

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

**I: Volume of Short-term Transactions of Electricity**

During the Month of February 2011, total electricity generation excluding generation from renewable and captive power plants in India was 65566.23 MUs (Table-1).

Of the total electricity generation, 6512.77 MUs (9.93%) were transacted through short-term, comprising of 3230.61 MUs (4.93%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 1890.66 MUs (2.88%) through UI and 1391.51 MUs (2.12%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 49.60% (37.57% through traders and term-ahead contracts on Power Exchanges and 12.03% directly between distribution companies) followed by 29.03% through UI and 21.37% 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 28.2.2011, of which only 17 have engaged in trading during February 2011. Top 5 trading licenses had a share of 83% 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 0.2007 for the month of February 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 1163.61 MUs and 227.90 MUs respectively. The volume of total Buy bids and Sale bids was 1804.73 MUs and 1771.89 MUs respectively in IEX and 368.69 MUs and 435.60 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was more demand in IEX (1.02 times) and less demand in PXIL (0.85 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 92.31 MU in IEX and 993.04 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 ₹4.24/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 ₹4.22/kWh, ₹5.91/kWh and ₹3.98/kWh respectively. Minimum and Maximum sale price was ₹2.50/kWh and ₹6.99/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 ₹1.70/kWh, ₹6.25/kWh and ₹3.88/kWh respectively in IEX and ₹1.57/kWh, ₹12.00/kWh and ₹4.54/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 ₹4.67/kWh in IEX and ₹4.25/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 ₹3.00/kWh in the NEW Grid and ₹5.16/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 Entity<sup>1</sup>-Wise)**

Of the total bilateral transactions, top 5 regional entities selling 57% of the volume are Jindal Power Ltd, Chattisgarh, Delhi, Punjab and Haryana. Top 5 regional entities purchasing 61% of the volume are Rajasthan, Tamil Nadu, Karnataka, Maharashtra and Madhya Pradesh (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 71% of the volume are Gujarat, Delhi, West Bengal, Karnataka and Chattisgarh and top 5 regional entities purchasing 87% of the volume are Tamil Nadu, Punjab, Rajasthan, Uttar Pradesh and Gujarat (Table-9 & 10).

Of the total UI transactions, top 5 regional entities underdrawing 45% of the volume are Uttar Pradesh, Delhi, DVC, Gujarat and Maharashtra. Top 5 regional entities overdrawing 61% of the volume are Rajasthan, Haryana, Tamil Nadu, Maharashtra and Madhya Pradesh (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 Delhi, Gujarat, Chattisgarh, Jindal Power Ltd,

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<sup>1</sup> 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.

and Lanco Amarkantak Ltd and top 5 regional entities purchasing electricity are Rajasthan, Tamil Nadu, Madhya Pradesh, Maharashtra and Uttarakhand.

#### **IV: Congestion<sup>2</sup> 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”<sup>3</sup>.

In the month of February 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 8.5% and 22.4% 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 89% in IEX and 84% in PXIL.

