Monthly Report on Short-term Transactions of Electricity in India

June, 2014

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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
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
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 June, 2014 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of June 2014, total electricity generation excluding generation from renewable and captive power plants in India was 88480.04 MUs (Table-1).

Of the total electricity generation, 8755.84 MUs (9.90%) were transacted through short-term, comprising of 4422.44 MUs (5%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2642.58 MUs (2.99%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1690.82 MUs (1.91%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 50.51% (37.92% through traders and term-ahead contracts on Power Exchanges and 12.59% directly between distribution companies) followed by 30.18% through day ahead collective transactions on Power Exchanges and 19.31% 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 45 trading licensees as on 30.06.2014, of which only 24 have engaged in trading during June 2014. Top 5 trading licensees had a share of 70.91% 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 0.1875 for the month of June 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 2616.78 MUs and 25.80 MUs respectively. The volume of total Buy bids and Sale bids was 4035.03 MUs and 3284.95 MUs respectively in IEX and 72.21 MUs and 43.39 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was almost greater demand in IEX (1.23 times) and PXIL (1.66 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 26.54 MUs and 40.54 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 ₹3.91/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 ₹3.93/kWh, ₹3.12kWh and ₹3.54/kWh respectively. Minimum and Maximum sale prices were ₹2.24/kWh and ₹6.04/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 ₹1.34/kWh, ₹10.62/kWh and ₹3.71/kWh respectively in IEX and ₹1.00/kWh, ₹6.17/kWh and ₹3.63/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹4.17/kWh and ₹3.69/kWh respectively (Table-6 and Table-7).

(iii*) Price of electricity transacted Through UI:* The average UI price was ₹2.97/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 Entity[1]-Wise)

Of the total bilateral transactions, top 5 regional entities sold 47.24% of the volume, and these were Himachal Pradesh, Rajasthan, Jammu and Kashmir, Gujarat and Jaypee Karcham Hydro Corporation Ltd. Top 5 regional entities purchased 58.65% of the volume, and these were Punjab, Haryana, Andhra Pradesh, Delhi and Uttar Pradesh (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 40.54% of the volume, and these were Himachal Pradesh, Gujarat, Chhattisgarh, Delhi and Jindal Power Ltd. Top 5 regional entities purchased 51.08% of the volume, and these were Rajasthan, Maharashtra, Punjab, Andhra Pradesh and Essar Steel Ltd. (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 40.10% of the volume, and these were Gujarat, Uttar Pradesh, Haryana, Tamilnadu and Punjab. Top 5 regional entities overdrew 31.85% of the volume, and these were Maharashtra, Punjab, West Bengal, Uttar Pradesh 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 &

[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.*

19. Top 5 electricity selling regional entities were Himachal Pradesh, Gujarat, Jaypee Karcham Hydro Corporation Ltd., Jindal Power Ltd and Sterlite India Ltd. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Haryana, Maharashtra and Uttar Pradesh.

IV: Congestion[2] 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 June 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 8.98% and 7.92% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 89.69% in IEX and 30.69% in PXIL.

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[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.

V: Analysis of Bilateral Contracts executed by Traders in July 2014[4]

(i) *Duration of bilateral contracts:*

During June and July, 2014, a total of 259 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 6613 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 52.1% of the contracts were executed for a duration of up to one week, followed by 47.5% of the contracts were executed for a duration of more than a week and upto one month and 0.4% of the contracts were executed for a duration of more than one month and upto 3 months.

During the same period, 51 banking/swapping bilateral contracts were also executed for the volume of 408 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 August 2014 to May 2015 based on bilateral contracts[5] executed during July, 2014. The forward curve drawn in June 2014 has also been depicted for the period August 2014 onwards for comparison purposes. It is observed that there is an increasing trend in the forward prices for the period from August to October, 2014 because of contracts executed in July 2014 were at higher prices when compared to contracts executed in June 2014. Since, no new contracts are executed for delivery beyond October 2014, the forward prices for the period from November 2014 to May 2015 continues to be same.

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[4] *'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.*

[5] *Excluding Banking/Swapping contracts*

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 June 2014 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 636 and 1018 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 50743 and 88711 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 0.004 and 0.012 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.016 and 0.023 in IEX and PXIL respectively

VII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 9.90%.

- Of the total short-term transactions of electricity, 50.51% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 30.18% through Power Exchanges and 19.31% through UI.

- Top 5 trading licensees had a share of 70.91% in the total volume traded by all the trading licensees.

- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1875, indicating moderate concentration of market power.

- The price of electricity transacted through trading licensees (₹3.91/kWh) was higher when compared with the price of electricity transacted through IEX (₹3.71/kWh) and PXIL (₹3.63/kWh) respectively.

- The price of electricity transacted through UI was ₹2.97/kWh

- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was almost more demand in IEX (1: 1.23) and PXIL (1: 1.66) when compared with the supply offered through these exchanges.

- Top 5 electricity selling regional entities were Himachal Pradesh, Gujarat, Jaypee Karcham Hydro Corporation Ltd., Jindal Power Ltd and Sterlite India Ltd. Top 5 electricity purchasing regional entities were Punjab, Andhra Pradesh, Haryana, Maharashtra and Uttar Pradesh.

- The volume of electricity that could not be cleared in the power exchanges due to congestion was 8.98% and 7.92% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 89.69% in IEX and 30.69% in PXIL.

- In June and July 2014, 52.1% of the bilateral contracts (excluding banking/swapping) were executed for a duration of up to one week, followed by 47.5% of the contracts were executed for a duration of more than a week and upto one month and 0.4% of the contracts were executed for a duration of more than one month and upto 3 months.

- There is an increasing trend in the forward prices for the period from August to October, 2014 because of contracts executed in July 2014 were at higher prices when compared to contracts executed in June 2014.

- The market clearing volume of Solar RECs transacted on IEX and PXIL were 636 and 1018 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 50743 and 88711 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), JUNE 2014				
Sr.No	**Short-term transactions**	**Volume (MUs)**	**% to Volume of short-term transactions**	**% to Total Generation**
1	Bilateral	4422.44	50.51%	5.00%
	(i) Through Traders and PXs	*3320.00*	37.92%	3.75%
	(ii) Direct	*1102.44*	12.59%	1.25%
2	Through Power Exchanges	2642.58	30.18%	2.99%
	(i) IEX	*2616.78*	29.89%	2.96%
	(ii) PXIL	*25.80*	0.29%	0.03%
3	Through UI	1690.82	19.31%	1.91%
	Total	**8755.84**	**100.00%**	**9.90%**
	Total Generation	**88480.04**	_	_
Source: NLDC				

