

MONTHLY REPORT ON SHORT-TERM TRANSACTIONS OF ELECTRICITY (July 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 July 2009 is as under:

I: Volume of Short-term Transactions of Electricity

During the Month of July 2009, total electricity generation excluding generation from renewables and captive power plants in India was 62935.51 MUs (Table-1).

Of the total electricity generation, 5720.67 MUs (9.09%) transacted through short-term i.e. 3020.83 MUs (4.80%) through Bilateral (through traders and direct between distribution companies), followed by 2204.68 MUs (3.50%) through UI and 495.16 MUs (0.79%) through Power Exchanges (IEX and PXIL) (Table-1 & Chart-2).

Of the total short-term transactions, Bilateral constitute 52.81% (42.00% through traders and 10.80% direct between distribution companies) followed by 38.54% through UI and 8.66% 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. Here the volume includes the volume traded by licensees through power exchanges also. There are 40 trading licensees as on 31.7.2009, of which only 13 have engaged in trading during July 2009. Top 5 trading licenses had a share of 88.88% 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 0.32 shows high concentration/market power (Table-2).

The volume of electricity transacted through IEX and PXIL was 434.12 MUs and 61.04 MUs respectively. The volume of total Buy bids and Sale bids was 908.81 MUs and 927.80 MUs respectively in IEX and 168.23 MUs and 320.89 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchange shows that there was less demand (0.98 times in IEX and 0.52 times in PXIL) when compared with the supply offered through IEX and 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 Rs.4.75. The weighted average sale price also computed for the transactions during Round the clock (RTC), Peak and Off-Peak periods separately and the sale price was Rs.4.72, Rs.5.92 and Rs.4.98 respectively. Minimum and Maximum sale price was Rs.1.04 and Rs.7.71 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.0.23, Rs.9.00 and Rs.4.81 respectively in IEX and Rs.0.78, Rs.8.00 and Rs.4.85 respectively in PXIL (Table-5).

(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.4.12 in the NEW Grid and Rs.4.67 in the SR Grid. The power deficit is more in the Southern Region when compared with other regions, therefore, the UI price was relatively high in the SR Grid when compared with the UI price in the NEW 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 (State/UT/Entity -Wise):

Of the total bilateral transactions, top 5 states/UTs/entities selling 61.71% of the volume are Himachal Pradesh, Jindal Power Ltd, J&K, Karnataka and Madhya Pradesh and top 5 states/UTs/entities purchasing 89.21% of the volume are Punjab, Haryana, Delhi, Maharashtra and Rajasthan (Table-7 & 8).

Of the total Power Exchange transactions, top 5 states/UTs/entities selling 68.07% of the volume are Chattisgarh, Gujarat, Jindal Power Ltd, Karnataka and Sikkim and top 5 states/UTs/entities purchasing 97.86% of the volume are Rajasthan, Maharashtra, Delhi, Dadra & Nagar Haveli and Andhra Pradesh (Table-9 & 10)

Of the total UI transactions, top 5 states/UTs/entities exporting 44.10% of the volume are Gujarat, Chattisgarh, Delhi, LANCO Amarkantak (P) Ltd and Maharashtra and top 5 states/UTs/entities importing 55.39% of the volume are Uttar Pradesh, Andhra Pradesh, Haryana, Punjab and Rajasthan (Table-11 & 12).

State-wise total 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 states/UTs/entities those selling electricity are Himachal Pradesh, Jindal Power Ltd, Chattisgarh, Gujarat and J&K and top 5 states/UTs/entities those purchasing electricity are Haryana, Punjab, Uttar Pradesh Delhi and Rajasthan.

IV: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 9.09%.
- Of the total short-term transactions of electricity, 52.81% transacted through bilateral (through traders and directly by distribution companies) followed by 38.54% through UI and 8.66% through Power Exchanges.
- Top 5 trading licenses are having share of 88.88% in the total volume traded by all the trading licensees.
- The price of electricity transacted through Power Exchanges was comparable with the price of electricity transacted through Trading Licensees and the price of electricity transacted through UI. The price range was between Rs.4.00/KWh and Rs.5.00/KWh.
- The HHI computed for volume of electricity traded by trading licensees was 0.32 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 (0.98 times in IEX and 0.52 times in PXIL) when compared with the supply offered through the exchanges.
- Top 5 states/UTs/entities those selling electricity are Himachal Pradesh, Jindal Power Ltd, Chattisgarh, Gujarat and J&K and top 5 states/UTs/entities those purchasing electricity are Haryana, Punjab, Uttar Pradesh, Delhi and Rajasthan.

VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA) (MUs)						Total Electricity Generation (MUs) as given at CEA Website*
Month: July 2009						
Date	Bilateral		Power Exchange (Market Clearing Volume)		Unscheduled Interchange (Over Drawl+Under Generation)	
	Through Traders	Direct	IEX	PXI		
1	74.81	15.78	16.76	2.33	78.73	2064.29
2	74.48	16.74	24.35	1.26	79.54	2079.78
3	78.37	17.59	25.47	1.47	77.79	2044.90
4	82.42	18.29	13.14	0.68	66.95	2044.11
5	80.95	17.89	10.71	0.16	68.93	2015.68
6	81.28	19.12	13.80	0.19	60.39	2065.35
7	79.23	18.79	12.89	0.45	60.60	2039.75
8	78.70	20.11	14.98	2.20	61.13	2047.04
9	77.12	19.62	15.31	2.78	70.12	2045.77
10	78.75	23.50	11.71	2.23	79.98	2043.47
11	77.42	21.35	10.54	2.86	65.35	2062.66
12	77.03	20.42	4.62	0.71	70.63	2013.32
13	78.98	20.55	11.39	2.09	80.93	1986.86
14	74.43	20.55	13.26	2.52	73.56	1992.87
15	74.80	20.55	14.07	3.04	66.63	2006.02
16	76.63	20.67	11.48	1.78	70.99	2023.19
17	75.66	17.91	13.24	2.48	65.60	2024.46
18	74.26	21.70	11.16	2.08	72.79	2021.56
19	73.60	20.52	9.84	1.78	64.52	1986.77
20	73.67	21.01	13.65	2.09	65.68	2008.09
21	76.58	21.21	13.37	2.67	68.27	1979.97
22	83.00	20.05	12.62	3.43	67.97	2012.30
23	78.03	20.67	17.87	2.67	71.66	2034.69
24	78.40	20.46	17.65	3.53	80.37	2051.58
25	76.60	20.71	14.66	2.20	73.11	2051.33
26	76.34	20.39	8.67	0.66	76.07	1995.15
27	79.80	20.44	15.52	2.63	74.25	2032.76
28	77.10	21.39	14.34	2.44	82.62	1991.41
29	78.60	20.13	11.27	1.17	77.77	2027.62
30	77.39	19.95	18.0327	1.677	67.77	2066.64
31	78.35	19.99	17.75	2.81	63.96	2076.12
Total	2402.76	618.07	434.12	61.04	2204.68	62935.51

Source: NLDC

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

PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (Rs/KWh)												
Month: July 2009												
Market Segment	Power Exchange (IEX)			Power Exchange (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-Jul-09	0.23	8.00	6.65	5.80	8.00	7.40	0.24	7.18	3.36	0.96	10.29	4.76
2-Jul-09	1.00	6.00	4.39	5.90	6.00	5.97	0.00	10.29	3.41	0.00	6.84	4.54
3-Jul-09	1.50	7.00	4.66	2.00	5.00	4.65	1.08	10.29	5.17	0.96	10.29	5.88
4-Jul-09	3.00	6.50	5.50	2.90	5.05	4.52	1.92	10.29	4.73	0.84	10.29	5.00
5-Jul-09	1.25	5.50	4.01	2.90	5.50	4.18	0.84	10.29	4.35	0.00	10.29	4.00
6-Jul-09	4.00	7.00	6.53	3.30	7.20	5.25	2.04	10.29	5.02	0.00	10.29	4.93
7-Jul-09	5.40	7.00	6.55	4.80	8.00	5.79	1.08	10.29	6.36	0.60	10.29	4.58
8-Jul-09	5.50	8.50	7.27	4.95	7.41	6.87	2.04	10.29	4.88	0.00	10.29	4.67
9-Jul-09	5.50	8.50	7.44	5.50	7.68	7.14	0.24	5.99	2.78	0.00	6.50	3.46
10-Jul-09	5.50	9.00	7.31	3.40	8.00	7.25	0.72	5.99	3.28	0.00	6.67	3.61
11-Jul-09	2.98	7.50	5.79	2.40	7.40	6.69	0.60	7.01	3.01	0.00	7.18	3.98
12-Jul-09	2.89	3.50	3.40	1.90	4.32	3.83	0.48	6.84	2.98	0.00	10.29	3.81
13-Jul-09	3.50	5.00	4.43	1.80	5.00	4.67	0.00	10.29	2.71	0.84	7.18	4.18
14-Jul-09	2.89	5.00	4.44	3.00	5.00	4.70	0.84	10.29	4.21	0.36	10.29	3.61
15-Jul-09	2.05	4.50	3.90	2.35	4.50	4.07	1.68	10.29	3.83	0.00	6.67	2.88
16-Jul-09	2.40	4.50	3.55	1.77	4.62	4.08	0.60	10.29	3.49	0.24	10.29	4.22
17-Jul-09	3.00	4.50	3.93	2.14	4.50	4.04	1.56	6.67	4.14	1.56	10.29	5.38
18-Jul-09	3.00	4.50	4.06	2.14	4.50	3.73	1.80	10.29	4.78	1.92	10.29	4.65
19-Jul-09	1.00	3.75	3.17	1.93	4.13	3.40	1.32	10.29	5.72	1.08	10.29	4.25
20-Jul-09	3.01	4.51	4.11	2.69	5.27	3.85	2.52	10.29	5.71	1.44	10.29	4.66
21-Jul-09	3.50	5.25	4.85	3.00	4.55	3.97	3.00	10.29	5.52	1.32	10.29	4.64
22-Jul-09	4.01	6.20	5.33	3.00	5.50	4.97	2.28	6.67	4.28	0.00	10.29	5.75
23-Jul-09	3.40	6.50	5.52	3.00	7.38	5.03	1.44	5.65	2.93	1.56	10.29	5.66
24-Jul-09	3.00	6.50	4.38	3.00	7.38	5.03	0.00	10.29	3.03	2.16	10.29	5.17
25-Jul-09	3.00	5.00	3.74	1.49	5.05	4.15	2.16	10.29	4.63	2.76	10.29	6.73
26-Jul-09	0.78	3.50	2.81	0.78	4.00	3.24	1.68	10.29	4.36	0.24	10.29	6.48
27-Jul-09	2.75	4.10	3.67	2.25	5.64	4.16	1.44	6.16	3.02	0.24	7.01	4.92
28-Jul-09	1.75	4.10	3.26	1.75	5.27	4.02	0.72	7.01	3.21	1.68	10.29	4.20
29-Jul-09	1.50	4.10	3.25	2.54	5.10	3.34	0.48	5.99	3.07	1.56	7.01	4.63
30-Jul-09	2.49	4.10	3.47	2.25	4.22	3.65	0.48	10.29	4.65	1.92	10.29	4.90
31-Jul-09	2.75	4.50	3.56	2.24	4.10	3.68	1.56	10.29	5.05	2.52	6.67	4.63
	0.23#	9.00#	4.81	0.78#	8.00#	4.85	0.00#	10.29#	4.12	0.00#	10.29#	4.67

