

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

I: Volume of Short-term Transactions of Electricity

During the Month of April 2011, total electricity generation excluding generation from renewable and captive power plants in India was 71676.12 MUs (Table-1).

Of the total electricity generation, 7719.45 MUs (10.77%) were transacted through short-term, comprising of 3931.36 MUs (5.48%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2415.58 MUs (3.37%) through UI and 1372.51 MUs (1.91%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 50.93% (35.78% through traders and term-ahead contracts on Power Exchanges and 15.15% directly between distribution companies) followed by 31.29% through UI and 17.78% 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 41 trading licensees as on 30.4.2011, of which only 14 have engaged in trading during April 2011. 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 0.1967 for the month of April 2011, which shows high concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 1231.55 MUs and 140.96 MUs respectively. The volume of total Buy bids and Sale bids was 1887.77 MUs and 1996.74 MUs respectively in IEX and 288.58 MUs and 372.26 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 (0.78 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 75.96 MU in IEX (Table-5A) and 27.79 MU in PXIL (Table-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 ₹4.76/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 ₹4.76/kWh, ₹5.07/kWh and ₹4.72/kWh respectively. Minimum and Maximum sale price was ₹3.23/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 ₹2.05/kWh, ₹8.00/kWh and ₹3.49/kWh respectively in IEX and ₹2.21/kWh, ₹12.30/kWh and ₹4.00/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 ₹11.16/kWh in IEX (Table-5A) and ₹11.68/kWh in PXIL (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 ₹3.91/kWh in the NEW Grid and ₹6.35/kWh in the SR Grid. Minimum and Maximum price of UI was ₹0.00/kWh and ₹17.46/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 50% of the volume are Jindal Power Ltd, Gujarat, Chattisgarh, Karnataka and Orissa. Top 5 regional entities purchasing 65% of the volume are Tamil Nadu, Maharashtra, Andhra Pradesh, West Bengal and Karnataka (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 73% of the volume are Gujarat, Delhi, West Bengal, Karnataka and Maharashtra. Top 5 regional entities purchasing 87% of the volume are Punjab, Rajasthan, Uttar Pradesh, Tamil Nadu and Andhra Pradesh (Table-9 & 10).

Of the total UI transactions, top 5 regional entities underdrawing 57% of the volume are Delhi, Punjab, West Bengal, Gujarat and Chattisgarh. Top 5 regional entities overdrawing 58% of the volume are Haryana, DVC, Rajasthan, Uttar Pradesh and Tamil Nadu (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, Jindal Power Ltd, Delhi, Chattisgarh and Orissa and top 5 regional entities purchasing electricity are Tamil Nadu, Uttar Pradesh, Maharashtra, Andhra Pradesh and Rajasthan.