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

<sup>3</sup> “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 9.93 %.
- Of the total short-term transactions of electricity, 49.60% transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies) followed by 29.03% through UI and 21.37% through Power Exchanges.
- Top 5 trading licenses are having share of 83% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.2007 shows high concentration of market power.
- The price of electricity transacted through Trading Licensees (₹4.24/kWh) was comparable with the price of electricity transacted through Power Exchanges (₹3.88/kWh in IEX and ₹4.54/kWh in PXIL). The price of electricity transacted through UI was ₹3.00/kWh in the NEW Grid and ₹5.16/kWh in the SR Grid.
- The gap between the volume of sale bids and buy bids placed through power exchanges shows that there was more demand in IEX (1:1.02) and less demand in PXIL (1:0.85) when compared with the supply offered through these exchanges.
- Top 5 regional entities selling electricity are Delhi, Gujarat, Chattisgarh, Jindal Power Ltd, and Lanco Amarkantak Ltd and top 5 regional entities purchasing electricity are Rajasthan, Tamil Nadu, Madhya Pradesh, Maharashtra and Uttarakhand.
- The volume of electricity that could not be cleared due to congestion was about 8.5% and 22.4% of the actual cleared volume in IEX and PXIL, respectively. In percentage of time terms, congestion occurred 89% of the time (596 hrs in the month) in IEX and 84% of the time (566 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: February 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-Feb-11	81.81	29.27	45.48	9.68	64.50	2359.88
2-Feb-11	81.47	28.42	43.44	9.33	65.14	2333.91
3-Feb-11	81.32	28.82	43.31	9.73	67.92	2327.51
4-Feb-11	81.88	29.07	43.49	10.11	69.39	2354.43
5-Feb-11	85.50	29.07	43.98	8.07	72.68	2339.78
6-Feb-11	83.21	28.51	51.36	11.75	64.72	2306.19
7-Feb-11	91.53	27.49	42.04	9.66	72.37	2312.72
8-Feb-11	91.89	26.47	42.79	8.11	63.23	2327.65
9-Feb-11	94.59	26.47	38.55	7.31	70.27	2354.14
10-Feb-11	91.50	27.62	42.87	10.76	62.13	2466.97
11-Feb-11	91.44	27.62	43.32	10.81	60.15	2371.39
12-Feb-11	94.99	27.62	40.17	8.33	66.78	2387.11
13-Feb-11	95.41	28.69	39.66	7.83	68.50	2336.65
14-Feb-11	89.31	27.32	42.28	10.16	65.33	2360.80
15-Feb-11	87.41	28.12	37.43	6.62	69.67	2336.11
16-Feb-11	87.68	27.97	31.40	3.45	74.51	2330.32
17-Feb-11	86.56	27.97	33.13	3.88	66.00	2349.53
18-Feb-11	86.77	27.97	33.29	5.20	65.70	2366.08
19-Feb-11	86.68	28.32	44.34	7.15	66.93	2294.50
20-Feb-11	85.97	28.98	44.28	9.30	71.05	2260.72
21-Feb-11	87.07	28.04	41.44	6.94	70.02	2282.36
22-Feb-11	87.24	27.84	43.86	9.49	71.40	2312.84
23-Feb-11	87.27	27.54	44.85	8.22	68.20	2363.43
24-Feb-11	86.56	27.54	41.94	9.38	63.52	2374.32
25-Feb-11	86.37	27.40	39.75	7.38	60.78	2381.16
26-Feb-11	85.06	27.40	42.19	7.55	73.71	2338.03
27-Feb-11	89.54	28.77	40.28	5.56	70.92	2302.50
28-Feb-11	80.84	27.46	42.70	6.15	65.11	2335.20
<b>Total</b>	<b>2446.84</b>	<b>783.76</b>	<b>1163.61</b>	<b>227.90</b>	<b>1890.66</b>	<b>65566.23</b>
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 (₹/KWh)												
Month: February 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-Feb-11	2.00	5.15	3.78	2.00	9.00	3.88	1.24	12.22	4.82	0.78	12.22	4.50
2-Feb-11	2.00	5.50	3.98	2.00	10.00	3.89	1.09	12.22	5.61	0.31	12.22	5.09
3-Feb-11	2.49	5.60	4.14	2.25	12.00	4.00	1.71	12.22	7.28	0.62	12.22	4.49
4-Feb-11	3.25	6.00	4.70	2.75	12.00	4.52	1.09	12.22	4.63	2.17	17.46	6.68
5-Feb-11	3.00	6.00	4.77	3.00	9.00	4.78	0.93	12.22	5.24	1.71	12.22	5.42
6-Feb-11	2.70	6.00	4.66	2.75	9.00	4.82	0.62	7.79	3.37	0.00	6.85	3.78
7-Feb-11	3.00	6.25	5.01	2.80	7.50	4.80	0.00	7.32	2.14	0.78	12.22	4.18
8-Feb-11	2.75	6.00	4.87	2.50	7.50	5.16	0.78	8.26	2.70	2.33	12.22	6.36
9-Feb-11	2.34	6.00	4.56	1.90	7.75	4.95	1.24	12.22	4.00	3.10	12.22	7.25
10-Feb-11	2.40	6.00	4.63	2.00	7.75	4.58	1.24	12.22	4.69	1.09	12.22	5.68
11-Feb-11	2.50	6.11	4.65	2.50	7.75	4.65	0.47	12.22	3.69	0.00	12.22	4.92
12-Feb-11	2.64	6.11	4.76	2.39	7.75	4.81	0.00	12.22	3.13	0.47	8.26	4.32
13-Feb-11	2.25	5.80	4.10	2.00	8.00	4.68	0.16	4.03	2.09	0.00	7.79	3.44
14-Feb-11	2.49	6.00	4.51	2.35	8.00	4.64	0.00	3.72	1.68	0.31	12.22	4.39
15-Feb-11	2.49	6.00	4.42	2.00	8.10	4.22	0.00	4.03	1.57	1.71	12.22	5.01
16-Feb-11	2.00	5.50	3.72	1.69	8.50	4.12	0.00	3.72	1.76	1.24	12.22	5.50
17-Feb-11	2.00	5.20	3.54	1.69	8.10	4.09	0.31	7.32	2.27	2.95	12.22	6.59
18-Feb-11	2.00	4.50	3.37	1.91	8.25	4.42	0.31	12.22	3.00	2.33	17.46	7.39
19-Feb-11	2.10	4.25	3.23	2.00	8.50	4.49	0.00	4.97	2.52	2.79	17.46	8.80
20-Feb-11	2.00	3.85	3.06	2.00	8.50	4.48	0.00	7.32	1.86	0.00	12.22	6.74
21-Feb-11	2.00	5.20	3.46	2.00	8.60	4.71	0.00	4.50	1.76	1.86	12.22	7.60
22-Feb-11	2.00	4.00	3.14	2.00	8.60	4.72	0.00	7.32	2.35	0.16	8.26	3.61
23-Feb-11	2.00	4.80	3.17	2.00	8.75	4.52	0.00	12.22	2.70	1.24	7.32	3.74
24-Feb-11	2.00	5.00	3.12	2.00	9.00	4.55	0.00	5.91	2.12	0.62	7.79	4.14
25-Feb-11	2.00	4.50	3.20	1.88	9.00	4.62	0.00	4.50	1.86	0.00	12.22	3.89
26-Feb-11	1.85	4.05	2.94	1.57	9.10	4.61	0.00	4.97	1.92	1.71	8.26	3.81
27-Feb-11	1.80	3.60	2.44	1.70	9.10	4.65	0.00	6.38	1.76	0.00	7.32	3.74
28-Feb-11	1.70	5.00	2.87	1.70	9.10	4.45	0.00	4.03	1.59	0.00	7.79	3.35
	<b>1.70#</b>	<b>6.25#</b>	<b>3.88</b>	<b>1.57#</b>	<b>12.00#</b>	<b>4.54</b>	<b>0.00#</b>	<b>12.22#</b>	<b>3.00</b>	<b>0.00#</b>	<b>17.46#</b>	<b>5.16</b>

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.