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

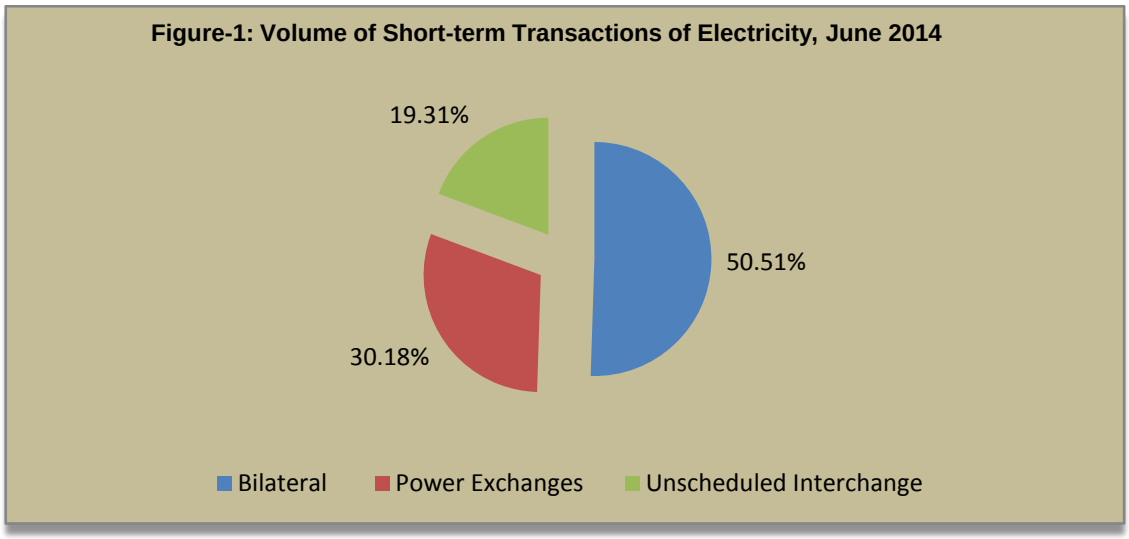
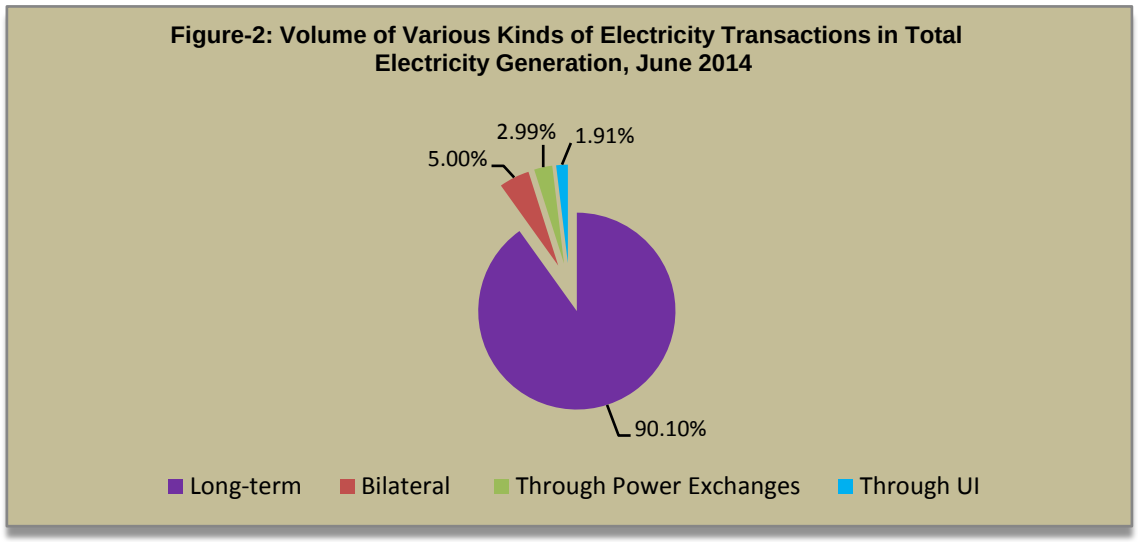


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, June 2014



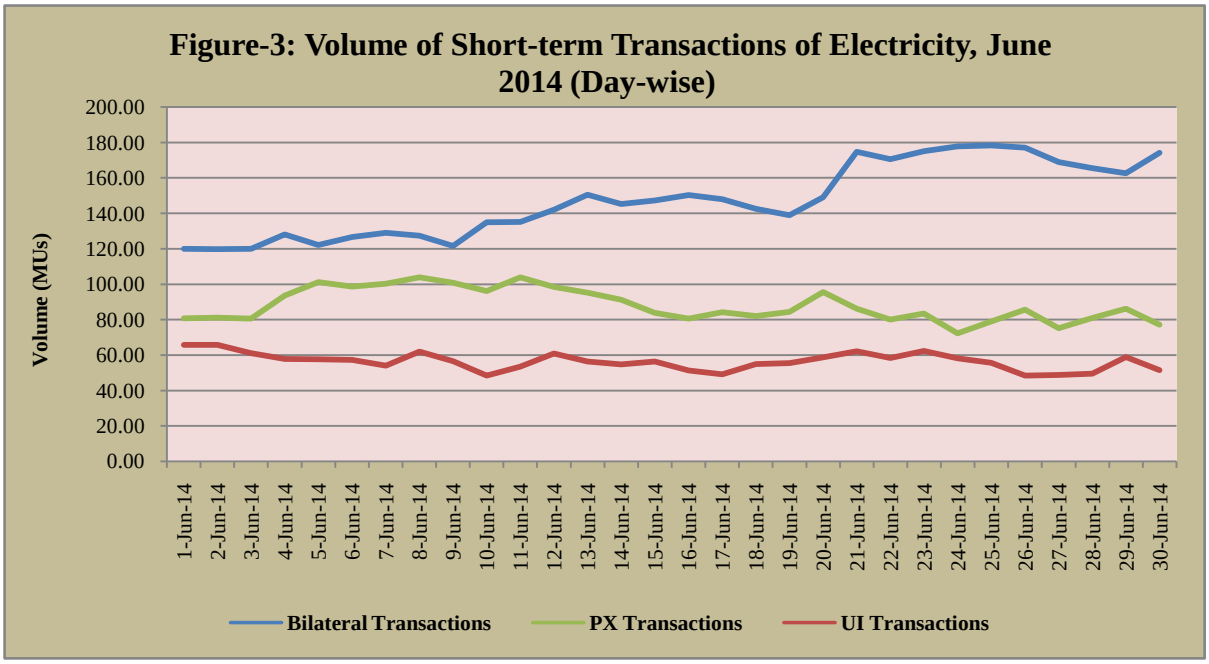


Figure-3: Volume of Short-term Transactions of Electricity, June 2014 (Day-wise)
Volume (MUs)
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
1-Jun-14
2-Jun-14
3-Jun-14
4-Jun-14
5-Jun-14
6-Jun-14
7-Jun-14
8-Jun-14
9-Jun-14
10-Jun-14
11-Jun-14
12-Jun-14
13-Jun-14
14-Jun-14
15-Jun-14
16-Jun-14
17-Jun-14
18-Jun-14
19-Jun-14
20-Jun-14
21-Jun-14
22-Jun-14
23-Jun-14
24-Jun-14
25-Jun-14
26-Jun-14
27-Jun-14
28-Jun-14
29-Jun-14
30-Jun-14
Bilateral Transactions
PX Transactions
UI Transactions

Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JUNE 2014			
Sr.No	**Name of the Trading Licensee**	**% Share in total Volume transacted by Trading Licensees**	**Herfindahl-Hirschman Index**
1	PTC India Ltd.	39.02%	0.1522
2	Tata Power Trading Company (P) Ltd.	9.61%	0.0092
3	JSW Power Trading Company Ltd	9.05%	0.0082
4	NTPC Vidyut Vyapar Nigam Ltd.	6.73%	0.0045
5	Mittal Processors (P) Ltd.	6.51%	0.0042
6	Adani Enterprises Ltd.	5.29%	0.0028
7	Knowledge Infrastructure Systems (P) Ltd	4.21%	0.0018
8	Shree Cement Ltd.	3.75%	0.0014
9	Reliance Energy Trading (P) Ltd	3.28%	0.0011
10	GMR Energy Trading Ltd.	2.63%	0.0007
11	Manikaran Power Ltd.	2.37%	0.0006
12	RPG Power Trading Company Ltd.	1.53%	0.0002
13	Jaiprakash Associates Ltd.	1.48%	0.0002
14	National Energy Trading & Services Ltd.	1.16%	0.0001
15	Arunachal Pradesh Power Corporation (P) ltd	0.86%	0.0001
16	Essar Electric Power Development Corp. Ltd.	0.67%	0.0000
17	Instinct Infra & Power Ltd.	0.62%	0.0000
18	SN Power Markets Pvt. Ltd.	0.49%	0.0000
19	My Home Power Private Ltd.	0.31%	0.0000
20	HMM Infra ltd.	0.25%	0.0000
21	Indrajit Power Technology (P) Ltd.	0.08%	0.0000
22	Customized Energy Solutions India (P) Ltd.	0.07%	0.0000
23	Pune Power Development (P) Ltd.	0.04%	0.0000
24	Ambitious Power Trading Company Ltd.	0.01%	0.0000
TOTAL		**100.00%**	**0.1875**
Top 5 trading licensees		**70.91%**	
Note 1: Volume of electricity transacted by the trading licensees includes bilateral transactions (inter-state & intra-state) and the transactions undertaken through power exchanges.			
Note 2: Volume of electricity transacted by Global Energy Ltd is not included.			
Source: Information submitted by trading licensees			

Figure- 4 : Percentage Share of Electricity Transacted by Trading

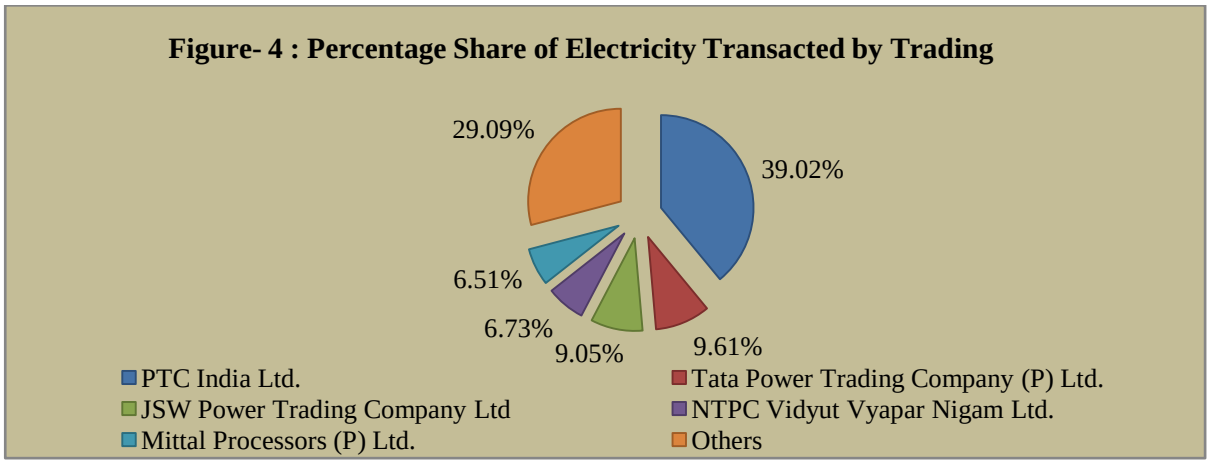


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JUNE 2014		
Sr.No		**Sale Price of Traders (₹/kWh)**
1	Minimum	2.24
2	Maximum	6.04
3	Weighted Average	3.91

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), JUNE 2014		
Sr.No	**Period of Trade**	**Sale Price of Traders (₹/kWh)**
1	RTC	3.93
2	PEAK	3.12
3	OFF PEAK	3.54

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JUNE 2014			
Sr.No	**ACP**	**Price in IEX (₹/kWh)**	**Price in PXIL (₹/kWh)**
1	Minimum	1.34	1.00
2	Maximum	10.62	6.17
3	Weighted Average	3.71	3.63

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JUNE 2014			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	23.99	4.14
2	Day Ahead Contingency Contracts	2.30	4.50
3	Weekly Contracts	0.25	4.00
	Total	**26.54**	**4.17**

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JUNE 2014			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	19.25	3.64
2	Daily Contracts	11.82	3.88
3	Weekly Contracts	9.47	3.55
	Total	**40.54**	**3.69**

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, JUNE 2014		
Sr.No		**Price in All India Grid (₹/kWh)**
1	Minimum	0
2	Maximum	8.24
3	Average	2.97

Source: NLDC

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

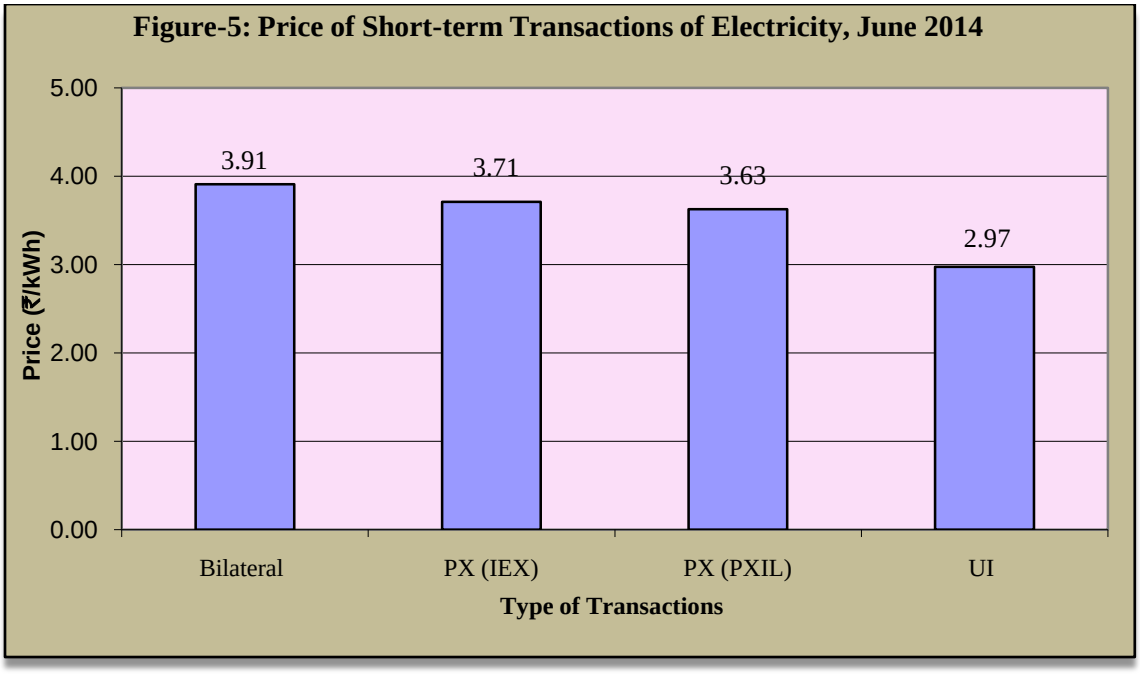


Figure-6: Price of Short-term Transactions of Electricity, June 2014 (Day-wise)

