Monthly Report on Short-term Transactions of Electricity in India

May, 2013

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Contents

List of Tables and Figures

Abbreviations

Abbreviation	Expanded Version
ACBIL	ACB (India) Limited
ACP	Area Clearing Price
ACV	Area Clearing Volume
AD HYDRO	AD Hydro Power Limited
BALCO	Bharat Aluminium Company Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPL	Coastal Gujarat Power Limited
CHUZACHEN	Chuzachen hydro electric power project
DCPP	Donga Mahua Captive Power Plant
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
HHI	Herfindahl-Hirschman Index
IEX	Indian Energy Exchange Limited
J&K	Jammu & Kashmir
JINDAL POWER	Jindal Power Limited
KARCHAM WANGTOO	Jaypee Karcham Hydro Corporation Limited
LANCO BUDHIL	Lanco Budhil Hydro Power Private Limited
LANKO_AMK	Lanco Amarkantak Power Private Limited
Meenakshi	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO Stations	North Eastern Electric Power Corporation Ltd. Stations
NEW Grid	North, East, North-East and Western Regional Grid
NHPC Stations	National Hydro Electric Power Corporation Ltd. Stations
NJPC	Nathpa Jhakri Hydroelectric Power Station
NLDC	National Load Despatch Centre
NSPCL	NTPC - SAIL Power Company Private Limited
PX	Power Exchange
PXIL	Power Exchange India Limited
RANGANADI	Ranganadi Hydro Electric Project
REC	Renewable Energy Certificate
RGPPL	Ratnagiri Gas and Power Private Limited
RLDC	Regional Load Despatch Centre
RTC	Round - the- Clock
SHREE CEMENT	Shree Cement Limited
SIMHAPURE	Simhapuri Energy Private Limited
SR Grid	Southern Regional Grid
STERLITE	Sterlite Energy Limited
UI	Unscheduled Interchange
UT	Union Territory

Introduction

A well-functioning electricity market requires an effective market monitoring process. As part of the market monitoring process, the monthly report on short-term transactions of electricity, is being prepared and posted on the website of CERC since August 2008. Here, "short-term transactions of electricity" refers to the contracts of less than one year period, for electricity transacted (inter-state & intra-state) through Inter-State Trading Licensees and directly by the Distribution Licensees, Power Exchanges (Indian Energy Exchange Ltd (IEX) and Power Exchange India Ltd (PXIL)), and Unscheduled Interchange (UI). The objectives of the report are: (i) to observe the trends in volume and price of the short-term transactions of electricity; (ii) to analyse competition among the market players; (iii) to analyse effect of congestion on volume of electricity transacted through power exchanges; (iv) to provide information on volume and price of Renewable Energy Certificates (RECs) transacted through power exchanges; and (v) to disclose/disseminate all relevant market information. The analysis of the report for the month of May, 2013 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of May 2013, total electricity generation excluding generation from renewable and captive power plants in India was 83942.68 MUs (Table-1).

Of the total electricity generation, 8599.08 MUs (10.24%) were transacted through short-term, comprising of 4221.03 MUs (5.03%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2572.52 MUs (3.06%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1805.54 MUs (2.15%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 49.09% (34.30% through traders and term-ahead contracts on Power Exchanges and 14.78% directly between distribution companies) followed by 29.92% through day ahead collective transactions on Power Exchanges and 21.00% through UI (Table-1& Figure-1). Daily volume of short-term transactions is shown in Table-17 & Figure-3.

The percentage share of electricity traded by each trading licensee in the total volume of electricity traded by all trading licensees is provided in Table-2 & Figure-4. The trading licensees undertake electricity transactions through bilateral and through power exchanges. Here, the volume of electricity transacted by the trading licensees includes bilateral

transactions and the transactions undertaken through power exchanges. There were 43 trading licensees as on 31.05.2013, of which only 19 have engaged in trading during May 2013. Top 5 trading licensees had a share of 66.71% 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. The HHI below 0.15 indicates non-concentration of market power. The HHI computed for volume of electricity traded by trading licensees (inter-state & intra-state) was 0.1202 for the month of May 2013, which indicates that there was no concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 2499.31 MUs and 73.21 MUs respectively. The volume of total Buy bids and Sale bids was 3271.72 MUs and 3887.47 MUs respectively in IEX and 146.50 MUs and 202.87 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was less demand in IEX (0.84 times) and PXIL (0.72 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted through IEX and PXIL in the term-ahead market was 4.86 MUs and 0.42 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 ₹4.54/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 ₹4.53/kWh, ₹6.02/kWh and ₹4.62/kWh respectively. Minimum and Maximum sale prices were ₹3.07/kWh and ₹6.90/kWh respectively (Table-3 & 4).

(ii) ***Price of electricity transacted Through Power Exchanges:*** Minimum, Maximum and Weighted Average Prices have been computed for the electricity transacted through IEX and PXIL separately. The Minimum, Maximum and Weighted Average prices were ₹1.00/kWh, ₹16.00/kWh and ₹3.26/kWh respectively in IEX and ₹1.26/kWh, ₹5.00/kWh and ₹2.44/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹2.80/kWh and ₹2.23/kWh respectively (Table-6 and Table-7).

(iii*) Price of electricity transacted Through UI:* All-India UI price has been computed for NEW Grid and SR Grid separately. The average UI price was ₹1.73/kWh in the NEW Grid and ₹3.45/kWh in the SR Grid. Minimum and Maximum UI prices were ₹0.00/kWh and ₹9.34/kWh respectively in the New Grid, and ₹0.00/kWh and ₹10.80/kWh respectively in the SR Grid (Table-8).

The prices of electricity transacted through trading licensees, power exchanges and UI and their comparison is shown in Table-18, Figure-5 & 6.

III: Volume of Short-term Transactions of Electricity (Regional Entity[1]-Wise)

Of the total bilateral transactions, top 5 regional entities sold 50.78% of the volume, and these were Sterlite, Karnataka, Jindal Power Limited, UT Chandigarh and Orissa. Top 5 regional entities purchased 56.87% of the volume, and these were Andhra Pradesh, Kerala, Gujarat, Punjab and West Bengal (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 63.92% of the volume, and these were Karnataka, Delhi, Karcham Wangtoo, Gujarat and Himachal Pradesh. Top 5 regional entities purchased 68.63% of the volume, and these were Gujarat, Punjab, Andhra Pradesh, Rajasthan and Maharashtra (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 37.30% of the volume, and these were Rajasthan, Delhi, Haryana, Gujarat and Madhya Pradesh. Top 5 regional entities overdrew 37.20% of the volume, and these were Maharashtra, Sterlite, Uttar Pradesh, Sikkim and Haryana (Table-13, 14 & 19).