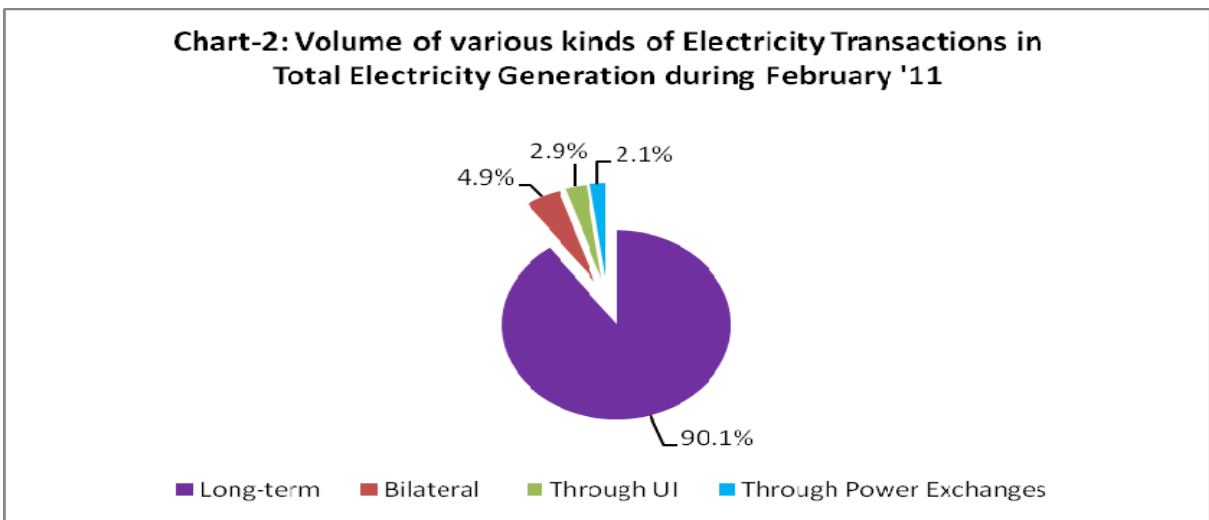
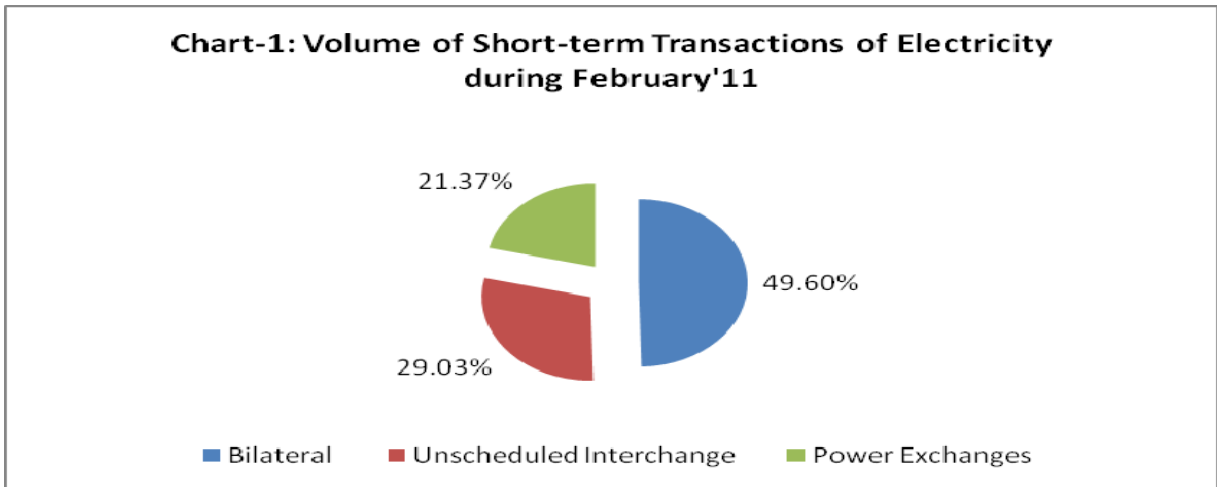
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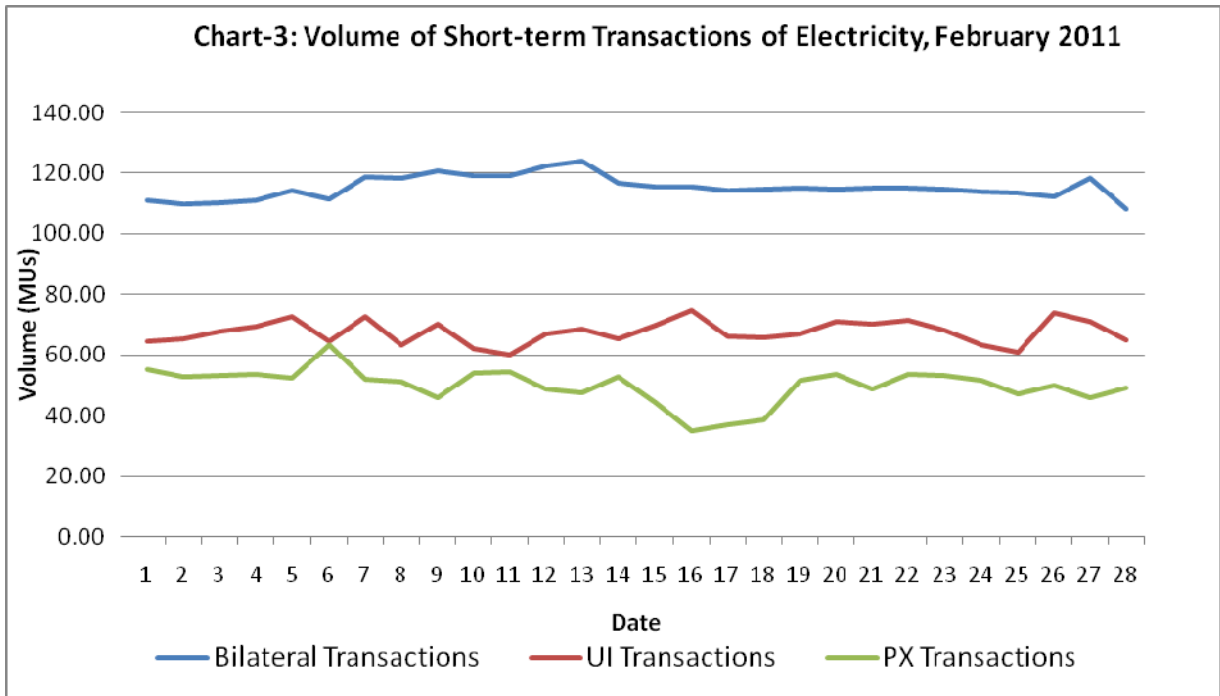
VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs)										
Month: February 2011										
Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through UI with Regional Grid			Total Net**
	Sale	Purchase	Net*	Sale	Purchase	Net*	Export (Under Drawl)	Import (Over Drawl)	Net*	
Punjab	309.53	30.80	-278.72	80.36	281.30	200.95	61.39	59.27	-2.12	-79.90
Haryana	253.54	12.39	-241.14	15.58	67.58	52.00	52.07	221.08	169.00	-20.14
Rajasthan	3.36	515.19	511.83	33.90	263.97	230.06	25.12	327.06	301.94	1043.84
Delhi	340.09	0.00	-340.09	206.15	0.79	-205.36	173.74	11.40	-162.34	-707.79
Uttar Pradesh	167.18	93.46	-73.72	0.00	238.93	238.93	230.51	41.98	-188.52	-23.31
Uttarakhand	0.00	129.42	129.42	8.58	1.01	-7.57	9.04	87.84	78.80	200.65
Himachal Pradesh	9.12	202.00	192.88	37.11	0.00	-37.11	19.21	35.55	16.34	172.11
J & K	45.58	168.56	122.99	2.12	0.00	-2.12	67.42	26.56	-40.85	80.01
UT Chandigarh	8.96	0.00	-8.96	0.00	0.00	0.00	1.77	6.95	5.18	-3.78
MP	0.00	255.53	255.53	18.25	22.74	4.49	64.88	97.87	32.99	293.01
Maharashtra	72.98	335.54	262.56	69.15	20.95	-48.20	98.30	123.21	24.90	239.26
Gujarat	184.94	0.00	-184.94	475.10	105.17	-369.93	119.32	69.38	-49.94	-604.81
Chattisgarh	435.10	0.00	-435.10	80.43	0.00	-80.43	89.88	11.79	-78.09	-593.63
Daman and Diu	0.00	0.00	0.00	0.00	0.00	0.00	18.81	1.59	-17.23	-17.23
Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	13.88	5.05	-8.83	-8.83
Andhra Pradesh	9.99	240.20	230.21	16.06	32.46	16.40	76.97	28.11	-48.86	197.74
Karnataka	243.70	432.23	188.53	95.14	0.00	-95.14	25.68	21.49	-4.19	89.20
Kerala	55.38	117.17	61.79	0.30	2.39	2.09	1.57	52.34	50.77	114.65
Tamilnadu	0.00	432.68	432.68	0.00	327.40	327.40	5.04	196.98	191.93	952.01
