Monthly Report on Short-term Transactions of Electricity in India

February, 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
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 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
LANCO 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

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
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 February, 2015 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of February 2015, total electricity generation excluding generation from renewable and captive power plants in India was 80680.34 MUs (Table-1).

Of the total electricity generation, 7430.80 MUs (9.21%) were transacted through short-term, comprising of 3793.79 MUs (4.70%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2058.37 MUs (2.55%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1578.64 MUs (1.96%) through DSM (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 51.05% (36.49% through traders and term-ahead contracts on Power Exchanges and 14.56% directly between distribution companies) followed by 27.70% through day ahead collective transactions on Power Exchanges and 21.24% 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 trading licensees is provided in Table-2 & Figure-4. The trading licensees undertake electricity transactions through bilateral and through power exchanges. 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 28.02.2015, of which only 22 have engaged in trading during February 2015. Top 5 trading licensees had a share of 63.54% 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 0.1071 for the month of February 2015, which indicates non-concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 2024.65 MUs and 33.71 MUs respectively. The volume of total Buy bids and Sale bids was 2886.87 MUs and 3397.70 MUs respectively in IEX and 81.84 MUs and 89.05 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was lesser demand in IEX (0.85 times) and PXIL (0.92 times) respectively when compared with the supply offered through these exchanges.

The volume of electricity transacted through IEX and PXIL in the term-ahead market was 5.75 MUs and 73.20 MUs respectively (Table-6 & Table-7).

II: Price of Short-term Transactions of Electricity

(i) ***Price of electricity transacted through Traders:*** Weighted average sale price has been computed for the electricity transacted through traders and it was ₹4.33/kWh. Weighted average sale price was also computed for the transactions during Round the Clock (RTC), Peak, and Off-Peak periods separately, and the sale prices were ₹4.38/kWh, ₹4.57/kWh and ₹3.60/kWh respectively. Minimum and Maximum sale prices were ₹2.65/kWh and ₹7.99/kWh respectively (Table-3 & 4).

(ii*) Price of electricity transacted Through Power Exchanges:* Minimum, Maximum and Weighted Average Prices have been computed for the electricity transacted through IEX and PXIL separately. The Minimum, Maximum and Weighted Average prices were ₹0.50/kWh, ₹15.00/kWh and ₹2.87/kWh respectively in IEX and ₹1.40/kWh, ₹4.31/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 ₹2.95/kWh and ₹2.75/kWh respectively (Table-6 and Table-7).

(iii*) Price of electricity transacted under DSM:* The average Deviation price was ₹1.62/kWh for all India grid. Minimum and Maximum Deviation 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 DSM 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 66.20% of the volume, and these were Haryana, Karnataka, Delhi, Gujarat and Simhapuri Energy Private Limited. Top 5 regional entities purchased 46.08% of the volume, and these were Jammu and Kashmir, Himachal Pradesh, Maharashtra, Andhra Pradesh and Telangana. (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 35.03% of the volume, and these were Karnataka, Korba West Power Company Ltd., Jindal Power Ltd Stage-II, Donga Mahua Captive Power Plant and Jaypee Nigrie Super Thermal Power Project. Top 5 regional entities purchased 52.30% of the volume, and these were Rajasthan, Gujarat, Maharashtra, Telangana and Uttarakhand. (Table-11, 12 & 19).

Of the total DSM transactions, top 5 regional entities underdrew 48.74% of the volume, and these were Uttar Pradesh, Maharashtra, Haryana, Bihar and Madhya Pradesh.

[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.*

Top 5 regional entities overdrew 36.84% of the volume, and these were Punjab, Telangana, Karnataka, Rajasthan and Gujarat. (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 DSM is shown in Table-15 & 19. Top 5 electricity selling regional entities were Haryana, Karnataka, Delhi, Jindal Power Ltd and Simhapuri Energy Private Limited. Top 5 electricity purchasing regional entities were Rajasthan, Maharashtra, Telangana, Andhra Pradesh and Jammu & Kashmir.

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 February 2015, 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.

[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.

During the month, the volume of electricity that could not be cleared in the power exchanges due to congestion was 12.32% and 28.96% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 95.20% in IEX and 69.08% in PXIL.

V: Analysis of Bilateral Contracts executed by Traders in March 2015[4]

(i) *Duration of bilateral contracts:*

During March 2015, a total of 85 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 1584 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 54.1% of the contracts were executed for a duration of up to one week followed by 45.9% of the contracts executed for a duration of more than a week and upto one month.

During the same period, 11 banking/swapping bilateral contracts were also executed for the volume of 156 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 April 2015 to May 2016 based on bilateral contracts[5] executed till March, 2015. The forward curve drawn for February 2015 has also been depicted for the period April 2015 onwards for comparison purposes. It is observed that with the execution of new contracts in March 2015,

[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*

there is an increase in the forward prices from April 2015 to June 2015. However, forward prices remain same for period beyond June 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 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 February 2015 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 26726 and 18143 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 345184 and 402303 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 0.03 for both IEX and PXIL. For Non-Solar RECs, the ratio of buy and sell bids was 0.06 for IEX and 0.08 for PXIL.

VII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 9.21%.

- Of the total short-term transactions of electricity, 51.05% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 27.70% through Power Exchanges and 21.24% through DSM.

- Top 5 trading licensees had a share of 63.54% in the total volume traded by all the trading licensees.

- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1071, indicating non-concentration of market power.

- The price of electricity transacted through trading licensees was ₹4.33/kWh. The prices of electricity transacted through IEX and PXIL were ₹2.87/kWh and ₹2.70/kWh respectively.

- The price of electricity transacted through DSM was ₹1.62/kWh

- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was less demand in IEX (1: 0.85) and PXIL (1: 0.92) when compared with the supply offered through these exchanges.

- Top 5 electricity selling regional entities were Haryana, Karnataka, Delhi, Jindal Power Ltd and Simhapuri Energy Private Limited. Top 5 electricity purchasing regional entities were Rajasthan, Maharashtra, Telangana, Andhra Pradesh and Jammu & Kashmir.

- The volume of electricity that could not be cleared in the power exchanges due to congestion was 12.32% and 28.96% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 95.20% in IEX and 69.08% in PXIL.

- In March 2015, 54.1% of the contracts were executed for a duration of up to one week followed by 45.9% of the contracts executed for a duration of more than a week and upto one month.

- It is observed that with the execution of new contracts in March 2015, there is an increase in the forward prices from April 2015 to June 2015. The increase in prices is attributed to contracts executed at higher prices. The forward prices remain same for period beyond June 2015.

