

**MONTHLY REPORT ON
SHORT-TERM TRANSACTIONS OF ELECTRICITY
(November 2009)**

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 November 2009 is as under:

I: Volume of Short-term Transactions of Electricity

During the Month of November 2009, total electricity generation excluding generation from renewable and captive power plants in India was 59402.72 MUs (Table-1).

Of the total electricity generation, 5243.57 MUs (8.83%) were transacted through short-term, comprising of 2386.27 MUs (4.02%) through Bilateral (through traders and Power Exchanges and directly between distribution companies), followed by 2098.48 MUs (3.53%) through UI and 758.82 MUs (1.28%) through Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 45.51% (37.03% through traders and Power Exchanges and 8.48% direct between distribution companies) followed by 40.02% through UI and 14.47% through Power Exchanges (Table-1& Chart-1). Daily volume of short-term transactions is shown in Chart-3&4.

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-5. The trading licensees are undertaking electricity transactions through bilateral and through power exchanges. Here the volume of electricity transacted by the trading licensees includes bilateral

transactions and the transactions undertaken through power exchanges. There are 38 trading licensees as on 30.11.2009, of which only 11 have engaged in trading during November 2009. Top 5 trading licenses had a share of 83.39% 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 0.2335 shows high concentration/market power (Table-2).

The volume of electricity transacted through IEX and PXIL was 638.45 MUs and 120.37 MUs respectively. The volume of total Buy bids and Sale bids was 840.61 MUs and 1289.86 MUs respectively in IEX and 157.54 MUs and 441.17 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 (0.65 times) and in PXIL (0.36 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted through IEX in the term ahead contracts was 1.80 MU. Of which, the volume in the 'intra-day' contracts was 0.44 MU and in 'day ahead contingency contracts' was 1.36 MU (Table-5A). There is no electricity transacted through PXIL in the term ahead contracts.

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.5.33. 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.5.05, Rs.5.76 and Rs.5.91 respectively. Minimum and Maximum sale price was Rs.1.84 and Rs.7.24 respectively (Table-3 & 4).

(2) *Price of electricity transacted Through Power Exchange:* The Minimum, Maximum and Weighted Average Price has been computed for the volume transacted through IEX and PXIL separately. The Minimum, Maximum and Weighted Average Price was Rs.1.40, Rs.6.29 and Rs.3.16 respectively in IEX and Rs.1.44, Rs.6.50 and Rs.3.39 respectively in PXIL (Table-5).

The weighted average price of electricity transacted through IEX in the term-ahead contracts was Rs.5.23/kWh in the 'intra-day contracts' and Rs.3.62/kWh in the 'day ahead contingency contracts' (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 Rs.2.72 in the NEW Grid and Rs.3.79 in the SR Grid. Minimum and Maximum price of UI was Rs.0.00 and Rs.10.29 respectively in the New Grid and Rs.0.00 and Rs.10.29 respectively in the SR Grid (Table-6).

The weighted average price/average price of electricity transacted through trading licensees, power exchanges and UI and its comparison is shown in Chart-6&7.

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

Of the total bilateral transactions, top 5 regional entities selling 66.51% of the volume are Chattisgarh, Jindal Power Ltd, Karnataka, West Bengal and Punjab and top 5 regional entities purchasing 71.81% of the volume are Rajasthan, Uttar Pradesh, Tamil Nadu, Madhya Pradesh and Maharashtra (Table-7 & 8).

Of the total Power Exchange transactions, top 5 regional entities selling 84.75% of the volume are Karnataka, Chattisgarh, Jindal Power Ltd, West Bengal and Gujarat and top 5 regional entities purchasing 89.87% of the volume are Tamil Nadu, Uttar Pradesh, Kerala, Rajasthan and Maharashtra (Table-9 & 10).

Of the total UI transactions, top 5 regional entities exporting 45.55% of the volume are Chattisgarh, Orissa, DVC, Gujarat and Delhi and top 5 regional entities importing 47.89% of the volume are Uttar Pradesh, Tamil Nadu, Maharashtra, Rajasthan and Haryana (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 was shown in Table-13. Top 5 regional entities selling electricity are Chattisgarh, Jindal Power Ltd, Karnataka, West Bengal and Gujarat and top 5 regional entities purchasing electricity are Rajasthan, Uttar Pradesh, Tamil Nadu, Haryana and Maharashtra.

IV: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 8.83%.
- Of the total short-term transactions of electricity, 45.51% transacted through bilateral (through traders and power exchanges and directly by distribution companies) followed by 40.02% through UI and 14.47% through Power Exchanges.
- Top 5 trading licenses are having share of 83.39% in the total volume traded by all the trading licensees.
- The price of electricity transacted through Trading Licensees was high (Rs.5.33/KWh) when compared with the price of electricity transacted through Power Exchanges (Rs.3.16/KWh in IEX and Rs.3.39/KWh in PXIL) and the price of electricity transacted through UI (Rs.2.72/KWh in NEW Grid and Rs.3.79/KWh in SR Grid).
- The HHI computed for volume of electricity traded by trading licensees was 0.23 and it shows high concentration/market power.
- The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was less demand in IEX (0.65 times) and in PXIL (0.36 times) when compared with the supply offered through the exchanges.
- Top 5 regional entities selling electricity are Chattisgarh, Jindal Power Ltd, Karnataka, West Bengal and Gujarat and top 5 regional entities purchasing electricity are Rajasthan, Uttar Pradesh, Tamil Nadu, Haryana and Maharashtra.

VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA) (MUs)						Total Electricity Generation (MUs) as given at CEA Website*
Month: Nov 2009						
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-Nov-09	72.90	11.74	20.10	1.34	77.54	2095.49
2-Nov-09	73.06	13.70	17.90	4.65	63.24	2050.76
3-Nov-09	70.00	13.67	21.71	4.78	65.92	2061.20
4-Nov-09	65.50	13.66	23.71	7.19	65.37	2093.49
5-Nov-09	67.98	13.68	22.09	6.16	62.68	2081.15
6-Nov-09	62.59	13.09	21.56	5.71	59.52	2065.93
7-Nov-09	64.59	12.88	19.90	2.52	62.29	2055.11
8-Nov-09	70.31	12.11	19.22	2.53	68.77	1992.09
9-Nov-09	73.61	14.16	24.87	2.34	66.12	1991.81
10-Nov-09	70.17	14.16	22.05	4.26	68.71	1972.19
11-Nov-09	71.70	14.16	21.25	3.27	77.51	1911.59
12-Nov-09	68.45	14.27	16.67	2.69	78.31	1914.10
13-Nov-09	71.68	14.18	18.62	2.95	70.36	1935.82
14-Nov-09	72.16	16.34	19.14	1.95	75.59	1951.24
15-Nov-09	71.69	13.51	17.26	0.75	80.94	1885.83
16-Nov-09	61.97	17.32	21.50	2.02	72.03	1951.01
17-Nov-09	61.59	17.11	22.26	2.38	69.91	1923.80
18-Nov-09	62.57	16.23	23.22	4.84	72.03	1936.57
19-Nov-09	61.68	16.23	21.70	4.55	71.74	1930.00
20-Nov-09	62.02	16.23	21.82	4.24	71.03	1941.14
21-Nov-09	69.80	16.89	20.05	4.95	68.09	1930.97
22-Nov-09	59.05	15.44	20.51	2.56	76.82	1880.09
23-Nov-09	56.43	16.89	22.87	5.28	71.48	1941.26
24-Nov-09	56.65	15.44	19.95	3.18	69.96	1967.97
25-Nov-09	56.27	15.44	21.95	3.84	73.16	2000.67
26-Nov-09	57.97	15.44	23.23	7.02	65.17	2017.74
27-Nov-09	57.87	15.44	24.15	8.20	60.44	2003.39
28-Nov-09	57.26	15.44	25.06	3.76	74.06	2001.48
29-Nov-09	56.50	14.99	21.77	5.22	69.99	1933.18
30-Nov-09	57.63	14.78	22.35	5.24	69.70	1985.65
Total	1941.68	444.59	638.45	120.37	2098.48	59402.72

Source: NLDC

* Gross Electricity Generation excluding electricity generation from renewables and captive power plants.

PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (Rs/KWh)												
Month: Nov 2009												
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-Nov-09	2.91	5.00	4.15	3.90	6.50	4.69	0.00	6.50	3.42	1.92	10.29	5.02
2-Nov-09	2.00	5.00	4.30	4.00	5.25	4.44	1.08	6.84	4.18	1.92	10.29	5.04
3-Nov-09	2.63	6.29	4.43	4.00	5.10	4.78	2.28	6.67	4.56	2.16	10.29	4.81
4-Nov-09	2.60	6.11	4.46	4.00	5.50	4.78	0.00	10.29	3.73	0.00	7.01	4.37
5-Nov-09	2.60	5.00	4.25	2.99	5.50	4.55	1.92	6.84	4.04	2.76	10.29	4.55
6-Nov-09	2.60	5.00	4.28	4.00	4.99	4.50	0.00	6.84	4.26	1.68	10.29	4.64
7-Nov-09	2.60	5.00	4.11	1.50	6.00	4.93	0.36	5.82	3.43	0.72	5.65	3.62
8-Nov-09	2.60	5.00	3.57	1.50	5.10	4.23	0.00	4.97	2.39	0.00	6.67	2.81
9-Nov-09	2.50	5.00	4.00	2.49	4.50	3.82	0.00	5.14	2.60	0.60	10.29	3.46
10-Nov-09	2.60	5.00	3.36	2.50	4.75	3.89	0.00	5.48	2.31	0.24	10.29	3.61
11-Nov-09	2.20	5.00	3.58	2.48	4.15	3.51	0.00	5.14	1.71	0.00	5.65	3.00
12-Nov-09	1.65	4.10	3.01	2.50	4.10	3.39	0.00	4.08	1.98	0.96	10.29	4.40
13-Nov-09	1.61	4.45	3.23	2.50	4.10	3.18	0.00	5.14	2.61	0.00	5.82	4.04
14-Nov-09	2.25	4.20	3.48	2.00	4.10	3.05	0.00	5.14	2.50	1.44	6.33	3.65
15-Nov-09	2.00	3.25	2.55	2.00	4.10	3.83	0.00	3.84	1.88	1.44	4.97	3.43
16-Nov-09	2.00	3.50	2.68	1.95	4.10	3.01	0.00	4.80	2.24	1.92	10.29	4.07
17-Nov-09	2.00	3.75	2.84	2.10	3.50	2.92	0.00	6.16	2.19	0.72	6.33	3.69
18-Nov-09	2.00	4.00	2.82	2.39	4.10	3.27	0.00	4.80	1.98	1.08	5.82	3.33
19-Nov-09	2.00	3.85	2.65	2.49	3.75	2.82	0.00	4.20	1.88	1.08	10.29	3.37
20-Nov-09	1.80	3.75	2.58	1.94	3.75	2.74	0.00	5.65	2.01	0.36	5.48	3.28
21-Nov-09	1.77	3.75	2.60	2.00	3.75	2.83	0.00	4.68	2.10	1.56	5.82	3.47
22-Nov-09	1.60	4.00	2.25	1.76	3.40	2.43	0.00	5.48	1.81	0.24	4.80	3.03
23-Nov-09	1.56	3.30	2.13	2.07	3.28	2.49	0.00	4.80	2.07	0.60	4.56	2.78
24-Nov-09	1.50	2.50	2.02	1.59	3.00	2.31	0.48	10.29	2.74	2.04	7.01	4.13
25-Nov-09	1.48	3.00	2.22	1.48	3.00	2.11	0.48	5.99	2.99	2.76	6.84	4.37
26-Nov-09	1.47	4.00	2.46	1.95	3.50	2.57	0.48	7.01	3.33	1.44	10.29	4.18
27-Nov-09	1.47	4.20	2.81	2.40	4.00	3.28	0.00	6.67	3.16	1.08	6.67	3.66
28-Nov-09	1.48	4.10	2.78	1.44	4.00	2.77	0.00	6.50	2.89	0.00	5.99	3.52
29-Nov-09	1.40	3.50	2.36	1.46	3.00	2.33	0.00	6.33	2.18	0.84	4.80	3.00
30-Nov-09	1.40	4.10	2.73	1.46	3.85	2.57	0.00	6.16	2.52	0.84	5.14	3.54
	1.40#	6.29#	3.16	1.44#	6.50#	3.39	0.00#	10.29#	2.72	0.00#	10.29#	3.79