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	46.99	0.01	-46.98	-46.98
West Bengal	57.50	74.86	17.37	133.84	3.85	-129.99	80.20	35.95	-44.25	-156.88
Orissa	27.88	28.75	0.87	23.82	0.05	-23.77	40.07	31.41	-8.66	-31.56
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	41.95	10.45	-31.50	-31.50
Jharkhand	0.00	100.74	100.74	3.32	16.73	13.41	38.45	0.00	-38.45	75.70
Sikkim	8.79	0.83	-7.96	7.35	0.00	-7.35	11.85	4.16	-7.69	-23.00
DVC	102.78	0.85	-101.93	0.00	0.00	0.00	130.70	1.45	-129.25	-231.18
Arunachal Pradesh	0.00	0.00	0.00	0.00	4.07	4.07	0.97	4.90	3.93	8.00
Assam	2.94	47.48	44.54	27.91	0.00	-27.91	27.17	2.15	-25.02	-8.39
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	3.18	6.13	2.96	2.96
Meghalaya	2.80	11.91	9.11	0.00	0.26	0.26	0.94	25.20	24.26	33.63
Mizoram	0.00	0.00	0.00	1.81	0.50	-1.31	0.46	5.41	4.95	3.64
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.03	12.70	12.67	12.67
Tripura	8.06	0.00	-8.06	17.26	1.36	-15.90	2.01	3.11	1.10	-22.85
GOA	0.00	0.00	0.00	17.80	0.00	-17.80	22.03	4.57	-17.45	-35.25
JINDAL POWER	453.27	0.00	-453.27	20.16	0.00	-20.16	3.79	6.50	2.71	-470.71
LANKO_AMK	183.46	0.00	-183.46	0.00	0.00	0.00	58.81	0.00	-58.81	-242.26
LANKO_KONDAPALLY	179.76	0.00	-179.76	0.00	0.00	0.00	8.89	13.93	5.04	-174.72
* 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 consume <sup>₹</sup>										
** (-) 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), FEB' 2011				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	3230.61	49.60%	4.93%
	(i) Through Traders and PXs	2446.84	37.57%	3.73%
	(ii) Direct	783.76	12.03%	1.20%
2	Through Power Exchanges	1391.51	21.37%	2.12%
	IEX	1163.61	17.87%	1.77%
	PXIL	227.90	3.50%	0.35%
3	Through UI	1890.66	29.03%	2.88%
	<b>Total</b>	<b>6512.77</b>	<b>100.00%</b>	<b>9.93%</b>
	<b>Total Generation</b>	<b>65566.23</b>	–	–

