

Monthly Report on Short-term Transactions of Electricity in India

December, 2013



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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
DCPP	Donga Mahua Captive Power Plant
DOYANG HEP	Doyang Hydro electric power project
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR STEEL	Essar Steel Ltd
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
LANKO_AMK	Lanco Amarkantak Power Private Limited
LANKO_KONDAPALLY	Lanco Kondapalli Power Limited
Meenakshi	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO Stations	North Eastern Electric Power Corporation Limited. 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 HEP	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
SIMHAPURI	Simhapuri Energy Private Limited
SR Grid	Southern Regional Grid
STERLITE	Sterlite Energy Limited
UI	Unscheduled Interchange
UT	Union Territory
VANDANA VIDYUT	Vandana Vidyut Ltd

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 December, 2013 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of December 2013, total electricity generation excluding generation from renewable and captive power plants in India was 82235.38 MUs (Table-1).

Of the total electricity generation, 8706.69 MUs (10.59%) were transacted through short-term, comprising of 4374.16 MUs (5.32%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2543.14 MUs (3.09%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1789.39 MUs (2.18%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 50.24% (30.52% through traders and term-ahead contracts on Power Exchanges and 19.72% directly between distribution companies) followed by 29.21% through day ahead collective transactions on Power Exchanges and 20.55% 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 41 trading licensees as on 31.12.2013, of which only 20 have engaged in trading during December 2013. Top 5 trading licensees had a share of 66.04% 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 0.1458 for the month of December 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 2409.42 MUs and 133.72 MUs respectively. The volume of total Buy bids and Sale bids was 3800.33 MUs and 3812.33 MUs respectively in IEX and 240.97 MUs and 280.70 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 (0.997 times) and PXIL (0.86 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 15.34 MUs and 17.76 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 ₹4.31/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 ₹4.35/kWh, ₹4.22/kWh and ₹3.76/kWh respectively. Minimum and Maximum sale prices were ₹2.64/kWh and ₹6.97/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 ₹0.0004/kWh, ₹20.00/kWh and ₹3.16/kWh respectively in IEX and ₹0.50/kWh, ₹5.50/kWh and ₹3.05/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹3.69/kWh and ₹3.79/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 ₹2.09/kWh in the NEW Grid and ₹1.81/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 ₹8.49/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 Entity¹-Wise)

Of the total bilateral transactions, top 5 regional entities sold 56.22% of the volume, and these were Haryana, Delhi, West Bengal, Punjab and Karnataka. Top 5 regional entities purchased 67.49% of the volume, and these were Rajasthan, Madhya Pradesh, Andhra Pradesh, Jammu & Kashmir and Himachal Pradesh (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 56.95% of the volume, and these were Gujarat, Delhi, Orissa, Rajasthan and Karnataka. Top 5 regional entities purchased 64.86% of the volume, and these were Gujarat, Andhra Pradesh, Rajasthan, Essar Steel and Punjab (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 51.50% of the volume, and these were Uttar Pradesh, Rajasthan, Tamilnadu, Maharashtra and Gujarat. Top 5 regional entities overdrew 35.45% of the volume, and these were West Bengal, Haryana, Jammu & Kashmir, Punjab and Maharashtra (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 Delhi, Haryana, Karnataka, Jindal Power and Gujarat. Top 5 electricity purchasing regional entities were Andhra Pradesh, Rajasthan, Madhya Pradesh, Jammu & Kashmir and Uttarakhand.

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: Congestion² on Inter-state Transmission Corridor for Day-Ahead Market on Power Exchanges

Power Exchanges use a price discovery mechanism in which the aggregate demand and supply are matched to arrive at an unconstrained market price and volume. This step assumes that there is no congestion in the inter-state transmission system between different regions. However, in reality, the system operator, NLDC in coordination with RLDCs, limits the flow due to congestion in the inter-state transmission system. In such a situation, Power Exchanges adopt a mechanism called “Market Splitting”³.

In the month of December 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 15.98% and 17.12% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 97.98% 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

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.

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 December 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 6893 and 989 respectively and the market clearing price of these RECs was ₹9300/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 250722 and 153140 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 0.09 and 0.07 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.09 and 0.10 in IEX and PXIL respectively.

VI: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 10.59%.
- Of the total short-term transactions of electricity, 50.24% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 29.21% through Power Exchanges and 20.55% through UI.
- Top 5 trading licensees had a share of 66.04% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1458, indicating non-concentration of market power.
- The price of electricity transacted through trading licensees (₹4.31/kWh) was higher when compared with the price of electricity transacted through IEX (₹3.16/kWh) and PXIL (₹3.05/kWh) respectively.
- The price of electricity transacted through UI was ₹2.09/kWh in the NEW Grid and ₹1.81/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: 0.997) and PXIL (1: 0.86) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Delhi, Haryana, Karnataka, Jindal Power and Gujarat. Top 5 electricity purchasing regional entities were Andhra Pradesh, Rajasthan, Madhya Pradesh, Jammu & Kashmir and Uttarakhand.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 15.98% and 17.12% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 97.98% in PXIL.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 6893 and 989 respectively and the market clearing price of these RECs was ₹9300/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 250722 and 153140 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), DECEMBER 2013				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	4374.16	50.24%	5.32%
	(i) Through Traders and PXs	2657.59	30.52%	3.23%
	(ii) Direct	1716.57	19.72%	2.09%
2	Through Power Exchanges	2543.14	29.21%	3.09%
	(i) IEX	2409.42	27.67%	2.93%
	(ii) PXIL	133.72	1.54%	0.16%
3	Through UI	1789.39	20.55%	2.18%
	Total	8706.69	100.00%	10.59%
	Total Generation	82235.38	—	—