Regional entity-wise total volume of net short-term transactions of electricity i.e. volume of net transactions through bilateral, power exchanges and UI is shown in Table-15 & 19. Top 5 electricity selling regional entities were Sterlite Energy Limited, Karnataka, Karcham Wangtoo, Himachal Pradesh and Jindal Power Limited. Top 5 electricity purchasing regional entities were Andhra Pradesh, Punjab, Kerala, Gujarat and Uttar 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.*

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 May 2013, congestion occurred in both the power exchanges, the details of which are shown in Table-16. The volume of electricity that could not be cleared due to congestion and could not be transacted through power exchanges is the difference between unconstrained cleared volume (volume of electricity that would have been scheduled, had there been no congestion) and actual cleared volume.

During the month, the volume of electricity that could not be cleared in the power exchanges due to congestion was 12.68% and 35.69% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 99.26% in IEX and 87.63% in PXIL.

V: Volume and Price of Renewable Energy Certificates (RECs)

The concept of Renewable Energy Certificates (RECs) seeks to address mismatch between availability of renewable energy sources and the requirement of the obligated entities to meet their renewable purchase obligation by purchasing green attributes of renewable energy remotely located in the form of RECs. The REC mechanism is a market

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[2] *"Congestion" means a situation where the demand for transmission capacity exceeds the available transfer capability*

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

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 May 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 669 and 1034 respectively and the market clearing price of these RECs ware ₹11490/MWh and ₹10990/MWh on IEX and PXIL respectively. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 18543 and 34425 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 0.41 and 0.42 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.01 and 0.04 in IEX and PXIL respectively.

VI: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 10.24%.
- Of the total short-term transactions of electricity, 49.09% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 29.92% through Power Exchanges and 21.00% through UI.
- Top 5 trading licensees had a share of 66.71% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1202, indicating a moderate concentration of market power.
- The price of electricity transacted through trading licensees (₹4.54/kWh) was higher when compared with the price of electricity transacted through IEX (₹3.26/kWh) and PXIL (₹2.44/kWh) respectively.
- The price of electricity transacted through UI was ₹1.73/kWh in the NEW Grid and ₹3.45/kWh in the SR Grid.
- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was less demand in IEX (1: 0.84) and PXIL (1: 0.72) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Sterlite Energy Limited, Karnataka, Karcham Wangtoo, Himachal Pradesh and Jindal Power Limited. Top 5 electricity purchasing regional entities were Andhra Pradesh, Punjab, Kerala, Gujarat and Uttar Pradesh.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 12.68% and 35.69% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 99.26% in IEX and 87.63% in PXIL.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 669 and 1034 respectively and the market clearing price of these RECs ware ₹11490/MWh and ₹10990/MWh on IEX and PXIL respectively. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 18543 and 34425 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), MAY 2013				
Sr.No	**Short-term transactions**	**Volume (MUs)**	**% to Volume of short-term transactions**	**% to Total Generation**
1	Bilateral	4221.03	49.09%	5.03%
	(i) Through Traders and PXs	*2949.81*	34.30%	3.51%
	(ii) Direct	*1271.22*	14.78%	1.51%
2	Through Power Exchanges	2572.52	29.92%	3.06%
	(i) IEX	*2499.31*	29.06%	2.98%
	(ii) PXIL	*73.21*	0.85%	0.09%
3	Through UI	1805.54	21.00%	2.15%
	Total	**8599.08**	**100.00%**	**10.24%**
	Total Generation	**83942.68**	_	_
Source: NLDC				

Figure-1: Volume of Short-term Transactions of Electricity, May 2013

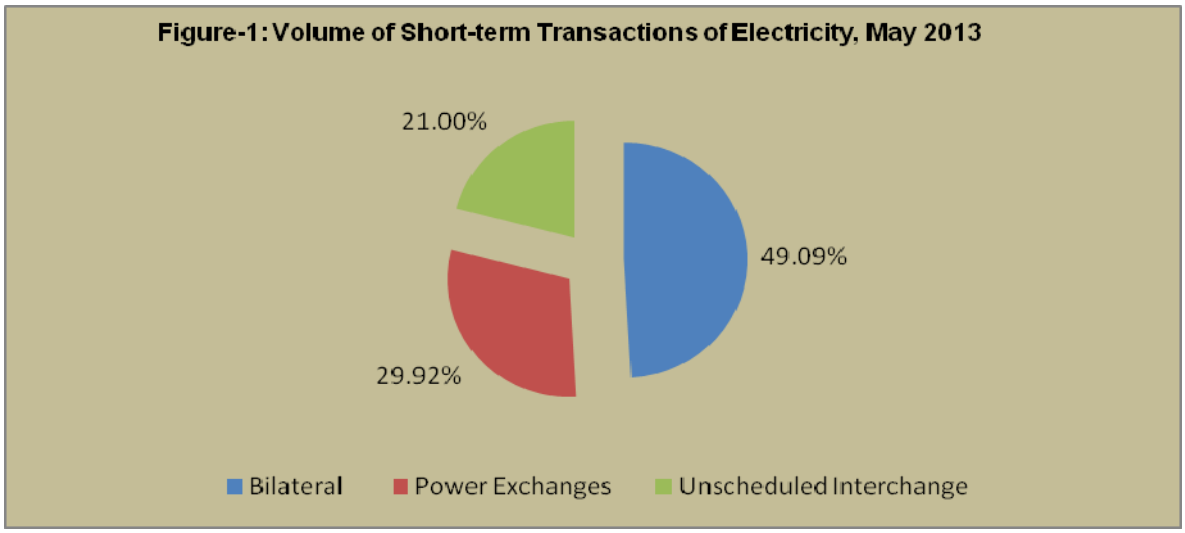
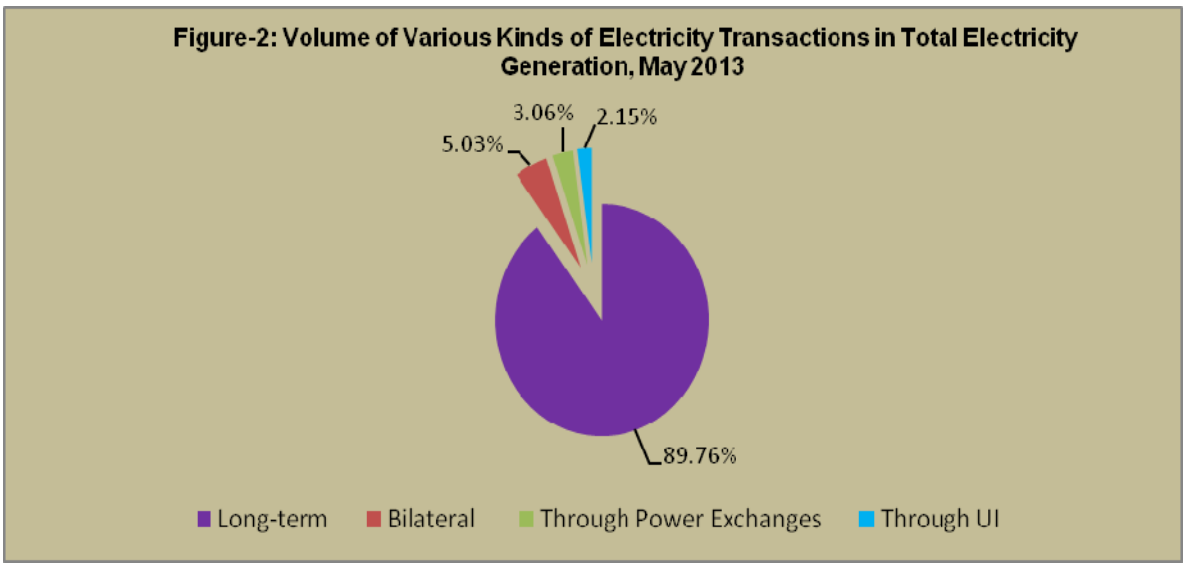


