

**MONTHLY REPORT ON
SHORT-TERM TRANSACTIONS OF ELECTRICITY
(January 2011)**

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 August 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 January 2011 is as under:

I: Volume of Short-term Transactions of Electricity

During the Month of January 2011, total electricity generation excluding generation from renewable and captive power plants in India was 71282.05 MUs (Table-1).

Of the total electricity generation, 7229.65 MUs (10.14%) were transacted through short-term, comprising of 3274.18 MUs (4.59%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2527.68 MUs (3.55%) through UI and 1427.79 MUs (2.00%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 45.29% (32.90% through traders and term-ahead contracts on Power Exchanges and 12.39% directly between distribution companies) followed by 34.96% through UI and 19.75% 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 39 trading licensees as on 31.1.2011, of which only 15 have engaged in trading during January 2011. Top 5 trading licenses had a share of 87 % 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 0.2277 for the month of January, which shows high concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL was 1205.64 MUs and 222.14 MUs respectively. The volume of total Buy bids and Sale bids was 1818.92 MUs and 1805.94 MUs respectively in IEX and 364.27 MUs and 378.21 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was equal demand in IEX (1.01 times) and less demand in PXIL (0.96 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 43.82 MU in IEX and 45.16 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.4.12/kWh, Rs.5.13/kWh and Rs.3.55/kWh respectively. Minimum and Maximum sale price was Rs.2.10/kWh and Rs.6.05/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.1.00/kWh, Rs.5.58/kWh and Rs.3.44/kWh respectively in IEX and Rs.1.00/kWh, Rs.10.00/kWh and Rs.3.66/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.3.06/kWh in IEX and Rs.3.19/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.3.29/kWh in the NEW Grid and Rs.3.48/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 62% of the volume are Chattisgarh, Punjab, Jindal Power Ltd, West Bengal and Delhi. Top 5 regional entities purchasing 63% of the volume are Tamil Nadu, Karnataka, Maharashtra, Rajasthan and Madhya Pradesh (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 70% of the volume are Gujarat, Delhi, Karnataka, Jindal Power Ltd and Chattisgarh and top 5 regional entities purchasing 91% of the volume are Punjab, Uttar Pradesh, Rajasthan, Tamil Nadu and Haryana (Table-9 & 10).

Of the total UI transactions, top 5 regional entities underdrawing 51% of the volume are Gujarat, Maharashtra, Delhi, Lanco Amarkantak Ltd and Jharkhand. Top 5 regional entities overdrawing 57% of the volume are Rajasthan, Haryana, Uttar Pradesh, Bihar and Orissa (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 Gujarat, Chattisgarh, Jindal Power Ltd, Delhi and

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.

West Bengal and top 5 regional entities purchasing electricity are Rajasthan, Tamil Nadu, Haryana, Madhya Pradesh and Uttar Pradesh.

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 January 2011, 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 2% and 7% of the actual cleared volume in IEX and PXIL, respectively. Although the congestion occurred in power exchanges, in percentage of time terms it was around 53% in IEX and 57% 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 10.14 %.
- Of the total short-term transactions of electricity, 45.29% transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies) followed by 34.96% through UI and 19.75% through Power Exchanges.
- Top 5 trading licenses are having share of 87.13% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.2277 shows high concentration of market power.
- The price of electricity transacted through Trading Licensees was comparable with the price of electricity transacted through Power Exchanges and the price of electricity transacted through UI. The price range was between Rs.3.29/kWh and Rs.4.00/kWh.
- The gap between the volume of sale bids and buy bids placed through power exchanges shows that there was equal demand in IEX (1:1.01) and less demand in PXIL (1:0.96) when compared with the supply offered through these exchanges.
- Top 5 regional entities selling electricity are Gujarat, Chattisgarh, Jindal Power Ltd, Delhi and West Bengal and top 5 regional entities purchasing electricity are Rajasthan, Tamil Nadu, Haryana, Madhya Pradesh and Uttar Pradesh.
- The volume of electricity that could not be cleared due to congestion was about 2% and 7% of the actual cleared volume in IEX and PXIL, respectively. In percentage of time terms, congestion occurred 53% of the time (394 hrs in the month) in IEX and 57% of the time (421 hrs in the month) in PXIL.
- 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: January 2011						
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-Jan-11	65.70	27.54	32.76	4.48	82.17	2249.58
2-Jan-11	63.13	27.54	35.15	3.44	72.50	2193.07
3-Jan-11	67.61	28.10	32.50	2.79	116.69	2258.80
4-Jan-11	73.10	26.81	30.60	3.77	115.20	2253.52
5-Jan-11	77.60	28.73	35.28	4.77	114.15	2128.89
6-Jan-11	79.42	28.73	33.41	6.11	120.51	2323.13
7-Jan-11	80.80	28.73	33.17	6.86	110.17	2310.73
8-Jan-11	84.28	27.94	36.47	6.44	101.18	2277.29
9-Jan-11	85.43	29.54	35.86	5.93	68.35	2283.68
10-Jan-11	82.95	29.63	32.34	6.50	67.59	2356.25
11-Jan-11	83.01	29.02	33.47	5.93	71.01	2349.02
12-Jan-11	82.18	29.00	34.98	8.28	65.98	2352.93
13-Jan-11	76.56	28.69	40.13	7.41	74.39	2343.79
14-Jan-11	73.60	28.65	50.76	9.21	69.61	2327.54
15-Jan-11	74.90	28.50	48.08	9.60	79.31	2242.82
16-Jan-11	70.38	28.72	37.27	6.40	76.06	2217.00
17-Jan-11	74.11	28.57	35.14	4.58	80.56	2285.15
18-Jan-11	76.77	28.57	36.09	6.75	76.91	2325.45
19-Jan-11	76.62	28.50	39.70	8.69	71.43	2338.31
20-Jan-11	75.22	28.50	36.07	8.02	74.74	2361.80
21-Jan-11	74.79	28.50	39.51	7.22	73.69	2352.03
22-Jan-11	69.32	27.25	42.32	8.57	71.07	2351.69
23-Jan-11	73.03	28.68	40.37	6.94	73.58	2281.29
24-Jan-11	74.73	30.29	37.21	5.39	83.04	2323.31
25-Jan-11	74.74	30.07	42.87	8.39	73.56	2323.77
26-Jan-11	76.92	29.06	47.28	11.07	81.66	2239.45
27-Jan-11	83.16	30.33	41.62	8.81	76.56	2290.94
28-Jan-11	82.53	30.33	44.58	7.65	74.34	2364.64
29-Jan-11	83.05	29.68	48.45	10.85	70.84	2331.69
30-Jan-11	84.95	30.51	45.58	10.86	72.46	2310.43
31-Jan-11	78.16	30.73	46.61	10.43	68.36	2334.06
Total	2378.73	895.45	1205.64	222.14	2527.68	71282.05
Source: NLDC						
* Gross Electricity Generation excluding electricity generation from renewables and captive power plants.						
** The volume of bilateral through PXs represents the volume through term-ahead contracts.						

PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (Rs/KWh)												
Month: January 2011												
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-Jan-11	1.10	3.70	2.60	1.10	4.50	3.20	0.00	6.38	1.95	0.00	7.79	3.20
2-Jan-11	1.05	3.40	2.39	1.00	4.50	3.00	0.00	4.50	1.67	0.00	5.44	2.44
3-Jan-11	1.00	3.50	2.49	1.20	6.50	2.98	0.00	6.85	2.61	0.00	12.22	3.30
4-Jan-11	1.60	3.60	2.79	1.20	4.70	3.26	0.00	12.22	3.82	0.47	7.32	3.53
5-Jan-11	1.50	4.00	2.93	2.00	7.01	3.17	0.00	12.22	5.27	0.16	12.22	3.39
6-Jan-11	1.41	4.00	3.02	2.00	4.75	3.33	0.00	12.22	4.58	0.00	8.26	3.16
7-Jan-11	2.00	4.25	3.19	1.20	5.10	3.44	0.16	12.22	3.72	0.00	8.26	3.77
8-Jan-11	1.20	4.50	3.19	2.00	5.50	3.43	0.00	12.22	3.66	1.55	12.22	4.15
9-Jan-11	1.51	4.50	3.26	1.20	6.50	3.32	0.00	5.44	2.38	0.31	5.91	3.19
10-Jan-11	1.25	4.80	3.27	2.00	8.00	3.44	0.00	7.79	3.05	0.62	7.32	3.72
11-Jan-11	2.00	5.50	3.63	1.20	5.50	3.77	0.47	12.22	4.22	1.24	12.22	4.43
12-Jan-11	2.00	5.58	3.72	2.00	5.50	3.74	0.93	12.22	4.71	0.00	12.22	3.92
13-Jan-11	2.00	5.50	3.81	2.50	10.00	4.05	0.62	12.22	4.04	0.00	12.22	4.07
14-Jan-11	2.00	5.20	3.92	2.00	6.50	3.61	0.00	12.22	3.11	0.00	6.38	3.22
15-Jan-11	2.00	5.00	3.63	2.00	5.20	4.00	0.00	3.72	1.79	0.00	4.97	2.34
16-Jan-11	2.00	3.80	2.91	2.00	4.70	3.50	0.00	4.97	1.89	0.00	7.32	2.55
17-Jan-11	2.20	5.00	3.24	2.00	6.50	3.34	0.00	12.22	3.13	0.00	7.79	2.76
18-Jan-11	1.92	4.75	3.34	2.00	6.50	3.58	0.93	12.22	3.85	0.00	7.32	3.17
19-Jan-11	2.20	4.85	3.49	2.00	8.00	3.68	2.17	12.22	5.43	0.47	8.26	4.03
20-Jan-11	2.25	5.00	3.60	2.00	7.50	3.73	0.62	12.22	3.81	0.00	12.22	3.92
21-Jan-11	2.20	5.30	3.82	2.35	8.50	4.06	0.47	6.85	2.97	0.00	12.22	3.55
22-Jan-11	2.28	5.40	3.99	2.20	6.81	3.93	0.00	12.22	3.19	0.00	7.32	3.47
23-Jan-11	2.00	4.80	3.75	2.00	5.50	3.74	0.16	12.22	3.18	0.00	6.38	2.62
24-Jan-11	2.00	5.00	3.71	2.00	5.50	3.80	0.00	6.85	2.62	0.00	7.79	3.26
25-Jan-11	2.00	4.85	3.74	2.00	5.50	3.70	0.78	12.22	3.83	0.31	7.79	3.68
26-Jan-11	2.00	4.50	3.30	2.00	5.50	3.69	0.00	7.32	2.44	0.00	6.85	2.87
27-Jan-11	2.00	5.00	3.84	2.00	6.50	3.70	0.00	6.85	2.58	0.00	12.22	4.50
28-Jan-11	2.00	5.00	3.81	1.85	6.86	3.98	0.16	12.22	3.04	0.62	12.22	4.51
29-Jan-11	2.00	5.00	3.79	2.00	6.90	3.81	0.62	12.22	3.88	0.00	8.26	4.11
30-Jan-11	2.00	4.55	3.49	2.00	6.90	3.62	0.00	7.32	2.38	0.00	6.38	2.92
31-Jan-11	2.00	5.00	3.72	2.00	6.90	3.94	0.00	12.22	3.17	0.00	7.79	3.98
	1.00#	5.58#	3.44	1.00#	10.00#	3.66	0.00#	12.22#	3.29	0.00#	12.22#	3.48