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: July 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	26.49	1014.44	987.96	1.74	0.00	-1.74	127.31	89.80	-37.51	948.71
Haryana	10.09	959.88	949.79	32.01	1.81	-30.19	29.24	93.74	64.51	984.11
Rajasthan	150.73	123.24	-27.49	5.12	277.62	272.50	71.35	89.02	17.67	262.69
Delhi	33.97	446.90	412.93	18.61	56.89	38.27	141.80	22.73	-119.06	332.14
Uttar Pradesh	8.85	34.70	25.84	0.00	0.00	0.00	4.94	701.98	697.04	722.89
Uttarakhand	51.90	0.00	-51.90	0.00	0.00	0.00	18.72	50.24	31.52	-20.38
Himachal Pradesh	726.34	1.23	-725.12	9.99	0.00	-9.99	12.42	32.32	19.90	-715.21
J & K	284.74	0.00	-284.74	0.00	0.00	0.00	91.37	10.10	-81.27	-366.01
UT Chandigarh	0.00	5.43	5.43	0.00	0.00	0.00	1.91	21.53	19.62	25.05
MP	210.78	0.00	-210.78	21.90	0.00	-21.90	87.04	41.83	-45.21	-277.89
Maharashtra	45.61	152.64	107.03	4.49	57.33	52.85	129.97	61.19	-68.78	91.09
Gujarat	189.44	0.00	-189.44	74.65	2.02	-72.63	259.51	60.77	-198.74	-460.80
Chattisgarh	149.23	0.00	-149.23	136.70	0.00	-136.70	202.63	18.24	-184.39	-470.31
Daman and Diu	0.00	0.00	0.00	0.00	0.00	0.00	3.03	12.90	9.87	9.87
Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	55.41	55.41	3.07	22.60	19.53	74.93
Andhra Pradesh	94.76	61.06	-33.70	12.46	37.30	24.84	38.75	138.78	100.03	91.17
Karnataka	213.03	0.00	-213.03	47.71	0.00	-47.71	31.69	70.48	38.79	-221.95
Kerala	95.61	0.00	-95.61	4.85	4.90	0.05	20.09	27.33	7.23	-88.33
Tamilnadu	76.60	117.24	40.64	0.00	0.00	0.00	80.37	76.44	-3.93	36.72
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	1.27	13.57	12.30	12.30
West Bengal	74.83	1.04	-73.79	33.57	0.50	-33.07	47.58	50.98	3.40	-103.46
Orissa	3.10	99.65	96.55	0.00	0.00	0.00	108.09	23.81	-84.28	12.27
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	72.60	20.21	-52.39	-52.39
Jharkhand	0.00	0.00	0.00	1.22	0.00	-1.22	8.94	67.84	58.89	57.67
Sikkim	4.29	0.00	-4.29	34.93	0.00	-34.93	2.09	27.33	25.23	-13.98
DVC	2.94	0.00	-2.94	0.00	0.00	0.00	128.60	4.40	-124.19	-127.13
Arunachal Pradesh	9.33	0.00	-9.33	0.00	0.00	0.00	7.81	1.53	-6.28	-15.61
Assam	44.53	0.71	-43.82	0.20	1.20	1.00	11.72	35.95	24.23	-18.59
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	11.54	0.66	-10.89	-10.89
Meghalaya	4.32	0.00	-4.32	2.17	0.00	-2.17	9.33	2.18	-7.15	-13.65
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	5.85	0.59	-5.26	-5.26
Nagaland	11.32	0.00	-11.32	0.00	0.00	0.00	1.70	5.34	3.64	-7.68
Tripura	14.71	0.00	-14.71	3.19	0.17	-3.02	7.26	3.03	-4.22	-21.95
GOA	0.00	5.04	5.04	8.84	0.00	-8.84	22.23	4.08	-18.15	-21.96
JINDAL POWER	477.07	0.00	-477.07	47.97	0.00	-47.97	15.55	45.62	26.07	-498.96
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	131.34	0.00	-131.34	-131.34
MUNDRA APL	83.68	0.00	-83.68	0.00	0.00	0.00	13.42	60.72	47.31	-36.37