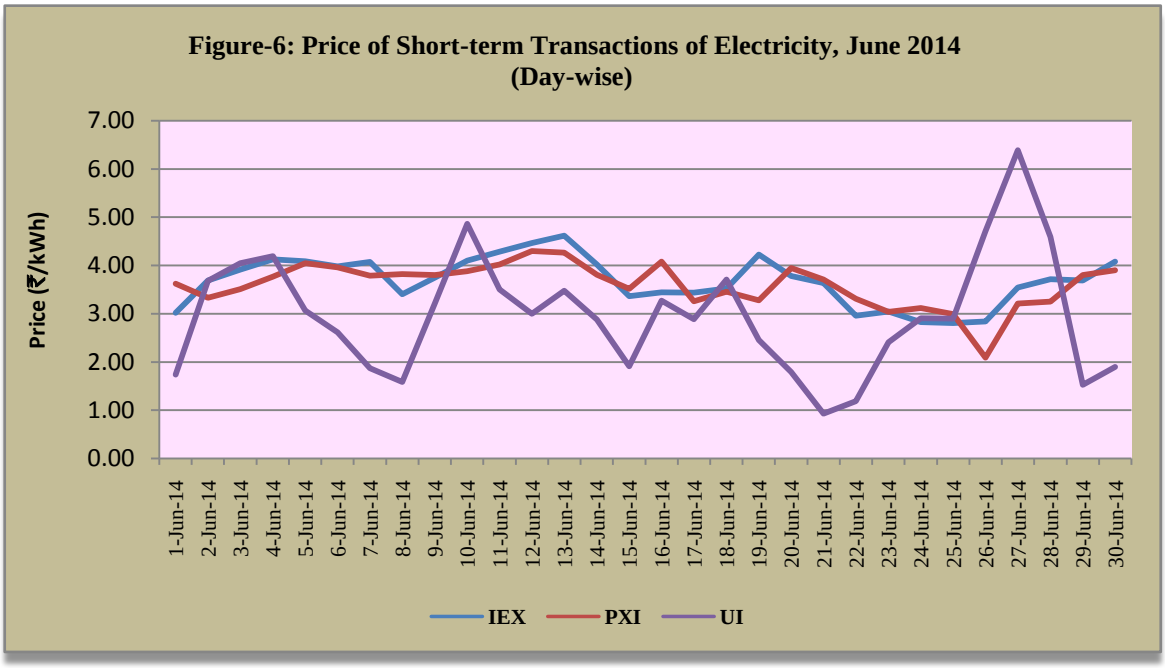


Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
Himachal Pradesh	456.40	11.38%
Rajasthan	430.28	10.73%
J & K	381.44	9.51%
Gujarat	315.23	7.86%
KARCHAM WANGTOO	310.83	7.75%
STERLITE	281.46	7.02%
JINDAL POWER	260.97	6.51%
Karnataka	255.88	6.38%
SIMHAPURI	240.69	6.00%
Orissa	230.52	5.75%
West Bengal	192.42	4.80%
SHREE CEMENT	141.09	3.52%
MP	102.90	2.57%
MAITHON POWER LTD	72.45	1.81%
DVC	69.34	1.73%
AD HYDRO	61.24	1.53%
Chattisgarh	39.58	0.99%
Meghalaya	31.57	0.79%
NSPCL	23.11	0.58%
Jharkhand	19.70	0.49%
Haryana	15.60	0.39%
Uttarakhand	14.34	0.36%
JITPL	13.01	0.32%
Tripura	12.97	0.32%
Assam	12.84	0.32%
Delhi	9.74	0.24%
ACBIL	8.68	0.22%
Tamilnadu	5.00	0.12%
Telangana	0.58	0.01%
Maharashtra	0.12	0.00%
Total	**4009.97**	**100.00%**
Volume of sale by top 5 States	**1894.19**	**47.24%**

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
Punjab	750.11	17.41%
Haryana	616.07	14.30%
Andhra Pradesh	411.34	9.55%
Delhi	403.17	9.36%
Uttar Pradesh	346.25	8.04%
Telangana	340.36	7.90%
Maharashtra	273.99	6.36%
Bihar	236.24	5.48%
Kerala	197.51	4.58%
Orissa	120.56	2.80%
West Bengal	107.62	2.50%
Dadra & Nagar Haveli	106.56	2.47%
Jharkhand	100.08	2.32%
Uttarakhand	89.93	2.09%
Assam	51.33	1.19%
Chattisgarh	27.24	0.63%
Rajasthan	21.89	0.51%
Tamilnadu	19.48	0.45%
Nagaland	13.94	0.32%
Daman and Diu	13.82	0.32%
Gujarat	13.79	0.32%
UT Chandigarh	12.66	0.29%
Goa	12.40	0.29%
J & K	7.35	0.17%
Sikkim	4.08	0.09%
Karnataka	3.73	0.09%
DVC	3.10	0.07%
Tripura	1.23	0.03%
Meenakshi	0.95	0.02%
Manipur	0.65	0.02%
MP	0.21	0.00%
Meghalaya	0.18	0.00%
Total	**4308.25**	**100.00%**
Volume of Purchase by top 5 States	**2526.94**	**58.65%**

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
Himachal Pradesh	362.83	13.73%
Gujarat	220.35	8.34%
Chattisgarh	167.99	6.36%
Delhi	160.47	6.07%
JINDAL POWER	159.58	6.04%
KARCHAM WANGTOO	133.82	5.06%
Karnataka	126.56	4.79%
MP	107.30	4.06%
STERLITE	105.98	4.01%
Orissa	102.71	3.89%
Haryana	99.73	3.77%
AD HYDRO	73.79	2.79%
DCPP	72.15	2.73%
ACBIL	64.07	2.42%
GMR KAMALANGA	50.20	1.90%
JITPL	50.05	1.89%
Maharashtra	48.81	1.85%
LANCO BUDHIL	46.46	1.76%
DB POWER	46.19	1.75%
Sikkim	43.42	1.64%
Rajasthan	39.49	1.49%
West Bengal	38.82	1.47%
J & K	33.45	1.27%
Tripura	30.85	1.17%
EMCO	26.46	1.00%
ONGC PALATANA	25.68	0.97%
NJPC	25.59	0.97%
DVC	24.30	0.92%
CHUZACHEN HEP	20.44	0.77%
TEESTA HEP	19.22	0.73%
MAITHON POWER LTD	18.43	0.70%
SHREE CEMENT	15.92	0.60%
JINDAL STAGE-II	15.31	0.58%
VANDANA VIDYUT	13.01	0.49%
Meghalaya	12.73	0.48%
Telangana	7.83	0.30%
MALANA	6.46	0.24%
Uttarakhand	5.01	0.19%
RANGIT HEP	3.65	0.14%
Kerala	2.74	0.10%
NEEPCO Stations	2.59	0.10%
Assam	2.25	0.08%
Mizoram	2.02	0.08%
Andhra Pradesh	1.80	0.07%
ADHUNIK POWER LTD	1.69	0.06%
SIMHAPURI	1.27	0.05%
Manipur	1.14	0.04%
BALCO	0.77	0.03%
Total	**2642.58**	**100.00%**
Volume of sale by top 5 States	**1071.23**	**40.54%**