Source: NLDC

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

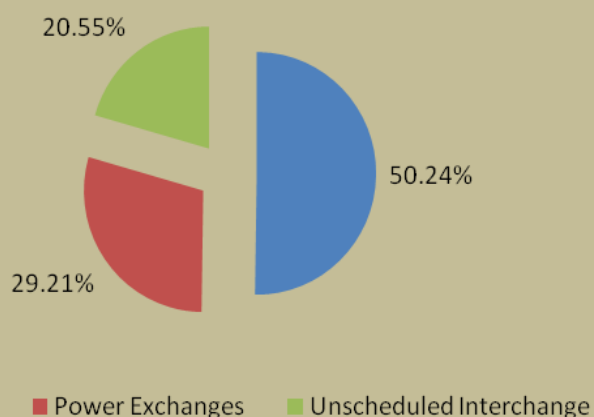
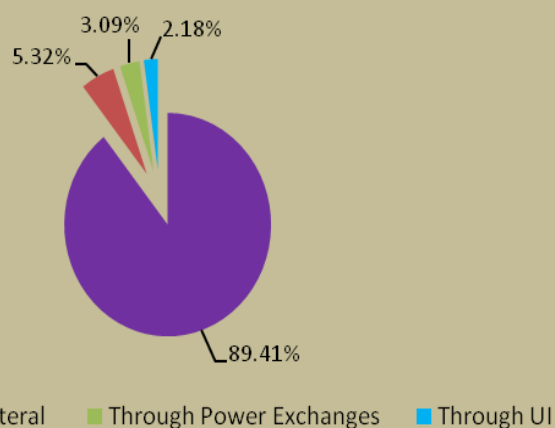


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, December 2013



**Figure-3: Volume of Short-term Transactions of Electricity,
December 2013 (Day-wise)**

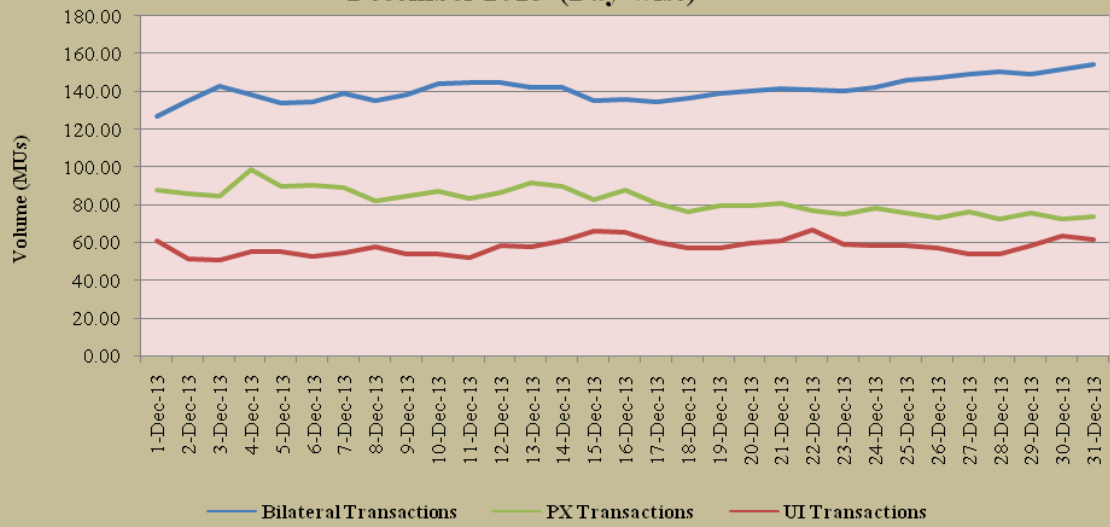


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, DECEMBER 2013			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	31.30%	0.0980
2	JSW Power Trading Company Ltd	11.52%	0.0133
3	Adani Enterprises Ltd.	8.09%	0.0065
4	Shree Cement Ltd.	7.74%	0.0060
5	Reliance Energy Trading (P) Ltd	7.40%	0.0055
6	Tata Power Trading Company (P) Ltd.	7.39%	0.0055
7	Mittal Processors (P) Ltd.	6.92%	0.0048
8	GMR Energy Trading Ltd.	5.13%	0.0026
9	NTPC Vidyut Vyapar Nigam Ltd.	4.39%	0.0019
10	Knowledge Infrastructure Systems (P) Ltd	2.54%	0.0006
11	Manikaran Power Ltd.	2.12%	0.0004
12	Jaiprakash Associates Ltd.	1.72%	0.0003
13	RPG Power Trading Company Ltd.	1.53%	0.0002
14	Instinct Infra & Power Ltd.	0.90%	0.0001
15	National Energy Trading & Services Ltd.	0.42%	0.0000
16	Arunachal Pradesh Power Corporation (P) ltd	0.37%	0.0000
17	Pune Power Development (P) Ltd.	0.19%	0.0000
18	Customized Energy Solutions India (P) Ltd.	0.16%	0.0000
19	Indrajit Power Technology (P) Ltd.	0.15%	0.0000
20	Essar Electric Power Development Corp. Ltd.	0.03%	0.0000
TOTAL		100.00%	0.1458
Top 5 trading licensees		66.04%	
<i>Note 1: Volume of electricity transacted by the trading licensees includes bilateral transactions (inter-state & intra-state) and the transactions undertaken through power exchanges.</i>			
<i>Note 2: Volume of electricity transacted by Global Energy Ltd is not included.</i>			
<i>Source: Information submitted by trading licensees</i>			