- The market clearing volume of Solar RECs transacted on IEX and PXIL were 26726 and 18143 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 345184 and 402303 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), FEBRUARY 2015				
Sr.No	**Short-term transactions**	**Volume (MUs)**	**% to Volume of short-term transactions**	**% to Total Generation**
1	Bilateral	3793.79	51.05%	4.70%
	(i) Through Traders and PXs	*2711.54*	36.49%	3.36%
	(ii) Direct	*1082.24*	14.56%	1.34%
2	Through Power Exchanges	2058.37	27.70%	2.55%
	(i) IEX	*2024.65*	27.25%	2.51%
	(ii) PXIL	*33.71*	0.45%	0.04%
3	Through DSM	1578.64	21.24%	1.96%
	Total	**7430.80**	**100.00%**	**9.21%**
	Total Generation	**80680.34**	_	_
Source: NLDC				

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

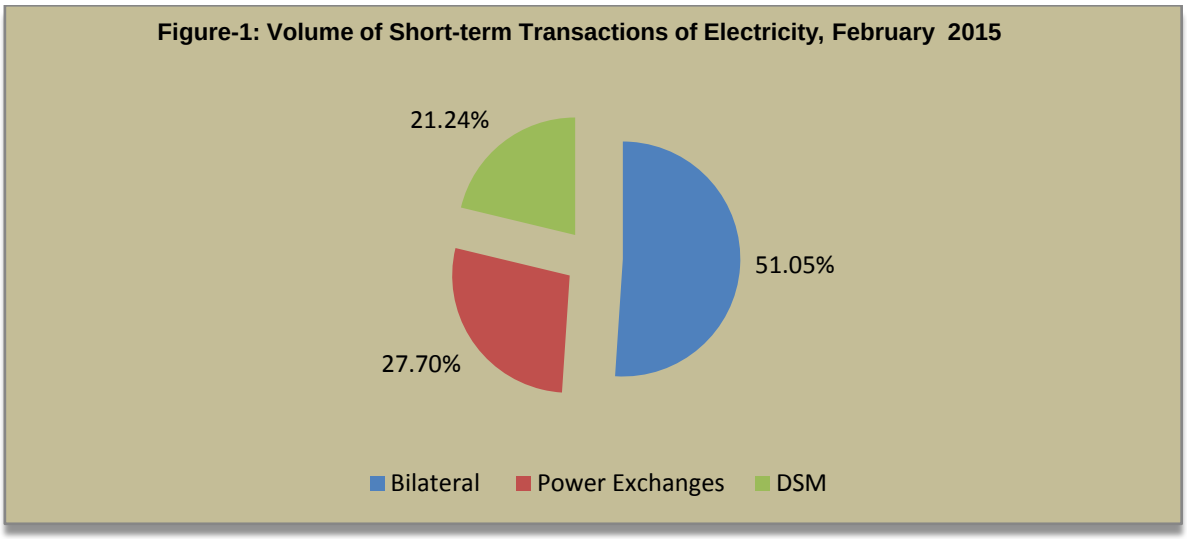
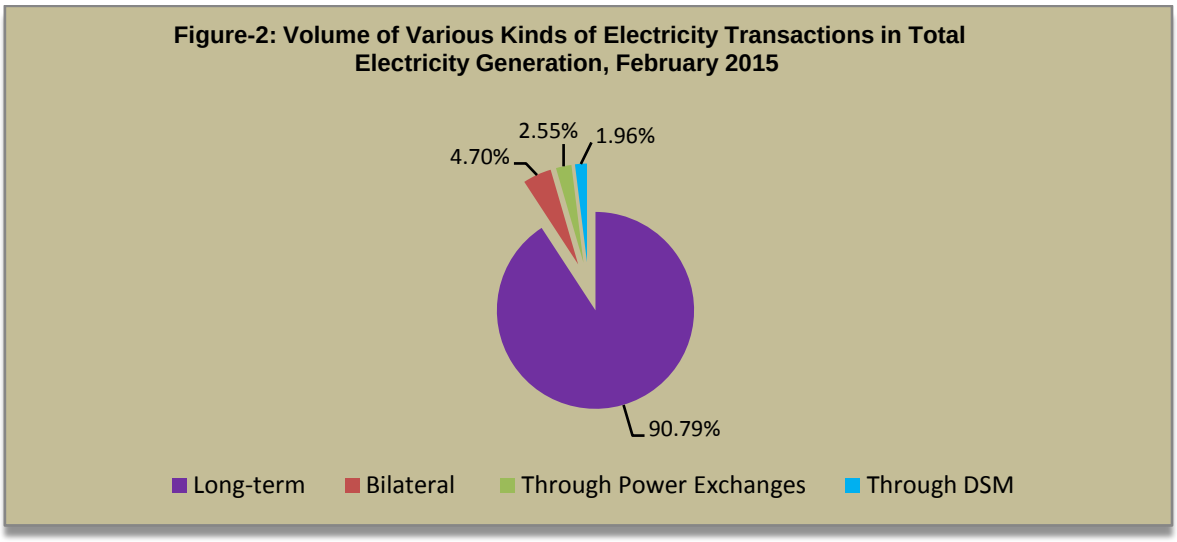


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, February 2015



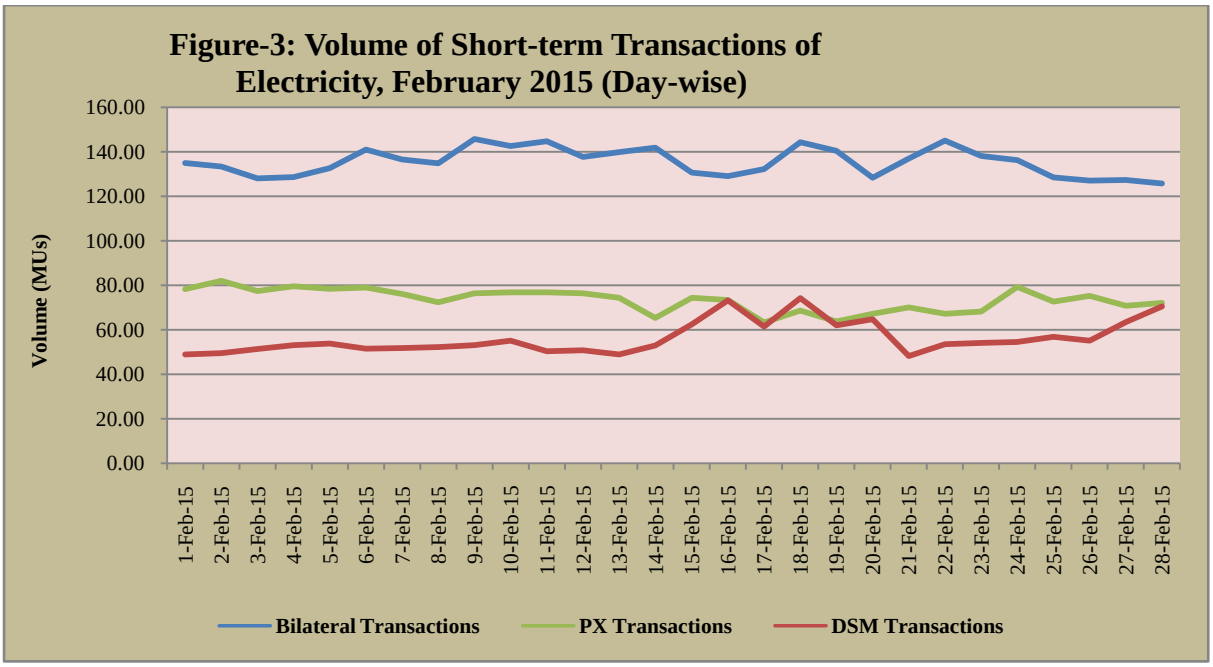


Figure-3: Volume of Short-term Transactions of Electricity, February 2015 (Day-wise)
Volume (MUs)
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
1-Feb-15
2-Feb-15
3-Feb-15
4-Feb-15
5-Feb-15
6-Feb-15
7-Feb-15
8-Feb-15
9-Feb-15
10-Feb-15
11-Feb-15
12-Feb-15
13-Feb-15
14-Feb-15
15-Feb-15
16-Feb-15
17-Feb-15
18-Feb-15
19-Feb-15
20-Feb-15
21-Feb-15
22-Feb-15
23-Feb-15
24-Feb-15
25-Feb-15
26-Feb-15
27-Feb-15
28-Feb-15
Bilateral Transactions
PX Transactions
DSM Transactions

Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, FEBRUARY 2015			
Sr. No.	**Name of the Trading Licensee**	**% Share in total Volume transacted by Trading Licensees**	**Herfindahl-Hirschman Index**
1	PTC India Ltd.	22.16%	0.0491
2	Mittal Processors (P) Ltd.	12.46%	0.0155
3	Tata Power Trading Company (P) Ltd.	10.77%	0.0116
4	GMR Energy Trading Ltd.	10.46%	0.0109
5	JSW Power Trading Company Ltd	7.69%	0.0059
6	Knowledge Infrastructure Systems (P) Ltd	5.41%	0.0029
7	Manikaran Power Ltd.	4.97%	0.0025
8	Adani Enterprises Ltd.	4.89%	0.0024
9	National Energy Trading & Services Ltd.	4.22%	0.0018
10	NTPC Vidyut Vyapar Nigam Ltd.	3.74%	0.0014
11	Shree Cement Ltd.	3.61%	0.0013
12	Jaiprakash Associates Ltd.	3.38%	0.0011
13	Ambitious Power Trading Company Ltd.	1.52%	0.0002
14	Instinct Infra & Power Ltd.	1.50%	0.0002
15	Reliance Energy Trading (P) Ltd	0.87%	0.0001
16	RPG Power Trading Company Ltd.	0.77%	0.0001
17	My Home Power Private Ltd.	0.44%	0.0000
18	Arunachal Pradesh Power Corporation (P) ltd	0.42%	0.0000
19	SN Power Markets Pvt. Ltd.	0.26%	0.0000
20	Essar Electric Power Development Corp. Ltd.	0.23%	0.0000
21	Customized Energy Solutions India (P) Ltd.	0.12%	0.0000
22	Parshavnath Power Projects Private Ltd.	0.11%	0.0000
TOTAL		**100.00%**	**0.1071**
Top 5 trading licensees		**63.54%**	
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, February 2015

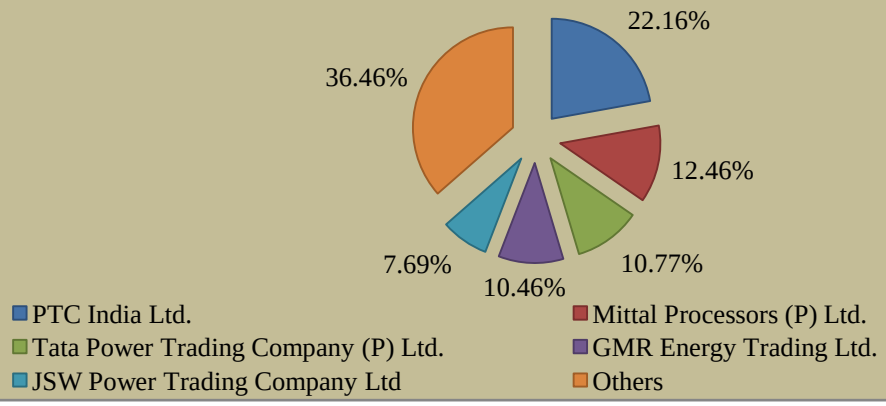


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, FEBRUARY 2015		
Sr.No		**Sale Price of Traders (₹/kWh)**
1	Minimum	2.65
2	Maximum	7.99
3	Weighted Average	4.33

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), FEBRUARY 2015		
Sr.No	**Period of Trade**	**Sale Price of Traders (₹/kWh)**
1	RTC	4.38
2	PEAK	4.57
3	OFF PEAK	3.60

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, FEBRUARY 2015			
Sr.No	**ACP**	**Price in IEX (₹/kWh)**	**Price in PXIL (₹/kWh)**
1	Minimum	0.50	1.40
2	Maximum	15.00	4.31
3	Weighted Average	2.87	2.70

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, FEBRUARY 2015			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	5.75	2.95
	Total	**5.75**	**2.95**

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, FEBRUARY 2015			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	4.08	2.50
2	Day Ahead Contingency Contracts	1.13	2.40
3	Daily Contracts	11.04	2.76
4	Weekly Contracts	56.95	2.77
	Total	**73.20**	**2.75**

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH DSM, FEBRUARY 2015		
Sr.No		**Price in All India Grid (₹/kWh)**
1	Minimum	0.00
2	Maximum	8.24
3	Average	1.62

Source: NLDC

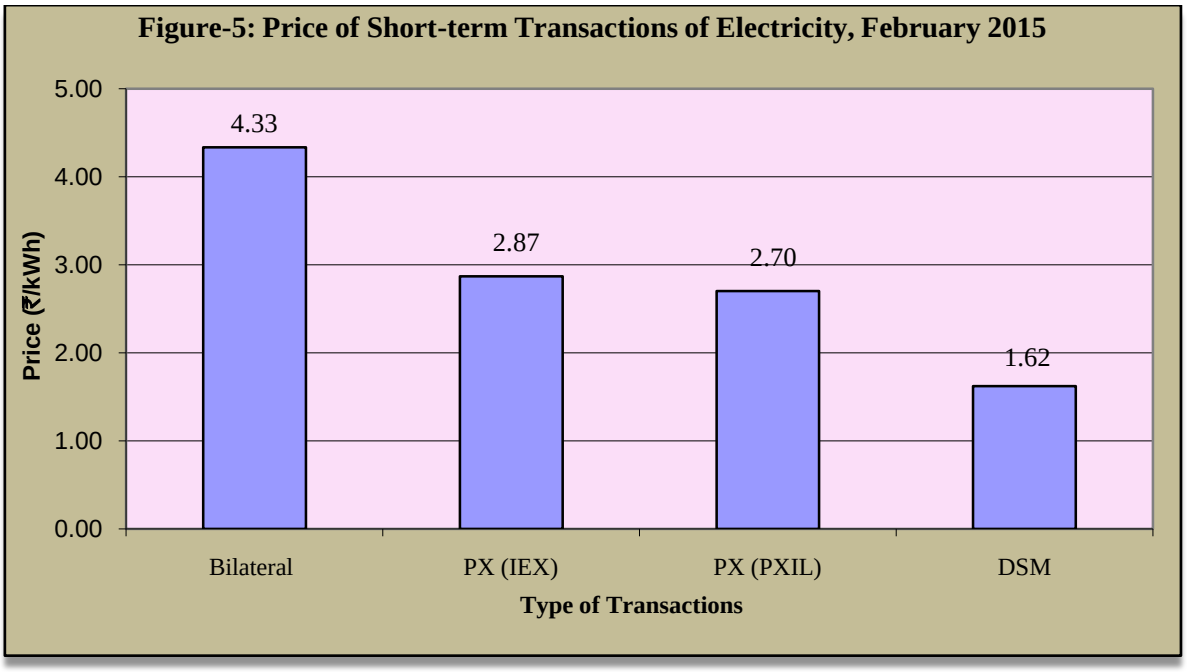


Figure-5: Price of Short-term Transactions of Electricity, February 2015
5.00
4.00
3.00
2.00
1.00
0.00
Price (₹/kWh)
4.33
2.87
2.70
1.62
Bilateral
PX (IEX)
PX (PXIL)
DSM
Type of Transactions