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, May 2013



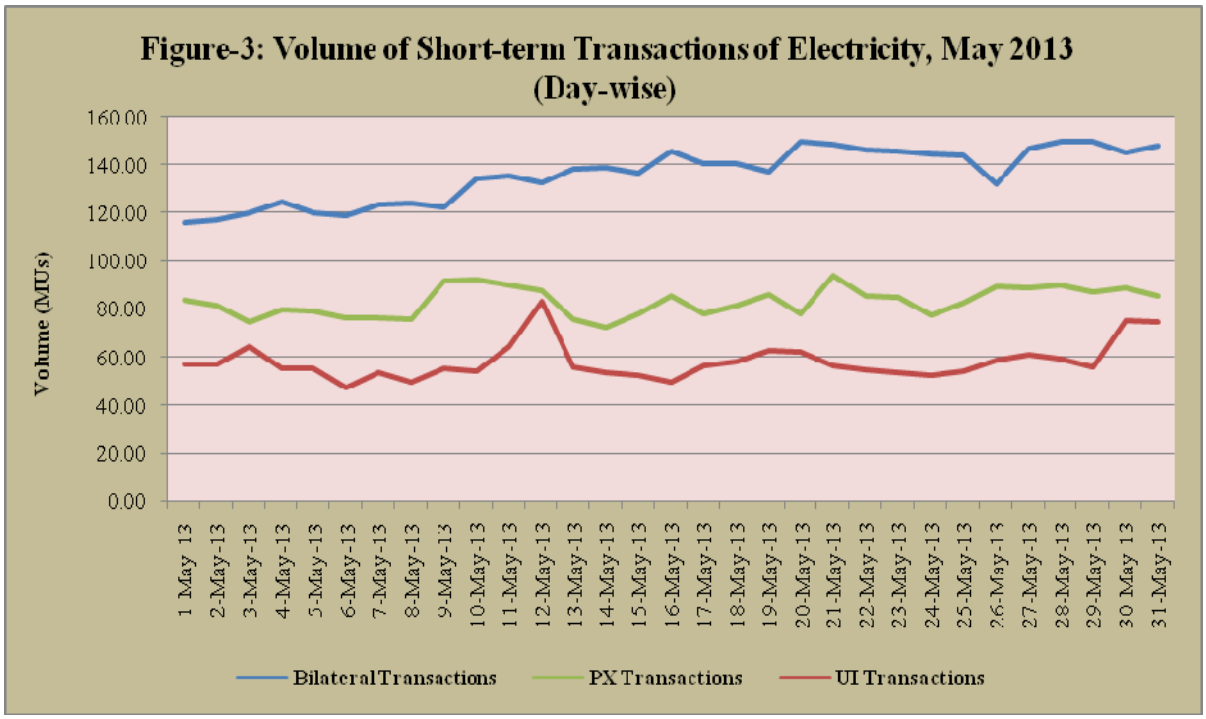


Figure-3: Volume of Short-term Transactions of Electricity, May 2013
(Day-wise)
Volume (MUs)
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
1 May 13
2-May-13
3-May-13
4-May-13
5-May-13
6-May-13
7-May-13
8-May-13
9-May-13
10-May-13
11-May-13
12-May-13
13-May-13
14-May-13
15-May-13
16-May-13
17-May-13
18-May-13
19-May-13
20-May-13
21-May-13
22-May-13
23-May-13
24-May-13
25-May-13
26-May-13
27-May-13
28-May-13
29-May-13
30 May 13
31-May-13
Bilateral Transactions
PX Transactions
UI Transactions

Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, MAY 2013			
Sr.No	**Name of the Trading Licensee**	**% Share in total Volume transacted by Trading Licensees**	**Herfindahl-Hirschman Index**
1	PTC India Ltd.	24.77%	0.0614
2	JSW Power Trading Company Ltd	13.89%	0.0193
3	Tata Power Trading Company (P) Ltd.	12.64%	0.0160
4	Reliance Energy Trading (P) Ltd	7.99%	0.0064
5	NTPC Vidyut Vyapar Nigam Ltd.	7.42%	0.0055
6	Pune Power Development Pvt. Ltd.	6.02%	0.0036
7	Adani Enterprises Ltd.	4.60%	0.0021
8	Jaiprakash Associates Ltd.	4.02%	0.0016
9	Shree Cement Ltd.	3.66%	0.0013
10	Knowledge Infrastructure Systems (P) Ltd	2.61%	0.0007
11	Mittal Processors (P) Ltd.	2.31%	0.0005
12	Essar Electric Power Development Corp. Ltd.	2.29%	0.0005
13	National Energy Trading & Services Ltd.	2.20%	0.0005
14	GMR Energy Trading Ltd.	1.78%	0.0003
15	Instinct Infra & Power Ltd.	1.75%	0.0003
16	Manikaran Power Ltd.	1.01%	0.0001
17	RPG Power Trading Company Ltd.	0.77%	0.0001
18	Indrajit Power Technology (P) Ltd.	0.23%	0.0000
19	Customized Energy Solutions India Pvt. Ltd.	0.05%	0.0000
TOTAL		**100.00%**	**0.1202**
Top 5 trading licensees		**66.71%**	
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			

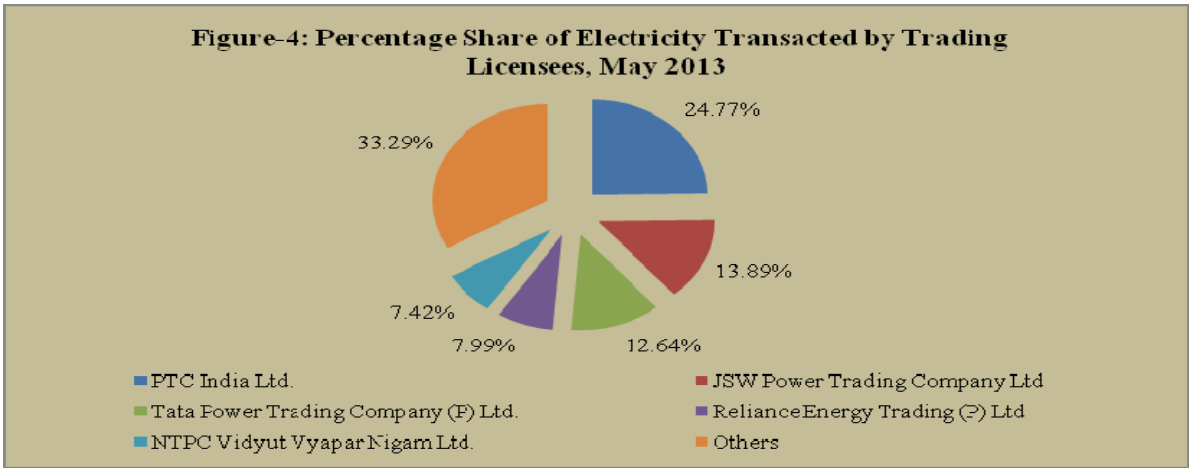


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, MAY 2013		
Sr.No		**Sale Price of Traders (₹/kWh)**
1	Minimum	3.07
2	Maximum	6.90
3	Weighted Average	4.54