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: January 2011										
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	495.17	24.44	-470.74	0.00	366.03	366.03	43.93	75.70	31.77	-72.94
Haryana	115.31	11.86	-103.45	0.17	86.52	86.34	9.88	382.53	372.65	355.55
Rajasthan	12.53	347.63	335.10	9.50	310.13	300.63	5.98	471.72	465.75	1101.47
Delhi	236.70	121.02	-115.67	156.31	5.21	-151.09	218.45	8.89	-209.56	-476.33
Uttar Pradesh	154.14	52.92	-101.23	0.00	343.53	343.53	111.45	178.30	66.85	309.15
Uttarakhand	0.00	223.20	223.20	8.71	0.92	-7.79	7.76	92.16	84.40	299.81
Himachal Pradesh	14.07	245.24	231.16	24.86	0.00	-24.86	21.76	33.55	11.80	218.10
J & K	36.30	230.64	194.34	2.15	0.00	-2.15	19.95	65.09	45.14	237.34
UT Chandigarh	7.44	0.00	-7.44	0.00	0.00	0.00	0.38	27.87	27.49	20.05
MP	1.63	306.33	304.70	6.86	1.58	-5.28	67.25	101.85	34.60	334.02
Maharashtra	134.90	400.19	265.29	71.12	21.68	-49.44	219.85	36.91	-182.93	32.92
Gujarat	154.69	0.00	-154.69	534.25	12.93	-521.32	401.93	6.58	-395.35	1071.36
Chattisgarh	505.43	0.00	-505.43	122.25	0.00	-122.25	118.79	15.55	-103.24	-730.92
Daman and Diu	0.00	0.00	0.00	0.00	0.32	0.32	19.17	2.94	-16.22	-15.90
Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	5.78	5.78	8.57	8.60	0.03	5.81
Andhra Pradesh	150.48	52.88	-97.60	36.14	51.32	15.18	48.85	66.52	17.67	-64.75
Karnataka	131.45	459.22	327.77	126.39	0.00	-126.39	29.35	33.10	3.75	205.13
Kerala	67.89	52.69	-15.20	0.73	16.65	15.92	0.79	115.77	114.98	115.70
Tamilnadu	0.00	544.20	544.20	0.00	192.49	192.49	28.80	95.86	67.06	803.74
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	40.36	0.36	-40.00	-40.00
West Bengal	263.56	12.34	-251.22	94.36	0.00	-94.36	110.70	32.54	-78.16	-423.75
Orissa	32.41	32.57	0.16	27.34	0.16	-27.18	121.39	118.31	-3.09	-30.10
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	1.53	170.38	168.86	168.86
Jharkhand	0.00	83.36	83.36	0.00	0.00	0.00	122.99	10.97	-112.02	-28.67
Sikkim	7.50	1.41	-6.09	14.56	0.00	-14.56	67.74	42.55	-25.20	-45.84
DVC	76.08	21.27	-54.81	0.00	0.00	0.00	119.95	16.14	-103.81	-158.61
Arunachal Pradesh	0.00	0.00	0.00	0.00	6.46	6.46	0.35	7.92	7.57	14.03
Assam	4.64	24.21	19.57	8.74	5.67	-3.07	18.44	5.47	-12.97	3.54
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	3.53	7.01	3.48	3.48
Meghalaya	3.10	13.46	10.36	0.36	0.00	-0.36	0.90	22.28	21.38	31.38
Mizoram	0.00	0.12	0.12	1.53	0.00	-1.53	0.05	9.00	8.95	7.53
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.17	11.02	10.85	10.85
Tripura	7.73	0.00	-7.73	19.86	0.41	-19.44	3.54	1.51	-2.03	-29.20
GOA	0.00	0.00	0.00	16.75	0.00	-16.75	22.81	4.49	-18.32	-35.06
JINDAL POWER	475.93	0.00	-460.03	122.79	0.00	-122.79	7.83	12.34	4.51	-578.31
LANKO_AMK	0.00	0.00	0.00	82.21	0.00	-82.21	126.03	0.00	-126.03	-208.23
LANKO_KONDAPAL LY	95.73	0.00	-95.73	22.07	0.00	-22.07	1.24	9.33	8.09	-109.71
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), JAN 2011				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	3274.18	45.29%	4.59%
	(i) Through Traders and PXs	2378.73	32.90%	3.34%
	(ii) Direct	895.45	12.39%	1.26%
2	Through Power Exchanges	1427.79	19.75%	2.00%
	IEX	1205.64	16.68%	1.69%
	PXIL	222.14	3.07%	0.31%
3	Through UI	2527.68	34.96%	3.55%
	Total	7229.65	100.00%	10.14%
	Total Generation	71282.05	—	—

