

**MONTHLY REPORT ON
SHORT-TERM TRANSACTIONS OF ELECTRICITY
(March 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 March 2011 is as under:

I: Volume of Short-term Transactions of Electricity

During the Month of March 2011, total electricity generation excluding generation from renewable and captive power plants in India was 75497.39 MUs (Table-1).

Of the total electricity generation, 7393.07 MUs (9.79%) were transacted through short-term, comprising of 3588.58 MUs (4.75%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2381.60 MUs (3.15%) through UI and 1422.89 MUs (1.88%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 48.54% (37.56% through traders and term-ahead contracts on Power Exchanges and 10.98% directly between distribution companies) followed by 32.21% through UI and 19.25% 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 40 trading licensees as on 31.3.2011, of which only 16 have engaged in trading during March 2011. Top 5 trading licenses had a share of 77.4% 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 0.1626 for the month of March 2011, which shows moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 1253.88 MUs and 169.01 MUs respectively. The volume of total Buy bids and Sale bids was 1997.38 MUs and 2105.20 MUs respectively in IEX and 404.60 MUs and 429.84 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 (0.95 times) and in PXIL (0.94 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted in term-ahead market through weekly contracts in IEX was 110.72 MU (Table-5A). There were no transactions of electricity in term-ahead market through PXIL.

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 ₹4.67/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 ₹4.65/kWh, ₹5.64/kWh and ₹4.79/kWh respectively. Minimum and Maximum sale price was ₹3.19/kWh and ₹8.04/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 ₹1.20/kWh, ₹9.35/kWh and ₹3.34/kWh respectively in IEX and ₹1.20/kWh, ₹13.95/kWh and ₹5.13/kWh respectively in PXIL (Table-5).

The weighted average price of electricity transacted in term-ahead market through the weekly contracts of IEX was ₹4.95/kWh (Table-5A).

(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 ₹3.12/kWh in the NEW Grid and ₹7.00/kWh in the SR Grid. Minimum and Maximum price of UI was ₹0.00/kWh and ₹12.22/kWh respectively in the New Grid and ₹0.00/kWh and ₹17.46/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 52% of the volume are Jindal Power Ltd, Gujarat, Chattisgarh, Delhi and Karnataka. Top 5 regional entities purchasing 68% of the volume are Andhra Pradesh, West Bengal, Uttar Pradesh, Karnataka and Tamil Nadu (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 72% of the volume are Gujarat, Delhi, West Bengal, Chattisgarh and Karnataka. Top 5 regional entities purchasing 84% of the volume are Tamil Nadu, Punjab, Rajasthan, Haryana and Uttar Pradesh (Table-9 & 10).

Of the total UI transactions, top 5 regional entities underdrawing 47% of the volume are Uttar Pradesh, Gujarat, Delhi, Madhya Pradesh and West Bengal. Top 5 regional entities overdrawing 64% of the volume are Rajasthan, Haryana, DVC, Tamil Nadu 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.

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.

Top 5 regional entities selling electricity are Gujarat, Delhi, Jindal Power Ltd, Chattisgarh and Lanco Amarkantak Ltd and top 5 regional entities purchasing electricity are Tamil Nadu, Rajasthan, Andhra Pradesh, Uttar Pradesh and Haryana.

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 March 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 10% and 58% 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 95% in IEX and 96% in PXIL.

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 9.79 %.
- Of the total short-term transactions of electricity, 48.54% transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies) followed by 32.21% through UI and 19.25% through Power Exchanges.
- Top 5 trading licenses are having share of 77.4% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1626 shows moderate concentration of market power.
- The price of electricity transacted through Trading Licensees (₹4.67/kWh) was comparable with the price of electricity transacted through Power Exchanges (₹3.34/kWh in IEX and ₹5.13/kWh in PXIL). The price of electricity transacted through UI was ₹3.12/kWh in the NEW Grid and ₹7.00/kWh in the SR Grid.
- The gap between the volume of sale bids and buy bids placed through power exchanges shows that there was less demand in IEX (1:0.95) and in PXIL (1:0.94) when compared with the supply offered through these exchanges.
- Top 5 regional entities selling electricity are Gujarat, Delhi, Jindal Power Ltd, Chattisgarh and Lanco Amarkantak Ltd and top 5 regional entities purchasing electricity are Tamil Nadu, Rajasthan, Andhra Pradesh, Uttar Pradesh and Haryana.
- The volume of electricity that could not be cleared due to congestion was about 10% and 58% of the actual cleared volume in IEX and PXIL, respectively. In percentage of time terms, congestion occurred 95% of the time (705 hrs in the month) in IEX and 96% of the time (713 hrs in the month) in PXIL.

VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA) (MUs)						Total Electricity Generation (MUs) as given at CEA Website*
Month: March 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-Mar-11	77.84	18.42	48.76	9.84	77.11	2347.64
2-Mar-11	77.17	18.08	46.28	5.90	80.97	2351.27
3-Mar-11	82.26	18.07	49.21	6.86	74.79	2366.79
4-Mar-11	81.40	17.85	48.46	5.71	70.43	2368.88
5-Mar-11	82.98	19.57	44.03	6.45	75.93	2387.53
6-Mar-11	84.78	23.24	39.29	5.70	85.45	2359.98
7-Mar-11	86.08	20.22	43.91	7.80	78.68	2404.56
8-Mar-11	84.48	20.14	37.13	6.01	77.20	2445.77
9-Mar-11	87.15	20.19	34.64	4.83	79.13	2469.13
10-Mar-11	87.45	20.94	36.68	5.13	79.64	2471.12
11-Mar-11	88.16	23.84	40.23	5.98	80.79	2453.16
12-Mar-11	90.25	23.92	38.70	7.08	85.89	2473.68
13-Mar-11	95.16	25.21	46.01	7.83	73.83	2436.77
14-Mar-11	95.71	24.08	40.39	5.42	67.31	2465.72
15-Mar-11	95.65	24.05	38.86	6.03	67.56	2479.89
16-Mar-11	92.11	23.87	36.25	3.85	68.56	2474.86
17-Mar-11	93.32	23.87	35.82	4.35	71.88	2502.51
18-Mar-11	92.00	23.84	40.71	5.89	67.66	2508.19
19-Mar-11	92.77	23.29	41.42	6.34	78.87	2486.15
20-Mar-11	89.67	24.85	29.16	6.01	94.74	2289.41
21-Mar-11	87.67	31.30	37.79	5.69	76.10	2362.75
22-Mar-11	94.55	32.41	46.45	4.84	70.07	2451.15
23-Mar-11	94.42	33.87	46.96	4.71	67.71	2461.08
24-Mar-11	94.26	33.87	38.17	4.45	71.92	2468.56
25-Mar-11	92.83	34.66	34.52	3.58	76.83	2444.81
26-Mar-11	94.28	35.42	34.04	3.95	77.18	2468.91
27-Mar-11	91.32	38.53	39.38	5.00	78.13	2423.95
28-Mar-11	91.60	35.68	37.00	3.62	79.82	2471.91
29-Mar-11	92.07	33.41	39.03	3.01	82.21	2479.15
30-Mar-11	93.69	33.25	42.43	4.25	88.80	2484.26
31-Mar-11	93.68	31.86	42.19	2.86	76.40	2437.85
Total	2776.78	811.79	1253.88	169.01	2381.60	75497.39
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: March 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-Mar-11	1.50	5.00	2.60	1.49	9.10	4.70	0.00	3.57	2.05	1.40	7.79	3.77
2-Mar-11	1.25	4.04	2.39	1.20	9.10	4.79	0.31	12.22	2.89	0.00	12.22	5.30
3-Mar-11	1.50	4.50	2.64	1.90	9.10	4.84	0.31	6.38	2.38	0.00	8.26	4.32
4-Mar-11	1.20	5.00	2.72	1.70	9.20	4.40	0.00	12.22	2.20	1.55	12.22	4.99
5-Mar-11	1.50	4.30	2.72	1.50	9.20	4.13	0.62	7.32	2.74	2.02	12.22	5.35
6-Mar-11	1.50	3.00	2.27	1.39	9.30	4.41	0.31	6.38	2.66	0.31	12.22	5.16
7-Mar-11	1.90	4.30	2.88	1.61	9.50	3.91	0.16	7.79	2.88	1.86	12.22	5.23
8-Mar-11	1.60	3.80	2.67	1.58	9.60	3.83	0.00	4.03	2.46	2.79	12.22	7.69
9-Mar-11	2.00	5.00	3.06	1.58	9.70	4.02	0.31	12.22	3.26	2.02	12.22	7.81
10-Mar-11	1.60	4.00	2.95	1.58	10.00	4.21	0.00	6.85	3.15	1.55	12.22	7.51
11-Mar-11	2.20	4.50	3.26	1.60	10.55	4.97	0.31	6.85	2.78	2.33	12.22	6.79
12-Mar-11	2.20	4.80	3.36	2.00	10.55	4.95	0.47	12.22	3.45	1.86	12.22	6.83
13-Mar-11	2.05	4.30	3.01	2.00	12.50	4.66	0.16	7.79	2.70	0.00	12.22	5.34
14-Mar-11	2.64	4.50	3.45	2.00	13.00	5.58	1.40	12.22	5.31	2.64	12.22	6.99
15-Mar-11	2.70	4.65	3.56	2.30	13.20	5.79	2.48	12.22	6.01	2.95	12.22	6.73
16-Mar-11	3.15	5.50	4.09	3.00	13.30	7.04	0.78	12.22	4.82	0.00	12.22	6.93
17-Mar-11	3.50	5.51	4.49	3.70	13.45	7.86	0.62	12.22	4.20	2.95	12.22	7.13
18-Mar-11	3.50	5.60	4.61	3.65	13.60	7.40	0.62	6.38	2.82	2.02	17.46	7.45
19-Mar-11	2.75	5.00	3.97	3.07	13.77	4.75	0.00	4.97	2.10	1.86	17.46	8.52
20-Mar-11	1.74	3.80	2.23	2.00	13.77	4.98	0.00	5.44	1.39	0.00	12.22	6.56
21-Mar-11	1.87	4.85	3.22	2.00	13.83	5.43	0.31	4.97	2.02	0.31	12.22	6.19
22-Mar-11	2.00	4.50	3.10	1.90	13.95	5.54	0.47	6.38	3.28	2.17	17.46	10.07
23-Mar-11	2.00	3.81	3.03	2.00	13.95	5.23	0.78	12.22	4.51	3.26	17.46	9.13
24-Mar-11	2.75	4.70	3.71	2.25	13.95	5.38	0.62	12.22	4.18	1.55	12.22	8.73
25-Mar-11	3.40	5.00	3.98	2.75	13.95	5.87	0.78	12.22	3.36	1.24	17.46	7.64
26-Mar-11	3.45	5.40	4.12	3.00	13.50	5.50	0.93	12.22	4.54	2.02	12.22	6.76
27-Mar-11	3.25	5.00	4.03	2.99	13.50	5.05	0.00	6.38	2.33	0.00	12.22	6.67
28-Mar-11	3.35	5.75	4.24	3.50	13.00	7.24	0.00	5.44	2.35	1.24	12.22	7.76
29-Mar-11	2.50	5.15	3.99	2.05	12.50	5.23	0.93	8.26	3.34	2.33	17.46	8.57
30-Mar-11	2.75	9.35	4.72	3.00	12.50	5.67	0.00	7.79	2.29	2.33	12.22	9.73
31-Mar-11	2.81	5.00	3.70	2.50	12.60	5.61	0.00	4.03	2.16	2.33	17.46	9.29
	1.20#	9.35#	3.34	1.20#	13.95#	5.13	0.00#	12.22#	3.12	0.00#	17.46#	7.00