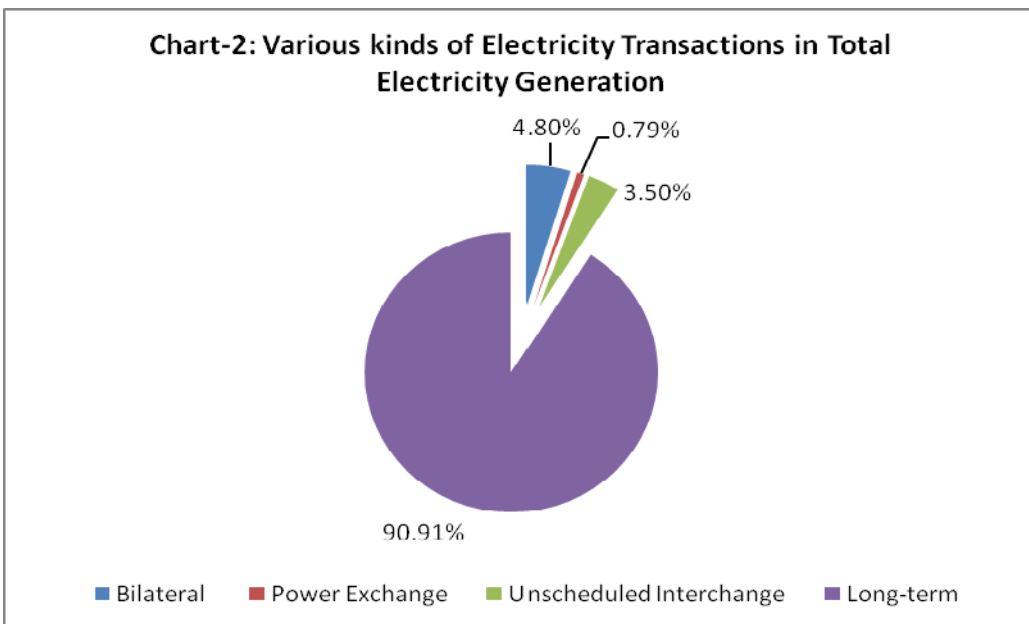
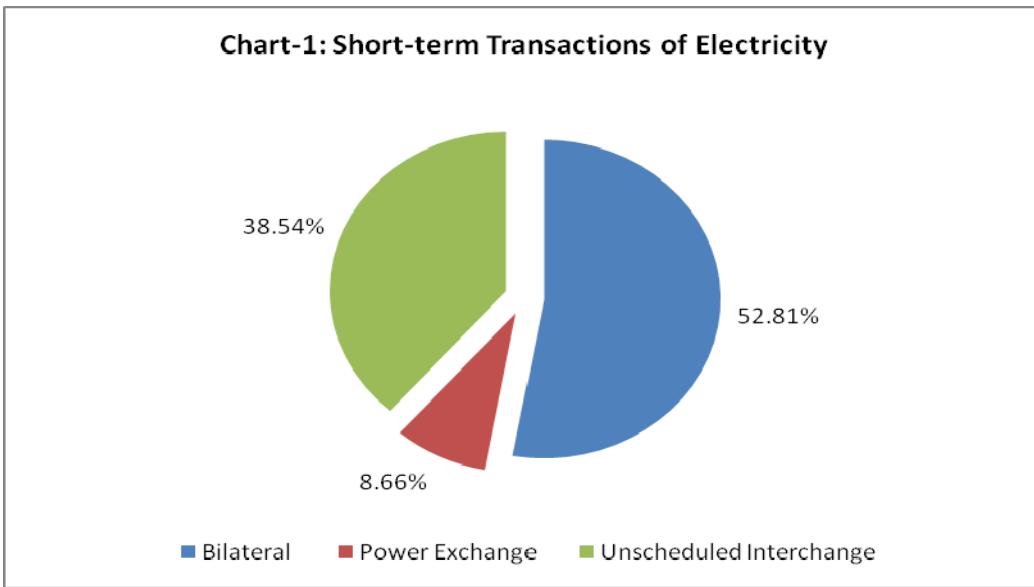
Source: NLDC

* (-) 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)				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	3020.83	52.81%	4.80%
	(i) Through Traders	2402.76	42.00%	3.82%
	(ii) Direct	618.07	10.80%	0.98%
2	Through Power Exchange	495.16	8.66%	0.79%
3	Through UI	2204.68	38.54%	3.50%
	Total	5720.67	100.00%	9.09%
	Total Generation	62935.51		