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
Rajasthan	346.12	13.10%
Maharashtra	273.45	10.35%
Punjab	256.20	9.70%
Andhra Pradesh	245.67	9.30%
ESSAR STEEL	228.51	8.65%
Gujarat	221.21	8.37%
Uttar Pradesh	186.62	7.06%
West Bengal	126.63	4.79%
Uttarakhand	107.92	4.08%
Telangana	104.39	3.95%
Assam	95.77	3.62%
Bihar	82.53	3.12%
Orissa	78.90	2.99%
Haryana	76.64	2.90%
MP	45.98	1.74%
Delhi	31.07	1.18%
Daman and Diu	27.94	1.06%
Karnataka	26.63	1.01%
J & K	23.16	0.88%
BALCO	16.46	0.62%
Kerala	11.41	0.43%
Meghalaya	9.04	0.34%
Chattisgarh	4.76	0.18%
Arunachal Pradesh	4.60	0.17%
UT Chandigarh	4.37	0.17%
Manipur	3.39	0.13%
Tamilnadu	2.05	0.08%
Tripura	0.04	0.00%
Total	**2642.58**	**100.00%**
Volume of purchase by top 5 States	**1349.95**	**51.08%**

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Export (MUs)**	**% of Volume**
Gujarat	138.86	10.65%
Uttar Pradesh	107.48	8.24%
Haryana	99.09	7.60%
Tamilnadu	98.42	7.55%
Punjab	79.23	6.07%
Delhi	71.71	5.50%
MP	71.08	5.45%
Rajasthan	67.48	5.17%
Maharashtra	67.00	5.14%
Telangana	51.38	3.94%
NHPC Stations	45.88	3.52%
Bihar	35.79	2.74%
Jharkhand	33.38	2.56%
Chattisgarh	32.69	2.51%
Andhra Pradesh	30.41	2.33%
DVC	27.75	2.13%
Karnataka	26.18	2.01%
J & K	24.74	1.90%
Uttarakhand	20.14	1.54%
West Bengal	18.44	1.41%
Orissa	18.14	1.39%
STERLITE	13.45	1.03%
KARCHAM WANGTOO	11.02	0.84%
CGPL	10.61	0.81%
Goa	8.65	0.66%
Meghalaya	7.74	0.59%
Assam	7.48	0.57%
Himachal Pradesh	7.03	0.54%
NJPC	6.52	0.50%
JINDAL POWER	6.35	0.49%
Sikkim	5.49	0.42%
Daman and Diu	5.30	0.41%
Dadra & Nagar Haveli	5.25	0.40%
Manipur	4.79	0.37%
Pondicherry	4.47	0.34%
MAITHON POWER LTD	3.61	0.28%
Tripura	3.26	0.25%
DCPP	3.01	0.23%
Arunachal Pradesh	2.95	0.23%
NEEPCO Stations	2.73	0.21%
LANKO_AMK	2.69	0.21%
AD HYDRO	2.46	0.19%
Nagaland	2.10	0.16%
NSPCL	2.07	0.16%
Kerala	2.03	0.16%
SIMHAPURI	1.77	0.14%
Mizoram	1.54	0.12%
UT Chandigarh	1.46	0.11%
SHREE CEMENT	1.29	0.10%
ACBIL	1.11	0.09%
BALCO	0.89	0.07%
RGPPL	0.04	0.00%
Total	**1304.40**	**100.00%**
Volume of Export by top 5 States	**523.08**	**40.10%**

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, JUNE 2014		
Name of the State/UT/Other Regional Entity	**Volume of Import (MUs)**	**% of Volume**
Maharashtra	111.27	7.83%
Punjab	99.92	7.03%
West Bengal	99.66	7.01%
Uttar Pradesh	72.62	5.11%
Telangana	69.12	4.86%
Kerala	68.79	4.84%
Haryana	68.75	4.84%
Orissa	65.74	4.63%
Andhra Pradesh	60.81	4.28%
Rajasthan	52.70	3.71%
Himachal Pradesh	42.00	2.96%
J & K	41.71	2.94%
Chattisgarh	41.11	2.89%
Delhi	39.50	2.78%
Assam	37.60	2.65%
DVC	36.32	2.56%
KARCHAM WANGTOO	32.15	2.26%
UT Chandigarh	31.46	2.21%
Bihar	30.73	2.16%
Uttarakhand	30.27	2.13%
Karnataka	29.20	2.05%
Goa	26.51	1.87%
ACBIL	20.84	1.47%
STERLITE	18.49	1.30%
MP	17.18	1.21%
Tamilnadu	15.54	1.09%
JINDAL POWER	15.50	1.09%
Arunachal Pradesh	11.66	0.82%
NHPC Stations	10.69	0.75%
Dadra & Nagar Haveli	10.50	0.74%
Gujarat	10.44	0.73%
Jharkhand	10.24	0.72%
Tripura	9.47	0.67%
Daman and Diu	8.16	0.57%
AD HYDRO	7.96	0.56%
BALCO	7.69	0.54%
Nagaland	7.27	0.51%
CGPL	6.56	0.46%
MAITHON POWER LTD	6.11	0.43%
Pondicherry	5.05	0.36%
RGPPL	4.64	0.33%
SIMHAPURI	4.25	0.30%
SHREE CEMENT	3.96	0.28%
DCPP	3.88	0.27%
NJPC	3.70	0.26%
Mizoram	3.27	0.23%
Meghalaya	3.10	0.22%
Sikkim	2.58	0.18%
NSPCL	1.51	0.11%
Manipur	1.29	0.09%
NEEPCO Stations	1.19	0.08%
LANKO_AMK	0.32	0.02%
Total	**1420.98**	**100.00%**
Volume of Import by top 5 States	**452.58**	**31.85%**

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JUNE 2014		
Sr.No.	**Name of the State/UT/Other Regional Entity**	**Total volume of net short-term transactions of electricity***
1	Punjab	1027.00
2	Andhra Pradesh	685.60
3	Haryana	547.05
4	Maharashtra	542.78
5	Uttar Pradesh	498.01
6	Telangana	454.09
7	Bihar	313.71
8	Kerala	272.95
9	Delhi	231.81
10	ESSAR STEEL	228.51
11	Uttarakhand	188.63
12	Assam	162.13
13	Dadra & Nagar Haveli	111.81
14	West Bengal	84.23
15	Jharkhand	57.23
16	UT Chandigarh	47.02
17	Daman and Diu	44.62
18	Goa	30.27
19	BALCO	22.50
20	Nagaland	19.11
21	Arunachal Pradesh	12.08
22	RGPPL	4.60
23	Meenakshi	2.07
24	Pondicherry	0.58
25	Mizoram	-0.29
26	Manipur	-0.60
27	ADHUNIK POWER LTD	-1.69
28	LANKO_AMK	-2.37
29	RANGIT HEP	-3.65
30	CGPL	-4.05
31	NEEPCO Stations	-4.13
32	MALANA	-6.46
33	VANDANA VIDYUT	-13.01
34	JINDAL STAGE-II	-15.31
35	TEESTA HEP	-19.22
36	CHUZACHEN HEP	-20.44
37	NSPCL	-23.67
38	ONGC PALATANA	-25.68
39	EMCO	-26.46
40	NJPC	-28.40
41	NHPC Stations	-35.20
42	Tripura	-36.32
43	Meghalaya	-39.71
44	Sikkim	-42.26
45	DB POWER	-46.19
46	LANCO BUDHIL	-46.46
47	GMR KAMALANGA	-50.20
48	ACBIL	-53.02
49	JITPL	-63.06
50	Tamilnadu	-66.34
51	DCPP	-71.28
52	DVC	-81.97
53	Orissa	-86.17
54	MAITHON POWER LTD	-88.38

