

Monthly Report on Short-term Transactions of Electricity in India

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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
DB Power	Diligent Power Pvt. Ltd.
DCPP	Donga Mahua Captive Power Plant
DHARIWAL POWER	Dhariwal Power Station
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR STEEL	Essar Steel Ltd
GMR KAMALANGA	GMR Kamalanga Energy Ltd.
IEX	Indian Energy Exchange Limited
J&K	Jammu & Kashmir
JINDAL POWER	Jindal Power Limited
JINDAL STAGE-II	Jindal Power Ltd Stage II
JITPL	Jindal India Thermal Power Ltd.
KARCHAM WANGTOO	Jaypee Karcham Hydro Corporation Limited
KSK MAHANADI	KSK Mahanadi Power Ltd
LANCO BUDHIL	Lanco Budhil Hydro Power Private Limited
LANKO_AMK	Lanco Amarkantak Power Private Limited
MALANA	Malana Hydroelectric Plant
Meenakshi	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO Stations	North Eastern Electric Power Corporation Limited. Stations
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
ONGC PALATANA	Oil and Natural Gas Corporation, Palatana
OTC	Over The Counter
PX	Power Exchange
PXIL	Power Exchange India Limited

RANGIT HEP	Rangit Hydro electric power 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
STERLITE	Sterlite Energy Limited
TEESTA HEP	Teesta Hydro electric power project
UI	Unscheduled Interchange
UT	Union Territory
VANDANA VIDYUT	Vandana Vidyut Limited

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 analyse bilateral contracts executed by traders; (v) to provide information on volume and price of Renewable Energy Certificates (RECs) transacted through power exchanges; and (vi) to disclose/disseminate all relevant market information. The analysis of the report for the month of August, 2014 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of August 2014, total electricity generation excluding generation from renewable and captive power plants in India was 89858.57 MUs (Table-1).

Of the total electricity generation, 9634.14 MUs (10.72%) were transacted through short-term, comprising of 5486.72 MUs (6.11%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2522.08 MUs (2.81%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1625.34 MUs (1.81%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 56.95% (36.42% through traders and term-ahead contracts on Power Exchanges and 20.53% directly between distribution companies) followed by 26.18% through day ahead collective transactions on Power Exchanges and 16.87% 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 46 trading licensees as on 31.08.2014, of which only 23 have engaged in trading during August 2014. Top 5 trading licensees had a share of 70.55% 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 0.1817 for the month of August 2014, 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 2495.91 MUs and 26.18 MUs respectively. The volume of total Buy bids and Sale bids was 4720.25 MUs and 3062.89 MUs respectively in IEX and 65.44 MUs and 36.60 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was greater demand in IEX (1.54 times) and PXIL (1.79 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 40.43 MUs and 80.34 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 ₹4.15/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 ₹4.15/kWh, ₹4.82kWh and ₹3.98/kWh respectively. Minimum and Maximum sale prices were ₹1.83/kWh and ₹7.99/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, ₹10.80/kWh and ₹4.33/kWh respectively in IEX and ₹1.00/kWh, ₹6.80/kWh and ₹3.68/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹5.64/kWh and ₹4.55/kWh respectively (Table-6 and Table-7).

(iii) Price of electricity transacted Through UI: The average UI price was ₹3.14/kWh for all India grid. Minimum and Maximum UI prices were ₹0.00/kWh and ₹8.24/kWh respectively in the All India Grid.

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 58.20% of the volume, and these were Rajasthan, Himachal Pradesh, Jaypee Karcham Hydro Corporation Ltd, Karnataka and Jammu & Kashmir. Top 5 regional entities purchased 69.36% of the volume, and these were Haryana, Punjab, Andhra Pradesh, Telangana and Delhi (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 39.57% of the volume, and these were Gujarat, Haryana, Himachal Pradesh, Sterlite India Ltd and Jindal Power Ltd. Top 5 regional entities purchased 55.80% of the volume, and these were Rajasthan, West Bengal, Uttar Pradesh, Maharashtra, and Gujarat (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 39.88% of the volume, and these were Madhya Pradesh, Maharashtra, Haryana, Gujarat and Rajasthan. Top 5 regional entities overdrew 39.79% of the volume, and these were Uttar Pradesh, Punjab, Rajasthan, Maharashtra and Telangana (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 Himachal Pradesh, Jaypee Karcham Hydro

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.

Corporation Ltd., Karnataka, Jindal Power Ltd and Rajasthan. Top 5 electricity purchasing regional entities were Punjab, Haryana, Uttar Pradesh, Andhra Pradesh and Telangana.

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 August 2014, 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 7.42% and -4.60%⁴ of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 76.21% in IEX and 31.25% in PXIL.

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.

⁴ In some instances, after market splitting, the Actual Cleared Volume can be greater than the Unconstrained Cleared Volume.

V: Analysis of Bilateral Contracts executed by Traders in September 2014⁵

(i) *Duration of bilateral contracts:*

During September, 2014, a total of 140 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 2420 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 84.3% of the contracts were executed for a duration of up to one week, followed by 14.3% of the contracts executed for a duration of more than a week and upto one month and with a small contribution of 1.4% of the contracts executed for a duration more than three months and upto 12 months.

During the same period, 30 banking/swapping bilateral contracts were also executed for the volume of 67 MUs.

(ii) *Forward Curve based on price of bilateral contracts:*

A forward curve reflects present day's expectation of prices for a future period. The forward curve of electricity prices are based on sale prices of bilateral contracts executed by traders. For constructing the forward curve, the price of each contract is taken to be price for each day of that contract's period. On the basis of these prices, weighted average price for each day is calculated using various sale prices of contracts for delivery on that particular day.

Figure-8 represents the forward curve of electricity sale prices for the period from October 2014 to September 2015 based on bilateral contracts executed till September, 2014. The forward curve drawn for August 2014 has also been depicted for the period October 2014 onwards for comparison purposes. For the last few months no contracts were being executed for delivery beyond October 2014. With the execution of new contracts at higher prices in September 2014 for delivery till September 2015, the forward curve is now depicted till September 2015 and there is a significant increase in the forward prices from November, 2014 onwards.

⁵ 'Monthly OTC (Electricity Traders) report' based on analysis of weekly reports has been discontinued and Analysis of Bilateral Contracts is being presented in this report hereinafter.

VI: 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.