Source: NLDC

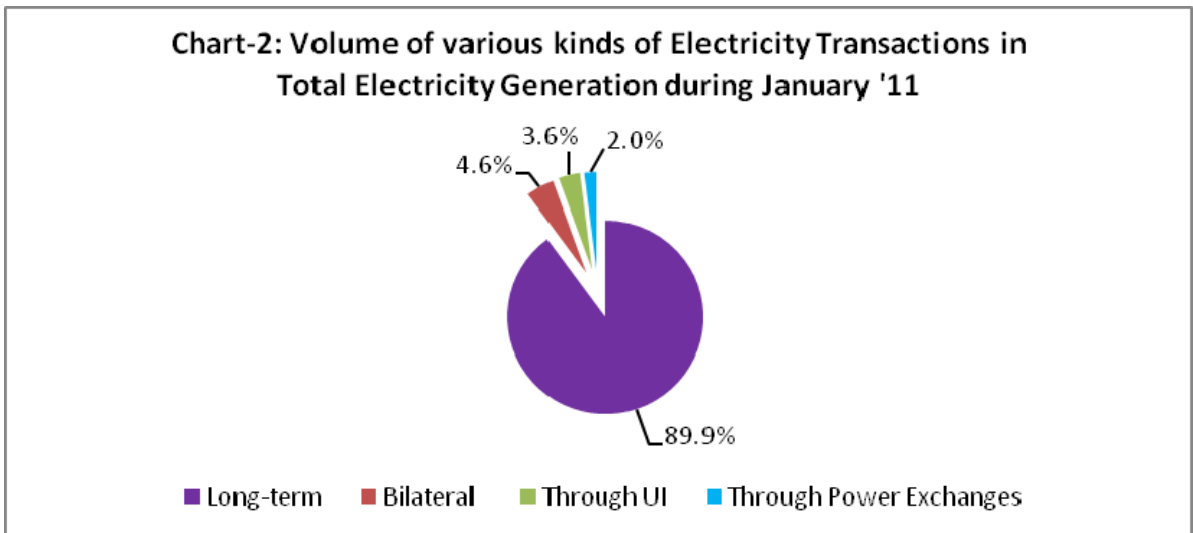
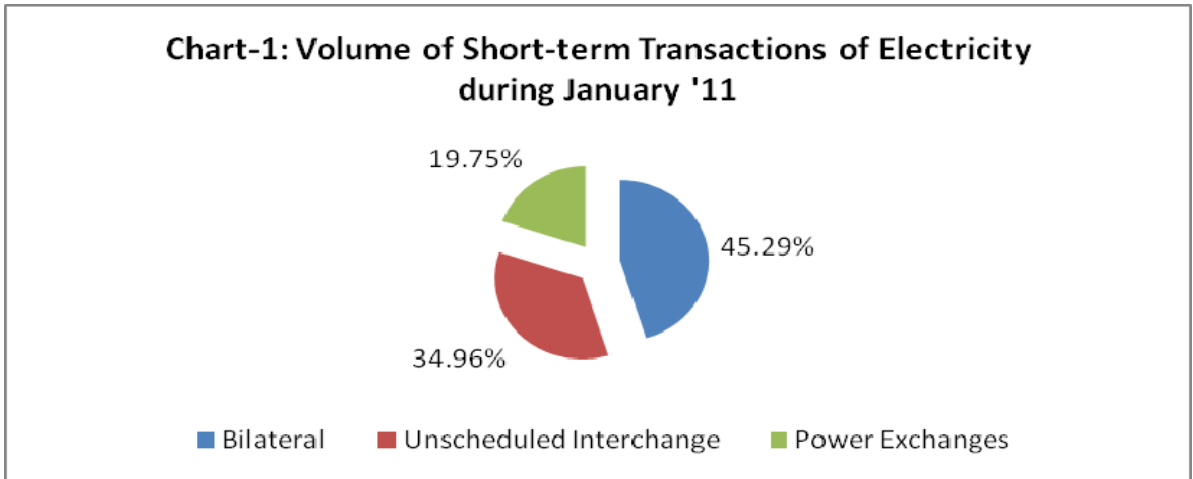
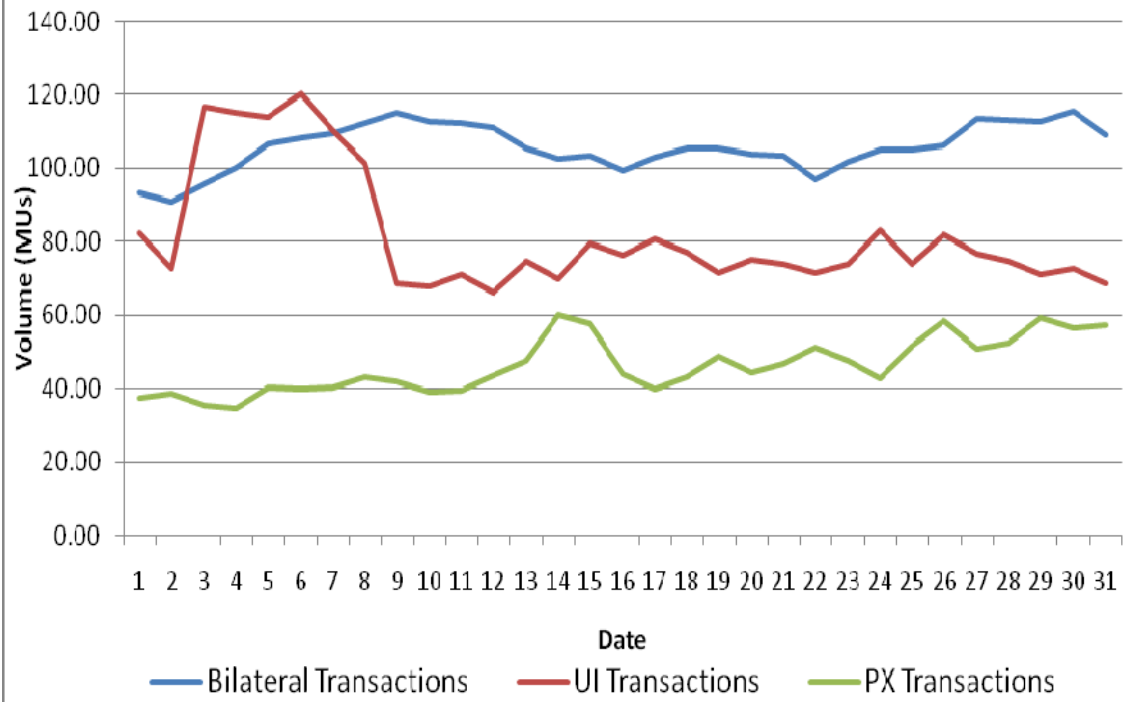


