Central Electricity Authority
System Planning & Project Appraisal Division
Room No. 302, North Wing
Sewa Bhawan, R.K. Puram
New Delhi-110066

No. CE(SP&PA)/Misc./09/CEA dated : 18.3.2010

Shri Alok Kumar,
Secretary,
Central Electricity Regulatory Commission,
3rd & 4th floor, Chander Lok Building,
36, Janpath,
New Delhi- 110001

Subject : Frequent Congestion in the inter-State transmission system affecting operation of the Power Exchanges.

This has reference to CERC Order dated 10.3.2010 seeking the views of CEA in the matter referred above. In this regard I am directed to communicate the following:

1. Transmission line-wise details of inter-regional capacity existing as on 30.11.2009 and planned by the end of 11th Plan i.e. 31.3.2012 is enclosed as per Annexure-I.

2. It would be seen from Annex-I that All India aggregate inter-regional transmission capacity is presently 20,750 MW and is likely to go up to 32,650 MW by the end of 11th Plan. Insofar as the Northern Region is concerned, which is reported to be facing severe transmission congestion, it may be pointed out that the inter-regional capacity between NR and ER is presently 6,330 MW and inter-regional transmission capacity between NR and WR is presently 4,220 MW. Accordingly, the aggregate inter-regional transmission capacity of NR is 10,550 MW.

3. It is observed from the data posted by NLDC that available transfer capability of NR for open access being declared by them is generally of the order of 4000 MW which is about 40% of the physical transmission capacity built for import of power by NR.(Annex-II) This clearly indicates under-utilisation of the existing transmission assets, the reasons for which needs to be ascertained from NLDC/CTU.

4. In case the restriction is being imposed due to voltage problem in States like Haryana and Punjab then it would be better to declare congestion for a particular State which is resorting to heavy reactive power drawal.

By declaring congestion for the entire Northern Region the prices of electricity unnecessarily go up for all the buyers in the Northern Region and a wrong impression is created that the congestion is on the inter-regional links.

5. The Commission may like to take appropriate action to ensure that the inter-regional transmission assets created specifically for the purpose of exchange of power between the regions are optimally utilised and the effect of congestion is localised as far as possible.

6. Further, it is suggested that the Commission may suitably apportion transmission capacity for Bilateral and Collective (power exchange) transactions so that the effect of congestion on the power exchanges is mitigated.

Yours faithfully,
Sd/-
(Ravinder)
Chief Engineer (SP&PA)

Annex-I

Details of Inter-Regional Transmission – Existing and Planned for 11th Plan:

Name of System		At the end of 10th Plan i.e. 31.03.2007	Additions during 11th Plan upto 30.11.2009	Existing as on 30.11.2009	Balance program for 11th Plan	At the end of 11th Plan i.e. 31.03.2012
		(a)	**(b)**	**(c=a+b)**	**(d)**	**(e=c+d)**
ER – SR :						
Gazuwaka HVDC back to back		1000		1000	-	1000
Balimela-Upper Sileru 220kV S/C		130		130	-	130
Talcher-Kolar HVDC Bipole		2000		2000	-	2000
Upgradation of Talcher–Kolar HVDC bipole			500	500	-	500
ER-SR total		**3130**	**500**	**3630**	**0**	**3630**
ER –NR :						
Muzaffarpur - Gorakhpur 400kV D/C (Quad Moose) with TCSC		2000		2000	-	2000
Dehri-Sahupuri 220kV S/C		130		130	-	130
Patna-Balia 400kV D/C quad		800	800	1600	-	1600
Biharshariff-Balia 400kV D/C quad			1600	1600	-	1600
Barh-Balia 400kV D/C quad					1600	1600
Sasaram–Fatehpur 765kV S/C line-1					2100	2100
Gaya–Balia 765kV S/C					2100	2100
Sasaram: (i) HVDC back to back (ii) Bypassing of HVDC back-to- back to establish Sasaram-Allahabad/Varanasi 400kV D/C line		500	500	1000	-	1000
ER-NR total		**3430**	**2900**	**6330**	**5800**	**12130**
ER - WR :						
Rourkela-Raipur 400kV D/C		1000		1000	-	1000
TCSC on Rourkela-Raipur 400kV D/C		400		400	-	400
Budhipara-Korba220kV D/C+S/C		390		390	-	390
Ranchi-Sipat 400kV D/C (40% SC)			1200	1200	-	1200
Ranchi-Rourkela-Raipur 400kV D/C with fixed series capacitor, TCSC in parallel line					1400	1400
Ranchi – Sipat Pooling Point 765kV S/C					2100	2100
ER-WR total		**1790**	**1200**	**2990**	**3500**	**6490**
ER - NER :						
Birpara-Salakati 220kV D/C		260		260	-	260
Malda-Bongaigaon 400kV D/C		1000		1000	-	1000
Bongaigaon-Siliguri 400kV D/C Quad	**				1600	1600
ER-NER total		**1260**	**0**	**1260**	**1600**	**2860**
NR - WR :						
Vindhychal HVDC back to back		500		500	-	500
Auria-Malanpur 220kV D/C		260		260	-	260
Kota-Ujjain 220kV D/C		260		260	-	260
Agra-Gwalior 765kV S/C line-1 400kV op.		1100		1100	-	1100
Agra-Gwalior 765kV S/C line-2 400kV op.			1100	1100	-	1100
Kankroli-Zerda 400kV D/C			1000	1000	-	1000

Name of System		At the end of 10th Plan i.e. 31.03.2007	Additions during 11th Plan upto 30.11.2009	Existing as on 30.11.2009	Balance program for 11th Plan	At the end of 11th Plan i.e. 31.03.2012
		(a)	**(b)**	**(c=a+b)**	**(d)**	**(e=c+d)**
NR-WR total		**2120**	**2100**	**4220**	**-**	**4220**
WR-SR :						
Chandrapur HVDC back to back		1000		1000	-	1000
Barsur–L.Sileru 200kV HVDC mono pole	@	200		200	-	200
Kolhapur-Belgaum 220kV D/C		260		260	-	260
Ponda – Nagajhari 220kV D/C		260		260	-	260
Narendra/Kolhapur HVDC back-to back with Narendra-Kolhapur 400kV D/C line					1000	1000
WR-SR total		**1720**	**0**	**1720**	**1000**	**2720**
NER/ER-NR/WR :						
		0	**0**	**0**	**0**	**0**
NER/ER-NR/WR total		**0**	**0**	**0**	**0**	**0**
TOTAL ALL INDIA (200kV & above)		**13450**	**6700**	**20150**	**11900**	**32050**
132kV/110kV Inter-Regional links 4xD/C + 4XS/C = 12 ckts	**$**	**600**	**0**	**600**	**0**	**600**
TOTAL ALL INDIA (110/132kV & above)		**14050**	**6700**	**20750**	**11900**	**32650**

Note:

@ - 200 MW HVDC Monopole is currently not in operation.

$ - 132/110kV lines are operated in radial mode from time to time.

** - Under Private Sector