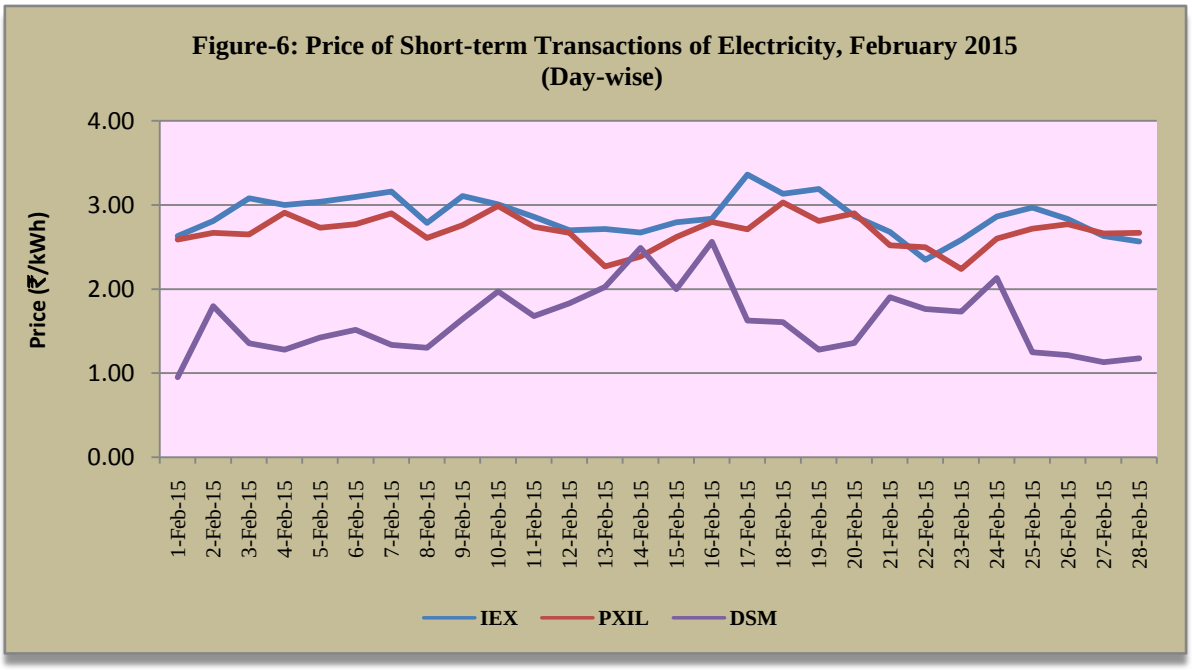


Figure-6: Price of Short-term Transactions of Electricity, February 2015
(Day-wise)
4.00
3.00
2.00
1.00
0.00
Price (₹/kWh)
1-Feb-15
2-Feb-15
3-Feb-15
4-Feb-15
5-Feb-15
6-Feb-15
7-Feb-15
8-Feb-15
9-Feb-15
10-Feb-15
11-Feb-15
12-Feb-15
13-Feb-15
14-Feb-15
15-Feb-15
16-Feb-15
17-Feb-15
18-Feb-15
19-Feb-15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

Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
Haryana	711.54	24.68%
Karnataka	365.97	12.69%
Delhi	353.45	12.26%
Gujarat	254.41	8.82%
SIMHAPURI	223.36	7.75%
Punjab	198.24	6.88%
JINDAL POWER	184.03	6.38%
Uttar Pradesh	92.83	3.22%
STERLITE	91.00	3.16%
Rajasthan	80.00	2.77%
SHREE CEMENT	79.40	2.75%
Himachal Pradesh	64.55	2.24%
Orissa	46.82	1.62%
DVC	28.97	1.00%
West Bengal	24.97	0.87%
ACBIL	17.83	0.62%
NSPCL	14.45	0.50%
Telangana	12.94	0.45%
J & K	12.35	0.43%
JITPL	10.42	0.36%
Chattisgarh	6.97	0.24%
UT Chandigarh	6.72	0.23%
Tripura	0.84	0.03%
DCPP	0.48	0.02%
MAITHON POWER LTD	0.43	0.01%
MP	0.34	0.01%
Total	**2883.29**	**100.00%**
Volume of sale by top 5 States	**1908.73**	**66.20%**

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
J & K	386.13	10.29%
Himachal Pradesh	384.75	10.25%
Maharashtra	368.18	9.81%
Andhra Pradesh	308.59	8.22%
Telangana	282.45	7.52%
Orissa	279.36	7.44%
Rajasthan	255.93	6.82%
Tamilnadu	211.66	5.64%
Kerala	211.55	5.64%
Haryana	210.07	5.60%
Uttarakhand	185.27	4.93%
Bihar	138.08	3.68%
Jharkhand	116.30	3.10%
Uttar Pradesh	104.79	2.79%
Delhi	57.85	1.54%
MP	57.40	1.53%
Meghalaya	55.95	1.49%
Assam	46.56	1.24%
Goa	20.47	0.55%
Manipur	16.51	0.44%
Dadra & Nagar Haveli	14.37	0.38%
Chattisgarh	13.91	0.37%
Gujarat	13.12	0.35%
Nagaland	9.06	0.24%
Sikkim	1.90	0.05%
West Bengal	1.40	0.04%
Karnataka	1.02	0.03%
Meenakshi	0.87	0.02%
Punjab	0.77	0.02%
Total	**3754.25**	**100.00%**
Volume of Purchase by top 5 States	**1730.10**	**46.08%**

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
Karnataka	164.79	8.01%
KORBA WEST Power	153.92	7.48%
JINDAL STAGE-II	140.91	6.85%
DCPP	131.42	6.38%
JAYPEE NIGRIE	129.92	6.31%
Himachal Pradesh	116.03	5.64%
STERLITE	103.38	5.02%
Chattisgarh	93.70	4.55%
West Bengal	91.45	4.44%
JITPL	89.76	4.36%
JINDAL POWER	72.24	3.51%
GMR KAMALANGA	71.27	3.46%
MAITHON POWER LTD	61.04	2.97%
MP	57.57	2.80%
Tripura	54.12	2.63%
ACBIL	51.89	2.52%
Rajasthan	50.67	2.46%
KARCHAM WANGTOO	47.23	2.29%
Orissa	41.30	2.01%
Delhi	39.15	1.90%
Gujarat	36.41	1.77%
Telangana	28.57	1.39%
Haryana	25.51	1.24%
Andhra Pradesh	23.84	1.16%
Goa	23.12	1.12%
SHREE CEMENT	20.98	1.02%
DVC	18.83	0.91%
Maharashtra	16.96	0.82%
ADHUNIK POWER LTD	12.73	0.62%
AD HYDRO	9.18	0.45%
Meenakshi	9.16	0.45%
Sikkim	7.84	0.38%
TEESTA HEP	7.67	0.37%
J & K	7.47	0.36%
KSK MAHANADI	6.38	0.31%
SIMHAPURI	4.85	0.24%
Uttarakhand	4.74	0.23%
Manipur	4.71	0.23%
CHUZACHEN HEP	4.68	0.23%
Assam	4.56	0.22%
LANCO BUDHIL	4.55	0.22%
ONGC PALATANA	4.45	0.22%
NJPC	3.81	0.18%
RANGIT HEP	2.12	0.10%
NEEPCO Stations	1.44	0.07%
Mizoram	0.88	0.04%
Kerala	0.72	0.04%
EMCO	0.20	0.01%
UT Chandigarh	0.20	0.01%
DGEN Mega power	0.08	0.00%
Total	**2058.41**	**100.00%**
Volume of sale by top 5 States	**3952.03**	**35.03%**