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), MAY 2013		
Sr.No	**Period of Trade**	**Sale Price of Traders (₹/kWh)**
1	RTC	4.53
2	PEAK	6.02
3	OFF PEAK	4.62

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, MAY 2013			
Sr.No	**ACP**	**Price in IEX (₹/kWh)**	**Price in PXIL (₹/kWh)**
1	Minimum	1.00	1.26
2	Maximum	16.00	5.00
3	Weighted Average	3.26	2.44

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, MAY 2013			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	3.36	2.55
3	Weekly Contracts	1.50	3.35
	Total	**4.86**	**2.80**

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, MAY 2013			
Sr.No	**Term ahead contracts**	**Actual Scheduled Volume (MUs)**	**Weighted Average Price (₹/kWh)**
1	Intra-Day Contracts	0.42	2.23
2	Weekly Contracts	0.00	0.00
	Total	**0.42**	**2.23**

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, MAY 2013			
Sr.No		**Price in NEW Grid (₹/kWh)**	**Price in SR Grid (₹/kWh)**
1	Minimum	0.00	0.00
2	Maximum	9.34	10.80
3	Average	1.73	3.45

Source: NLDC

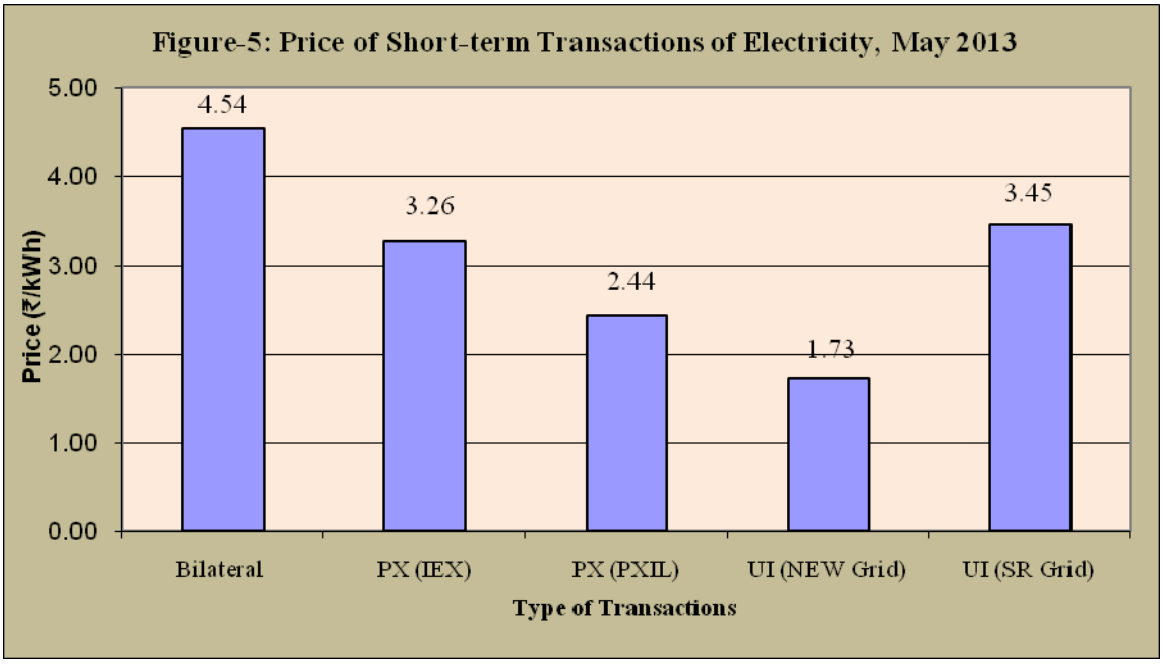


Figure-5: Price of Short-term Transactions of Electricity, May 2013
5.00
4.00
3.00
2.00
1.00
0.00
Price (₹/kWh)
4.54
3.26
2.44
1.73
3.45
Bilateral
PX (IEX)
PX (PXIL)
UI (NEW Grid)
UI (SR Grid)
Type of Transactions

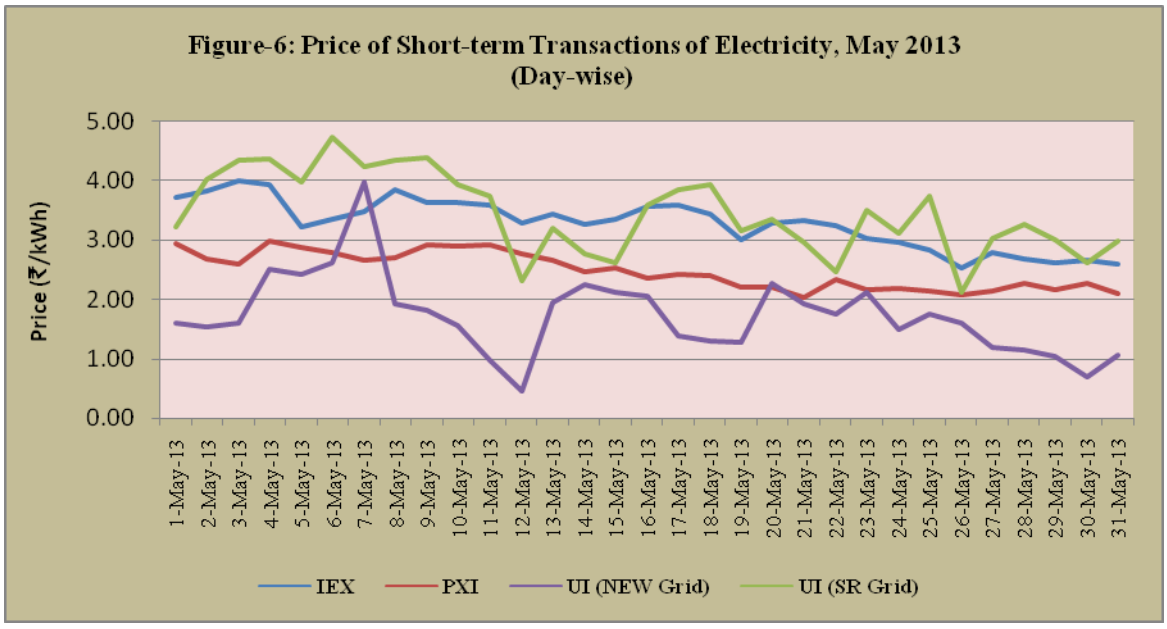


Figure-6: Price of Short-term Transactions of Electricity, May 2013
(Day-wise)
5.00
4.00
3.00
2.00
1.00
0.00
Price (₹/kWh)
1-May-13
2-May-13
3-May-13
4-May-13
5-May-13
6-May-13
7-May-13
8-May-13
9-May-13
10-May-13
11-May-13
12-May-13
13-May-13
14-May-13
15-May-13
16-May-13
17-May-13
18-May-13
19-May-13
20-May-13
21-May-13
22-May-13
23-May-13
24-May-13
25-May-13
26-May-13
27-May-13
28-May-13
29-May-13
30-May-13
31-May-13
IEX
PXI
UI (NEW Grid)
UI (SR Grid)

Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
STERLITE	860.84	19.84%
Karnataka	358.79	8.27%
JINDAL POWER	333.89	7.69%
UT Chandigarh	325.47	7.50%
Orissa	324.84	7.48%
Himachal Pradesh	286.70	6.61%
Rajasthan	263.88	6.08%
KARCHAM WANGTOO	260.53	6.00%
Gujarat	221.40	5.10%
DVC	214.95	4.95%
Maharashtra	184.94	4.26%
J & K	183.87	4.24%
SHREE CEMENT	168.41	3.88%
West Bengal	127.06	2.93%
MAITHON POWER LTD	54.37	1.25%
AD HYDRO	27.65	0.64%
Delhi	19.36	0.45%
Uttar Pradesh	19.21	0.44%
MP	18.98	0.44%
ACBIL	16.22	0.37%
Punjab	13.65	0.31%
Sikkim	13.59	0.31%
Uttarakhand	11.84	0.27%
Chattisgarh	11.81	0.27%
Jharkhand	8.60	0.20%
SIMHAPURI	5.40	0.12%
Meghalaya	3.73	0.09%
Total	**4339.96**	**100.00%**
Volume of sale by top 5 States	**2203.82**	**50.78%**

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
Andhra Pradesh	625.08	15.27%
Kerala	478.76	11.69%
Gujarat	466.35	11.39%
Punjab	401.40	9.80%
West Bengal	356.94	8.72%
Delhi	295.20	7.21%
Uttar Pradesh	265.98	6.50%
Bihar	180.79	4.42%
Tamilnadu	165.28	4.04%
Maharashtra	147.27	3.60%
Uttarakhand	123.51	3.02%
Jharkhand	106.33	2.60%
Assam	96.66	2.36%
DVC	70.05	1.71%
Haryana	65.76	1.61%
Chattisgarh	63.99	1.56%
Dadra & Nagar Haveli	47.91	1.17%
MP	41.82	1.02%
Rajasthan	31.62	0.77%
Karnataka	29.03	0.71%
Tripura	14.88	0.36%
Orissa	12.05	0.29%
Meghalaya	3.42	0.08%
Himachal Pradesh	3.38	0.08%
Meenakshi	0.99	0.02%
Total	**4094.44**	**100.00%**
Volume of sale by top 5 States	**2328.53**	**56.87%**

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Sale (MUs)**	**% of Volume**
Karnataka	408.42	15.88%
Delhi	375.38	14.59%
KARCHAM WANGTOO	344.90	13.41%
Gujarat	315.83	12.28%
Himachal Pradesh	199.84	7.77%
West Bengal	135.98	5.29%
JINDAL POWER	110.85	4.31%
Andhra Pradesh	87.47	3.40%
MP	65.79	2.56%
Haryana	64.55	2.51%
DCPP	53.42	2.08%
AD HYDRO	51.74	2.01%
MAITHON POWER LTD	40.34	1.57%
Sikkim	33.72	1.31%
LANCO BUDHIL	29.08	1.13%
Orissa	27.41	1.07%
Chattisgarh	26.71	1.04%
STERLITE	25.36	0.99%
CHUZACHEN	25.08	0.97%
ACBIL	23.96	0.93%
NEEPCO Stations	21.42	0.83%
DVC	18.80	0.73%
EMCO	15.10	0.59%
Assam	14.40	0.56%
Meghalaya	11.69	0.45%
Maharashtra	7.48	0.29%
SIMHAPURI	7.08	0.28%
Rajasthan	5.94	0.23%
Meenakshi	5.43	0.21%
Tripura	5.01	0.19%
SHREE CEMENT	4.74	0.18%
NHPC Stations	4.61	0.18%
J & K	3.16	0.12%
RANGANADI	1.08	0.04%
Nagaland	0.33	0.01%
UT Chandigarh	0.28	0.01%
BALCO	0.17	0.01%
Total	**2572.52**	**100.00%**
Volume of sale by top 5 States	**1644.37**	**63.92%**

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Purchase (MUs)**	**% of Volume**
Gujarat	538.61	20.94%
Punjab	445.64	17.32%
Andhra Pradesh	327.62	12.74%
Rajasthan	274.25	10.66%
Maharashtra	179.47	6.98%
Tamilnadu	160.45	6.24%
Uttar Pradesh	152.78	5.94%
Chattisgarh	116.48	4.53%
Haryana	111.98	4.35%
Uttarakhand	100.42	3.90%
Kerala	83.03	3.23%
MP	24.15	0.94%
J & K	23.43	0.91%
UT Chandigarh	8.99	0.35%
Meghalaya	6.68	0.26%
Assam	5.92	0.23%
West Bengal	5.29	0.21%
Nagaland	2.43	0.09%
Arunachal Pradesh	2.27	0.09%
Karnataka	1.73	0.07%
Delhi	0.64	0.02%
Himachal Pradesh	0.27	0.01%
Total	**2572.52**	**100.00%**
Volume of purchase by top 5 States	**1765.59**	**68.63%**

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Export (MUs)**	**% of Volume**
Rajasthan	168.33	11.19%
Delhi	128.86	8.57%
Haryana	100.27	6.67%
Gujarat	82.08	5.46%
MP	81.39	5.41%
Uttar Pradesh	79.07	5.26%
Maharashtra	58.51	3.89%
NHPC Stations	58.04	3.86%
Sikkim	56.28	3.74%
Punjab	54.84	3.65%
J & K	54.35	3.61%
Assam	53.36	3.55%
West Bengal	51.04	3.39%
Tamilnadu	45.86	3.05%
Chattisgarh	45.50	3.03%
Himachal Pradesh	39.59	2.63%
Bihar	37.37	2.49%
Karnataka	31.16	2.07%
Orissa	29.50	1.96%
Andhra Pradesh	28.77	1.91%
Pondicherry	19.64	1.31%
Uttarakhand	19.62	1.30%
Jharkhand	19.41	1.29%
Tripura	14.78	0.98%
NJPC	12.08	0.80%
Manipur	10.59	0.70%
KARCHAM WANGTOO	9.54	0.63%
Arunachal Pradesh	9.49	0.63%
DVC	9.24	0.61%
Meghalaya	9.19	0.61%
JINDAL POWER	8.99	0.60%
Dadra & Nagar Haveli	7.98	0.53%
AD HYDRO	7.82	0.52%
NEEPCO Stations	7.66	0.51%
Goa	7.56	0.50%
CGPL	6.71	0.45%
Daman and Diu	6.30	0.42%
MAITHON POWER LTD	5.85	0.39%
Nagaland	4.31	0.29%
DCPP	4.09	0.27%
Mizoram	3.60	0.24%
SHREE CEMENT	3.37	0.22%
NSPCL	2.74	0.18%
UT Chandigarh	2.39	0.16%
ACBIL	1.32	0.09%
LANKO_AMK	1.21	0.08%
Kerala	1.17	0.08%
RGPPL(Dabhol)	0.94	0.06%
STERLITE	0.93	0.06%
SIMHAPURI	0.74	0.05%
BALCO	0.27	0.02%
Total	**1503.69**	**100.00%**
Volume of Export by top 5 States	**560.92**	**37.30%**

