



Monthly Report on Short-term Transactions of Electricity in India

July, 2013



Economics Division
Central Electricity Regulatory Commission
3rd & 4th Floor, Chanderlok Building
36, Janpath, New Delhi -110001.



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Abbreviations

Abbreviation	Expanded Version
ACBIL	ACB (India) Limited
ACP	Area Clearing Price
ACV	Area Clearing Volume
AD HYDRO	AD Hydro Power Limited
BALCO	Bharat Aluminium Company Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPL	Coastal Gujarat Power Limited
CHUZACHEN	Chuzachen hydro electric power project
DCPP	Donga Mahua Captive Power Plant
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR STEEL	Essar Steel Ltd
HHI	Herfindahl-Hirschman Index
IEX	Indian Energy Exchange Limited
J&K	Jammu & Kashmir
JINDAL POWER	Jindal Power Limited
KARCHAM WANGTOO	Jaypee Karcham Hydro Corporation Limited
LANCO BUDHIL	Lanco Budhil Hydro Power Private Limited
LANCO_AMK	Lanco Amarkantak Power Private Limited
LANCO_KONDAPALLY	Lanco Kondapalli Power Ltd
Meenakshi	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO Stations	North Eastern Electric Power Corporation Ltd. Stations
NEW Grid	North, East, North-East and Western Regional Grid
NHPC Stations	National Hydro Electric Power Corporation Ltd. Stations
NJPC	Nathpa Jhakri Hydroelectric Power Station
NLDC	National Load Despatch Centre
NSPCL	NTPC - SAIL Power Company Private Limited
PX	Power Exchange
PXIL	Power Exchange India Limited
RANGANADI HEP	Ranganadi Hydro Electric Project
REC	Renewable Energy Certificate
RGPPL	Ratnagiri Gas and Power Private Limited
RLDC	Regional Load Despatch Centre
RTC	Round - the- Clock
SHREE CEMENT	Shree Cement Limited
SIMHAPURI	Simhapuri Energy Private Limited
SR Grid	Southern Regional Grid
STERLITE	Sterlite Energy Limited
UI	Unscheduled Interchange
UT	Union Territory
VANDANA VIDYUT	Vandana Vidyut Ltd

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. Here, “short-term transactions of electricity” refers to the contracts of less than one year period, for electricity transacted (inter-state & intra-state) 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; (iii) to analyse effect of congestion on volume of electricity transacted through power exchanges; (iv) to provide information on volume and price of Renewable Energy Certificates (RECs) transacted through power exchanges; and (v) to disclose/disseminate all relevant market information. The analysis of the report for the month of July, 2013 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of July 2013, total electricity generation excluding generation from renewable and captive power plants in India was 80522.28 MUs (Table-1).

Of the total electricity generation, 10550.40 MUs (13.10%) were transacted through short-term, comprising of 6162.31 MUs (7.65%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2357.71 MUs (2.93%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 2030.37 MUs (2.52%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 58.41% (38.95% through traders and term-ahead contracts on Power Exchanges and 19.46% directly between distribution companies) followed by 22.35% through day ahead collective transactions on Power Exchanges and 19.24% through UI (Table-1& Figure-1). Daily volume of short-term transactions is shown in Table-17 & Figure-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 & Figure-4. The trading licensees undertake 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 were 43 trading licensees as on 31.07.2013, of which only 21 have engaged in trading during July 2013. Top 5 trading licensees had a share of 75.42% in the total volume traded by all the licensees.

Herfindahl-Hirschman Index (HHI) has been used for measuring the competition among the trading licensees. Increase in the HHI generally indicates a decrease in competition and an increase of market power, whereas decrease indicates the opposite. A HHI below 0.15 indicates non-concentration, a HHI between 0.15 to 0.25 indicates moderate concentration and a HHI above 0.25 indicates high concentration. The HHI computed for volume of electricity traded by trading licensees (inter-state & intra-state) was 0.1850 for the month of July 2013, which indicates that there was moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 2264.28 MUs and 93.44 MUs respectively. The volume of total Buy bids and Sale bids was 2925.73 MUs and 4771.72 MUs respectively in IEX and 114.59 MUs and 339.30 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 (0.61 times) and PXIL (0.34 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted through IEX and PXIL in the term-ahead market was 18.38 MUs and 11.90 MUs respectively (Table-6 & Table-7).

II: Price of Short-term Transactions of Electricity

(i) Price of electricity transacted through Traders: Weighted average sale price has been computed for the electricity transacted through traders and it was ₹ 4.27/kWh. Weighted average sale price was also computed for the transactions during Round the Clock (RTC), Peak, and Off-Peak periods separately, and the sale prices were ₹ 4.27/kWh, ₹ 4.92/kWh and ₹ 4.14/kWh respectively. Minimum and Maximum sale prices were ₹ 2.34/kWh and ₹ 6.06/kWh respectively (Table-3 & 4).

(ii) Price of electricity transacted Through Power Exchanges: Minimum, Maximum and Weighted Average Prices have been computed for the electricity transacted through IEX and PXIL separately. The Minimum, Maximum and Weighted Average prices were

` 1.00/kWh, ` 20.00/kWh and ` 2.54/kWh respectively in IEX and ` 1.05/kWh, ` 3.50/kWh and ` 2.11/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ` 2.66/kWh and ` 2.97/kWh respectively (Table-6 and Table-7).

(iii) 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 ` 1.43/kWh in the NEW Grid and ` 2.26/kWh in the SR Grid. Minimum and Maximum UI prices were ` 0.00/kWh and ` 10.80/kWh respectively in the New Grid, and ` 0.00/kWh and ` 8.49/kWh respectively in the SR Grid (Table-8).

The prices of electricity transacted through trading licensees, power exchanges and UI and their comparison is shown in Table-18, Figure-5 & 6.

III: Volume of Short-term Transactions of Electricity (Regional Entity¹-Wise)

Of the total bilateral transactions, top 5 regional entities sold 52.24% of the volume, and these were Madhya Pradesh, UT Chandigarh, Karcham Wangtoo, Himachal Pradesh and Jindal Power Ltd. Top 5 regional entities purchased 71.08% of the volume, and these were Punjab, Haryana, Andhra Pradesh, Delhi and West Bengal (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 53.43% of the volume, and these were Delhi, Gujarat, Madhya Pradesh, Karnataka and Karcham Wangtoo. Top 5 regional entities purchased 71.83% of the volume, and these were Gujarat, Andhra Pradesh, Rajasthan, Uttarakhand and Uttar Pradesh (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 53.03% of the volume, and these were Haryana, Rajasthan, Uttar Pradesh, Maharashtra and Delhi. Top 5 regional entities overdrew 41.60% of the volume, and these were Sterlite, West Bengal, Gujarat, Orissa and Maharashtra (Table-13, 14 & 19).