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 April 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 16% and 52% 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 79% in IEX and 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 10.77%.
- Of the total short-term transactions of electricity, 50.93% transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies) followed by 31.29% through UI and 17.78% through Power Exchanges.
- Top 5 trading licenses are having share of 85.8% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1967 shows high 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 (₹3.49/kWh in IEX and ₹4.00/kWh in PXIL). The price of electricity transacted through UI was ₹3.91/kWh in the NEW Grid and ₹6.35/kWh in the SR Grid.
- The UI price in the SR Grid is observed to be high in the first half of the month, probably as a result of higher demand (due to election in southern region states) and congestion.
- 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 (1:0.78) when compared with the supply offered through these exchanges.
- Top 5 regional entities selling electricity are Gujarat, Jindal Power Ltd, Delhi, Chattisgarh and Orissa and top 5 regional entities purchasing electricity are Tamil Nadu, Uttar Pradesh, Maharashtra, Andhra Pradesh and Rajasthan.
- The volume of electricity that could not be cleared due to congestion was about 16% and 52% of the actual cleared volume in IEX and PXIL, respectively. In percentage of time terms, congestion occurred 79% of the time (567 hrs in the month) in IEX and 79% of the time (568 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: April 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-Apr-11	87.98	38.74	42.68	5.06	70.68	2428.96
2-Apr-11	88.79	40.24	48.15	5.22	72.92	2460.98
3-Apr-11	87.13	37.21	34.86	3.16	79.58	2322.25
4-Apr-11	90.03	37.50	38.96	4.43	81.34	2350.88
5-Apr-11	95.18	40.14	39.16	3.08	80.69	2372.89
6-Apr-11	92.65	40.24	42.43	3.24	88.90	2430.14
7-Apr-11	91.99	40.24	47.35	4.88	75.48	2442.81
8-Apr-11	81.63	39.20	43.31	3.98	70.32	2453.80
9-Apr-11	83.18	39.06	39.91	6.51	83.81	2439.99
10-Apr-11	81.63	36.68	45.22	6.18	80.98	2359.16
11-Apr-11	89.39	39.27	50.60	6.70	65.22	2348.12
12-Apr-11	90.86	39.27	45.09	6.42	69.33	2434.28
13-Apr-11	92.62	39.97	36.83	4.46	72.52	2437.57
14-Apr-11	92.62	38.47	43.18	7.18	72.76	2407.98
15-Apr-11	93.64	38.47	43.21	6.43	77.20	2385.01
16-Apr-11	97.55	38.64	40.14	5.43	83.67	2363.14
17-Apr-11	96.81	37.13	34.81	4.51	82.83	2326.34
18-Apr-11	94.78	39.20	34.75	3.44	83.18	2365.05
19-Apr-11	92.64	39.58	28.90	2.28	88.60	2353.56
20-Apr-11	95.08	39.61	27.14	1.33	85.45	2399.03
21-Apr-11	93.79	40.02	35.10	3.25	86.59	2399.38
22-Apr-11	93.90	38.68	42.59	5.65	87.65	2377.69
23-Apr-11	93.97	40.38	44.96	5.95	87.55	2368.45
24-Apr-11	93.29	38.76	41.15	5.30	87.32	2303.90
25-Apr-11	93.36	40.68	43.25	5.02	84.31	2369.71
26-Apr-11	96.80	40.81	43.13	3.86	81.58	2356.03
27-Apr-11	97.14	37.85	40.01	3.88	79.38	2397.98
28-Apr-11	95.84	37.85	43.18	4.09	83.41	2421.09
29-Apr-11	93.44	37.83	48.07	6.80	86.94	2375.86
30-Apr-11	94.06	37.85	43.43	3.26	85.40	2424.09
Total	2761.80	1169.56	1231.55	140.96	2415.58	71676.12
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: April 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-Apr-11	2.05	4.50	3.16	2.21	4.35	3.20	0.47	12.22	3.42	3.41	17.46	8.52
2-Apr-11	2.50	8.00	3.67	2.75	5.50	3.83	0.78	17.46	3.78	0.31	12.22	7.14
3-Apr-11	3.00	4.50	3.49	2.50	3.50	3.02	0.00	4.50	2.00	0.00	12.22	5.14
4-Apr-11	2.25	4.50	3.15	3.00	12.30	5.71	0.78	6.38	2.83	0.00	12.22	6.36
5-Apr-11	2.50	4.00	3.30	2.50	5.99	3.60	1.24	12.22	4.03	2.17	12.22	7.60
6-Apr-11	2.50	4.10	3.40	2.70	4.75	3.67	1.40	12.22	4.59	2.79	17.46	8.61
7-Apr-11	2.70	4.11	3.39	2.75	5.99	4.42	0.47	12.22	4.52	3.10	17.46	8.27
8-Apr-11	3.00	4.50	3.75	2.70	4.10	3.45	1.24	12.22	5.27	2.79	17.46	9.80
9-Apr-11	3.25	4.50	3.75	3.00	4.30	3.57	1.55	12.22	4.25	2.33	17.46	10.42
10-Apr-11	3.00	4.50	3.54	3.00	4.75	3.57	0.00	5.91	2.68	1.09	17.46	8.78
11-Apr-11	2.74	4.50	3.59	3.00	4.50	3.59	1.55	17.46	5.35	2.64	17.46	9.66
12-Apr-11	3.15	5.00	3.82	2.75	5.00	3.61	1.09	12.22	5.29	2.95	17.46	10.42
13-Apr-11	3.50	6.00	4.05	3.21	5.85	4.13	0.31	12.22	3.63	1.09	17.46	8.61
14-Apr-11	3.65	6.00	4.31	3.49	5.75	4.22	0.78	12.22	4.05	0.93	12.22	8.27
15-Apr-11	3.51	6.80	4.29	3.00	5.75	4.11	0.00	12.22	3.51	1.09	12.22	6.59