The details of REC transactions for the month of August 2014 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 367 and 796 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 15736 and 34945 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 shows that there was less demand for Solar RECs and Non-Solar RECs. For Solar RECs, the ratio of buy and sell bids was 0.002 and 0.007 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.004 and 0.007 in IEX and PXIL respectively

VII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 10.72%.
- Of the total short-term transactions of electricity, 56.95% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 26.18% through Power Exchanges and 16.87% through UI.
- Top 5 trading licensees had a share of 70.55% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1817, indicating moderate concentration of market power.
- The price of electricity transacted through trading licensees was ₹4.15/kWh. The price of electricity transacted through IEX and PXIL was ₹4.33/kWh and ₹3.68/kWh respectively.
- The price of electricity transacted through UI was ₹3.14/kWh
- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was more demand in IEX (1: 1.54) and PXIL (1: 1.79) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Himachal Pradesh, Jaypee Karcham Hydro Corporation Ltd., Karnataka, Jindal Power Ltd and Rajasthan. Top 5 electricity purchasing regional entities were Punjab, Haryana, Uttar Pradesh, Andhra Pradesh and Telangana.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 7.42% and -4.60% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 76.21% in IEX and 31.25% in PXIL.

- In September 2014, 84.3% of the bilateral contracts (excluding banking/swapping) were executed for a duration of up to one week, followed by 14.3% of the contracts were executed for a duration of more than a week and upto one month.1.4% of the contracts were executed for a duration of more than three months and upto 12 months.
- There is an increasing trend in the forward prices in November, 2014 because contracts executed in September 2014 were at higher prices when compared to contracts executed till August 2014.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 367 and 796 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 15736 and 34945 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), AUGUST 2014				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	5486.72	56.95%	6.11%
	(i) Through Traders and PXs	3508.57	36.42%	3.90%
	(ii) Direct	1978.15	20.53%	2.20%
2	Through Power Exchanges	2522.08	26.18%	2.81%
	(i) IEX	2495.91	25.91%	2.78%
	(ii) PXIL	26.18	0.27%	0.03%
3	Through UI	1625.34	16.87%	1.81%
	Total	9634.14	100.00%	10.72%
	Total Generation	89858.57	—	—

Source: NLDC

Figure-1: Volume of Short-term Transactions of Electricity, August 2014

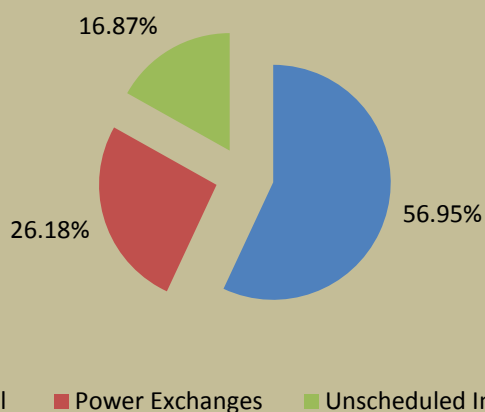


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, August 2014

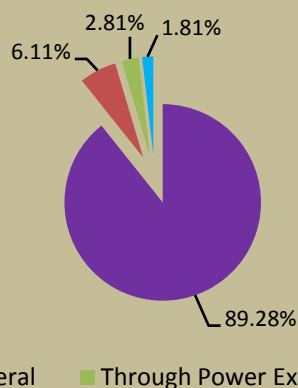


Figure-3: Volume of Short-term Transactions of Electricity, August 2014 (Day-wise)

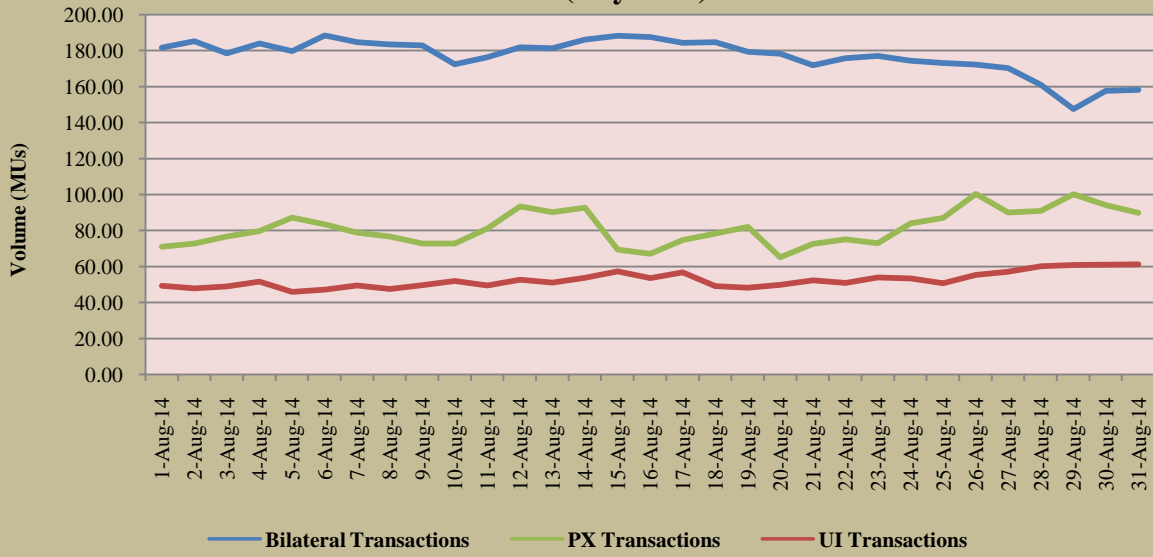


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, AUGUST 2014			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	37.76%	0.1426
2	Mittal Processors (P) Ltd.	10.06%	0.0101
3	Tata Power Trading Company (P) Ltd.	9.56%	0.0091
4	JSW Power Trading Company Ltd	6.62%	0.0044
5	NTPC Vidyut Vyapar Nigam Ltd.	6.56%	0.0043
6	Adani Enterprises Ltd.	6.54%	0.0043
7	GMR Energy Trading Ltd.	4.84%	0.0023
8	Shree Cement Ltd.	4.81%	0.0023
9	Knowledge Infrastructure Systems (P) Ltd	3.07%	0.0009
10	Manikaran Power Ltd.	1.99%	0.0004
11	Essar Electric Power Development Corp. Ltd.	1.57%	0.0002
12	RPG Power Trading Company Ltd.	1.44%	0.0002
13	Arunachal Pradesh Power Corporation (P) ltd	1.30%	0.0002
14	National Energy Trading & Services Ltd.	1.21%	0.0001
15	Reliance Energy Trading (P) Ltd	1.05%	0.0001
16	Jaiprakash Associates Ltd.	0.63%	0.0000
17	Instinct Infra & Power Ltd.	0.44%	0.0000
18	My Home Power Private Ltd.	0.34%	0.0000
19	SN Power Markets Pvt. Ltd.	0.13%	0.0000
20	Indrajit Power Technology (P) Ltd.	0.08%	0.0000
21	Customized Energy Solutions India (P) Ltd.	0.04%	0.0000
22	Ambitious Power Trading Company Ltd.	0.003%	0.0000
23	Pune Power Development (P) Ltd.	0.002%	0.0000
TOTAL		100.00%	0.1817
Top 5 trading licensees		70.55%	
<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>			