Regional entity-wise total volume of net short-term transactions of electricity i.e. volume of net transactions through bilateral, power exchanges and UI is shown in Table-15 & 19. Top 5 electricity selling regional entities were Madhya Pradesh, Karcham Wangtoo, UT Chandigarh, Himachal Pradesh and Karnataka. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Haryana, Uttar Pradesh and Gujarat.

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.

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 July 2013, congestion occurred in both the power exchanges, the details of which are shown in Table-16. The volume of electricity that could not be cleared due to congestion and could not be transacted through power exchanges is the difference between 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 in the power exchanges due to congestion was 16.77% and 7.54% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 85.35% in PXIL.

V: Volume and Price of Renewable Energy Certificates (RECs)

The concept of Renewable Energy Certificates (RECs) seeks to address mismatch between availability of renewable energy sources and the requirement of the obligated entities to meet their renewable purchase obligation by purchasing green attributes of renewable energy remotely located in the form of RECs. The REC mechanism is a market

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.

based instrument, to promote renewable sources of energy and development of market in electricity.

One REC is equivalent to 1 MWh of electricity injected into the grid from renewable energy sources. The REC is exchanged only in the power exchanges approved by CERC within the band of a floor price and forbearance (ceiling) price as notified by CERC from time to time. The first REC trading session was held on power exchanges in March 2011.

The details of REC transactions for the month of July 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 1983 and 46 respectively and the market clearing price of these RECs was ` 9300/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 72321 and 89081 respectively and the market clearing price of these RECs was ` 1500/MWh on both the power exchanges.

The gap between the volume of buy and sell bids of RECs placed through power exchanges show that there was less demand for Solar RECs and Non-Solar RECs. For Solar RECs, the ratio of buy and sell bids was 0.16 and 0.01 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.04 and 0.08 in IEX and PXIL respectively.

VI: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 13.10%.
- Of the total short-term transactions of electricity, 58.41% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 22.35% through Power Exchanges and 19.24% through UI.
- Top 5 trading licensees had a share of 75.42% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1850, indicating a moderate concentration of market power.
- The price of electricity transacted through trading licensees (₹ 4.27/kWh) was higher when compared with the price of electricity transacted through IEX (₹ 2.54/kWh) and PXIL (₹ 2.11/kWh) respectively.
- The price of electricity transacted through UI was ₹ 1.43/kWh in the NEW Grid and ₹ 2.26/kWh in the SR Grid.
- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was less demand in IEX (1: 0.61) and PXIL (1: 0.34) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Madhya Pradesh, Karcham Wangtoo, UT Chandigarh, Himachal Pradesh and Karnataka. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Haryana, Uttar Pradesh and Gujarat.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 16.77% and 7.54% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 85.35% in PXIL.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 1983 and 46 respectively and the market clearing price of these RECs was ₹ 9300/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 72321 and 89081 respectively and the market clearing price of these RECs was ₹ 1500/MWh on both the power exchanges.

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), JULY 2013				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	6162.31	58.41%	7.65%
	(i) Through Traders and PXs	4109.68	38.95%	5.10%
	(ii) Direct	2052.63	19.46%	2.55%
2	Through Power Exchanges	2357.71	22.35%	2.93%
	(i) IEX	2264.28	21.46%	2.81%
	(ii) PXIL	93.44	0.89%	0.12%
3	Through UI	2030.37	19.24%	2.52%
	Total	10550.40	100.00%	13.10%
	Total Generation	80522.28	—	—

Source: NLDC

Figure-1: Volume of Short-term Transactions of Electricity, July 2013

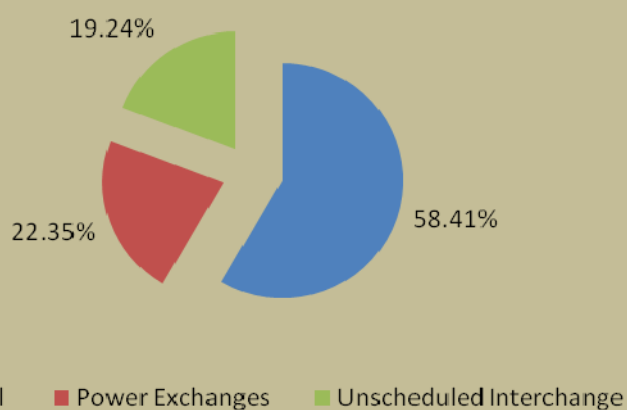
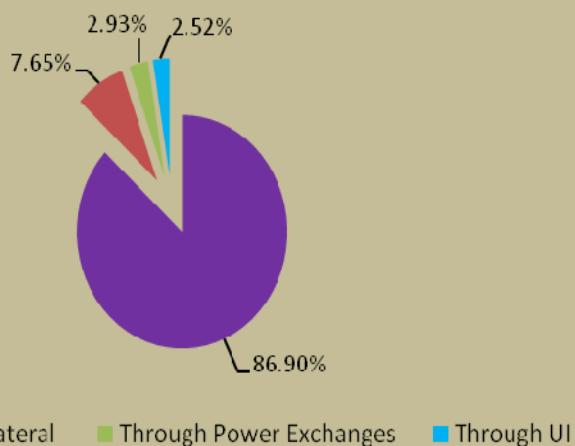


