

# Monthly Report on Short-term Transactions of Electricity in India

September, 2013



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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 HEP	Chuzachen Hydro electric power project
DCPP	Donga Mahua Captive Power Plant
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR POWER	Essar Power Ltd
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
KSK Mahanadi	KSK Mahanadi Power Project
LANCO BUDHIL	Lanco Budhil Hydro Power Private Limited
LANKO_AMK	Lanco Amarkantak Power Private Limited
Meenakshi	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO Stations	North Eastern Electric Power Corporation Limited. 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

## **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 September, 2013 is as under:

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

During the month of September 2013, total electricity generation excluding generation from renewable and captive power plants in India was 82614.24 MUs (Table-1).

Of the total electricity generation, 8697.89 MUs (10.53%) were transacted through short-term, comprising of 4088.91 MUs (4.95%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2939.84 MUs (3.56%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1669.13 MUs (2.02%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 47.01% (30.14% through traders and term-ahead contracts on Power Exchanges and 16.87% directly between distribution companies) followed by 33.80% through day ahead collective transactions on Power Exchanges and 19.19% 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 30.09.2013, of which only 20 have engaged in trading during September 2013. Top 5 trading licensees had a share of 72.30% 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 0.1669 for the month of September 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 2852.88 MUs and 86.96 MUs respectively. The volume of total Buy bids and Sale bids was 3808.74 MUs and 4386.13 MUs respectively in IEX and 134.33 MUs and 221.85 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 (0.87 times) and PXIL (0.61 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 142.46 MUs and 159.68 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 ₹4.41/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 ₹4.45/kWh, ₹4.67/kWh and ₹3.24/kWh respectively. Minimum and Maximum sale prices were ₹2.44/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, ₹12.00/kWh and ₹2.98/kWh respectively in IEX and ₹0.95/kWh, ₹4.58/kWh and ₹2.82/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹3.50/kWh (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 ₹1.62/kWh in the NEW Grid and ₹1.69/kWh in the SR Grid. Minimum and Maximum UI prices were ₹0.00/kWh and ₹12.22/kWh respectively in both New Grid and 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 Entity<sup>1</sup>-Wise)**

Of the total bilateral transactions, top 5 regional entities sold 51.49% of the volume, and these were Madhya Pradesh, Himachal Pradesh, Karnataka, Sterlite and Karcham Wangtoo. Top 5 regional entities purchased 68.18% of the volume, and these were Punjab, Andhra Pradesh, West Bengal, Rajasthan and Gujarat (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 44.33% of the volume, and these were Gujarat, Delhi, Karcham Wangtoo, West Bengal and Kerala. Top 5 regional entities purchased 75.87% of the volume, and these were Uttar Pradesh, Gujarat, Rajasthan, Andhra Pradesh and Maharashtra (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 38.25% of the volume, and these were Rajasthan, Uttar Pradesh, Punjab, Haryana and Maharashtra. Top 5 regional entities overdrew 32.92% of the volume, and these were Haryana, West Bengal, Maharashtra, Gujarat and Uttar Pradesh (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, Himachal Pradesh, Karcham Wangtoo, Sterlite and Jindal Power. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Uttar Pradesh, Gujarat and Rajasthan.

### **IV: Congestion<sup>2</sup> on Inter-state Transmission Corridor for Day-Ahead Market on Power Exchanges**

Power Exchanges use a price discovery mechanism in which the aggregate demand and supply are matched to arrive at an unconstrained market price and volume. This step assumes that there is no congestion in the inter-state transmission system

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<sup>1</sup> In case of a state, the entities which are “selling” also include generators connected to state grid and the entities which are “buying” also include open access consumers.

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

between different regions. However, in reality, the system operator, NLDC in coordination with RLDCs, limits the flow due to congestion in the inter-state transmission system. In such a situation, Power Exchanges adopt a mechanism called “Market Splitting”<sup>3</sup>.

In the month of September 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 6.81% and 14.37% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 78.75% in IEX and 58.13% 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 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.

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<sup>3</sup> “Market Splitting” is a mechanism adopted by Power Exchange where the market is split in the event of transmission congestion, into predetermined ( by NLDC) bid areas or zones, which are cleared individually at their respective area prices such that the energy balance in every bid area is reached based upon the demand and supply in individual bid areas and using the available transmission corridor capacity between various bid areas simultaneously”  
As a result of this market splitting the price of electricity in the importing region, where demand for electricity is more than supply, becomes relatively higher than the price of electricity in the exporting region.



The details of REC transactions for the month of September 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 5880 and 832 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 38195 and 11636 respectively and the market clearing price of these RECs was ₹1500/MWh on both the power exchanges.