Source: NLDC



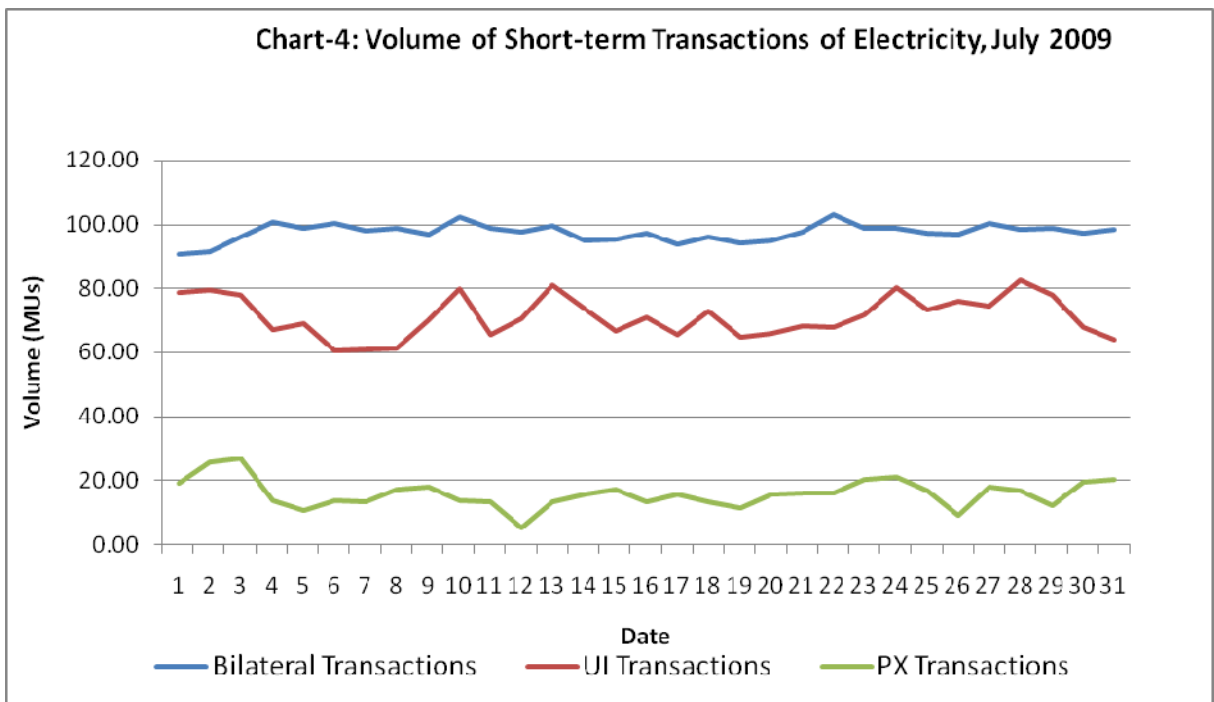
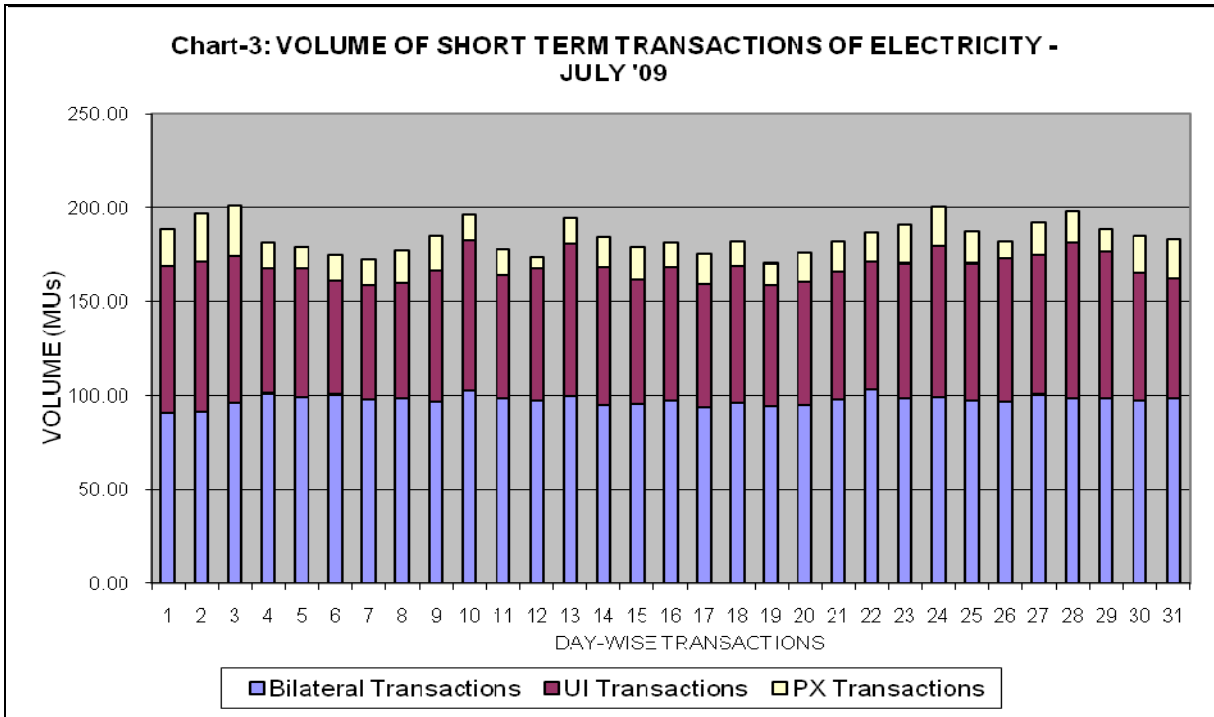


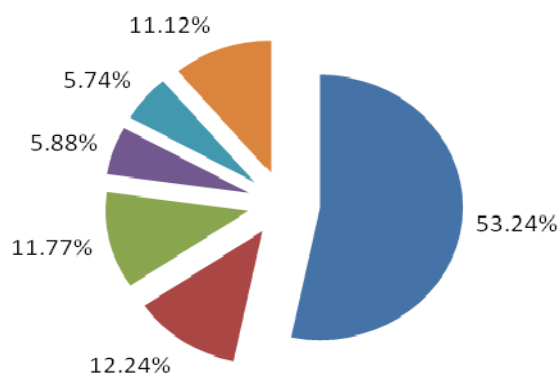
Table-2: Percentage Share of Electricity Traded by Trading Licensees during July 2009

Sr.No	Name of the Trading Licensee	% Share in total Volume traded by Licensees	HHI
1	PTC India Ltd	53.24%	0.2835
2	Lanco Electric Utility Ltd	12.24%	0.0150
3	NTPC Vidyut Vyapar Nigam Ltd	11.77%	0.0138
4	Reliance Energy Trading (P) Ltd	5.88%	0.0035
5	JSW Power Trading Company Ltd	5.74%	0.0033
6	Adani Enterprises Ltd	5.32%	0.0028
7	Tata Power Trading Company (P) Ltd	3.37%	0.0011
8	GMR Energy Trading Ltd	0.93%	0.0001
9	Kalyani Power Development (P) Ltd	0.81%	0.0001
10	RPG Power Trading Company Ltd	0.42%	0.0000
11	Mittal Processors (P) Ltd	0.25%	0.0000
12	Knowledge Infrastructure Systems (P) Ltd	0.01%	0.0000
13	Instinct Advertisement & Marketing Ltd	0.00%	0.0000
	Total	100.00%	0.3232
	Top 5 trading licensees	88.88%	

Note: Percentage Share in total volume traded by licensees computed based on the volume which includes the volume traded by trading licensees through power exchanges also.