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
Rajasthan	328.92	15.98%
Gujarat	253.36	12.31%
Maharashtra	205.60	9.99%
Telangana	145.78	7.08%
Uttarakhand	142.78	6.94%
Andhra Pradesh	136.02	6.61%
MP	97.95	4.76%
Punjab	89.12	4.33%
Tamilnadu	88.79	4.31%
Haryana	86.32	4.19%
ESSAR STEEL	84.13	4.09%
Delhi	64.77	3.15%
Kerala	57.15	2.78%
J & K	46.55	2.26%
Karnataka	45.16	2.19%
BALCO	32.26	1.57%
Daman and Diu	30.32	1.47%
West Bengal	26.79	1.30%
Assam	20.43	0.99%
Himachal Pradesh	18.09	0.88%
Dadra & Nagar Haveli	14.11	0.69%
Meghalaya	12.42	0.60%
Arunachal Pradesh	9.44	0.46%
Manipur	9.26	0.45%
UT Chandigarh	4.68	0.23%
Chattisgarh	2.91	0.14%
Goa	1.66	0.08%
GMR Chattisgarh	1.51	0.07%
Nagaland	1.40	0.07%
Orissa	0.69	0.03%
Total	**2058.37**	**100.00%**
Volume of purchase by top 5 States	**1076.43**	**52.30%**

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH DSM, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Export (MUs)**	**% of Volume**
Uttar Pradesh	190.31	17.12%
Maharashtra	130.46	11.74%
Haryana	83.32	7.50%
Bihar	71.03	6.39%
MP	66.76	6.01%
Tamilnadu	60.04	5.40%
J & K	51.90	4.67%
Gujarat	48.17	4.33%
Rajasthan	44.37	3.99%
Delhi	35.41	3.19%
NHPC Stations	32.44	2.92%
Chattisgarh	29.53	2.66%
Punjab	23.29	2.10%
Himachal Pradesh	21.07	1.90%
Jharkhand	20.19	1.82%
Orissa	16.82	1.51%
DVC	16.30	1.47%
Andhra Pradesh	15.65	1.41%
JINDAL POWER	13.72	1.23%
CGPL	13.42	1.21%
West Bengal	12.27	1.10%
Goa	11.29	1.02%
Uttarakhand	9.23	0.83%
Dadra & Nagar Haveli	8.53	0.77%
STERLITE	8.17	0.73%
Assam	7.74	0.70%
Karnataka	7.34	0.66%
Telangana	6.98	0.63%
Meghalaya	5.85	0.53%
Sikkim	5.33	0.48%
MAITHON POWER LTD	5.24	0.47%
NEEPCO Stations	5.08	0.46%
NJPC	3.95	0.36%
UT Chandigarh	3.65	0.33%
Daman and Diu	3.24	0.29%
Manipur	2.90	0.26%
Pondicherry	2.76	0.25%
NSPCL	2.75	0.25%
KARCHAM WANGTOO	2.68	0.24%
DCPP	2.34	0.21%
SIMHAPURI	2.31	0.21%
LANKO_AMK	2.11	0.19%
Kerala	1.39	0.13%
SHREE CEMENT	1.09	0.10%
Tripura	0.82	0.07%
Nagaland	0.68	0.06%
Mizoram	0.51	0.05%
ACBIL	0.43	0.04%
BALCO	0.35	0.03%
AD HYDRO	0.32	0.03%
Arunachal Pradesh	0.12	0.01%
RGPPL(Dabhol)	0.01	0.00%
Total	**1111.67**	**100.00%**
Volume of Export by top 5 States	**541.88**	**48.74%**

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH DSM, FEBRUARY 2015		
Name of the State/UT/Other Regional Entity	**Volume of Import (MUs)**	**% of Volume**
Punjab	122.32	10.99%
Telangana	75.41	6.77%
Karnataka	74.97	6.73%
Rajasthan	73.29	6.58%
Gujarat	64.16	5.76%
Kerala	58.96	5.30%
West Bengal	51.09	4.59%
Orissa	49.78	4.47%
Andhra Pradesh	44.60	4.01%
Haryana	43.92	3.95%
Uttarakhand	37.41	3.36%
Maharashtra	32.74	2.94%
Chattisgarh	32.07	2.88%
Uttar Pradesh	31.73	2.85%
MP	25.61	2.30%
DVC	25.58	2.30%
J & K	19.17	1.72%
STERLITE	18.05	1.62%
Assam	17.83	1.60%
Himachal Pradesh	16.82	1.51%
Delhi	16.24	1.46%
Arunachal Pradesh	15.56	1.40%
CGPL	15.35	1.38%
Bihar	13.79	1.24%
Tripura	13.56	1.22%
Tamilnadu	12.02	1.08%
Goa	10.19	0.91%
ACBIL	9.20	0.83%
Jharkhand	8.32	0.75%
Mizoram	8.14	0.73%
Nagaland	8.04	0.72%
BALCO	6.81	0.61%
RGPPL(Dabhol)	6.57	0.59%
UT Chandigarh	5.68	0.51%
NHPC Stations	5.23	0.47%
Manipur	5.05	0.45%
DCPP	4.09	0.37%
Pondicherry	3.93	0.35%
JINDAL POWER	3.37	0.30%
Daman and Diu	3.31	0.30%
Dadra & Nagar Haveli	3.28	0.29%
MAITHON POWER LTD	3.01	0.27%
KARCHAM WANGTOO	2.76	0.25%
SHREE CEMENT	2.68	0.24%
NJPC	2.53	0.23%
SIMHAPURI	2.52	0.23%
NEEPCO Stations	2.18	0.20%
Meghalaya	2.07	0.19%
NSPCL	1.25	0.11%
LANKO_AMK	0.50	0.05%
Sikkim	0.39	0.04%
AD HYDRO	0.22	0.02%
Total	**1113.39**	**100.00%**
Volume of Import by top 5 States	**410.15**	**36.84%**

