



Monthly Report on Short-term Transactions of Electricity in India

November, 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 Aluminium 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
KSK Mahanadi	KSK Mahanadi Power Project
LANCO BUDHIL	Lanco Budhil Hydro Power Private 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

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 November, 2013 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of November 2013, total electricity generation excluding generation from renewable and captive power plants in India was 77304.55 MUs (Table-1).

Of the total electricity generation, 8561.18 MUs (11.07%) were transacted through short-term, comprising of 4294.01 MUs (5.55%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2653.76 MUs (3.43%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1613.42 MUs (2.09%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 50.16% (24.13% through traders and term-ahead contracts on Power Exchanges and 26.03% directly between distribution companies) followed by 31.00% through day ahead collective transactions on Power Exchanges and 18.85% 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 30.11.2013, of which only 20 have engaged in trading during November 2013. Top 5 trading licensees had a share of 71.71% 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. 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 0.1623 for the month of November 2013, which indicates that there was moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 2480.86 MUs and 172.89 MUs respectively. The volume of total Buy bids and Sale bids was 3659.97 MUs and 4239.04 MUs respectively in IEX and 259.15 MUs and 334.00 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 (0.86 times) and PXIL (0.78 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 55.65 MUs and 9.17 MUs respectively (Table-6 & Table-7).

II: Price of Short-term Transactions of Electricity

(i) *Price of electricity transacted through Traders:* Weighted average sale price has been computed for the electricity transacted through traders and it was ₹3.53/kWh. Weighted average sale price was also computed for the transactions during Round the Clock (RTC), Peak, and Off-Peak periods separately, and the sale prices were ₹3.48/kWh, ₹4.54/kWh and ₹3.84/kWh respectively. Minimum and Maximum sale prices were ₹2.78/kWh and ₹7.80/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 ₹1.10/kWh, ₹20.00/kWh and ₹2.69/kWh respectively in IEX and ₹1.25/kWh, ₹4.25/kWh and ₹2.59/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹2.81/kWh and ₹2.99/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 ₹2.04/kWh in the NEW Grid and ₹2.02/kWh in the SR Grid. Minimum and Maximum UI prices were ₹0.00/kWh and ₹7.93/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 Entity¹-Wise)

Of the total bilateral transactions, top 5 regional entities sold 60.42% of the volume, and these were Haryana, Punjab, Delhi, Gujarat and Karnataka. Top 5 regional entities purchased 72.01% of the volume, and these were Madhya Pradesh, Rajasthan, Andhra Pradesh, Jammu & Kashmir and Himachal Pradesh (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 49.72% of the volume, and these were Gujarat, Delhi, Orissa, Madhya Pradesh and West Bengal. Top 5 regional entities purchased 67.10% of the volume, and these were Gujarat, Maharashtra, Punjab, Rajasthan and Andhra Pradesh (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities under drew 42.04% of the volume, and these were Maharashtra, Rajasthan, Madhya Pradesh, Gujarat and Tamilnadu. Top 5 regional entities overdrew 38.92% of the volume, and these were Uttar Pradesh, Punjab, Haryana, West Bengal and Jammu & Kashmir (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 Haryana, Delhi, Jindal Power, Karnataka and Orissa. Top 5 electricity purchasing regional entities were Madhya Pradesh, Rajasthan, Andhra Pradesh, Maharashtra 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 November 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 16.69% and 18.17% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 96.35% 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 November 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 6983 and 371 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 97743 and 211185 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 0.15 and 0.02 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.04 and 0.15 in IEX and PXIL respectively.

VI: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 11.07%.
- Of the total short-term transactions of electricity, 50.16% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 31.00% through Power Exchanges and 18.85% through UI.
- Top 5 trading licensees had a share of 71.71% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1623, indicating a moderate concentration of market power.
- The price of electricity transacted through trading licensees (₹3.53/kWh) was higher when compared with the price of electricity transacted through IEX (₹2.69/kWh) and PXIL (₹2.59/kWh) respectively.
- The price of electricity transacted through UI was ₹2.04/kWh in the NEW Grid and ₹2.02/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: 0.86) and PXIL (1: 0.78) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Haryana, Delhi, Jindal Power, Karnataka and Orissa. Top 5 electricity purchasing regional entities were Madhya Pradesh, Rajasthan, Andhra Pradesh, Maharashtra and Uttarakhand.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was 16.69% and 18.17% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 100.00% in IEX and 96.35% in PXIL.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 6983 and 371 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 97743 and 211185 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), NOVEMBER 2013				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	4294.01	50.16%	5.55%
	(i) Through Traders and PXs	2065.88	24.13%	2.67%
	(ii) Direct	2228.13	26.03%	2.88%
2	Through Power Exchanges	2653.76	31.00%	3.43%
	(i) IEX	2480.86	28.98%	3.21%
	(ii) PXIL	172.89	2.02%	0.22%
3	Through UI	1613.42	18.85%	2.09%
	Total	8561.18	100.00%	11.07%
	Total Generation	77304.55	–	–