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: March 2011										
Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through UI with Regional Grid			Total Net**
	Sale	Pur- chase	Net*	Sale	Pur- chase	Net*	Export (Under Drawl)	Import (Over Drawl)	Net*	
Punjab	254.24	44.47	-209.77	63.94	338.14	274.20	99.12	70.18	-28.94	35.49
Haryana	239.09	32.55	-206.54	30.82	118.57	87.76	14.02	402.89	388.88	270.10
Rajasthan	2.86	124.11	121.25	5.32	202.35	197.04	12.54	461.45	448.90	767.19
Delhi	280.92	0.00	-280.92	278.32	2.11	-276.21	145.51	12.39	-133.11	-690.25
Uttar Pradesh	25.58	465.27	439.69	0.00	100.62	100.62	197.58	54.05	-143.53	396.79
Uttarakhand	0.00	54.60	54.60	3.11	0.20	-2.91	9.33	99.60	90.27	141.95
Himachal Pradesh	19.03	86.34	67.32	14.48	0.00	-14.48	58.12	22.23	-35.89	16.94
J & K	116.61	0.00	-116.61	1.19	0.00	-1.19	53.91	43.81	-10.10	-127.90
UT Chandigarh	0.00	0.00	0.00	0.47	0.00	-0.47	14.13	1.51	-12.63	-13.10
MP	0.00	111.59	111.59	29.48	41.73	12.26	125.91	101.45	-24.46	99.38
Maharashtra	176.50	322.08	145.58	45.68	67.37	21.69	73.59	168.48	94.89	262.16
Gujarat	462.59	25.44	-437.15	296.44	70.40	-226.04	175.75	49.00	-126.75	-789.94
Chattisgarh	330.41	49.01	-281.40	146.10	0.00	-146.10	62.70	44.98	-17.71	-445.22
Daman and Diu	0.00	0.78	0.78	0.00	0.00	0.00	26.10	1.09	-25.01	-24.22
Dadra & Nagar Haveli	0.00	2.35	2.35	0.00	0.00	0.00	27.09	1.16	-25.93	-23.58
Andhra Pradesh	36.25	644.71	608.46	40.58	38.39	-2.19	57.98	30.00	-27.99	578.29
Karnataka	257.02	424.34	167.32	104.60	0.94	-103.66	17.63	31.62	13.99	77.65
Kerala	206.61	74.29	-132.32	3.28	0.00	-3.28	8.06	22.93	14.87	-120.74
Tamilnadu	0.00	403.02	403.02	0.00	430.73	430.73	4.99	221.12	216.12	1049.87
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	54.05	0.04	-54.01	-54.01
West Bengal	14.78	470.15	455.37	207.77	0.00	-207.77	112.94	42.33	-70.62	176.98
Orissa	52.53	50.25	-2.28	14.89	0.00	-14.89	48.38	33.70	-14.68	-31.85
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	19.47	31.43	11.96	11.96
Jharkhand	0.00	74.40	74.40	0.00	1.80	1.80	20.40	32.66	12.26	88.46
Sikkim	7.40	1.49	-5.91	5.83	0.00	-5.83	8.13	3.47	-4.66	-16.40
DVC	124.97	0.00	-124.97	0.00	0.00	0.00	3.13	236.72	233.59	108.62
Arunachal Pradesh	0.00	0.00	0.00	0.73	6.56	5.83	3.04	6.19	3.15	8.99
Assam	0.00	58.09	58.09	48.03	2.89	-45.14	46.10	2.99	-43.11	-30.15
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	3.78	5.27	1.49	1.49
Meghalaya	3.41	16.61	13.20	0.00	0.00	0.00	2.89	19.09	16.20	29.40
Mizoram	0.00	0.00	0.00	1.98	0.00	-1.98	0.81	5.05	4.24	2.26
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.59	11.06	10.47	10.47
Tripura	8.75	0.00	-8.75	13.04	0.11	-12.93	5.00	2.61	-2.39	-24.07
GOA	0.00	24.46	24.46	25.00	0.00	-25.00	23.69	10.03	-13.66	-14.20
JINDAL POWER	493.48	0.00	-493.48	41.83	0.00	-41.83	4.32	17.32	13.00	-522.31
LANKO_AMK	184.21	0.00	-184.21	14.96	0.00	-14.96	67.50	0.00	-67.50	-266.67
LANKO_KONDAPALLY	217.42	0.00	-217.42	0.00	0.00	0.00	3.30	27.78	24.48	-192.94