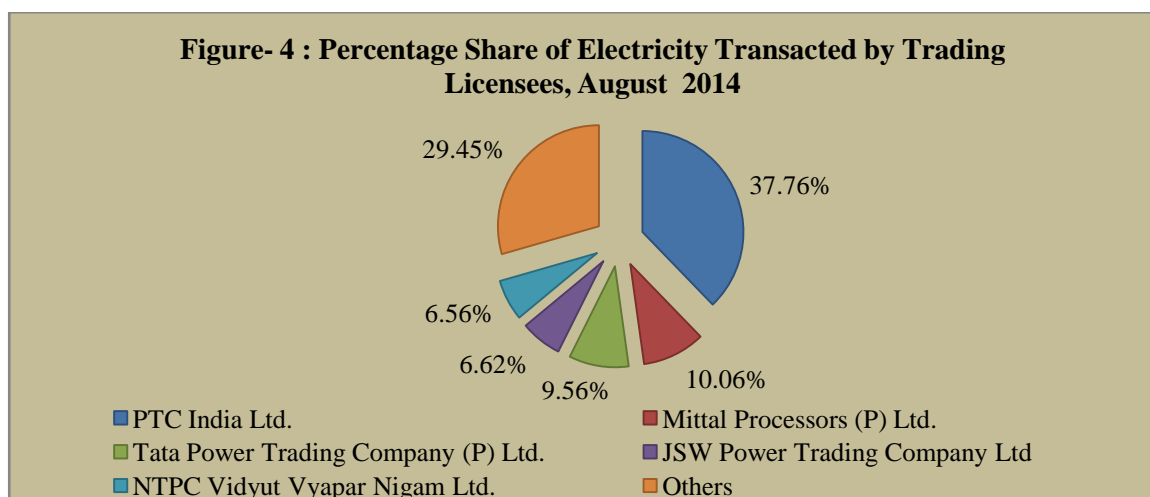


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, AUGUST 2014		
Sr.No		Sale Price of Traders (₹/kWh)
1	Minimum	1.83
2	Maximum	7.99
3	Weighted Average	4.15

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), AUGUST 2014		
Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	4.15
2	PEAK	4.82
3	OFF PEAK	3.98

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, AUGUST 2014			
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	1.00	1.00
2	Maximum	10.80	6.80
3	Weighted Average	4.33	3.68

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, AUGUST 2014			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	17.95	5.73
2	Day Ahead Contingency Contracts	22.48	5.56
	Total	40.43	5.64

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, AUGUST 2014			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	33.91	5.28
2	Daily Contracts	46.43	4.02
	Total	80.34	4.55

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, AUGUST 2014		
Sr.No		Price in All India Grid (₹/kWh)
1	Minimum	0.00
2	Maximum	8.24
3	Average	3.14

Source: NLDC

Figure-5: Price of Short-term Transactions of Electricity, August 2014

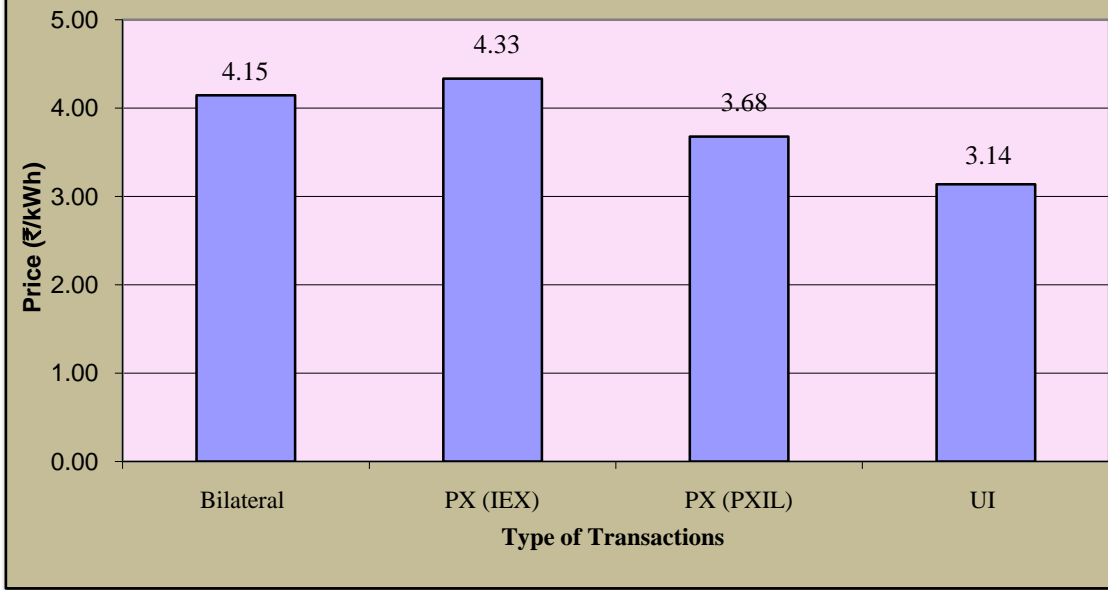


Figure-6: Price of Short-term Transactions of Electricity, August 2014 (Day-wise)