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, July 2013



**Figure-3: Volume of Short-term Transactions of Electricity, July 2013
(Day-wise)**

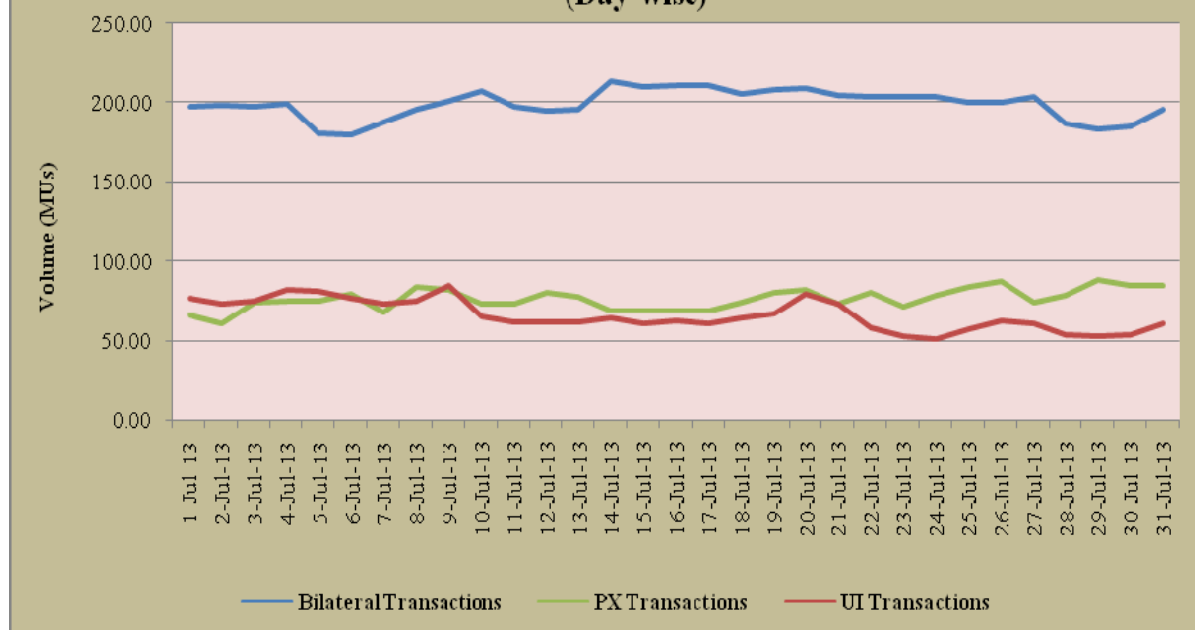


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JULY 2013			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	37.29%	0.1390
2	JSW Power Trading Company Ltd	12.90%	0.0166
3	Tata Power Trading Company (P) Ltd.	11.68%	0.0136
4	NTPC Vidyut Vyapar Nigam Ltd.	7.61%	0.0058
5	Reliance Energy Trading (P) Ltd	5.95%	0.0035
6	Mittal Processors (P) Ltd.	3.78%	0.0014
7	GMR Energy Trading Ltd.	3.35%	0.0011
8	Adani Enterprises Ltd.	3.17%	0.0010
9	Shree Cement Ltd.	2.84%	0.0008
10	National Energy Trading & Services Ltd.	2.48%	0.0006
11	Knowledge Infrastructure Systems (P) Ltd	2.48%	0.0006
12	Jaiprakash Associates Ltd.	1.88%	0.0004
13	Essar Electric Power Development Corp. Ltd.	1.41%	0.0002
14	RPG Power Trading Company Ltd.	0.87%	0.0001
15	Instinct Infra & Power Ltd.	0.84%	0.0001
16	Manikaran Power Ltd.	0.74%	0.0001
17	Arunachal Pradesh Power Corporation (P) Ltd	0.49%	0.0000
18	Pune Power Development (P) Ltd.	0.15%	0.0000
19	Customized Energy Solutions India (P) Ltd.	0.06%	0.0000
20	Indrajit Power Technology (P) Ltd.	0.03%	0.0000
21	Ambitious Power Trading Company Ltd.	0.00%	0.0000
TOTAL		100.00%	0.1850
Top 5 trading licensees		75.42%	
<i>Note 1: Volume of electricity transacted by the trading licensees includes bilateral transactions (inter-state & intra-state) and the transactions undertaken through power exchanges.</i>			
<i>Note 2: Volume of electricity transacted by Global Energy Ltd is not included.</i>			
<i>Source: Information submitted by trading licensees</i>			

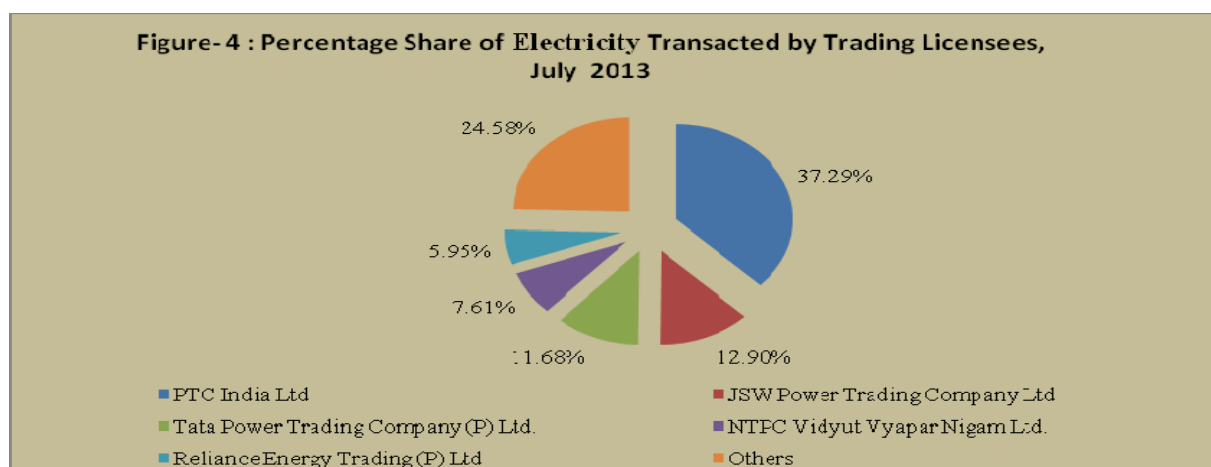


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JULY 2013		
Sr.No		Sale Price of Traders (₹ /kWh)
1	Minimum	2.34
2	Maximum	6.06
3	Weighted Average	4.27

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), JULY 2013		
Sr.No	Period of Trade	Sale Price of Traders (₹ /kWh)
1	RTC	4.27
2	PEAK	4.92
3	OFF PEAK	4.14

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JULY 2013			
Sr.No	ACP	Price in IEX (₹ /kWh)	Price in PXIL (₹ /kWh)
1	Minimum	1.00	1.05
2	Maximum	20.00	3.50
3	Weighted Average	2.54	2.11

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JULY 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹ /kWh)
1	Intra-Day Contracts	15.90	2.68
2	Day Ahead Contingency Contracts	2.48	2.57
	Total	18.38	2.66

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JULY 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹ /kWh)
1	Intra-Day Contracts	4.76	2.55
2	Weekly Contracts	7.14	3.25
	Total	11.90	2.97

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, JULY 2013			
Sr.No		Price in NEW Grid (₹ /kWh)	Price in SR Grid (₹ /kWh)
1	Minimum	0.00	0.00
2	Maximum	10.80	8.49
3	Average	1.43	2.26

