Monthly Report on Short-term Transactions of Electricity in India

July, 2015

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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 Aluminum Company Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPL	Coastal Gujarat Power Limited
CHUZACHEN HEP	Chuzachen Hydro electric power project
COASTGEN	Coastal Energen Private Limited
DAGACHU	Dagachhu Hydro Power Corporation
DB POWER	Diligent Power Pvt. Ltd.
DCPP	Donga Mahua Captive Power Plant
DGEN MEGA POWER	DGEN Mega Power Project
DHARIWAL POWER	Dhariwal Power Station
DSM	Deviation Settlement Mechanism
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR POWER	Essar Power Limited
ESSAR STEEL	Essar Steel Ltd
GMR CHHATTISGARH	GMR Chhattisgarh Energy Limited
GMR KAMALANGA	GMR Kamalanga Energy Ltd.
IEX	Indian Energy Exchange Limited
J&K	Jammu & Kashmir
JAYPEE NIGRIE	Jaypee Nigrie Super Thermal Power Project
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
KORBA WEST POWER	Korba West Power Company Limited
KSK MAHANADI	KSK Mahanadi Power Ltd
LANKO BUDHIL	Lanco Budhil Hydro Power Private Limited
LANKO AMK	Lanco Amarkantak Power Private Limited
LANKO KONDAPALLY	Lanco Kondapally Power Private Limited
MAITHON	Maithon Power 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
NTPC STATIONS	National Thermal 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
THERMAL POWERTECH	Thermal Powertech Corporation India Limited
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 Deviation Settlement Mechanism (DSM). 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 **July, 2015** is as under:

I: Volume of Short-term Transactions of Electricity

During July 2015, total electricity generation excluding generation from renewable and captive power plants in India was 92917.85 MUs (Table-1).

Of the total electricity generation, 10960.37 MUs (11.80%) were transacted through short-term, comprising of 6599.73 MUs (7.10 %) through bilateral (through traders and term-ahead contracts on power exchanges and directly between distribution companies), followed by 2535.31 MUs (2.73 %) through day ahead collective transactions on power exchanges (IEX and PXIL) and 1825.34 MUs (1.96 %) through DSM (Table-1 & Figure-2).

Of the total short-term transactions, bilateral constitutes 60.21 % (38.83% through traders and term-ahead contracts on power exchanges and 21.39% directly between distribution companies) followed by 23.13 % through day ahead collective transactions on power exchanges and 16.65% through DSM (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 the trading licensees is provided in Table-2 & Figure-4. The volume of electricity transacted by the trading licensees includes bilateral transactions and the transactions undertaken through power exchanges. There were 47 trading licensees as on 31.07.2015. In July 2015, 19 trading licensees were engaged in short term trading. Top 5 trading licensees had a share of 73.88 % in the total volume traded by all the licensees. These are PTC India Ltd., Tata Power Trading Company (P) Ltd., Mittal Processors (P) Ltd., JSW Power Trading Company Ltd. and GMR Energy Trading Ltd.

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 concentration, and vice versa. The HHI below 0.15 indicates non-concentration, HHI between 0.15 to 0.25 indicates moderate concentration and HHI above 0.25 indicates high concentration. The HHI has been computed based on the volume of electricity traded (inter-State & intra-State) by inter-State trading licensees, and it was 0.1554 for the month of July 2015, which indicates moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 2521.06 MUs and 14.25 MUs respectively. The volume of total buy bids and sale bids was 3394.53 MUs and 4705.30 MUs respectively in IEX while the same was 37.23MUs and 44.30 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was less demand in both IEX (0.72 times) and PXIL (0.84 times) when compared with the supply bids offered through these exchanges.

The volume of electricity transacted through IEX and PXIL in the term-ahead market was 68.83 MUs and 100.55 MUs respectively (Table-6 & Table-7).

II: Price of Short-term Transactions of Electricity

(i) ***Price of electricity transacted through Traders:*** The minimum, maximum and weighted average sale prices have been computed for the electricity transacted through traders and the sale prices were ₹2.64/kWh, ₹7.99/kWh and ₹3.99/kWh respectively (Table-3).The weighted average sale prices were also computed for the transactions during Round

the Clock (RTC), Peak, and Off-Peak periods separately, and the sale prices were □4.07/kWh, □3.60/kWh and □3.57/kWh respectively (Table-4).

(ii*) Price of electricity transacted Through Power Exchanges:* The 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 ☐0.25/kWh, ☐8.20/kWh and ☐2.47/kWh respectively in IEX and ☐0.38/kWh, ☐4.95/kWh and ☐2.70/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ☐3.12/kWh and ☐2.60/kWh respectively (Table-6 and Table-7).

(iii*) Price of electricity transacted through DSM:* The average deviation price was ☐1.86/kWh for all India grid. The minimum and maximum deviation prices were ☐0.00/kWh and ☐8.24/kWh respectively in the all India grid (Table-8).

The prices of electricity transacted through trading licensees, power exchanges and DSM and their comparison is shown in Table-18 & 19, 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 43.38 % of the volume, and these were Himachal Pradesh, Madhya Pradesh, Rajasthan, Jammu & Kashmir and Jaypee Karcham Hydro Corporation Limited. Top 5 regional entities purchased 66.68% of the volume, and these were Telangana, Haryana, Punjab, West Bengal and Uttar Pradesh (Table-9 & 10).

Of the total power exchange transactions, top 5 regional entities sold 32.85 % of the volume, and these were Jindal India Thermal Power Limited, Himachal Pradesh, Gujarat, Karnataka and Simhapuri Energy Private Limited. Top 5 regional entities purchased 58.77% of the volume, and these were Rajasthan, Maharashtra, Andhra Pradesh, Gujarat and Essar Steel Limited (Table-11 & 12).

[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.*

Of the total DSM transactions, top 5 regional entities underdrew 35.21% of the volume, and these were Gujarat, Maharashtra, National Thermal Power Corporation Stations(Western Region),Tamil Nadu and Uttar Pradesh (Table-13). Top 5 regional entities overdrew 30.99% of the volume, and these were Haryana, National Thermal Power Stations (Western Region), Uttar Pradesh, National Thermal Power Stations (Northern Region)and Punjab (Table-14).

Regional entity-wise total volume of net short-term transactions of electricity i.e. volume of net transactions through bilateral, power exchanges and DSM is shown in Table-15 & 19. Top 5 electricity selling regional entities were Himachal Pradesh, Madhya Pradesh, Jaypee Karcham Hydro Corporation Limited, Jammu & Kashmir and Jindal Power Limited Stage II. Top 5 electricity purchasing regional entities were Haryana, Telangana, Punjab, West Bengal and Andhra 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 July 2015, congestion occurred in both the power exchanges. The details of congestion are shown in Table-16. The volume of electricity that could not be

[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.

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 IEX and PXIL due to congestion was 11.11% and 6.55% of the unconstrained cleared volume respectively. In terms of time, congestion occurred was 94.72% in IEX and 90.32% in PXIL (Table-16).

V: Bilateral Contracts executed by Traders

In addition to the analysis on short-term transactions of electricity in July 2015, this section covers an analysis of bilateral contracts executed in August 2015.

(i) ***Duration of bilateral contracts:*** During August, 2015, a total of 98 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 1731.22 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 62% of the contracts were executed for a duration of up to one week and 38% of the contracts executed for a duration of more than a week and upto one month.

During the month, 42 banking/swapping bilateral contracts were also executed for the volume of 781.85 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. The price of each contract for each day is taken into consideration while constructing the forward curve. On the basis of these prices, the 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, 2015 to May, 2016 based on bilateral contracts[4] executed till August, 2015. Forward curves have been drawn for the contracts executed in July, 2015 and August, 2015 for the

[4]*Excluding Banking/Swapping contracts*

purpose of comparison. It is observed that the forward prices for September, 2015 and November, 2015 were lower for the contracts executed in August, 2015 compared to the contracts executed in July, 2015. However, the forward prices since December, 2015 onwards remained same for the contracts executed in August, 2015 and July, 2015.

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 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 electricity market.

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

The details of REC transactions for the month of July, 2015 are shown in Table-20. The market clearing volume of solar RECs transacted on IEX and PXIL were 16782 and 1170 respectively and the market clearing price of these RECs was ☐3500/MWh on both the power exchanges. Market clearing volume of non-solar RECs transacted on IEX and PXIL were 108042 and 47229 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 bids to sell bids was 0.01 and 0.003 for IEX and PXIL respectively. For non-solar RECs, the ratio of buy bids to sell bids was 0.01 for IEX and 0.01 for PXIL.

VII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 11.80 %.

- Of the total short-term transactions of electricity, 60.21 % was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 23.13% through power exchanges and 16.65% through DSM.

- Top 5 trading licensees had a share of 73.88% in the total volume traded by all the trading licensees.

