CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 67/2010 (Suo-motu)

Coram

1. **Dr. Pramod Deo, Chairperson**
2. **Shri S.Jayaraman, Member**
3. **Shri V.S.Verma, Member**
4. **Shri M.Deena Dayalan, Member**

DATE OF HEARING: 22.12.2010

DATE OF ORDER: 2.2.2012

In the matter of

Frequent congestion in the inter-State transmission system affecting operation of the Power exchanges.

And
In the matter of

1. Power Grid Corporation of India Limited, Gurgaon
2. Central Electricity Authority, New Delhi
3. National Load Despatch Centre, New Delhi
4. Northern Regional Load Despatch Centre, New Delhi
5. Western Regional Load Despatch Centre, Mumbai
6. Southern Regional Load Despatch, Bangalore
7. North Eastern Regional Load Despatch Centre, Shillong
8. State Transmission Utilities of Haryana, Jammu and Kashmir, Punjab, Uttarakhand, Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Bihar, Jharkhand, Orissa, Assam and Manipur **Respondents**

Following were present:

Shri S.K.Sonee, POSOCO
Shri V.K.Agarwal, NRLDC
Miss Joyti Prasad, NRLDC
Shri V.V. Sharma, NLDC
Shri Raghuram, SRLDC
Shri V. Suresh, SRLDC

Shri Sabjeev Bhasker, UPPCL
Shri Rahul Srivastava, Advocate, UPPCL
Shri V. Chandran, TANTRANSCO
Shri C.Kaliperumal, TANTRANSCO

ORDER

The Commission vide its order dated 10.3.2010 took note of the fact that all transactions carried out through the Power Exchanges could not fructify on account of frequent congestion experienced in the transmission of power and directed National Load Despatch Centres, Centre Transmission Utility, all Regional Load Despatch Centre and Central Electricity Authority to make presentations before the Commission on the causes of congestion. The percentage of time that congestion was faced by the Indian Energy exchange (IEX) and Power Exchange of India Limited (PXIL) in the Northern Region during the month of December 2009 to January 2010 were as under:

Exchange	December 2009	January 2010
IEX	43%	47%
PXIL	19%	13%

2. The Commission had further observed that the frequent congestion apart from hampering the development of the power market had also resulted in increased incidents of grid indiscipline. When the utilities were unable to arrange power through the Power Exchanges on day-ahead basis, they sometimes resorted to overdrawal of power through Unscheduled Interchange (UI) in real time. This resulted in further congestion of transmission Corridors. It was also observed that power flow on inter Regional Links on

real-time was sometimes more than the Total Transfer Capability (TTC) declared by Regional Load Despatch Centres. The violations of TTC and consequently the "reliability margins" endangers the security and stability of the grid.

3. A written submission was received from the Central Electricity Authority in which the under utilization of the inter-regional transmission capacity of Northern Region was stated to be the main reason for congestion. As against the transmission capacity of 10,550 MW in the Northern Region, the Available Transfer Capability was of the order of 4,000 MW. It was further stated the possible cause of restriction could be to low voltage problem in the States of Punjab and Haryana.

4. During the course of hearing on 23.3.2010, the representative of the Indian Energy exchange (IEX) submitted that curtailment of Power Exchange volumes (MU) was up to 87% of Market Clearing Volume (MCV). He clarified that due to congestion, around 660 MU during the period December 2008 to February, 2010 could not be despatched. He further submitted that the total volume of transactions in the IEX during this period was about 8000 MU. The representative of the Indian Energy exchange submitted that Power Exchange is not getting the transmission corridors for scheduling as the Total Transfer Capability (TTC) is being declared conservatively. According to the representative of Indian Energy Exchange, the constituents are continuously

overdrawing from the grid in real-time while the transactions through Power Exchanges are not getting cleared due to congestion in the transmission corridor reserved on day-ahead basis. Hence, the supply side is being suppressed. He pleaded that if more power is scheduled through Power Exchanges, frequency regime would have been much better. He submitted that Short Term Open Access (STOA) is expected to go up to 15-20% of the total volume of power transaction in near future and requested that the transmission planning should take care of these transactions. He further submitted that in our country, reliability margin is 12.5% of TTC in respect of Northern Region, where as the world over it is 2% plus 2% is for capacity margin. He also urged that the same reliability margin should be applied in India. He requested for reservation of transmission corridors for the Power Exchanges.