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, MAY 2013		
Name of the State/UT/Other Regional Entity	**Volume of Import (MUs)**	**% of Volume**
Maharashtra	132.68	9.71%
STERLITE	119.98	8.78%
Uttar Pradesh	102.41	7.49%
Sikkim	84.35	6.17%
Haryana	69.01	5.05%
Jharkhand	63.43	4.64%
Kerala	62.04	4.54%
Gujarat	61.27	4.48%
NHPC Stations	60.09	4.40%
Chattisgarh	44.33	3.24%
Punjab	39.96	2.92%
Tamilnadu	37.19	2.72%
Uttarakhand	33.32	2.44%
Bihar	33.21	2.43%
Andhra Pradesh	31.64	2.32%
CGPL	28.69	2.10%
J & K	23.15	1.69%
UT Chandigarh	22.00	1.61%
West Bengal	21.56	1.58%
Goa	21.48	1.57%
Orissa	21.45	1.57%
RGPPL(Dabhol)	21.32	1.56%
Assam	18.80	1.38%
KARCHAM WANGTOO	18.42	1.35%
Karnataka	17.95	1.31%
Himachal Pradesh	17.34	1.27%
NJPC	16.90	1.24%
MP	15.75	1.15%
LANKO_AMK	14.58	1.07%
Rajasthan	13.79	1.01%
Dadra & Nagar Haveli	12.43	0.91%
ACBIL	10.76	0.79%
MAITHON POWER LTD	8.67	0.63%
Meghalaya	8.62	0.63%
Daman and Diu	7.84	0.57%
BALCO	6.07	0.44%
AD HYDRO	5.95	0.44%
Delhi	5.69	0.42%
Arunachal Pradesh	5.50	0.40%
SHREE CEMENT	3.38	0.25%
Tripura	3.11	0.23%
Mizoram	2.96	0.22%
DVC	2.94	0.22%
DCPP	2.51	0.18%
NEEPCO Stations	2.39	0.18%
JINDAL POWER	2.37	0.17%
Nagaland	2.36	0.17%
Manipur	2.27	0.17%
NSPCL	1.34	0.10%
Pondicherry	1.28	0.09%
SIMHAPURI	0.24	0.02%
Total	**1366.75**	**100.00%**
Volume of Export by top 5 States	**508.43**	**37.20%**

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), MAY 2013		
Sr.No.	**Name of the State/UT/Other Regional Entity**	**Total volume of net short-term transactions of electricity***
1	Andhra Pradesh	868.10
2	Punjab	818.50
3	Kerala	622.65
4	Gujarat	446.92
5	Uttar Pradesh	422.89
6	Tamilnadu	317.07
7	Uttarakhand	225.78
8	Maharashtra	208.50
9	Bihar	176.63
10	Jharkhand	141.75
11	Chattisgarh	140.78
12	Haryana	81.93
13	West Bengal	69.69
14	Assam	53.62
15	Dadra & Nagar Haveli	52.35
16	CGPL	21.98
17	RGPPL(Dabhol)	20.38
18	Goa	13.91
19	LANKO_AMK	13.36
20	BALCO	5.64
21	NJPC	4.81
22	Daman and Diu	1.54
23	Nagaland	0.15
24	Mizoram	-0.64
25	RANGANADI	-1.08
26	NSPCL	-1.40
27	Arunachal Pradesh	-1.72
28	Tripura	-1.80
29	NHPC Stations	-2.57
30	Meenakshi	-4.44
31	Meghalaya	-5.89
32	Manipur	-8.32
33	SIMHAPURI	-12.98
34	EMCO	-15.10
35	Pondicherry	-18.36
36	Sikkim	-19.23
37	CHUZACHEN	-25.08
38	NEEPCO Stations	-26.69
39	LANCO BUDHIL	-29.08
40	ACBIL	-30.73
41	DCPP	-55.00
42	AD HYDRO	-81.26
43	MP	-84.44
44	MAITHON POWER LTD	-91.88
45	Rajasthan	-118.48
46	DVC	-170.00
47	SHREE CEMENT	-173.14
48	J & K	-194.81
49	Delhi	-222.06
50	UT Chandigarh	-297.16
51	Orissa	-348.25
52	JINDAL POWER	-451.35
53	Himachal Pradesh	-505.14
54	KARCHAM WANGTOO	-596.55
55	Karnataka	-749.66
56	STERLITE	-767.15
** Total volume of net short-term transactions of electricity includes net of transactions of electricity through bilateral, power exchange and UI*		
(-) indicates sale and (+) indicates purchase		