- The Herfindahl Hirschman Index computed for the volume of electricity traded by trading licensees was 0.1554, indicating moderate concentration of market power.

- The weighted average price of electricity transacted through trading licensees was □3.99/kWh. The weighted average prices of electricity transacted through IEX and PXIL were □2.47/kWh and □2.70/kWh respectively.

- The average price of electricity transacted through DSM was □1.86/kWh

- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was less demand in both IEX (1.0: 0.72) and PXIL (1.0: 0.84) when compared with the supply bids offered through these exchanges.

- Top 5 electricity selling regional entities were Himachal Pradesh, Madhya Pradesh, Jaypee Karcham Hydro Corporation Limited, Jammu & Kashmir and Jindal Power Limited Stage II. Top 5 electricity purchasing regional entities were Haryana, Telangana, Punjab, West Bengal and Andhra Pradesh.

- The volume of electricity that could not be cleared due to congestion was 11.11% and 6.55 % of the unconstrained cleared volume for IEX and PXIL, respectively. In terms of time, congestion occurred for 94.72% of the time in IEX and 90.32% of the time in PXIL.

- In August 2015, 62% of the bilateral contracts were executed for a duration of up to one week, and 38% of the contracts were executed for a duration of more than a week and upto one month.
- The forward prices for September, 2015 and November, 2015 were lower for the contracts executed in August, 2015 compared to the contracts executed in July, 2015. However, the forward prices since December, 2015 onwards remained the same for the contracts executed in August, 2015 and July, 2015.

- The market clearing volume of Solar RECs transacted on IEX and PXIL were 16782 and 1170 respectively and the market clearing price of these RECs was ☐3500/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 108042 and 47229 respectively and the market clearing price of these RECs was ☐1500/MWh on both the power exchanges.

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), JULY 2015				
Sr. No	**Short-term transactions**	**Volume (MUs)**	**% of short-term transactions**	**% of Total Generation**
1	Bilateral	6599.73	60.21	7.10
	(i) Through Traders and PXs	*4255.70*	38.83	4.58
	(ii) Direct	*2344.03*	21.39	2.52
2	Through Power Exchanges	2535.31	23.13	2.73
	(i) IEX	*2521.06*	23.00	2.71
	(ii) PXIL	*14.25*	0.13	0.02
3	Through DSM	1825.34	16.65	1.96
	Total	**10960.37**	**100.00**	**11.80**
	Total Generation	**92917.85**	_	_
Source: NLDC				

Figure-1: Volume of Short-term Transactions of Electricity, July 2015

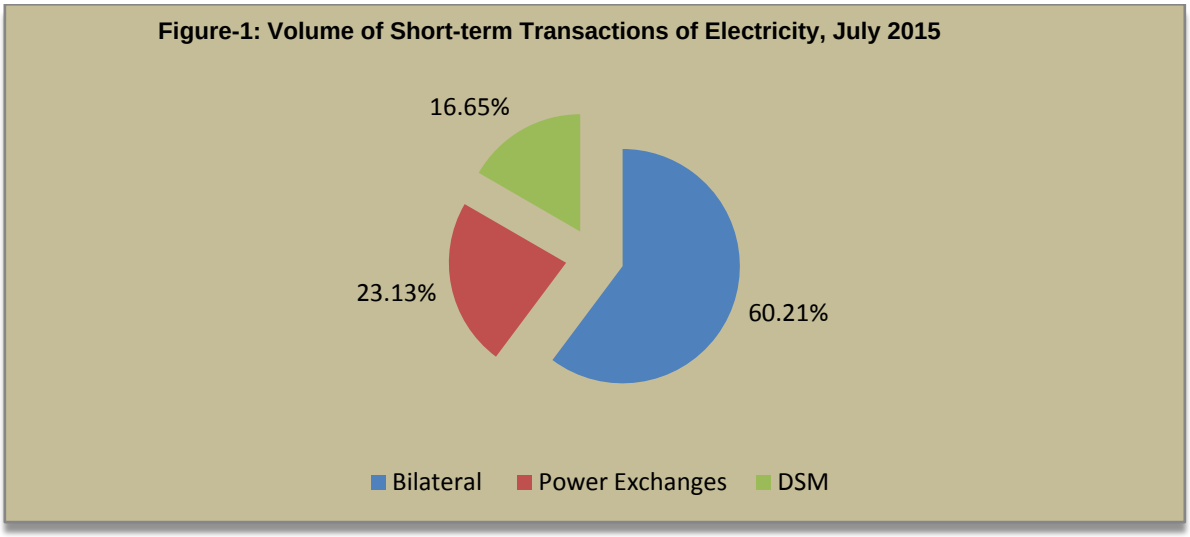
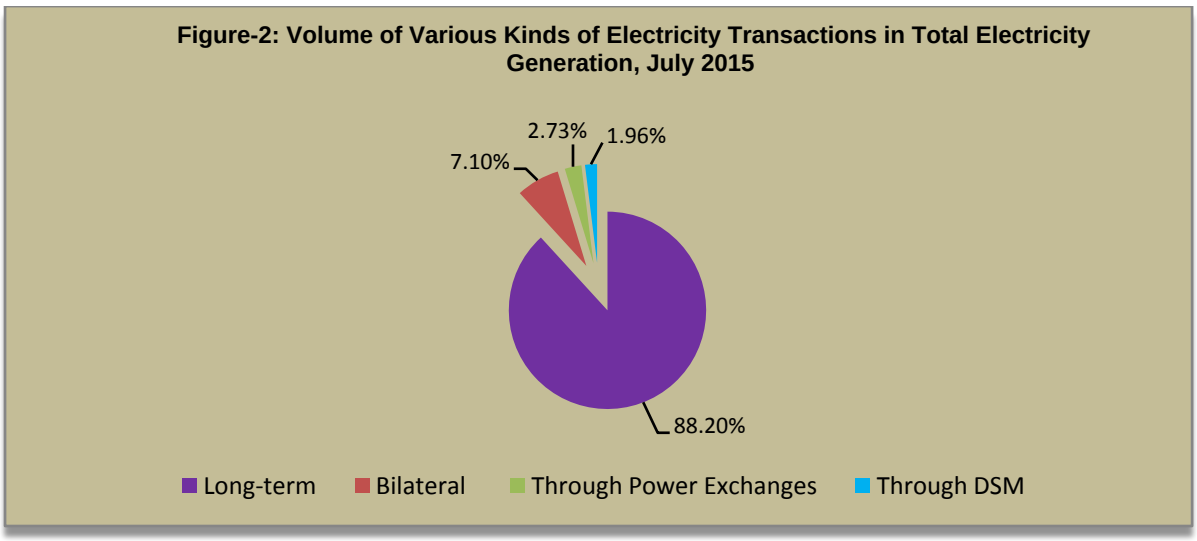