Source: Information submitted by trading licensees

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



■ PTC India Ltd ■ Lanco Electric Utility Ltd
■ NTPC Vidyut Vyapar Nigam Ltd ■ Reliance Energy Trading (P) Ltd
■ JSW Power Trading Company Ltd ■ Others

Table-3: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No	Period of Trade	Weighted Average Sale Price (Rs)
1	RTC	4.72
2	PEAK	5.92
3	OFF PEAK	4.98
	Total	4.75

Source: Information submitted by trading licensees

Table-4: PRICE OF POWER TRANSACTED THROUGH TRADERS		
Sr.No		Sale Price (Rs/KWh)
1	Minimum	1.04
2	Maximum	7.71
3	Weighted Average	4.75

Source: Information submitted by trading licensees

Table-5: PRICE OF POWER TRANSACTED THROUGH POWER EXCHANGE (Rs/KWh)			
Sr.No	MCP	IEX	PXIL
1	Minimum	0.23	0.78
2	Maximum	9.00	8.00
3	Weighted Average	4.81	4.85

Source: Information submitted by IEX and 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	10.29	10.29
3	Average	4.12	4.67

Source: NLDC

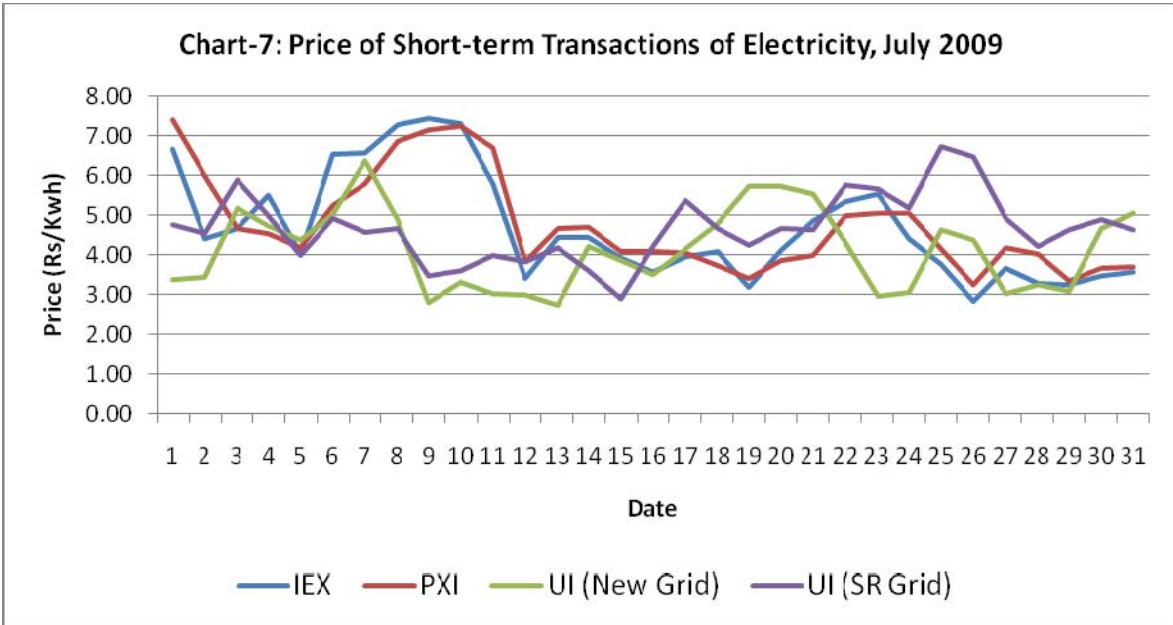
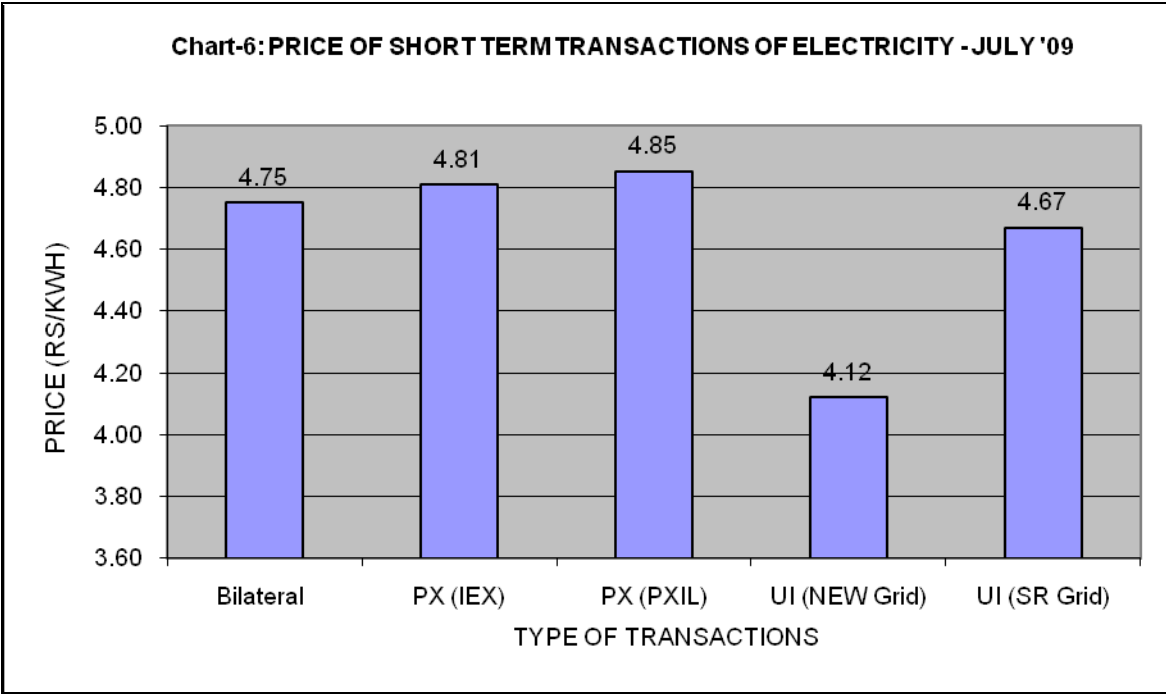