Source: NLDC





<b>Table-2: Percentage Share of Electricity Traded by Trading Licensees during February 2011</b>			
<b>Sr.No</b>	<b>Name of the Trading Licensee</b>	<b>% Share in total Volume traded by Licensees</b>	<b>Herfindahl-Hirschman Index</b>
1	PTC India Ltd	37.10%	0.1376
2	NTPC Vidyut Vyapar Nigam Ltd	16.03%	0.0257
3	Reliance Energy Trading (P) Ltd	12.40%	0.0154
4	National Energy Trading and Services Ltd	9.02%	0.0081
5	Tata Power Trading Company (P) Ltd	8.01%	0.0064
6	JSW Power Trading Company Ltd	5.63%	0.0032
7	Knowledge Infrastructure Systems (P) Ltd	5.28%	0.0028
8	Instinct Infra & Power Ltd	2.85%	0.0008
9	Adani Enterprise Ltd.	2.68%	0.0007
10	Mittal Power Processor Ltd.	0.33%	0.0000
11	Shree Cement Ltd.	0.237%	0.0000
12	GMR Energy Trading Ltd	0.235%	0.0000
13	RPG Power Trading Company Ltd.	0.076%	0.0000
14	Essar Electric Power Development Corp. Ltd	0.043%	0.0000
15	Global Energy Pvt. Ltd.	0.039%	0.0000
16	Jindal Power Trading Company Ltd.	0.036%	0.0000
17	Pune Power Development (P) Ltd	0.025%	0.0000
	<b>Total</b>	<b>100.00%</b>	<b>0.2007</b>
	<b>Top 5 trading licensees</b>	<b>82.5%</b>	
<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>			

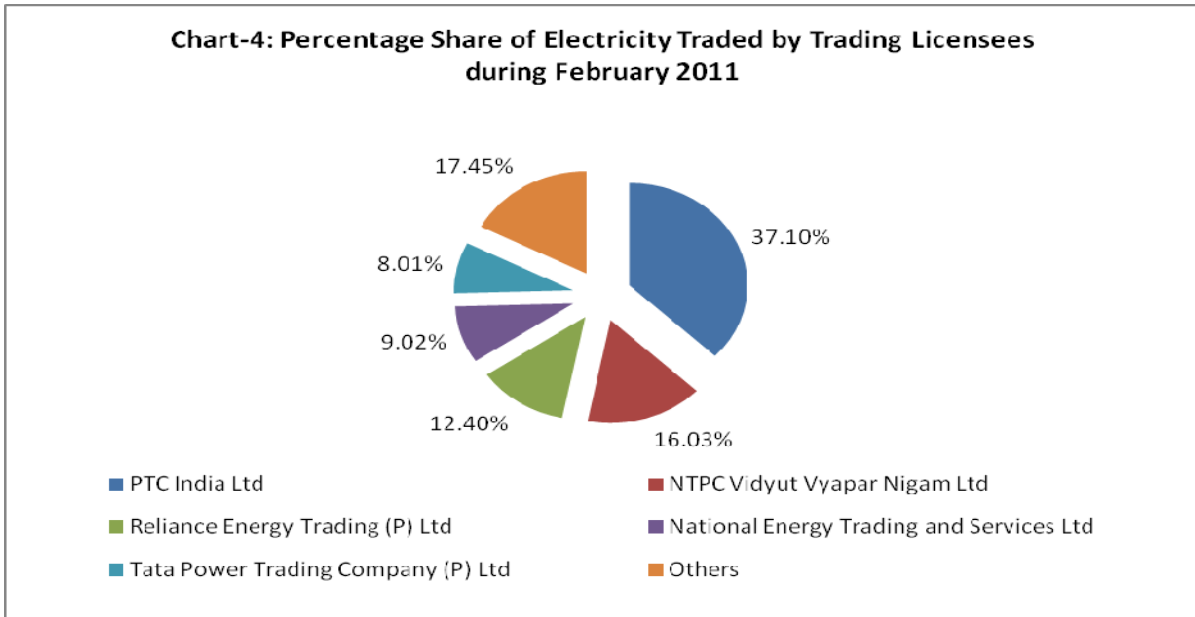


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (₹/KWh)
1	RTC	4.22
2	PEAK	5.91
3	OFF PEAK	3.98