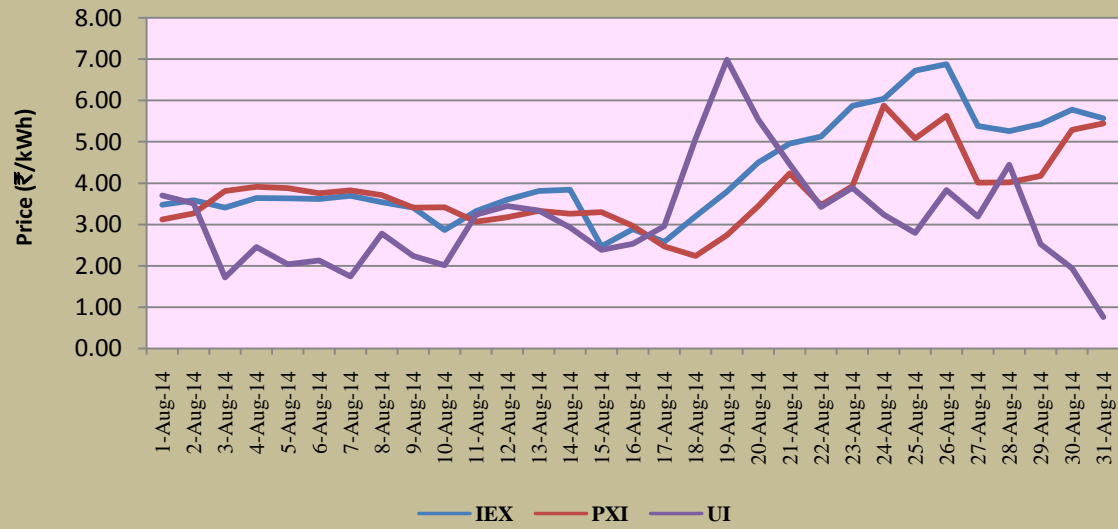


Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, AUGUST 2014		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Rajasthan	772.59	16.68%
Himachal Pradesh	750.26	16.20%
KARCHAM WANGTOO	452.88	9.78%
Karnataka	373.53	8.07%
J & K	345.90	7.47%
Gujarat	299.17	6.46%
MP	259.61	5.61%
SIMHAPURI	222.75	4.81%
JINDAL POWER	206.68	4.46%
STERLITE	153.59	3.32%
West Bengal	131.88	2.85%
Orissa	107.29	2.32%
AD HYDRO	100.65	2.17%
SHREE CEMENT	89.24	1.93%
DVC	74.27	1.60%
Meghalaya	46.85	1.01%
MAITHON POWER LTD	42.15	0.91%
Chattisgarh	34.33	0.74%
NSPCL	30.28	0.65%
Haryana	29.30	0.63%
Assam	24.52	0.53%
Uttarakhand	17.51	0.38%
Jharkhand	16.39	0.35%
JITPL	14.64	0.32%
Telangana	14.29	0.31%
ACBIL	9.90	0.21%
Delhi	6.90	0.15%
Tripura	3.66	0.08%
Arunachal Pradesh	0.06	0.00%
Total	4631.05	100.00%
Volume of sale by top 5 States	2695.15	58.20%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, AUGUST 2014		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Haryana	1143.89	22.78%
Punjab	1039.97	20.71%
Andhra Pradesh	538.06	10.72%
Telangana	413.51	8.24%
Delhi	346.87	6.91%
Uttar Pradesh	294.76	5.87%
Maharashtra	244.01	4.86%
West Bengal	206.16	4.11%
Bihar	190.33	3.79%
Orissa	127.31	2.54%
Jharkhand	116.24	2.32%
Rajasthan	105.30	2.10%
Uttarakhand	84.32	1.68%
Chattisgarh	40.35	0.80%
GOA	20.62	0.41%
Dadra & Nagar Haveli	19.92	0.40%
Assam	17.51	0.35%
Karnataka	16.17	0.32%
Daman and Diu	14.28	0.28%
Gujarat	9.35	0.19%
Sikkim	8.03	0.16%
UT Chandigarh	7.44	0.15%
MP	6.12	0.12%
Kerala	3.81	0.08%
J & K	2.06	0.04%
Tripura	1.25	0.02%
Himachal Pradesh	1.12	0.02%
Meenakshi	0.99	0.02%
DVC	0.92	0.02%
Arunachal Pradesh	0.06	0.00%
Meghalaya	0.01	0.00%
Total	5020.74	100.00%
Volume of Purchase by top 5 States	3482.31	69.36%

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, AUGUST 2014		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	236.25	9.37%
Haryana	214.22	8.49%
Himachal Pradesh	196.60	7.80%
STERLITE	180.80	7.17%
JINDAL POWER	170.17	6.75%
JINDAL STAGE-II	124.83	4.95%
Chattisgarh	115.59	4.58%
Orissa	114.03	4.52%
Delhi	105.72	4.19%
Maharashtra	103.07	4.09%
Karnataka	79.62	3.16%
KARCHAM WANGTOO	68.26	2.71%
J & K	66.34	2.63%
JITPL	63.85	2.53%
Sikkim	57.24	2.27%
ACBIL	53.58	2.12%
TEESTA HEP	48.51	1.92%
CHUZACHEN HEP	44.91	1.78%
Rajasthan	37.17	1.47%
DCPP	32.91	1.30%
Tripura	29.80	1.18%
MP	29.64	1.18%
MAITHON POWER LTD	28.42	1.13%
NJPC	26.67	1.06%
EMCO	24.75	0.98%
LANCO BUDHIL	18.90	0.75%
Meghalaya	17.69	0.70%
AD HYDRO	17.47	0.69%
DVC	16.33	0.65%
GMR KAMALANGA	16.11	0.64%
ESSAR POWER	15.33	0.61%
DHARIWAL POWER	15.23	0.60%
West Bengal	15.08	0.60%
ONGC PALATANA	14.38	0.57%
Arunachal Pradesh	10.82	0.43%
SHREE CEMENT	10.28	0.41%
Assam	9.55	0.38%
Telangana	9.45	0.37%
VANDANA VIDYUT	9.44	0.37%
RANGIT HEP	9.41	0.37%
KSK MAHANADI	9.38	0.37%
SIMHAPURI	9.27	0.37%
NEEPCO Stations	9.08	0.36%
Mizoram	8.34	0.33%
MALANA	7.24	0.29%
Manipur	6.91	0.27%
Andhra Pradesh	3.17	0.13%
Uttarakhand	2.52	0.10%
Meenakshi	2.39	0.09%
Kerala	1.76	0.07%

DB POWER	1.45	0.06%
ADHUNIK POWER LTD	1.24	0.05%
Nagaland	0.83	0.03%
Punjab	0.04	0.00%
Total	2522.08	100.00%
Volume of sale by top 5 States	998.05	39.57%

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, AUGUST 2014		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Rajasthan	316.73	12.56%
West Bengal	312.77	12.40%
Uttar Pradesh	291.07	11.54%
Maharashtra	261.95	10.39%
Gujarat	224.73	8.91%
Bihar	186.40	7.39%
Telangana	185.01	7.34%
Punjab	117.44	4.66%
Delhi	103.68	4.11%
Kerala	89.44	3.55%
MP	89.01	3.53%
Andhra Pradesh	71.54	2.84%
Assam	66.78	2.65%
Haryana	66.28	2.63%
BALCO	62.54	2.48%
Daman and Diu	24.45	0.97%
ESSAR STEEL	12.24	0.49%
Karnataka	9.25	0.37%
Meghalaya	9.03	0.36%
Himachal Pradesh	5.62	0.22%
UT Chandigarh	5.11	0.20%
Uttarakhand	3.99	0.16%
J & K	3.85	0.15%
Arunachal Pradesh	1.01	0.04%
Tamilnadu	0.72	0.03%
Tripura	0.70	0.03%
Chattisgarh	0.52	0.02%
Manipur	0.19	0.01%
Orissa	0.05	0.00%
Total	2522.08	100.00%
Volume of purchase by top 5 States	1407.25	55.80%