Table-7: VOLUME OF ELECTRICITY SALE BY STATES THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Himachal Pradesh	726.34	23.44%
JINDAL POWER	477.07	15.40%
J & K	284.74	9.19%
Karnataka	213.03	6.88%
MP	210.78	6.80%
Gujarat	189.44	6.11%
Rajasthan	150.73	4.87%
Chattisgarh	149.23	4.82%
Kerala	95.61	3.09%
Andhra Pradesh	94.76	3.06%
MUNDRA APL	83.68	2.70%
Tamilnadu	76.60	2.47%
West Bengal	74.83	2.42%
Uttarakhand	51.90	1.68%
Maharashtra	45.61	1.47%
Assam	44.53	1.44%
Delhi	33.97	1.10%
Punjab	26.49	0.85%
Tripura	14.71	0.47%
Nagaland	11.32	0.37%
Haryana	10.09	0.33%
Arunachal Pradesh	9.33	0.30%
Uttar Pradesh	8.85	0.29%
Meghalaya	4.32	0.14%
Sikkim	4.29	0.14%
Orissa	3.10	0.10%
DVC	2.94	0.09%
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%
Manipur	0.00	0.00%
Mizoram	0.00	0.00%
GOA	0.00	0.00%
LANKO_AMK	0.00	0.00%
Total	3098.26	100.00%
Volume of sale by top 5 States	1911.96	61.71%

Table-8: VOLUME OF ELECTRICITY PURCHASE BY STATES THROUGH BILATERAL		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Punjab	1014.44	33.56%
Haryana	959.88	31.75%
Delhi	446.90	14.78%
Maharashtra	152.64	5.05%
Rajasthan	123.24	4.08%
Tamilnadu	117.24	3.88%
Orissa	99.65	3.30%
Andhra Pradesh	61.06	2.02%
Uttar Pradesh	34.70	1.15%
UT Chandigarh	5.43	0.18%
GOA	5.04	0.17%
Himachal Pradesh	1.23	0.04%
West Bengal	1.04	0.03%
Assam	0.71	0.02%
Uttarakhand	0.00	0.00%
J & K	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%
Kerala	0.00	0.00%
Pondicherry	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%
Manipur	0.00	0.00%
Meghalaya	0.00	0.00%
Mizoram	0.00	0.00%
Nagaland	0.00	0.00%
Tripura	0.00	0.00%
JINDAL POWER	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	3023.19	100.00%
Volume of purchase by top 5 States	2697.11	89.21%

Table-9: VOLUME OF ELECTRICITY SALE BY STATES THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Chattisgarh	136.70	27.21%
Gujarat	74.65	14.86%
JINDAL POWER	47.97	9.55%
Karnataka	47.71	9.50%
Sikkim	34.93	6.95%
West Bengal	33.57	6.68%
Haryana	32.01	6.37%
MP	21.90	4.36%
Delhi	18.61	3.71%
Andhra Pradesh	12.46	2.48%
Himachal Pradesh	9.99	1.99%
GOA	8.84	1.76%
Rajasthan	5.12	1.02%
Kerala	4.85	0.97%
Maharashtra	4.49	0.89%
Tripura	3.19	0.64%
Meghalaya	2.17	0.43%
Punjab	1.74	0.35%
Jharkhand	1.22	0.24%
Assam	0.20	0.04%
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%
Tamilnadu	0.00	0.00%
Pondicherry	0.00	0.00%
Orissa	0.00	0.00%
Bihar	0.00	0.00%
DVC	0.00	0.00%
Arunachal Pradesh	0.00	0.00%
Manipur	0.00	0.00%
Mizoram	0.00	0.00%
Nagaland	0.00	0.00%
LANKO_AMK	0.00	0.00%
MUNDRA APL	0.00	0.00%
Total	502.33	100.00%
Volume of sale by top 5 States	341.95	68.07%