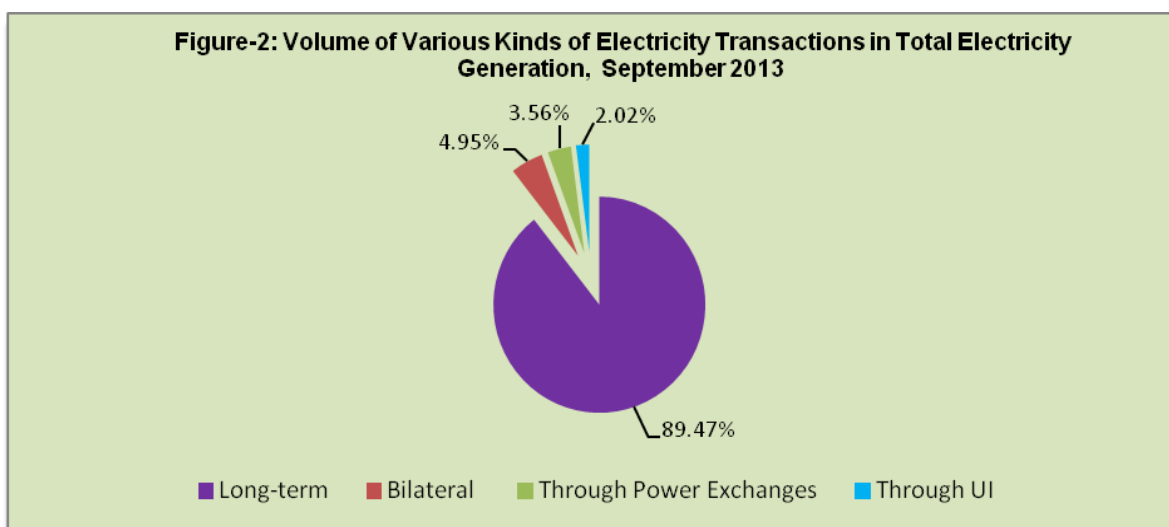
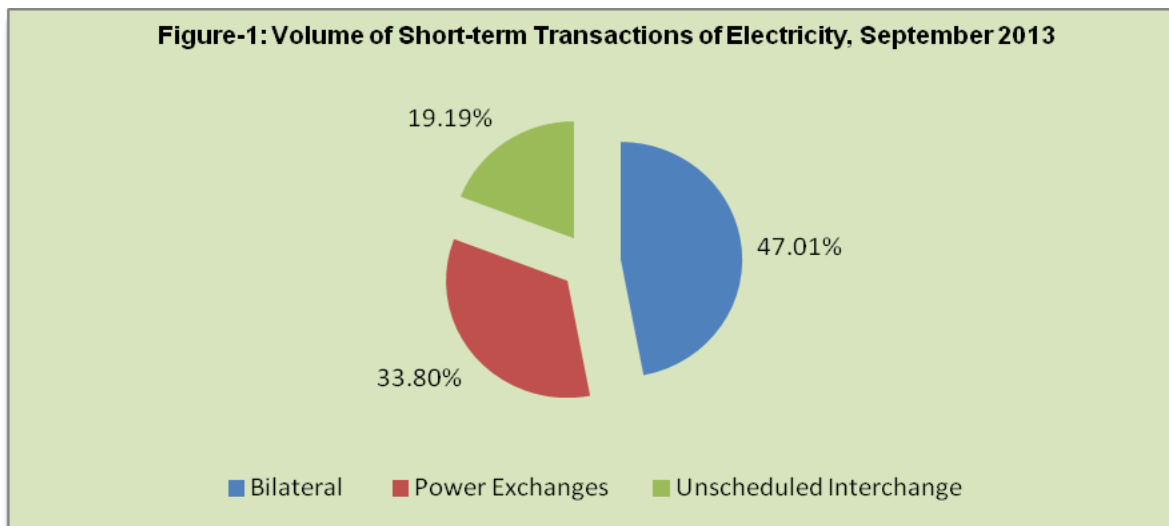
The gap between the volume of buy and sell bids of RECs placed through power exchanges show that there was less demand for Solar RECs and Non-Solar RECs. For Solar RECs, the ratio of buy and sell bids was 0.16 and 0.07 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.02 and 0.01 in IEX and PXIL respectively.

## VI: Inferences:

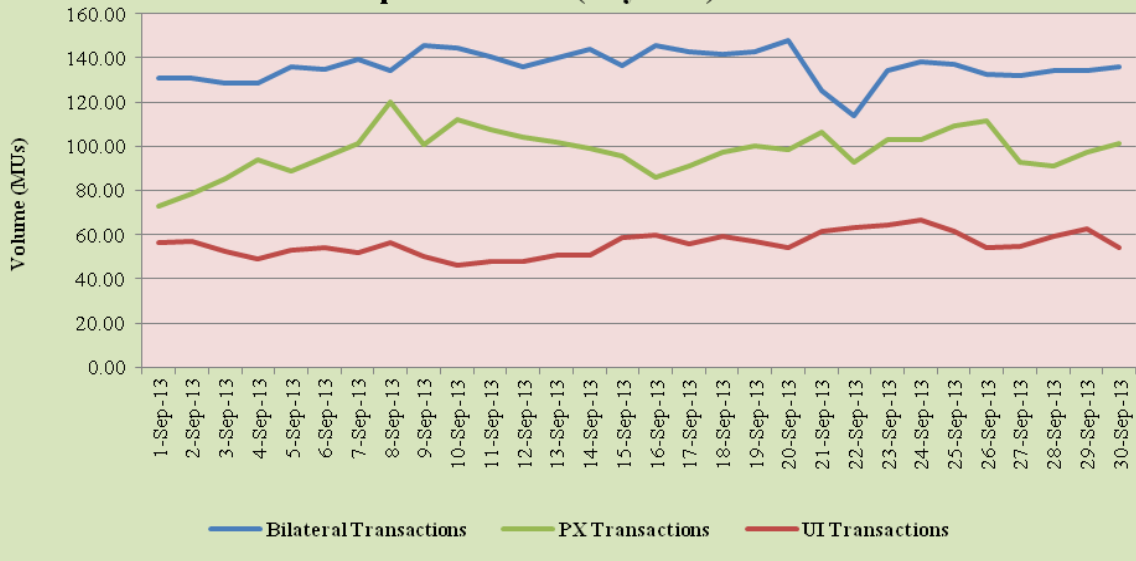
- The percentage of short-term transactions of electricity to total electricity generation was 10.53%.
- Of the total short-term transactions of electricity, 47.01% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 33.80% through Power Exchanges and 19.19% through UI.
- Top 5 trading licensees had a share of 72.30% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1669, indicating a moderate concentration of market power.
- The price of electricity transacted through trading licensees (₹4.41/kWh) was higher when compared with the price of electricity transacted through IEX (₹2.98/kWh) and PXIL (₹2.82/kWh) respectively.
- The price of electricity transacted through UI was ₹1.62/kWh in the NEW Grid and ₹1.69/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: 0.87) and PXIL (1: 0.61) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Madhya Pradesh, Himachal Pradesh, Karcham Wangtoo, Sterlite and Jindal Power. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Uttar Pradesh, Gujarat and Rajasthan.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 6.81% and 14.37% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 78.75% in IEX and 58.13% in PXIL.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 5880 and 832 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 38195 and 11636 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), SEPTEMBER 2013				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	4088.91	47.01%	4.95%
	(i) Through Traders and PXs	2621.34	30.14%	3.17%
	(ii) Direct	1467.57	16.87%	1.78%
2	Through Power Exchanges	2939.84	33.80%	3.56%
	(i) IEX	2852.88	32.80%	3.45%
	(ii) PXIL	86.96	1.00%	0.11%
3	Through UI	1669.13	19.19%	2.02%
	<b>Total</b>	<b>8697.89</b>	<b>100.00%</b>	<b>10.53%</b>
	<b>Total Generation</b>	<b>82614.24</b>	–	–