Source: NLDC

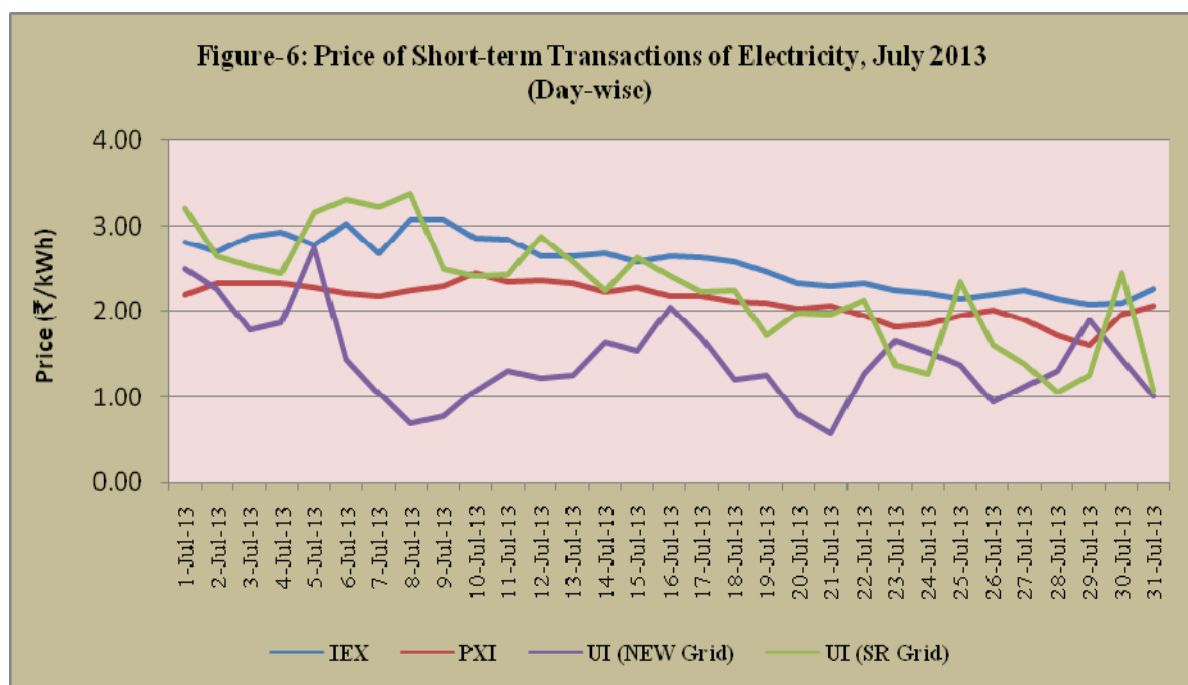
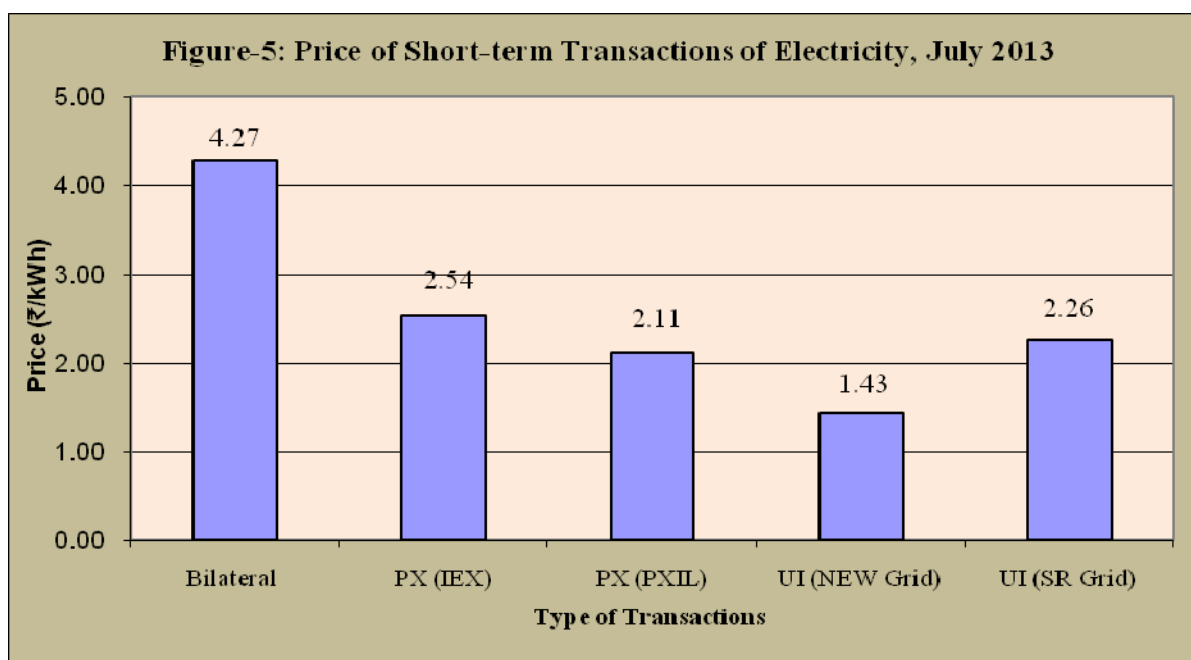


Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
MP	924.22	14.15%
UT Chandigarh	781.84	11.97%
KARCHAM WANGTOO	665.28	10.19%
Himachal Pradesh	608.50	9.32%
JINDAL POWER	431.50	6.61%
Rajasthan	379.25	5.81%
STERLITE	353.05	5.41%
West Bengal	338.10	5.18%
Karnataka	316.24	4.84%
Maharashtra	255.69	3.92%
Orissa	221.03	3.38%
J & K	170.39	2.61%
DVC	167.42	2.56%
Gujarat	160.77	2.46%
SIMHAPURI	135.16	2.07%
SHREE CEMENT	116.64	1.79%
Chattisgarh	86.86	1.33%
AD HYDRO	83.94	1.29%
Delhi	78.85	1.21%
MAITHON POWER LTD	47.02	0.72%
Meghalaya	41.94	0.64%
Jharkhand	37.52	0.57%
Sikkim	36.92	0.57%
Assam	31.70	0.49%
Tripura	25.07	0.38%
Uttarakhand	20.25	0.31%
ACBIL	12.92	0.20%
Haryana	2.60	0.04%
Total	6530.65	100.00%
Volume of sale by top 5 States	3411.34	52.24%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Punjab	1405.79	23.21%
Haryana	1079.90	17.83%
Andhra Pradesh	735.71	12.15%
Delhi	658.65	10.88%
West Bengal	424.70	7.01%
Uttar Pradesh	402.64	6.65%
Tamilnadu	309.92	5.12%
Gujarat	287.98	4.76%
Jharkhand	179.76	2.97%
Bihar	137.36	2.27%
Assam	96.11	1.59%
Dadra & Nagar Haveli	74.40	1.23%
Kerala	73.89	1.22%
DVC	68.70	1.13%
Maharashtra	50.71	0.84%
Tripura	27.37	0.45%
Himachal Pradesh	9.63	0.16%
Chattisgarh	8.79	0.15%
Sikkim	8.48	0.14%
Orissa	7.17	0.12%
Goa	4.17	0.07%
Meghalaya	1.63	0.03%
Meenakshi	0.99	0.02%
J & K	0.85	0.01%
Rajasthan	0.40	0.01%
MP	0.16	0.00%
Total	6055.85	100.00%
Volume of Purchase by top 5 States	4304.74	71.08%

