

**MONTHLY REPORT ON
SHORT-TERM TRANSACTIONS OF ELECTRICITY
(October 2010)**

Introduction

A well-functioning electricity market requires an effective market monitoring process. As part of the market monitoring process, the monthly report on short-term transactions of electricity, is being prepared and posted on the website of CERC since September 2008. In this context, “short-term transactions of electricity” means the contracts of less than one year period for electricity transacted through Inter-State Trading Licensees and directly by the Distribution Licensees, Power Exchanges (Indian Energy Exchange Ltd (IEX) and Power Exchange India Ltd (PXIL)), and Unscheduled Interchange (UI). The objectives of the report are: (i) to observe the trends in volume and price of the short-term transactions of electricity; (ii) to analyse competition among the market players; and (iii) to disclose/disseminate all relevant market information. The analysis of the report for the month of October 2010 is as under:

I: Volume of Short-term Transactions of Electricity

During the Month of October 2010, total electricity generation excluding generation from renewable and captive power plants in India was 70558.09 MUs (Table-1).

Of the total electricity generation, 6245.97 MUs (8.85%) were transacted through short-term, comprising of 2574.17 MUs (3.65%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2470.02 MUs (3.50%) through UI and 1201.78 MUs (1.70%) through Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 41.21% (32.42% through traders and term-ahead contracts on Power Exchanges and 8.80% directly between distribution companies) followed by 39.55% through UI and 19.24% through day ahead collective transactions on Power Exchanges (Table-1& Chart-1). Daily volume of short-term transactions is shown in Chart-3.

The percentage share of electricity traded by each trading licensee in the total volume of electricity traded by all trading licensees is provided in Table-2 & Chart-4. The trading licensees are undertaking electricity transactions through bilateral and through power

exchanges. Here the volume of electricity transacted by the trading licensees includes bilateral transactions and the transactions undertaken through power exchanges. There are 38 trading licensees as on 31.10.2010, of which only 15 have engaged in trading during October 2010. Top 5 trading licenses had a share of 85.8 % in the total volume traded by all the licensees.

Herfindahl-Hirschman Index (HHI) has been used for measuring the competition among the trading licensees. Increases in the HHI generally indicate a decrease in competition and an increase of market power, whereas decreases indicate the opposite. A HHI above 0.18 indicates high concentration. The HHI computed for volume of electricity traded by trading licensees was 0.1977 for the month of October, which shows high concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL was 1089.46 MUs and 112.32 MUs respectively. The volume of total Buy bids and Sale bids was 1340.97 MUs and 1950.93 MUs respectively in IEX and 182.52 MUs and 260.20 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was less demand in IEX (0.69 times) and in PXIL (0.70 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted in term-ahead market through weekly contracts of power exchanges was 68.49 MU in IEX and 48.00 MU in PXIL (Table-5A&5B).

II: Price of Short-term Transactions of Electricity

(1) *Price of electricity transacted through Traders:* Weighted average sale price has been computed for the electricity transacted through traders and it was Rs.4.00/kWh. The weighted average sale price also computed for the transactions during Round the clock (RTC), Peak and Off-Peak periods separately and the sale price was Rs.3.90/kWh, Rs.4.97/kWh and Rs.4.23/kWh respectively. Minimum and Maximum sale price was Rs.2.39/kWh and Rs.6.07/kWh respectively (Table-3 & 4).

(2) *Price of electricity transacted Through Power Exchange:* The Minimum, Maximum and Weighted Average Price have been computed for the volume transacted through IEX and PXIL separately. The Minimum, Maximum and Weighted Average Price was Rs.1.70/kWh, Rs.7.25/kWh and Rs.2.73/kWh respectively in IEX and Rs1.50/kWh, Rs.8.35/kWh and Rs.3.00/kWh respectively in PXIL (Table-5).

The weighted average price of electricity transacted in term-ahead market through the weekly contracts of power exchanges was Rs.3.77/kWh in IEX and Rs.3.50/kWh in PXIL (Table-5A & Table-5B).

(3) Price of electricity transacted Through UI: All-India UI price has been computed for NEW Grid and SR Grid separately. The average UI price was Rs.2.27/kWh in the NEW Grid and Rs.3.25/kWh in the SR Grid. Minimum and Maximum price of UI was Rs.0.00/kWh and Rs.12.22/kWh respectively in the New Grid and Rs.0.00/kWh and Rs.12.22/kWh respectively in the SR Grid (Table-6).

The price of electricity transacted through trading licensees, power exchanges and UI and its comparison is shown in Chart-5 & 6.

III: Volume of Short-term Transactions of Electricity (Regional Entity¹-Wise):

Of the total bilateral transactions, top 5 regional entities selling 51% of the volume are Jindal Power Ltd, Andhra Pradesh, Lanko Amarkantak Ltd, Lanko Kondapally Ltd and Haryana. Top 5 regional entities purchasing 74% of the volume are Tamil Nadu, Maharashtra, Rajasthan, Uttar Pradesh and Karnataka (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 70% of the volume are Delhi, Chattisgarh, Himachal Pradesh, Gujarat and Karnataka. Top 5 regional entities purchasing 74% of the volume are Tamil Nadu, Punjab, Maharashtra, Uttar Pradesh and Kerala (Table-9 & 10).

Of the total UI transactions, top 5 regional entities underdrawing 46% of the volume are Delhi, Chattisgarh, Damodar Valley Corporation, Andhra Pradesh and Lanko Amarkantak Ltd. Top 5 regional entities overdrawing 58% of the volume are Haryana, Rajasthan, Madhya Pradesh, Uttar Pradesh and Maharashtra (Table-11 & 12).

Regional entity-wise total volume of net short-term transactions of electricity i.e. volume of net transactions through bilateral, power exchange and UI is shown in Table-13. Top 5 regional entities selling electricity are Chattisgarh, Jindal Power Ltd, Andhra Pradesh,

¹ In case of a state, the entities which are “selling” also include generators connected to state grid and the entities which are “buying” also include open access consumers.