Chart-3: Volume of Short-term Transactions of Electricity, January 2011



Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd	37.460%	0.1403
2	NTPC Vidyut Vyapar Nigam Ltd	24.472%	0.0599
3	Reliance Energy Trading (P) Ltd	12.349%	0.0152
4	National Energy Trading And Services Limited	6.784%	0.0046
5	Tata Power Trading Company (P) Ltd	6.067%	0.0037
6	JSW Power Trading Company Ltd	3.977%	0.0016
7	Instinct Infra & Power Ltd	3.327%	0.0011
8	Knowledge Infrastructure Systems (P) Ltd	3.169%	0.0010
9	GMR Energy Trading Ltd	1.663%	0.0003
10	Mittal Power Processor Ltd.	0.357%	0.0000
11	RPG Power Trading Company Ltd.	0.224%	0.0000
12	Global Energy Pvt. Ltd.	0.073%	0.0000
13	Pune Power Development (P) Ltd	0.068%	0.0000
14	Jindal Power Trading Company Ltd.	0.005%	0.0000
15	Essar Electric Power Development Corp. Ltd.	0.004%	0.0000
	Total	100.00%	0.2277
	Top 5 trading licensees	87.13%	

Note: Volume of electricity traded by the licensees includes bilateral transactions (inter-state) and the transactions undertaken through power exchanges.