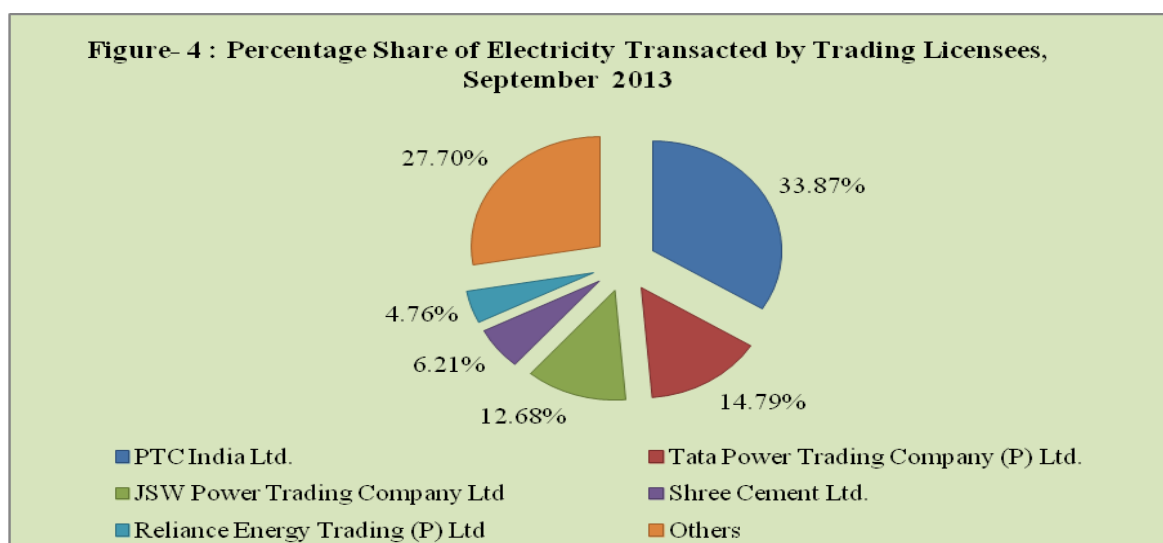
Source: NLDC



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



<b>Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, SEPTEMBER 2013</b>			
<b>Sr.No</b>	<b>Name of the Trading Licensee</b>	<b>% Share in total Volume transacted by Trading Licensees</b>	<b>Herfindahl-Hirschman Index</b>
1	PTC India Ltd.	33.87%	0.1147
2	Tata Power Trading Company (P) Ltd.	14.79%	0.0219
3	JSW Power Trading Company Ltd	12.68%	0.0161
4	Shree Cement Ltd.	6.21%	0.0039
5	Reliance Energy Trading (P) Ltd	4.76%	0.0023
6	Jaiprakash Associates Ltd.	4.67%	0.0022
7	Mittal Processors (P) Ltd.	4.31%	0.0019
8	Adani Enterprises Ltd.	3.36%	0.0011
9	Knowledge Infrastructure Systems (P) Ltd	3.13%	0.0010
10	NTPC Vidyut Vyapar Nigam Ltd.	2.75%	0.0008
11	Manikaran Power Ltd.	1.78%	0.0003
12	GMR Energy Trading Ltd.	1.70%	0.0003
13	National Energy Trading & Services Ltd.	1.46%	0.0002
14	Instinct Infra & Power Ltd.	1.30%	0.0002
15	RPG Power Trading Company Ltd.	1.27%	0.0002
16	Essar Electric Power Development Corp. Ltd.	0.77%	0.0001
17	Arunachal Pradesh Power Corporation (P) ltd	0.73%	0.0001
18	Pune Power Development (P) Ltd.	0.33%	0.0000
19	Customized Energy Solutions India (P) Ltd.	0.12%	0.0000
20	Ambitious Power Trading Company Ltd.	0.02%	0.0000
<b>TOTAL</b>		<b>100.00%</b>	<b>0.1669</b>
<b>Top 5 trading licensees</b>		<b>72.30%</b>	
<i>Note 1: Volume of electricity transacted by the trading licensees includes bilateral transactions (inter-state &amp; 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>			



<b>Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, SEPTEMBER 2013</b>		
<b>Sr.No</b>		<b>Sale Price of Traders (₹/kWh)</b>
1	Minimum	2.44
2	Maximum	6.06
3	Weighted Average	4.41

Source: Information submitted by trading licensees

<b>Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), SEPTEMBER 2013</b>		
<b>Sr.No</b>	<b>Period of Trade</b>	<b>Sale Price of Traders (₹/kWh)</b>
1	RTC	4.45
2	PEAK	4.67
3	OFF PEAK	3.24

Source: Information submitted by trading licensees

<b>Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, SEPTEMBER 2013</b>			
<b>Sr.No</b>	<b>ACP</b>	<b>Price in IEX (₹/kWh)</b>	<b>Price in PXIL (₹/kWh)</b>
1	Minimum	1.00	0.95
2	Maximum	12.00	4.58
3	Weighted Average	2.98	2.82

Source: Information submitted by IEX and PXIL

<b>Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, SEPTEMBER 2013</b>			
<b>Sr.No</b>	<b>Term ahead contracts</b>	<b>Actual Scheduled Volume (MUs)</b>	<b>Weighted Average Price (₹/kWh)</b>
1	Intra-Day Contracts	33.17	3.78
2	Day Ahead Contingency Contracts	28.47	3.49
3	Daily Contracts	49.63	3.33
4	Weekly Contracts	31.20	3.50
	<b>Total</b>	<b>142.46</b>	<b>3.50</b>