16-Apr-11	3.25	7.50	4.10	3.25	10.00	5.09	1.24	12.22	3.96	0.00	17.46	7.93
17-Apr-11	2.78	5.00	3.58	3.50	9.01	4.84	0.00	5.44	2.26	0.00	12.22	6.31
18-Apr-11	3.10	6.01	4.01	4.00	7.00	4.74	0.62	6.38	2.50	1.55	17.46	7.78
19-Apr-11	3.00	6.50	3.82	4.00	9.01	5.04	0.47	12.22	3.33	0.00	12.22	8.01
20-Apr-11	2.58	5.50	3.34	4.00	8.51	4.94	0.47	12.22	3.60	0.00	12.22	6.41
21-Apr-11	2.25	5.00	3.03	3.00	7.00	4.40	1.55	12.22	4.15	0.00	12.22	5.83
22-Apr-11	2.60	6.50	3.45	4.00	7.71	4.66	0.62	17.46	4.34	0.00	12.22	2.96
23-Apr-11	2.50	4.50	3.02	2.50	4.50	3.24	0.93	17.46	5.39	0.00	4.97	2.49
24-Apr-11	2.48	4.30	2.83	2.25	4.25	3.04	0.00	8.26	2.65	0.00	3.72	1.92
25-Apr-11	2.50	4.70	3.12	2.25	4.70	3.10	0.47	6.85	2.84	0.00	4.97	2.26
26-Apr-11	2.50	4.70	3.10	2.50	4.70	3.14	0.00	12.22	3.56	0.00	5.44	2.48
27-Apr-11	2.44	4.70	2.92	2.25	4.70	3.11	1.55	12.22	5.99	1.55	6.85	3.71
28-Apr-11	2.50	5.00	3.25	2.50	4.80	3.07	0.62	17.46	4.29	0.00	4.50	2.30
29-Apr-11	2.50	5.00	3.27	2.50	5.55	3.53	0.93	12.22	3.67	0.00	7.32	3.14
30-Apr-11	2.25	5.00	3.09	2.25	4.75	3.06	1.24	17.46	5.54	0.00	6.38	2.70
	2.05#	8.00#	3.49	2.21#	12.30#	4.00	0.00#	17.46#	3.91	0.00#	17.46#	6.35
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: April 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	142.45	121.58	-20.87	18.21	359.90	341.70	279.18	8.47	-270.71	50.12
Haryana	179.90	100.76	-79.14	28.93	24.37	-4.56	42.20	302.76	260.56	176.87
Rajasthan	208.80	1.86	-206.94	6.02	263.53	257.51	37.90	281.44	243.53	294.10
Delhi	143.76	292.87	149.11	303.59	0.47	-303.12	316.33	4.41	-311.92	-465.93
Uttar Pradesh	52.56	312.40	259.84	0.00	261.64	261.64	62.69	250.20	187.50	708.99
Uttarakhand	0.00	0.00	0.00	1.39	0.66	-0.72	8.33	134.55	126.22	125.49
Himachal Pradesh	86.52	2.05	-84.47	14.11	0.00	-14.11	73.69	40.03	-33.66	-132.24
J & K	205.68	0.00	-205.68	3.45	0.00	-3.45	15.41	64.70	49.29	-159.84
UT Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	7.29	5.30	-2.00	-2.00
MP	72.07	93.99	21.92	6.20	16.55	10.34	64.54	80.14	15.60	47.86
Maharashtra	90.94	522.06	431.12	94.74	47.29	-47.45	46.33	169.63	123.29	506.96
Gujarat	396.83	52.01	-344.82	367.46	58.79	-308.68	135.66	85.46	-50.20	-703.69
Chattisgarh	393.79	182.10	-211.68	61.09	0.00	-61.09	122.25	25.35	-96.90	-369.67
Daman and Diu	0.00	4.16	4.16	0.00	0.00	0.00	19.13	2.50	-16.62	-12.46
Dadra & Nagar Haveli	0.00	16.03	16.03	0.00	0.00	0.00	10.31	8.21	-2.10	13.93
Andhra Pradesh	29.43	466.48	437.06	15.94	62.12	46.17	121.99	14.41	-107.57	375.66
Karnataka	303.23	317.77	14.54	95.39	0.00	-95.39	54.03	14.99	-39.04	-119.89
Kerala	165.41	5.29	-160.12	5.45	3.31	-2.14	5.90	53.78	47.88	-114.38
Tamilnadu	0.00	819.08	819.08	0.00	241.55	241.55	9.47	189.24	179.77	1240.39
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	34.10	0.29	-33.81	-33.81
West Bengal	32.42	426.18	393.76	199.70	0.84	-198.86	248.24	16.66	-231.58	-36.69
Orissa	297.54	24.02	-273.51	4.89	0.00	-4.89	40.04	36.51	-3.53	-281.93
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	8.46	49.09	40.63	40.63
Jharkhand	0.00	78.40	78.40	0.00	23.35	23.35	28.81	27.85	-0.96	100.78
Sikkim	29.52	1.63	-27.89	0.29	0.00	-0.29	3.71	5.98	2.27	-25.90
DVC	96.49	0.00	-96.49	0.00	0.00	0.00	0.05	288.63	288.58	192.09
Arunachal Pradesh	0.01	0.00	-0.01	1.26	2.89	1.63	3.07	4.89	1.82	3.44
Assam	0.00	37.80	37.80	31.53	5.26	-26.27	27.69	14.56	-13.13	-1.60
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	5.30	3.04	-2.26	-2.26
Meghalaya	3.30	11.05	7.75	2.33	0.00	-2.33	3.86	13.89	10.03	15.45
Mizoram	0.00	0.00	0.00	2.25	0.00	-2.25	1.08	4.54	3.46	1.21
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.04	12.23	12.20	12.20
Tripura	6.72	12.50	5.78	17.99	0.00	-17.99	5.26	3.33	-1.93	-14.13
GOA TOTAL	0.00	29.30	29.30	15.26	0.00	-15.26	12.05	15.42	3.37	17.41
JINDAL POWER	508.32	0.00	-508.32	75.05	0.00	-75.05	3.82	12.21	8.38	-574.98
LANKO_AMK	108.00	0.00	-108.00	71.59	0.00	-71.59	90.14	1.08	-89.06	-268.65
LANKO_KONDAPALLY	213.87	0.00	-213.87	0.18	0.00	0.00	0.72	20.90	20.18	-193.69
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), APRIL 2011				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	3931.36	50.93%	5.48%
	(i) Through Traders and PXs	2761.80	35.78%	3.85%
	(ii) Direct	1169.56	15.15%	1.63%
2	Through Power Exchanges	1372.51	17.78%	1.91%
	IEX	1231.55	15.95%	1.72%
	PXIL	140.96	1.83%	0.20%
3	Through UI	2415.58	31.29%	3.37%
	Total	7719.45	100.00%	10.77%
	Total Generation	71676.12	—	—