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), March 2011				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	3588.58	48.54%	4.75%
	(i) Through Traders and PXs	2776.78	37.56%	3.68%
	(ii) Direct	811.79	10.98%	1.08%
2	Through Power Exchanges	1422.89	19.25%	1.88%
	IEX	1253.88	16.96%	1.66%
	PXIL	169.01	2.29%	0.22%
3	Through UI	2381.60	32.21%	3.15%
	Total	7393.07	100.00%	9.79%
	Total Generation	75497.39	–	–

Source: NLDC

Chart-1: Volume of Short-term Transactions of Electricity, March'11

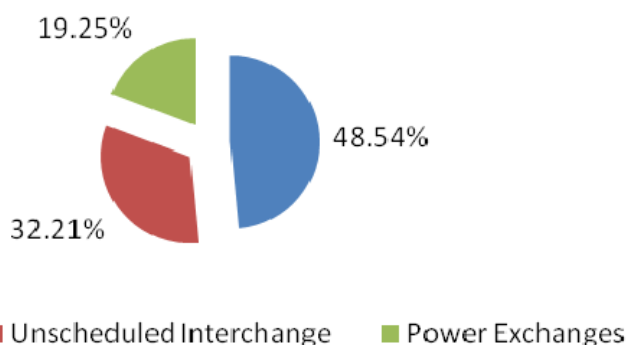


Chart-2: Volume of various kinds of Electricity Transactions in Total Electricity Generation, March '11

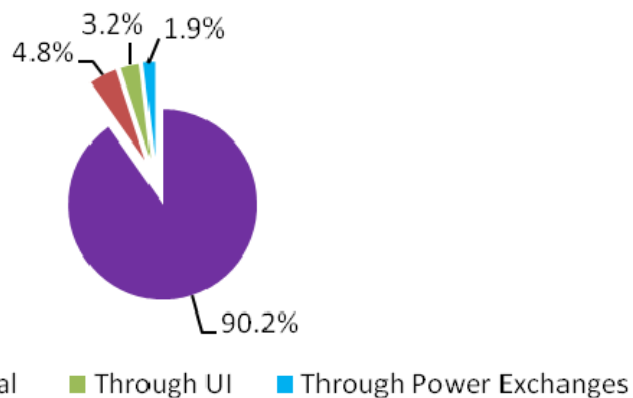
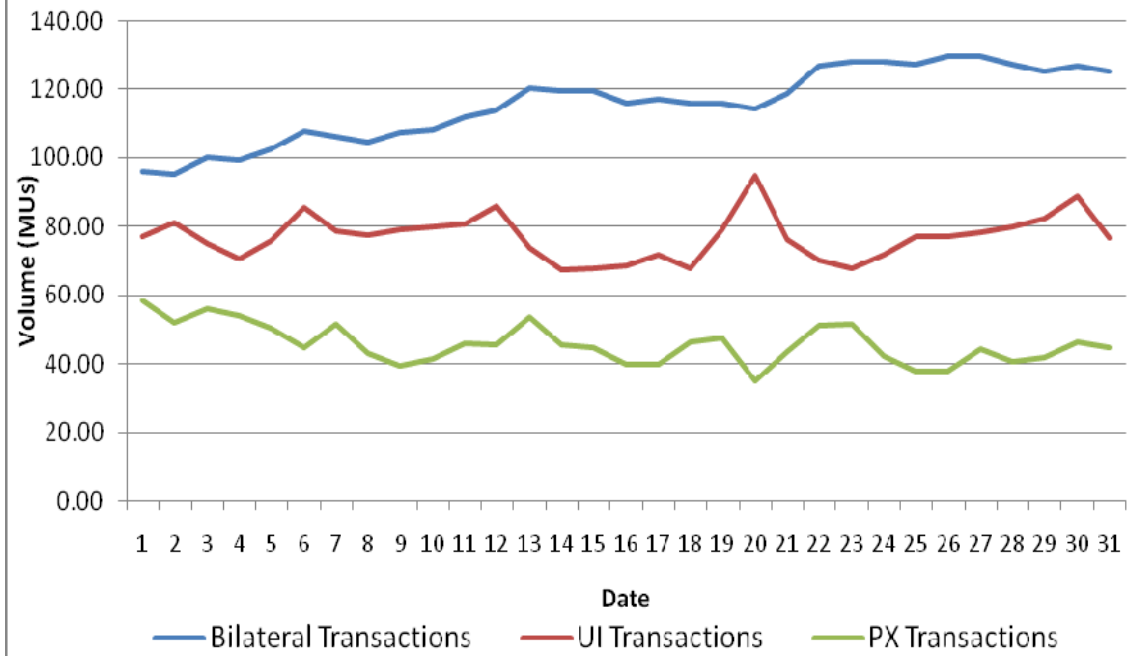