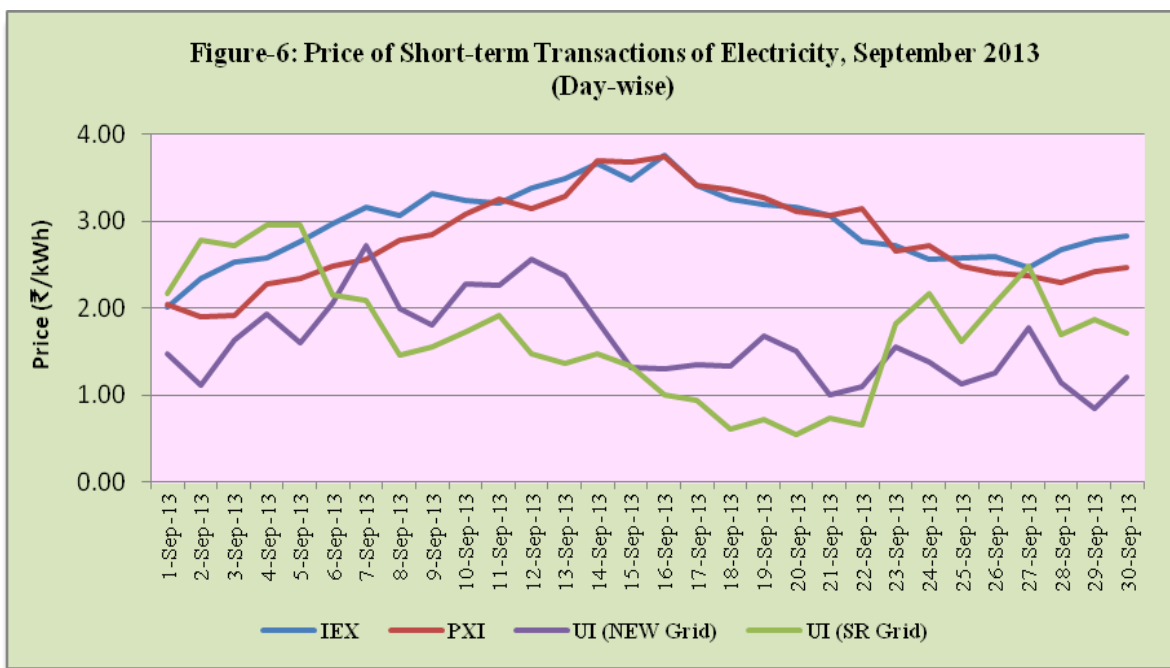
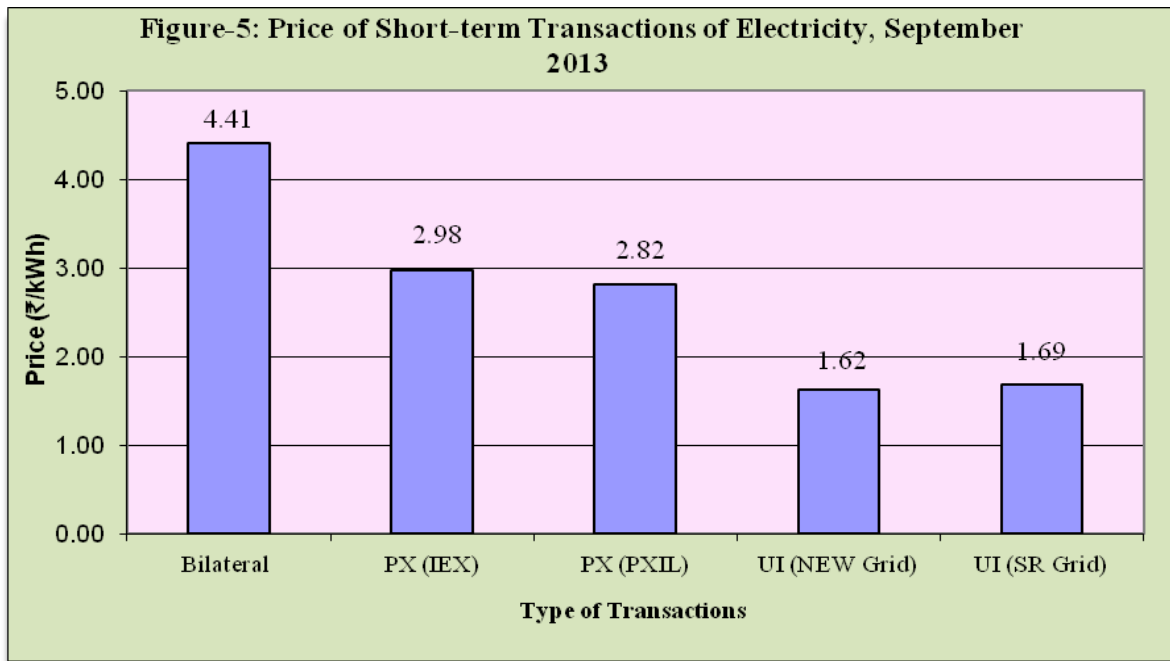
Source: IEX

<b>Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, SEPTEMBER 2013</b>			
<b>Sr.No</b>	<b>Term ahead contracts</b>	<b>Actual Scheduled Volume (MUs)</b>	<b>Weighted Average Price (₹/kWh)</b>
1	Intra-Day Contracts	8.11	3.67
2	Day Ahead Contingency Contracts	2.98	3.75
3	Daily Contracts	100.50	3.54
4	Weekly Contracts	48.09	3.36
	<b>Total</b>	<b>159.68</b>	<b>3.50</b>

Source: PXIL

<b>Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, SEPTEMBER 2013</b>			
<b>Sr.No</b>		<b>Price in NEW Grid (₹/kWh)</b>	<b>Price in SR Grid (₹/kWh)</b>
1	Minimum	0.00	0.00
2	Maximum	12.22	12.22
3	Average	1.62	1.69

Source: NLDC



<b>Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Sale (MUs)</b>	<b>% of Volume</b>
MP	598.13	16.28%
Himachal Pradesh	472.00	12.85%
Karnataka	292.47	7.96%
STERLITE	286.07	7.79%
KARCHAM WANGTOO	243.39	6.62%
Rajasthan	241.15	6.56%
Maharashtra	199.15	5.42%
JINDAL POWER	182.20	4.96%
DVC	169.20	4.61%
SIMHAPURI	131.25	3.57%
West Bengal	131.20	3.57%
J & K	114.67	3.12%
Gujarat	105.82	2.88%
Orissa	99.06	2.70%
MAITHON POWER LTD	91.37	2.49%
SHREE CEMENT	89.34	2.43%
Haryana	54.07	1.47%
Uttarakhand	50.92	1.39%
AD HYDRO	36.75	1.00%
Sikkim	22.56	0.61%
Meghalaya	22.20	0.60%
ACBIL	18.45	0.50%
Chattisgarh	12.04	0.33%
Delhi	5.94	0.16%
Tripura	4.17	0.11%
Jharkhand	0.75	0.02%
<b>Total</b>	<b>3674.30</b>	<b>100.00%</b>
<b>Volume of sale by top 5 States</b>	<b>1892.06</b>	<b>51.49%</b>



<b>Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Purchase (MUs)</b>	<b>% of Volume</b>
Punjab	1201.45	29.31%
Andhra Pradesh	628.63	15.34%
West Bengal	359.29	8.76%
Rajasthan	308.92	7.54%
Gujarat	296.68	7.24%
Delhi	186.42	4.55%
Jharkhand	167.93	4.10%
Tamilnadu	142.69	3.48%
Maharashtra	132.38	3.23%
Uttar Pradesh	130.15	3.18%
Dadra & Nagar Haveli	106.10	2.59%
Haryana	92.31	2.25%
Assam	79.70	1.94%
DVC	63.80	1.56%
Bihar	63.78	1.56%
Karnataka	54.72	1.33%
Himachal Pradesh	23.62	0.58%
Kerala	15.48	0.38%
Goa	13.63	0.33%
Chattisgarh	8.46	0.21%
Sikkim	7.91	0.19%
UT Chandigarh	7.72	0.19%
MP	3.36	0.08%
Tripura	2.46	0.06%
Meenakshi	0.95	0.02%
Uttarakhand	0.68	0.02%
<b>Total</b>	<b>4099.24</b>	<b>100.00%</b>
<b>Volume of Purchase by top 5 States</b>	<b>2794.97</b>	<b>68.18%</b>