Source: NLDC

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

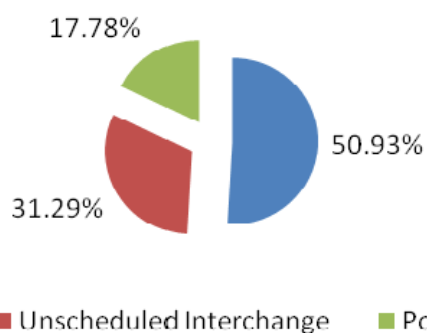
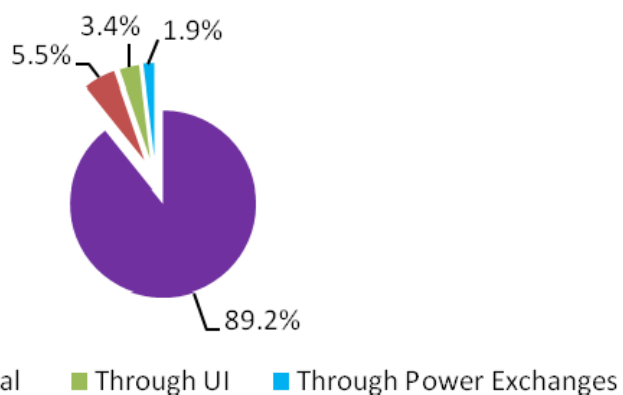


Chart-2: Volume of various kinds of Electricity Transactions in Total Electricity Generation, April '11