5. The Commission vide its order dated 19.7.2010 had observed as under:

> *3. In compliance with our directions, the corporate System Operation Department of the System Operator has filed an affidavit dated 5.5.2010 on behalf of NLDC and all RLDCs. Along with the affidavit, the following documents have been enclosed:*
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> *(a) A draft detailed procedure on congestion management in real time as per Regulation 4(2) of Central Electricity Regulatory Commission (Measures to relieve congestion in real time operations) Regulations, 2009 submitted to the Commission vide letter dated 5.4.2010.*
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> *(b) Copy of its letter dated 5.4.2010 to CTU and CEA regarding operational feedback on transmission constraints in terms of Rule 4(j) of National Load Despatch Centre Rules, 2005.*
>
> *(c) Copy of the letter dated 13.8.2009 submitting an approach paper to the Commission on "Assessment of Transfer Capability in Indian Bulk Electric Power System.*

4. It has been further submitted that regular seminars and workshops on ATC and TTC assessment and congestion management are being organized by NLDC/RLDCs for better appreciation of the issues among the stakeholders.

5. Copy of the affidavit dated 5.5.2010 has been endorsed by the System Operator to the CTU vide its letter dated 6.5.2010.

6. We have examined the affidavit filed by the System Operator. Clause (j) of Rule 4 of National Load Despatch Centre Rules, 2005 vests in NLDC the function of "providing operational feedback for national grid planning to the Authority and the Central Transmission Utility." NLDC vide its letter dated 5.4.2010 has given its operational feedback on the transmission constraints in each of the five regions to the CTU. The operational feedbacks also contain the suggested remedial measures to be considered and implemented by the CTU in order to reduce/remove the transmission constraints. Though there was a direction to CTU during the hearing on 23.3.2010 to submit the details of congestion points and the remedial measures proposed to relieve congestion at those points, necessary submissions do not appear to have been made by the CTU to the Commission.

7. As per the provisions of clause (c) of sub-section (2) of Section 38 of the Electricity Act, 2003, it is one of the functions of the CTU "to ensure development of an efficient, coordinated and economical system of inter-State transmission lines for smooth flow of electricity from the generating stations to the load centres". The operational feedback provided by the NLDC in compliance with the provisions of Rule 4(j) of the National Load Despatch Centre Rules are meant to help the Central Transmission Utility to plan the national grid in order to ensure development of efficient, coordinated and economical inter-State transmission. It is not understood as to why the CTU has not submitted the necessary information regarding points of congestions and proposed remedial measures to relieve congestion which is an integral part of its statutory duty to ensure development of efficient, coordinated and economical inter-State transmission.

8. We direct the CTU to submit its recommendations with regard to the points of congestion and the suggested measures to relieve congestion in inter-State transmission after considering the report of NLDC by 10.8.2010."

6. The Central Transmission Utility had furnished, through a letter dated 9.8.2010 to the Commission, a letter dated 15.6.2010 addressed to Chief Executive Officer, POSOCO, giving the comments on the points of congestion

raised by the National Load Despatch Centre (NLDC) and all Regional Load Despatch Centers. Based on the congestion points mentioned in the said letter, Central Transmission Utility (CTU) has highlighted certain remedial actions to be taken by it and the State Utilities. The Commission vide its order dated 3.11.2010 further observed as under:

> *"5. It is observed from the letter of National Load Despatch Centre that a number of congestion points on corridors have been highlighted. Similarly, Central Transmission Utility has deliberated on the removal of the points of congestions without generally giving the time line for removal of the same. The Central Transmission Utility has further stated that in the Northern Region, utilities of Haryana, Jammu & Kashmir, Punjab, Uttarakhand and Uttar Pradesh; in the Western Region, utilities of Chhattisgarh, Madhya Pradesh and Maharashtra; in the Southern Region, utilities of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu; in the Eastern Region, utilities of Bihar, Jharkhand, Orissa and Damodar Valley Corporation (DVC); and in the North Eastern Region are required to take certain action for the removal of congestion points/corridors.*
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> *6. It is seen that the congestion points are many and occur in different seasons. However, National Load Despatch Centre has not mentioned critical congestion points and congestion points which occur with greater frequency. We accordingly direct the National Load Despatch Centre to prioritise the elements for removal of congestion based on the criticality and frequency of congestion and provide these details to the Central Transmission Utility and the concerned State Utilities under intimation to the Commission by 20.11.2010. Central Transmission Utility is directed to submit to the Commission the timeline for removal of the congestion points by 30.11.2010. Similarly, the State Utilities in Haryana, Jammu & Kashmir, Punjab, Uttarakhand, Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu Bihar, Jharkhand, Orissa, Assam and Manipur and Damodar Valley Corporation (DVC), for which National Load Despatch Centre has indicated remedial measures to be taken, are directed to file their reply by 30.11.2010 after serving copy thereof on National Load Despatch Centre and Central Transmission Utility*."

7. The NLDC has identified the transmission constraints on regional basis for gradual and systematic removal by the concerned agencies and submitted the details vide letter dated 19.11.2010. The CTU vide letter dated 30.11.2010 has enclosed the timeline for commissioning of new transmission assets for gradual removal of the points of congestions identified by the NLDC. Further, the CTU, in the said letter dated 30.11.2010, has also indicated the actions to be taken by the Utilities of the various States and Damodar Valley Corporation (DVC) in which transmission congestion is happening on real time basis. The timeline as indicated by the CTU for removal of congestion as well as action to be taken by various utilities of the States and DVC are annexed as **Annexure- *I*** to this order.

8. Uttar Pradesh Power Corporation Ltd. (UPPCL) in its reply has submitted as under:

(i) Section 38 of the Electricity Act, 2003 (Act) provides for the CTU to discharge all functions of planning and coordination relating to inter-State transmission system with State Transmission Utilities, Central Government, State Governments, Generating companies, Regional Power Committees, Central Electricity Authority, Licensees so as to ensure development of an efficient, coordinated and economical system of inter-State transmission lines for smooth flow of electricity from the generating stations to the load centers and also to provide non-discriminatory open access to its transmission for use by any

licensee or generating company on payment of the transmission charges. The CTU has failed to discharge its responsibility in terms of Section 38 of the Act and there is always shortage of transmission corridors and non-availability of an efficient, coordinated and economical inter-State transmission system for smooth flow of electricity which is a main factor for frequent congestion in the inter-State transmission system affecting the operation of the power exchanges;

(ii) The low voltages in the inter-State nodes are also a main reason for frequent congestions in the inter-State transmission system which requires immediate attention of this Commission;

(iii) Overdrawal is contributing to the congestion problem and UPPCL is serious about solving this problem. In order to overcome the power shortages at least three private sector power plants of capacity of 1,700 MW are scheduled to be made operational within the next six months. The first unit of Harduaganj power plant of 250 MW is scheduled to be commissioned in the month of January, 2011 and second unit of 250 MW in the month of March, 2011. Further, the first unit of Anpara Power Plant of 600 MW is scheduled to be commissioned in the month of March, 2011 and second unit of 600 MW in the month of May, 2011. For reducing the overdrawal during the months of August to October, 2010, about 12 MU per day was arranged bilaterally and rostering/ load shedding on different sectors was also imposed.