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, AUGUST 2014		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
MP	100.41	8.93%
Maharashtra	100.00	8.90%
Haryana	87.46	7.78%
Gujarat	80.87	7.19%
Rajasthan	79.57	7.08%
Delhi	59.82	5.32%
Tamilnadu	54.22	4.82%
NHPC Stations	46.30	4.12%
Orissa	39.98	3.56%
Karnataka	39.38	3.50%
West Bengal	38.98	3.47%
Bihar	32.51	2.89%
Punjab	32.02	2.85%
Uttar Pradesh	27.56	2.45%
Andhra Pradesh	22.13	1.97%
CGPL	22.11	1.97%
J & K	22.03	1.96%
Chattisgarh	19.81	1.76%
Telangana	19.18	1.71%
JINDAL POWER	18.54	1.65%
Jharkhand	18.10	1.61%
Uttarakhand	15.88	1.41%
DVC	13.01	1.16%
Assam	12.48	1.11%
STERLITE	9.86	0.88%
Meghalaya	9.24	0.82%
Nagaland	8.61	0.77%
Goa	8.40	0.75%
Himachal Pradesh	7.59	0.67%
KARCHAM WANGTOO	6.75	0.60%
MAITHON POWER LTD	6.49	0.58%
GOA	6.25	0.56%
NEEPCO Stations	6.25	0.56%
Manipur	5.97	0.53%
Pondicherry	5.07	0.45%
ACBIL	5.05	0.45%
Sikkim	4.76	0.42%
Arunachal Pradesh	4.49	0.40%
Dadra & Nagar Haveli	3.48	0.31%
AD HYDRO	3.11	0.28%
Tripura	2.83	0.25%
Kerala	2.46	0.22%
BALCO	2.01	0.18%
LANKO_AMK	1.98	0.18%
Daman and Diu	1.94	0.17%
Mizoram	1.84	0.16%
SIMHAPURI	1.81	0.16%
NJPC	1.75	0.16%
NSPCL	1.39	0.12%
SHREE CEMENT	0.93	0.08%
DCPP	0.86	0.08%
UT Chandigarh	0.58	0.05%
RGPPL	0.10	0.01%
Total	1124.19	100.00%
Volume of Export by top 5 States	448.31	39.88%

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, AUGUST 2014

Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Uttar Pradesh	226.15	15.71%
Punjab	103.43	7.19%
Rajasthan	99.56	6.92%
Maharashtra	72.32	5.02%
Telangana	71.20	4.95%
J & K	70.74	4.91%
West Bengal	58.13	4.04%
DVC	55.77	3.87%
Kerala	55.49	3.85%
Chattisgarh	50.85	3.53%
Andhra Pradesh	44.01	3.06%
Gujarat	35.84	2.49%
UT Chandigarh	35.57	2.47%
Bihar	35.00	2.43%
Uttarakhand	33.81	2.35%
Haryana	30.62	2.13%
Himachal Pradesh	30.06	2.09%
GOA	29.49	2.05%
Karnataka	26.43	1.84%
MP	25.97	1.80%
Tamilnadu	23.20	1.61%
Orissa	22.74	1.58%
Delhi	22.48	1.56%
Jharkhand	21.48	1.49%
Assam	20.61	1.43%
Daman and Diu	20.47	1.42%
Dadra & Nagar Haveli	15.76	1.10%
AD HYDRO	12.99	0.90%
BALCO	11.17	0.78%
NHPC Stations	7.39	0.51%
KARCHAM WANGTOO	7.06	0.49%
Tripura	7.03	0.49%
CGPL	6.17	0.43%
STERLITE	4.77	0.33%
RGPPL	4.28	0.30%
Arunachal Pradesh	4.19	0.29%
Pondicherry	3.92	0.27%
ACBIL	3.81	0.26%
MAITHON POWER LTD	3.10	0.22%
DCPP	3.08	0.21%
NEEPCO Stations	2.94	0.20%
Mizoram	2.86	0.20%
Sikkim	2.64	0.18%
Nagaland	2.00	0.14%
NJPC	1.84	0.13%
Meghalaya	1.67	0.12%
SIMHAPURI	1.57	0.11%
Goa	1.51	0.10%
JINDAL POWER	1.37	0.10%
Manipur	1.32	0.09%
SHREE CEMENT	1.24	0.09%
LANKO_AMK	1.19	0.08%
NSPCL	1.06	0.07%
Total	1439.37	100.00%
Volume of Import by top 5 States	572.66	39.79%

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), AUGUST 2014		
Sr.No.	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	Punjab	1228.78
2	Haryana	909.82
3	Uttar Pradesh	784.42
4	Andhra Pradesh	628.32
5	Telangana	626.80
6	West Bengal	391.12
7	Bihar	379.22
8	Maharashtra	375.21
9	Delhi	300.60
10	Kerala	144.51
11	Jharkhand	103.22
12	Uttarakhand	86.21
13	BALCO	71.70
14	Assam	58.36
15	Daman and Diu	57.27
16	UT Chandigarh	47.54
17	GOA	43.86
18	Dadra & Nagar Haveli	32.21
19	ESSAR STEEL	12.24
20	RGPPL	4.19
21	LANKO_AMK	-0.79
22	Pondicherry	-1.15
23	ADHUNIK POWER LTD	-1.24
24	Meenakshi	-1.40
25	DB POWER	-1.45
26	Goa	-6.89
27	MALANA	-7.24
28	Mizoram	-7.33
29	Nagaland	-7.43
30	KSK MAHANADI	-9.38
31	RANGIT HEP	-9.41
32	VANDANA VIDYUT	-9.44
33	Arunachal Pradesh	-10.11
34	Manipur	-11.37
35	NEEPCO Stations	-12.39
36	ONGC PALATANA	-14.38
37	DHARIWAL POWER	-15.23
38	ESSAR POWER	-15.33
39	CGPL	-15.94
40	GMR KAMALANGA	-16.11
41	LANCO BUDHIL	-18.90
42	EMCO	-24.75
43	NJPC	-26.59
44	Tripura	-27.31
45	Tamilnadu	-30.31
46	NSPCL	-30.60
47	DCPP	-30.68
48	NHPC Stations	-38.91
49	CHUZACHEN HEP	-44.91
50	DVC	-46.92
51	TEESTA HEP	-48.51
52	Sikkim	-51.34
53	Meghalaya	-63.07
54	ACBIL	-64.72