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (₹/KWh)
1	Minimum	2.50
2	Maximum	6.99
3	Weighted Average	4.24

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (₹/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	1.70	1.57
2	Maximum	6.25	12.00
3	Weighted Average	3.88	4.54

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 (₹/kwh)
1	Intra-Day Contracts	2.30	6.59
2	Weekly Contracts	90.01	4.67
	<b>Total</b>	<b>92.31</b>	

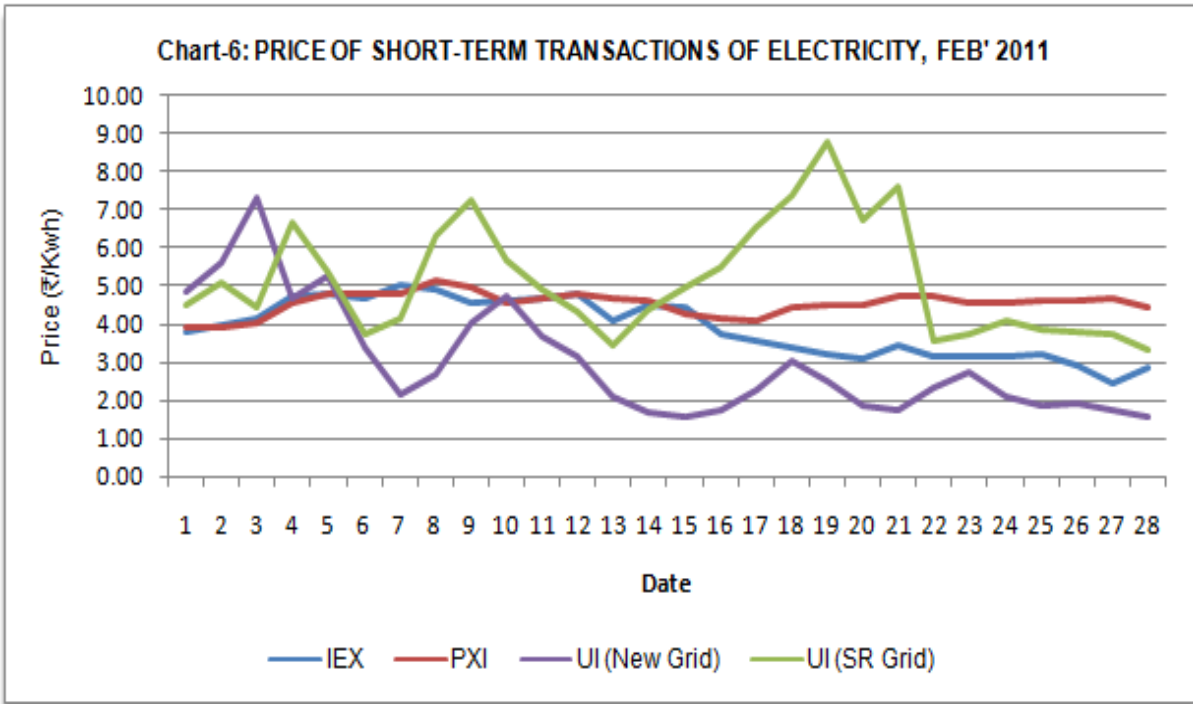
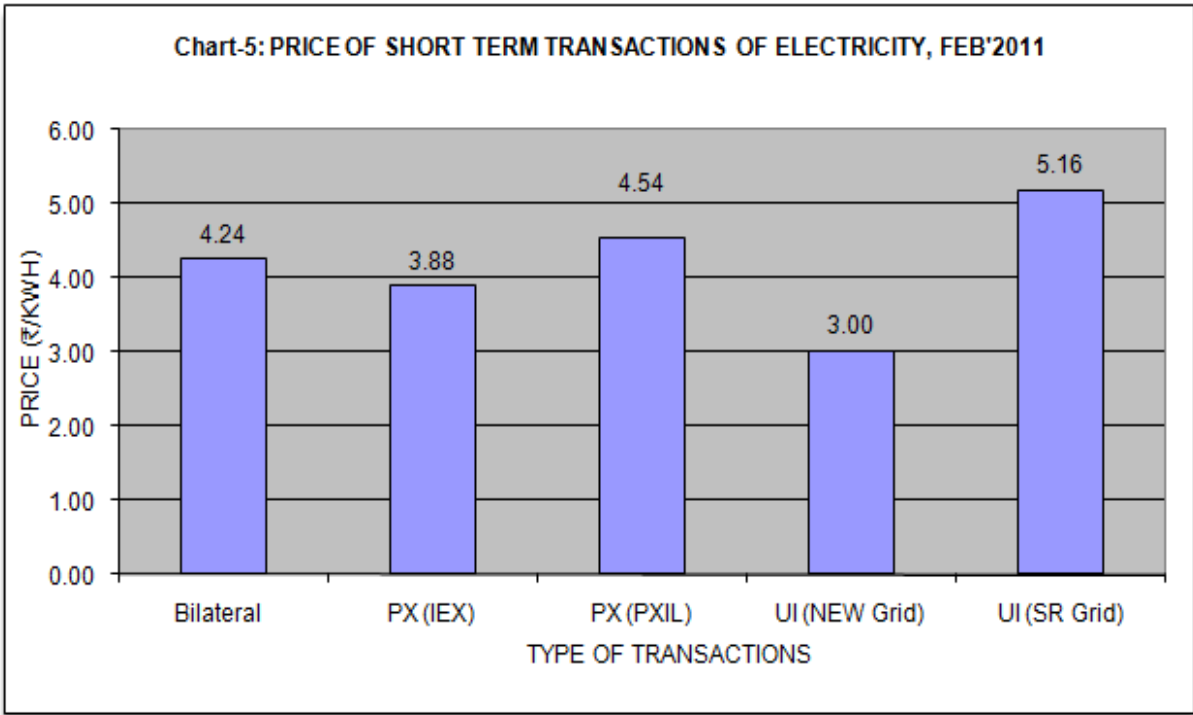
Source: IEX