Chart-3: Volume of Short-term Transactions of Electricity, March 2011



Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd	30.78%	0.0947
2	NTPC Vidyut Vyapar Nigam Ltd	15.98%	0.0255
3	National Energy Trading & Services Ltd	12.07%	0.0146
4	Tata Power Trading Company (P) Ltd	9.63%	0.0093
5	Reliance Energy Trading (P) Ltd	8.94%	0.0080
6	Knowledge Infrastructure Systems (P) Ltd	6.95%	0.0048
7	Adani Enterprises Ltd.	5.38%	0.0029
8	JSW Power Trading Company Ltd	3.72%	0.0014
9	Instinct Infra & Power Ltd	2.77%	0.0008
10	GMR Energy Trading Ltd	2.33%	0.0005
11	Shree Cement Ltd.	1.08%	0.0001
12	Mittal Processor (P) Ltd.	0.16%	0.0000
13	Essar Electric Power Development Corp. Ltd.	0.09%	0.0000
14	RPG Power Trading Company Ltd.	0.07%	0.0000
15	Global Energy (P) Ltd.	0.05%	0.0000
16	Jindal Power Trading Company Ltd.	0.001%	0.0000
	Total	100.00%	0.1626
	Top 5 trading licensees	77.4%	

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

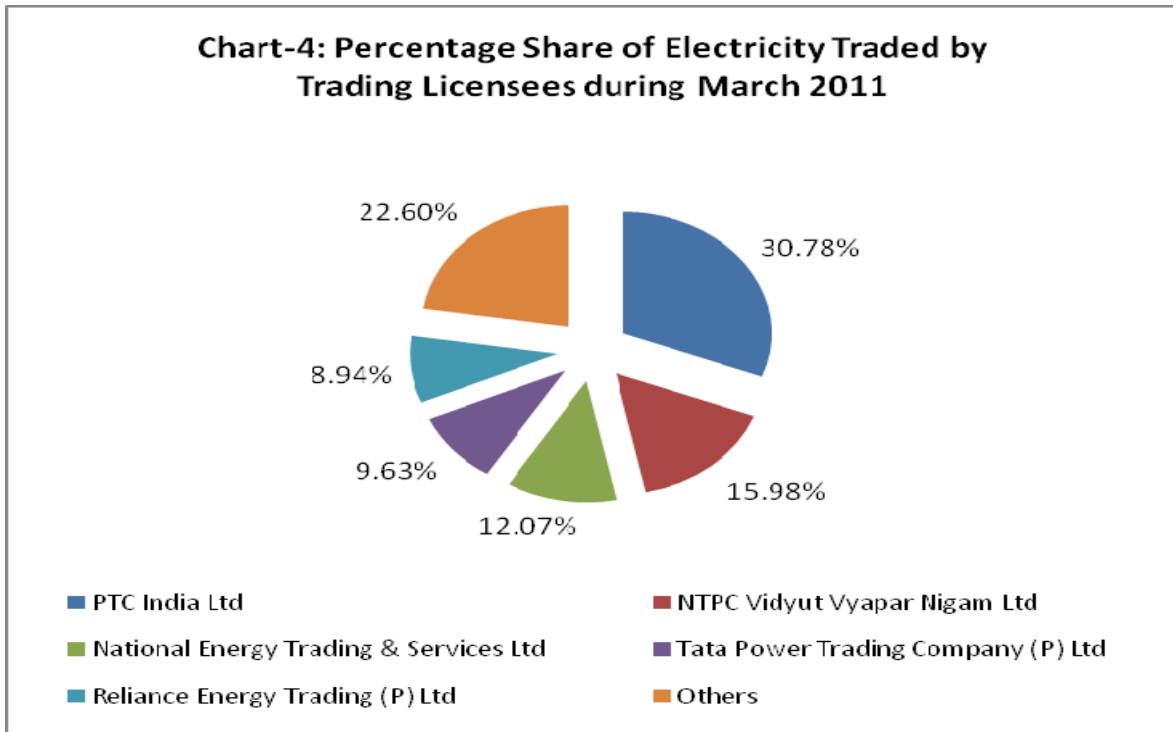


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	4.65
2	PEAK	5.64
3	OFF PEAK	4.79

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	3.19
2	Maximum	8.04
3	Weighted Average	4.67

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (Rs/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	1.20	1.20
2	Maximum	9.35	13.95
3	Weighted Average	3.34	5.13

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	2.59	8.28
2	Day-Ahead Contingency Contracts	9.89	11.40
3	Daily Contracts	20.74	11.14
4	Weekly Contracts	110.72	4.95
	Total	143.94	