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, July 2015



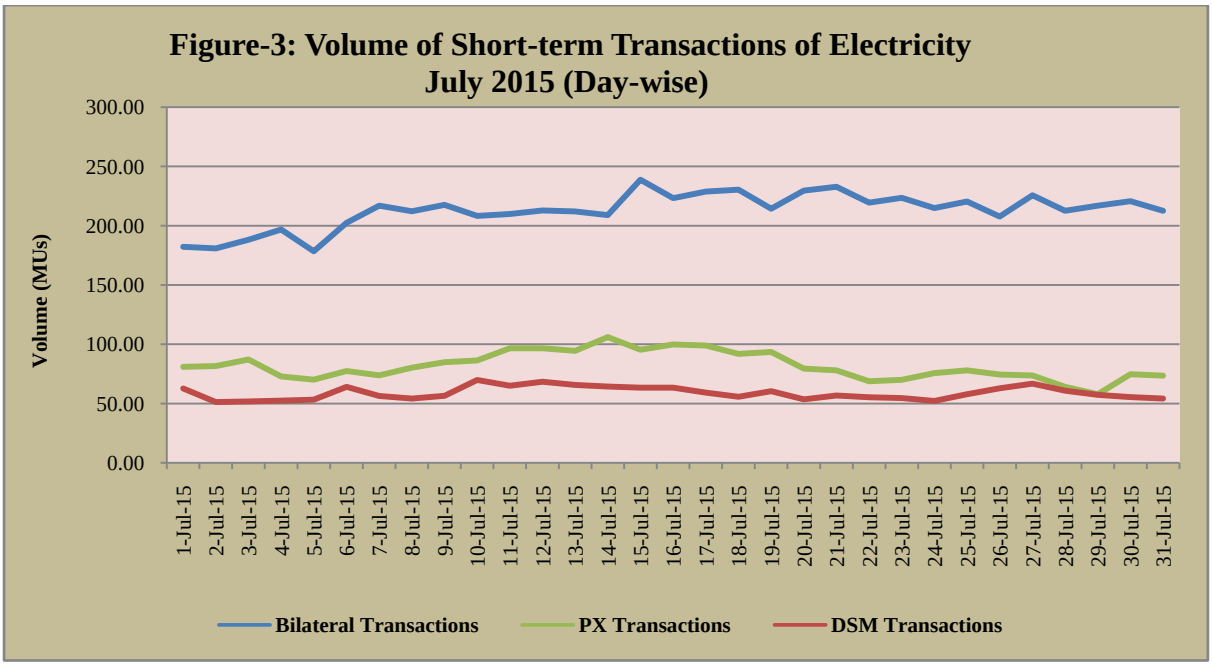


Figure-3: Volume of Short-term Transactions of Electricity
July 2015 (Day-wise)
Volume (MUs)
300.00
250.00
200.00
150.00
100.00
50.00
0.00
1-Jul-15
2-Jul-15
3-Jul-15
4-Jul-15
5-Jul-15
6-Jul-15
7-Jul-15
8-Jul-15
9-Jul-15
10-Jul-15
11-Jul-15
12-Jul-15
13-Jul-15
14-Jul-15
15-Jul-15
16-Jul-15
17-Jul-15
18-Jul-15
19-Jul-15
20-Jul-15
21-Jul-15
22-Jul-15
23-Jul-15
24-Jul-15
25-Jul-15
26-Jul-15
27-Jul-15
28-Jul-15
29-Jul-15
30-Jul-15
31-Jul-15
Bilateral Transactions
PX Transactions
DSM Transactions

Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JULY 2015			
Sr. No	**Name of the Trading Licensee**	**% Share in total Volume transacted by Trading Licensees**	**Herfindahl-Hirschman Index**
1	PTC India Ltd.	31.04	0.0963
2	Tata Power Trading Company (P) Ltd.	12.53	0.0157
3	Mittal Processors (P) Ltd.	12.49	0.0156
4	JSW Power Trading Company Ltd	9.18	0.0084
5	GMR Energy Trading Ltd.	8.65	0.0075
6	Manikaran Power Ltd.	7.64	0.0058
7	NTPC Vidyut Vyapar Nigam Ltd.	5.56	0.0031
8	Adani Enterprises Ltd.	3.36	0.0011
9	Shree Cement Ltd.	3.10	0.0010
10	Knowledge Infrastructure Systems (P) Ltd	2.33	0.0005
11	Instinct Infra & Power Ltd.	1.06	0.0001
12	Jaiprakash Associates Ltd.	0.93	0.0001
13	RPG Power Trading Company Ltd.	0.59	0.0000
14	SN Power Markets Pvt. Ltd.	0.52	0.0000
15	National Energy Trading & Services Ltd.	0.44	0.0000
16	Ambitious Power Trading Company Ltd.	0.24	0.0000
17	Customized Energy Solutions India (P) Ltd.	0.15	0.0000
18	My Home Power Private Ltd.	0.14	0.0000
19	Essar Electric Power Development Corp. Ltd.	0.06	0.0000
TOTAL		**100.00**	**0.1554**
Top 5 trading licensees		**73.88**	

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 Licensees, July 2015

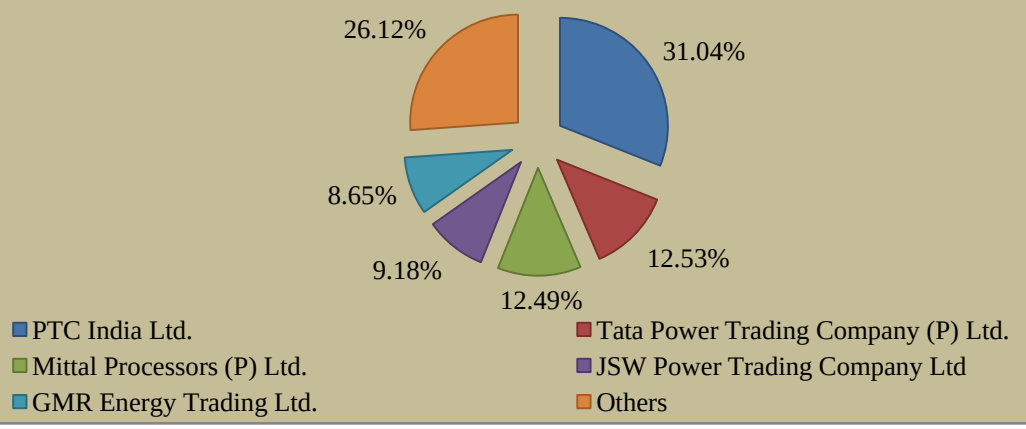


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JULY 2015		
Sr.No		**Sale Price of Traders (□/kWh)**
1	Minimum	2.64
2	Maximum	7.99
3	Weighted Average	3.99

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE),JULY 2015		
Sr.No	**Period of Trade**	**Sale Price of Traders (□/kWh)**
1	RTC	4.07
2	PEAK	3.60
3	OFF PEAK	3.57

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JULY 2015			
Sr.No	**ACP**	**Price in IEX (□/kWh)**	**Price in PXIL (□/kWh)**
1	Minimum	0.25	0.38
2	Maximum	8.20	4.95
3	Weighted Average	2.47	2.70

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JULY 2015			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (□/kWh)**
1	Intra-Day Contracts	6.60	3.19
2	Day Ahead Contingency Contracts	10.18	2.74
3	Weekly Contracts	52.05	3.18
	Total	**68.83**	**3.12**

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JULY 2015			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (□/kWh)**
1	Intra-Day Contracts	10.96	2.26
2	Daily Contracts	89.60	2.64
	Total	**100.55**	**2.60**

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH DSM, JULY 2015		
Sr.No		**Price in All India Grid (□/kWh)**
1	Minimum	0.00
2	Maximum	8.24
3	Average	1.86

Source: NLDC

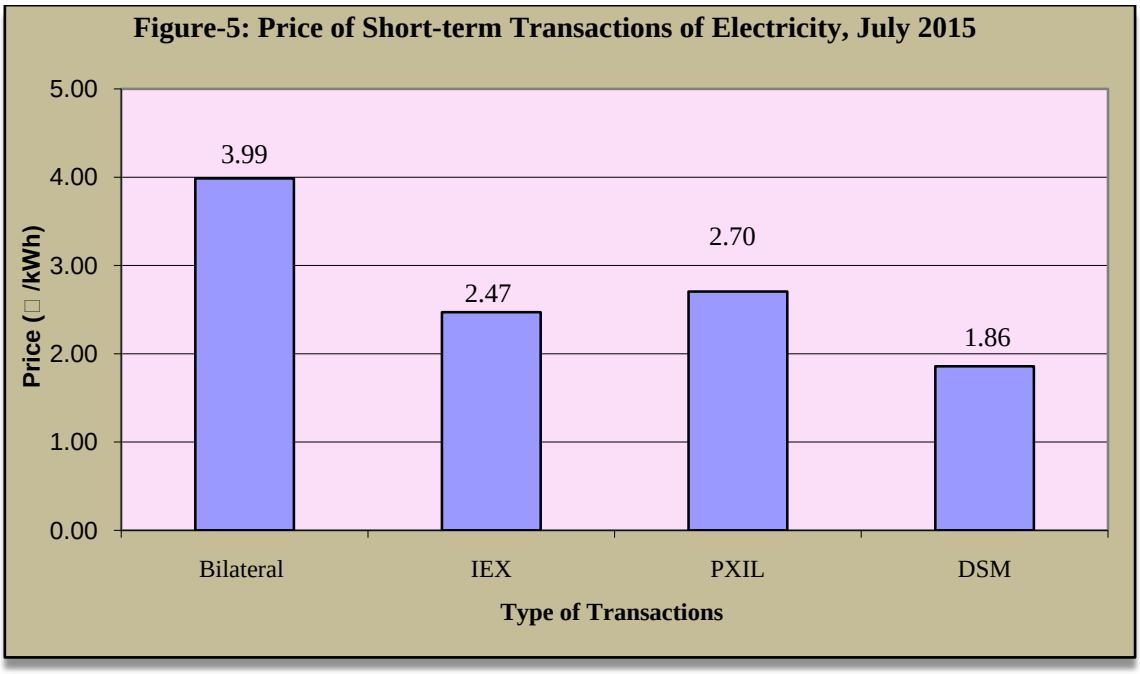


Figure-5: Price of Short-term Transactions of Electricity, July 2015
5.00
4.00
3.00
2.00
1.00
0.00
Price (□ /kWh)
3.99
2.47
2.70
1.86
Bilateral
IEX
PXIL
DSM
Type of Transactions