<b>Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Sale (MUs)</b>	<b>% of Volume</b>
Gujarat	365.33	12.43%
Delhi	260.69	8.87%
KARCHAM WANGTOO	257.36	8.75%
West Bengal	232.71	7.92%
Kerala	187.30	6.37%
MP	172.80	5.88%
Haryana	168.25	5.72%
JINDAL POWER	164.32	5.59%
Orissa	145.04	4.93%
Himachal Pradesh	136.95	4.66%
Chattisgarh	110.93	3.77%
Maharashtra	109.57	3.73%
STERLITE	88.78	3.02%
Karnataka	68.63	2.33%
Andhra Pradesh	52.46	1.78%
DCPP	50.22	1.71%
ADHUNIK POWER LTD	41.45	1.41%
Sikkim	31.69	1.08%
Rajasthan	28.06	0.95%
J & K	27.32	0.93%
SHREE CEMENT	25.50	0.87%
KSK MAHANADI	24.60	0.84%
EMCO	23.70	0.81%
AD HYDRO	23.24	0.79%
LANCO BUDHIL	22.40	0.76%
SIMHAPURI	18.20	0.62%
Meghalaya	16.89	0.57%
ESSAR POWER	16.58	0.56%
DVC	15.85	0.54%
MAITHON POWER LTD	9.54	0.32%
Uttarakhand	8.09	0.28%
CHUZACHEN HEP	5.95	0.20%
RANGANADI HEP	5.70	0.19%
UT Chandigarh	5.57	0.19%
ACBIL	4.44	0.15%
Assam	3.47	0.12%
NJPC	3.34	0.11%
Arunachal Pradesh	2.48	0.08%
NEEPCO Stations	1.61	0.05%
Nagaland	1.44	0.05%
BALCO	1.40	0.05%
<b>Total</b>	<b>2939.86</b>	<b>100.00%</b>
<b>Volume of sale by top 5 States</b>	<b>1303.39</b>	<b>44.33%</b>

<b>Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Purchase (MUs)</b>	<b>% of Volume</b>
Uttar Pradesh	648.96	22.07%
Gujarat	641.41	21.82%
Rajasthan	397.55	13.52%
Andhra Pradesh	276.93	9.42%
Maharashtra	265.62	9.04%
Haryana	159.68	5.43%
Punjab	103.97	3.54%
ESSAR STEEL	77.28	2.63%
Chattisgarh	65.57	2.23%
Uttarakhand	61.79	2.10%
Himachal Pradesh	51.10	1.74%
Tamilnadu	47.81	1.63%
MP	30.18	1.03%
Karnataka	24.85	0.85%
Daman and Diu	21.56	0.73%
Assam	19.72	0.67%
Kerala	9.74	0.33%
J & K	9.11	0.31%
Bihar	7.57	0.26%
West Bengal	7.54	0.26%
Orissa	5.00	0.17%
Meghalaya	4.18	0.14%
Delhi	2.53	0.09%
UT Chandigarh	0.10	0.00%
Tripura	0.09	0.00%
<b>Total</b>	<b>2939.84</b>	<b>100.00%</b>
<b>Volume of purchase by top 5 States</b>	<b>2230.47</b>	<b>75.87%</b>

<b>Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Export (MUs)</b>	<b>% of Volume</b>
Rajasthan	173.21	12.06%
Uttar Pradesh	120.16	8.37%
Punjab	92.75	6.46%
Haryana	82.89	5.77%
Maharashtra	80.22	5.59%
Delhi	73.34	5.11%
Gujarat	63.47	4.42%
Chattisgarh	61.16	4.26%
Jharkhand	57.36	3.99%
MP	55.89	3.89%
Karnataka	47.74	3.32%
NHPC Stations	46.40	3.23%
West Bengal	45.41	3.16%
Orissa	41.32	2.88%
DVC	32.83	2.29%
Andhra Pradesh	32.44	2.26%
Bihar	32.24	2.25%
Tamilnadu	31.78	2.21%
J & K	23.96	1.67%
Kerala	21.71	1.51%
Goa	21.22	1.48%
Assam	16.81	1.17%
JINDAL POWER	15.48	1.08%
Himachal Pradesh	14.23	0.99%
NJPC	12.11	0.84%
Meghalaya	11.26	0.78%
Pondicherry	11.08	0.77%
KARCHAM WANGTOO	10.42	0.73%
CGPL	10.31	0.72%
Manipur	10.03	0.70%
Uttarakhand	9.22	0.64%
Arunachal Pradesh	7.32	0.51%
Sikkim	6.94	0.48%
Daman and Diu	6.68	0.47%
Dadra & Nagar Haveli	6.31	0.44%
AD HYDRO	5.47	0.38%
UT Chandigarh	5.44	0.38%
MAITHON POWER LTD	5.07	0.35%
NEEPCO Stations	4.59	0.32%
STERLITE	4.45	0.31%
Nagaland	4.24	0.30%
Mizoram	4.08	0.28%
DCPP	3.35	0.23%
LANKO_AMK	3.09	0.22%
NSPCL	2.66	0.19%
Tripura	2.06	0.14%
SIMHAPURI	1.96	0.14%
ACBIL	1.60	0.11%
SHREE CEMENT	1.22	0.08%
BALCO	0.78	0.05%
RGPPL(Dabhol)	0.05	0.00%
<b>Total</b>	<b>1435.78</b>	<b>100.00%</b>
<b>Volume of Export by top 5 States</b>	<b>549.22</b>	<b>38.25%</b>