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 (STATE-WISE) (MUs)										
Month: Nov 2009										
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	199.07	39.20	-159.87	14.64	7.25	-7.40	67.30	42.97	-24.32	-191.59
Haryana	45.30	185.02	139.72	0.26	20.76	20.50	32.65	135.22	102.57	262.78
Rajasthan	8.56	713.99	705.43	4.87	51.25	46.38	70.70	141.88	71.18	822.99
Delhi	154.53	62.97	-91.56	10.39	12.50	2.11	144.00	8.66	-135.34	-224.79
Uttar Pradesh	2.24	356.01	353.76	0.00	268.41	268.41	63.52	185.75	122.24	744.41
Uttarakhand	0.00	84.26	84.26	0.00	0.00	0.00	0.75	121.75	120.99	205.26
Himachal Pradesh	8.66	87.41	78.75	17.05	0.00	-17.05	32.93	36.83	3.90	65.60
J & K	45.81	172.63	126.82	0.00	0.00	0.00	21.88	112.28	90.40	217.22
UT Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	7.13	10.79	3.66	3.66
MP	9.07	220.97	211.90	16.29	0.00	-16.29	130.36	50.50	-79.86	115.75
Maharashtra	21.84	191.31	169.47	2.06	32.27	30.21	125.93	150.70	24.77	224.46
Gujarat	90.11	0.00	-90.11	77.86	0.00	-77.86	159.75	87.59	-72.16	-240.12
Chattisgarh	481.94	0.00	-481.94	162.76	0.00	-162.76	304.15	2.56	-301.60	-946.30
Daman and Diu	0.00	0.00	0.00	0.00	0.00	0.00	49.80	0.00	-49.80	-49.80
Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	25.86	2.08	-23.79	-23.79
Andhra Pradesh	188.31	14.73	-173.58	11.47	29.78	18.31	91.56	58.23	-33.33	-188.61
Karnataka	284.10	0.00	-284.10	218.09	0.00	-218.09	17.20	93.87	76.67	-425.52
Kerala	102.43	10.50	-91.92	0.00	59.96	59.96	6.10	46.38	40.27	8.31
Tamilnadu	54.00	266.40	212.40	0.00	270.03	270.03	14.42	176.68	162.27	644.69
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	11.87	0.91	-10.96	-10.96
West Bengal	278.20	4.23	-273.97	78.12	0.00	-78.12	38.71	73.49	34.79	-317.30
Orissa	19.77	1.57	-18.19	9.55	5.92	-3.63	192.39	4.35	-188.04	-209.86
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	54.60	15.56	-39.04	-39.04
Jharkhand	0.00	18.29	18.29	0.00	0.00	0.00	62.53	1.15	-61.38	-43.09
Sikkim	8.84	3.26	-5.58	13.82	0.00	-13.82	1.90	11.24	9.34	-10.06
DVC	25.73	0.00	-25.73	0.00	0.00	0.00	167.70	3.08	-164.61	-190.35
Arunachal Pradesh	0.34	0.00	-0.34	0.34	0.00	-0.34	3.44	4.18	0.74	0.06
Assam	0.00	0.00	0.00	0.00	0.00	0.00	23.49	9.25	-14.23	-14.23
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	6.50	3.95	-2.54	-2.54
Meghalaya	3.00	2.50	-0.50	1.74	0.69	-1.05	1.08	22.27	21.19	19.64
Mizoram	0.00	0.00	0.00	0.04	0.00	-0.04	0.84	3.85	3.02	2.97
Nagaland	3.66	0.00	-3.66	0.00	0.00	0.00	2.12	5.62	3.50	-0.16
Tripura	6.87	0.00	-6.87	11.97	0.00	-11.97	10.08	0.96	-9.12	-27.96
GOA	0.00	0.00	0.00	1.20	0.00	-1.20	30.41	7.64	-22.77	-23.97
JINDAL POWER	343.90	0.00	-343.90	106.31	0.00	-106.31	10.20	9.09	-1.11	-451.32
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	138.25	0.07	-138.18	-138.18
MUNDRA APL	0.00	0.00	0.00	0.00	0.00	0.00	2.87	8.64	5.77	5.77