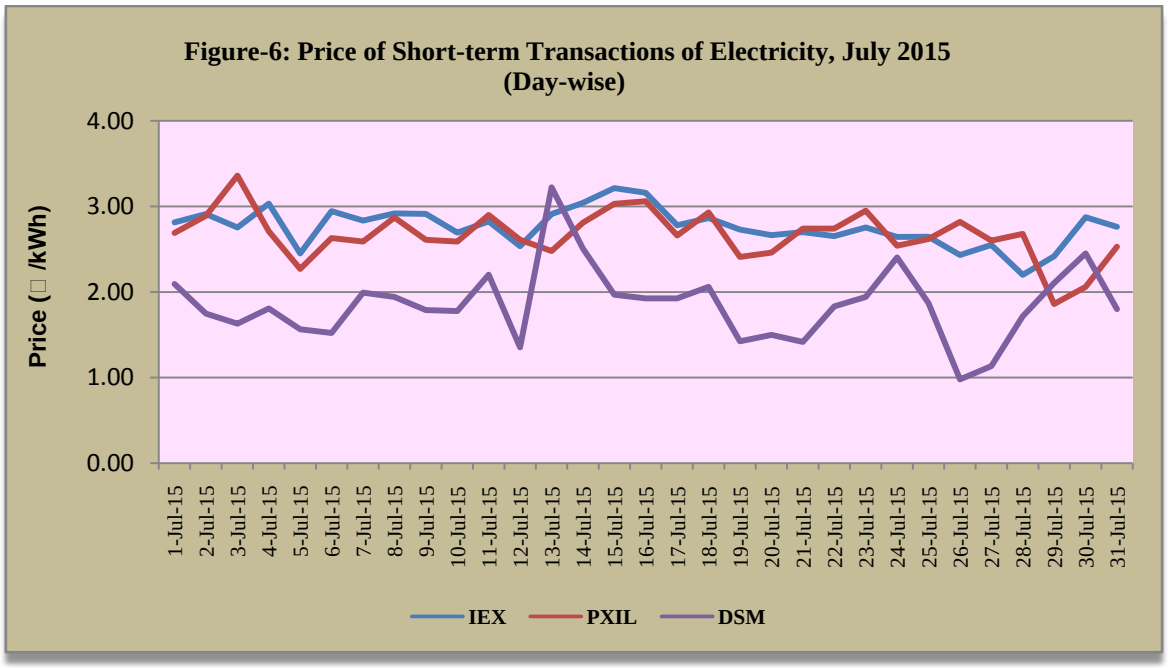


Figure-6: Price of Short-term Transactions of Electricity, July 2015
(Day-wise)
4.00
3.00
2.00
1.00
0.00
Price (□ /kWh)
1-Jul-15
2-Jul-15
3-Jul-15
4-Jul-15
5-Jul-15
6-Jul-15
7-Jul-15
8-Jul-15
9-Jul-15
10-Jul-15
11-Jul-15
12-Jul-15
13-Jul-15
14-Jul-15
15-Jul-15
16-Jul-15
17-Jul-15
18-Jul-15
19-Jul-15
20-Jul-15
21-Jul-15
22-Jul-15
23-Jul-15
24-Jul-15
25-Jul-15
26-Jul-15
27-Jul-15
28-Jul-15
29-Jul-15
30-Jul-15
31-Jul-15
IEX
PXIL
DSM

Table-9: VOLUME OF ELECTRICITY SOLD THROUGH BILATERAL TRADE, JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
HIMACHAL PRADESH	780.41	13.19
MP	557.23	9.42
RAJASTHAN	511.21	8.64
J & K	361.35	6.11
KARCHAM WANGTOO	357.17	6.04
THERMAL POWERTECH	333.24	5.63
JINDAL STAGE-II	315.13	5.33
GMR KAMALANGA	257.19	4.35
LANKO KONDAPALLI	237.66	4.02
STERLITE	223.13	3.77
KARNATAKA	222.61	3.76
SIMHAPURI	204.24	3.45
UTTARAKHAND	148.80	2.51
SHREE CEMENT	148.75	2.51
GUJARAT	145.58	2.46
JITPL	138.89	2.35
ODISHA	132.49	2.24
DVC	127.44	2.15
ADHUNIK POWER LTD	110.24	1.86
AD HYDRO	109.04	1.84
MEENAKSHI	90.00	1.52
ANDHRA PRADESH	71.87	1.21
EMCO	64.36	1.09
DAGACHU	50.42	0.85
MEGHALAYA	49.55	0.84
CHHATTISGARH	43.99	0.74
ASSAM	37.21	0.63
TELANGANA	24.33	0.41
DELHI	14.65	0.25
KORBA WEST POWER	13.85	0.23
TRIPURA	11.43	0.19
ACBIL	8.25	0.14
JINDAL POWER	7.41	0.13
MANIPUR	7.17	0.12
DCPP	1.20	0.02
HARYANA	0.50	0.01
TOTAL	**5918.00**	**100.00**
VOLUME SOLD BY TOP 5 STATES	**2567.36**	**43.38**

Table-10: VOLUME OF ELECTRICITY PURCHASED THROUGH BILATERAL TRADE, JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
TELANGANA	1176.75	17.83
HARYANA	1028.09	15.58
PUNJAB	909.63	13.78
WEST BENGAL	793.62	12.02
UTTAR PRADESH	492.49	7.46
ANDHRA PRADESH	491.86	7.45
GUJARAT	349.71	5.30
MAHARASHTRA	315.47	4.78
DELHI	290.48	4.40
BIHAR	258.27	3.91
UTTARAKHAND	102.52	1.55
KERALA	95.04	1.44
JHARKHAND	91.10	1.38
ASSAM	55.80	0.85
ODISHA	47.41	0.72
ESSAR STEEL	44.81	0.68
CHHATTISGARH	30.95	0.47
MANIPUR	11.88	0.18
CHANDIGARH	7.44	0.11
TAMIL NADU	2.71	0.04
RAJASTHAN	2.33	0.04
GOA	0.89	0.01
MP	0.36	0.01
MEGHALAYA	0.12	0.00
TOTAL	**6599.73**	**100.00**
VOLUME PURCHASED BY TOP 5 STATES	**4400.58**	**66.68**

Table-11: VOLUME OF ELECTRICITY SOLD THROUGH POWER EXCHANGES, JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
JITPL	228.63	9.02
HIMACHAL PRADESH	214.81	8.48
GUJARAT	155.11	6.12
KARNATAKA	125.98	4.97
SIMHAPURI	108.26	4.27
KARCHAM WANGTOO	92.00	3.63
DELHI	81.69	3.22
CHUZACHEN HEP	77.37	3.05
TRIPURA	76.10	3.00
HARYANA	75.74	2.99
JINDAL STAGE-II	75.06	2.96
CHHATTISGARH	70.95	2.80
THERMAL POWERTECH	70.17	2.77
MEENAKSHI	68.24	2.69
SIKKIM	57.56	2.27
NHPC STATIONS	57.29	2.26
RAJASTHAN	54.74	2.16
WEST BENGAL	52.37	2.07
MAITHON POWER LTD	51.68	2.04
NJPC	51.24	2.02
AD HYDRO	50.10	1.98
LANCO BUDHIL	49.06	1.94
DCPP	48.51	1.91
KORBA WEST POWER	45.73	1.80
J & K	42.94	1.69
ACBIL	42.26	1.67
TELANGANA	39.16	1.55
MP	38.14	1.51
MEGHALAYA	36.52	1.44
JINDAL POWER	35.27	1.39
JAYPEE NIGRIE	30.44	1.20
MANIPUR	26.93	1.06
ODISHA	24.58	0.97
MB POWER	21.31	0.84
MIZORAM	19.43	0.77
MAHARASHTRA	18.84	0.74
STERLITE	17.86	0.70
SHREE CEMENT	17.71	0.70
ARUNACHAL PRADESH	14.14	0.56
ANDHRA PRADESH	12.99	0.51
ASSAM	11.00	0.43
GMR KAMALANGA	10.53	0.42
NEEPCO STATIONS	8.77	0.35
MALANA	8.70	0.34
NAGALAND	6.91	0.27
GOA	3.59	0.14
KERALA	3.27	0.13
DVC	2.99	0.12
CHANDIGARH	1.71	0.07
EMCO	0.67	0.03
DB POWER	0.16	0.01
ADHUNIK POWER LTD	0.10	0.00
TOTAL	**2535.31**	**100.00**
VOLUME SOLD BY TOP 5 SELLERS	**832.79**	**32.85**