Source: IEX

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	17.46
3	Average	3.12	7.00

Source: NLDC

Chart-5: Price of Short-term Transactions of Electricity, March 2011

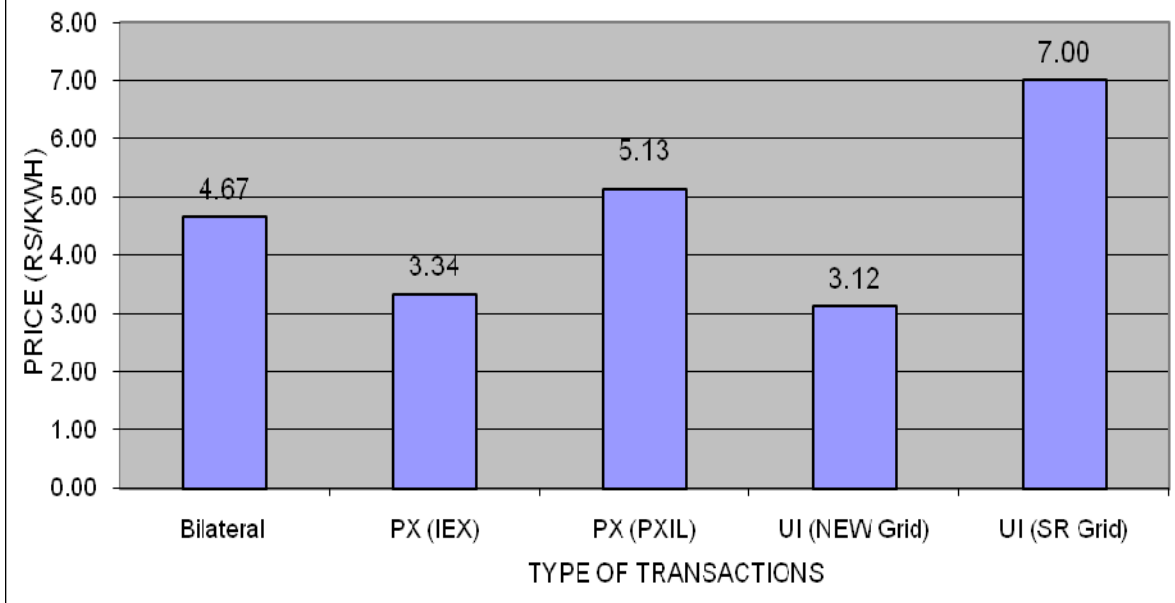


Chart-6: Price of Short-term Transactions of Electricity, March 2011

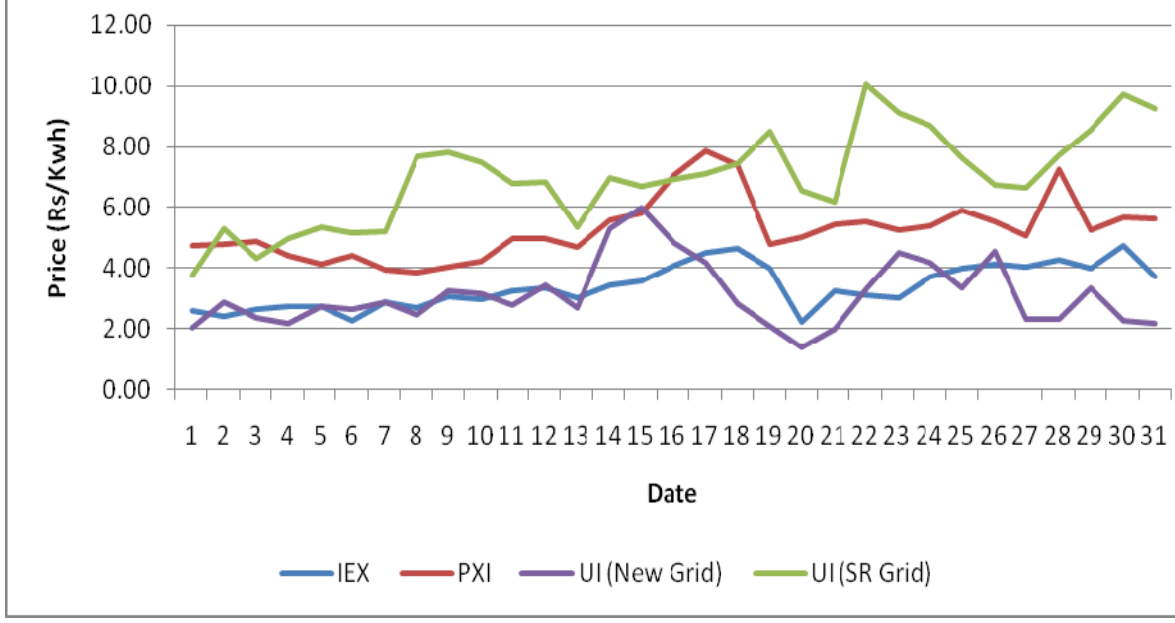


Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
JINDAL POWER	493.48	14.04%
Gujarat	462.59	13.16%
Chattisgarh	330.41	9.40%
Delhi	280.92	7.99%
Karnataka	257.02	7.31%
Punjab	254.24	7.23%
Haryana	239.09	6.80%
LANKO_KONDAPALLY	217.42	6.19%
Kerala	206.61	5.88%
LANKO_AMK	184.21	5.24%
Maharashtra	176.50	5.02%
DVC	124.97	3.56%
J & K	116.61	3.32%
Orissa	52.53	1.49%
Andhra Pradesh	36.25	1.03%
Uttar Pradesh	25.58	0.73%
Himachal Pradesh	19.03	0.54%
West Bengal	14.78	0.42%
Tripura	8.75	0.25%
Sikkim	7.40	0.21%
Meghalaya	3.41	0.10%
Rajasthan	2.86	0.08%
Total	3514.65	100.00%
Volume of sale by top 5 States	1824.42	52%

Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Andhra Pradesh	644.71	18.11%
West Bengal	470.15	13.20%
Uttar Pradesh	465.27	13.07%
Karnataka	424.34	11.92%
Tamilnadu	403.02	11.32%
Maharashtra	322.08	9.05%
Rajasthan	124.11	3.49%
MP	111.59	3.13%
Himachal Pradesh	86.34	2.43%
Jharkhand	74.40	2.09%
Kerala	74.29	2.09%
Assam	58.09	1.63%
Uttarakhand	54.60	1.53%
Orissa	50.25	1.41%
Chattisgarh	49.01	1.38%