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), FEBRUARY 2015		
Sr.No.	**Name of the State/UT/Other Regional Entity**	**Total volume of net short-term transactions of electricity***
1	Rajasthan	483.10
2	Maharashtra	459.11
3	Telangana	455.15
4	Andhra Pradesh	449.73
5	J & K	380.13
6	Uttarakhand	351.48
7	Kerala	325.54
8	Tamilnadu	252.43
9	Orissa	224.90
10	Himachal Pradesh	218.01
11	Jharkhand	104.43
12	ESSAR STEEL	84.13
13	Bihar	80.84
14	Assam	72.52
15	Meghalaya	64.59
16	MP	56.29
17	BALCO	38.72
18	Daman and Diu	30.39
19	Arunachal Pradesh	24.88
20	Dadra & Nagar Haveli	23.23
21	Manipur	23.21
22	Nagaland	17.82
23	Mizoram	6.76
24	RGPPL(Dabhol)	6.57
25	CGPL	1.93
26	GMR Chattisgarh	1.51
27	Pondicherry	1.17
28	DGEN Mega power	-0.08
29	EMCO	-0.20
30	UT Chandigarh	-0.21
31	LANKO_AMK	-1.61
32	Goa	-2.10
33	RANGIT HEP	-2.12
34	NEEPCO Stations	-4.34
35	ONGC PALATANA	-4.45
36	LANCO BUDHIL	-4.55
37	CHUZACHEN HEP	-4.68
38	NJPC	-5.22
39	KSK MAHANADI	-6.38
40	TEESTA HEP	-7.67
41	Meenakshi	-8.29
42	Gujarat	-8.34
43	AD HYDRO	-9.28
44	Punjab	-9.32
45	Sikkim	-10.88
46	ADHUNIK POWER LTD	-12.73
47	NSPCL	-15.95
48	NHPC Stations	-27.21
49	DVC	-38.52
50	Tripura	-42.21
51	KARCHAM WANGTOO	-47.15
52	West Bengal	-49.41
53	ACBIL	-60.95
54	MAITHON POWER LTD	-63.69

55	GMR KAMALANGA	-71.27
56	Chattisgarh	-81.30
57	SHREE CEMENT	-98.79
58	JITPL	-100.18
59	JAYPEE NIGRIE	-129.92
60	DCPP	-130.15
61	JINDAL STAGE-II	-140.91
62	Uttar Pradesh	-146.62
63	KORBA WEST Power	-153.92
64	STERLITE	-184.49
65	SIMHAPURI	-228.00
66	JINDAL POWER	-266.62
67	Delhi	-289.16
68	Karnataka	-416.95
69	Haryana	-480.06
** 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, FEBRUARY 2015			
	Details of Congestion	**IEX**	**PXIL**
A	Unconstrained Cleared Volume* (MUs)	2309.20	47.46
B	Actual Cleared Volume and hence scheduled (MUs)	2024.65	33.71
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	284.54	13.75
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	12.32%	28.96%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	95.20%	69.08%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	22.12%	10.18%
	6.00 - 12.00 hours	26.22%	28.65%
	12.00 - 18.00 hours	26.26%	31.66%
	18.00 - 24.00 hours	25.40%	29.51%
** 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), FEBRUARY 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 Drawl+ Under Generation)	
	Through Traders and PXs**	Direct	IEX	PXI		
1-Feb-15	97.37	37.57	76.98	1.42	48.92	2785.85
2-Feb-15	99.41	34.01	80.61	1.47	49.48	2813.14
3-Feb-15	99.20	28.96	76.19	1.32	51.44	2786.97
4-Feb-15	98.48	30.20	78.57	1.10	53.07	2792.03
5-Feb-15	99.45	33.25	77.32	1.20	53.86	2848.32
6-Feb-15	99.37	41.67	77.31	1.79	51.58	2837.81
7-Feb-15	103.85	32.81	74.36	1.90	51.89	2813.81
8-Feb-15	102.31	32.56	70.97	1.52	52.19	2755.50
9-Feb-15	104.17	41.64	74.38	2.04	53.05	2801.21
10-Feb-15	101.93	40.71	75.30	1.65	55.11	2832.54
11-Feb-15	102.38	42.45	75.51	1.45	50.31	2857.45
12-Feb-15	94.17	43.63	74.92	1.61	50.81	2904.95
13-Feb-15	95.24	44.63	73.12	1.41	48.93	2912.98
14-Feb-15	97.26	44.59	64.42	0.96	52.92	2901.37
15-Feb-15	90.50	40.17	73.48	0.96	62.55	2861.01
16-Feb-15	88.41	40.71	72.43	1.03	73.30	2850.76
17-Feb-15	89.51	42.73	62.59	0.83	61.43	2933.41
18-Feb-15	99.01	45.34	67.79	0.98	74.33	2929.23
19-Feb-15	98.44	41.99	62.82	1.02	62.01	2970.10
20-Feb-15	95.74	32.58	66.57	0.75	64.86	2955.85
21-Feb-15	98.53	38.47	69.21	0.99	48.21	2976.05
22-Feb-15	98.76	46.36	66.47	0.82	53.56	2908.09
23-Feb-15	94.80	43.42	67.68	0.62	54.16	2932.94
24-Feb-15	92.50	43.79	78.52	0.86	54.60	2989.27
25-Feb-15	92.67	35.80	71.48	1.24	56.89	2953.46
26-Feb-15	93.07	33.96	74.53	0.81	55.20	2954.75
27-Feb-15	93.06	34.36	69.85	1.06	63.45	2959.00
28-Feb-15	91.94	33.85	71.27	0.91	70.55	2862.49
Total	**2711.54**	**1082.24**	**2024.65**	**33.71**	**1578.64**	**80680.34**

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), FEBRUARY 2015 (DAY-WISE)									
Market Segment	**Day ahead market of IEX**			**Day ahead market of PXIL**			**Under Drawl/Over Drawl from the Grid (DSM)**		
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-Feb-15	1.60	10.00	2.63	1.55	4.31	2.59	0.00	3.45	0.95
2-Feb-15	1.50	5.66	2.81	1.55	4.31	2.67	0.00	6.36	1.80
3-Feb-15	1.70	6.00	3.08	1.50	4.21	2.65	0.00	6.36	1.36
4-Feb-15	1.56	6.90	3.00	1.72	4.11	2.91	0.00	3.45	1.28
5-Feb-15	1.70	7.00	3.04	1.70	4.31	2.73	0.00	3.45	1.42
6-Feb-15	1.36	6.00	3.09	1.85	4.11	2.77	0.00	5.32	1.52
7-Feb-15	1.53	6.00	3.16	1.81	4.01	2.90	0.00	5.32	1.34
8-Feb-15	1.60	6.01	2.79	1.65	3.91	2.61	0.00	5.11	1.30
9-Feb-15	1.35	6.10	3.11	1.80	3.91	2.76	0.00	5.32	1.65
10-Feb-15	1.48	6.50	3.01	1.70	3.91	2.99	0.00	6.16	1.97
11-Feb-15	1.20	6.11	2.86	1.68	3.91	2.74	0.00	6.16	1.68
12-Feb-15	1.55	6.11	2.70	1.74	3.91	2.67	0.00	4.91	1.83
13-Feb-15	1.49	7.00	2.72	1.60	3.81	2.27	0.00	6.36	2.03
14-Feb-15	1.18	6.11	2.67	1.60	3.16	2.39	0.00	6.16	2.49
15-Feb-15	1.00	6.12	2.80	1.60	3.81	2.62	0.00	5.95	2.00
16-Feb-15	1.26	6.73	2.84	1.59	4.01	2.80	0.00	7.20	2.56
17-Feb-15	2.30	10.00	3.36	1.47	4.01	2.71	0.00	8.24	1.63
18-Feb-15	1.80	7.35	3.13	2.40	4.01	3.03	0.00	6.16	1.61
19-Feb-15	1.97	7.35	3.19	2.10	4.01	2.81	0.00	5.11	1.28
20-Feb-15	1.65	8.00	2.87	2.07	4.01	2.90	0.00	5.32	1.36
21-Feb-15	1.00	7.35	2.68	1.95	4.01	2.52	0.00	5.74	1.90
22-Feb-15	0.50	15.00	2.35	1.57	4.01	2.50	0.00	5.95	1.76
23-Feb-15	0.50	7.00	2.59	1.50	3.51	2.24	0.00	5.11	1.73
24-Feb-15	0.80	7.00	2.86	1.40	4.01	2.60	0.00	7.20	2.13
25-Feb-15	0.75	6.61	2.97	2.08	4.01	2.72	0.00	4.91	1.25
26-Feb-15	0.88	6.61	2.83	2.22	4.01	2.77	0.00	5.74	1.22
27-Feb-15	0.87	6.75	2.63	1.80	4.01	2.66	0.00	3.03	1.13
28-Feb-15	0.80	6.60	2.57	1.70	4.21	2.67	0.00	3.45	1.18
	0.50#	**15.00#**	**2.87**	**1.40#**	**4.31#**	**2.70**	**0.00#**	**8.24#**	**1.62**

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.