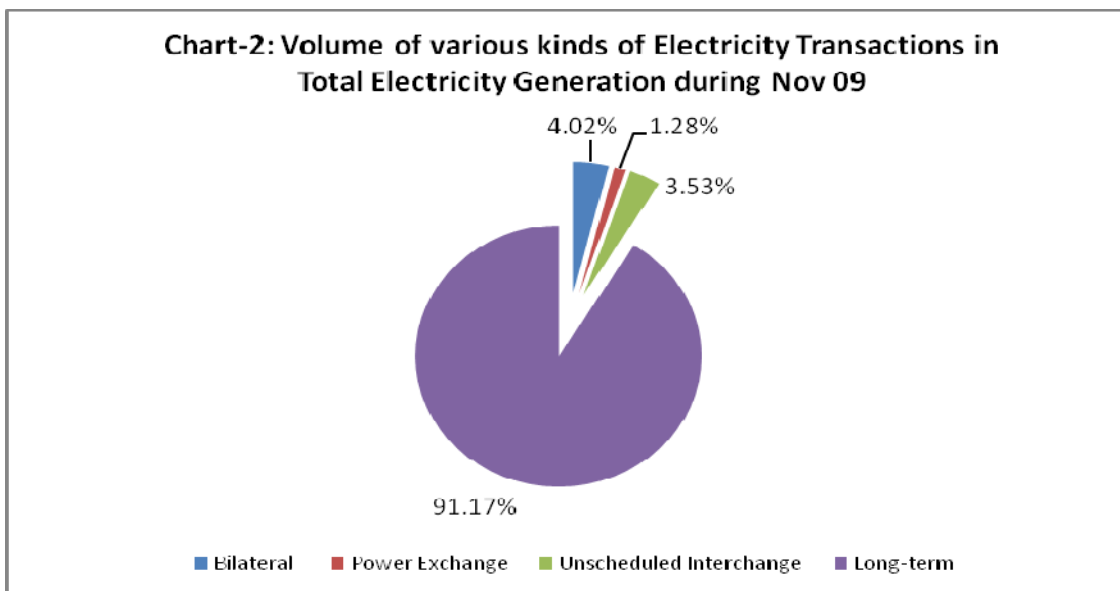
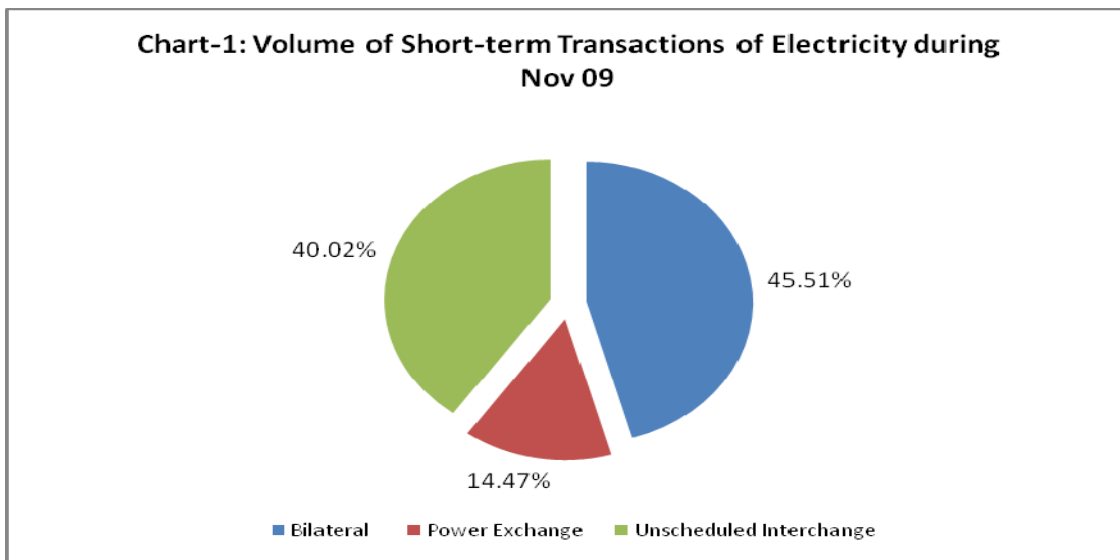
Source: NLDC

* (-) 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) DURING NOV 2009				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	2386.27	45.51%	4.02%
	(i) Through Traders and PXs	1941.68	37.03%	3.27%
	(ii) Direct	444.59	8.48%	0.75%
2	Through Power Exchange	758.82	14.47%	1.28%
3	Through UI	2098.48	40.02%	3.53%
	Total	5243.57	100.00%	8.83%
	Total Generation	59402.72		