Table-5B: Term ahead market of PXIL			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kwh)
1	Day-Ahead Contingency contracts	919.67	4.05
2	Weekly Contracts	73.37	4.25
	<b>Total</b>	<b>993.04</b>	

Source: PXIL

Table-6: PRICE OF POWER TRANSACTED THROUGH UI (₹/KWh)			
Sr.No		NEW Grid	SR Grid
1	Minimum	0.00	0.00
2	Maximum	12.22	17.46
3	Average	3.00	5.16

Source: NLDC



<b>Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Sale (MUs)</b>	<b>% of Volume</b>
JINDAL POWER	453.27	14.31%
Chattisgarh	435.10	13.74%
Delhi	340.09	10.74%
Punjab	309.53	9.77%
Haryana	253.54	8.01%
Karnataka	243.70	7.70%
Gujarat	184.94	5.84%
LANKO_AMK	183.46	5.79%
LANKO_KONDAPALLY	179.76	5.68%
Uttar Pradesh	167.18	5.28%
DVC	102.78	3.25%
Maharashtra	72.98	2.30%
West Bengal	57.50	1.82%
Kerala	55.38	1.75%
J & K	45.58	1.44%
Orissa	27.88	0.88%
Andhra Pradesh	9.99	0.32%
Himachal Pradesh	9.12	0.29%
UT Chandigarh	8.96	0.28%
Sikkim	8.79	0.28%
Tripura	8.06	0.25%
Rajasthan	3.36	0.11%
Assam	2.94	0.09%
Meghalaya	2.80	0.09%
<b>Total</b>	<b>3166.67</b>	<b>100.00%</b>
<b>Volume of sale by top 5 States</b>	<b>1791.52</b>	<b>57%</b>

<b>Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Purchase (MUs)</b>	<b>% of Volume</b>
Rajasthan	515.19	15.95%
Tamilnadu	432.68	13.39%
Karnataka	432.23	13.38%
Maharashtra	335.54	10.39%
MP	255.53	7.91%
Andhra Pradesh	240.20	7.43%
Himachal Pradesh	202.00	6.25%
J & K	168.56	5.22%
Uttarakhand	129.42	4.01%
Kerala	117.17	3.63%
Jharkhand	100.74	3.12%
Uttar Pradesh	93.46	2.89%
West Bengal	74.86	2.32%
Assam	47.48	1.47%
Punjab	30.80	0.95%
Orissa	28.75	0.89%
Haryana	12.39	0.38%
Meghalaya	11.91	0.37%
DVC	0.85	0.03%
Sikkim	0.83	0.03%
<b>Total</b>	<b>3230.61</b>	<b>100%</b>
<b>Volume of purchase by top 5 States</b>	<b>1971.17</b>	<b>61%</b>

<b>Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Sale (MUs)</b>	<b>% of Volume</b>
Gujarat	475.10	34.14%
Delhi	206.15	14.81%
West Bengal	133.84	9.62%
Karnataka	95.14	6.84%
Chattisgarh	80.43	5.78%
Punjab	80.36	5.77%
Maharashtra	69.15	4.97%
Himachal Pradesh	37.11	2.67%
Rajasthan	33.90	2.44%
Assam	27.91	2.01%
Orissa	23.82	1.71%
JINDAL POWER	20.16	1.45%
MP	18.25	1.31%
GOA	17.80	1.28%
Tripura	17.26	1.24%
Andhra Pradesh	16.06	1.15%
Haryana	15.58	1.12%
Uttarakhand	8.58	0.62%
Sikkim	7.35	0.53%
Jharkhand	3.32	0.24%
J & K	2.12	0.15%
Mizoram	1.81	0.13%
Kerala	0.30	0.02%
<b>Total</b>	<b>1391.51</b>	<b>100.00%</b>
<b>Volume of purchase by top 5 States</b>	<b>990.67</b>	<b>71%</b>



<b>Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Purchase (MUs)</b>	<b>% of Volume</b>
Tamilnadu	327.40	23.53%
Punjab	281.30	20.22%
Rajasthan	263.97	18.97%
Uttar Pradesh	238.93	17.17%
Gujarat	105.17	7.56%
Haryana	67.58	4.86%
Andhra Pradesh	32.46	2.33%
MP	22.74	1.63%
Maharashtra	20.95	1.51%
Jharkhand	16.73	1.20%
Arunachal Pradesh	4.07	0.29%
West Bengal	3.85	0.28%
Kerala	2.39	0.17%
Tripura	1.36	0.10%
Uttarakhand	1.01	0.07%
Delhi	0.79	0.06%
Mizoram	0.50	0.04%
Meghalaya	0.26	0.02%
Orissa	0.05	0.00%
<b>Total</b>	<b>1391.51</b>	<b>100.00%</b>
<b>Volume of sale by top 5 States</b>	<b>1216.76</b>	<b>87%</b>