Maximum/Minimum in the month

Table-19: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs), FEBRUARY 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**	Export (Under Drawl)	Import (Over Drawl)	Net**	
Punjab	198.24	0.77	-197.47	0.00	89.12	89.12	23.29	122.32	99.03	-9.32
Haryana	711.54	210.07	-501.47	25.51	86.32	60.82	83.32	43.92	-39.40	-480.06
Rajasthan	80.00	255.93	175.93	50.67	328.92	278.24	44.37	73.29	28.93	483.10
Delhi	353.45	57.85	-295.60	39.15	64.77	25.61	35.41	16.24	-19.18	-289.16
Uttar Pradesh	92.83	104.79	11.96	0.00	0.00	0.00	190.31	31.73	-158.57	-146.62
Uttarakhand	0.00	185.27	185.27	4.74	142.78	138.03	9.23	37.41	28.17	351.48
Himachal Pradesh	64.55	384.75	320.20	116.03	18.09	-97.94	21.07	16.82	-4.25	218.01
J & K	12.35	386.13	373.78	7.47	46.55	39.08	51.90	19.17	-32.73	380.13
UT Chandigarh	6.72	0.00	-6.72	0.20	4.68	4.48	3.65	5.68	2.03	-0.21
MP	0.34	57.40	57.06	57.57	97.95	40.38	66.76	25.61	-41.15	56.29
Maharashtra	0.00	368.18	368.18	16.96	205.60	188.64	130.46	32.74	-97.71	459.11
Gujarat	254.41	13.12	-241.29	36.41	253.36	216.96	48.17	64.16	15.99	-8.34
Chattisgarh	6.97	13.91	6.94	93.70	2.91	-90.78	29.53	32.07	2.55	-81.30
Daman and Diu	0.00	0.00	0.00	0.00	30.32	30.32	3.24	3.31	0.06	30.39
Dadra & Nagar Haveli	0.00	14.37	14.37	0.00	14.11	14.11	8.53	3.28	-5.25	23.23
Andhra Pradesh	0.00	308.59	308.59	23.84	136.02	112.19	15.65	44.60	28.95	449.73
Karnataka	365.97	1.02	-364.95	164.79	45.16	-119.63	7.34	74.97	67.63	-416.95
Kerala	0.00	211.55	211.55	0.72	57.15	56.42	1.39	58.96	57.56	325.54
Tamilnadu	0.00	211.66	211.66	0.00	88.79	88.79	60.04	12.02	-48.02	252.43
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	2.76	3.93	1.17	1.17
Telangana	12.94	282.45	269.52	28.57	145.78	117.20	6.98	75.41	68.43	455.15
West Bengal	24.97	1.40	-23.57	91.45	26.79	-64.66	12.27	51.09	38.82	-49.41
Orissa	46.82	279.36	232.54	41.30	0.69	-40.61	16.82	49.78	32.97	224.90
Bihar	0.00	138.08	138.08	0.00	0.00	0.00	71.03	13.79	-57.24	80.84
Jharkhand	0.00	116.30	116.30	0.00	0.00	0.00	20.19	8.32	-11.87	104.43
Sikkim	0.00	1.90	1.90	7.84	0.00	-7.84	5.33	0.39	-4.93	-10.88
DVC	28.97	0.00	-28.97	18.83	0.00	-18.83	16.30	25.58	9.29	-38.52
Arunachal Pradesh	0.00	0.00	0.00	0.00	9.44	9.44	0.12	15.56	15.45	24.88
Assam	0.00	46.56	46.56	4.56	20.43	15.87	7.74	17.83	10.09	72.52
Manipur	0.00	16.51	16.51	4.71	9.26	4.55	2.90	5.05	2.15	23.21
Meghalaya	0.00	55.95	55.95	0.00	12.42	12.42	5.85	2.07	-3.78	64.59
Mizoram	0.00	0.00	0.00	0.88	0.00	-0.88	0.51	8.14	7.63	6.76
Nagaland	0.00	9.06	9.06	0.00	1.40	1.40	0.68	8.04	7.36	17.82
Tripura	0.84	0.00	-0.84	54.12	0.00	-54.12	0.82	13.56	12.75	-42.21
Goa	0.00	20.47	20.47	23.12	1.66	-21.46	11.29	10.19	-1.11	-2.10
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	32.44	5.23	-27.21	-27.21
NJPC	0.00	0.00	0.00	3.81	0.00	-3.81	3.95	2.53	-1.42	-5.22