Table-12: VOLUME OF ELECTRICITY PURCHASED THROUGH POWER EXCHANGES JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
RAJASTHAN	397.84	15.69
MAHARASHTRA	382.64	15.09
ANDHRA PRADESH	257.42	10.15
GUJARAT	256.72	10.13
ESSAR STEEL	195.39	7.71
HARYANA	164.22	6.48
PUNJAB	113.96	4.49
KARNATAKA	112.91	4.45
TELANGANA	83.87	3.31
KERALA	60.16	2.37
MP	58.10	2.29
WEST BENGAL	57.94	2.29
BIHAR	50.24	1.98
DELHI	48.70	1.92
DADRA & NAGAR HAVELI	43.50	1.72
TAMIL NADU	42.81	1.69
UTTARAKHAND	33.68	1.33
DAMAN AND DIU	33.10	1.31
BALCO	30.76	1.21
J & K	28.40	1.12
ASSAM	16.59	0.65
MEGHALAYA	15.85	0.63
GOA	14.58	0.58
ODISHA	12.26	0.48
CHHATTISGARH	11.17	0.44
HIMACHAL PRADESH	7.44	0.29
CHANDIGARH	4.06	0.16
JHARKHAND	0.99	0.04
TOTAL	**2535.31**	**100.00**
VOLUME PURCHASED BY TOP 5 BUYERS	**1490.02**	**58.77**

Table-13: VOLUME OF ELECTRICITY UNDER DRAWAL THROUGH DSM, JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Under drawal (MUs)**	**% of Volume**
GUJARAT	163.77	10.66
MAHARASHTRA	117.09	7.62
NTPC STATIONS_WR	96.21	6.26
TAMIL NADU	85.17	5.54
UTTAR PRADESH	78.93	5.14
MP	74.52	4.85
PUNJAB	63.53	4.13
BIHAR	60.39	3.93
J & K	46.24	3.01
JHARKHAND	44.66	2.91
NHPC STATIONS	41.59	2.71
DELHI	41.21	2.68
DVC	40.78	2.65
RAJASTHAN	39.82	2.59
HARYANA	39.33	2.56
NTPC STATIONS_NR	37.16	2.42
TELANGANA	35.92	2.34
WEST BENGAL	33.70	2.19
ODISHA	26.72	1.74
ANDHRA PRADESH	26.69	1.74
UTTARAKHAND	21.93	1.43
ESSAR STEEL	19.19	1.25
CHHATTISGARH	18.42	1.20
ASSAM	18.37	1.20
NTPC STATIONS_ER	17.72	1.15
KARNATAKA	16.21	1.06
CGPL	14.95	0.97
TEESTA HEP	14.00	0.91
JITPL	13.81	0.90
MEGHALAYA	10.70	0.70
DADRA & NAGAR HAVELI	8.94	0.58
KARCHAM WANGTOO	8.93	0.58
SIKKIM	8.93	0.58
NTPC STATIONS_SR	8.50	0.55
HIMACHAL PRADESH	8.32	0.54
MAITHON POWER LTD	7.88	0.51
NJPC	7.23	0.47
MANIPUR	7.18	0.47
NEEPCO STATIONS	7.04	0.46
ARUNACHAL PRADESH	6.78	0.44
GOA	6.45	0.42
STERLITE	6.31	0.41
JINDAL POWER	6.24	0.41
GMR KAMALANGA	5.65	0.37
JAYPEE NIGRIE	5.12	0.33

NSPCL	5.02	0.33
TRIPURA	4.15	0.27
KERALA	4.08	0.27
CHUZACHEN HEP	3.89	0.25
RANGANADI HEP	3.64	0.24
NAGALAND	3.16	0.21
PONDICHERRY	2.86	0.19
COASTGEN	2.83	0.18
DAMAN AND DIU	2.68	0.17
KORBA WEST POWER	2.64	0.17
MEENAKSHI	2.63	0.17
SIMHAPURI	2.63	0.17
KSK MAHANADI	2.32	0.15
CHANDIGARH	2.00	0.13
BALCO	1.97	0.13
DGEN MEGA POWER	1.94	0.13
DCPP	1.92	0.13
ACBIL	1.79	0.12
LANKO_AMK	1.74	0.11
LANCO BUDHIL	1.68	0.11
MB POWER	1.63	0.11
SHREE CEMENT	1.49	0.10
RANGIT HEP	1.43	0.09
EMCO	1.40	0.09
THERMAL POWERTECH	1.34	0.09
URI-2	0.96	0.06
DAGACHU	0.90	0.06
AD HYDRO	0.89	0.06
LOKTAK	0.78	0.05
MIZORAM	0.76	0.05
ADHUNIK POWER LTD	0.70	0.05
DOYANG HEP	0.42	0.03
MALANA	0.25	0.02
VANDANA VIDYUT	0.18	0.01
LANKO KONDAPALLI	0.15	0.01
RGPPL	0.05	0.00
TOTAL	**1537.13**	**100.00**
VOLUME OF UNDER DRAWAL BY TOP 5 STATES	**541.16**	**35.21**

Table-14: VOLUME OF ELECTRICITY OVER DRAWAL THROUGH DSM, JULY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Over drawal (MUs)**	**% of Volume**
HARYANA	166.62	8.85
NTPC STATIONS_WR	108.80	5.78
UTTAR PRADESH	107.65	5.72
NTPC STATIONS_NR	104.23	5.53
PUNJAB	96.44	5.12
MAHARASHTRA	90.11	4.78
NTPC STATIONS_ER	87.21	4.63
RAJASTHAN	86.39	4.59
KARNATAKA	70.59	3.75
ANDHRA PRADESH	63.50	3.37
CHHATTISGARH	62.03	3.29
KERALA	53.20	2.82
WEST BENGAL	51.78	2.75
TELANGANA	47.66	2.53
NTPC STATIONS_SR	47.16	2.50
HIMACHAL PRADESH	41.26	2.19
ASSAM	38.19	2.03
BIHAR	36.22	1.92
ODISHA	35.59	1.89
DELHI	33.29	1.77
UTTARAKHAND	28.82	1.53
J & K	25.74	1.37
GUJARAT	23.66	1.26
TAMIL NADU	23.17	1.23
GOA	22.05	1.17
STERLITE	20.09	1.07
ESSAR STEEL	19.19	1.02
THERMAL POWERTECH	18.93	1.01
DVC	17.98	0.95
MP	16.69	0.89
SHREE CEMENT	15.58	0.83
CHANDIGARH	14.69	0.78
TRIPURA	13.44	0.71
NHPC STATIONS	10.28	0.55
BALCO	10.11	0.54
DAMAN AND DIU	10.03	0.53
KARCHAM WANGTOO	9.94	0.53
CGPL	9.69	0.51
DCPP	9.24	0.49
ADHUNIK POWER LTD	8.93	0.47
JITPL	8.03	0.43
NJPC	7.49	0.40

NSPCL	7.44	0.40
JHARKHAND	7.05	0.37
LANKO KONDAPALLI	6.60	0.35
NAGALAND	6.58	0.35
MIZORAM	6.35	0.34
PONDICHERRY	5.58	0.30
JAYPEE NIGRIE	5.12	0.27
ARUNACHAL PRADESH	5.01	0.27
NEEPCO STATIONS	4.79	0.25
MAITHON POWER LTD	4.46	0.24
RGPPL	4.17	0.22
JINDAL POWER	3.96	0.21
DAGACHU	3.87	0.21
DADRA & NAGAR HAVELI	3.55	0.19
AD HYDRO	3.32	0.18
GMR KAMALANGA	3.19	0.17
ACBIL	2.78	0.15
KORBA WEST POWER	2.64	0.14
MEGHALAYA	2.53	0.13
CHUZACHEN HEP	2.37	0.13
KSK MAHANADI	2.32	0.12
MANIPUR	2.14	0.11
COASTGEN	2.14	0.11
SIMHAPURI	2.06	0.11
DGEN MEGA POWER	1.94	0.10
MEENAKSHI	1.67	0.09
MB POWER	1.63	0.09
EMCO	1.40	0.07
LANKO_AMK	0.83	0.04
URI-2	0.74	0.04
RANGANADI HEP	0.70	0.04
MALANA	0.68	0.04
LANCO BUDHIL	0.53	0.03
RANGIT HEP	0.43	0.02
SIKKIM	0.41	0.02
LOKTAK	0.38	0.02
DOYANG HEP	0.35	0.02
VANDANA VIDYUT	0.18	0.01
TEESTA HEP	0.03	0.00
TOTAL	**1883.61**	**100.00**
VOLUME OF OVER DRAWAL BY TOP 5 STATES	**583.74**	**30.99**

