LTA Applicant / Project	Basin	Installed Capacity(MW)	LTA/Connectivity (MW)	Time Frame	Applied for
1.	KSK Dibbin Hydro Power Pvt Ltd	Kameng	2x60=120	120	Feb'15	Connectivity & LTA
2.	Patel Hydro Pvt Ltd	Kameng	Gongri : 3x48=144 Saskang Rong :2x22.5=45	165/189	Gongri-Sep'15 Saskang - Oct'15	Connectivity & LTA
3.	Adishankar Khuitam Power Pvt. Ltd.	Kameng	3x22 = 66	66	Sep-2015	Connectivity
4.	SEW Nafra Power Corporation Ltd	Kameng	2x60 = 120	80	Oct., 2014	Connectivity & LTA
Total			495 MW	431/455MW		

A presentation was given with details of the above generation projects in Kameng basin of NER seeking connectivity and long term access in ISTS for evacuation of power. The proposed transmission system was explained which envisages establishment of pooling station at Dinchang for pooling of power from generation projects in Kameng basin through 220 & 132kV lines to be developed by the generation project. Another pooling station has been planned at Rowta/Rangia by looping in and looping out of Balipara – Bongaigaon 400kV D/c line (quad, under construction with Kameng HEP project) for dispersal of power to the load centres / beneficiaries. Power pooled at Dinchang PP would be brought to Rowta/Rangia PP through high capacity 400kV line. In addition, strengthening of transmission system in NER has also been planned through Silchar – Misa 400kV D/c line with quad conductor. This would provide a strong interconnection between the upper and lower part of the regional grid and would result in formation of a high capacity 400kV ring in NER viz. Silchar – Misa – Balipara – Bongaigaon – Azara – Byrnihat and further upto Silchar. This ring would facilitate pooling of power from different generation projects as well as dispersal of power to various parts of the regional grid.

The detail of the common transmission system proposed is as below:

- Establishment of 7x105 MVA, 400/220kV (GIS) Dinchang pooling station (Kameng PP-1) for pooling of power from generation projects in Kameng basin
- Establishment of 2x315 MVA, 400/220kV pooling station at Rowta / Rangia in Upper Assam for pooling and dispersal of power from generation projects in Kameng
- Dinchang – Rangia/Rowta PP 400kV D/c line with high capacity conductor
- LILO of Balipara – Bongaigaon 400kV D/c line (quad) at Rangia/Rowta PP

- Silchar - Misa 400kV D/c (quad conductor) (with 400kV GIS bays at Misa required due to space constraints).

The developers requested for the possibility of connecting Dinchang pooling station with Kameng switchyard which is about 25-30km away. The representative from NEEPCO clarified that there is no additional bay at Kameng switchyard for termination of the proposed line. It was also explained that the Kameng-Balipara line would not have adequate capacity for evacuation of power from the above generation projects. As more generation projects are also envisaged to come up in this basin in near future, it was felt that additional high capacity 400kV transmission corridor need to be built for evacuation of power from the above generation projects.

Accordingly, the following was agreed:

- a. To grant Connectivity and LTA** to the generation projects of KSK Dibbin, M/s Patel Hydro (Gongri and Saskang Rong), M/s SEW Nafra & M/s Adishankar Khuitam (subject to application for LTA) as per their application corresponding to following transmission system :

1. Transmission System Under the Scope of Generation Projects

▪ KSK Dibbin Hydro Power Pvt Ltd :

- KSK Dibbin – Dinchang PP 220kV D/c line along with associated line bays at both ends and 31.5 MVAR Bus Reactor at KSK Dibbin generation switchyard.

▪ Patel Hydro Pvt Ltd

- Saskang Rong – Gongri 132kV D/c line along with associated line bays at both ends
- Gongri – Dinchang PP 220kV D/c line along with associated line bays at both ends and 31.5 MVAR Bus Reactor at Gongri generation switchyard.

▪ Adishankar Khuitam Power Pvt. Ltd.

- Khuitam – Dinchang PP 220kV D/c line along with associated line bays at both ends and 31.5 MVAR Bus Reactor at Adishankar Khuitam generation switchyard.