Table-10: VOLUME OF ELECTRICITY PURCHASE BY STATES THROUGH POWER EXCHANGE		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Rajasthan	277.62	56.07%
Maharashtra	57.33	11.58%
Delhi	56.89	11.49%
Dadra & Nagar Haveli	55.41	11.19%
Andhra Pradesh	37.30	7.53%
Kerala	4.90	0.99%
Gujarat	2.02	0.41%
Haryana	1.81	0.37%
Assam	1.20	0.24%
West Bengal	0.50	0.10%
Tripura	0.17	0.03%
Punjab	0.00	0.00%
Uttar Pradesh	0.00	0.00%
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%
Chattisgarh	0.00	0.00%
Daman and Diu	0.00	0.00%
Karnataka	0.00	0.00%
Tamilnadu	0.00	0.00%
Pondicherry	0.00	0.00%
Orissa	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%
Manipur	0.00	0.00%
Meghalaya	0.00	0.00%
Mizoram	0.00	0.00%
Nagaland	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	495.16	100.00%
Volume of purchase by top 5 States	484.55	97.86%

Table-11: VOLUME OF ELECTRICITY EXPORT BY STATES THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Gujarat	259.51	13.23%
Chattisgarh	202.63	10.33%
Delhi	141.80	7.23%
LANKO_AMK	131.34	6.69%
Maharashtra	129.97	6.62%
DVC	128.60	6.55%
Punjab	127.31	6.49%
Orissa	108.09	5.51%
J & K	91.37	4.66%
MP	87.04	4.44%
Tamilnadu	80.37	4.10%
Bihar	72.60	3.70%
Rajasthan	71.35	3.64%
West Bengal	47.58	2.42%
Andhra Pradesh	38.75	1.97%
Karnataka	31.69	1.62%
Haryana	29.24	1.49%
GOA	22.23	1.13%
Kerala	20.09	1.02%
Uttarakhand	18.72	0.95%
JINDAL POWER	15.55	0.79%
MUNDRA APL	13.42	0.68%
Himachal Pradesh	12.42	0.63%
Assam	11.72	0.60%
Manipur	11.54	0.59%
Meghalaya	9.33	0.48%
Jharkhand	8.94	0.46%
Arunachal Pradesh	7.81	0.40%
Tripura	7.26	0.37%
Mizoram	5.85	0.30%
Uttar Pradesh	4.94	0.25%
Dadra & Nagar Haveli	3.07	0.16%
Daman and Diu	3.03	0.15%
Sikkim	2.09	0.11%
UT Chandigarh	1.91	0.10%
Nagaland	1.70	0.09%
Pondicherry	1.27	0.06%
Total	1962.11	100.00%
Volume of Export by top 5 States	865.25	44.10%

Table-12: VOLUME OF ELECTRICITY IMPORT BY STATES THROUGH UI		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Uttar Pradesh	701.98	34.93%
Andhra Pradesh	138.78	6.90%
Haryana	93.74	4.66%
Punjab	89.80	4.47%
Rajasthan	89.02	4.43%
Tamilnadu	76.44	3.80%
Karnataka	70.48	3.51%
Jharkhand	67.84	3.38%
Maharashtra	61.19	3.04%
Gujarat	60.77	3.02%
MUNDRA APL	60.72	3.02%
West Bengal	50.98	2.54%
Uttarakhand	50.24	2.50%
JINDAL POWER	45.62	2.27%
MP	41.83	2.08%
Assam	35.95	1.79%
Himachal Pradesh	32.32	1.61%
Sikkim	27.33	1.36%
Kerala	27.33	1.36%
Orissa	23.81	1.18%
Delhi	22.73	1.13%
Dadra & Nagar Haveli	22.60	1.12%
UT Chandigarh	21.53	1.07%
Bihar	20.21	1.01%
Chattisgarh	18.24	0.91%
Pondicherry	13.57	0.68%
Daman and Diu	12.90	0.64%
J & K	10.10	0.50%
Nagaland	5.34	0.27%
DVC	4.40	0.22%
GOA	4.08	0.20%
Tripura	3.03	0.15%
Meghalaya	2.18	0.11%
Arunachal Pradesh	1.53	0.08%
Manipur	0.66	0.03%
Mizoram	0.59	0.03%
LANKO_AMK	0.00	0.00%
Total	2009.85	100.00%
Volume of Export by top 5 States	1113.33	55.39%

Table-13: TOTAL NET SHORT-TERM TRANSACTIONS (STATE-WISE)

Sr.No	Name of the State/UT/Other Regional Entity	Total short-term transactions*
1	Haryana	984.11
2	Punjab	948.71
3	Uttar Pradesh	722.89
4	Delhi	332.14
5	Rajasthan	262.69
6	Andhra Pradesh	91.17
7	Maharashtra	91.09
8	Dadra & Nagar Haveli	74.93
9	Jharkhand	57.67
10	Tamilnadu	36.72
11	UT Chandigarh	25.05
12	Pondicherry	12.30
13	Orissa	12.27
14	Daman and Diu	9.87
15	Mizoram	-5.26
16	Nagaland	-7.68
17	Manipur	-10.89
18	Meghalaya	-13.65
19	Sikkim	-13.98
20	Arunachal Pradesh	-15.61
21	Assam	-18.59
22	Uttarakhand	-20.38
23	Tripura	-21.95
24	GOA	-21.96
25	MUNDRA APL	-36.37
26	Bihar	-52.39
27	Kerala	-88.33
28	West Bengal	-103.46
29	DVC	-127.13
30	LANKO_AMK	-131.34
31	Karnataka	-221.95
32	MP	-277.89
33	J & K	-366.01
34	Gujarat	-460.80
35	Chattisgarh	-470.31
36	JINDAL POWER	-498.96
37	Himachal Pradesh	-715.21
* Total net short-term transactions includes net of transactions through bilateral, power exchange and UI		
(-) indicates sale and (+) indicates purchase		