Lanko Amarkantak Ltd and Delhi. Top 5 regional entities purchasing electricity are Tamil Nadu, Rajasthan, Maharashtra, Uttar Pradesh and Punjab.

IV: Congestion² on Inter-state Transmission Corridor for Day-Ahead Market on Power Exchanges:

Power Exchanges use a price discovery mechanism in which the aggregate demand and supply are matched to arrive at an unconstrained market price and volume. This step assumes that there is no congestion in the inter-state transmission system between different regions. However, in reality, the system operator, NLDC in coordination with RLDCs, limits the flow due to congestion in the inter-state transmission system. In such a situation, Power Exchanges adopt a mechanism called “Market Splitting”³.

In the month of October 2010, congestion occurred in both the power exchanges, the details of which are shown in Table-14. The volume of electricity that could not be cleared due to congestion and could not be transacted through power exchanges is the difference of unconstrained cleared volume (volume of electricity that would have been scheduled, had there been no congestion) and actual cleared volume.

During the month, the volume of electricity that could not be cleared due to congestion was about 7.0% of the actual cleared volume in IEX and about 16.5% of the actual cleared volume in PXIL. Although the congestion occurred in power exchanges, in percentage of time terms it was around 45.43% in IEX and 49.17% in PXIL. The congestion occurred in most number of times during 6:00-12:00 hours period of the day in both the exchanges.

² “Congestion” means a situation where the demand for transmission capacity exceeds the available transfer capability

³ “Market Splitting” is a mechanism adopted by Power Exchange where the market is split in the event of transmission congestion, into predetermined (by NLDC) bid areas or zones, which are cleared individually at their respective area prices such that the energy balance in every bid area is reached based upon the demand and supply in individual bid areas and using the available transmission corridor capacity between various bid areas simultaneously”

As a result of this market splitting the price of electricity in the importing region, where demand for electricity is more than supply, becomes relatively higher than the price of electricity in the exporting region.

V: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 8.85 %.
- Of the total short-term transactions of electricity, 41.21% transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies) followed by 39.55% through UI and 19.24% through Power Exchanges.
- Top 5 trading licenses are having share of 85.8% in the total volume traded by all the trading licensees.
- The price of electricity transacted through Trading Licensees was relatively high (Rs.4.00/kWh) when compared with the price of electricity transacted through Power Exchanges (Rs.2.73/kWh in IEX and 3.00/kWh in PXIL). The price of electricity transacted through UI was Rs.2.27/kWh in NEW Grid and Rs.3.25/kWh in SR Grid.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1977 shows high concentration of market power.
- The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was less demand in IEX (0.69 times) and in PXIL (0.70 times) when compared with the supply offered through these exchanges.
- Top 5 regional entities selling electricity are Chattisgarh, Jindal Power Ltd, Andhra Pradesh, Lanko Amarkantak Ltd and Delhi and top 5 regional entities purchasing electricity are Tamil Nadu, Rajasthan, Maharashtra, Uttar Pradesh and Punjab.
- Volume of electricity that could not be cleared due to congestion was 7.0% and 16.5% of the actual cleared volume in IEX and PXIL, however, the percentage of time of congestion occurred in both the exchanges was significant and it was 45% and 49% respectively.
- The congestion occurred in most number of times during 6:00-12:00 hours period of the day in both the exchanges.

VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA) (MUs)						Total Electricity Generation (MUs) as given at CEA Website*
Month: October 2010						
Date	Bilateral		Power Exchange (Market Clearing Volume of day ahead market)		Unscheduled Interchange (Over Drawl+Under Generation)	
	Through Traders and PXs**	Direct	IEX	PXI		
1-Oct-10	63.15	20.20	51.19	9.64	73.03	2333.10
2-Oct-10	70.76	21.67	50.38	9.42	84.60	2332.16
3-Oct-10	70.51	21.28	41.37	5.02	82.18	2248.56
4-Oct-10	64.80	22.70	46.28	9.91	75.33	2313.41
5-Oct-10	66.42	18.50	45.38	6.36	75.65	2318.74
6-Oct-10	66.64	18.45	40.63	4.06	75.11	2285.12
7-Oct-10	67.32	18.45	28.09	3.10	81.89	2304.43
8-Oct-10	72.16	18.00	36.24	2.25	78.13	2312.03
9-Oct-10	70.82	18.85	35.22	2.85	83.10	2300.32
10-Oct-10	72.12	17.48	27.41	2.15	79.73	2269.34
11-Oct-10	72.64	18.89	32.38	2.85	74.71	2313.64
12-Oct-10	72.56	18.86	31.12	3.49	66.52	2348.02
13-Oct-10	72.62	19.12	41.73	2.46	69.83	2336.52
14-Oct-10	71.89	18.62	43.77	3.30	80.12	2316.15
15-Oct-10	66.63	18.62	43.52	3.42	84.50	2283.13
16-Oct-10	54.22	17.54	39.43	4.19	89.51	2256.64
17-Oct-10	57.59	16.20	20.09	1.52	89.89	2151.88
18-Oct-10	59.28	16.37	29.06	2.43	78.07	2236.91
19-Oct-10	60.60	16.47	32.15	2.52	75.30	2292.67
20-Oct-10	60.00	16.44	33.52	1.89	68.96	2318.17
21-Oct-10	60.18	16.44	35.90	3.58	71.55	2313.99
22-Oct-10	60.15	16.44	36.29	3.32	78.41	2254.27
23-Oct-10	61.10	15.99	32.86	3.08	80.95	2262.87
24-Oct-10	57.16	14.92	28.41	1.71	87.77	2157.11
25-Oct-10	63.60	16.36	36.13	4.67	85.21	2233.04
26-Oct-10	63.08	16.36	29.09	1.97	91.97	2265.17
27-Oct-10	66.79	16.36	27.10	2.66	92.72	2240.96
28-Oct-10	66.46	16.36	29.12	2.15	87.85	2256.90
29-Oct-10	67.69	16.33	27.25	2.30	75.04	2275.41
30-Oct-10	63.95	16.33	28.40	1.83	78.24	2261.22
31-Oct-10	61.78	14.89	29.96	2.23	74.15	2166.21
Total	2024.68	549.50	1089.46	112.32	2470.02	70558.09
<i>Source: NLDC</i>						
<i>* Gross Electricity Generation excluding electricity generation from renewable and captive power plants.</i>						
<i>** The volume of bilateral through PXs represents the volume through term-ahead contracts.</i>						

PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (Rs/KWh)												
Month: October 2010												
Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Drawl/Over Drawl from the Grid (UI)					
Date	Minimum MCP	Maximum MCP	Weighted Average*	Minimum MCP	Maximum MCP	Weighted Average*	NEW Grid			SR Grid		
							Minimum Price	Maximum Price	Average Price**	Minimum Price	Maximum Price	Average Price**
1-Oct-10	2.50	7.00	3.86	2.00	6.75	3.46	0.00	5.91	2.50	0.93	12.22	4.76
2-Oct-10	1.98	6.00	2.82	2.50	8.01	3.66	0.00	5.91	2.14	0.62	12.22	3.38
3-Oct-10	2.00	4.40	2.68	1.50	7.00	3.12	0.00	3.72	1.84	0.00	4.97	1.83
4-Oct-10	1.98	7.25	3.34	2.00	6.80	3.23	0.93	7.32	2.71	0.62	4.97	2.67
5-Oct-10	1.90	5.00	3.07	2.10	4.20	3.12	0.47	7.32	2.69	0.00	6.38	2.92
6-Oct-10	1.99	4.40	2.89	1.90	4.25	3.18	1.24	12.22	3.14	0.00	4.97	2.21
7-Oct-10	1.90	4.00	2.59	1.90	5.71	2.96	1.24	5.91	2.82	0.62	7.32	2.87
8-Oct-10	1.99	4.05	2.72	1.89	5.51	3.16	1.09	8.26	2.65	0.47	12.22	3.96
9-Oct-10	1.97	4.30	2.77	1.90	4.30	3.06	0.16	5.91	2.03	0.31	8.26	2.99
10-Oct-10	1.80	4.00	2.46	1.80	4.19	2.88	0.00	3.26	1.34	0.00	6.38	1.67
11-Oct-10	1.80	4.50	2.62	1.90	4.25	2.80	0.31	4.97	2.22	0.00	6.85	2.94
12-Oct-10	1.94	4.65	2.83	1.90	4.25	2.78	0.47	3.72	2.30	1.55	6.38	3.73
13-Oct-10	2.50	4.75	2.98	2.00	5.71	3.04	1.40	7.79	3.01	2.79	8.26	4.95
14-Oct-10	2.30	4.90	3.05	2.25	5.00	3.13	0.31	6.85	2.88	2.33	12.22	5.07
15-Oct-10	2.75	4.70	3.14	2.25	5.00	3.17	0.31	6.38	2.84	1.24	7.79	4.14
16-Oct-10	2.50	3.81	2.72	2.40	4.20	2.77	0.00	4.03	2.04	0.00	7.32	2.64
17-Oct-10	1.96	3.12	2.29	2.00	4.25	2.59	0.00	3.41	1.21	0.00	4.03	2.17
18-Oct-10	1.85	3.90	2.41	2.00	4.40	2.94	0.00	3.72	1.73	0.31	5.44	3.23
19-Oct-10	1.99	4.00	2.61	2.00	5.51	2.85	0.78	12.22	3.43	1.24	12.22	4.55
20-Oct-10	2.00	3.51	2.62	2.00	4.75	2.68	0.78	12.22	4.00	3.26	12.22	5.56
21-Oct-10	2.50	4.75	3.09	2.00	4.80	2.43	0.00	6.38	2.13	1.09	12.22	4.42
22-Oct-10	2.20	5.00	3.34	2.00	5.00	2.63	0.00	4.50	1.59	0.16	6.38	3.29
23-Oct-10	2.00	3.85	2.86	2.00	6.01	2.75	0.00	3.88	1.57	0.00	6.85	3.50
24-Oct-10	1.90	3.00	2.18	1.90	5.71	2.24	0.00	3.26	1.45	0.00	6.38	2.32
25-Oct-10	1.90	3.25	2.25	1.95	5.15	2.65	0.00	3.88	1.65	0.00	5.44	2.54
26-Oct-10	1.81	3.00	2.09	1.80	6.21	3.11	0.00	6.38	2.02	0.78	5.44	2.88
27-Oct-10	1.94	3.60	2.40	1.80	7.51	2.53	0.62	4.97	2.30	0.00	5.91	2.39
28-Oct-10	1.80	3.30	2.21	1.80	8.01	2.45	0.00	5.91	2.26	0.00	4.50	2.36
29-Oct-10	1.85	3.00	2.24	1.80	8.01	2.39	0.00	4.03	2.28	0.00	8.26	3.59
30-Oct-10	1.75	2.23	1.89	1.75	8.35	2.59	0.00	5.91	2.24	0.78	8.26	3.20
31-Oct-10	1.70	2.30	1.82	1.78	8.35	2.52	0.00	3.57	1.30	0.00	7.79	2.12
	1.70#	7.25#	2.73	1.50#	8.35#	3.00	0.00#	12.22#	2.27	0.00#	12.22#	3.25

Source: Data on price of PX transactions from IEX and PXIL and data on UI Price from NLDC

* Weighted average price computed based on Market Clearing Volume (MCV) and Market Clearing Price (MCP) for each hour of the day

** Simple average price of UI of 96 time blocks of 15 minutes each in a day. UI price includes Ceiling UI Rate+ 40% additional UI charge.