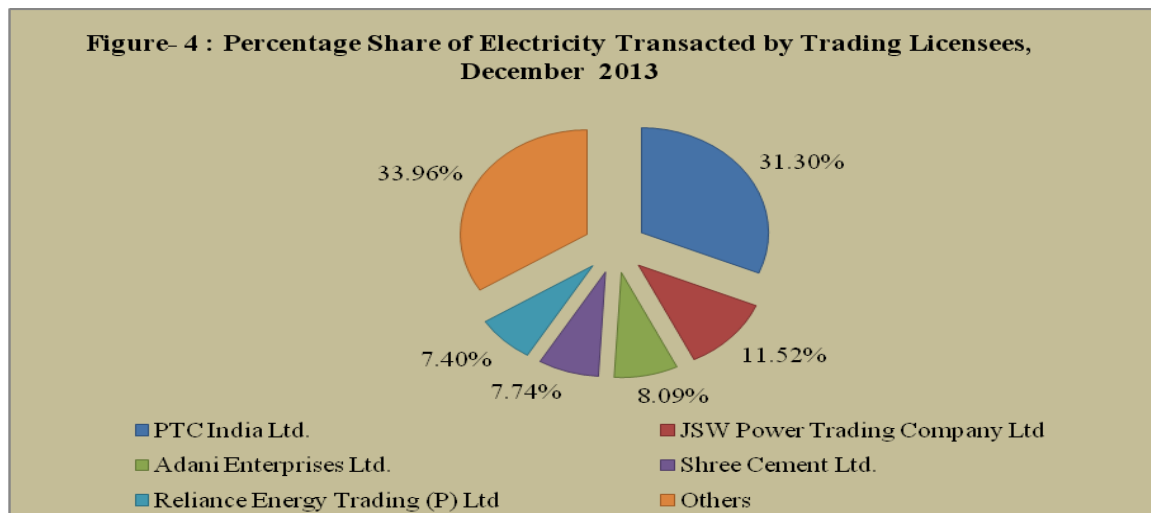


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, DECEMBER 2013		
Sr.No		Sale Price of Traders (₹/kWh)
1	Minimum	2.64
2	Maximum	6.97
3	Weighted Average	4.31

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), DECEMBER 2013		
Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	4.35
2	PEAK	4.22
3	OFF PEAK	3.76

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, DECEMBER 2013			
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	0.0004	0.50
2	Maximum	20.00	5.50
3	Weighted Average	3.16	3.05

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, DECEMBER 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	8.12	3.51
2	Day Ahead Contingency Contracts	7.22	3.88
	Total	15.34	3.69

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, DECEMBER 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	0.15	4.29
2	Day Ahead Contingency Contracts	2.00	4.20
3	Daily Contracts	12.04	3.78
4	Weekly Contracts	3.57	3.59
	Total	17.76	3.79

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, DECEMBER 2013			
Sr.No		Price in NEW Grid (₹/kWh)	Price in SR Grid (₹/kWh)
1	Minimum	0.00	0.00
2	Maximum	9.34	8.49
3	Average	2.09	1.81

Source: NLDC

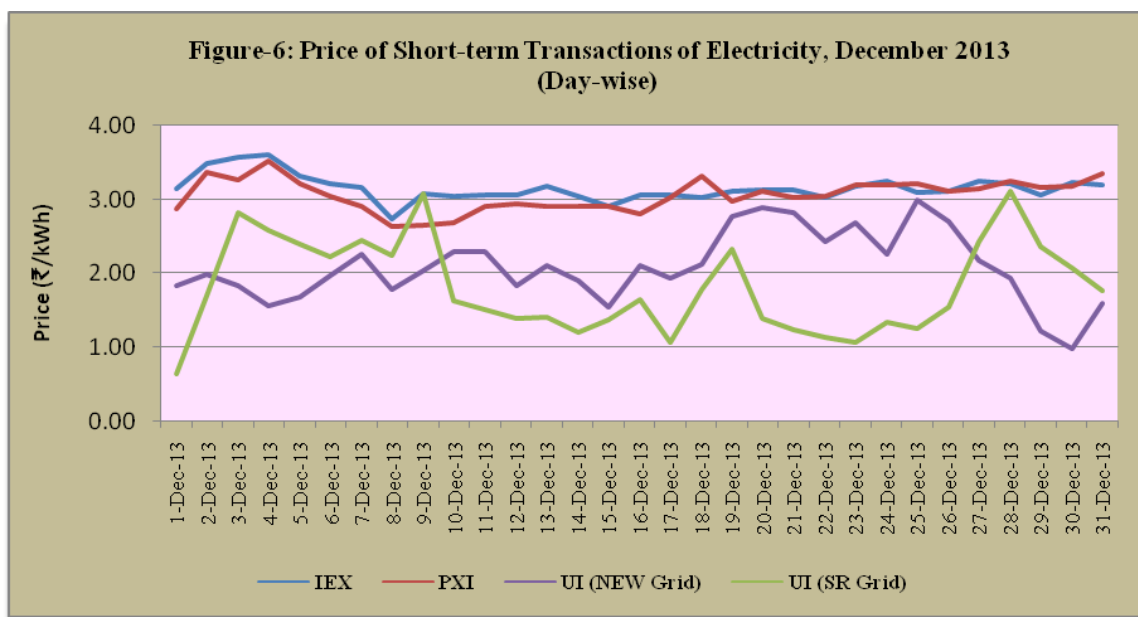
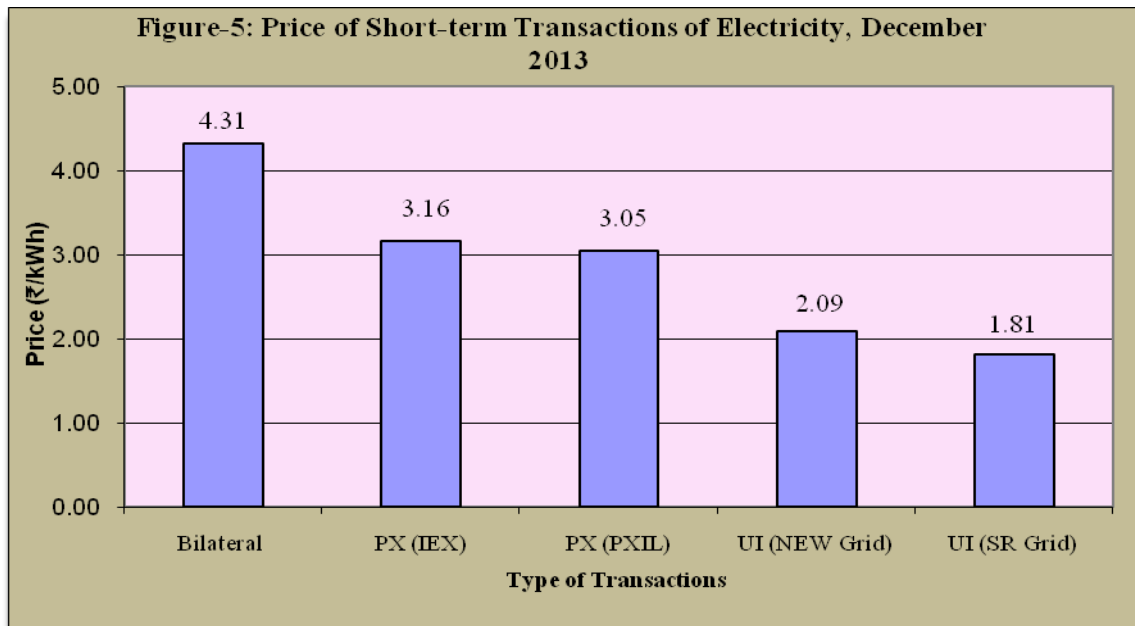


Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Haryana	789.51	18.77%
Delhi	463.04	11.01%
West Bengal	399.15	9.49%
Punjab	369.35	8.78%
Karnataka	343.31	8.16%
Gujarat	315.64	7.51%
JINDAL POWER	315.33	7.50%
Uttar Pradesh	260.36	6.19%
DVC	157.21	3.74%
Chhattisgarh	141.79	3.37%
STERLITE	136.82	3.25%
SIMHAPURI	127.10	3.02%
Rajasthan	75.32	1.79%
SHREE CEMENT	66.45	1.58%
Jharkhand	49.38	1.17%
MAITHON POWER LTD	44.83	1.07%
KARCHAM WANGTOO	37.60	0.89%
Kerala	37.29	0.89%
Orissa	22.51	0.54%
ACBIL	22.14	0.53%
J & K	18.09	0.43%
Tripura	7.44	0.18%
Meghalaya	5.16	0.12%
MP	0.33	0.01%
Himachal Pradesh	0.20	0.00%
Total	4205.34	100.00%
Volume of sale by top 5 States	2364.35	56.22%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Rajasthan	959.33	21.93%
MP	841.15	19.23%
Andhra Pradesh	583.23	13.33%
J & K	288.70	6.60%
Himachal Pradesh	280.58	6.41%
Uttarakhand	256.83	5.87%
Jharkhand	183.99	4.21%
Kerala	120.16	2.75%
Maharashtra	108.85	2.49%
Tamilnadu	97.42	2.23%
West Bengal	91.16	2.08%
Uttar Pradesh	87.91	2.01%
DVC	83.11	1.90%
Delhi	69.13	1.58%
Dadra & Nagar Haveli	66.96	1.53%
Gujarat	63.23	1.45%
Meghalaya	42.70	0.98%
Bihar	40.85	0.93%
Orissa	32.45	0.74%
Haryana	21.67	0.50%
Assam	19.51	0.45%
Nagaland	9.62	0.22%
Chhattisgarh	8.44	0.19%
Punjab	5.59	0.13%
Karnataka	5.34	0.12%
Tripura	4.97	0.11%
Mizoram	1.30	0.03%
Meenakshi	0.99	0.02%
Total	4375.15	100.00%
Volume of Purchase by top 5 States	2952.98	67.49%

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	617.73	24.30%
Delhi	271.45	10.68%
Orissa	252.62	9.94%
Rajasthan	177.92	7.00%
Karnataka	128.34	5.05%
Haryana	117.06	4.60%
West Bengal	110.28	4.34%
MP	96.08	3.78%
SHREE CEMENT	94.20	3.71%
KARCHAM WANGTOO	90.80	3.57%
Maharashtra	69.57	2.74%
EMCO	64.73	2.55%
Himachal Pradesh	60.06	2.36%
Chhattisgarh	52.71	2.07%
SIMHAPURI	43.74	1.72%
STERLITE	42.69	1.68%
MAITHON POWER LTD	42.28	1.66%
JINDAL POWER	29.07	1.14%
DCPP	28.15	1.11%
NEEPCO Stations	23.30	0.92%
Andhra Pradesh	21.10	0.83%
DVC	17.14	0.67%
CHUZACHEN HEP	15.51	0.61%
AD HYDRO	13.52	0.53%
J & K	10.71	0.42%
BALCO	8.26	0.32%
Uttarakhand	6.80	0.27%
Sikkim	6.19	0.24%
NJPC	5.95	0.23%
Meenakshi	4.60	0.18%
UT Chandigarh	4.04	0.16%
ADHUNIK POWER LTD	3.97	0.16%
RANGANADI HEP	3.83	0.15%
Meghalaya	1.88	0.07%
ACBIL	1.77	0.07%
Assam	1.52	0.06%
Tripura	1.09	0.04%
Punjab	1.04	0.04%
DOYANG HEP	0.67	0.03%
Mizoram	0.13	0.01%
Total	2542.49	100.00%
Volume of sale by top 5 States	1448.07	56.95%