55	Rajasthan	-116.53
56	AD HYDRO	-129.52
57	SHREE CEMENT	-154.33
58	Chattisgarh	-167.14
59	MP	-217.91
60	SIMHAPURI	-239.49
61	Karnataka	-349.07
62	J & K	-367.42
63	STERLITE	-382.39
64	JINDAL POWER	-411.40
65	KARCHAM WANGTOO	-423.52
66	Gujarat	-428.99
67	Himachal Pradesh	-783.83
** 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, JUNE 2014			
	Details of Congestion	**IEX**	**PXIL**
A	Unconstrained Cleared Volume* (MUs)	2874.87	28.02
B	Actual Cleared Volume and hence scheduled (MUs)	2616.78	25.80
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	258.09	2.22
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	8.98%	7.92%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	89.69%	30.69%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25.28%	21.95%
	6.00 - 12.00 hours	26.02%	29.52%
	12.00 - 18.00 hours	23.15%	27.38%
	18.00 - 24.00 hours	25.55%	21.15%
** 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), JUNE 2014 (DAY-WISE)					
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-Jun-14	92.15	27.89	79.85	0.97	65.76
2-Jun-14	92.23	27.54	79.92	1.13	65.71
3-Jun-14	90.95	29.00	78.66	1.97	61.05
4-Jun-14	96.81	31.28	91.94	1.61	57.75
5-Jun-14	90.67	31.37	99.98	1.22	57.59
6-Jun-14	94.34	32.30	97.45	1.29	57.32
7-Jun-14	97.02	32.01	99.09	1.20	53.98
8-Jun-14	96.95	30.33	102.27	1.60	62.04
9-Jun-14	98.02	23.61	100.59	0.24	56.47
10-Jun-14	108.27	26.71	95.91	0.29	48.39
11-Jun-14	108.09	27.07	102.47	1.48	53.40
12-Jun-14	113.47	28.48	98.10	0.46	60.95
13-Jun-14	120.38	30.07	94.52	0.66	56.43
14-Jun-14	116.90	28.33	90.74	0.59	54.68
15-Jun-14	118.97	28.28	82.72	1.09	56.31
16-Jun-14	119.74	30.47	79.67	0.84	51.33
17-Jun-14	115.12	32.75	83.69	0.52	49.14
18-Jun-14	111.02	31.53	81.42	0.68	54.89
19-Jun-14	109.29	29.57	83.66	0.64	55.47
20-Jun-14	113.23	35.86	94.74	0.87	58.66
21-Jun-14	123.44	51.25	85.57	0.60	62.13
22-Jun-14	120.70	49.79	79.17	0.79	58.42
23-Jun-14	128.25	46.77	83.05	0.40	62.29
24-Jun-14	127.42	50.40	71.70	0.56	58.08
25-Jun-14	127.85	50.46	78.36	0.58	55.68
26-Jun-14	129.32	47.63	84.57	1.05	48.40
27-Jun-14	115.15	53.74	74.88	0.22	48.73
28-Jun-14	116.45	49.03	80.18	0.75	49.46
29-Jun-14	109.87	52.64	85.71	0.52	58.89
30-Jun-14	117.93	56.27	76.19	0.98	51.40
Total	**3320.00**	**1102.44**	**2616.78**	**25.80**	**1690.82**
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), JUNE 2014 (DAY-WISE)									
Market Segment	**Day ahead market of IEX**			**Day ahead market of PXIL**			**Under Drawl/Over Drawl from the Grid (UI)**		
Date	**Mini-mum ACP**	**Maxi-mum ACP**	**Weighted Average Price***	**Mini-mum ACP**	**Maxi-mum ACP**	**Weighted Average Price***	**All India Grid**		
							Mini-mum Price	**Maxi-mum Price**	**Average Price****
1-Jun-14	1.61	6.51	3.02	2.88	4.80	3.62	0.00	8.24	1.74
2-Jun-14	2.30	6.01	3.69	3.25	3.75	3.33	0.00	8.24	3.68
3-Jun-14	2.20	6.01	3.91	3.50	3.90	3.51	0.00	8.24	4.05
4-Jun-14	2.52	6.00	4.13	2.60	4.62	3.77	0.00	8.24	4.19
5-Jun-14	2.65	5.92	4.09	3.90	4.25	4.05	0.00	8.24	3.06
6-Jun-14	2.90	6.29	3.98	3.75	4.11	3.96	0.00	8.24	2.61
7-Jun-14	2.71	6.51	4.07	3.00	4.50	3.79	0.00	7.20	1.87
8-Jun-14	1.34	6.66	3.40	2.92	4.80	3.82	0.00	7.82	1.59
9-Jun-14	1.60	7.01	3.75	3.31	5.00	3.80	0.00	8.24	3.22
10-Jun-14	2.58	10.62	4.10	3.25	5.00	3.88	0.00	8.24	4.86
11-Jun-14	2.71	7.01	4.28	2.90	5.20	4.02	0.00	8.24	3.50
12-Jun-14	2.80	7.00	4.47	3.00	5.30	4.30	0.00	8.24	3.00
13-Jun-14	3.00	7.00	4.62	2.90	5.00	4.27	0.00	8.24	3.48
14-Jun-14	2.35	7.00	4.02	3.30	4.12	3.81	0.00	7.82	2.88
15-Jun-14	2.00	7.25	3.37	2.18	6.17	3.52	0.00	8.03	1.91
16-Jun-14	2.07	7.26	3.45	3.20	6.10	4.08	0.00	8.24	3.27
17-Jun-14	2.03	7.26	3.43	2.40	4.00	3.26	0.00	8.24	2.88
18-Jun-14	1.60	7.26	3.53	2.50	4.80	3.46	0.00	8.24	3.71
19-Jun-14	2.71	7.15	4.23	1.00	5.10	3.28	0.00	8.24	2.46
20-Jun-14	2.20	7.25	3.78	1.00	5.15	3.95	0.00	8.24	1.79
21-Jun-14	1.50	7.26	3.64	1.00	5.00	3.71	0.00	3.24	0.93
22-Jun-14	1.54	7.30	2.96	1.00	5.00	3.31	0.00	3.45	1.18
23-Jun-14	1.50	7.30	3.04	3.00	3.30	3.04	0.00	8.24	2.41
24-Jun-14	1.50	7.31	2.83	2.75	3.80	3.12	0.00	7.20	2.90
25-Jun-14	1.40	7.21	2.81	2.65	3.70	2.99	0.00	8.24	2.90
26-Jun-14	1.42	7.11	2.84	1.75	3.10	2.09	0.00	8.24	4.71
27-Jun-14	2.47	7.21	3.54	1.00	3.75	3.21	1.07	8.24	6.39
28-Jun-14	2.46	6.96	3.72	2.00	4.40	3.25	0.00	8.24	4.59
29-Jun-14	2.21	6.96	3.69	2.50	4.50	3.80	0.00	5.32	1.52
30-Jun-14	2.00	6.83	4.08	3.00	5.20	3.90	0.00	5.95	1.89
	1.34#	**10.62#**	**3.71**	**1.00#**	**6.17#**	**3.63**	**0.00#**	**8.24#**	**2.97**