Maximum/Minimum in the month

VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs)										
Month: October 2010										
Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through UI with Regional Grid			Total Net**
	Sale	Purchase	Net*	Sale	Purchase	Net*	Export (Under Drawl)	Import (Over Drawl)	Net*	
Punjab	12.12	117.36	105.24	18.65	268.41	249.76	103.99	54.30	-49.70	305.31
Haryana	186.00	31.47	-154.53	0.03	64.52	64.49	8.49	399.01	390.52	300.48
Rajasthan	0.49	338.42	337.93	10.35	57.97	47.62	28.18	309.73	281.55	667.10
Delhi	15.95	235.45	219.50	255.41	0.00	-255.41	286.78	9.26	-277.52	-313.42
Uttar Pradesh	0.30	269.49	269.20	0.00	118.15	118.15	47.00	200.87	153.88	541.22
Uttarakhand	0.00	0.00	0.00	17.34	0.00	-17.34	103.62	5.17	-98.45	-115.78
Himachal Pradesh	122.14	40.66	-81.48	166.36	0.00	-166.36	72.13	20.52	-51.61	-299.46
J & K	135.36	0.00	-135.36	5.73	0.00	-5.73	21.60	59.21	37.61	-103.48
UT Chandigarh	0.00	11.16	11.16	0.00	0.00	0.00	12.44	2.85	-9.59	1.57
Madhya Pradesh	66.37	43.01	-23.36	11.38	22.75	11.37	32.98	215.33	182.35	170.36
Maharashtra	0.00	418.90	418.90	1.77	143.85	142.07	94.28	132.67	38.39	599.36
Gujarat	180.97	0.00	-180.97	102.56	63.50	-39.06	113.22	58.34	-54.88	-274.91
Chattisgarh	182.74	0.00	-182.74	222.34	0.00	-222.34	209.23	15.37	-193.86	-598.94
Daman and Diu	0.00	0.00	0.00	0.00	0.00	0.00	12.46	3.61	-8.85	-8.85
Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.23	0.23	6.62	19.03	12.41	12.64
Andhra Pradesh	240.59	0.23	-240.36	95.50	60.99	-34.51	159.94	53.35	-106.59	-381.46
Karnataka	31.59	263.65	232.06	97.20	34.88	-62.33	28.44	110.89	82.45	252.19
Kerala	109.38	102.13	-7.25	0.00	74.97	74.97	0.47	80.23	79.76	147.48
Tamilnadu	50.72	615.46	564.74	0.00	280.37	280.37	59.49	91.95	32.46	877.57
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	11.69	2.33	-9.36	-9.36
West Bengal	127.65	0.99	-126.66	79.50	3.54	-75.95	126.12	44.31	-81.81	-284.42
Orissa	20.18	0.00	-20.18	8.62	0.00	-8.62	69.39	70.72	1.33	-27.47
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	9.50	56.39	46.89	46.89
Jharkhand	10.78	74.40	63.62	0.00	0.00	0.00	5.19	51.83	46.64	110.26
Sikkim	39.26	5.46	-33.80	15.74	0.00	-15.74	2.13	17.36	15.23	-34.31
DVC	104.84	0.00	-104.84	0.66	0.00	-0.66	170.17	1.38	-168.79	-274.29
Arunachal Pradesh	0.00	5.24	5.24	0.46	0.00	-0.46	13.46	1.83	-11.62	-6.84
Assam	0.00	0.00	0.00	5.00	1.20	-3.80	48.21	11.20	-37.01	-40.80
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	17.90	0.40	-17.50	-17.50
Meghalaya	9.61	0.00	-9.61	3.03	0.00	-3.03	8.42	4.43	-3.99	-16.62
Mizoram	0.72	0.00	-0.72	10.15	0.00	-10.15	1.74	3.65	1.91	-8.95
Nagaland	10.93	0.00	-10.93	0.00	0.00	0.00	4.81	4.73	-0.08	-11.01
Tripura	13.95	0.70	-13.25	17.27	0.20	-17.07	8.41	2.42	-5.99	-36.31
GOA	0.00	0.00	0.00	0.00	6.26	6.26	23.16	8.43	-14.73	-8.48
JINDAL POWER	481.39	0.00	-481.39	38.80	0.00	-38.80	5.06	15.32	10.26	-509.93
LANKO_AMK	203.11	0.00	-203.11	0.00	0.00	0.00	131.01	0.40	-130.60	-333.71
LANKO_KONDAPALLY	196.14	0.00	-196.14	17.95	1.00	-16.95	6.18	12.65	6.47	-206.62
Source: NLDC										
* in case of a state, the entities which are "selling" also include generators connected to state grid and the entities which are "buying" also include open access consumers.										
** (-) indicates sale and (+) indicates purchase										
*** Total net includes net of transactions through bilateral, power exchange and UI										

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), OCTOBER 2010				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	2574.17	41.21%	3.65%
	(i) Through Traders and PXs	2024.68	32.42%	2.87%
	(ii) Direct	549.50	8.80%	0.78%
2	Through Power Exchanges	1201.77	19.24%	1.70%
	IEX	1089.46	17.44%	1.54%
	PXIL	112.32	1.80%	0.16%
3	Through UI	2470.02	39.55%	3.50%
	Total	6245.96	100.00%	8.85%
	Total Generation	70558.09	–	–