9. APTRANSCO, in its reply dated 29.11.2010, has indicated the timeline for commissioning of various transmission elements as highlighted by NLDC and CTU, like removal of congestion in Hyderabad City, Srisailam generation evacuation, etc.

10. TANTRANSCO (erstwhile Tamil Nadu Electricity Board) in its reply dated 29.11.2010 has submitted as under:

(i) The additional generating capacities of 1,894 MW have been added in North East Andhra Pradesh in addition to the existing NTPC Simadhri, Stage-I (2 x 500 MW) without commissioning of adequate transmission systems for their evacuation. The generators are utilizing the Regional transmission corridor viz. Gazuwaka–Kalpaka–Vemagiri–Vijayawada–Nellore – Alamathi - SRIPERUMBADUR to evacuate their power resulting in continuous over loading of 400 kV Vijawada-Nellore transmission line, causing congestion.

(ii) CTU has approved the injection of power from these generating projects without satisfying the Long-term Open Access (LTOA) conditions at North-Eastern Andhra Pradesh. Hence, in the congestion management order, in the event of congestion, a small penalty should be imposed on CTU also so that they do not approve LTOA without developing adequate infrastructure.

(iii) CTU should take urgent steps such as identifying critical transmission projects which will relieve transmission congestion and implement the same on fast track basis.

(iv) The constituents should not be deprived of availing power from elsewhere to meet their demand which is the main criteria of the Act.

(v) Generation projects in States systems should be allowed to be connected only after ensuring adequate transmission lines to evacuate their power independent of CTU lines. In future, none of the Inter Regional corridor should be made LILO to evacuate generation or for feeding Load.

11. PTC India Limited vide its affidavit dated 17.4.2010 has submitted as under:

(i) Even though the problem of congestion requires consideration, the same cannot be done through the creation of a separate power transmission corridor for the Power Exchanges and it will lead to a further complication of the problem of congestion and may even disincentivise the advance planning by State Utilities etc. for the procurement of power and obtaining consequent open access;

(ii) The safety margin is sometimes being used by States to overdraw under Unscheduled Interchange mechanism and sometimes results in lowering of the grid frequency. The sole purpose of keeping safety

margin by RLDCs is not being met, but the buyer/seller who can plan in advance for purchase/sale of power should get higher priority over the last day purchase/sale of power;

(iii) The current structure of priority for transmission corridors for long-term, medium-term, bi-lateral on advance reservation, Power exchange on day ahead and bi-lateral on day ahead should be maintained ;

(iv) No corridor should be kept reserved for Power Exchanges as it would disturb the market and interfere with the priority of the corridor booking; and

(v) The current priority of granting open access should be maintained and no separate transmission corridor be created for sale of power through Power Exchanges.

12. M/s S.L. Lumax Limited, Jayavarma Textiles Private Limited, Eastern Textiles, Eastman spinning Mills (P) Limited, Tamil Nadu Jaibharath Mills Limited, Best and Cromption Engg. Ltd., PAS Cotton Mills (P) Ltd., Raju Spinning Mills (P) Ltd. and Sri Parameshwari Spinning Mills Private Limited in their letters dated 17.12.2010, 15.12.2010, 16.12.2010, 13.12.2010, 17.12.2010 15.12.2010, respectively have requested to reduce the transmission constraint in the S2 region of the Southern Region so that they may avail power continuously .

13. It is noted that the NLDC on the "Operational feedback on transmission constraints" indicated that the low voltage constraints resulting from skewed load-generation scenario and transmission inadequacy in Western Uttar Pradesh is a frequent cause of restriction in the transmission capability to import power from neighbouring regions. Inadequate capacitor in the network is also a cause of low voltage in this area. It is observed that UPPCL did not submit any action on their part for improving the voltage profile in their transmission system by way of installing adequate number of capacitors.