AD HYDRO	0.00	0.00	0.00	9.18	0.00	-9.18	0.32	0.22	-0.10	-9.28
KARCHAM WANGTOO	0.00	0.00	0.00	47.23	0.00	-47.23	2.68	2.76	0.08	-47.15
SHREE CEMENT	79.40	0.00	-79.40	20.98	0.00	-20.98	1.09	2.68	1.59	-98.79
LANCO BUDHIL	0.00	0.00	0.00	4.55	0.00	-4.55	0.00	0.00	0.00	-4.55
JINDAL POWER	184.03	0.00	-184.03	72.24	0.00	-72.24	13.72	3.37	-10.36	-266.62
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	2.11	0.50	-1.61	-1.61
NSPCL	14.45	0.00	-14.45	0.00	0.00	0.00	2.75	1.25	-1.50	-15.95
ACBIL	17.83	0.00	-17.83	51.89	0.00	-51.89	0.43	9.20	8.77	-60.95
BALCO	0.00	0.00	0.00	0.00	32.26	32.26	0.35	6.81	6.46	38.72
RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	0.01	6.57	6.57	6.57
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	13.42	15.35	1.93	1.93
DCPP	0.48	0.00	-0.48	131.42	0.00	-131.42	2.34	4.09	1.75	-130.15
EMCO	0.00	0.00	0.00	0.20	0.00	-0.20	0.00	0.00	0.00	-0.20
ESSAR STEEL	0.00	0.00	0.00	0.00	84.13	84.13	0.00	0.00	0.00	84.13
KSK MAHANADI	0.00	0.00	0.00	6.38	0.00	-6.38	0.00	0.00	0.00	-6.38
JINDAL STAGE-II	0.00	0.00	0.00	140.91	0.00	-140.91	0.00	0.00	0.00	-140.91
JAYPEE NIGRIE	0.00	0.00	0.00	129.92	0.00	-129.92	0.00	0.00	0.00	-129.92
DGEN Mega power	0.00	0.00	0.00	0.08	0.00	-0.08	0.00	0.00	0.00	-0.08
GMR Chattisgarh	0.00	0.00	0.00	0.00	1.51	1.51	0.00	0.00	0.00	1.51
KORBA WEST Power	0.00	0.00	0.00	153.92	0.00	-153.92	0.00	0.00	0.00	-153.92
SIMHAPURI	223.36	0.00	-223.36	4.85	0.00	-4.85	2.31	2.52	0.21	-228.00
Meenakshi	0.00	0.87	0.87	9.16	0.00	-9.16	0.00	0.00	0.00	-8.29
STERLITE	91.00	0.00	-91.00	103.38	0.00	-103.38	8.17	18.05	9.88	-184.49
MAITHON POWER LTD	0.43	0.00	-0.43	61.04	0.00	-61.04	5.24	3.01	-2.22	-63.69
ADHUNIK POWER LTD	0.00	0.00	0.00	12.73	0.00	-12.73	0.00	0.00	0.00	-12.73
CHUZACHEN HEP	0.00	0.00	0.00	4.68	0.00	-4.68	0.00	0.00	0.00	-4.68
RANGIT HEP	0.00	0.00	0.00	2.12	0.00	-2.12	0.00	0.00	0.00	-2.12
GMR KAMALANGA	0.00	0.00	0.00	71.27	0.00	-71.27	0.00	0.00	0.00	-71.27
JITPL	10.42	0.00	-10.42	89.76	0.00	-89.76	0.00	0.00	0.00	-100.18
TEESTA HEP	0.00	0.00	0.00	7.67	0.00	-7.67	0.00	0.00	0.00	-7.67
NEEPCO Stations	0.00	0.00	0.00	1.44	0.00	-1.44	5.08	2.18	-2.90	-4.34
ONGC PALATANA	0.00	0.00	0.00	4.45	0.00	-4.45	0.00	0.00	0.00	-4.45
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 March, 2015

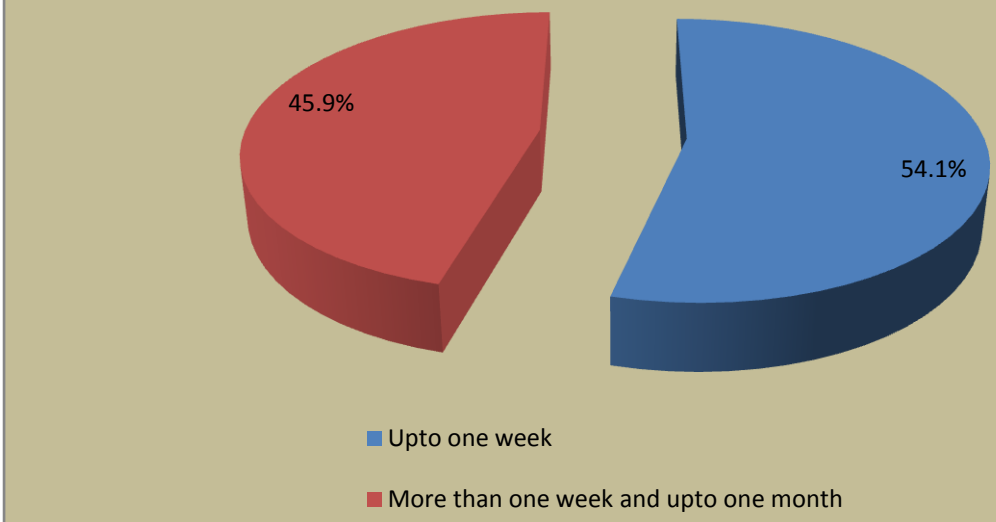


Figure-8: Forward Curve based on Prices of Bilateral Contracts

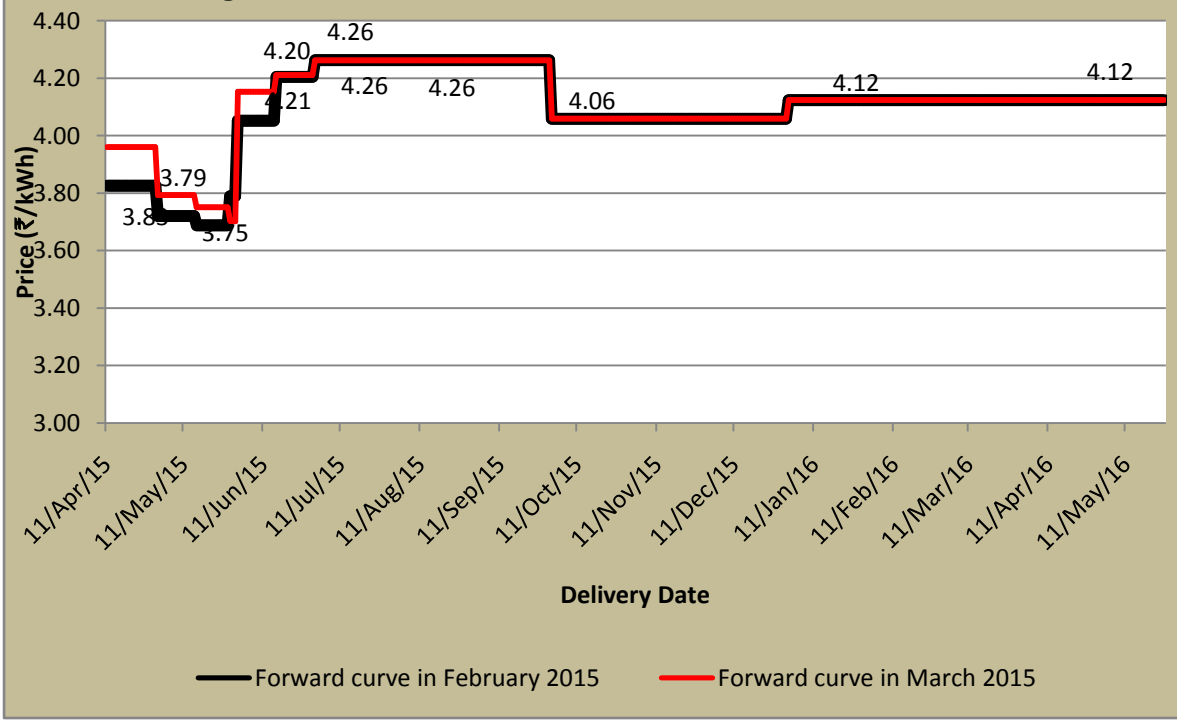


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTED THROUGH POWER EXCHANGES, FEBRUARY 2015					
Sr.No.	**Details of REC Transactions**	**IEX**		**PXIL**	
		Solar	**Non-Solar**	**Solar**	**Non Solar**
A	Volume of Buy Bid	26726	345184	18143	402303
B	Volume of Sell Bid	987764	6025638	557355	5099712
C	Ratio of Buy Bid to Sell Bid Volume	0.03	0.06	0.03	0.08
D	Market Clearing Volume (MWh)	26726	345184	18143	402303
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 January 2015		
Type of REC	*Floor Price (₹/MWh)*	*Forbearance Price (₹/MWh)*
Solar	*3500.00*	*5800.00*
Non-Solar	*1500.00*	*3300.00*