<b>Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Export (MUs)</b>	<b>% of Volume</b>
Uttar Pradesh	230.51	13.78%
Delhi	173.74	10.38%
DVC	130.70	7.81%
Gujarat	119.32	7.13%
Maharashtra	98.30	5.88%
Chattisgarh	89.88	5.37%
West Bengal	80.20	4.79%
Andhra Pradesh	76.97	4.60%
J & K	67.42	4.03%
MP	64.88	3.88%
Punjab	61.39	3.67%
LANKO_AMK	58.81	3.51%
Haryana	52.07	3.11%
Pondicherry	46.99	2.81%
Bihar	41.95	2.51%
Orissa	40.07	2.40%
Jharkhand	38.45	2.30%
Assam	27.17	1.62%
Karnataka	25.68	1.53%
Rajasthan	25.12	1.50%
GOA	22.03	1.32%
Himachal Pradesh	19.21	1.15%
Daman and Diu	18.81	1.12%
Dadra & Nagar Haveli	13.88	0.83%
Sikkim	11.85	0.71%
Uttarakhand	9.04	0.54%
LANKO_KONDAPALLY	8.89	0.53%
Tamilnadu	5.04	0.30%
JINDAL POWER	3.79	0.23%
Manipur	3.18	0.19%
Tripura	2.01	0.12%
UT Chandigarh	1.77	0.11%
Kerala	1.57	0.09%
Arunachal Pradesh	0.97	0.06%
Meghalaya	0.94	0.06%
Mizoram	0.46	0.03%
Nagaland	0.03	0.00%
<b>Total</b>	<b>1673.08</b>	<b>100.00%</b>
<b>Volume of Export by top 5 States</b>	<b>752.57</b>	<b>45%</b>

<b>Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Import (MUs)</b>	<b>% of Volume</b>
Rajasthan	327.06	20.52%
Haryana	221.08	13.87%
Tamilnadu	196.98	12.36%
Maharashtra	123.21	7.73%
MP	97.87	6.14%
Uttarakhand	87.84	5.51%
Gujarat	69.38	4.35%
Punjab	59.27	3.72%
Kerala	52.34	3.28%
Uttar Pradesh	41.98	2.63%
West Bengal	35.95	2.26%
Himachal Pradesh	35.55	2.23%
Orissa	31.41	1.97%
Andhra Pradesh	28.11	1.76%
J & K	26.56	1.67%
Meghalaya	25.20	1.58%
Karnataka	21.49	1.35%
LANKO_KONDAPALLY	13.93	0.87%
Nagaland	12.70	0.80%
Chattisgarh	11.79	0.74%
Delhi	11.40	0.72%
Bihar	10.45	0.66%
UT Chandigarh	6.95	0.44%
JINDAL POWER	6.50	0.41%
Manipur	6.13	0.38%
Mizoram	5.41	0.34%
Dadra & Nagar Haveli	5.05	0.32%
Arunachal Pradesh	4.90	0.31%
GOA	4.57	0.29%
Sikkim	4.16	0.26%
Tripura	3.11	0.20%
Assam	2.15	0.13%
Daman and Diu	1.59	0.10%
DVC	1.45	0.09%
Pondicherry	0.01	0.00%
<b>Total</b>	<b>1593.52</b>	<b>100.00%</b>
<b>Volume of Export by top 5 States</b>	<b>966.20</b>	<b>61%</b>

<b>Table-13: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE)</b>		
<b>Sr.No</b>	<b>Name of the State/UT/Other Regional Entity</b>	<b>Total volume of net short-term transactions of electricity*</b>
1	Rajasthan	1043.84
2	Tamilnadu	952.01
3	MP	293.01
4	Maharashtra	239.26
5	Uttarakhand	200.65
6	Andhra Pradesh	197.74
7	Himachal Pradesh	172.11
8	Kerala	114.65
9	Karnataka	89.20
10	J & K	80.01
11	Jharkhand	75.70
12	Meghalaya	33.63
13	Nagaland	12.67
14	Arunachal Pradesh	8.00
15	Mizoram	3.64
16	Manipur	2.96
17	UT Chandigarh	-3.78
18	Assam	-8.39
19	Dadra & Nagar Haveli	-8.83
20	Daman and Diu	-17.23
21	Haryana	-20.14
22	Tripura	-22.85
23	Sikkim	-23.00
24	Uttar Pradesh	-23.31
25	Bihar	-31.50
26	Orissa	-31.56
27	GOA	-35.25
28	Pondicherry	-46.98
29	Punjab	-79.90
30	West Bengal	-156.88
31	LANKO_KONDAPALLY	-174.72
32	DVC	-231.18
33	LANKO_AMK	-242.26
34	JINDAL POWER	-470.71
35	Chattisgarh	-593.63
36	Gujarat	-604.81
37	Delhi	-707.79
* 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, FEB' 2011**

	<b>Details of Congestion</b>	<b>IEX</b>	<b>PXIL</b>
A	Unconstrained Cleared Volume* (MU)	1262.53	278.92
B	Actual Cleared Volume and hence scheduled (MU)	1163.61	227.90
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MU) (A-B)	98.92	51.02
D	Volume of electricity that could not be cleared as % to Actual Cleared Volume	8.5%	22.4%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	88.69%	84.23%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25%	26%
	6.00 - 12.00 hours	25%	23%
	12.00 - 18.00 hours	23%	22%
	18.00 - 24.00 hours	27%	28%

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