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JULY 2015		
Sr. No.	**Name of the State/UT/Other Regional Entity**	**Total volume of net short-term transactions of electricity in (MUs)***
1	HARYANA	1243.36
2	TELANGANA	1208.88
3	PUNJAB	1056.50
4	WEST BENGAL	817.26
5	ANDHRA PRADESH	701.24
6	MAHARASHTRA	652.29
7	UTTAR PRADESH	521.21
8	BIHAR	284.34
9	ESSAR STEEL	240.21
10	DELHI	234.91
11	KERALA	201.05
12	GUJARAT	165.64
13	NTPC STATIONS_ER	69.49
14	NTPC STATIONS_NR	67.07
15	JHARKHAND	54.49
16	ASSAM	43.99
17	DAMAN AND DIU	40.45
18	BALCO	38.90
19	NTPC STATIONS_SR	38.67
20	DADRA & NAGAR HAVELI	38.11
21	GOA	27.48
22	CHANDIGARH	22.48
23	NTPC STATIONS_WR	12.59
24	RGPPL	4.12
25	PONDICHERRY	2.73
26	NSPCL	2.43
27	DOYANG HEP	-0.07
28	DB POWER	-0.16
29	URI-2	-0.21
30	LOKTAK	-0.40
31	COASTGEN	-0.69
32	LANKO_AMK	-0.91
33	RANGIT HEP	-1.00
34	RANGANADI HEP	-2.94
35	NAGALAND	-3.49
36	CGPL	-5.26
37	UTTARAKHAND	-5.71
38	MALANA	-8.27
39	NEEPCO STATIONS	-11.02
40	MIZORAM	-13.84
41	TEESTA HEP	-13.97
42	ARUNACHAL PRADESH	-15.91
43	TAMIL NADU	-16.48
44	MB POWER	-21.31
45	MANIPUR	-27.25
46	CHHATTISGARH	-29.22
47	JAYPEE NIGRIE	-30.44
48	DCPP	-42.39
49	JINDAL POWER	-44.96
50	DAGACHU	-47.45
51	ACBIL	-49.52
52	LANCO BUDHIL	-50.22

53	NJPC	-50.98
54	MAITHON POWER LTD	-55.10
55	KORBA WEST POWER	-59.58
56	EMCO	-65.03
57	SIKKIM	-66.08
58	TRIPURA	-78.24
59	MEGHALAYA	-78.26
60	CHUZACHEN HEP	-78.90
61	ODISHA	-88.53
62	NHPC STATIONS	-88.61
63	ADHUNIK POWER LTD	-102.11
64	RAJASTHAN	-119.21
65	SHREE CEMENT	-152.38
66	DVC	-153.24
67	AD HYDRO	-156.71
68	MEENAKSHI	-159.20
69	KARNATAKA	-181.30
70	STERLITE	-227.20
71	LANKO KONDAPALLI	-231.20
72	GMR KAMALANGA	-270.18
73	SIMHAPURI	-313.07
74	JITPL	-373.31
75	THERMAL POWERTECH	-385.81
76	JINDAL STAGE-II	-390.19
77	J & K	-396.38
78	KARCHAM WANGTOO	-448.16
79	MP	-594.74
80	HIMACHAL PRADESH	-954.83

** Total volume of net short-term transactions of electricity includes net of transactions of electricity through bilateral, power exchange and DSM*
(-) indicates sale and (+) indicates purchase

Table-16: DETAILS OF CONGESTION IN POWER EXCHANGES, JULY 2015			
	Details of Congestion	**IEX**	**PXIL**
A	Unconstrained Cleared Volume* (MUs)	2836.08	15.25
B	Actual Cleared Volume and hence scheduled (MUs)	2521.06	14.25
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	315.02	1.00
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	11.11%	6.55%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	94.72%	90.32%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	22.60%	23.81%
	6.00 - 12.00 hours	25.79%	25.15%
	12.00 - 18.00 hours	26.11%	24.85%
	18.00 - 24.00 hours	25.51%	26.19%
** This power would have been scheduled had there been no congestion.*			
Source: IEX & PXIL& NLDC			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (MUs), JULY 2015 (DAY-WISE)						Total Electricity Generation (MU) as given at CEA Website *
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Deviation Settlement (Over Drawal+ Under Generation)	
	Through Traders and PXs**	Direct	IEX	PXI		
1-Jul-15	112.70	69.52	80.49	0.37	62.75	3026.90
2-Jul-15	111.21	69.65	81.08	0.50	51.19	3070.60
3-Jul-15	117.08	71.02	86.53	0.62	51.75	3081.40
4-Jul-15	125.42	71.29	72.25	0.57	52.40	3048.25
5-Jul-15	112.90	65.50	69.66	0.47	53.28	3018.60
6-Jul-15	133.84	68.67	77.07	0.36	64.10	3003.40
7-Jul-15	144.49	72.42	73.35	0.35	56.29	3052.00
8-Jul-15	138.70	73.50	79.67	0.48	54.18	3084.00
9-Jul-15	137.97	79.55	84.40	0.45	56.53	3015.29
10-Jul-15	131.79	76.45	85.81	0.42	69.88	2952.00
11-Jul-15	131.48	78.45	95.65	0.85	64.97	2912.30
12-Jul-15	139.61	73.25	96.23	0.35	68.41	2793.00
13-Jul-15	135.24	76.81	93.95	0.47	65.68	2995.90
14-Jul-15	130.95	77.91	105.59	0.40	64.35	3157.23
15-Jul-15	159.25	79.53	94.87	0.47	63.42	3155.30
16-Jul-15	145.88	77.39	99.35	0.44	63.31	3155.30
17-Jul-15	147.25	81.54	98.42	0.43	59.24	3111.00
18-Jul-15	151.84	78.51	91.35	0.54	55.72	3076.00
19-Jul-15	140.44	73.92	93.07	0.44	60.36	2888.45
20-Jul-15	147.34	82.22	79.02	0.39	53.48	2956.37
21-Jul-15	152.54	80.29	77.51	0.45	56.73	3012.70
22-Jul-15	140.25	79.28	68.18	0.50	55.26	3024.30
23-Jul-15	144.77	78.77	69.55	0.45	54.59	3065.00
24-Jul-15	135.17	79.72	75.21	0.38	52.13	3064.40
25-Jul-15	135.13	85.29	77.38	0.48	57.89	3018.55
26-Jul-15	136.04	71.70	73.75	0.70	62.88	2748.50
27-Jul-15	144.46	81.25	73.12	0.48	66.78	2840.28
28-Jul-15	139.08	73.48	63.53	0.46	60.78	2880.88
29-Jul-15	144.49	72.38	57.51	0.31	57.33	2895.45
30-Jul-15	145.87	74.75	74.34	0.33	55.42	2916.00
31-Jul-15	142.51	70.02	73.14	0.33	54.23	2898.50
TOTAL	**4255.70**	**2344.03**	**2521.06**	**14.25**	**1825.34**	**92917.85**

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 ELECTRICITY IN SHORT-TERM TRANSACTIONS (□/kWh), JULY 2015 (DAY-WISE)									
Market Segment	**Day ahead market of IEX**			**Day ahead market of PXIL**			**Under Drawal/Over Drawal from the Grid (DSM)**		
							All India Grid		
Date	**Mini-mum ACP**	**Maxi-mum ACP**	**Weighted Average Price***	**Mini-mum ACP**	**Maxi-mum ACP**	**Weighted Average Price***	**Mini-mum Price**	**Maximum Price**	**Average Price****
1-July-15	1.10	6.01	2.81	1.70	4.60	2.69	0.00	5.95	2.09
2-July-15	1.82	6.11	2.91	1.45	4.20	2.89	0.00	5.11	1.75
3-July-15	1.10	6.51	2.75	1.91	4.95	3.36	0.00	3.45	1.63
4-July-15	0.50	7.51	3.03	1.40	4.24	2.71	0.00	3.45	1.81
5-July-15	0.29	7.51	2.45	1.60	4.40	2.27	0.00	3.45	1.56
6-July-15	0.89	7.52	2.95	1.00	4.37	2.63	0.00	5.32	1.52
7-July-15	1.00	7.52	2.83	1.00	4.50	2.59	0.00	7.20	1.99
8-July-15	1.00	8.01	2.92	2.06	4.40	2.87	0.00	5.11	1.94
9-July-15	0.64	8.01	2.91	1.61	3.90	2.61	0.00	5.32	1.79
10-July-15	0.62	8.01	2.69	1.98	3.90	2.59	0.00	6.16	1.78
11-July-15	1.82	8.01	2.83	2.14	4.14	2.90	0.00	5.74	2.20
12-July-15	0.30	7.40	2.54	1.77	3.89	2.61	0.00	4.91	1.35
13-July-15	0.70	7.67	2.91	1.98	3.88	2.48	0.36	8.24	3.22
14-July-15	0.90	8.00	3.04	0.84	4.24	2.81	0.00	6.16	2.51
15-July-15	1.00	8.20	3.21	1.67	4.50	3.03	0.00	5.95	1.97
16-July-15	1.10	8.00	3.16	2.51	4.00	3.06	0.00	4.91	1.93
17-July-15	0.50	8.02	2.78	1.45	4.40	2.66	0.00	5.11	1.93
18-July-15	0.25	8.02	2.86	1.45	4.25	2.93	0.00	5.11	2.06
19-July-15	0.60	6.50	2.73	0.38	4.40	2.41	0.00	3.45	1.43
20-July-15	0.50	6.51	2.66	1.38	4.37	2.46	0.00	3.45	1.50
21-July-15	1.10	6.75	2.70	1.38	4.00	2.74	0.00	3.45	1.42
22-July-15	0.70	5.50	2.65	1.21	4.19	2.74	0.00	4.91	1.83
23-July-15	1.20	5.20	2.75	2.40	4.50	2.95	0.00	5.32	1.94
24-July-15	1.10	5.23	2.64	2.45	4.51	2.54	0.00	6.16	2.40
25-July-15	1.47	5.20	2.64	2.00	4.23	2.62	0.00	5.11	1.87
26-July-15	0.28	8.00	2.43	1.95	4.35	2.82	0.00	3.45	0.98
27-July-15	1.24	6.01	2.55	1.99	4.29	2.60	0.00	3.24	1.13
28-July-15	0.70	7.01	2.20	1.90	4.50	2.68	0.00	3.45	1.72
29-July-15	0.80	6.11	2.42	1.80	2.50	1.86	0.00	6.36	2.11
30-July-15	1.19	6.20	2.87	2.00	2.85	2.06	0.00	7.20	2.45
31-July-15	1.19	8.01	2.76	1.49	4.50	2.53	0.00	4.91	1.80
	0.25#	**8.20#**	**2.47**	**0.38#**	**4.95#**	**2.70**	**0.00#**	**8.24#**	**1.86**