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), JUNE 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	750.11	750.11	0.00	256.20	256.20	79.23	99.92	20.69	1027.00
Haryana	15.60	616.07	600.48	99.73	76.64	-23.09	99.09	68.75	-30.34	547.05
Rajasthan	430.28	21.89	-408.38	39.49	346.12	306.63	67.48	52.70	-14.77	-116.53
Delhi	9.74	403.17	393.43	160.47	31.07	-129.41	71.71	39.50	-32.21	231.81
Uttar Pradesh	0.00	346.25	346.25	0.00	186.62	186.62	107.48	72.62	-34.87	498.01
Uttarakhand	14.34	89.93	75.59	5.01	107.92	102.91	20.14	30.27	10.13	188.63
Himachal Pradesh	456.40	0.43	-455.97	362.83	0.00	-362.83	7.03	42.00	34.97	-783.83
J & K	381.44	7.35	-374.09	33.45	23.16	-10.29	24.74	41.71	16.97	-367.42
UT Chandigarh	0.00	12.66	12.66	0.00	4.37	4.37	1.46	31.46	29.99	47.02
MP	102.90	0.21	-102.69	107.30	45.98	-61.32	71.08	17.18	-53.90	-217.91
Maharashtra	0.12	273.99	273.86	48.81	273.45	224.64	67.00	111.27	44.27	542.78
Gujarat	315.23	13.79	-301.44	220.35	221.21	0.86	138.86	10.44	-128.42	-428.99
Chattisgarh	39.58	27.24	-12.34	167.99	4.76	-163.23	32.69	41.11	8.42	-167.14
Daman and Diu	0.00	13.82	13.82	0.00	27.94	27.94	5.30	8.16	2.86	44.62
Dadra & Nagar Haveli	0.00	106.56	106.56	0.00	0.00	0.00	5.25	10.50	5.25	111.81
Andhra Pradesh	0.00	411.34	411.34	1.80	245.67	243.86	30.41	60.81	30.40	685.60
Karnataka	255.88	3.73	-252.15	126.56	26.63	-99.93	26.18	29.20	3.01	-349.07
Kerala	0.00	197.51	197.51	2.74	11.41	8.67	2.03	68.79	66.76	272.95
Tamilnadu	5.00	19.48	14.48	0.00	2.05	2.05	98.42	15.54	-82.87	-66.34
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	4.47	5.05	0.58	0.58
Telangana	0.58	340.36	339.78	7.83	104.39	96.57	51.38	69.12	17.74	454.09
West Bengal	192.42	107.62	-84.80	38.82	126.63	87.82	18.44	99.66	81.22	84.23
Orissa	230.52	120.56	-109.96	102.71	78.90	-23.81	18.14	65.74	47.60	-86.17
Bihar	0.00	236.24	236.24	0.00	82.53	82.53	35.79	30.73	-5.06	313.71
Jharkhand	19.70	100.08	80.38	0.00	0.00	0.00	33.38	10.24	-23.14	57.23
Sikkim	0.00	4.08	4.08	43.42	0.00	-43.42	5.49	2.58	-2.91	-42.26
DVC	69.34	3.10	-66.24	24.30	0.00	-24.30	27.75	36.32	8.56	-81.97
Arunachal Pradesh	0.00	0.00	0.00	1.24	4.60	3.36	2.95	11.66	8.72	12.08
Assam	12.84	51.33	38.49	2.25	95.77	93.53	7.48	37.60	30.12	162.13
Manipur	0.00	0.65	0.65	1.14	3.39	2.25	4.79	1.29	-3.50	-0.60
Meghalaya	31.57	0.18	-31.39	12.73	9.04	-3.68	7.74	3.10	-4.63	-39.71
Mizoram	0.00	0.00	0.00	2.02	0.00	-2.02	1.54	3.27	1.74	-0.29
Nagaland	0.00	13.94	13.94	0.00	0.00	0.00	2.10	7.27	5.17	19.11
Tripura	12.97	1.23	-11.73	30.85	0.04	-30.81	3.26	9.47	6.22	-36.32
Goa	0.00	12.40	12.40	0.00	0.00	0.00	8.65	26.51	17.87	30.27
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	45.88	10.69	-35.20	-35.20
NJPC	0.00	0.00	0.00	25.59	0.00	-25.59	6.52	3.70	-2.81	-28.40

AD HYDRO	61.24	0.00	-61.24	73.79	0.00	-73.79	2.46	7.96	5.50	-129.52
KARCHAM WANGTOO	310.83	0.00	-310.83	133.82	0.00	-133.82	11.02	32.15	21.13	-423.52
SHREE CEMENT	141.09	0.00	-141.09	15.92	0.00	-15.92	1.29	3.96	2.67	-154.33
LANCO BUDHIL	0.00	0.00	0.00	46.46	0.00	-46.46	0.00	0.00	0.00	-46.46
MALANA	0.00	0.00	0.00	6.46	0.00	-6.46	0.00	0.00	0.00	-6.46
JINDAL POWER	260.97	0.00	-260.97	159.58	0.00	-159.58	6.35	15.50	9.15	-411.40
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	2.69	0.32	-2.37	-2.37
NSPCL	23.11	0.00	-23.11	0.00	0.00	0.00	2.07	1.51	-0.56	-23.67
ACBIL	8.68	0.00	-8.68	64.07	0.00	-64.07	1.11	20.84	19.73	-53.02
BALCO	0.00	0.00	0.00	0.77	16.46	15.70	0.89	7.69	6.80	22.50
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00	0.04	4.64	4.60	4.60
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	10.61	6.56	-4.05	-4.05
DCPP	0.00	0.00	0.00	72.15	0.00	-72.15	3.01	3.88	0.87	-71.28
EMCO	0.00	0.00	0.00	26.46	0.00	-26.46	0.00	0.00	0.00	-26.46
VANDANA VIDYUT	0.00	0.00	0.00	13.01	0.00	-13.01	0.00	0.00	0.00	-13.01
ESSAR STEEL	0.00	0.00	0.00	0.00	228.51	228.51	0.00	0.00	0.00	228.51
JINDAL STAGE-II	0.00	0.00	0.00	15.31	0.00	-15.31	0.00	0.00	0.00	-15.31
DB POWER	0.00	0.00	0.00	46.19	0.00	-46.19	0.00	0.00	0.00	-46.19
SIMHAPURI	240.69	0.00	-240.69	1.27	0.00	-1.27	1.77	4.25	2.48	-239.49
Meenakshi	0.00	0.95	0.95	0.00	1.12	1.12	0.00	0.00	0.00	2.07
STERLITE	281.46	0.00	-281.46	105.98	0.00	-105.98	13.45	18.49	5.04	-382.39
MAITHON POWER LTD	72.45	0.00	-72.45	18.43	0.00	-18.43	3.61	6.11	2.50	-88.38
ADHUNIK POWER LTD	0.00	0.00	0.00	1.69	0.00	-1.69	0.00	0.00	0.00	-1.69
CHUZACHEN HEP	0.00	0.00	0.00	20.44	0.00	-20.44	0.00	0.00	0.00	-20.44
RANGIT HEP	0.00	0.00	0.00	3.65	0.00	-3.65	0.00	0.00	0.00	-3.65
GMR KAMALANGA	0.00	0.00	0.00	50.20	0.00	-50.20	0.00	0.00	0.00	-50.20
JITPL	13.01	0.00	-13.01	50.05	0.00	-50.05	0.00	0.00	0.00	-63.06
TEESTA HEP	0.00	0.00	0.00	19.22	0.00	-19.22	0.00	0.00	0.00	-19.22
NEEPCO Stations	0.00	0.00	0.00	2.59	0.00	-2.59	2.73	1.19	-1.53	-4.13
ONGC PALATANA	0.00	0.00	0.00	25.68	0.00	-25.68	0.00	0.00	0.00	-25.68
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 June & July, 2014