<b>Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, SEPTEMBER 2013</b>		
<b>Name of the State/UT/Other Regional Entity</b>	<b>Volume of Import (MUs)</b>	<b>% of Volume</b>
Haryana	100.30	8.01%
West Bengal	82.76	6.61%
Maharashtra	82.13	6.56%
Gujarat	75.36	6.02%
Uttar Pradesh	71.43	5.71%
Assam	57.25	4.57%
Uttarakhand	52.95	4.23%
MP	50.88	4.07%
Bihar	50.53	4.04%
Tamilnadu	49.78	3.98%
DVC	46.07	3.68%
Rajasthan	45.90	3.67%
NHPC Stations	43.41	3.47%
Andhra Pradesh	36.98	2.95%
Himachal Pradesh	36.55	2.92%
Chattisgarh	34.61	2.77%
J & K	26.75	2.14%
Orissa	26.60	2.13%
STERLITE	25.46	2.03%
Punjab	21.76	1.74%
KARCHAM WANGTOO	19.17	1.53%
CGPL	18.13	1.45%
Delhi	16.64	1.33%
Kerala	15.96	1.28%
Tripura	13.63	1.09%
JINDAL POWER	13.51	1.08%
Dadra & Nagar Haveli	13.42	1.07%
Goa	13.15	1.05%
Karnataka	10.24	0.82%
ACBIL	8.87	0.71%
NJPC	8.44	0.67%
DCPP	8.33	0.67%
UT Chandigarh	7.78	0.62%
MAITHON POWER LTD	6.90	0.55%
SIMHAPURI	5.57	0.44%
Daman and Diu	5.15	0.41%
Arunachal Pradesh	5.06	0.40%
RGPPL(Dabhol)	4.97	0.40%
SHREE CEMENT	4.71	0.38%
NEEPCO Stations	4.56	0.36%
Sikkim	4.52	0.36%
Meghalaya	3.80	0.30%
LANKO_AMK	3.79	0.30%
Jharkhand	3.35	0.27%
BALCO	2.91	0.23%
Nagaland	2.65	0.21%
Pondicherry	2.63	0.21%
AD HYDRO	2.09	0.17%
Manipur	1.65	0.13%
Mizoram	1.51	0.12%
NSPCL	0.96	0.08%
<b>Total</b>	<b>1251.48</b>	<b>100.00%</b>
<b>Volume of Import by top 5 States</b>	<b>411.97</b>	<b>32.92%</b>

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), SEPTEMBER 2013		
Sr.No.	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	Punjab	1234.43
2	Andhra Pradesh	857.63
3	Uttar Pradesh	730.38
4	Gujarat	478.83
5	Rajasthan	309.96
6	Tamilnadu	208.50
7	Assam	136.39
8	Dadra & Nagar Haveli	113.20
9	Jharkhand	113.17
10	Maharashtra	91.19
11	Bihar	89.64
12	ESSAR STEEL	77.28
13	Uttarakhand	47.19
14	Haryana	47.08
15	West Bengal	40.28
16	Daman and Diu	20.03
17	Tripura	9.95
18	CGPL	7.82
19	Goa	5.56
20	RGPPL(Dabhol)	4.92
21	UT Chandigarh	4.59
22	Meenakshi	0.95
23	BALCO	0.73
24	LANKO_AMK	0.70
25	NEEPCO Stations	-1.64
26	NSPCL	-1.71
27	Mizoram	-2.57
28	NHPC Stations	-2.99
29	Nagaland	-3.03
30	Arunachal Pradesh	-4.74
31	RANGANADI HEP	-5.70
32	CHUZACHEN HEP	-5.95
33	NJPC	-7.02
34	Manipur	-8.38
35	Pondicherry	-8.45
36	ACBIL	-15.62
37	ESSAR POWER	-16.58
38	LANCO BUDHIL	-22.40
39	EMCO	-23.70
40	KSK MAHANADI	-24.60
41	ADHUNIK POWER LTD	-41.45
42	Meghalaya	-42.37
43	DCPP	-45.24
44	Sikkim	-48.76
45	AD HYDRO	-63.37
46	Chattisgarh	-75.48
47	MAITHON POWER LTD	-99.08
48	DVC	-108.01
49	SHREE CEMENT	-111.35
50	J & K	-130.09
51	Delhi	-134.39
52	SIMHAPURI	-145.84
53	Kerala	-167.82
54	Orissa	-253.81
55	Karnataka	-319.02
56	JINDAL POWER	-348.48
57	STERLITE	-353.83
58	KARCHAM WANGTOO	-492.00
59	Himachal Pradesh	-511.91
60	MP	-742.41
* 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		

<b>Table-16: DETAILS OF CONGESTION IN POWER EXCHANGES, SEPTEMBER 2013</b>			
	<b>Details of Congestion</b>	<b>IEX</b>	<b>PXIL</b>
A	Unconstrained Cleared Volume* (MUs)	3061.25	101.56
B	Actual Cleared Volume and hence scheduled (MUs)	2852.88	86.96
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	208.37	14.59
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	6.81%	14.37%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	78.75%	58.13%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	22.80%	28.73%
	6.00 - 12.00 hours	28.53%	30.65%
	12.00 - 18.00 hours	23.59%	24.67%
	18.00 - 24.00 hours	25.09%	15.95%
<i>* This power would have been scheduled had there been no congestion.</i>			
<i>Source: IEX &amp; PXIL</i>			

<b>Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (MUs), SEPTEMBER 2013 (DAY-WISE)</b>						
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Unscheduled Interchange (Over Drawl+Under Generation)	Total Electricity Generation (MU) as given at CEA Website*
	Through Traders and PXs**	Direct	IEX	PXI		
1-Sep-13	80.26	50.76	69.91	3.12	56.51	2817.16
2-Sep-13	80.12	50.91	76.04	2.52	57.14	2817.16
3-Sep-13	76.84	51.54	82.41	3.25	52.52	2820.61
4-Sep-13	77.67	50.91	91.33	2.60	49.27	2827.87
5-Sep-13	82.16	53.78	85.84	3.22	52.89	2856.91
6-Sep-13	82.78	52.29	91.07	4.08	53.92	2888.05
7-Sep-13	86.07	53.28	98.08	3.30	51.76	2876.87
8-Sep-13	84.49	49.85	117.41	2.86	56.18	2811.81
9-Sep-13	94.57	50.85	98.52	2.47	50.20	2812.36
10-Sep-13	95.24	49.00	109.88	2.12	45.99	2856.04
11-Sep-13	94.08	46.23	105.64	2.08	47.96	2902.02
12-Sep-13	88.00	48.17	100.18	3.79	47.69	2910.26
13-Sep-13	91.60	48.51	98.04	3.73	50.78	2877.19
14-Sep-13	92.64	51.51	95.55	3.28	50.95	2852.10
15-Sep-13	86.48	49.86	92.59	3.28	58.95	2766.23
16-Sep-13	96.20	49.27	82.63	3.15	59.70	2707.66
17-Sep-13	94.71	48.24	89.64	1.27	56.07	2734.09
18-Sep-13	94.40	47.30	94.01	3.22	59.45	2753.49
19-Sep-13	96.97	45.82	95.52	4.40	56.73	2780.16
20-Sep-13	99.89	47.77	95.44	3.26	54.11	2758.94
21-Sep-13	81.68	43.38	102.84	3.60	61.68	2699.57
22-Sep-13	70.05	43.76	91.04	1.75	63.07	2502.43
23-Sep-13	85.67	48.42	101.78	1.51	64.09	2605.70
24-Sep-13	89.45	48.59	99.24	3.77	66.45	2648.43
25-Sep-13	88.64	48.59	105.64	3.77	61.37	2647.61
26-Sep-13	84.65	48.11	107.64	3.73	53.95	2648.94
27-Sep-13	83.13	49.07	90.13	2.78	54.48	2644.53
28-Sep-13	85.96	48.35	89.20	1.73	59.01	2651.52
29-Sep-13	89.18	45.15	95.68	1.73	62.42	2528.18
30-Sep-13	87.76	48.27	99.97	1.55	53.86	2610.35
<b>Total</b>	<b>2621.34</b>	<b>1467.57</b>	<b>2852.88</b>	<b>86.96</b>	<b>1669.13</b>	<b>82614.24</b>