Source: Data on price of PX transactions from IEX and PXIL and data on Deviation 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 of Deviation price of 96 time blocks of 15 minutes each in a day.
# Minimum/Maximum in the month

Table-19: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs), JULY 2015										
Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through DSM with Regional Grid			Total Net***
	Sale	Pur-chase	Net**	Sale	Pur-chase	Net**	Over Drawal	Under Drawal	Net**	
PUNJAB	0.00	909.63	909.63	0.00	113.96	113.96	96.44	63.53	32.91	1056.50
HARYANA	0.50	1028.09	1027.59	75.74	164.22	88.48	166.62	39.33	127.29	1243.36
RAJASTHAN	511.21	2.33	-508.88	54.74	397.84	343.10	86.39	39.82	46.58	-119.21
DELHI	14.65	290.48	275.83	81.69	48.70	-32.99	33.29	41.21	-7.92	234.91
UTTAR PRADESH	0.00	492.49	492.49	0.00	0.00	0.00	107.65	78.93	28.72	521.21
UTTARAKHAND	148.80	102.52	-46.28	0.00	33.68	33.68	28.82	21.93	6.89	-5.71
HIMACHAL PRADESH	780.41	0.00	-780.41	214.81	7.44	-207.37	41.26	8.32	32.94	-954.83
J & K	361.35	0.00	-361.35	42.94	28.40	-14.53	25.74	46.24	-20.50	-396.38
CHANDIGARH	0.00	7.44	7.44	1.71	4.06	2.35	14.69	2.00	12.69	22.48
MP	557.23	0.36	-556.87	38.14	58.10	19.96	16.69	74.52	-57.83	-594.74
MAHARASHTRA	0.00	315.47	315.47	18.84	382.64	363.80	90.11	117.09	-26.98	652.29
GUJARAT	145.58	349.71	204.13	155.11	256.72	101.61	23.66	163.77	-140.11	165.64
CHHATTISGARH	43.99	30.95	-13.04	70.95	11.17	-59.79	62.03	18.42	43.61	-29.22
GOA	0.00	0.89	0.89	3.59	14.58	10.99	22.05	6.45	15.60	27.48
DAMAN AND DIU	0.00	0.00	0.00	0.00	33.10	33.10	10.03	2.68	7.35	40.45
DADRA & NAGAR HAVELI	0.00	0.00	0.00	0.00	43.50	43.50	3.55	8.94	-5.39	38.11
ANDHRA PRADESH	71.87	491.86	419.99	12.99	257.42	244.43	63.50	26.69	36.82	701.24
KARNATAKA	222.61	0.00	-222.61	125.98	112.91	-13.06	70.59	16.21	54.37	-181.30
KERALA	0.00	95.04	95.04	3.27	60.16	56.89	53.20	4.08	49.12	201.05
TAMIL NADU	0.00	2.71	2.71	0.00	42.81	42.81	23.17	85.17	-62.00	-16.48
PONDICHERRY	0.00	0.00	0.00	0.00	0.00	0.00	5.58	2.86	2.73	2.73
TELANGANA	24.33	1176.75	1152.42	39.16	83.87	44.71	47.66	35.92	11.74	1208.88
WEST BENGAL	0.00	793.62	793.62	52.37	57.94	5.57	51.78	33.70	18.07	817.26
ODISHA	132.49	47.41	-85.08	24.58	12.26	-12.32	35.59	26.72	8.87	-88.53
BIHAR	0.00	258.27	258.27	0.00	50.24	50.24	36.22	60.39	-24.17	284.34
JHARKHAND	0.00	91.10	91.10	0.00	0.99	0.99	7.05	44.66	-37.60	54.49
SIKKIM	0.00	0.00	0.00	57.56	0.00	-57.56	0.41	8.93	-8.53	-66.08
DVC	127.44	0.00	-127.44	2.99	0.00	-2.99	17.98	40.78	-22.80	-153.24
ARUNACHAL PRADESH	0.00	0.00	0.00	14.14	0.00	-14.14	5.01	6.78	-1.77	-15.91
ASSAM	37.21	55.80	18.59	11.00	16.59	5.59	38.19	18.37	19.81	43.99
MANIPUR	7.17	11.88	4.71	26.93	0.00	-26.93	2.14	7.18	-5.04	-27.25
MEGHALAYA	49.55	0.12	-49.43	36.52	15.85	-20.67	2.53	10.70	-8.17	-78.26
MIZORAM	0.00	0.00	0.00	19.43	0.00	-19.43	6.35	0.76	5.59	-13.84
NAGALAND	0.00	0.00	0.00	6.91	0.00	-6.91	6.58	3.16	3.42	-3.49
TRIPURA	11.43	0.00	-11.43	76.10	0.00	-76.10	13.44	4.15	9.29	-78.24
NTPC STATIONS_NR	0.00	0.00	0.00	0.00	0.00	0.00	104.23	37.16	67.07	67.07
NHPC STATIONS	0.00	0.00	0.00	57.29	0.00	-57.29	10.28	41.59	-31.32	-88.61
NJPC	0.00	0.00	0.00	51.24	0.00	-51.24	7.49	7.23	0.26	-50.98
AD HYDRO	109.04	0.00	-109.04	50.10	0.00	-50.10	3.32	0.89	2.43	-156.71
KARCHAM WANGTOO	357.17	0.00	-357.17	92.00	0.00	-92.00	9.94	8.93	1.00	-448.16
SHREE CEMENT	148.75	0.00	-148.75	17.71	0.00	-17.71	15.58	1.49	14.09	-152.38