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Gujarat	636.30	25.02%
Andhra Pradesh	297.67	11.70%
Rajasthan	281.69	11.08%
ESSAR STEEL	220.53	8.67%
Punjab	213.22	8.38%
Uttar Pradesh	186.95	7.35%
Haryana	175.90	6.92%
Maharashtra	117.91	4.64%
West Bengal	80.46	3.16%
J & K	47.72	1.88%
Karnataka	41.17	1.62%
Uttarakhand	32.13	1.26%
MP	30.15	1.19%
Daman and Diu	29.83	1.17%
Bihar	23.62	0.93%
Kerala	22.40	0.88%
Tamilnadu	21.77	0.86%
Assam	21.07	0.83%
Chhattisgarh	18.26	0.72%
Delhi	15.12	0.59%
Arunachal Pradesh	7.73	0.30%
Meghalaya	7.00	0.28%
Orissa	6.19	0.24%
Goa	3.61	0.14%
Tripura	2.62	0.10%
Himachal Pradesh	2.03	0.08%
UT Chandigarh	0.09	0.00%
Total	2543.14	100.00%
Volume of purchase by top 5 States	1649.41	64.86%

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Uttar Pradesh	250.72	16.77%
Rajasthan	154.72	10.35%
Tamilnadu	135.44	9.06%
Maharashtra	118.18	7.90%
Gujarat	110.96	7.42%
MP	73.93	4.94%
Chhattisgarh	72.64	4.86%
JINDAL POWER	66.73	4.46%
Delhi	55.44	3.71%
Karnataka	49.19	3.29%
Haryana	46.36	3.10%
NHPC Stations	36.49	2.44%
Jharkhand	29.90	2.00%
Orissa	29.43	1.97%
Punjab	24.07	1.61%
Andhra Pradesh	23.90	1.60%
Goa	18.51	1.24%
Pondicherry	18.06	1.21%
DVC	17.74	1.19%
STERLITE	16.26	1.09%
NJPC	14.68	0.98%
Bihar	14.59	0.98%
Uttarakhand	12.72	0.85%
J & K	12.65	0.85%
Daman and Diu	10.38	0.69%
Himachal Pradesh	9.35	0.63%
NSPCL	8.66	0.58%
ACBIL	6.27	0.42%
NEEPCO Stations	5.81	0.39%
CGPL	5.73	0.38%
West Bengal	5.52	0.37%
Sikkim	4.95	0.33%
SHREE CEMENT	4.77	0.32%
MAITHON POWER LTD	4.25	0.28%
Assam	4.03	0.27%
DCPP	3.22	0.22%
LANCO_AMK	2.92	0.20%
BALCO	2.46	0.16%
UT Chandigarh	2.04	0.14%
KARCHAM WANGTOO	1.91	0.13%
Manipur	1.86	0.12%
Meghalaya	1.35	0.09%
RGPPL(Dabhol)	1.24	0.08%
SIMHAPURI	1.11	0.07%
AD HYDRO	1.10	0.07%
Kerala	0.89	0.06%
Dadra & Nagar Haveli	0.78	0.05%
Tripura	0.45	0.03%
Nagaland	0.42	0.03%
Mizoram	0.26	0.02%
Arunachal Pradesh	0.03	0.00%
LANCO KONDAPALLY	0.01	0.00%
Total	1495.09	100.00%
Volume of Export by top 5 States	770.02	51.50%

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, DECEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
West Bengal	143.46	10.24%
Haryana	117.48	8.39%
J & K	84.94	6.06%
Punjab	76.16	5.44%
Maharashtra	74.56	5.32%
Uttar Pradesh	61.55	4.39%
MP	58.41	4.17%
Kerala	51.61	3.68%
DVC	50.40	3.60%
Andhra Pradesh	48.24	3.44%
Chhattisgarh	46.63	3.33%
Gujarat	44.63	3.19%
Himachal Pradesh	44.35	3.17%
Orissa	44.25	3.16%
Uttarakhand	37.77	2.70%
NHPC Stations	37.64	2.69%
Assam	34.62	2.47%
Bihar	33.19	2.37%
CGPL	30.78	2.20%
Arunachal Pradesh	22.36	1.60%
Rajasthan	21.59	1.54%
Delhi	17.47	1.25%
STERLITE	17.37	1.24%
UT Chandigarh	16.74	1.19%
Jharkhand	16.21	1.16%
Dadra & Nagar Haveli	15.73	1.12%
Meghalaya	13.38	0.96%
Manipur	12.57	0.90%
JINDAL POWER	11.57	0.83%
Karnataka	11.47	0.82%
Tripura	10.10	0.72%
MAITHON POWER LTD	9.96	0.71%
ACBIL	9.84	0.70%
Nagaland	8.94	0.64%
Goa	8.44	0.60%
NJPC	8.23	0.59%
Mizoram	8.00	0.57%
BALCO	6.53	0.47%
DCPP	4.84	0.35%
Tamilnadu	4.76	0.34%
RGPPL(Dabhol)	4.74	0.34%
NEEPCO Stations	4.31	0.31%
SHREE CEMENT	3.89	0.28%
SIMHAPURI	2.41	0.17%
Sikkim	1.83	0.13%
LANKO_AMK	1.83	0.13%
KARCHAM WANGTOO	1.79	0.13%
Daman and Diu	1.27	0.09%
NSPCL	1.21	0.09%
AD HYDRO	0.57	0.04%
Pondicherry	0.34	0.02%
LANKO KONDAPALLY	0.03	0.00%
Total	1400.99	100.00%
Volume of Import by top 5 States	496.60	35.45%