▪ SEW Nafra Power Corporation Ltd

- Nafra – Dinchang PP 220kV D/c line along with associated line bays at both ends and 31.5 MVAR Bus Reactor at SEW Nafra generation switchyard

2. Transmission System to be implemented through ISTS Licensee

Sub-Station

- Establishment of 400/220kV Pooling Station (GIS) at Dinchang
 - 7x105 MVA Single Phase transformer along with associated bays
 - 2 nos. 400kV line bays (for 400kV D/c to Rowta / Rangia Pooling Station)
 - Space provision for 8 nos. 220kV line bays for termination of 220kV D/c lines from generation projects like Dibbin, Gongri, Khuitam and Nafra
 - Space provision for 6 nos. 220kV line bays for termination of 220kV lines from future generation projects / other substations

- Space provision for 6 nos. of 400kV line bays for termination of 400kV lines from future generation projects / other substations
 - Space provision for 7x105 MVA Single Phase transformer along with associated bays
- Establishment of 400/220kV Pooling Station at Rowta / Rangia in Upper Assam
 - 2x315 MVA, 3-Phase transformer along with associated bays
 - 6 nos. 400kV line bays (2 for 400kV D/c from Dinchang, 4 for LILO of Balipara-Bongaigaon 400kV D/c Quad line)
 - 4 nos. 220kV line bays (for 220kV take-off to Assam)
 - Space provision for 8 nos. 400kV line bays, 4 nos. 220kV line bays for future
 - Space provision for 1x315 MVA 3-Phase transformer along with associated bays
 - Extension at 400 kV Silchar Sub-station
 - 2 nos. 400kV line bays (for 400kV D/c to Misa)
 - Extension at 400 kV Misa Sub-station
 - 2 nos. 400kV GIS line bays (for 400kV D/c to Silchar)

Transmission Line

- Dinchang – Rangia/Rowta PP 400kV D/c line with quad conductor
- LILO of Balipara – Bongaigaon 400kV D/c line (quad) at Rangia/Rowta PP
- Silchar - Misa 400kV D/c (quad conductor) (with 400kV GIS bays at Misa required due to space constraints)

Reactive Compensation

Bus Reactor

- 2x80 MVAR Bus Reactor at Dinchang Pooling Station
- 2x125 MVAR Bus Reactor at Rowta / Rangia Pooling Station
- 1x125 MVAR Bus Reactor at Silchar
- 1x125 MVAR Bus Reactor at Misa (GIS bay)

Line Reactor

Sl No.	Transmission Line	Length (Approx.)	Line Reactor on each ckt (From End)	Line Reactor on each ckt (To end)
1	Dinchang – Rangia/Rowta PP 400kV D/c line with high capacity conductor	120 kms.	NIL	50 MVAR (Fixed)
2	LILO of Balipara – Bongaigaon 400kV D/c line (quad) at Rangia/Rowta PP. Following line sections would be formed.	Balipara – Bongaigaon 400kV D/c line : 298 kms.	1x63 MVAR fixed line reactor at Balipara & Bongaigaon ends already under implementation as part of NER-NR/WR Interconnector-I scheme	

2a.	Rangia/Rowta – Balipara	90 km	-	To convert 1x63MVAR fixed reactor as switchable (The reactor has been provided as a part of NER-NR/WR Interconnector-I scheme,
2b.	Rangia/Rowta - Bongaigaon	210km	50MVAR (Fixed)	1x63MVAR (fixed) (already provided as part of NER-NR/WR Interconnector-I scheme)
3.	Silchar - Misa 400kV D/c (quad conductor)	180 KMS.	50 MVAR (Fixed)	50 MVAR (Fixed)

- b. For smooth operation of generation projects, the developers were requested to provide bus reactor(s) at their generation switchyards. In case of space constraints, the above mentioned reactor(s) at the generation switchyard may be connected as switchable line reactor at their end.
- c. The generation projects would need to sign the TSA and submit the requisite Bank Guarantee for construction of transmission system. The zero date of transmission system implementation would start after fulfillment of above milestones.
- d. A review meeting would take place in March, 2012 after submission of Bank Guarantee and signing of TSA by the generation developers, after which the transmission system would be forwarded to the Empowered Committee for implementation through competitive bidding route.

List of Participants

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