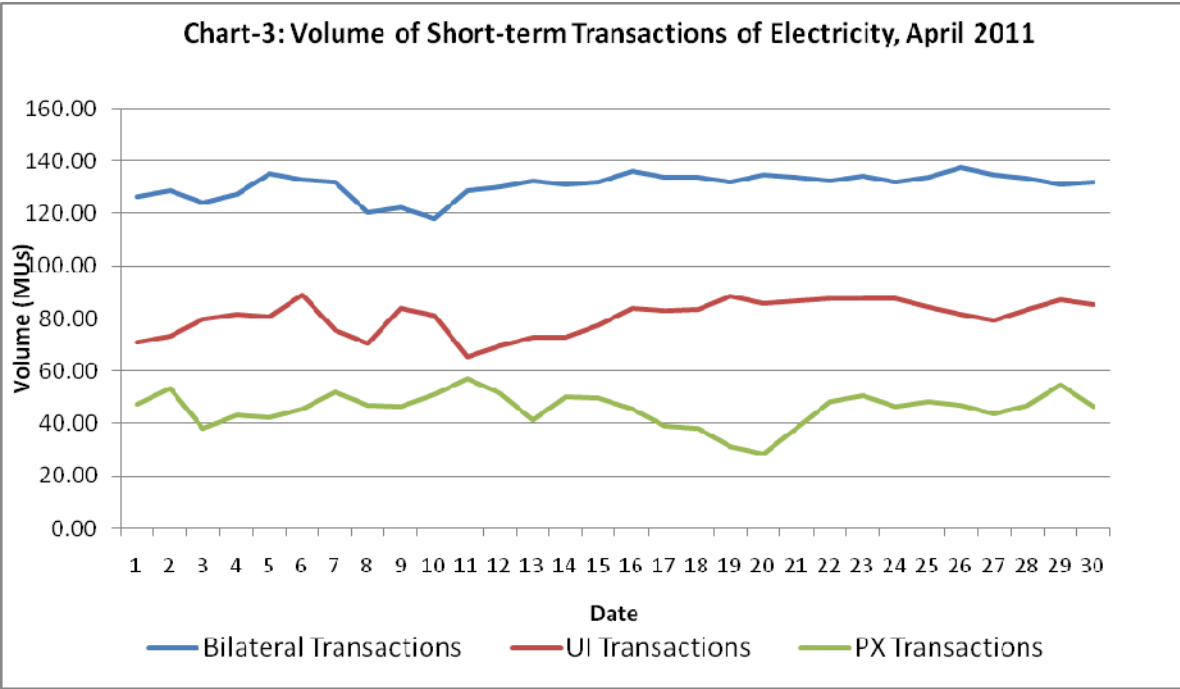


Table-2: Percentage Share of Electricity Traded by Trading Licensees during April 2011

Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd	33.60%	0.1129
2	NTPC Vidyut Vyapar Nigam Ltd	21.64%	0.0468
3	Tata Power Trading Company (P) Ltd	12.63%	0.0159
4	National Energy Trading & Services Ltd	9.32%	0.0087
5	Reliance Energy Trading (P) Ltd	8.65%	0.0075
6	Knowledge Infrastructure Systems (P) Ltd	4.30%	0.0018
7	JSW Power Trading Company Ltd	4.29%	0.0018
8	Instinct Infra & Power Ltd	2.94%	0.0009
9	Shree Cement Ltd.	1.68%	0.0003
10	GMR Energy Trading Ltd	0.37%	0.0000
11	Mittal Processor (P) Ltd.	0.24%	0.0000
12	Global Energy (P) Ltd.	0.16%	0.0000
13	RPG Power Trading Company Ltd.	0.10%	0.0000
14	Essar Electric Power Development Corp. Ltd.	0.09%	0.0000
	Total	100.00%	0.1967
	Top 5 trading licensees	85.8%	

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

Chart-4: Percentage Share of Electricity Traded by Trading Licensees during April 2011

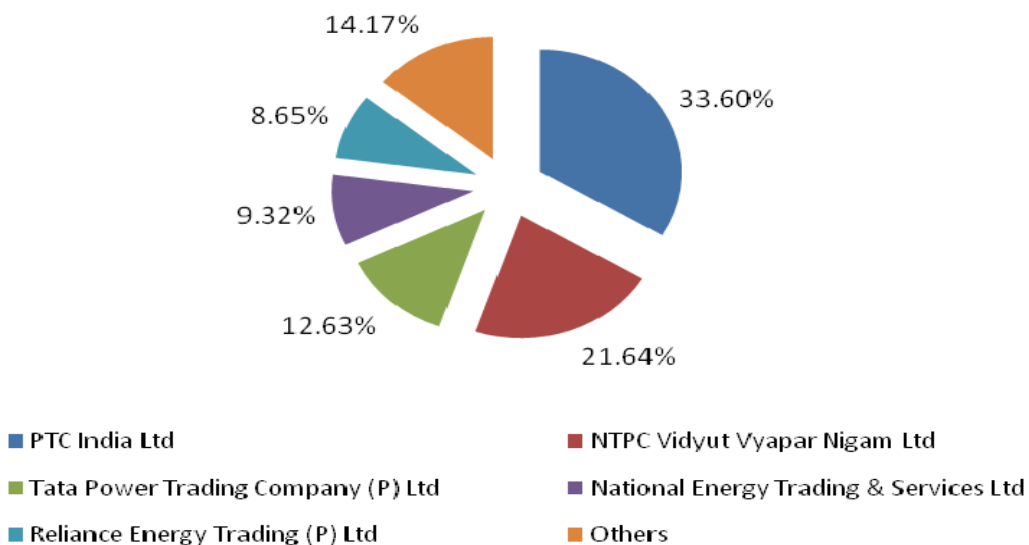


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	4.76
2	PEAK	5.07
3	OFF PEAK	4.72

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	3.23
2	Maximum	8.04
3	Weighted Average	4.76