Source: NLDC



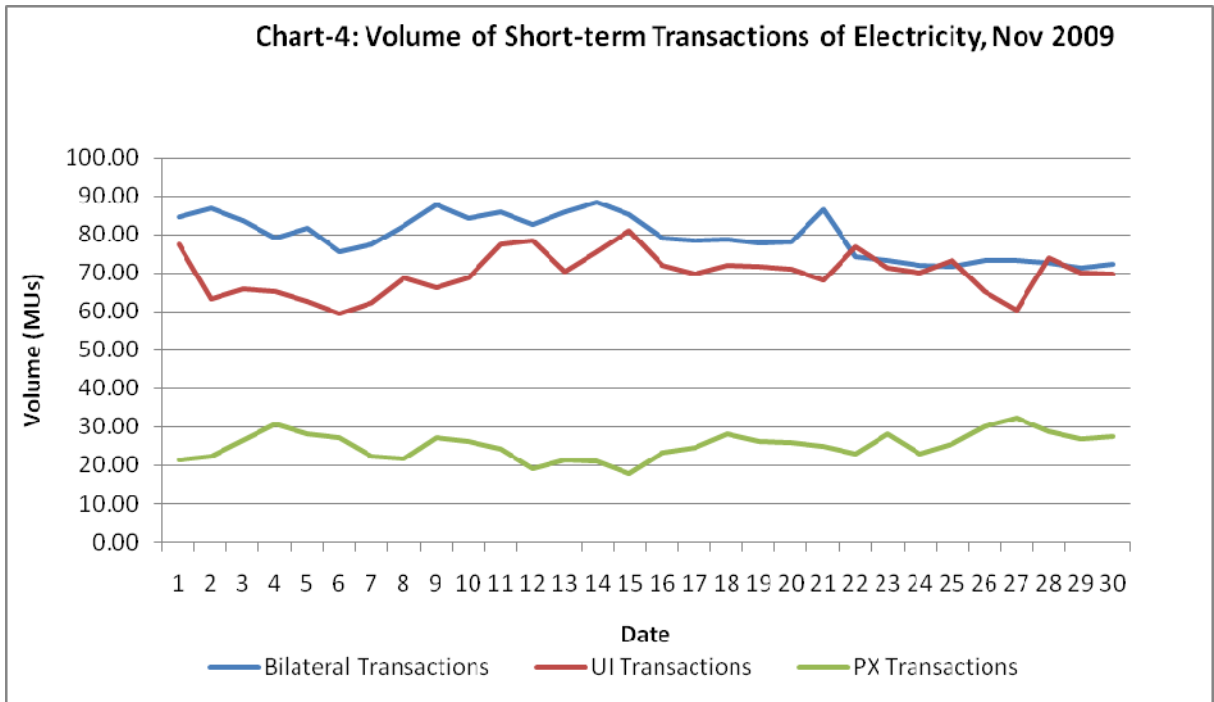
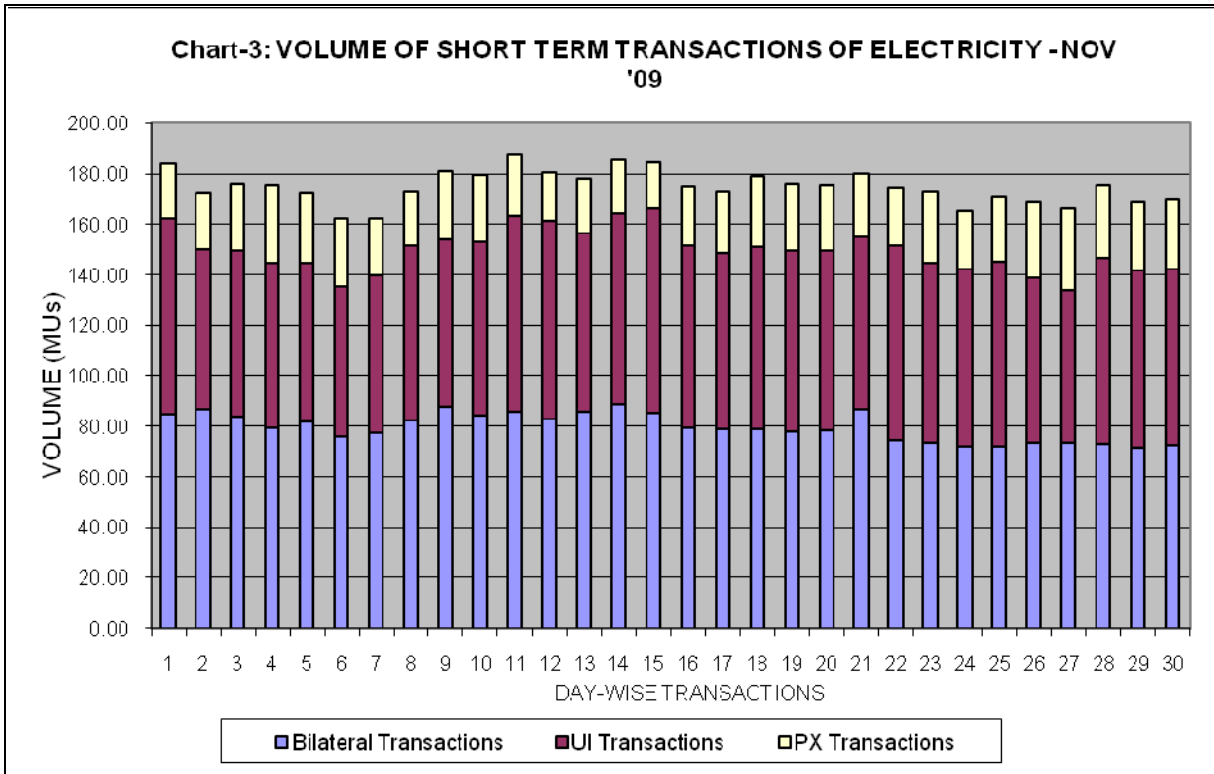


Table-2: Percentage Share of Electricity Traded by Trading Licensees during Nov 2009

Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	HHI
1	PTC India Ltd	42.42%	0.1800
2	NTPC Vidyut Vyapar Nigam Ltd	13.42%	0.0180
3	JSW Power Trading Company Ltd	12.00%	0.0144
4	Tata Power Trading Company (P) Ltd	8.32%	0.0069
5	Knowledge Infrastructure Systems (P) Ltd	7.23%	0.0052
6	Lanco Electric Utility Ltd	6.84%	0.0047
7	Reliance Energy Trading (P) Ltd	6.24%	0.0039
8	GMR Energy Trading Ltd	1.27%	0.0002
9	Adani Enterprises Ltd	0.96%	0.0001
10	Mittal Processors (P) Ltd	0.83%	0.0001
11	RPG Power Trading Company Ltd	0.46%	0.0000
	Total	100.00%	0.2335
	Top 5 trading licensees	83.39%	

Note: Volume of electricity traded by the licensees includes bilateral transactions and the transactions undertaken through power exchanges.