Table-16: DETAILS OF CONGESTION IN POWER EXCHANGES, MAY 2013			
	Details of Congestion	**IEX**	**PXIL**
A	Unconstrained Cleared Volume* (MUs)	2862.21	113.83
B	Actual Cleared Volume and hence scheduled (MUs)	2499.31	73.21
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	362.90	40.62
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	12.68%	35.69%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	99.26%	87.63%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	24.64%	24.54%
	6.00 - 12.00 hours	25.19%	25.77%
	12.00 - 18.00 hours	25.02%	25.15%
	18.00 - 24.00 hours	25.15%	24.54%
** This power would have been scheduled had there been no congestion.*			
Source: IEX & PXIL			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (MUs), MAY 2013 (DAY-WISE)						
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Unscheduled Interchange (Over Drawl+Under Generation)	Total Electricity Generation (MU) as given at CEA Website*
	Through Traders and PXs**	Direct	IEX	PXI		
1-May-13	75.31	40.93	80.46	2.89	56.93	2672.22
2-May-13	76.27	41.06	79.38	1.95	57.01	2696.26
3-May-13	81.35	38.91	72.89	1.47	64.46	2689.22
4-May-13	86.63	38.11	77.10	2.63	55.61	2692.08
5-May-13	86.22	33.94	75.90	3.33	55.31	2685.19
6-May-13	79.41	39.86	75.13	1.26	47.37	2756.12
7-May-13	83.49	40.33	75.02	1.14	53.60	2754.85
8-May-13	83.44	40.58	74.03	1.63	49.53	2770.64
9-May-13	82.17	40.14	89.43	1.85	55.47	2759.63
10-May-13	94.51	39.88	89.79	2.11	54.21	2764.17
11-May-13	96.62	39.26	87.74	1.91	64.70	2734.76
12-May-13	94.48	38.11	85.22	2.28	83.28	2513.12
13-May-13	100.25	38.28	73.70	1.72	56.00	2601.80
14-May-13	100.64	38.29	70.81	1.36	53.80	2696.68
15-May-13	98.35	38.37	75.38	2.36	52.55	2715.96
16-May-13	103.15	42.76	83.03	2.45	49.47	2712.67
17-May-13	98.38	42.24	75.87	2.02	56.60	2722.64
18-May-13	99.57	41.00	78.78	2.22	58.42	2700.42
19-May-13	98.89	38.69	83.57	2.32	62.56	2679.27
20-May-13	105.08	44.57	75.41	2.57	62.10	2767.41
21-May-13	104.76	43.92	88.41	5.36	56.40	2782.63
22-May-13	102.35	43.82	82.95	2.13	55.01	2795.59
23-May-13	102.09	43.53	82.88	1.71	53.45	2750.87
24-May-13	101.64	42.98	75.98	1.56	52.30	2745.00
25-May-13	101.92	42.34	80.82	1.75	54.10	2762.97
26-May-13	99.39	32.81	87.62	1.81	58.92	2677.71
27-May-13	104.07	43.19	86.44	2.21	60.91	2699.63
28-May-13	102.43	47.29	86.84	3.04	59.33	2720.05
29-May-13	102.62	47.24	83.69	3.16	56.13	2680.50
30-May-13	101.17	43.95	84.37	4.24	75.20	2643.14
31-May-13	103.17	44.85	80.70	4.77	74.80	2599.48
Total	**2949.81**	**1271.22**	**2499.31**	**73.21**	**1805.54**	**83942.68**
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), MAY 2013 (DAY-WISE)												
Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Drawl/Over Drawl from the Grid (UI)					
							NEW Grid			SR Grid		
Date	Mini-mum ACP	Maxi-mum ACP	Weighted Average Price*	Mini-mum ACP	Maxi-mum ACP	Weighted Average Price*	Mini-mum Price	Maxi-mum Price	Average Price**	Mini-mum Price	Maxi-mum Price	Average Price**
1-May-13	2.34	7.48	3.71	2.45	4.00	2.95	0.00	5.34	1.61	0.00	7.37	3.22
2-May-13	2.26	10.50	3.83	2.07	4.00	2.69	0.00	3.65	1.55	1.32	5.91	4.03
3-May-13	2.30	10.00	3.99	2.40	4.00	2.59	0.00	4.22	1.61	0.50	8.21	4.35
4-May-13	2.30	7.48	3.94	2.35	4.00	2.99	0.33	5.06	2.51	0.00	8.49	4.37
5-May-13	2.20	7.21	3.22	2.40	3.50	2.89	0.66	7.37	2.42	0.00	5.91	3.99
6-May-13	2.06	7.21	3.33	2.35	3.50	2.80	0.00	5.34	2.63	1.49	7.65	4.74
7-May-13	2.06	11.00	3.46	2.06	5.00	2.67	0.83	9.34	3.98	0.66	7.09	4.25
8-May-13	2.05	10.00	3.84	1.44	3.75	2.71	0.00	4.22	1.93	0.17	9.62	4.35
9-May-13	2.30	7.15	3.63	1.44	3.50	2.92	0.00	5.34	1.83	0.00	10.80	4.38
10-May-13	2.40	10.00	3.63	2.35	3.50	2.90	0.00	5.06	1.57	0.00	7.65	3.93
11-May-13	2.35	12.00	3.58	2.35	3.75	2.92	0.00	3.65	0.98	0.00	7.93	3.74
12-May-13	2.06	8.00	3.28	2.06	3.60	2.77	0.00	2.22	0.46	0.00	5.91	2.32
13-May-13	1.98	8.00	3.43	2.06	3.75	2.67	0.00	5.91	1.95	0.00	7.37	3.20
14-May-13	1.88	9.00	3.26	1.80	2.73	2.46	0.00	7.37	2.25	0.00	10.80	2.78
15-May-13	1.31	10.00	3.34	1.31	5.00	2.54	0.00	5.34	2.12	0.00	7.09	2.62
16-May-13	1.31	15.00	3.56	1.70	2.60	2.35	0.00	4.22	2.06	0.17	5.91	3.59
17-May-13	1.61	15.00	3.58	1.31	2.65	2.43	0.00	4.50	1.40	0.17	7.65	3.84
18-May-13	1.45	14.00	3.42	2.00	2.65	2.40	0.00	4.22	1.31	0.00	7.09	3.95
19-May-13	1.31	9.00	3.01	2.00	2.50	2.21	0.00	4.50	1.28	0.00	7.09	3.17
20-May-13	1.28	10.00	3.27	1.90	2.60	2.21	0.00	7.37	2.28	0.00	5.91	3.35
21-May-13	1.36	9.00	3.32	1.30	2.55	2.03	0.00	5.34	1.93	0.00	5.91	2.96
22-May-13	1.31	10.00	3.23	1.80	2.60	2.34	0.00	3.65	1.75	0.00	5.91	2.46
23-May-13	1.28	15.00	3.02	2.00	5.00	2.17	0.00	4.50	2.13	0.00	5.91	3.51
24-May-13	1.13	16.00	2.95	1.90	2.50	2.19	0.00	3.93	1.49	0.00	7.93	3.11
25-May-13	1.20	15.10	2.83	1.82	2.50	2.14	0.00	4.50	1.75	0.00	9.34	3.74
26-May-13	1.26	10.00	2.52	1.26	2.50	2.07	0.00	4.22	1.62	0.00	5.63	2.12
27-May-13	1.30	12.50	2.77	1.70	2.50	2.13	0.00	3.65	1.20	0.00	7.09	3.03
28-May-13	1.20	14.00	2.67	1.76	5.00	2.28	0.00	3.65	1.14	0.00	7.09	3.26
29-May-13	1.05	15.00	2.61	1.70	5.00	2.17	0.00	3.36	1.05	0.00	8.49	3.01
30-May-13	1.20	16.00	2.66	1.60	2.50	2.27	0.00	3.08	0.71	0.00	7.65	2.62
31-May-13	1.00	11.00	2.59	1.50	2.50	2.09	0.00	3.93	1.06	0.00	7.09	2.98
	1.00#	**16.00#**	**3.26**	**1.26#**	**5.00#**	**2.44**	**0.00#**	**9.34#**	**1.73**	**0.00#**	**10.80#**	**3.45**

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

* Weighted average price computed based on Area Clearing Volume (ACV) and Area Clearing Price (ACP) for each hour of the day. Here, ACV and ACP represent the scheduled volume and weighted average price of all the bid areas of power exchanges.

** Simple average price of UI of 96 time blocks of 15 minutes each in a day. UI price includes Ceiling UI Rate +40% additional UI charge.