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Delhi	424.07	17.99%
Gujarat	244.41	10.37%
MP	206.75	8.77%
Karnataka	198.74	8.43%
KARCHAM WANGTOO	185.84	7.88%
Himachal Pradesh	180.62	7.66%
Maharashtra	168.30	7.14%
Haryana	107.74	4.57%
AD HYDRO	52.67	2.23%
J & K	47.84	2.03%
LANCO BUDHIL	46.90	1.99%
Andhra Pradesh	39.11	1.66%
Rajasthan	37.39	1.59%
JINDAL POWER	35.53	1.51%
Kerala	35.44	1.50%
Meghalaya	29.57	1.25%
DVC	25.36	1.08%
Chattisgarh	24.53	1.04%
NEEPCO Stations	24.49	1.04%
CHUZACHEN HEP	22.78	0.97%
SIMHAPURI	21.07	0.89%
Sikkim	19.98	0.85%
ACBIL	19.11	0.81%
Meenakshi	17.35	0.74%
Assam	15.98	0.68%
West Bengal	15.82	0.67%
ADHUNIK POWER LTD	15.38	0.65%
SHREE CEMENT	13.92	0.59%
Nagaland	11.98	0.51%
Uttarakhand	10.38	0.44%
Arunachal Pradesh	9.76	0.41%
MAITHON POWER LTD	8.67	0.37%
Orissa	7.94	0.34%
STERLITE	7.46	0.32%
RANGANADI HEP	7.14	0.30%
EMCO	6.26	0.27%
Mizoram	5.38	0.23%
Bihar	2.01	0.09%
BALCO	1.68	0.07%
UT Chandigarh	1.37	0.06%
Punjab	1.00	0.04%
Total	2357.73	100.00%
Volume of sale by top 5 States	1259.80	53.43%

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Gujarat	614.71	26.07%
Andhra Pradesh	417.43	17.70%
Rajasthan	260.06	11.03%
Uttarakhand	201.55	8.55%
Uttar Pradesh	199.78	8.47%
Haryana	151.94	6.44%
Chattisgarh	103.77	4.40%
Maharashtra	87.24	3.70%
ESSAR STEEL	87.10	3.69%
Tamilnadu	73.90	3.13%
MP	48.43	2.05%
West Bengal	19.38	0.82%
Assam	15.85	0.67%
Himachal Pradesh	15.48	0.66%
Karnataka	13.16	0.56%
J & K	10.06	0.43%
Meghalaya	8.55	0.36%
Daman and Diu	7.88	0.33%
Kerala	6.41	0.27%
Orissa	3.97	0.17%
Punjab	2.98	0.13%
UT Chandigarh	2.95	0.13%
Bihar	2.75	0.12%
Tripura	1.66	0.07%
Arunachal Pradesh	0.72	0.03%
Total	2357.71	100.00%
Volume of purchase by top 5 States	1693.53	71.83%

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Haryana	432.01	25.22%
Rajasthan	170.47	9.95%
Uttar Pradesh	109.02	6.36%
Maharashtra	98.57	5.75%
Delhi	98.36	5.74%
MP	81.76	4.77%
J & K	78.12	4.56%
Punjab	63.75	3.72%
Bihar	55.83	3.26%
Jharkhand	53.75	3.14%
Gujarat	48.77	2.85%
Tamilnadu	43.41	2.53%
Karnataka	39.50	2.31%
NHPC Stations	37.03	2.16%
Himachal Pradesh	26.70	1.56%
DVC	24.27	1.42%
Andhra Pradesh	23.83	1.39%
Chattisgarh	23.07	1.35%
Uttarakhand	19.04	1.11%
Pondicherry	17.84	1.04%
Goa	16.69	0.97%
Manipur	15.41	0.90%
Orissa	12.28	0.72%
Arunachal Pradesh	9.39	0.55%
JINDAL POWER	8.95	0.52%
CGPL	8.45	0.49%
Assam	8.41	0.49%
NJPC	8.26	0.48%
Meghalaya	7.72	0.45%
Sikkim	7.11	0.41%
West Bengal	7.06	0.41%
KARCHAM WANGTOO	6.43	0.38%
NEEPCO Stations	6.09	0.36%
AD HYDRO	5.97	0.35%
Mizoram	5.19	0.30%
UT Chandigarh	4.97	0.29%
SHREE CEMENT	4.92	0.29%
Tripura	3.26	0.19%
Dadra & Nagar Haveli	2.99	0.17%
Daman and Diu	2.94	0.17%
Nagaland	2.69	0.16%
NSPCL	2.61	0.15%
LANKO_AMK	2.36	0.14%
MAITHON POWER LTD	2.04	0.12%
Kerala	1.90	0.11%
ACBIL	1.55	0.09%
SIMHAPURI	1.01	0.06%
RGPPL(Dabhol)	0.58	0.03%
STERLITE	0.51	0.03%
BALCO	0.07	0.00%
LANKO_KONDAPALLY	0.04	0.00%
Total	1712.93	100.00%
Volume of Export by top 5 States	908.43	53.03%