55	MAITHON POWER LTD	-73.96
56	Chattisgarh	-78.00
57	JITPL	-78.48
58	SHREE CEMENT	-99.22
59	AD HYDRO	-108.25
60	Orissa	-111.19
61	JINDAL STAGE-II	-124.83
62	SIMHAPURI	-232.26
63	MP	-268.55
64	STERLITE	-339.48
65	Gujarat	-346.38
66	J & K	-357.61
67	Rajasthan	-367.75
68	JINDAL POWER	-394.01
69	Karnataka	-440.68
70	KARCHAM WANGTOO	-520.82
71	Himachal Pradesh	-917.65
* 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, AUGUST 2014			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	2695.90	25.03
B	Actual Cleared Volume and hence scheduled [#] (MUs)	2495.91	26.18
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	200.00	-1.15
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	7.42%	-4.60%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	76.21%	31.25%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25.93%	3.66%
	6.00 - 12.00 hours	28.31%	37.63%
	12.00 - 18.00 hours	23.85%	30.97%
	18.00 - 24.00 hours	21.91%	27.74%
* This power would have been scheduled had there been no congestion.			
# In some instances, after market splitting the Actual Cleared Volume can be greater than the Unconstrained Cleared Volume.			
Source: IEX & PXIL & NLDC			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (MUs), AUGUST 2014 (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-Aug-14	116.00	65.62	70.44	0.45	49.18	2882.15
2-Aug-14	118.21	67.02	71.92	0.72	47.79	2850.96
3-Aug-14	116.19	62.24	75.89	0.81	48.90	2725.95
4-Aug-14	122.53	61.45	79.10	0.62	51.53	2729.06
5-Aug-14	115.55	64.13	86.56	0.63	45.86	2761.37
6-Aug-14	118.52	69.86	82.53	0.91	47.09	2806.50
7-Aug-14	119.19	65.52	78.24	0.55	49.45	2822.98
8-Aug-14	118.37	65.07	75.76	0.89	47.42	2853.32
9-Aug-14	114.26	68.53	71.73	1.04	49.51	2828.89
10-Aug-14	104.69	67.71	71.73	0.98	51.83	2752.24
11-Aug-14	110.14	66.16	80.16	0.97	49.44	2828.52
12-Aug-14	113.88	67.83	91.96	1.42	52.59	2875.86
13-Aug-14	113.50	67.73	89.21	1.05	50.91	2885.44
14-Aug-14	115.44	70.66	91.68	0.98	53.66	2890.28
15-Aug-14	117.16	71.12	67.78	1.46	57.26	2783.08
16-Aug-14	119.53	68.01	65.56	1.43	53.47	2793.80
17-Aug-14	116.85	67.37	73.27	1.39	56.72	2833.60
18-Aug-14	120.04	64.64	76.87	1.32	49.07	2980.61
19-Aug-14	117.51	61.77	80.93	1.00	48.16	3051.39
20-Aug-14	118.97	59.22	64.35	0.69	49.83	3060.94
21-Aug-14	117.91	53.97	71.84	0.73	52.28	3109.93
22-Aug-14	121.91	53.76	74.63	0.45	50.90	3114.53
23-Aug-14	124.94	52.02	72.48	0.36	53.82	3107.71
24-Aug-14	115.11	59.29	82.79	1.20	53.21	2985.95
25-Aug-14	113.62	59.50	86.66	0.40	50.62	3057.20
26-Aug-14	112.42	59.67	99.96	0.40	55.17	3039.98
27-Aug-14	109.60	60.68	89.93	0.09	57.03	2984.32
28-Aug-14	94.03	66.94	90.57	0.40	60.01	2942.66
29-Aug-14	86.56	60.86	99.80	0.41	60.74	2895.11
30-Aug-14	92.01	65.54	92.96	1.21	60.82	2865.05
31-Aug-14	93.92	64.25	88.61	1.21	61.08	2759.19
Total	3508.57	1978.15	2495.91	26.18	1625.34	89858.57

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), AUGUST 2014 (DAY-WISE)

Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Draw/Over Drawl from the Grid (UI)		
	Date	Minimum ACP	Maximum ACP	Weighted Average Price*	Minimum ACP	Maximum ACP	Weighted Average Price*	All India Grid	
Minimum Price								Maximum Price	Average Price**
1-Aug-14	2.31	6.26	3.47	1.70	7.80	3.12	0.00	8.24	3.70
2-Aug-14	1.49	6.35	3.58	2.60	3.95	3.27	0.00	8.24	3.51
3-Aug-14	1.97	6.30	3.41	2.50	5.25	3.81	0.00	5.32	1.72
4-Aug-14	1.89	6.60	3.64	2.54	5.00	3.91	0.00	8.24	2.46
5-Aug-14	1.85	6.66	3.64	2.90	5.50	3.88	0.00	8.24	2.04
6-Aug-14	1.73	6.79	3.61	2.10	5.51	3.76	0.00	7.20	2.13
7-Aug-14	1.68	6.81	3.70	2.70	5.50	3.83	0.00	6.36	1.74
8-Aug-14	1.80	6.91	3.54	2.65	5.50	3.71	0.00	7.20	2.78
9-Aug-14	1.84	6.83	3.41	1.88	5.50	3.41	0.00	7.82	2.24
10-Aug-14	1.05	6.96	2.87	2.70	5.50	3.42	0.00	6.36	2.01
11-Aug-14	1.59	6.83	3.32	1.70	4.00	3.07	0.00	8.24	3.24
12-Aug-14	2.50	6.96	3.60	1.95	4.00	3.18	0.00	8.24	3.45
13-Aug-14	2.47	6.96	3.81	2.50	5.50	3.33	0.00	8.24	3.34
14-Aug-14	2.44	6.91	3.84	2.45	5.50	3.26	0.00	8.24	2.93
15-Aug-14	1.00	6.76	2.47	2.50	5.50	3.30	0.00	8.24	2.39
16-Aug-14	1.00	6.82	2.89	2.00	5.50	2.97	0.00	8.24	2.54
17-Aug-14	1.00	6.82	2.58	1.10	4.00	2.47	0.00	8.24	2.96
18-Aug-14	1.73	6.96	3.20	1.00	3.50	2.24	1.07	8.24	5.08
19-Aug-14	2.47	6.91	3.79	1.80	3.80	2.74	2.41	8.24	6.99
20-Aug-14	2.80	7.60	4.50	2.50	5.50	3.45	1.78	8.24	5.54
21-Aug-14	3.11	8.50	4.96	3.00	6.50	4.24	0.00	8.24	4.46
22-Aug-14	3.33	8.70	5.13	3.00	5.50	3.47	0.00	7.20	3.43
23-Aug-14	4.10	10.00	5.87	3.50	5.00	3.93	0.00	8.03	3.89
24-Aug-14	3.75	9.80	6.04	4.00	8.00	5.88	0.00	8.24	3.23
25-Aug-14	4.50	10.70	6.73	4.50	6.10	5.08	0.00	8.24	2.80
26-Aug-14	5.00	10.80	6.88	5.10	6.65	5.63	0.00	8.24	3.83
27-Aug-14	4.00	10.50	5.38	4.00	5.51	4.01	0.00	8.24	3.19
28-Aug-14	4.10	6.50	5.26	4.02	4.05	4.02	1.07	8.24	4.45
29-Aug-14	4.00	7.00	5.43	4.00	7.00	4.18	0.00	8.03	2.52
30-Aug-14	3.50	7.62	5.78	5.29	6.51	5.29	0.00	5.32	1.94
31-Aug-14	4.00	7.62	5.57	5.44	6.51	5.45	0.00	3.24	0.76
	1.00#	10.80#	4.33	1.00#	8.00#	3.68	0.00#	8.24#	3.14