Punjab	44.47	1.25%
Haryana	32.55	0.91%
Gujarat	25.44	0.71%
GOA	24.46	0.69%
Meghalaya	16.61	0.47%
Dadra & Nagar Haveli	2.35	0.07%
Sikkim	1.49	0.04%
Daman and Diu	0.78	0.02%
Total	3560.41	100%
Volume of purchase by top 5 States	2407.49	68%

Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	296.44	20.62%
Delhi	278.32	19.36%
West Bengal	207.77	14.45%
Chattisgarh	146.10	10.16%
Karnataka	104.60	7.27%
Punjab	63.94	4.45%
Assam	48.03	3.34%
Maharashtra	45.68	3.18%
JINDAL POWER	41.83	2.91%
Andhra Pradesh	40.58	2.82%
Haryana	30.82	2.14%
MP	29.48	2.05%
GOA	25.00	1.74%
LANKO_AMK	14.96	1.04%
Orissa	14.89	1.04%
Himachal Pradesh	14.48	1.01%
Tripura	13.04	0.91%
Sikkim	5.83	0.41%
Rajasthan	5.32	0.37%
Kerala	3.28	0.23%
Uttarakhand	3.11	0.22%
Mizoram	1.98	0.14%
J & K	1.19	0.08%
Arunachal Pradesh	0.73	0.05%
UT Chandigarh	0.47	0.03%
Total	1437.85	100.00%
Volume of purchase by top 5 States	1033.23	72%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	430.73	30.27%
Punjab	338.14	23.76%
Rajasthan	202.35	14.22%
Haryana	118.57	8.33%
Uttar Pradesh	100.62	7.07%
Gujarat	70.40	4.95%
Maharashtra	67.37	4.73%
MP	41.73	2.93%
Andhra Pradesh	38.39	2.70%
Arunachal Pradesh	6.56	0.46%
Assam	2.89	0.20%
Delhi	2.11	0.15%
Jharkhand	1.80	0.13%
Karnataka	0.94	0.07%
Uttarakhand	0.20	0.01%
Tripura	0.11	0.01%
Total	1422.89	100.00%
Volume of sale by top 5 States	1190.41	84%

Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Uttar Pradesh	197.58	12.26%
Gujarat	175.75	10.91%
Delhi	145.51	9.03%
MP	125.91	7.81%
West Bengal	112.94	7.01%
Punjab	99.12	6.15%
Maharashtra	73.59	4.57%
LANKO_AMK	67.50	4.19%
Chattisgarh	62.70	3.89%
Himachal Pradesh	58.12	3.61%
Andhra Pradesh	57.98	3.60%
Pondicherry	54.05	3.35%
J & K	53.91	3.35%
Orissa	48.38	3.00%
Assam	46.10	2.86%
Dadra & Nagar Haveli	27.09	1.68%
Daman and Diu	26.10	1.62%
GOA	23.69	1.47%
Jharkhand	20.40	1.27%
Bihar	19.47	1.21%
Karnataka	17.63	1.09%
UT Chandigarh	14.13	0.88%
Haryana	14.02	0.87%
Rajasthan	12.54	0.78%
Uttarakhand	9.33	0.58%
Sikkim	8.13	0.50%
Kerala	8.06	0.50%
Tripura	5.00	0.31%
Tamilnadu	4.99	0.31%
JINDAL POWER	4.32	0.27%
Manipur	3.78	0.23%
LANKO_KONDAPALLY	3.30	0.20%
DVC	3.13	0.19%
Arunachal Pradesh	3.04	0.19%
Meghalaya	2.89	0.18%
Mizoram	0.81	0.05%
Nagaland	0.59	0.04%
Total	1611.59	100.00%
Volume of Export by top 5 States	757.69	47%

Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Rajasthan	461.45	19.82%
Haryana	402.89	17.31%
DVC	236.72	10.17%
Tamilnadu	221.12	9.50%
Maharashtra	168.48	7.24%
MP	101.45	4.36%
Uttarakhand	99.60	4.28%
Punjab	70.18	3.02%
Uttar Pradesh	54.05	2.32%
Gujarat	49.00	2.11%
Chattisgarh	44.98	1.93%
J & K	43.81	1.88%
West Bengal	42.33	1.82%
Orissa	33.70	1.45%
Jharkhand	32.66	1.40%
Karnataka	31.62	1.36%
Bihar	31.43	1.35%
Andhra Pradesh	30.00	1.29%
LANKO_KONDAPALLY	27.78	1.19%
Kerala	22.93	0.99%
Himachal Pradesh	22.23	0.96%
Meghalaya	19.09	0.82%
JINDAL POWER	17.32	0.74%
Delhi	12.39	0.53%
Nagaland	11.06	0.48%
GOA	10.03	0.43%
Arunachal Pradesh	6.19	0.27%
Manipur	5.27	0.23%
Mizoram	5.05	0.22%
Sikkim	3.47	0.15%
Assam	2.99	0.13%
Tripura	2.61	0.11%
UT Chandigarh	1.51	0.06%
Dadra & Nagar Haveli	1.16	0.05%
Daman and Diu	1.09	0.05%
Pondicherry	0.04	0.00%
LANKO_AMK	0.00	0.00%
Total	2327.69	100.00%
Volume of Export by top 5 States	1490.66	64%

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	1049.87
2	Rajasthan	767.19
3	Andhra Pradesh	578.29
4	Uttar Pradesh	396.79
5	Haryana	270.10
6	Maharashtra	262.16
7	West Bengal	176.98
8	Uttarakhand	141.95
9	DVC	108.62
10	MP	99.38
11	Jharkhand	88.46
12	Karnataka	77.65
13	Punjab	35.49
14	Meghalaya	29.40
15	Himachal Pradesh	16.94
16	Bihar	11.96
17	Nagaland	10.47
18	Arunachal Pradesh	8.99
19	Mizoram	2.26
20	Manipur	1.49
21	UT Chandigarh	-13.10
22	GOA	-14.20
23	Sikkim	-16.40
24	Dadra & Nagar Haveli	-23.58
25	Tripura	-24.07
26	Daman and Diu	-24.22
27	Assam	-30.15
28	Orissa	-31.85
29	Pondicherry	-54.01
30	Kerala	-120.74
31	J & K	-127.90
32	LANKO_KONDAPALLY	-192.94
33	LANKO_AMK	-266.67
34	Chattisgarh	-445.22
35	JINDAL POWER	-522.31
36	Delhi	-690.25
37	Gujarat	-789.94
* 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, March 2011			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MU)	1384.83	266.52
B	Actual Cleared Volume and hence scheduled (MU)	1253.88	169.01
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MU) (A-B)	130.95	97.51
D	Volume of electricity that could not be cleared as % to Actual Cleared Volume	10%	58%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	95%	96%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25%	24%
	6.00 - 12.00 hours	24%	24%
	12.00 - 18.00 hours	25%	24%
	18.00 - 24.00 hours	26%	28%

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