LANCO BUDHIL	0.00	0.00	0.00	49.06	0.00	-49.06	0.53	1.68	-1.16	-50.22
MALANA	0.00	0.00	0.00	8.70	0.00	-8.70	0.68	0.25	0.43	-8.27
URI-2	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.96	-0.21	-0.21
NTPC STATIONS_WR	0.00	0.00	0.00	0.00	0.00	0.00	108.80	96.21	12.59	12.59
JINDAL POWER	7.41	0.00	-7.41	35.27	0.00	-35.27	3.96	6.24	-2.28	-44.96
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	0.83	1.74	-0.91	-0.91
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	7.44	5.02	2.43	2.43
ACBIL	8.25	0.00	-8.25	42.26	0.00	-42.26	2.78	1.79	0.99	-49.52
BALCO	0.00	0.00	0.00	0.00	30.76	30.76	10.11	1.97	8.14	38.90
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00	4.17	0.05	4.12	4.12
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	9.69	14.95	-5.26	-5.26
DCPP	1.20	0.00	-1.20	48.51	0.00	-48.51	9.24	1.92	7.32	-42.39
EMCO	64.36	0.00	-64.36	0.67	0.00	-0.67	1.40	1.40	0.00	-65.03
VANDANA VIDYUT	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.00	0.00
ESSAR STEEL	0.00	44.81	44.81	0.00	195.39	195.39	19.19	19.19	0.00	240.21
KSK MAHANADI	0.00	0.00	0.00	0.00	0.00	0.00	2.32	2.32	0.00	0.00
JINDAL STAGE-II	315.13	0.00	-315.13	75.06	0.00	-75.06	0.00	0.00	0.00	-390.19
DB POWER	0.00	0.00	0.00	0.16	0.00	-0.16	0.00	0.00	0.00	-0.16
JAYPEE NIGRIE	0.00	0.00	0.00	30.44	0.00	-30.44	5.12	5.12	0.00	-30.44
DGEN MEGA POWER	0.00	0.00	0.00	0.00	0.00	0.00	1.94	1.94	0.00	0.00
KORBA WEST POWER	13.85	0.00	-13.85	45.73	0.00	-45.73	2.64	2.64	0.00	-59.58
MB POWER	0.00	0.00	0.00	21.31	0.00	-21.31	1.63	1.63	0.00	-21.31
NTPC STATIONS_SR	0.00	0.00	0.00	0.00	0.00	0.00	47.16	8.50	38.67	38.67
LANKO KONDAPALLI	237.66	0.00	-237.66	0.00	0.00	0.00	6.60	0.15	6.45	-231.20
SIMHAPURI	204.24	0.00	-204.24	108.26	0.00	-108.26	2.06	2.63	-0.56	-313.07
MEENAKSHI	90.00	0.00	-90.00	68.24	0.00	-68.24	1.67	2.63	-0.96	-159.20
COASTGEN	0.00	0.00	0.00	0.00	0.00	0.00	2.14	2.83	-0.69	-0.69
THERMAL POWERTECH	333.24	0.00	-333.24	70.17	0.00	-70.17	18.93	1.34	17.59	-385.81
NTPC STATIONS_ER	0.00	0.00	0.00	0.00	0.00	0.00	87.21	17.72	69.49	69.49
STERLITE	223.13	0.00	-223.13	17.86	0.00	-17.86	20.09	6.31	13.79	-227.20
MAITHON POWER LTD	0.00	0.00	0.00	51.68	0.00	-51.68	4.46	7.88	-3.42	-55.10
ADHUNIK POWER LTD	110.24	0.00	-110.24	0.10	0.00	-0.10	8.93	0.70	8.23	-102.11
CHUZACHEN HEP	0.00	0.00	0.00	77.37	0.00	-77.37	2.37	3.89	-1.53	-78.90
RANGIT HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.43	1.43	-1.00	-1.00
GMR KAMALANGA	257.19	0.00	-257.19	10.53	0.00	-10.53	3.19	5.65	-2.46	-270.18
JITPL	138.89	0.00	-138.89	228.63	0.00	-228.63	8.03	13.81	-5.78	-373.31
TEESTA HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.03	14.00	-13.97	-13.97
DAGACHU	50.42	0.00	-50.42	0.00	0.00	0.00	3.87	0.90	2.97	-47.45
NEEPCO STATIONS	0.00	0.00	0.00	8.77	0.00	-8.77	4.79	7.04	-2.25	-11.02
RANGANADI HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.70	3.64	-2.94	-2.94
DOYANG HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.42	-0.07	-0.07
LOKTAK	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.78	-0.40	-0.40
TOTAL	**5918.00**	**6599.73**	**681.73**	**2535.31**	**2535.31**	**0.00**	**1883.61**	**1537.13**	**346.48**	**1028.21**

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 DSM

Figure 7: Bilateral Contracts executed by Traders in August, 2015

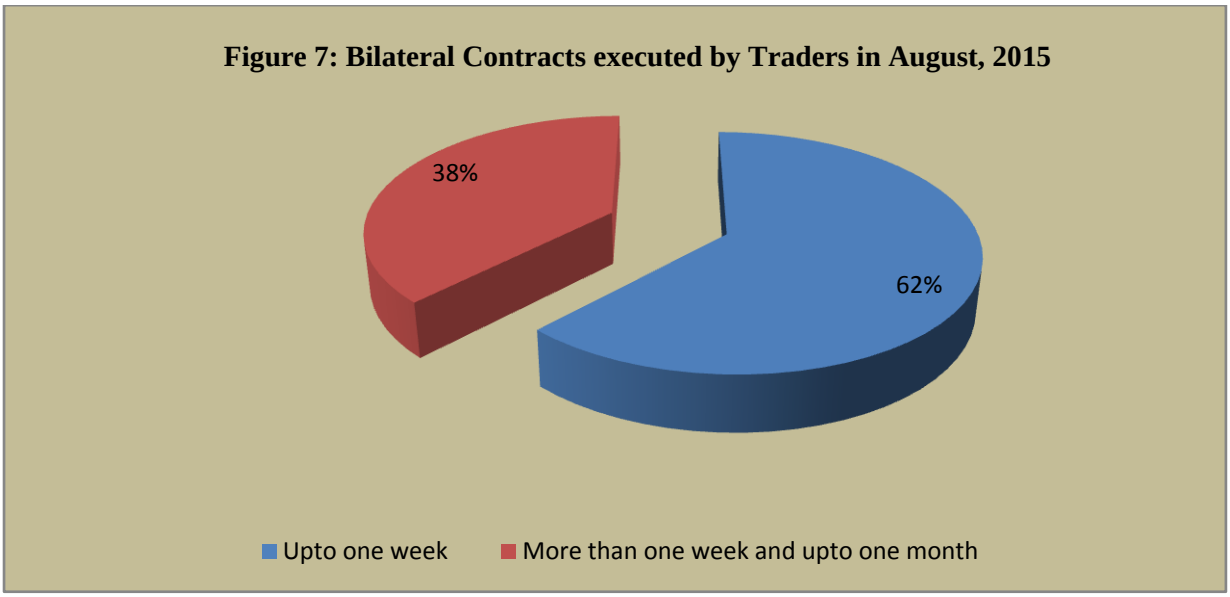


Figure-8: Forward Curve based on Prices of Bilateral Contracts

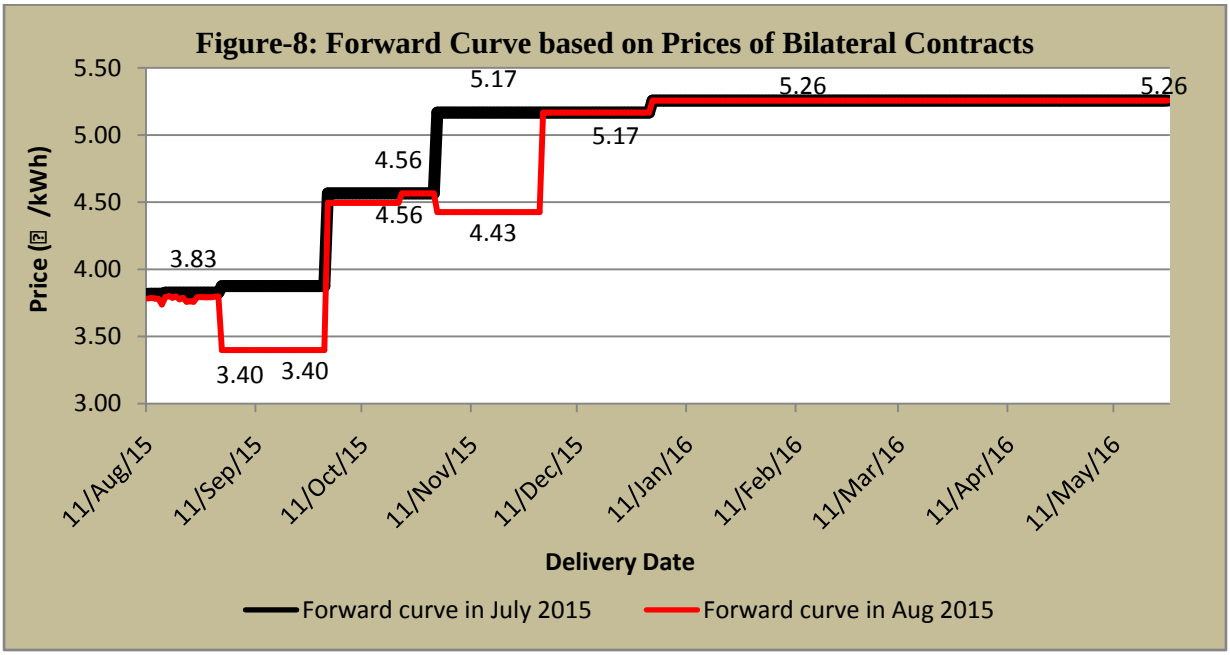


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTED THROUGH POWER EXCHANGES, JULY 2015					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	16782	108042	1170	47229
B	Volume of Sell Bid	2002901	8106012	402557	4112793
C	Ratio of Buy Bid to Sell Bid Volume	0.01	0.01	0.003	0.01
D	Market Clearing Volume (MWh)	16782	108042	1170	47229
E	Market Clearing Price (□/MWh)	3500	1500	3500	1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

Forbearance and Floor Price w.e.f 1st March 2015		
Type of REC	*Floor Price (□/MWh)*	*Forbearance Price (□/MWh)*
Solar	*3500.00*	*5800.00*
Non-Solar	*1500.00*	*3300.00*