Source: NLDC

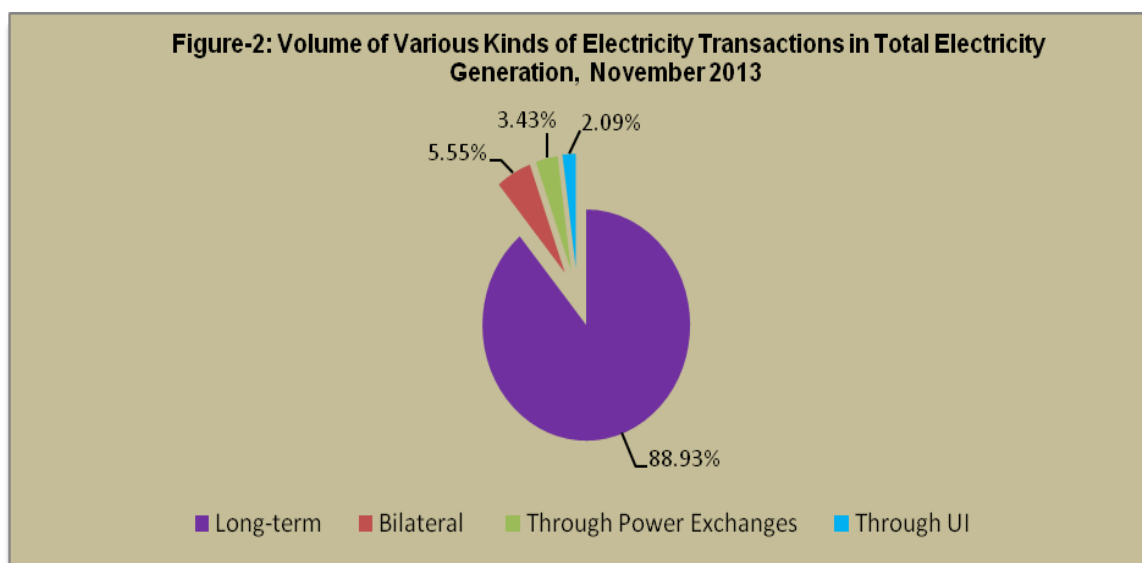
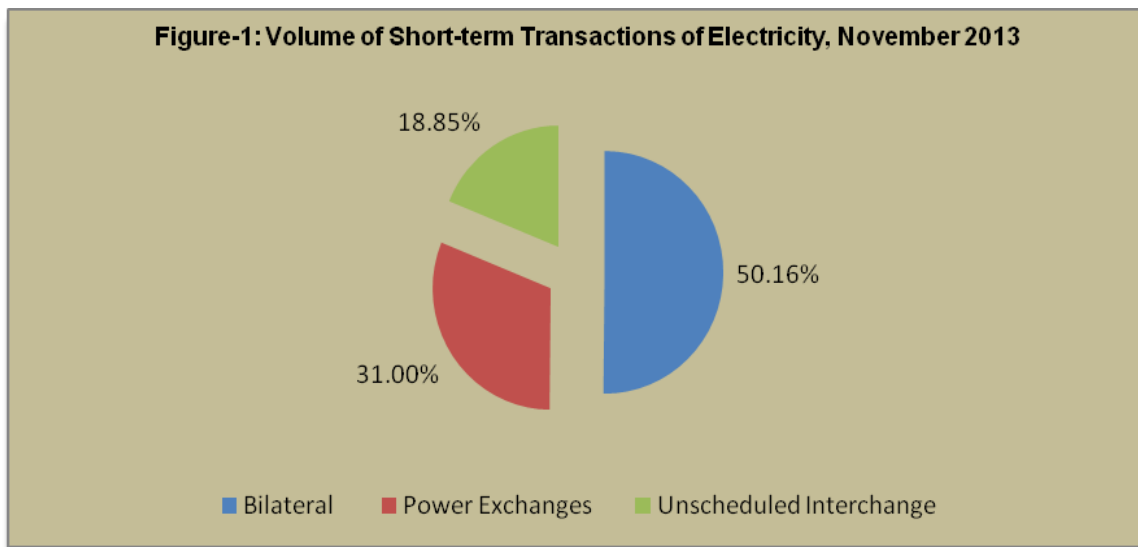