Source: Information submitted by trading licensees

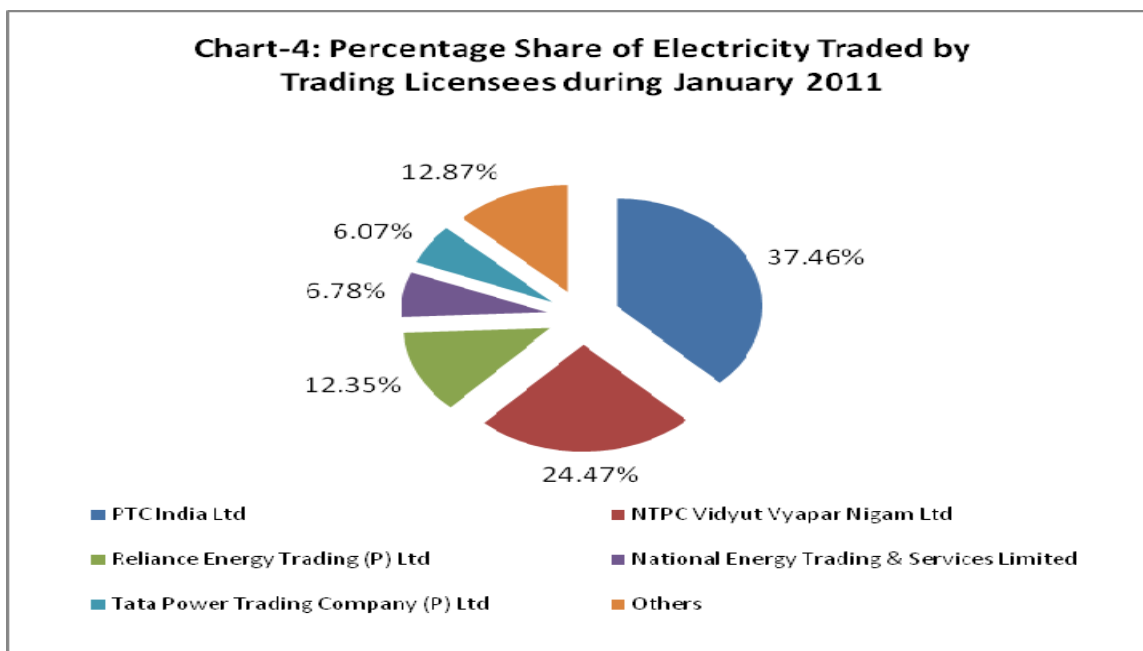


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	4.12
2	PEAK	5.13
3	OFF PEAK	3.55

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	2.10
2	Maximum	6.05
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	1.00	1.00
2	Maximum	5.58	10.00
3	Weighted Average	3.44	3.66

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	Intra Day Contracts	0.10	5.00
2	Day-Ahead Contingency Contracts	0.49	4.30
3	Weekly Contracts	43.82	3.06
	Total	44.41	

Source: IEX

Table-5B: Term ahead market of PXIL			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (Rs/kwh)
1	Day Ahead Contingency	2.10	3.85
2	Weekly Contracts	45.16	3.19
	Total	47.26	