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), DECEMBER 2013		
Sr.No.	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	Andhra Pradesh	884.13
2	Rajasthan	854.65
3	MP	759.37
4	J & K	379.90
5	Uttarakhand	307.20
6	Himachal Pradesh	257.35
7	ESSAR STEEL	220.53
8	Kerala	156.00
9	Jharkhand	120.92
10	Maharashtra	113.57
11	Bihar	83.07
12	Dadra & Nagar Haveli	81.91
13	Assam	69.66
14	Meghalaya	54.68
15	Arunachal Pradesh	30.06
16	CGPL	25.05
17	Daman and Diu	20.72
18	Nagaland	18.14
19	UT Chandigarh	10.75
20	Manipur	10.71
21	Mizoram	8.91
22	Tripura	8.72
23	RGPPPL(Dabhol)	3.50
24	NHPC Stations	1.15
25	LANKO_KONDAPALLY	0.01
26	DOYANG HEP	-0.67
27	LANKO_AMK	-1.09
28	Meenakshi	-3.61
29	RANGANADI HEP	-3.83
30	ADHUNIK POWER LTD	-3.97
31	BALCO	-4.19
32	Goa	-6.46
33	NSPCL	-7.45
34	Sikkim	-9.31
35	Tamilnadu	-11.50
36	NJPC	-12.40
37	AD HYDRO	-14.04
38	CHUZACHEN HEP	-15.51
39	Pondicherry	-17.72
40	ACBIL	-20.35
41	NEEPCO Stations	-24.80
42	DCPP	-26.53
43	DVC	-58.59
44	EMCO	-64.73
45	MAITHON POWER LTD	-81.40
46	Punjab	-99.49
47	KARCHAM WANGTOO	-128.51
48	SHREE CEMENT	-161.53
49	SIMHAPURI	-169.54
50	Uttar Pradesh	-174.67
51	STERLITE	-178.40
52	Chhattisgarh	-193.81
53	West Bengal	-199.87
54	Orissa	-221.67
55	Gujarat	-300.18
56	JINDAL POWER	-399.56
57	Karnataka	-462.85
58	Haryana	-637.88
59	Delhi	-688.21
* 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, DECEMBER 2013			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	2867.56	161.34
B	Actual Cleared Volume and hence scheduled (MUs)	2409.42	133.72
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	458.14	27.61
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	15.98%	17.12%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	100.00%	97.98%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25.00%	24.83%
	6.00 - 12.00 hours	25.00%	25.51%
	12.00 - 18.00 hours	25.00%	24.93%
	18.00 - 24.00 hours	25.00%	24.73%
* 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), DECEMBER 2013 (DAY-WISE)						Total Electricity Generation (MU) as given at CEA Website*
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Unscheduled Interchange (Over Draw+Under Generation)	
	Through Traders and PXs**	Direct	IEX	PXI		
1-Dec-13	74.28	52.54	82.70	4.92	61.24	2599.16
2-Dec-13	80.96	54.29	81.18	4.54	50.92	2626.73
3-Dec-13	87.69	55.10	79.45	4.74	50.37	2606.12
4-Dec-13	83.80	54.68	93.68	5.00	55.13	2639.75
5-Dec-13	79.32	54.64	85.51	3.92	55.24	2654.92
6-Dec-13	79.77	54.77	85.63	4.68	52.48	2689.18
7-Dec-13	84.17	54.59	84.97	4.28	54.09	2707.23
8-Dec-13	81.75	53.47	77.94	3.75	57.93	2629.99
9-Dec-13	84.60	53.71	80.26	4.34	53.85	2669.16
10-Dec-13	87.98	56.29	82.74	4.46	53.84	2704.52
11-Dec-13	88.70	56.22	78.43	5.00	51.83	2698.83
12-Dec-13	88.48	56.21	81.76	4.87	58.33	2670.16
13-Dec-13	87.49	54.87	85.96	5.57	57.92	2679.92
14-Dec-13	86.94	55.16	84.13	5.39	61.05	2662.25
15-Dec-13	81.92	53.45	77.60	5.01	65.99	2608.97
16-Dec-13	80.23	55.68	82.35	5.48	65.79	2637.13
17-Dec-13	78.96	55.40	77.03	3.71	60.26	2647.00
18-Dec-13	81.19	55.22	72.21	3.82	57.04	2656.92
19-Dec-13	83.22	55.77	75.93	3.34	56.80	2653.74
20-Dec-13	84.00	55.99	75.05	4.06	59.70	2669.50
21-Dec-13	84.83	56.36	76.90	3.91	60.72	2670.81
22-Dec-13	85.03	55.67	72.69	4.26	66.88	2560.39
23-Dec-13	85.62	54.25	70.95	3.67	58.88	2614.36
24-Dec-13	85.20	56.80	73.94	3.89	58.27	2612.56
25-Dec-13	88.83	57.38	71.70	3.93	57.98	2666.34
26-Dec-13	90.30	56.71	68.52	4.18	56.73	2695.39
27-Dec-13	92.00	56.86	72.54	3.37	53.60	2670.90
28-Dec-13	93.66	56.64	68.48	3.80	53.66	2659.00
29-Dec-13	93.73	55.22	70.98	4.23	58.08	2646.21
30-Dec-13	95.09	56.30	68.61	3.76	63.27	2700.13
31-Dec-13	97.87	56.31	69.63	3.85	61.53	2628.11
Total	2657.59	1716.57	2409.42	133.72	1789.39	82235.38
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), DECEMBER 2013 (DAY-WISE)												
Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Draw/Over Drawl from the Grid (UI)					
Date	Minimum ACP	Maximum ACP	Weighted Average Price*	Minimum ACP	Maximum ACP	Weighted Average Price*	NEW Grid			SR Grid		
							Minimum Price	Maximum Price	Average Price**	Minimum Price	Maximum Price	Average Price**
1-Dec-13	1.37	7.00	3.15	1.39	4.00	2.87	0.00	4.78	1.84	0.00	3.36	0.65
2-Dec-13	1.00	9.01	3.49	2.25	4.00	3.36	0.00	5.06	2.00	0.00	7.09	1.69
3-Dec-13	0.50	9.01	3.57	0.50	4.00	3.27	0.00	3.93	1.83	0.00	5.91	2.82
4-Dec-13	1.39	9.50	3.61	2.05	4.37	3.52	0.00	4.22	1.56	0.00	5.63	2.58
5-Dec-13	0.50	5.24	3.32	0.50	4.50	3.22	0.00	3.93	1.69	0.00	5.91	2.39
6-Dec-13	0.50	20.00	3.22	0.50	4.52	3.04	0.00	4.78	1.97	0.00	5.06	2.23
7-Dec-13	0.50	4.20	3.17	0.50	4.45	2.90	0.00	5.34	2.26	0.00	5.34	2.45
8-Dec-13	1.20	4.10	2.74	0.50	3.50	2.63	0.00	7.09	1.79	0.00	5.06	2.24
9-Dec-13	1.25	4.55	3.08	0.50	4.50	2.64	0.00	7.37	2.03	0.00	8.49	3.07
10-Dec-13	1.29	4.25	3.05	0.50	4.25	2.68	0.00	5.06	2.30	0.00	5.06	1.64
11-Dec-13	1.26	18.00	3.07	2.00	4.52	2.90	0.00	7.09	2.30	0.00	3.36	1.51
12-Dec-13	1.26	19.50	3.06	2.00	4.55	2.93	0.00	5.63	1.83	0.00	4.50	1.39
13-Dec-13	0.00	4.30	3.18	2.00	4.00	2.90	0.00	7.09	2.12	0.00	4.78	1.40