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), AUGUST 2014

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	1039.97	1039.97	0.04	117.44	117.40	32.02	103.43	71.41	1228.78
Haryana	29.30	1143.89	1114.59	214.22	66.28	-147.94	87.46	30.62	-56.84	909.82
Rajasthan	772.59	105.30	-667.29	37.17	316.73	279.56	79.57	99.56	19.98	-367.75
Delhi	6.90	346.87	339.97	105.72	103.68	-2.04	59.82	22.48	-37.34	300.60
Uttar Pradesh	0.00	294.76	294.76	0.00	291.07	291.07	27.56	226.15	198.59	784.42
Uttarakhand	17.51	84.32	66.81	2.52	3.99	1.48	15.88	33.81	17.92	86.21
Himachal Pradesh	750.26	1.12	-749.13	196.60	5.62	-190.98	7.59	30.06	22.47	-917.65
J & K	345.90	2.06	-343.84	66.34	3.85	-62.50	22.03	70.74	48.72	-357.61
UT Chandigarh	0.00	7.44	7.44	0.00	5.11	5.11	0.58	35.57	34.99	47.54
MP	259.61	6.12	-253.49	29.64	89.01	59.37	100.41	25.97	-74.43	-268.55
Maharashtra	0.00	244.01	244.01	103.07	261.95	158.88	100.00	72.32	-27.68	375.21
Gujarat	299.17	9.35	-289.82	236.25	224.73	-11.52	80.87	35.84	-45.04	-346.38
Chattisgarh	34.33	40.35	6.02	115.59	0.52	-115.07	19.81	50.85	31.05	-78.00
GOA	0.00	20.62	20.62	0.00	0.00	0.00	6.25	29.49	23.23	43.86
Daman and Diu	0.00	14.28	14.28	0.00	24.45	24.45	1.94	20.47	18.54	57.27
Dadra & Nagar Haveli	0.00	19.92	19.92	0.00	0.00	0.00	3.48	15.76	12.29	32.21
Andhra Pradesh	0.00	538.06	538.06	3.17	71.54	68.38	22.13	44.01	21.88	628.32
Karnataka	373.53	16.17	-357.36	79.62	9.25	-70.37	39.38	26.43	-12.95	-440.68
Kerala	0.00	3.81	3.81	1.76	89.44	87.67	2.46	55.49	53.03	144.51
Tamilnadu	0.00	0.00	0.00	0.00	0.72	0.72	54.22	23.20	-31.02	-30.31
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	5.07	3.92	-1.15	-1.15
Goa	0.00	0.00	0.00	0.00	0.00	0.00	8.40	1.51	-6.89	-6.89
Telangana	14.29	413.51	399.22	9.45	185.01	175.56	19.18	71.20	52.03	626.80
West Bengal	131.88	206.16	74.28	15.08	312.77	297.69	38.98	58.13	19.15	391.12
Orissa	107.29	127.31	20.03	114.03	0.05	-113.98	39.98	22.74	-17.24	-111.19
Bihar	0.00	190.33	190.33	0.00	186.40	186.40	32.51	35.00	2.49	379.22
Jharkhand	16.39	116.24	99.85	0.00	0.00	0.00	18.10	21.48	3.37	103.22
Sikkim	0.00	8.03	8.03	57.24	0.00	-57.24	4.76	2.64	-2.13	-51.34
DVC	74.27	0.92	-73.35	16.33	0.00	-16.33	13.01	55.77	42.76	-46.92
Arunachal Pradesh	0.06	0.06	0.00	10.82	1.01	-9.81	4.49	4.19	-0.30	-10.11
Assam	24.52	17.51	-7.01	9.55	66.78	57.23	12.48	20.61	8.13	58.36
Manipur	0.00	0.00	0.00	6.91	0.19	-6.72	5.97	1.32	-4.65	-11.37
Meghalaya	46.85	0.01	-46.84	17.69	9.03	-8.67	9.24	1.67	-7.57	-63.07
Mizoram	0.00	0.00	0.00	8.34	0.00	-8.34	1.84	2.86	1.02	-7.33
Nagaland	0.00	0.00	0.00	0.83	0.00	-0.83	8.61	2.00	-6.60	-7.43
Tripura	3.66	1.25	-2.41	29.80	0.70	-29.11	2.83	7.03	4.20	-27.31
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	46.30	7.39	-38.91	-38.91