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	3.29	3.48

Source: NLDC

Chart-5: PRICE OF SHORT TERM TRANSACTIONS OF ELECTRICITY, JAN '11

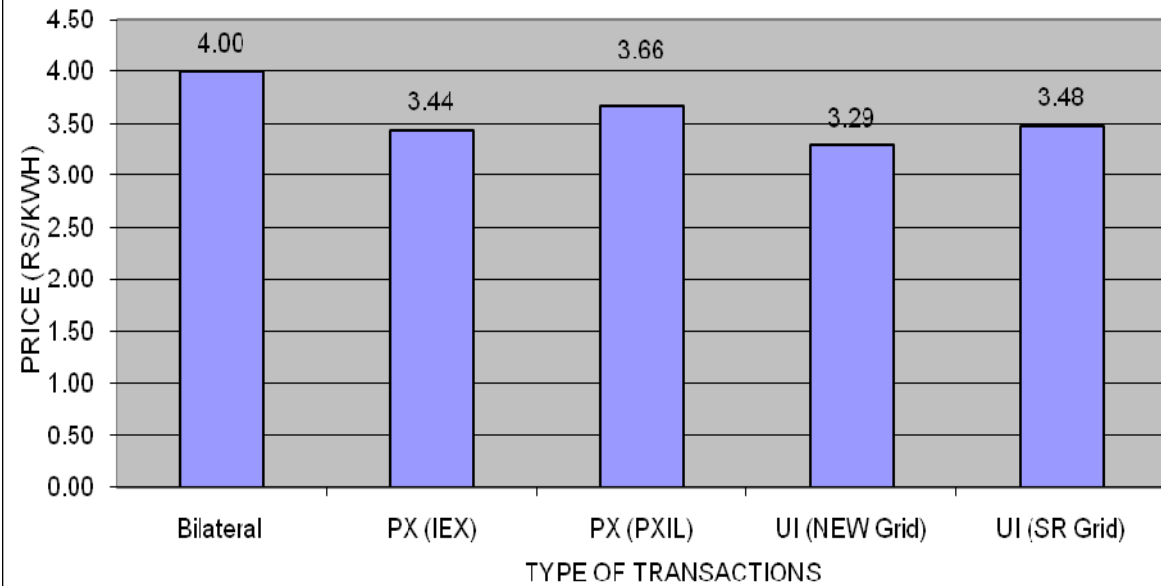


Chart-6: Price of Short-term Transactions of Electricity, Jan'11

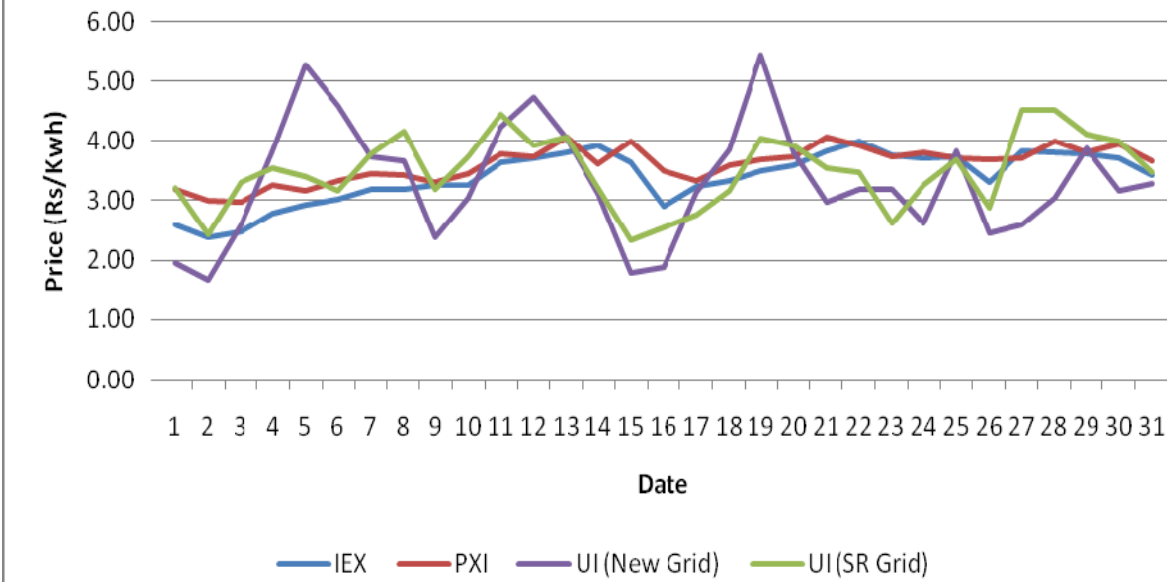


Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Chattisgarh	505.43	15.87%
Punjab	495.17	15.55%
JINDAL POWER	475.93	14.94%
West Bengal	263.56	8.28%
Delhi	236.70	7.43%
Gujarat	154.69	4.86%
Uttar Pradesh	154.14	4.84%
Andhra Pradesh	150.48	4.73%
Maharashtra	134.90	4.24%
Karnataka	131.45	4.13%
Haryana	115.31	3.62%
LANKO_KONDAPALLY	95.73	3.01%
DVC	76.08	2.39%
Kerala	67.89	2.13%
J & K	36.30	1.14%
Orissa	32.41	1.02%
Himachal Pradesh	14.07	0.44%
Rajasthan	12.53	0.39%
Tripura	7.73	0.24%
Sikkim	7.50	0.24%
UT Chandigarh	7.44	0.23%
Assam	4.64	0.15%
Meghalaya	3.10	0.10%
MP	1.63	0.05%
Total	3184.80	100.00%
Volume of sale by top 5 States	1976.78	62%

Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	544.20	16.69%
Karnataka	459.22	14.08%
Maharashtra	400.19	12.27%
Rajasthan	347.63	10.66%
MP	306.33	9.39%
Himachal Pradesh	245.24	7.52%
J & K	230.64	7.07%
Uttarakhand	223.20	6.84%
Delhi	121.02	3.71%
Jharkhand	83.36	2.56%
Uttar Pradesh	52.92	1.62%
Andhra Pradesh	52.88	1.62%
Kerala	52.69	1.62%
Orissa	32.57	1.00%
Punjab	24.44	0.75%
Assam	24.21	0.74%
DVC	21.27	0.65%
Meghalaya	13.46	0.41%
West Bengal	12.34	0.38%
Haryana	11.86	0.36%
Sikkim	1.41	0.04%
Mizoram	0.12	0.00%
Total	3261.18	100%
Volume of purchase by top 5 States	2057.57	63%

Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	534.25	35.38%
Delhi	156.31	10.35%
Karnataka	126.39	8.37%
JINDAL POWER	122.79	8.13%
Chattisgarh	122.25	8.10%
West Bengal	94.36	6.25%
LANKO_AMK	82.21	5.44%
Maharashtra	71.12	4.71%
Andhra Pradesh	36.14	2.39%
Orissa	27.34	1.81%
Himachal Pradesh	24.86	1.65%
LANKO_KONDAPALLY	22.07	1.46%
Tripura	19.86	1.31%
GOA	16.75	1.11%
Sikkim	14.56	0.96%
Rajasthan	9.50	0.63%
Assam	8.74	0.58%
Uttarakhand	8.71	0.58%
MP	6.86	0.45%
J & K	2.15	0.14%
Mizoram	1.53	0.10%
Kerala	0.73	0.05%
Meghalaya	0.36	0.02%
Haryana	0.17	0.01%
Total	1509.99	100.00%
Volume of purchase by top 5 States	1061.98	70%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Punjab	366.03	25.64%
Uttar Pradesh	343.53	24.06%
Rajasthan	310.13	21.72%
Tamilnadu	192.49	13.48%
Haryana	86.52	6.06%
Andhra Pradesh	51.32	3.59%
Maharashtra	21.68	1.52%
Kerala	16.65	1.17%
Gujarat	12.93	0.91%
Arunachal Pradesh	6.46	0.45%
Dadra & Nagar Haveli	5.78	0.40%
Assam	5.67	0.40%
Delhi	5.21	0.37%
MP	1.58	0.11%
Uttarakhand	0.92	0.06%
Tripura	0.41	0.03%
Daman and Diu	0.32	0.02%
Orissa	0.16	0.01%
Total	1427.79	100.00%
Volume of sale by top 5 States	1298.69	91%

Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Gujarat	401.93	18.67%
Maharashtra	219.85	10.21%
Delhi	218.45	10.15%
LANKO_AMK	126.03	5.86%
Jharkhand	122.99	5.71%
Orissa	121.39	5.64%
DVC	119.95	5.57%
Chattisgarh	118.79	5.52%
Uttar Pradesh	111.45	5.18%
West Bengal	110.70	5.14%
Sikkim	67.74	3.15%
MP	67.25	3.12%
Andhra Pradesh	48.85	2.27%
Punjab	43.93	2.04%
Pondicherry	40.36	1.87%
Karnataka	29.35	1.36%
Tamilnadu	28.80	1.34%
GOA	22.81	1.06%
Himachal Pradesh	21.76	1.01%
J & K	19.95	0.93%
Daman and Diu	19.17	0.89%
Assam	18.44	0.86%
Haryana	9.88	0.46%
Dadra & Nagar Haveli	8.57	0.40%
JINDAL POWER	7.83	0.36%
Uttarakhand	7.76	0.36%
Rajasthan	5.98	0.28%
Tripura	3.54	0.16%
Manipur	3.53	0.16%
Bihar	1.53	0.07%
LANKO_KONDAPALLY	1.24	0.06%
Meghalaya	0.90	0.04%
Kerala	0.79	0.04%
UT Chandigarh	0.38	0.02%
Arunachal Pradesh	0.35	0.02%
Nagaland	0.17	0.01%
Mizoram	0.05	0.00%
Total	2152.44	100.00%
Volume of Export by top 5 States	1089.25	51%

Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Rajasthan	471.72	20.50%
Haryana	382.53	16.62%
Uttar Pradesh	178.30	7.75%
Bihar	170.38	7.40%
Orissa	118.31	5.14%
Kerala	115.77	5.03%
MP	101.85	4.43%
Tamilnadu	95.86	4.17%
Uttarakhand	92.16	4.01%
Punjab	75.70	3.29%
Andhra Pradesh	66.52	2.89%
J & K	65.09	2.83%
Sikkim	42.55	1.85%
Maharashtra	36.91	1.60%
Himachal Pradesh	33.55	1.46%
Karnataka	33.10	1.44%
West Bengal	32.54	1.41%
UT Chandigarh	27.87	1.21%
Meghalaya	22.28	0.97%
DVC	16.14	0.70%
Chattisgarh	15.55	0.68%
JINDAL POWER	12.34	0.54%
Nagaland	11.02	0.48%
Jharkhand	10.97	0.48%
LANKO_KONDAPALLY	9.33	0.41%
Mizoram	9.00	0.39%
Delhi	8.89	0.39%
Dadra & Nagar Haveli	8.60	0.37%
Arunachal Pradesh	7.92	0.34%
Manipur	7.01	0.30%
Gujarat	6.58	0.29%
Assam	5.47	0.24%
GOA	4.49	0.20%
Daman and Diu	2.94	0.13%
Tripura	1.51	0.07%
Pondicherry	0.36	0.02%
LANKO_AMK	0.00	0.00%
Total	2301.14	100.00%
Volume of Export by top 5 States	1321.24	57%

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	Rajasthan	1101.47
2	Tamilnadu	803.74
3	Haryana	355.55
4	MP	334.02
5	Uttar Pradesh	309.15
6	Uttarakhand	299.81
7	J & K	237.34
8	Himachal Pradesh	218.10
9	Karnataka	205.13
10	Bihar	168.86
11	Kerala	115.70
12	Maharashtra	32.92
13	Meghalaya	31.38
14	UT Chandigarh	20.05
15	Arunachal Pradesh	14.03
16	Nagaland	10.85
17	Mizoram	7.53
18	Dadra & Nagar Haveli	5.81
19	Assam	3.54
20	Manipur	3.48
21	Daman and Diu	-15.90
22	Jharkhand	-28.67
23	Tripura	-29.20
24	Orissa	-30.10
25	GOA	-35.06
26	Pondicherry	-40.00
27	Sikkim	-45.84
28	Andhra Pradesh	-64.75
29	Punjab	-72.94
30	LANKO_KONDAPALLY	-109.71
31	DVC	-158.61
32	LANKO_AMK	-208.23
33	West Bengal	-423.75
34	Delhi	-476.33
35	JINDAL POWER	-578.31
36	Chattisgarh	-730.92
37	Gujarat	-1071.36
* 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 DAY AHEAD COLLECTIVE TRANSACTIONS ON POWER EXCHANGES, JAN 2011			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MU)	1229.97	237.32
B	Actual Cleared Volume and hence scheduled (MU)	1205.64	222.14
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MU) (A-B)	24.33	15.18
D	Volume of electricity that could not be cleared as % to Actual Cleared Volume	2%	7%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	53%	57%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	6%	8%
	6.00 - 12.00 hours	35%	34%
	12.00 - 18.00 hours	30%	30%
	18.00 - 24.00 hours	29%	28%

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