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, JULY 2013		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
STERLITE	155.50	11.15%
West Bengal	120.31	8.63%
Gujarat	115.73	8.30%
Orissa	100.25	7.19%
Maharashtra	88.36	6.34%
Uttar Pradesh	78.18	5.61%
Chattisgarh	74.87	5.37%
Assam	70.03	5.02%
DVC	49.85	3.57%
Andhra Pradesh	44.80	3.21%
Kerala	37.11	2.66%
NHPC Stations	36.34	2.61%
CGPL	36.07	2.59%
Tamilnadu	32.20	2.31%
Uttarakhand	27.78	1.99%
Himachal Pradesh	23.81	1.71%
Bihar	22.34	1.60%
Punjab	22.01	1.58%
Dadra & Nagar Haveli	19.49	1.40%
Rajasthan	19.43	1.39%
MP	17.53	1.26%
Delhi	17.05	1.22%
LANKO_AMK	16.73	1.20%
J & K	16.12	1.16%
Karnataka	13.41	0.96%
Goa	12.46	0.89%
KARCHAM WANGTOO	11.21	0.80%
NEEPCO Stations	10.07	0.72%
UT Chandigarh	9.82	0.70%
JINDAL POWER	9.81	0.70%
MAITHON POWER LTD	9.52	0.68%
Daman and Diu	9.22	0.66%
Tripura	8.46	0.61%
ACBIL	7.68	0.55%
Sikkim	7.00	0.50%
AD HYDRO	6.95	0.50%
Meghalaya	5.33	0.38%
Jharkhand	4.97	0.36%
RGPPL(Dabhol)	4.49	0.32%
Nagaland	3.50	0.25%
Arunachal Pradesh	3.22	0.23%
SHREE CEMENT	2.82	0.20%
Haryana	2.68	0.19%
SIMHAPURI	2.18	0.16%
Mizoram	2.16	0.15%
BALCO	1.95	0.14%
Pondicherry	1.40	0.10%
NSPCL	1.32	0.09%
Manipur	0.65	0.05%
NJPC	0.42	0.03%
LANKO_KONDAPALLY	0.04	0.00%
Total	1394.61	100.00%
Volume of Import by top 5 States	580.16	41.60%

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JULY 2013		
Sr.No.	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	Punjab	1366.04
2	Andhra Pradesh	1134.99
3	Haryana	692.18
4	Uttar Pradesh	571.58
5	Gujarat	564.47
6	Tamilnadu	372.61
7	West Bengal	203.40
8	Uttarakhand	179.67
9	Assam	125.89
10	Bihar	104.60
11	Jharkhand	93.47
12	Dadra & Nagar Haveli	90.90
13	ESSAR STEEL	87.10
14	Kerala	80.07
15	Delhi	74.42
16	Chattisgarh	52.98
17	CGPL	27.62
18	LANKO_AMK	14.37
19	Daman and Diu	14.16
20	Tripura	9.17
21	RGPPPL(Dabhol)	3.91
22	BALCO	0.20
23	LANKO_KONDAPALLY	-0.002
24	Goa	-0.07
25	NHPC Stations	-0.69
26	NSPCL	-1.29
27	EMCO	-6.26
28	RANGANADI HEP	-7.14
29	NJPC	-7.84
30	Mizoram	-8.41
31	Nagaland	-11.18
32	Manipur	-14.76
33	Arunachal Pradesh	-15.22
34	ADHUNIK POWER LTD	-15.38
35	Meenakshi	-16.36
36	Pondicherry	-16.44
37	NEEPCO Stations	-20.51
38	CHUZACHEN HEP	-22.78
39	ACBIL	-25.92
40	LANCO BUDHIL	-46.90
41	MAITHON POWER LTD	-48.21
42	Sikkim	-48.52
43	Meghalaya	-63.72
44	DVC	-98.50
45	Orissa	-129.86
46	SHREE CEMENT	-132.67
47	AD HYDRO	-135.62
48	SIMHAPURI	-155.06
49	STERLITE	-205.52
50	J & K	-269.31
51	Maharashtra	-296.26
52	Rajasthan	-307.21
53	JINDAL POWER	-466.18
54	Karnataka	-527.91
55	Himachal Pradesh	-766.89
56	UT Chandigarh	-775.41
57	KARCHAM WANGTOO	-846.35
58	MP	-1146.61
* 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-16: DETAILS OF CONGESTION IN POWER EXCHANGES, JULY 2013			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	2720.49	101.05
B	Actual Cleared Volume and hence scheduled (MUs)	2264.28	93.44
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	456.21	7.62
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	16.77%	7.54%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	100.00%	85.35%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25.00%	25.51%
	6.00 - 12.00 hours	25.00%	25.20%
	12.00 - 18.00 hours	25.00%	24.57%
	18.00 - 24.00 hours	25.00%	24.72%
* This power would have been scheduled had there been no congestion.			
Source: IEX & PXIL			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (MUs), JULY 2013 (DAY-WISE)						Total Electricity Generation (MU) as given at CEA Website*
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Unscheduled Interchange (Over Drawl+Under Generation)	
	Through Traders and PXs**	Direct	IEX	PXI		
1-Jul-13	130.14	67.39	64.31	1.10	76.30	2594.70
2-Jul-13	130.91	67.10	58.93	1.52	72.91	2741.00
3-Jul-13	130.35	67.09	72.17	1.68	74.49	2630.43
4-Jul-13	132.02	67.19	73.47	1.65	81.97	2617.08
5-Jul-13	118.80	61.24	72.28	2.46	81.02	2646.34
6-Jul-13	125.71	53.77	76.62	2.59	76.82	2639.51
7-Jul-13	124.28	63.50	65.65	1.88	73.06	2616.60
8-Jul-13	132.59	63.03	81.50	2.50	74.27	2580.87
9-Jul-13	136.95	63.40	79.07	2.65	84.58	2589.17
10-Jul-13	143.41	63.49	70.57	2.60	64.48	2565.49
11-Jul-13	135.49	61.45	69.40	3.24	61.54	2610.09
12-Jul-13	132.77	61.79	75.20	4.56	60.92	2599.35
13-Jul-13	133.90	61.45	73.44	3.99	61.46	2655.00
14-Jul-13	141.05	72.04	64.85	3.99	64.12	2556.28
15-Jul-13	139.55	69.95	65.04	3.85	60.49	2601.79
16-Jul-13	141.65	69.13	64.40	3.65	61.70	2619.14
17-Jul-13	142.30	67.77	65.51	3.00	60.01	2632.44
18-Jul-13	138.78	66.15	70.46	3.67	63.78	2607.67
19-Jul-13	140.21	67.59	75.51	4.37	66.36	2688.00
20-Jul-13	141.31	67.67	77.97	3.88	78.74	2524.53
21-Jul-13	136.73	67.94	69.47	3.70	72.50	2489.43
22-Jul-13	135.33	68.46	75.45	4.24	57.63	2554.29
23-Jul-13	134.67	68.50	67.71	2.99	52.19	2556.78
24-Jul-13	134.91	68.33	74.95	3.43	50.39	2607.38
25-Jul-13	131.11	68.41	80.33	3.65	56.95	2575.32
26-Jul-13	131.18	68.66	83.72	3.67	62.36	2582.33
27-Jul-13	134.89	68.59	71.79	2.44	59.99	2583.93
28-Jul-13	118.79	67.55	75.52	2.47	52.71	2579.00
29-Jul-13	115.56	67.78	85.21	2.87	52.58	2559.10
30-Jul-13	117.00	67.85	82.23	2.34	53.53	2578.38
31-Jul-13	127.33	68.36	81.59	2.82	60.56	2540.86
Total	4109.68	2052.63	2264.28	93.44	2030.37	80522.28
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.						
# Area Clearing Volume represents the scheduled volume of all the bid areas.						