Source: NLDC

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

\*\* The volume of bilateral through PXs represents the volume through term-ahead contracts.

# Area Clearing Volume represents the scheduled volume of all the bid areas.



**Table-18: PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (₹/kWh), SEPTEMBER 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-Sep-13	1.00	5.21	2.01	1.54	3.70	2.04	0.00	4.97	1.47	0.00	7.32	2.17
2-Sep-13	1.00	5.38	2.35	1.25	3.00	1.90	0.00	2.48	1.12	0.00	5.44	2.79
3-Sep-13	1.10	5.39	2.53	1.00	3.70	1.91	0.00	4.97	1.64	0.16	5.44	2.72
4-Sep-13	1.45	6.01	2.57	0.95	3.80	2.28	0.00	5.91	1.93	0.31	12.22	2.95
5-Sep-13	1.51	6.01	2.76	1.74	3.80	2.34	0.16	4.50	1.60	0.00	7.79	2.96
6-Sep-13	1.98	6.01	2.97	2.00	4.00	2.49	0.00	4.03	2.06	0.00	3.88	2.15
7-Sep-13	2.38	6.01	3.16	2.00	3.81	2.57	1.09	12.22	2.71	0.00	5.44	2.09
8-Sep-13	2.38	6.01	3.07	2.35	4.20	2.78	0.00	3.57	1.99	0.00	3.41	1.46
9-Sep-13	2.75	6.01	3.32	2.35	4.05	2.85	0.16	3.88	1.81	0.00	6.38	1.56
10-Sep-13	2.74	6.00	3.24	2.74	4.10	3.08	0.62	12.22	2.28	0.00	3.88	1.73
11-Sep-13	2.62	6.01	3.21	2.85	4.50	3.25	0.78	5.44	2.27	0.00	3.57	1.91
12-Sep-13	2.74	6.01	3.38	2.80	4.05	3.15	0.78	6.85	2.55	0.00	3.57	1.48
13-Sep-13	2.90	6.00	3.49	2.88	4.15	3.28	0.93	4.50	2.37	0.00	3.10	1.36
14-Sep-13	2.96	5.50	3.66	3.10	4.55	3.69	0.31	3.10	1.85	0.00	3.41	1.48
15-Sep-13	2.39	5.50	3.48	2.96	4.50	3.68	0.00	3.10	1.32	0.00	3.10	1.34
16-Sep-13	2.39	5.50	3.76	2.75	4.55	3.74	0.00	3.10	1.29	0.00	3.41	1.01
17-Sep-13	2.75	4.51	3.41	2.75	4.50	3.41	0.00	3.41	1.36	0.00	2.95	0.93
18-Sep-13	2.70	9.00	3.26	2.75	4.58	3.36	0.00	2.64	1.34	0.00	2.48	0.61
19-Sep-13	2.53	4.40	3.19	2.75	4.51	3.27	0.00	4.97	1.68	0.00	3.10	0.72
20-Sep-13	2.53	4.49	3.16	2.50	4.49	3.11	0.00	3.10	1.51	0.00	2.79	0.55
21-Sep-13	2.50	5.10	3.07	2.50	4.52	3.07	0.00	2.64	1.00	0.00	2.95	0.73
22-Sep-13	2.48	4.50	2.77	2.53	3.81	3.14	0.00	2.95	1.10	0.00	3.10	0.66
23-Sep-13	2.38	5.10	2.72	2.25	3.40	2.65	0.00	4.50	1.56	0.00	12.22	1.82
24-Sep-13	2.19	3.89	2.57	2.40	3.35	2.72	0.16	3.41	1.38	0.00	4.03	2.17
25-Sep-13	2.00	5.00	2.58	2.20	3.00	2.49	0.00	3.72	1.13	0.00	3.88	1.61
26-Sep-13	1.90	6.00	2.59	2.00	3.00	2.40	0.00	2.95	1.26	0.00	3.57	2.06
27-Sep-13	1.99	5.10	2.47	2.00	3.40	2.38	0.31	3.88	1.78	0.00	4.03	2.48
28-Sep-13	1.90	5.40	2.68	2.00	3.70	2.29	0.00	2.95	1.14	0.47	3.57	1.69
29-Sep-13	1.75	7.00	2.78	2.00	3.75	2.42	0.00	2.48	0.84	0.16	3.88	1.87
30-Sep-13	1.90	12.00	2.84	2.00	3.90	2.46	0.00	2.79	1.20	0.00	3.88	1.72
	<b>1.00#</b>	<b>12.00#</b>	<b>2.98</b>	<b>0.95#</b>	<b>4.58#</b>	<b>2.82</b>	<b>0.00#</b>	<b>12.22#</b>	<b>1.62</b>	<b>0.00#</b>	<b>12.22#</b>	<b>1.69</b>

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

\* Weighted average price computed based on 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), SEPTEMBER 2013**