Source: NLDC

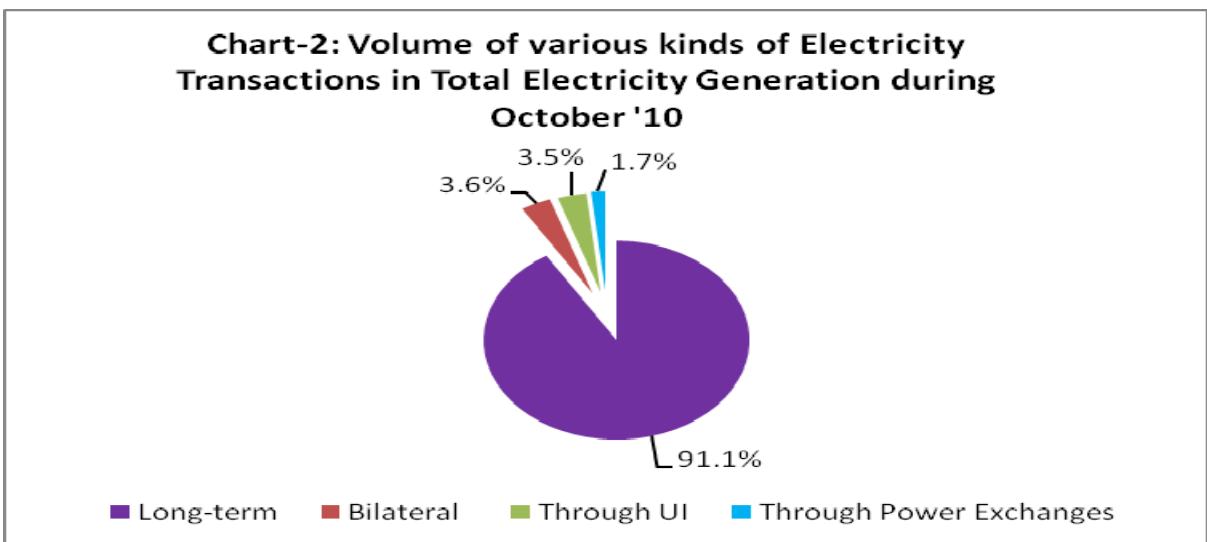
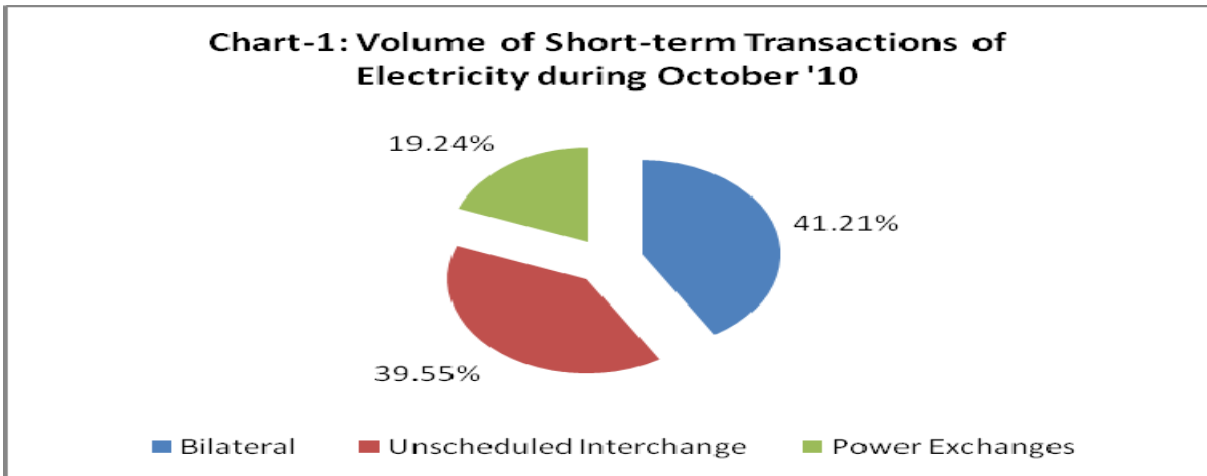


Chart-3: Volume of Short-term Transactions of Electricity, October 2010

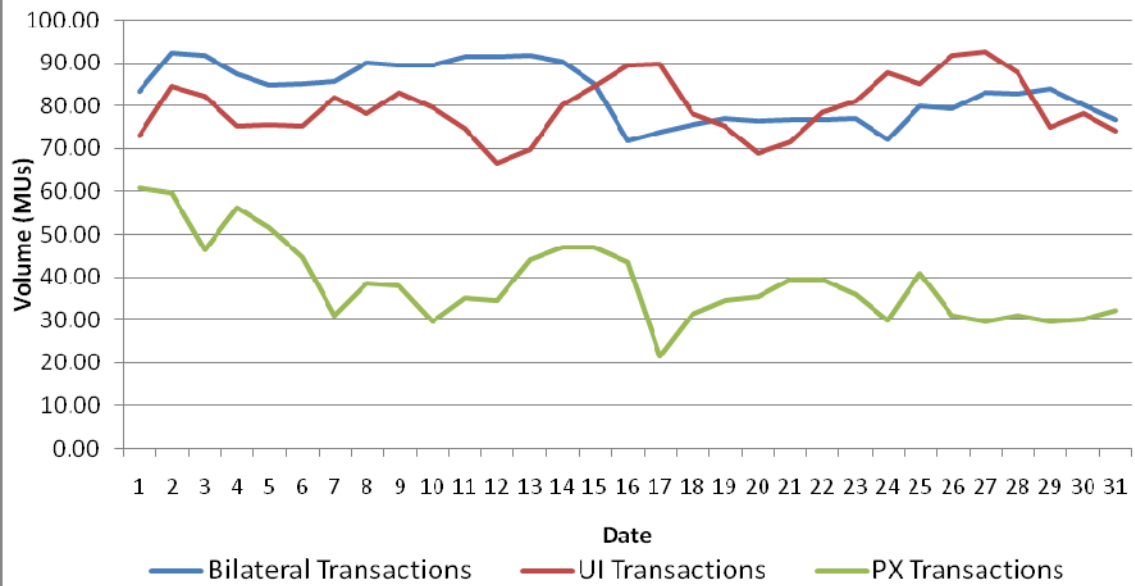


Table-2: Percentage Share of Electricity Traded by Trading Licensees during October 2010			
Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd	34.18%	0.1168
2	Lanco Electric Utility Ltd	19.05%	0.0363
3	NTPC Vidyut Vyapar Nigam Ltd	14.05%	0.0197
4	Reliance Energy Trading (P) Ltd	13.01%	0.0169
5	Tata Power Trading Company (P) Ltd	5.47%	0.0030
6	Knowledge Infrastructure Systems (P) Ltd	5.23%	0.0027
7	Instinct Advertisement & Marketing Ltd	3.67%	0.0013
8	JSW Power Trading Company Ltd	2.14%	0.0005
9	Shree Cement Ltd.	1.84%	0.0003
10	Adani Enterprises Ltd	0.62%	0.0000
11	GMR Energy Trading Ltd	0.44%	0.0000
12	Pune Power Development (P) Ltd	0.13%	0.0000
13	Mittal Power Processor Ltd.	0.13%	0.0000
14	RPG Power Trading Company Ltd.	0.04%	0.0000
15	Godawari Power & Ispat Ltd.	0.01%	0.0000
	Total	100.00%	0.1977
	Top 5 trading licensees	85.8%	
<i>Note: Volume of electricity traded by the licensees includes bilateral transactions (inter-state) and the transactions undertaken through power exchanges.</i>			
<i>Source: Information submitted by trading licensees</i>			