Source: Information submitted by trading licensees

Chart-5: Percentage Share of Electricity Traded by Trading Licensees during Nov 09

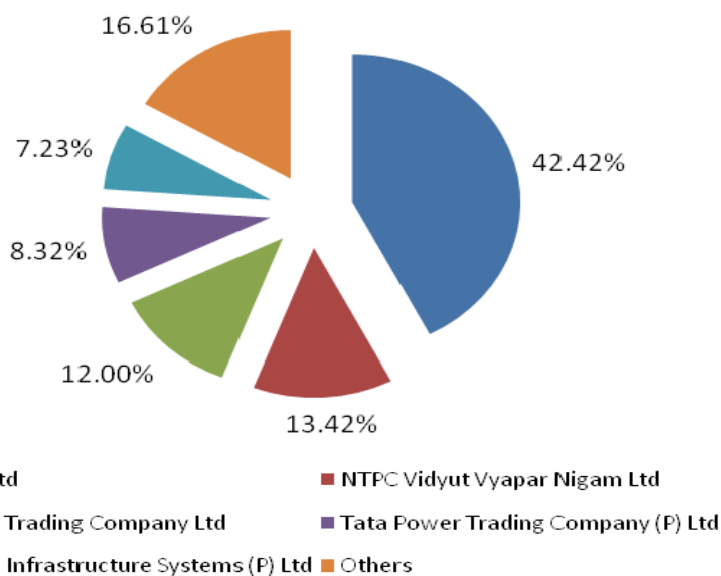


Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	5.05
2	PEAK	5.76
3	OFF PEAK	5.91
	Total	5.33

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	1.84
2	Maximum	7.24
3	Weighted Average	5.33

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (Rs/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	1.40	1.44
2	Maximum	6.29	6.50
3	Weighted Average	3.16	3.39

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	0.44	5.23
2	Day-Ahead Contingency Contracts	1.36	3.62
3	Daily Contracts		
4	Weekly Contracts		
	Total	1.80	

Table-6: PRICE OF POWER TRANSACTED THROUGH UI (Rs/KWh)			
Sr.No		NEW Grid	SR Grid
1	Minimum	0.00	0.00
2	Maximum	10.29	10.29
3	Average	2.72	3.79

Source: NLDC

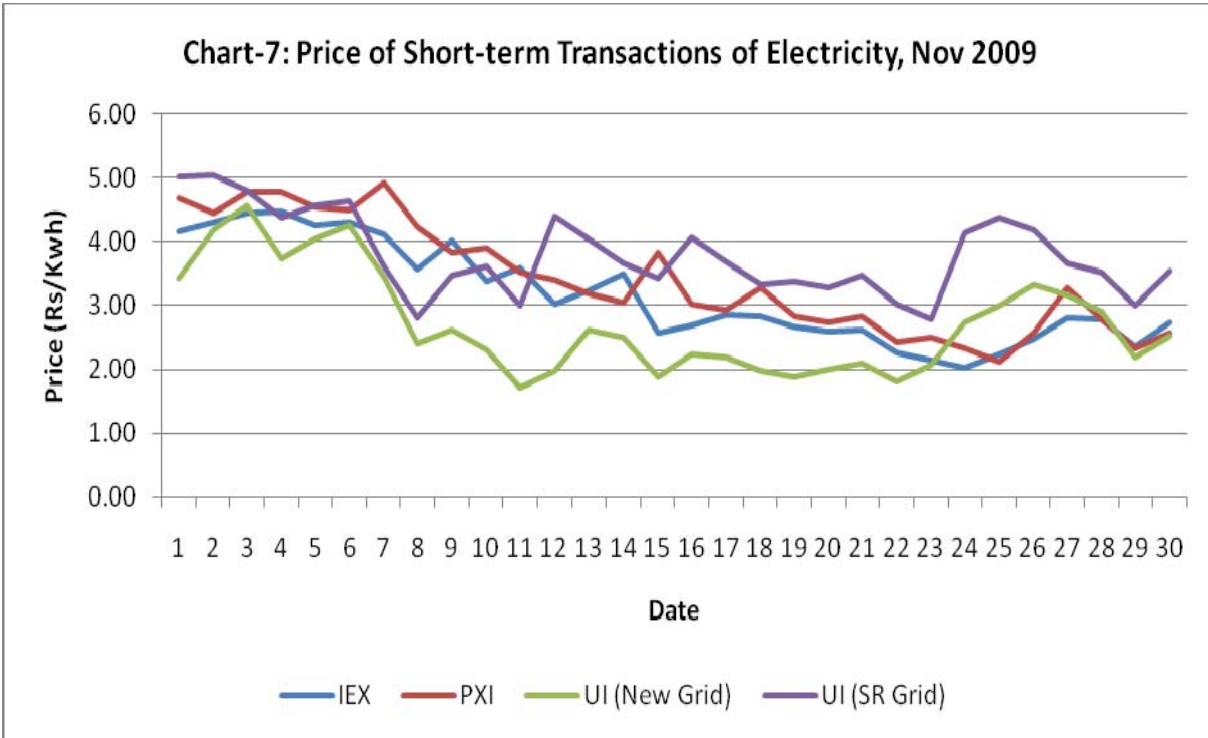
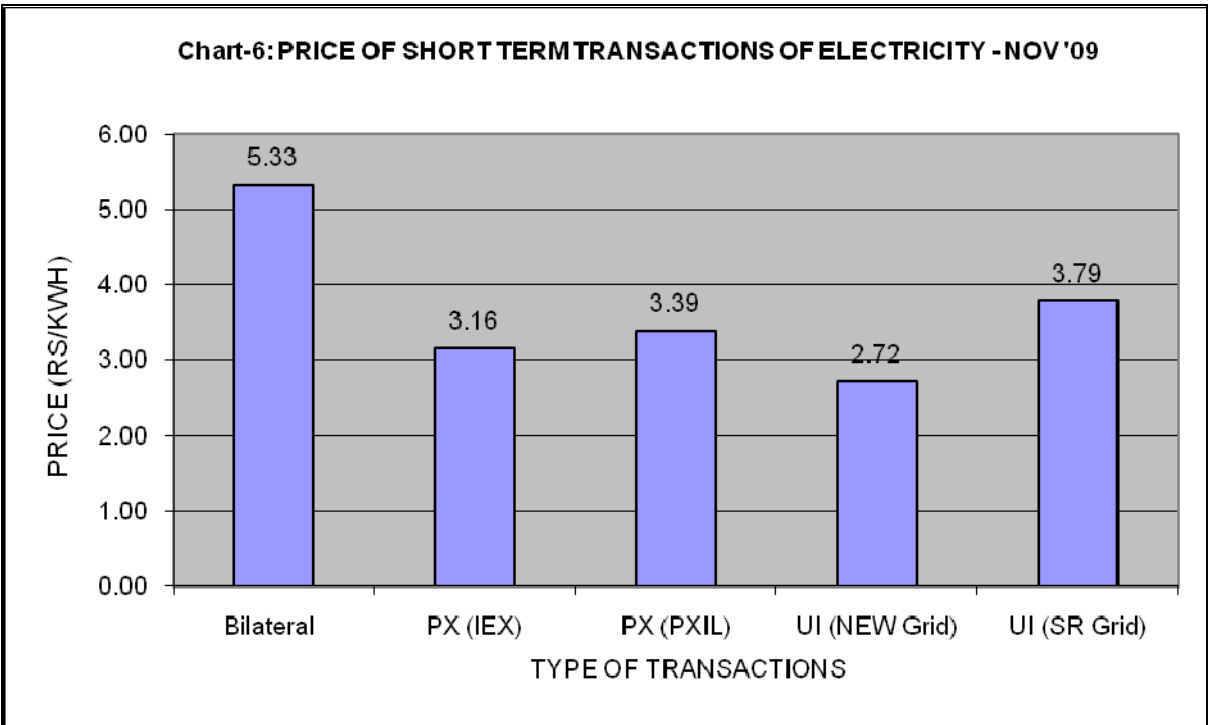