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	0.00	1201.45	1201.45	0.00	103.97	103.97	92.75	21.76	-70.99	1234.43
Haryana	54.07	92.31	38.24	168.25	159.68	-8.56	82.89	100.30	17.41	47.08
Rajasthan	241.15	308.92	67.77	28.06	397.55	369.49	173.21	45.90	-127.30	309.96
Delhi	5.94	186.42	180.48	260.69	2.53	-258.17	73.34	16.64	-56.71	-134.39
Uttar Pradesh	0.00	130.15	130.15	0.00	648.96	648.96	120.16	71.43	-48.73	730.38
Uttarakhand	50.92	0.68	-50.24	8.09	61.79	53.70	9.22	52.95	43.73	47.19
Himachal Pradesh	472.00	23.62	-448.38	136.95	51.10	-85.85	14.23	36.55	22.32	-511.91
J & K	114.67	0.00	-114.67	27.32	9.11	-18.21	23.96	26.75	2.78	-130.09
UT Chandigarh	0.00	7.72	7.72	5.57	0.10	-5.47	5.44	7.78	2.34	4.59
MP	598.13	3.36	-594.77	172.80	30.18	-142.62	55.89	50.88	-5.02	-742.41
Maharashtra	199.15	132.38	-66.77	109.57	265.62	156.05	80.22	82.13	1.91	91.19
Gujarat	105.82	296.68	190.86	365.33	641.41	276.08	63.47	75.36	11.89	478.83
Chattisgarh	12.04	8.46	-3.58	110.93	65.57	-45.36	61.16	34.61	-26.54	-75.48
Daman and Diu	0.00	0.00	0.00	0.00	21.56	21.56	6.68	5.15	-1.52	20.03
Dadra & Nagar Haveli	0.00	106.10	106.10	0.00	0.00	0.00	6.31	13.42	7.10	113.20
Andhra Pradesh	0.00	628.63	628.63	52.46	276.93	224.47	32.44	36.98	4.54	857.63
Karnataka	292.47	54.72	-237.74	68.63	24.85	-43.78	47.74	10.24	-37.50	-319.02
Kerala	0.00	15.48	15.48	187.30	9.74	-177.56	21.71	15.96	-5.75	-167.82
Tamilnadu	0.00	142.69	142.69	0.00	47.81	47.81	31.78	49.78	18.00	208.50
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	11.08	2.63	-8.45	-8.45
West Bengal	131.20	359.29	228.10	232.71	7.54	-225.17	45.41	82.76	37.35	40.28
Orissa	99.06	0.00	-99.06	145.04	5.00	-140.04	41.32	26.60	-14.72	-253.81
Bihar	0.00	63.78	63.78	0.00	7.57	7.57	32.24	50.53	18.29	89.64
Jharkhand	0.75	167.93	167.18	0.00	0.00	0.00	57.36	3.35	-54.01	113.17
Sikkim	22.56	7.91	-14.64	31.69	0.00	-31.69	6.94	4.52	-2.43	-48.76
DVC	169.20	63.80	-105.40	15.85	0.00	-15.85	32.83	46.07	13.24	-108.01
Arunachal Pradesh	0.00	0.00	0.00	2.48	0.00	-2.48	7.32	5.06	-2.26	-4.74
Assam	0.00	79.70	79.70	3.47	19.72	16.25	16.81	57.25	40.44	136.39
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	10.03	1.65	-8.38	-8.38
Meghalaya	22.20	0.00	-22.20	16.89	4.18	-12.71	11.26	3.80	-7.46	-42.37
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	4.08	1.51	-2.57	-2.57
Nagaland	0.00	0.00	0.00	1.44	0.00	-1.44	4.24	2.65	-1.59	-3.03
Tripura	4.17	2.46	-1.71	0.00	0.09	0.09	2.06	13.63	11.57	9.95
Goa	0.00	13.63	13.63	0.00	0.00	0.00	21.22	13.15	-8.07	5.56
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	46.40	43.41	-2.99	-2.99
NJPC	0.00	0.00	0.00	3.34	0.00	-3.34	12.11	8.44	-3.68	-7.02
AD HYDRO	36.75	0.00	-36.75	23.24	0.00	-23.24	5.47	2.09	-3.38	-63.37
KARCHAM WANGTOO	243.39	0.00	-243.39	257.36	0.00	-257.36	10.42	19.17	8.75	-492.00
SHREE CEMENT	89.34	0.00	-89.34	25.50	0.00	-25.50	1.22	4.71	3.49	-111.35
LANCO BUDHIL	0.00	0.00	0.00	22.40	0.00	-22.40	0.00	0.00	0.00	-22.40
JINDAL POWER	182.20	0.00	-182.20	164.32	0.00	-164.32	15.48	13.51	-1.96	-348.48
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	3.09	3.79	0.70	0.70
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	2.66	0.96	-1.71	-1.71
ACBIL	18.45	0.00	-18.45	4.44	0.00	-4.44	1.60	8.87	7.27	-15.62
BALCO	0.00	0.00	0.00	1.40	0.00	-1.40	0.78	2.91	2.13	0.73
RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	0.05	4.97	4.92	4.92
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	10.31	18.13	7.82	7.82
DCPP	0.00	0.00	0.00	50.22	0.00	-50.22	3.35	8.33	4.99	-45.24
EMCO	0.00	0.00	0.00	23.70	0.00	-23.70	0.00	0.00	0.00	-23.70
ESSAR STEEL	0.00	0.00	0.00	0.00	77.28	77.28	0.00	0.00	0.00	77.28
KSK MAHANADI	0.00	0.00	0.00	24.60	0.00	-24.60	0.00	0.00	0.00	-24.60

ESSAR POWER	0.00	0.00	0.00	16.58	0.00	-16.58	0.00	0.00	0.00	-16.58
SIMHAPURI	131.25	0.00	-131.25	18.20	0.00	-18.20	1.96	5.57	3.61	-145.84
Meenakshi	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.95
STERLITE	286.07	0.00	-286.07	88.78	0.00	-88.78	4.45	25.46	21.01	-353.83
MAITHON POWER LTD	91.37	0.00	-91.37	9.54	0.00	-9.54	5.07	6.90	1.83	-99.08
ADHUNIK POWER LTD	0.00	0.00	0.00	41.45	0.00	-41.45	0.00	0.00	0.00	-41.45
CHUZACHEN HEP	0.00	0.00	0.00	5.95	0.00	-5.95	0.00	0.00	0.00	-5.95
NEEPCO Stations	0.00	0.00	0.00	1.61	0.00	-1.61	4.59	4.56	-0.03	-1.64
RANGANADI HEP	0.00	0.00	0.00	5.70	0.00	-5.70	0.00	0.00	0.00	-5.70

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) TRANSACTED THROUGH POWER EXCHANGES, SEPTEMBER 2013					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non-Solar
A	Volume of Buy Bid	5880	38195	832	11636
B	Volume of Sell Bid	37028	2325171	12493	1124625
C	Ratio of Buy Bid to Sell Bid Volume	0.16	0.02	0.07	0.01
D	Market Clearing Volume (MWh)	5880	38195	832	11636
E	Market Clearing Price (₹/MWh)	9300	1500	9300	1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

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