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (Rs/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	2.05	2.21
2	Maximum	8.00	12.30
3	Weighted Average	3.49	4.00

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	Intra Day Contracts	0.94	4.36
2	Day-Ahead Contingency Contracts	0.35	3.85
3	Daily Contracts	9.46	12.20
4	Weekly Contracts	75.96	11.16
	Total	86.70	

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	27.79	11.68
	Total	27.79	

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	17.46	17.46
3	Average	3.91	6.35

Source: NLDC

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

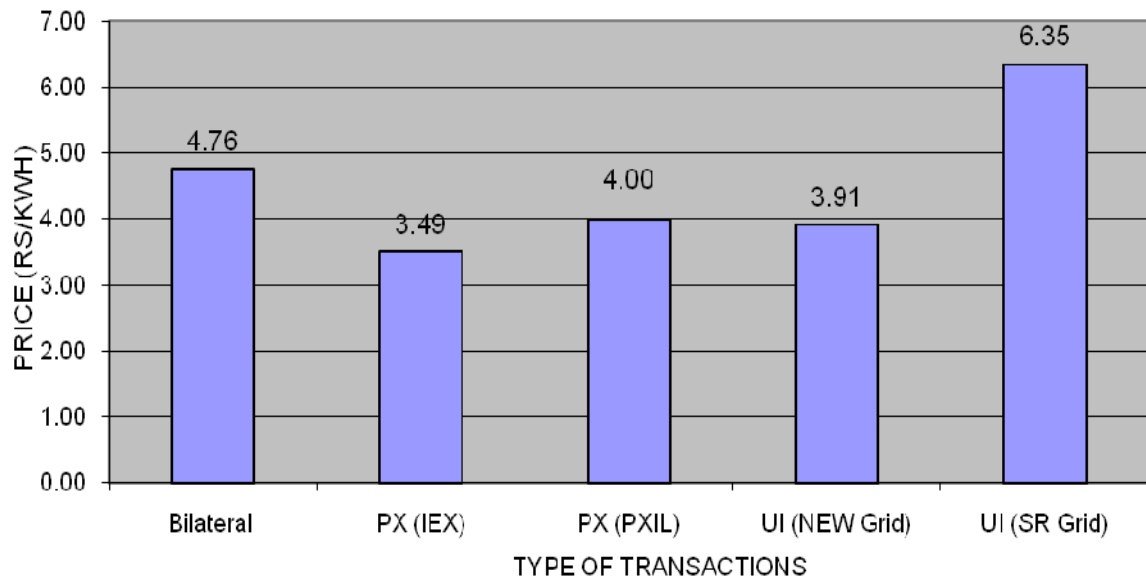


Chart-6: Price of Short-term Transactions of Electricity, April 2011

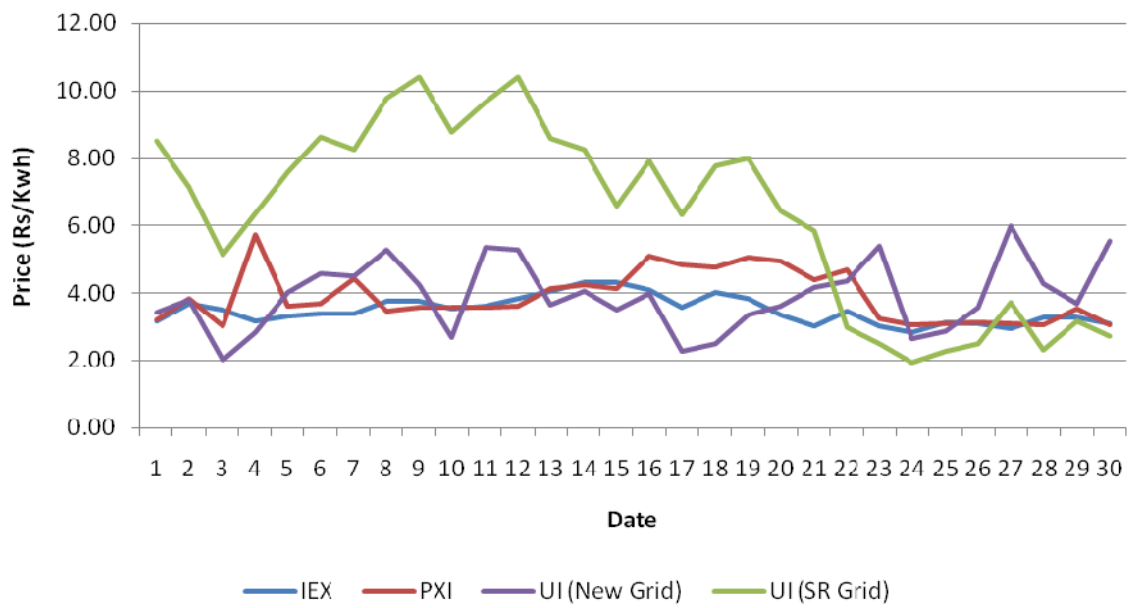


Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
JINDAL POWER	508.32	13.49%
Gujarat	396.83	10.53%
Chattisgarh	393.79	10.45%
Karnataka	303.23	8.05%
Orissa	297.54	7.90%
LANKO_KONDAPALLY	213.87	5.68%
Rajasthan	208.80	5.54%
J & K	205.68	5.46%
Haryana	179.90	4.78%
Kerala	165.41	4.39%
Delhi	143.76	3.82%
Punjab	142.45	3.78%
LANKO_AMK	108.00	2.87%
DVC	96.49	2.56%
Maharashtra	90.94	2.41%
Himachal Pradesh	86.52	2.30%
MP	72.07	1.91%
Uttar Pradesh	52.56	1.40%
West Bengal	32.42	0.86%
Sikkim	29.52	0.78%
Andhra Pradesh	29.43	0.78%
Tripura	6.72	0.18%
Meghalaya	3.30	0.09%
Arunachal Pradesh	0.01	0.00%
Total	3767.53	100.00%
Volume of sale by top 5 States	1899.70	50%

Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	819.08	20.83%
Maharashtra	522.06	13.28%
Andhra Pradesh	466.48	11.87%
West Bengal	426.18	10.84%
Karnataka	317.77	8.08%
Uttar Pradesh	312.40	7.95%