14. We have considered the submissions made by the NLDC, CTU, UPPCL, APTRANSCO, TATRANSCO and PTC. We direct the CTU to carry out the execution and commissioning of various elements in a time bound manner as indicated in the ***Annexure-I*** to the order and also expedite the same wherever possible. We also direct the CTU to take immediate steps to remove the constraints highlighted by TANTRANSCO for evacuation of power in the Vemagiri area caused due to LILO arrangements of the existing transmission lines. In case, there is a change in the scenario in which the connectivity/ long-term access were given by the CTU, adequate corrective measures need to be taken by the CTU immediately.

15. The Southern Regional Load Despatch Centre is directed to carry out the system studies on the specific queries raised by the TANTRANSCO. The States and DVC are also directed to act in coordination with the CTU so that

there remains no congestion in their systems once the congestion is removed in the CTU system.

16. We take note of the actions being taken by UPPCL to mitigate shortages and in turn remove the bottlenecks in their electrical power system. The UPPCL is directed to install capacitor banks as per the study carried out by Northern Regional Power Committee so that under voltage in the State Transmission Utility System does not become a cause for congestion. Further, the State Transmission Utilities are also directed to furnish their transmission requirement so that the transmission system can be designed to meet their requirements. They should refrain from meeting their power requirement on short-term basis to a large extent.

17. With regard to system strengthening of the inter-State transmission system and the associated transmission system of evacuation of Central Generating Stations, for which the Standing Committee on Transmission Planning has already approved, we direct the CTU to execute these schemes, in the time schedule as per requirement.

18. Further, wherever the transmission projects are being executed by the various transmission licensees, we direct that these transmission projects be executed as per requirement in a timely manner. The State Transmission Utilities

are directed to make concentrated efforts in the transmission system where the concerned utility of the State needs to take action for upgradation, construction of new transmission lines and installation of capacitors for improvement of voltage profile of the sub-stations feeding the loads of the States.

19. It is observed that the transmission system of the State Transmission Utilities and the CTU or the other transmission licensees all being inter connected, we underline the need for a coordinated approach by the CTU, STUs and other Transmission Licensees for implementation of the various transmission system schemes so that unhindered flow of electricity may be ensured from the surplus to the deficit parts of the country and there is no generation bottled-up in the country. We direct all the agencies concerned to implement the various schemes in a time-bound manner so that the Open Access envisaged in the Act is implemented in letter and spirit. The Power Exchanges offer a neutral and transparent platform and with the implementation of these schemes, more volumes of electricity trades would be cleared resulting in better utilisation of the scarce generating facilities in the country in meeting the power aspirations of the consumers.

20. The National Load Despatch Centre is directed to regularly monitor the congestion points and submit a quarterly report to the Commission and CTU in the first week of January, April, July and October of each year. The CTU

is also directed to make all efforts in coordinated planning and to take remedial measures to relieve congestion wherever foreseen.

21. The Petition No. 67 of 2010 (Suo motu) is disposed of with the above directions.

Sd/	sd/-	sd/-	sd/-
(M.Deena Dayalan)	**(V.S.Verma)**	**(S.Jayaraman)**	**(Dr.Pramod Deo)**
Member	**Member**	**Member**	**Chairperson**

Annexure- I

Region-wise Time lines for implementation of various Transmission Schemes indicated by the CTU for removal of congestion

Northern Region

SL No.	Name of the Congested Corridors	Time line for removal of congestion
1.	Low Voltage in Central / Western Part of Northern region	Capacitors need to be installed by the State Utilities in the Central and Western part of the grid (i.e. Delhi, Haryana, UP (West), Rajasthan and Jammu & Kashmir) to address the low voltage problem. There is a large gap in requirement as computed by NRPC vis-à-vis the actual installation of the capacitor banks by the State Utilities. The progress of installation of capacitors by the State Utilities is monitored by NRPC. State Utilities must be impressed upon to install the capacitors, as identified by NRPC, at the earliest.
2.	Network constraints in Western Uttar Pradesh	Inadequacy in 220 kV system and 400/220 kV transformation capacity in STU system in western Uttar Pradesh system need to be addressed. The above strengthening is to be taken up by UPPTCL.
3.	Limitation in import capability of Northern Region due to the constraints in Western and Eastern Regions	Time line given in the details of Eastern and Western regions.