Table-7: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Chattisgarh	481.94	20.20%
JINDAL POWER	343.90	14.41%
Karnataka	284.10	11.91%
West Bengal	278.20	11.66%
Punjab	199.07	8.34%
Andhra Pradesh	188.31	7.89%
Delhi	154.53	6.48%
Kerala	102.43	4.29%
Gujarat	90.11	3.78%
Tamilnadu	54.00	2.26%
J & K	45.81	1.92%
Haryana	45.30	1.90%
DVC	25.73	1.08%
Maharashtra	21.84	0.92%
Orissa	19.77	0.83%
MP	9.07	0.38%
Sikkim	8.84	0.37%
Himachal Pradesh	8.66	0.36%
Rajasthan	8.56	0.36%
Tripura	6.87	0.29%
Nagaland	3.66	0.15%
Meghalaya	3.00	0.13%
Uttar Pradesh	2.24	0.09%
Arunachal Pradesh	0.34	0.01%
Uttarakhand	0.00	0.00%
UT Chandigarh	0.00	0.00%
Daman and Diu	0.00	0.00%
Dadra & Nagar Haveli	0.00	0.00%
Pondicherry	0.00	0.00%
Bihar	0.00	0.00%
Jharkhand	0.00	0.00%
Assam	0.00	0.00%
Manipur	0.00	0.00%
Mizoram	0.00	0.00%
GOA	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	2386.27	100.00%
Volume of sale by top 5 States	1587.22	66.51%

Table-8: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Rajasthan	713.99	29.32%
Uttar Pradesh	356.01	14.62%
Tamilnadu	266.40	10.94%
MP	220.97	9.07%
Maharashtra	191.31	7.86%
Haryana	185.02	7.60%
J & K	172.63	7.09%
Himachal Pradesh	87.41	3.59%
Uttarakhand	84.26	3.46%
Delhi	62.97	2.59%
Punjab	39.20	1.61%
Jharkhand	18.29	0.75%
Andhra Pradesh	14.73	0.60%
Kerala	10.50	0.43%
West Bengal	4.23	0.17%
Sikkim	3.26	0.13%
Meghalaya	2.50	0.10%
Orissa	1.57	0.06%
UT Chandigarh	0.00	0.00%
Gujarat	0.00	0.00%
Chattisgarh	0.00	0.00%
Daman and Diu	0.00	0.00%
Dadra & Nagar Haveli	0.00	0.00%
Karnataka	0.00	0.00%
Pondicherry	0.00	0.00%
Bihar	0.00	0.00%
DVC	0.00	0.00%
Arunachal Pradesh	0.00	0.00%
Assam	0.00	0.00%
Manipur	0.00	0.00%
Mizoram	0.00	0.00%
Nagaland	0.00	0.00%
Tripura	0.00	0.00%
GOA	0.00	0.00%
JINDAL POWER	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	2435.23	100.00%
Volume of purchase by top 5 States	1748.67	71.81%

Table-9: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Karnataka	218.09	28.74%
Chattisgarh	162.76	21.45%
JINDAL POWER	106.31	14.01%
West Bengal	78.12	10.29%
Gujarat	77.86	10.26%
Himachal Pradesh	17.05	2.25%
MP	16.29	2.15%
Punjab	14.64	1.93%
Sikkim	13.82	1.82%
Tripura	11.97	1.58%
Andhra Pradesh	11.47	1.51%
Delhi	10.39	1.37%
Orissa	9.55	1.26%
Rajasthan	4.87	0.64%
Maharashtra	2.06	0.27%
Meghalaya	1.74	0.23%
GOA	1.20	0.16%
Arunachal Pradesh	0.34	0.05%
Haryana	0.26	0.03%
Mizoram	0.04	0.01%
Uttar Pradesh	0.00	0.00%
Uttarakhand	0.00	0.00%
J & K	0.00	0.00%
UT Chandigarh	0.00	0.00%
Daman and Diu	0.00	0.00%
Dadra & Nagar Haveli	0.00	0.00%
Kerala	0.00	0.00%
Tamilnadu	0.00	0.00%
Pondicherry	0.00	0.00%
Bihar	0.00	0.00%
Jharkhand	0.00	0.00%
DVC	0.00	0.00%
Assam	0.00	0.00%
Manipur	0.00	0.00%
Nagaland	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	758.82	100.00%
Volume of sale by top 5 States	643.13	84.75%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Tamilnadu	270.03	35.59%
Uttar Pradesh	268.41	35.37%
Kerala	59.96	7.90%
Rajasthan	51.25	6.75%
Maharashtra	32.27	4.25%
Andhra Pradesh	29.78	3.92%
Haryana	20.76	2.74%
Delhi	12.50	1.65%
Punjab	7.25	0.95%
Orissa	5.92	0.78%
Meghalaya	0.69	0.09%
Uttarakhand	0.00	0.00%
Himachal Pradesh	0.00	0.00%
J & K	0.00	0.00%
UT Chandigarh	0.00	0.00%
MP	0.00	0.00%
Gujarat	0.00	0.00%
Chattisgarh	0.00	0.00%
Daman and Diu	0.00	0.00%
Dadra & Nagar Haveli	0.00	0.00%
Karnataka	0.00	0.00%
Pondicherry	0.00	0.00%
West Bengal	0.00	0.00%
Bihar	0.00	0.00%
Jharkhand	0.00	0.00%
Sikkim	0.00	0.00%
DVC	0.00	0.00%
Arunachal Pradesh	0.00	0.00%
Assam	0.00	0.00%
Manipur	0.00	0.00%
Mizoram	0.00	0.00%
Nagaland	0.00	0.00%
Tripura	0.00	0.00%
GOA	0.00	0.00%
JINDAL POWER	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	758.82	100.00%
Volume of purchase by top 5 States	681.92	89.87%