Table-18: PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (₹ /kWh), JULY 2013 (DAY-WISE)

Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Drawl/Over Drawl from the Grid (UI)					
Date	Minimum ACP	Maximum ACP	Weighted Average Price*	Minimum ACP	Maximum ACP	Weighted Average Price*	NEW Grid			SR Grid		
							Minimum Price	Maximum Price	Average Price**	Minimum Price	Maximum Price	Average Price**
1-Jul-13	1.30	6.01	2.80	1.68	2.50	2.20	0.00	7.37	2.50	0.50	7.09	3.20
2-Jul-13	1.30	10.00	2.69	1.95	2.60	2.33	0.17	4.78	2.26	0.00	5.63	2.63
3-Jul-13	1.50	6.01	2.88	1.75	2.70	2.32	0.00	5.06	1.80	0.00	5.91	2.53
4-Jul-13	1.49	6.01	2.92	1.80	2.60	2.33	0.00	5.06	1.87	0.00	7.65	2.44
5-Jul-13	1.49	20.00	2.77	1.75	2.50	2.27	0.00	10.80	2.75	0.50	5.91	3.15
6-Jul-13	1.49	17.50	3.02	1.90	2.50	2.21	0.00	4.50	1.45	0.33	5.91	3.30
7-Jul-13	1.20	20.00	2.68	2.00	2.50	2.17	0.00	3.08	1.04	0.33	5.91	3.22
8-Jul-13	1.20	12.00	3.07	2.00	2.50	2.25	0.00	3.36	0.70	0.83	5.91	3.37
9-Jul-13	1.49	6.01	3.07	1.75	2.80	2.29	0.00	3.08	0.78	0.00	5.06	2.49
10-Jul-13	1.89	15.00	2.85	1.96	3.50	2.44	0.00	3.08	1.07	0.00	5.63	2.40
11-Jul-13	1.70	17.10	2.84	1.75	2.75	2.34	0.00	3.65	1.31	0.00	7.65	2.43
12-Jul-13	1.50	16.00	2.65	1.75	3.38	2.35	0.00	4.22	1.22	0.00	7.37	2.88
13-Jul-13	1.45	8.00	2.65	1.75	3.50	2.33	0.00	3.36	1.25	0.00	5.63	2.57
14-Jul-13	1.47	16.20	2.67	1.86	3.50	2.23	0.00	4.50	1.65	0.00	5.34	2.25
15-Jul-13	1.49	20.00	2.57	2.00	3.50	2.28	0.00	4.22	1.54	0.00	7.65	2.63
16-Jul-13	1.34	15.00	2.65	1.75	3.50	2.18	0.00	5.91	2.06	0.00	5.91	2.41
17-Jul-13	1.26	16.00	2.63	1.67	2.60	2.17	0.00	4.78	1.68	0.00	8.49	2.23
18-Jul-13	1.24	19.00	2.58	1.50	2.60	2.11	0.00	4.22	1.20	0.00	5.34	2.25
19-Jul-13	1.22	17.10	2.46	1.50	2.50	2.10	0.00	4.22	1.25	0.00	5.34	1.71
20-Jul-13	1.21	19.50	2.33	1.45	2.50	2.03	0.00	3.08	0.80	0.00	7.37	1.98
21-Jul-13	1.10	17.00	2.29	1.50	2.50	2.06	0.00	2.79	0.58	0.00	5.63	1.97
22-Jul-13	1.21	17.00	2.33	1.20	2.50	1.95	0.00	3.65	1.27	0.00	5.34	2.13
23-Jul-13	1.21	12.00	2.26	1.18	2.50	1.82	0.00	5.63	1.65	0.00	4.78	1.37
24-Jul-13	1.21	10.00	2.22	1.20	2.50	1.85	0.00	3.93	1.52	0.00	5.06	1.28
25-Jul-13	1.09	8.00	2.16	1.20	2.60	1.94	0.00	3.93	1.38	0.00	5.06	2.34
26-Jul-13	1.20	8.00	2.20	1.10	2.50	2.01	0.00	4.50	0.95	0.00	5.34	1.61
27-Jul-13	1.13	17.10	2.25	1.10	2.50	1.89	0.00	4.22	1.13	0.00	4.78	1.39
28-Jul-13	1.04	9.00	2.15	1.20	2.50	1.71	0.00	4.50	1.31	0.00	3.93	1.06
29-Jul-13	1.00	8.50	2.09	1.05	2.50	1.60	0.00	5.63	1.90	0.00	5.06	1.25
30-Jul-13	1.05	10.00	2.11	1.10	3.40	1.96	0.00	4.50	1.45	0.00	5.63	2.44
31-Jul-13	1.00	8.50	2.26	1.25	3.40	2.06	0.00	3.65	1.01	0.00	5.91	1.07
	1.00#	20.00#	2.54	1.05#	3.50#	2.11	0.00#	10.80#	1.43	0.00#	8.49#	2.26

Source: Data on price of PX transactions from IEX and PXIL and data on UI Price from NLDC.

* Weighted average price computed based on Area Clearing Volume (ACV) and Area Clearing Price (ACP) for each hour of the day. Here, ACV and ACP represent the scheduled volume and weighted average price of all the bid areas of power exchanges.