14-Dec-13	1.25	4.08	3.05	1.99	4.15	2.90	0.00	5.06	1.91	0.00	4.22	1.21
15-Dec-13	1.00	4.00	2.92	1.99	4.10	2.91	0.00	4.22	1.56	0.00	3.36	1.38
16-Dec-13	1.36	20.00	3.06	1.98	4.66	2.80	0.00	5.91	2.11	0.00	5.91	1.65
17-Dec-13	0.05	4.25	3.07	1.98	4.08	3.03	0.00	4.78	1.94	0.00	4.22	1.08
18-Dec-13	1.35	4.51	3.03	2.00	5.00	3.31	0.00	5.91	2.13	0.00	5.34	1.79
19-Dec-13	1.25	5.01	3.11	2.00	3.90	2.97	0.00	8.21	2.78	0.00	7.09	2.34
20-Dec-13	1.25	5.00	3.13	2.00	3.96	3.11	0.00	7.09	2.89	0.00	4.50	1.39
21-Dec-13	0.40	5.00	3.14	1.98	3.95	3.03	0.33	7.37	2.82	0.00	4.22	1.24
22-Dec-13	0.30	5.00	3.04	1.90	3.75	3.04	0.00	7.93	2.43	0.00	3.65	1.14
23-Dec-13	0.25	5.01	3.18	1.90	5.50	3.20	0.00	8.21	2.68	0.00	3.65	1.07
24-Dec-13	0.15	5.01	3.26	1.80	4.39	3.19	0.00	5.91	2.26	0.00	4.50	1.35
25-Dec-13	0.20	5.01	3.10	1.87	4.34	3.21	0.17	9.34	2.99	0.00	4.22	1.27
26-Dec-13	1.20	5.01	3.12	1.90	3.90	3.11	0.00	8.21	2.70	0.00	5.34	1.54
27-Dec-13	1.20	5.01	3.25	1.90	4.46	3.14	0.00	7.37	2.19	0.00	5.91	2.44
28-Dec-13	1.30	5.25	3.21	1.74	4.76	3.24	0.00	4.50	1.94	0.00	5.91	3.11
29-Dec-13	1.25	5.20	3.07	1.74	4.24	3.16	0.00	4.50	1.22	0.00	5.34	2.36
30-Dec-13	1.20	5.25	3.24	1.49	4.64	3.17	0.00	4.50	0.99	0.00	5.06	2.07
31-Dec-13	1.52	5.25	3.19	1.50	4.92	3.35	0.00	5.06	1.60	0.00	5.06	1.76
	0.00#	20.00#	3.16	0.50#	5.50#	3.05	0.00#	9.34#	2.09	0.00#	8.49#	1.81
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), DECEMBER 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	369.35	5.59	-363.76	1.04	213.22	212.18	24.07	76.16	52.09	-99.49
Haryana	789.51	21.67	-767.84	117.06	175.90	58.84	46.36	117.48	71.12	-637.88
Rajasthan	75.32	959.33	884.01	177.92	281.69	103.77	154.72	21.59	-133.13	854.65
Delhi	463.04	69.13	-393.91	271.45	15.12	-256.33	55.44	17.47	-37.97	-688.21
Uttar Pradesh	260.36	87.91	-172.46	0.00	186.95	186.95	250.72	61.55	-189.17	-174.67
Uttarakhand	0.00	256.83	256.83	6.80	32.13	25.33	12.72	37.77	25.05	307.20
Himachal Pradesh	0.20	280.58	280.38	60.06	2.03	-58.03	9.35	44.35	35.00	257.35
J & K	18.09	288.70	270.60	10.71	47.72	37.01	12.65	84.94	72.29	379.90
UT Chandigarh	0.00	0.00	0.00	4.04	0.09	-3.95	2.04	16.74	14.70	10.75
MP	0.33	841.15	840.82	96.08	30.15	-65.94	73.93	58.41	-15.51	759.37
Maharashtra	0.00	108.85	108.85	69.57	117.91	48.35	118.18	74.56	-43.62	113.57
Gujarat	315.64	63.23	-252.42	617.73	636.30	18.57	110.96	44.63	-66.33	-300.18
Chhattisgarh	141.79	8.44	-133.35	52.71	18.26	-34.44	72.64	46.63	-26.02	-193.81
Daman and Diu	0.00	0.00	0.00	0.00	29.83	29.83	10.38	1.27	-9.11	20.72
Dadra & Nagar Haveli	0.00	66.96	66.96	0.00	0.00	0.00	0.78	15.73	14.95	81.91
Andhra Pradesh	0.00	583.23	583.23	21.10	297.67	276.57	23.90	48.24	24.33	884.13
Karnataka	343.31	5.34	-337.97	128.34	41.17	-87.17	49.19	11.47	-37.72	-462.85
Kerala	37.29	120.16	82.87	0.00	22.40	22.40	0.89	51.61	50.72	156.00
Tamilnadu	0.00	97.42	97.42	0.00	21.77	21.77	135.44	4.76	-130.68	-11.50
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	18.06	0.34	-17.72	-17.72
West Bengal	399.15	91.16	-307.99	110.28	80.46	-29.82	5.52	143.46	137.94	-199.87
Orissa	22.51	32.45	9.94	252.62	6.19	-246.43	29.43	44.25	14.82	-221.67
Bihar	0.00	40.85	40.85	0.00	23.62	23.62	14.59	33.19	18.60	83.07
Jharkhand	49.38	183.99	134.61	0.00	0.00	0.00	29.90	16.21	-13.69	120.92
Sikkim	0.00	0.00	0.00	6.19	0.00	-6.19	4.95	1.83	-3.12	-9.31
DVC	157.21	83.11	-74.11	17.14	0.00	-17.14	17.74	50.40	32.66	-58.59
Arunachal Pradesh	0.00	0.00	0.00	0.00	7.73	7.73	0.03	22.36	22.33	30.06
Assam	0.00	19.51	19.51	1.52	21.07	19.56	4.03	34.62	30.59	69.66
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	1.86	12.57	10.71	10.71
Meghalaya	5.16	42.70	37.54	1.88	7.00	5.12	1.35	13.38	12.03	54.68
Mizoram	0.00	1.30	1.30	0.13	0.00	-0.13	0.26	8.00	7.74	8.91
Nagaland	0.00	9.62	9.62	0.00	0.00	0.00	0.42	8.94	8.52	18.14
Tripura	7.44	4.97	-2.47	1.09	2.62	1.54	0.45	10.10	9.64	8.72
Goa	0.00	0.00	0.00	0.00	3.61	3.61	18.51	8.44	-10.07	-6.46
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	36.49	37.64	1.15	1.15
NJPC	0.00	0.00	0.00	5.95	0.00	-5.95	14.68	8.23	-6.45	-12.40
AD HYDRO	0.00	0.00	0.00	13.52	0.00	-13.52	1.10	0.57	-0.53	-14.04
KARCHAM WANGTOO	37.60	0.00	-37.60	90.80	0.00	-90.80	1.91	1.79	-0.11	-128.51
SHREE CEMENT	66.45	0.00	-66.45	94.20	0.00	-94.20	4.77	3.89	-0.88	-161.53
JINDAL POWER	315.33	0.00	-315.33	29.07	0.00	-29.07	66.73	11.57	-55.16	-399.56
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	2.92	1.83	-1.09	-1.09
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	8.66	1.21	-7.45	-7.45
ACBIL	22.14	0.00	-22.14	1.77	0.00	-1.77	6.27	9.84	3.57	-20.35
BALCO	0.00	0.00	0.00	8.26	0.00	-8.26	2.46	6.53	4.07	-4.19
RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	1.24	4.74	3.50	3.50
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	5.73	30.78	25.05	25.05
DCPP	0.00	0.00	0.00	28.15	0.00	-28.15	3.22	4.84	1.62	-26.53
EMCO	0.00	0.00	0.00	64.73	0.00	-64.73	0.00	0.00	0.00	-64.73
VANDANA VIDYUT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESSAR STEEL	0.00	0.00	0.00	0.00	220.53	220.53	0.00	0.00	0.00	220.53