Delhi	292.87	7.45%
Chattisgarh	182.10	4.63%
Punjab	121.58	3.09%
Haryana	100.76	2.56%
MP	93.99	2.39%
Jharkhand	78.40	1.99%
Gujarat	52.01	1.32%
Assam	37.80	0.96%
GOA TOTAL	29.30	0.75%
Orissa	24.02	0.61%
Dadra & Nagar Haveli	16.03	0.41%
Tripura	12.50	0.32%
Meghalaya	11.05	0.28%
Kerala	5.29	0.13%
Daman and Diu	4.16	0.11%
Himachal Pradesh	2.05	0.05%
Rajasthan	1.86	0.05%
Sikkim	1.63	0.04%
Total	3931.36	100.00%
Volume of purchase by top 5 States	2551.57	65%

Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	367.46	25.44%
Delhi	303.59	21.02%
West Bengal	199.70	13.83%
Karnataka	95.39	6.60%
Maharashtra	94.74	6.56%
JINDAL POWER	75.05	5.20%
LANKO_AMK	71.59	4.96%
Chattisgarh	61.09	4.23%
Assam	31.53	2.18%
Haryana	28.93	2.00%
Punjab	18.21	1.26%
Tripura	17.99	1.25%
Andhra Pradesh	15.94	1.10%
GOA TOTAL	15.26	1.06%
Himachal Pradesh	14.11	0.98%
MP	6.20	0.43%
Rajasthan	6.02	0.42%
Kerala	5.45	0.38%
Orissa	4.89	0.34%
J & K	3.45	0.24%
Meghalaya	2.33	0.16%
Mizoram	2.25	0.16%
Uttarakhand	1.39	0.10%
Arunachal Pradesh	1.26	0.09%
Sikkim	0.29	0.02%
LANKO_KONDAPALLY	0.18	0.01%
Total	1444.28	100.00%
Volume of purchase by top 5 States	1060.89	73%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Punjab	359.90	26.22%
Rajasthan	263.53	19.20%
Uttar Pradesh	261.64	19.06%
Tamilnadu	241.55	17.60%
Andhra Pradesh	62.12	4.53%
Gujarat	58.79	4.28%
Maharashtra	47.29	3.45%
Haryana	24.37	1.78%
Jharkhand	23.35	1.70%
MP	16.55	1.21%
Assam	5.26	0.38%
Kerala	3.31	0.24%
Arunachal Pradesh	2.89	0.21%
West Bengal	0.84	0.06%
Uttarakhand	0.66	0.05%
Delhi	0.47	0.03%
Total	1372.51	100.00%
Volume of sale by top 5 States	1188.74	87%

Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Delhi	316.33	16.23%
Punjab	279.18	14.32%
West Bengal	248.24	12.74%
Gujarat	135.66	6.96%
Chattisgarh	122.25	6.27%
Andhra Pradesh	121.99	6.26%
LANKO_AMK	90.14	4.62%
Himachal Pradesh	73.69	3.78%
MP	64.54	3.31%
Uttar Pradesh	62.69	3.22%
Karnataka	54.03	2.77%
Maharashtra	46.33	2.38%
Haryana	42.20	2.16%
Orissa	40.04	2.05%
Rajasthan	37.90	1.94%
Pondicherry	34.10	1.75%
Jharkhand	28.81	1.48%
Assam	27.69	1.42%
Daman and Diu	19.13	0.98%
J & K	15.41	0.79%
GOA TOTAL	12.05	0.62%
Dadra & Nagar Haveli	10.31	0.53%
Tamilnadu	9.47	0.49%
Bihar	8.46	0.43%
Uttarakhand	8.33	0.43%
UT Chandigarh	7.29	0.37%
Kerala	5.90	0.30%
Manipur	5.30	0.27%
Tripura	5.26	0.27%
Meghalaya	3.86	0.20%
JINDAL POWER	3.82	0.20%
Sikkim	3.71	0.19%
Arunachal Pradesh	3.07	0.16%
Mizoram	1.08	0.06%
LANKO_KONDAPALLY	0.72	0.04%
DVC	0.05	0.00%
Nagaland	0.04	0.00%
Total	1949.08	100.00%
Volume of Export by top 5 States	1101.66	57%

Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Haryana	302.76	13.36%
DVC	288.63	12.73%
Rajasthan	281.44	12.42%
Uttar Pradesh	250.20	11.04%
Tamilnadu	189.24	8.35%
Maharashtra	169.63	7.48%
Uttarakhand	134.55	5.94%
Gujarat	85.46	3.77%
MP	80.14	3.54%
J & K	64.70	2.85%
Kerala	53.78	2.37%
Bihar	49.09	2.17%
Himachal Pradesh	40.03	1.77%
Orissa	36.51	1.61%
Jharkhand	27.85	1.23%
Chattisgarh	25.35	1.12%
LANKO_KONDAPALLY	20.90	0.92%
West Bengal	16.66	0.73%
GOA TOTAL	15.42	0.68%
Karnataka	14.99	0.66%
Assam	14.56	0.64%
Andhra Pradesh	14.41	0.64%
Meghalaya	13.89	0.61%
Nagaland	12.23	0.54%
JINDAL POWER	12.21	0.54%
Punjab	8.47	0.37%
Dadra & Nagar Haveli	8.21	0.36%
Sikkim	5.98	0.26%
UT Chandigarh	5.30	0.23%
Arunachal Pradesh	4.89	0.22%
Mizoram	4.54	0.20%
Delhi	4.41	0.19%
Tripura	3.33	0.15%
Manipur	3.04	0.13%
Daman and Diu	2.50	0.11%
LANKO_AMK	1.08	0.05%
Pondicherry	0.29	0.01%
Total	2266.66	100.00%
Volume of Export by top 5 States	1312.26	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	1240.39
2	Uttar Pradesh	708.99
3	Maharashtra	506.96
4	Andhra Pradesh	375.66
5	Rajasthan	294.10
6	DVC	192.09
7	Haryana	176.87
8	Uttarakhand	125.49
9	Jharkhand	100.78
10	Punjab	50.12
11	MP	47.86
12	Bihar	40.63
13	GOA TOTAL	17.41
14	Meghalaya	15.45
15	Dadra & Nagar Haveli	13.93
16	Nagaland	12.20
17	Arunachal Pradesh	3.44
18	Mizoram	1.21
19	Assam	-1.60
20	UT Chandigarh	-2.00
21	Manipur	-2.26
22	Daman and Diu	-12.46
23	Tripura	-14.13
24	Sikkim	-25.90
25	Pondicherry	-33.81
26	West Bengal	-36.69
27	Kerala	-114.38
28	Karnataka	-119.89
29	Himachal Pradesh	-132.24
30	J & K	-159.84
31	LANKO_KONDAPALLY	-193.69
32	LANKO_AMK	-268.65
33	Orissa	-281.93
34	Chattisgarh	-369.67
35	Delhi	-465.93
36	JINDAL POWER	-574.98
37	Gujarat	-703.69
* 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, APRIL 2011			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MU)	1424.98	214.72
B	Actual Cleared Volume and hence scheduled (MU)	1231.55	140.96
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MU) (A-B)	193.43	73.76
D	Volume of electricity that could not be cleared as % to Actual Cleared Volume	16%	52%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	79%	79%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	24%	24%
	6.00 - 12.00 hours	24%	24%
	12.00 - 18.00 hours	24%	26%
	18.00 - 24.00 hours	27%	26%

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