Western Region

Sl. No.	Name of the Congested Corridors	Time line for removal of congestion
1	Constraints in export to Northern Region; 400 kV Ranchodpura-Zerda D/C. LILO of 400kV Bina-Nagda D/C at Shujalpur.	Being executed by IPTC Company. March, 2011.
2	400 kV Gandhar-Navsari D/C 400 kV Navsari-Boisar D/C	October, 2012. October, 2012.
3	400 kV Raipur-Wardha D/C 400 kV Wardha-Parli D/C.	March, 2011. March, 2011.
4	400 kV Korba-Birsinghpur	March, 2011.

Southern Region

Sl. No.	Name of the Congested Corridors	Time line for removal of congestion
1.	Vijayawada-Nellore-Alamathi Corridor	As stated by NLDC the congestion in this corridor is primarily on account for delay in commissioning of generation projects in Tamil Nadu viz. Kudankulam (2000 MW), Neyveli TS-II Expn. (500 MW). The revised commissioning schedule as intimated by NPCIL and NLC respectively in recently held SRPC meeting on 26th November, 2010 is as below: Kudankulam APP ; Unit #1 - June, 2011, U#2 - March, 2012 Neyveli TS-Epn.; Unit #1 - March, 2011, U#2 -June, 2011 It is worthwhile to mention here that the original schedule for Kudankulam generation project was May,2007/December, 2007. The project developer NPCIL revised these schedules 3 months/6 months each time instead of indicating a comprehensive delay of about 4 year because of which corrective action could not be taken up, Additionally, 1500 MW generation by NTPC-TNEB at Vallur, Chennai is under advanced stage of construction (commissioning schedule-unit-I October, 2011, unit-2, December, 2011, unit-3-December, 2012) which being at the receiving end shall have direct impact on reduction of flow on Vijayawada-Nellore-Alamathi transmission corridor. The issue was again deliberated in the 31st meeting of Standing Committee for Power System Planning in SR for provision of additional transmission corridor for which the constituents of SR have desired to have joint study to be held during first week of December, 2010.
2.	400 kV Gooty-Hoody and Gooty-Nelamangala lines.	Gooty-Madhugiri-Yelahanka 400 kV D/c line, which is a parallel corridor to Gooty-Hoody/Nelamangala, is already being taken up by POWERGRID and it is expected to be commissioned in 2013-14.

3.	S1-S2 Bid area Constraints: High loading of 400 kV Bangalore-Salem, Hosur-Salem sections.	Strengthening of Bangalore-Salem section is already taken up by POWERGRID through construction of Bangalore -Salem 400 kV D/C (quad) line and it is expected to be commissioned by 2013-14. The issue of strengthening of Hosur-Salem section was deliberated in the 31st meeting of Standing Committee Meeting for provision of additional transmission corridor for which the constituents of SR have desired to have, joint study to be held during first week of December 2010.
4.	400 kV Mysore-Kozhikode and North Trichur-Cochin	These lines are already under implementation and are getting delayed due to severe RoW constraints and Forest issues. These issues are being taken up at the highest level and the expected commissioning schedule is are as given below: Mysore - Kozhikode line : December, 2012 North Trichur - Cochin line : March, 2012
5.	Srisailam Evacuation	As indicated by NLDC for expediting commissioning Krishnapatnam UMPP evacuation lines. These lines are being planned for implementation by 2013-14.
6.	Neyveli - Pondicherry - Chennai Corridor.	The issue of strengthening this section was deliberated in the 31st meeting of Standing Committee Meeting for provision of additional transmission corridor for which the constituents of SR have desired to have joint study to be held during first week of December, 2010.
7.	Low voltage in Chennai area.	As indicated by NLDC, TNEB to address the issue.
8.	Evacuation of Udupi power and Varahi.	As indicated by NLDC, KPTCL to address the issue.