Table-11: VOLUME OF ELECTRICITY EXPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Chattisgarh	304.15	14.31%
Orissa	192.39	9.05%
DVC	167.70	7.89%
Gujarat	159.75	7.52%
Delhi	144.00	6.78%
LANKO_AMK	138.25	6.51%
MP	130.36	6.13%
Maharashtra	125.93	5.93%
Andhra Pradesh	91.56	4.31%
Rajasthan	70.70	3.33%
Punjab	67.30	3.17%
Uttar Pradesh	63.52	2.99%
Jharkhand	62.53	2.94%
Bihar	54.60	2.57%
Daman and Diu	49.80	2.34%
West Bengal	38.71	1.82%
Himachal Pradesh	32.93	1.55%
Haryana	32.65	1.54%
GOA	30.41	1.43%
Dadra & Nagar Haveli	25.86	1.22%
Assam	23.49	1.11%
J & K	21.88	1.03%
Karnataka	17.20	0.81%
Tamilnadu	14.42	0.68%
Pondicherry	11.87	0.56%
JINDAL POWER	10.20	0.48%
Tripura	10.08	0.47%
UT Chandigarh	7.13	0.34%
Manipur	6.50	0.31%
Kerala	6.10	0.29%
Arunachal Pradesh	3.44	0.16%
MUNDRA APL	2.87	0.14%
Nagaland	2.12	0.10%
Sikkim	1.90	0.09%
Meghalaya	1.08	0.05%
Mizoram	0.84	0.04%
Uttarakhand	0.75	0.04%
Total	2124.97	100.00%
Volume of Export by top 5 States	967.99	45.55%

Table-12: VOLUME OF ELECTRICITY IMPORT THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Uttar Pradesh	185.75	11.26%
Tamilnadu	176.68	10.71%
Maharashtra	150.70	9.13%
Rajasthan	141.88	8.60%
Haryana	135.22	8.19%
Uttarakhand	121.75	7.38%
J & K	112.28	6.80%
Karnataka	93.87	5.69%
Gujarat	87.59	5.31%
West Bengal	73.49	4.45%
Andhra Pradesh	58.23	3.53%
MP	50.50	3.06%
Kerala	46.38	2.81%
Punjab	42.97	2.60%
Himachal Pradesh	36.83	2.23%
Meghalaya	22.27	1.35%
Bihar	15.56	0.94%
Sikkim	11.24	0.68%
UT Chandigarh	10.79	0.65%
Assam	9.25	0.56%
JINDAL POWER	9.09	0.55%
Delhi	8.66	0.52%
MUNDRA APL	8.64	0.52%
GOA	7.64	0.46%
Nagaland	5.62	0.34%
Orissa	4.35	0.26%
Arunachal Pradesh	4.18	0.25%
Manipur	3.95	0.24%
Mizoram	3.85	0.23%
DVC	3.08	0.19%
Chattisgarh	2.56	0.15%
Dadra & Nagar Haveli	2.08	0.13%
Jharkhand	1.15	0.07%
Tripura	0.96	0.06%
Pondicherry	0.91	0.06%
LANKO_AMK	0.07	0.00%
Daman and Diu	0.00	0.00%
Total	1650.05	100.00%
Volume of Export by top 5 States	790.24	47.89%

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	822.99
2	Uttar Pradesh	744.41
3	Tamilnadu	644.69
4	Haryana	262.78
5	Maharashtra	224.46
6	J & K	217.22
7	Uttarakhand	205.26
8	MP	115.75
9	Himachal Pradesh	65.60
10	Meghalaya	19.64
11	Kerala	8.31
12	MUNDRA APL	5.77
13	UT Chandigarh	3.66
14	Mizoram	2.97
15	Arunachal Pradesh	0.06
16	Nagaland	-0.16
17	Manipur	-2.54
18	Sikkim	-10.06
19	Pondicherry	-10.96
20	Assam	-14.23
21	Dadra & Nagar Haveli	-23.79
22	GOA	-23.97
23	Tripura	-27.96
24	Bihar	-39.04
25	Jharkhand	-43.09
26	Daman and Diu	-49.80
27	LANKO_AMK	-138.18
28	Andhra Pradesh	-188.61
29	DVC	-190.35
30	Punjab	-191.59
31	Orissa	-209.86
32	Delhi	-224.79
33	Gujarat	-240.12
34	West Bengal	-317.30
35	Karnataka	-425.52
36	JINDAL POWER	-451.32
37	Chattisgarh	-946.30
* 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		