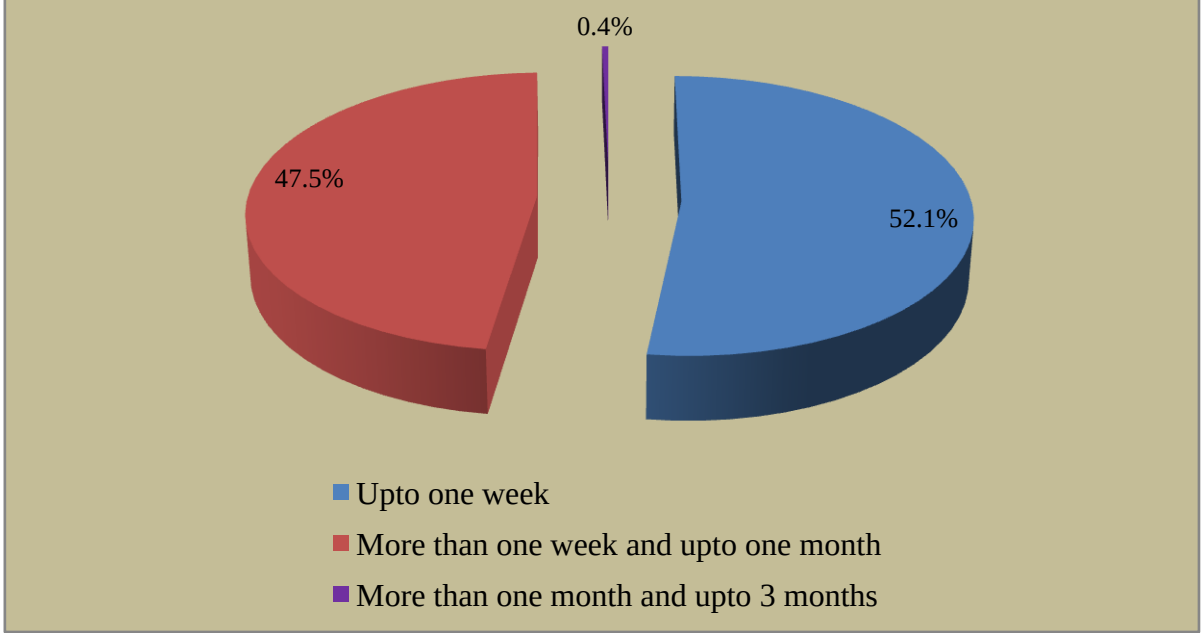


Figure-8: Forward Curve based on Prices of Bilateral Contracts

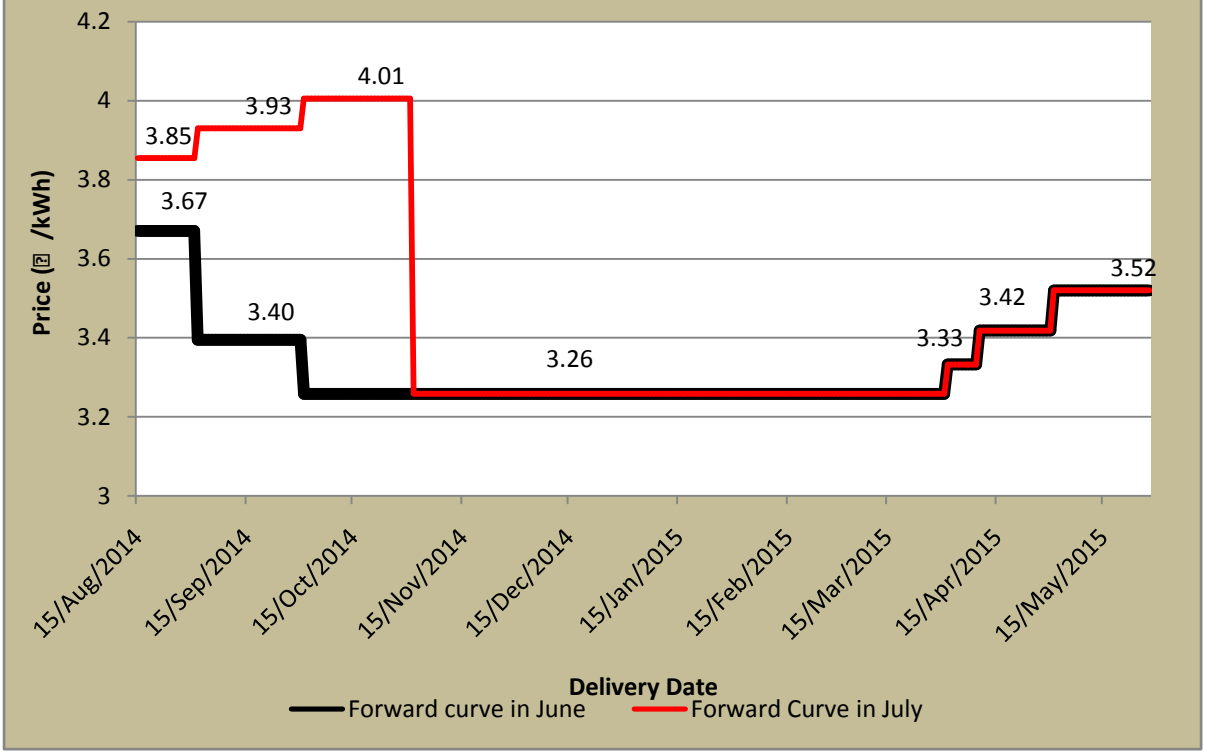


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTED THROUGH POWER EXCHANGES, JUNE 2014					
Sr.No.	**Details of REC Transactions**	**IEX**		**PXIL**	
		Solar	**Non-Solar**	**Solar**	**Non Solar**
A	Volume of Buy Bid	636	50743	1018	88711
B	Volume of Sell Bid	147026	3166863	88520	3809585
C	Ratio of Buy Bid to Sell Bid Volume	0.004	0.016	0.012	0.023
D	Market Clearing Volume (MWh)	636	50743	1018	88711
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*