LANKO KONDAPALLY	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.01
SIMHAPURI	127.10	0.00	-127.10	43.74	0.00	-43.74	1.11	2.41	1.30	-169.54
Meenakshi	0.00	0.99	0.99	4.60	0.00	-4.60	0.00	0.00	0.00	-3.61
STERLITE	136.82	0.00	-136.82	42.69	0.00	-42.69	16.26	17.37	1.11	-178.40
MAITHON POWER LTD	44.83	0.00	-44.83	42.28	0.00	-42.28	4.25	9.96	5.71	-81.40
ADHUNIK POWER LTD	0.00	0.00	0.00	3.97	0.00	-3.97	0.00	0.00	0.00	-3.97
CHUZACHEN HEP	0.00	0.00	0.00	15.51	0.00	-15.51	0.00	0.00	0.00	-15.51
NEEPCO Stations	0.00	0.00	0.00	23.30	0.00	-23.30	5.81	4.31	-1.50	-24.80
RANGANADI HEP	0.00	0.00	0.00	3.83	0.00	-3.83	0.00	0.00	0.00	-3.83
DOYANG HEP	0.00	0.00	0.00	0.67	0.00	-0.67	0.00	0.00	0.00	-0.67
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) TRANSACTIONED THROUGH POWER EXCHANGES, DECEMBER 2013					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	6893	250722	989	153140
B	Volume of Sell Bid	77180	2712444	13240	1603154
C	Ratio of Buy Bid to Sell Bid Volume	0.09	0.09	0.07	0.10
D	Market Clearing Volume (MWh)	6893	250722	989	153140
E	Market Clearing Price (₹/MWh)	9300	1500	9300	1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

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