Chart-4: Percentage Share of Electricity Traded by Trading Licensees during October 2010

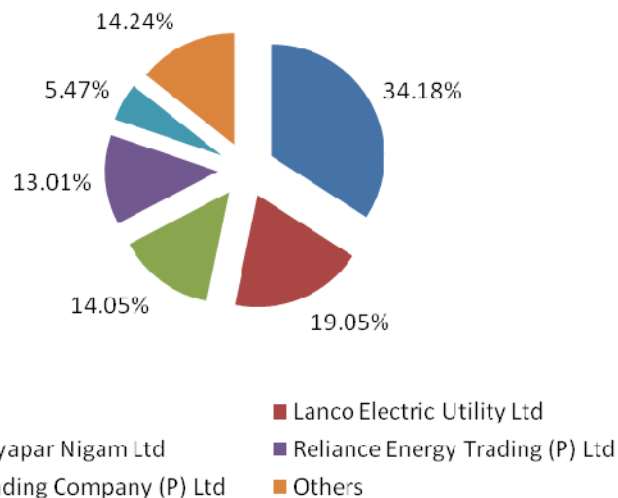


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	3.90
2	PEAK	4.97
3	OFF PEAK	4.23

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	2.39
2	Maximum	6.07
3	Weighted Average	4.00

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (Rs/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	1.70	1.50
2	Maximum	7.25	8.35
3	Weighted Average	2.73	3.00

Source: Information submitted by IEX and PXIL

Table-5A: Term ahead market of IEX			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (Rs/kwh)
1	Day-Ahead Contingency Contracts	0.02	7.00
2	Weekly Contracts	68.49	3.77
	Total	68.51	

Source: IEX

Table-5B: Term ahead market of PXIL			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (Rs/kwh)
1	Weekly Contracts	48.00	3.50
	Total		

Source: PXIL

Table-6: PRICE OF POWER TRANSACTED THROUGH UI (Rs/KWh)			
Sr.No		NEW Grid	SR Grid
1	Minimum	0.00	0.00
2	Maximum	12.22	12.22
3	Average	2.27	3.25

Source: NLDC

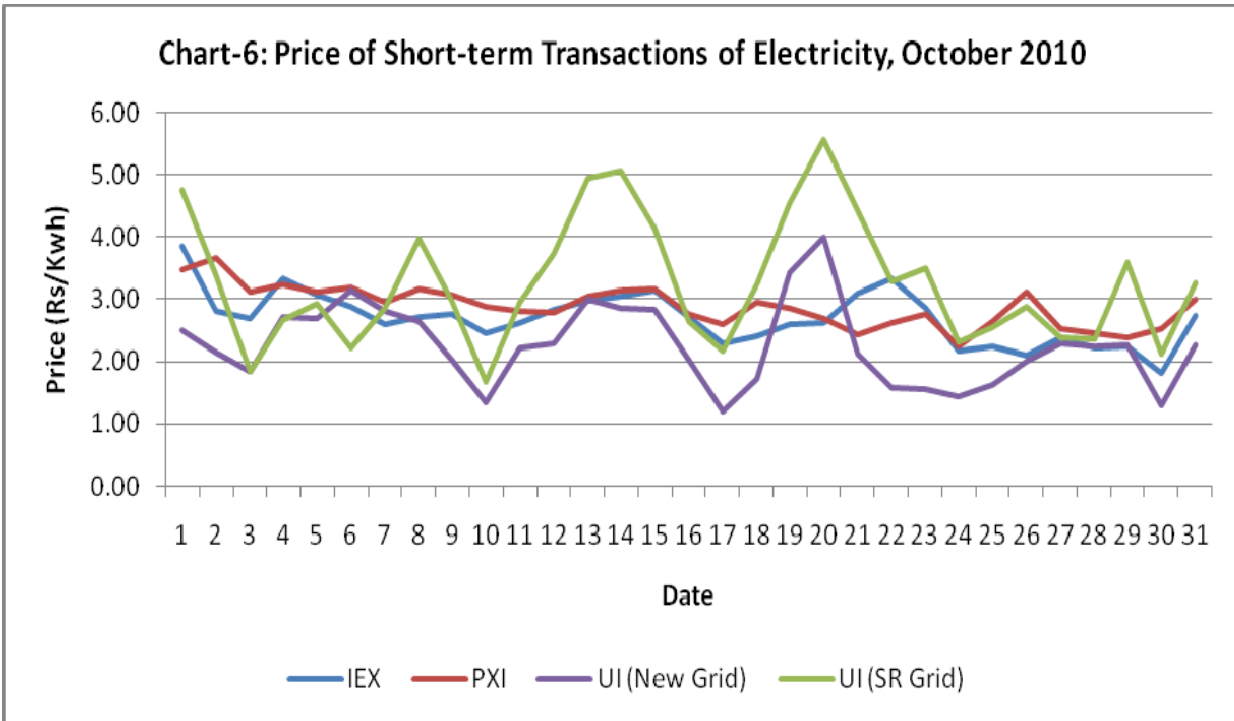
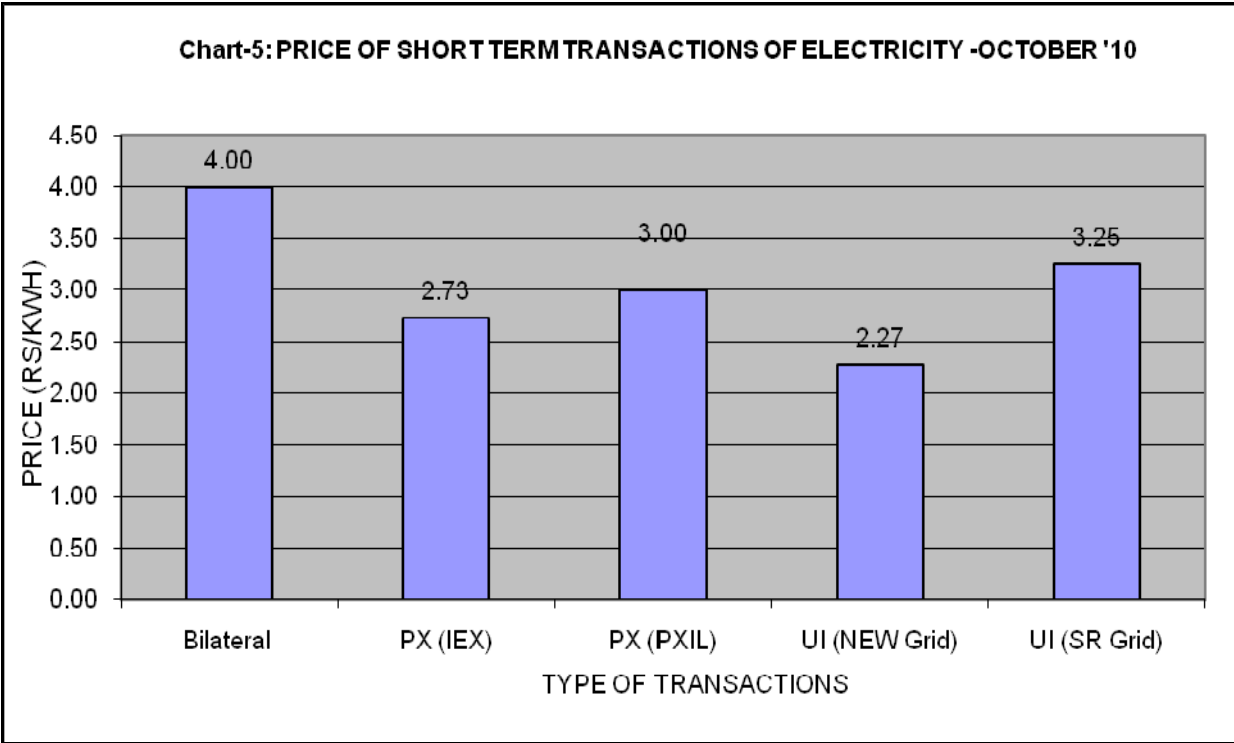


Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
JINDAL POWER	481.39	18.85%
Andhra Pradesh	240.59	9.42%
LANKO_AMK	203.11	7.96%
LANKO_KONDAPALLY	196.14	7.68%
Haryana	186.00	7.28%
Chattisgarh	182.74	7.16%
Gujarat	180.97	7.09%
J & K	135.36	5.30%
West Bengal	127.65	5.00%
Himachal Pradesh	122.14	4.78%
Kerala	109.38	4.28%
DVC	104.84	0.04
Madhya Pradesh	66.37	2.60%
Tamilnadu	50.72	1.99%
Sikkim	39.26	0.02
Karnataka	31.59	1.24%
Orissa	20.18	0.79%
Delhi	15.95	0.62%
Tripura	13.95	0.55%
Punjab	12.12	0.47%
Nagaland	10.93	0.00
Jharkhand	10.78	0.00
Meghalaya	9.61	0.00
Mizoram	0.72	0.00
Rajasthan	0.49	0.02%
Uttar Pradesh	0.30	0.01%
Total	2553.26	100.00%
Volume of sale by top 5 States	1307.23	51%

Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	615.46	23.91%
Maharashtra	418.90	16.27%
Rajasthan	338.42	13.15%
Uttar Pradesh	269.49	10.47%
Karnataka	263.65	10.24%
Delhi	235.45	9.15%
Punjab	117.36	4.56%
Kerala	102.13	3.97%
Jharkhand	74.40	2.89%
Madhya Pradesh	43.01	1.67%
Himachal Pradesh	40.66	1.58%
Haryana	31.47	1.22%
UT Chandigarh	11.16	0.43%
Sikkim	5.46	0.21%
Arunachal Pradesh	5.24	0.20%
West Bengal	0.99	0.04%
Tripura	0.70	0.03%
Andhra Pradesh	0.23	0.01%
Total	2574.17	100%
Volume of purchase by top 5 States	1905.91	74%

Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Delhi	255.41	21.25%
Chattisgarh	222.34	18.50%
Himachal Pradesh	166.36	13.84%
Gujarat	102.56	8.53%
Karnataka	97.20	8.09%
Andhra Pradesh	95.50	7.95%
West Bengal	79.50	6.61%
JINDAL POWER	38.80	3.23%
Punjab	18.65	1.55%
LANKO_KONDAPALLY	17.95	1.49%
Uttarakhand	17.34	1.44%
Tripura	17.27	1.44%
Sikkim	15.74	1.31%
Madhya Pradesh	11.38	0.95%
Rajasthan	10.35	0.86%
Mizoram	10.15	0.84%
Orissa	8.62	0.72%
J & K	5.73	0.48%
Assam	5.00	0.42%
Meghalaya	3.03	0.25%
Maharashtra	1.77	0.15%
DVC	0.66	0.05%
Arunachal Pradesh	0.46	0.04%
Haryana	0.03	0.00%
Total	1201.77	100.00%
Volume of purchase by top 5 States	843.88	70%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	280.37	23.31%
Punjab	268.41	22.32%
Maharashtra	143.85	11.96%
Uttar Pradesh	118.15	9.82%
Kerala	74.97	6.23%
Haryana	64.52	5.36%
Gujarat	63.50	5.28%
Andhra Pradesh	60.99	5.07%
Rajasthan	57.97	4.82%
Karnataka	34.88	2.90%
Madhya Pradesh	22.75	1.89%
GOA TOTAL	6.26	0.52%
West Bengal	3.54	0.29%
Assam	1.20	0.10%
LANKO_KONDAPALLY	1.00	0.08%
Dadra & Nagar Haveli	0.23	0.02%
Tripura	0.20	0.02%
Total	1202.77	100.00%
Volume of sale by top 5 States	885.74	74%

Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Delhi	286.78	13.90%
Chattisgarh	209.23	10.14%
DVC	170.17	8.24%
Andhra Pradesh	159.94	7.75%
LANKO_AMK	131.01	6.35%
West Bengal	126.12	6.11%
Gujarat	113.22	5.49%
Punjab	103.99	5.04%
Uttarakhand	103.62	5.02%
Maharashtra	94.28	4.57%
Himachal Pradesh	72.13	3.49%
Orissa	69.39	3.36%
Tamilnadu	59.49	2.88%
Assam	48.21	2.34%
Uttar Pradesh	47.00	2.28%
Madhya Pradesh	32.98	1.60%
Karnataka	28.44	1.38%
Rajasthan	28.18	1.37%
GOA TOTAL	23.16	1.12%
J & K	21.60	1.05%
Manipur	17.90	0.87%
Arunachal Pradesh	13.46	0.65%
Daman and Diu	12.46	0.60%
UT Chandigarh	12.44	0.60%
Pondicherry	11.69	0.57%
Bihar	9.50	0.46%
Haryana	8.49	0.41%
Meghalaya	8.42	0.41%
Tripura	8.41	0.41%
Dadra & Nagar Haveli	6.62	0.32%
LANKO_KONDAPALLY	6.18	0.30%
Jharkhand	5.19	0.25%
JINDAL POWER	5.06	0.25%
Nagaland	4.81	0.23%
Sikkim	2.13	0.10%
Mizoram	1.74	0.08%
Kerala	0.47	0.02%
Total	2063.90	100.00%
Volume of Export by top 5 States	957.11	46%

Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Haryana	399.01	18.55%
Rajasthan	309.73	14.40%
Madhya Pradesh	215.33	10.01%
Uttar Pradesh	200.87	9.34%
Maharashtra	132.67	6.17%
Karnataka	110.89	5.15%
Tamilnadu	91.95	4.27%
Kerala	80.23	3.73%
Orissa	70.72	3.29%
J & K	59.21	2.75%
Gujarat	58.34	2.71%
Bihar	56.39	2.62%
Punjab	54.30	2.52%
Andhra Pradesh	53.35	2.48%
Jharkhand	51.83	2.41%
West Bengal	44.31	2.06%
Himachal Pradesh	20.52	0.95%
Dadra & Nagar Haveli	19.03	0.88%
Sikkim	17.36	0.81%
Chattisgarh	15.37	0.71%
JINDAL POWER	15.32	0.71%
LANKO_KONDAPALLY	12.65	0.59%
Assam	11.20	0.52%
Delhi	9.26	0.43%
GOA TOTAL	8.43	0.39%
Uttarakhand	5.17	0.24%
Nagaland	4.73	0.22%
Meghalaya	4.43	0.21%
Mizoram	3.65	0.17%
Daman and Diu	3.61	0.17%
UT Chandigarh	2.85	0.13%
Tripura	2.42	0.11%
Pondicherry	2.33	0.11%
Arunachal Pradesh	1.83	0.09%
DVC	1.38	0.06%
LANKO_AMK	0.40	0.02%
Manipur	0.40	0.02%
Total	2151.46	100.00%
Volume of Export by top 5 States	1257.61	58%

Table-13: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE)		
Sr.No	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	Tamilnadu	877.57
2	Rajasthan	667.10
3	Maharashtra	599.36
4	Uttar Pradesh	541.22
5	Punjab	305.31
6	Haryana	300.48
7	Karnataka	252.19
8	Madhya Pradesh	170.36
9	Kerala	147.48
11	Jharkhand	110.26
12	Bihar	46.89
13	Dadra & Nagar Haveli	12.64
14	UT Chandigarh	1.57
16	Arunachal Pradesh	-6.84
17	GOA TOTAL	-8.48
19	Daman and Diu	-8.85
20	Mizoram	-8.95
21	Pondicherry	-9.36
22	Nagaland	-11.01
23	Meghalaya	-16.62
26	Manipur	-17.50
27	Orissa	-27.47
28	Sikkim	-34.31
29	Tripura	-36.31
30	Assam	-40.80
31	J & K	-103.48
33	Uttarakhand	-115.78
34	LANKO_KONDAPALLY	-206.62
35	DVC	-274.29
36	Gujarat	-274.91
37	West Bengal	-284.42
38	Himachal Pradesh	-299.46
39	Delhi	-313.42
43	LANKO_AMK	-333.71
44	Andhra Pradesh	-381.46
45	JINDAL POWER	-509.93
46	Chattisgarh	-598.94
* Total volume of net short-term transactions of electricity includes net of transactions of electricity through bilateral, power exchange and UI		
(-) indicates sale and (+) indicates purchase		

Table-14: Details of Congestion in Power Exchanges for October 2010			
Details of Congestion		IEX	PXIL
A	Unconstrained Cleared Volume* (MU)	1165.88	130.89
B	Actual Cleared Volume and hence scheduled (MU)	1089.46	112.31
C	Volume of electricity that could not be cleared as hence not scheduled because of congestion (MU) (A-B)	76.42	18.58
D	Volume of electricity that could not be cleared as % to Actual Cleared Volume	7.0%	16.5%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	45.43%	49.17%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	12%	12%
	6.00 - 12.00 hours	30%	30%
	12.00 - 18.00 hours	28%	28%
	18.00 - 24.00 hours	30%	29%

* This power would have been scheduled had there been no congestion.