Eastern Region

SL No.	Name of the Congested Corridors	Time line for removal of congestion
1.	Constraints in export to NR; 400 kV Farakka-Malda line.	As stated by NLDC an alternate 400 kV D/C link from South Bengal to North Bengal is being planned. The tentative scheme is as given below • Establishment of 400/220 kV, 2x500 MVA Rajarhat substation with LILO of Subhashgram-Jeerat 400 kV S/c line • RajarhaWPurnea/Kishanganj 400 kV D/c line(triple snowbird), **witrTT LILO** or one circuit at Uokarna" and other circuit at Farakka. The scheme is proposed to be discussed and finalized in the next meeting of Standing Committee on Power System Planning in Eastern Region expected to be held in January, 2011. Another 400 kV D/c line from Purnea to Biharsharif which would help relieve the loading on 400 kV Purnea-Muzaffarpur 400kV corridor is being implemented under private sector through competitive bidding with the scheduled commissioning of March, 2013.
2.	400 kV Talcher-Rourkela D/C and 400 kV Rengali – Baripada -Kolaghat.	As stated by NLDC, a new 400 kV D/c line from Talcher to Rourkela has been planned. However, the same is being implemented under private sector through competitive bidding with the scheduled commissioning of October, 2012.
3.	Non-availability of 400 kV D/C Purnea-Malda line	The restoration works are under progress and the line is expected to be restored by January, 2011
4.	220 kV D/C Bidhipadar-Tarkera line	As stated by NLDC, LILO of one circuit of 400 kV Rourkela - Raigarh line at Sterlite has been planned and the same is expected to relieve the loading on

		Budhipadar-Tarkera line. The LILO portion (which is the dedicated portion being implemented by Sterlite Energy Ltd.) is expected to be completed by January, 2011.

North Eastern Region

SL No.	Name of the Congested Corridors	Time line for removal of congestion
1.	132 kV Kopili-Khandong S/C line.	Commissioning of this line has been held up due to non-availability of forest clearance. The line has recently been commissioned on ERS and normal commissioning is expected by January, 2011.
2.	400/220 kV, 315MVA ICT at Misa.	The 2nd ICT is expected to be commissioned by May / June, 2011.
3.	132 kV Dimapur-Imphal line.	As stated by NLDC, 400kV Silchar - Imphal D/c line (charged at 132 kV) and new sub-station at Imphal would address the constraint and the same is expected to be commissioned by December, 2012.
4.	Overloading of lines during peak hours.	As stated by NLDC, 400/132 kV Silchar sub-station and associated system strengthening schemes would address the constraints. 400/132 kV Silchar sub-station is expected to be commissioned by November-2011 and associated system strengthening schemes are expected to be commissioned progressively from November-2011 to December, 2012.
5.	132 kV Badarpur-Kumarghat and Kumarghat-Aizawl S/C lines.	As stated by NLDC, 400/132 kV Silchar sub-station and associated system strengthening schemes would address the constraints. 400/132 kV Silchar sub-station is expected to be commissioned by November-2011 and associated system strengthening schemes are expected to be commissioned progressively from November,2011 to December, 2012.
6.	220 kV BTPS – Agia - Sarusujai D/C line (Assam)	Assam may take suitable action.

7.	132 kV Umium Stage-L Mawlai S/C line (Meghalaya)	Meghalaya may take suitable action.
8.	132 kV Loktak-Jiribam line-I (Manipur)	Meghalaya may take suitable action.
9.	220/132 kV, 100 MVA ICT at Dimapur.	Second 220/132 kV, 100 MVA ICT at Dimapur (POWERGRID) has already been commissioned.
10.	132 kV Dimapur-Dimapur S/C line.	LILO of Dimapur-Kohima 132 kV S/C line at Dimapur (Powergrid) is under progress and is expected to be completed by January, 2011.