** 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

Table-19: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs), JULY 2013

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	0.00	1405.79	1405.79	1.00	2.98	1.99	63.75	22.01	-41.73	1366.04
Haryana	2.60	1079.90	1077.30	107.74	151.94	44.21	432.01	2.68	-429.33	692.18
Rajasthan	379.25	0.40	-378.85	37.39	260.06	222.67	170.47	19.43	-151.04	-307.21
Delhi	78.85	658.65	579.80	424.07	0.00	-424.07	98.36	17.05	-81.32	74.42
Uttar Pradesh	0.00	402.64	402.64	0.00	199.78	199.78	109.02	78.18	-30.84	571.58
Uttarakhand	20.25	0.00	-20.25	10.38	201.55	191.17	19.04	27.78	8.74	179.67
Himachal Pradesh	608.50	9.63	-598.87	180.62	15.48	-165.14	26.70	23.81	-2.88	-766.89
J & K	170.39	0.85	-169.54	47.84	10.06	-37.78	78.12	16.12	-62.00	-269.31
UT Chandigarh	781.84	0.00	-781.84	1.37	2.95	1.58	4.97	9.82	4.85	-775.41
MP	924.22	0.16	-924.06	206.75	48.43	-158.32	81.76	17.53	-64.23	-1146.61
Maharashtra	255.69	50.71	-204.98	168.30	87.24	-81.06	98.57	88.36	-10.21	-296.26
Gujarat	160.77	287.98	127.21	244.41	614.71	370.30	48.77	115.73	66.97	564.47
Chattisgarh	86.86	8.79	-78.07	24.53	103.77	79.24	23.07	74.87	51.81	52.98
Daman and Diu	0.00	0.00	0.00	0.00	7.88	7.88	2.94	9.22	6.28	14.16
Dadra & Nagar Haveli	0.00	74.40	74.40	0.00	0.00	0.00	2.99	19.49	16.50	90.90
Andhra Pradesh	0.00	735.71	735.71	39.11	417.43	378.31	23.83	44.80	20.97	1134.99
Karnataka	316.24	0.00	-316.24	198.74	13.16	-185.57	39.50	13.41	-26.09	-527.91
Kerala	0.00	73.89	73.89	35.44	6.41	-29.03	1.90	37.11	35.21	80.07
Tamilnadu	0.00	309.92	309.92	0.00	73.90	73.90	43.41	32.20	-11.21	372.61
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	17.84	1.40	-16.44	-16.44
West Bengal	338.10	424.70	86.60	15.82	19.38	3.55	7.06	120.31	113.24	203.40
Orissa	221.03	7.17	-213.86	7.94	3.97	-3.97	12.28	100.25	87.97	-129.86
Bihar	0.00	137.36	137.36	2.01	2.75	0.74	55.83	22.34	-33.49	104.60
Jharkhand	37.52	179.76	142.25	0.00	0.00	0.00	53.75	4.97	-48.78	93.47
Sikkim	36.92	8.48	-28.43	19.98	0.00	-19.98	7.11	7.00	-0.11	-48.52
DVC	167.42	68.70	-98.72	25.36	0.00	-25.36	24.27	49.85	25.58	-98.50
Arunachal Pradesh	0.00	0.00	0.00	9.76	0.72	-9.04	9.39	3.22	-6.18	-15.22
Assam	31.70	96.11	64.41	15.98	15.85	-0.13	8.41	70.03	61.61	125.89
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	15.41	0.65	-14.76	-14.76
Meghalaya	41.94	1.63	-40.31	29.57	8.55	-21.02	7.72	5.33	-2.39	-63.72
Mizoram	0.00	0.00	0.00	5.38	0.00	-5.38	5.19	2.16	-3.03	-8.41
Nagaland	0.00	0.00	0.00	11.98	0.00	-11.98	2.69	3.50	0.81	-11.18
Tripura	25.07	27.37	2.30	0.00	1.66	1.66	3.26	8.46	5.20	9.17
Goa	0.00	4.17	4.17	0.00	0.00	0.00	16.69	12.46	-4.24	-0.07
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	37.03	36.34	-0.69	-0.69
NJPC	0.00	0.00	0.00	0.00	0.00	0.00	8.26	0.42	-7.84	-7.84
AD HYDRO	83.94	0.00	-83.94	52.67	0.00	-52.67	5.97	6.95	0.98	-135.62
KARCHAM WANGTOO	665.28	0.00	-665.28	185.84	0.00	-185.84	6.43	11.21	4.77	-846.35
SHREE CEMENT	116.64	0.00	-116.64	13.92	0.00	-13.92	4.92	2.82	-2.10	-132.67
LANCO BUDHIL	0.00	0.00	0.00	46.90	0.00	-46.90	0.00	0.00	0.00	-46.90
ADANI HVDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JINDAL POWER	431.50	0.00	-431.50	35.53	0.00	-35.53	8.95	9.81	0.86	-466.18
LANCO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	2.36	16.73	14.37	14.37
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	2.61	1.32	-1.29	-1.29
ACBIL	12.92	0.00	-12.92	19.11	0.00	-19.11	1.55	7.68	6.12	-25.92
BALCO	0.00	0.00	0.00	1.68	0.00	-1.68	0.07	1.95	1.88	0.20

RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	0.58	4.49	3.91	3.91
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	8.45	36.07	27.62	27.62
DCPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EMCO	0.00	0.00	0.00	6.26	0.00	-6.26	0.00	0.00	0.00	-6.26
VANDANA VIDYUT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESSAR STEEL	0.00	0.00	0.00	0.00	87.10	87.10	0.00	0.00	0.00	87.10
LANCO_KONDAPALLY	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00
SIMHAPURI	135.16	0.00	-135.16	21.07	0.00	-21.07	1.01	2.18	1.17	-155.06
Meenakshi	0.00	0.99	0.99	17.35	0.00	-17.35	0.00	0.00	0.00	-16.36
STERLITE	353.05	0.00	-353.05	7.46	0.00	-7.46	0.51	155.50	154.99	-205.52
MAITHON POWER LTD	47.02	0.00	-47.02	8.67	0.00	-8.67	2.04	9.52	7.48	-48.21
ADHUNIK POWER LTD	0.00	0.00	0.00	15.38	0.00	-15.38	0.00	0.00	0.00	-15.38
CHUZACHEN HEP	0.00	0.00	0.00	22.78	0.00	-22.78	0.00	0.00	0.00	-22.78
NEEPCO Stations	0.00	0.00	0.00	24.49	0.00	-24.49	6.09	10.07	3.98	-20.51
RANGANADI HEP	0.00	0.00	0.00	7.14	0.00	-7.14	0.00	0.00	0.00	-7.14
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-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTIONED THROUGH POWER EXCHANGES, JULY 2013					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	1983	72321	46	89081
B	Volume of Sell Bid	12486	1676875	9194	1095323
C	Ratio of Buy Bid to Sell Bid Volume	0.16	0.04	0.01	0.08
D	Market Clearing Volume (MWh)	1983	72321	46	89081
E	Market Clearing Price (₹ /MWh)	9300	1500	9300	1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

Forbearance and Floor Price w.e.f 1st April 2012		
Type of REC	Floor Price (₹/MWh)	Forbearance Price (₹/MWh)
Solar	9300.00	13400.00
Non-Solar	1500.00	3300.00