NJPC	0.00	0.00	0.00	26.67	0.00	-26.67	1.75	1.84	0.08	-26.59
AD HYDRO	100.65	0.00	-100.65	17.47	0.00	-17.47	3.11	12.99	9.88	-108.25
KARCHAM WANGTOO	452.88	0.00	-452.88	68.26	0.00	-68.26	6.75	7.06	0.31	-520.82
SHREE CEMENT	89.24	0.00	-89.24	10.28	0.00	-10.28	0.93	1.24	0.30	-99.22
LANCO BUDHIL	0.00	0.00	0.00	18.90	0.00	-18.90	0.00	0.00	0.00	-18.90
MALANA	0.00	0.00	0.00	7.24	0.00	-7.24	0.00	0.00	0.00	-7.24
JINDAL POWER	206.68	0.00	-206.68	170.17	0.00	-170.17	18.54	1.37	-17.16	-394.01
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	1.98	1.19	-0.79	-0.79
NSPCL	30.28	0.00	-30.28	0.00	0.00	0.00	1.39	1.06	-0.32	-30.60
ACBIL	9.90	0.00	-9.90	53.58	0.00	-53.58	5.05	3.81	-1.24	-64.72
BALCO	0.00	0.00	0.00	0.00	62.54	62.54	2.01	11.17	9.16	71.70
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00	0.10	4.28	4.19	4.19
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	22.11	6.17	-15.94	-15.94
DCPP	0.00	0.00	0.00	32.91	0.00	-32.91	0.86	3.08	2.23	-30.68
EMCO	0.00	0.00	0.00	24.75	0.00	-24.75	0.00	0.00	0.00	-24.75
VANDANA VIDYUT	0.00	0.00	0.00	9.44	0.00	-9.44	0.00	0.00	0.00	-9.44
ESSAR STEEL	0.00	0.00	0.00	0.00	12.24	12.24	0.00	0.00	0.00	12.24
KSK MAHANADI	0.00	0.00	0.00	9.38	0.00	-9.38	0.00	0.00	0.00	-9.38
ESSAR POWER	0.00	0.00	0.00	15.33	0.00	-15.33	0.00	0.00	0.00	-15.33
JINDAL STAGE-II	0.00	0.00	0.00	124.83	0.00	-124.83	0.00	0.00	0.00	-124.83
DB POWER	0.00	0.00	0.00	1.45	0.00	-1.45	0.00	0.00	0.00	-1.45
DHARIWAL POWER	0.00	0.00	0.00	15.23	0.00	-15.23	0.00	0.00	0.00	-15.23
SIMHAPURI	222.75	0.00	-222.75	9.27	0.00	-9.27	1.81	1.57	-0.24	-232.26
Meenakshi	0.00	0.99	0.99	2.39	0.00	-2.39	0.00	0.00	0.00	-1.40
STERLITE	153.59	0.00	-153.59	180.80	0.00	-180.80	9.86	4.77	-5.09	-339.48
MAITHON POWER LTD	42.15	0.00	-42.15	28.42	0.00	-28.42	6.49	3.10	-3.39	-73.96
ADHUNIK POWER LTD	0.00	0.00	0.00	1.24	0.00	-1.24	0.00	0.00	0.00	-1.24
CHUZACHEN HEP	0.00	0.00	0.00	44.91	0.00	-44.91	0.00	0.00	0.00	-44.91
RANGIT HEP	0.00	0.00	0.00	9.41	0.00	-9.41	0.00	0.00	0.00	-9.41
GMR KAMALANGA	0.00	0.00	0.00	16.11	0.00	-16.11	0.00	0.00	0.00	-16.11
JITPL	14.64	0.00	-14.64	63.85	0.00	-63.85	0.00	0.00	0.00	-78.48
TEESTA HEP	0.00	0.00	0.00	48.51	0.00	-48.51	0.00	0.00	0.00	-48.51
NEEPCO Stations	0.00	0.00	0.00	9.08	0.00	-9.08	6.25	2.94	-3.30	-12.39
ONGC PALATANA	0.00	0.00	0.00	14.38	0.00	-14.38	0.00	0.00	0.00	-14.38

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

Figure 7: Bilateral Contracts executed by Traders in September, 2014

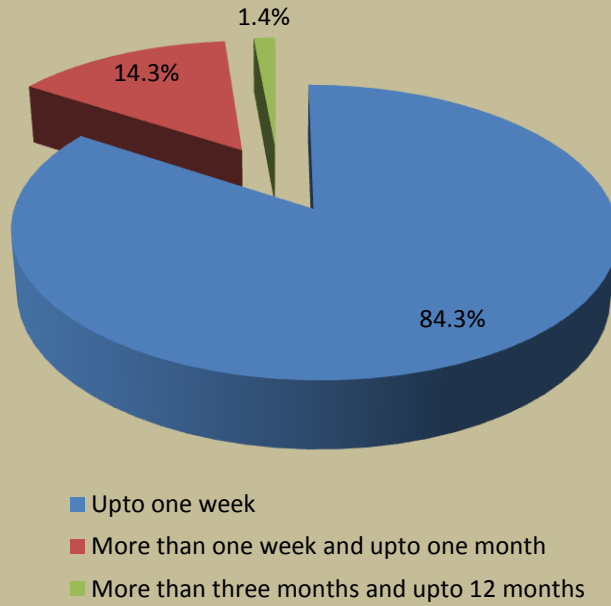


Figure-8: Forward Curve based on Prices of Bilateral Contracts

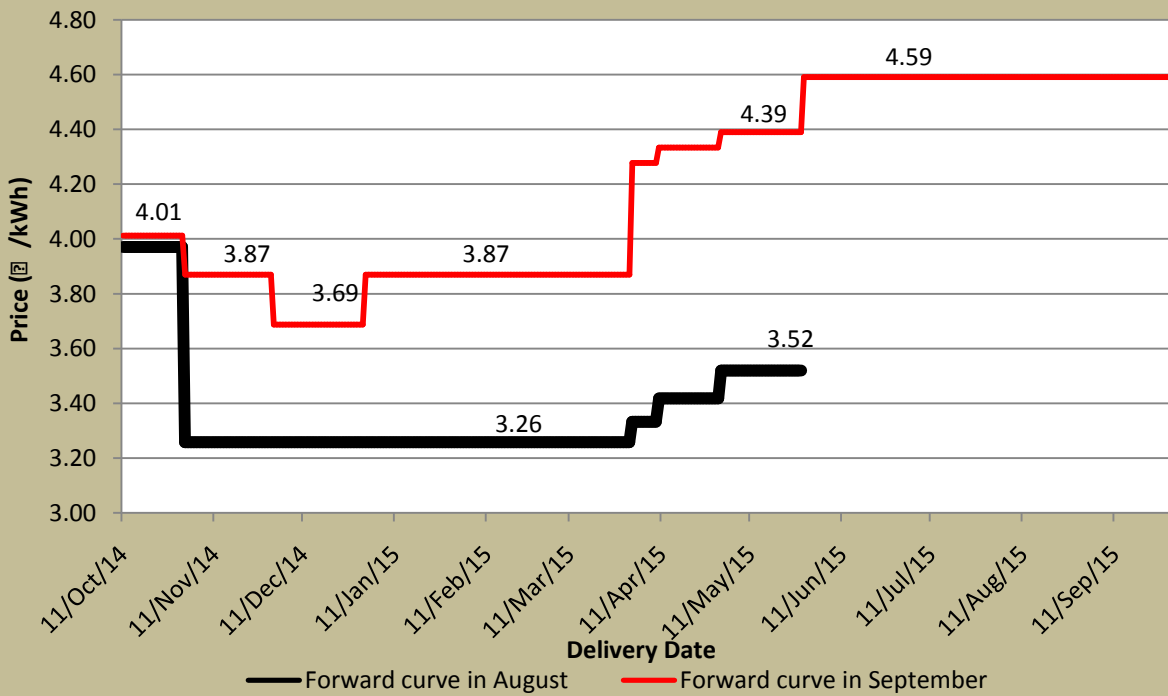


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTIONED THROUGH POWER EXCHANGES, AUGUST 2014					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	367	15736	796	34945
B	Volume of Sell Bid	150091	3949016	111577	4766759
C	Ratio of Buy Bid to Sell Bid Volume	0.002	0.004	0.007	0.007
D	Market Clearing Volume (MWh)	367	15736	796	34945
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>