Maximum/Minimum in the month

Table-19: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE) (MUs), MAY 2013										
Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through UI with Regional Grid			Total Net***
	Sale	Pur-chase	Net**	Sale	Pur-chase	Net**	Export (Under Drawl)	Import (Over Drawl)	Net**	
Punjab	13.65	401.40	387.75	0.00	445.64	445.64	54.84	39.96	-14.88	818.50
Haryana	0.00	65.76	65.76	64.55	111.98	47.43	100.27	69.01	-31.25	81.93
Rajasthan	263.88	31.62	-232.26	5.94	274.25	268.31	168.33	13.79	-154.54	-118.48
Delhi	19.36	295.20	275.85	375.38	0.64	-374.74	128.86	5.69	-123.17	-222.06
Uttar Pradesh	19.21	265.98	246.77	0.00	152.78	152.78	79.07	102.41	23.34	422.89
Uttarakhand	11.84	123.51	111.67	0.00	100.42	100.42	19.62	33.32	13.69	225.78
Himachal Pradesh	286.70	3.38	-283.32	199.84	0.27	-199.57	39.59	17.34	-22.25	-505.14
J & K	183.87	0.00	-183.87	3.16	23.43	20.27	54.35	23.15	-31.20	-194.81
UT Chandigarh	325.47	0.00	-325.47	0.28	8.99	8.71	2.39	22.00	19.61	-297.16
MP	18.98	41.82	22.84	65.79	24.15	-41.64	81.39	15.75	-65.63	-84.44
Maharashtra	184.94	147.27	-37.66	7.48	179.47	171.99	58.51	132.68	74.17	208.50
Gujarat	221.40	466.35	244.95	315.83	538.61	222.78	82.08	61.27	-20.81	446.92
Chattisgarh	11.81	63.99	52.18	26.71	116.48	89.77	45.50	44.33	-1.17	140.78
Daman and Diu	0.00	0.00	0.00	0.00	0.00	0.00	6.30	7.84	1.54	1.54
Dadra & Nagar Haveli	0.00	47.91	47.91	0.00	0.00	0.00	7.98	12.43	4.44	52.35
Andhra Pradesh	0.00	625.08	625.08	87.47	327.62	240.14	28.77	31.64	2.88	868.10
Karnataka	358.79	29.03	-329.76	408.42	1.73	-406.70	31.16	17.95	-13.21	-749.66
Kerala	0.00	478.76	478.76	0.00	83.03	83.03	1.17	62.04	60.87	622.65
Tamilnadu	0.00	165.28	165.28	0.00	160.45	160.45	45.86	37.19	-8.67	317.07
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	19.64	1.28	-18.36	-18.36
West Bengal	127.06	356.94	229.88	135.98	5.29	-130.70	51.04	21.56	-29.49	69.69
Orissa	324.84	12.05	-312.79	27.41	0.00	-27.41	29.50	21.45	-8.05	-348.25
Bihar	0.00	180.79	180.79	0.00	0.00	0.00	37.37	33.21	-4.16	176.63
Jharkhand	8.60	106.33	97.73	0.00	0.00	0.00	19.41	63.43	44.02	141.75
Sikkim	13.59	0.00	-13.59	33.72	0.00	-33.72	56.28	84.35	28.07	-19.23
DVC	214.95	70.05	-144.90	18.80	0.00	-18.80	9.24	2.94	-6.30	-170.00
Arunachal Pradesh	0.00	0.00	0.00	0.00	2.27	2.27	9.49	5.50	-3.99	-1.72
Assam	0.00	96.66	96.66	14.40	5.92	-8.48	53.36	18.80	-34.56	53.62
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	10.59	2.27	-8.32	-8.32
Meghalaya	3.73	3.42	-0.31	11.69	6.68	-5.01	9.19	8.62	-0.57	-5.89
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	3.60	2.96	-0.64	-0.64
Nagaland	0.00	0.00	0.00	0.33	2.43	2.10	4.31	2.36	-1.95	0.15
Tripura	0.00	14.88	14.88	5.01	0.00	-5.01	14.78	3.11	-11.67	-1.80
Goa	0.00	0.00	0.00	0.00	0.00	0.00	7.56	21.48	13.91	13.91
NHPC Stations	0.00	0.00	0.00	4.61	0.00	-4.61	58.04	60.09	2.04	-2.57
NJPC	0.00	0.00	0.00	0.00	0.00	0.00	12.08	16.90	4.81	4.81
AD HYDRO	27.65	0.00	-27.65	51.74	0.00	-51.74	7.82	5.95	-1.87	-81.26
Karcham Wangtoo	260.53	0.00	-260.53	344.90	0.00	-344.90	9.54	18.42	8.88	-596.55
SHREE CEMENT	168.41	0.00	-168.41	4.74	0.00	-4.74	3.37	3.38	0.01	-173.14
LANCO BUDHIL	0.00	0.00	0.00	29.08	0.00	-29.08	0.00	0.00	0.00	-29.08
JINDAL POWER	333.89	0.00	-333.89	110.85	0.00	-110.85	8.99	2.37	-6.61	-451.35
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	1.21	14.58	13.36	13.36
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	2.74	1.34	-1.40	-1.40
ACBIL	16.22	0.00	-16.22	23.96	0.00	-23.96	1.32	10.76	9.44	-30.73
BALCO	0.00	0.00	0.00	0.17	0.00	-0.17	0.27	6.07	5.81	5.64
RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	0.94	21.32	20.38	20.38
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	6.71	28.69	21.98	21.98

DCPP	0.00	0.00	0.00	53.42	0.00	-53.42	4.09	2.51	-1.58	-55.00
EMCO	0.00	0.00	0.00	15.10	0.00	-15.10	0.00	0.00	0.00	-15.10
SIMHAPURI	5.40	0.00	-5.40	7.08	0.00	-7.08	0.74	0.24	-0.51	-12.98
Meenakshi	0.00	0.99	0.99	5.43	0.00	-5.43	0.00	0.00	0.00	-4.44
STERLITE	860.84	0.00	-860.84	25.36	0.00	-25.36	0.93	119.98	119.05	-767.15
Maithon Power Ltd	54.37	0.00	-54.37	40.34	0.00	-40.34	5.85	8.67	2.82	-91.88
CHUZACHEN	0.00	0.00	0.00	25.08	0.00	-25.08	0.00	0.00	0.00	-25.08
NEEPCO Stations	0.00	0.00	0.00	21.42	0.00	-21.42	7.66	2.39	-5.27	-26.69
RANGANADI	0.00	0.00	0.00	1.08	0.00	-1.08	0.00	0.00	0.00	-1.08
Source: NLDC										
* in case of a state, the entities which are "selling" also include generators connected to state grid and the entities which are "buying" also include open access consumers.										
** (-) indicates sale and (+) indicates purchase,										
*** Total net includes net of transactions through bilateral, power exchange and UI										

Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTED THROUGH POWER EXCHANGES, MAY 2013					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	862	18543	1137	34425
B	Volume of Sell Bid	2113	1280605	2720	812485
C	Ratio of Buy Bid to Sell Bid Volume	0.41	0.01	0.42	0.04
D	Market Clearing Volume (MWh)	669	18543	1034	34425
E	Market Clearing Price (₹/MWh)	11490	1500	10990	1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

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