Figure-3: Volume of Short-term Transactions of Electricity, November 2013 (Day-wise)

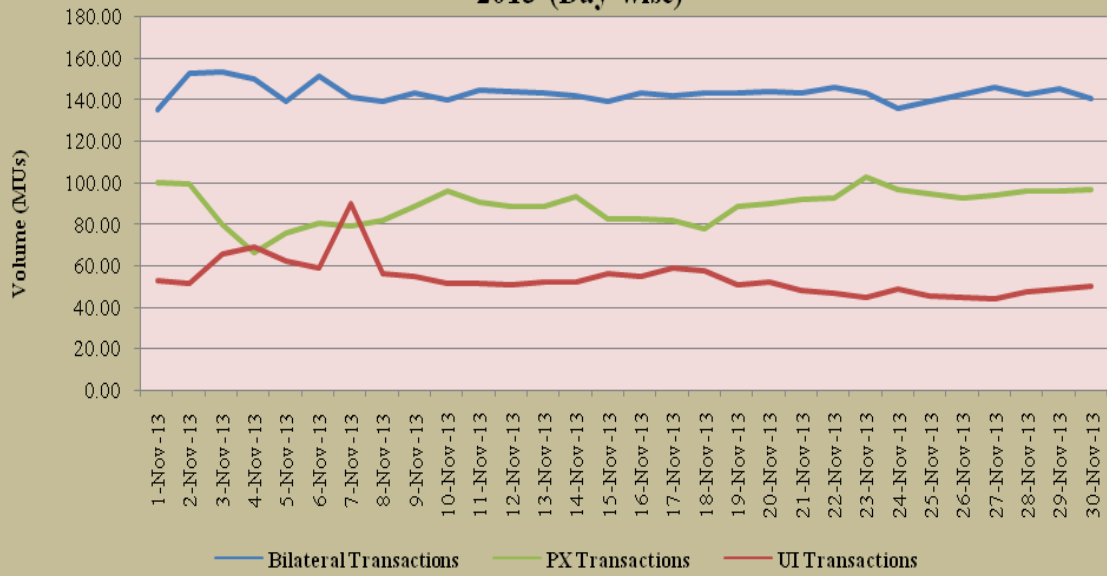


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, NOVEMBER 2013			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	34.15%	0.1166
2	JSW Power Trading Company Ltd	11.03%	0.0122
3	Tata Power Trading Company (P) Ltd.	9.43%	0.0089
4	Reliance Energy Trading (P) Ltd	9.40%	0.0088
5	Adani Enterprises Ltd.	7.71%	0.0059
6	Shree Cement Ltd.	6.43%	0.0041
7	Mittal Processors (P) Ltd.	3.66%	0.0013
8	GMR Energy Trading Ltd.	3.63%	0.0013
9	Jaiprakash Associates Ltd.	2.69%	0.0007
10	Knowledge Infrastructure Systems (P) Ltd	2.64%	0.0007
11	NTPC Vidyut Vyapar Nigam Ltd.	2.44%	0.0006
12	Manikaran Power Ltd.	2.17%	0.0005
13	Instinct Infra & Power Ltd.	1.66%	0.0003
14	RPG Power Trading Company Ltd.	1.34%	0.0002
15	National Energy Trading & Services Ltd.	0.87%	0.0001
16	Arunachal Pradesh Power Corporation (P) ltd	0.24%	0.0000
17	Pune Power Development (P) Ltd.	0.20%	0.0000
18	Indrajit Power Technology (P) Ltd.	0.16%	0.0000
19	Customized Energy Solutions India (P) Ltd.	0.14%	0.0000
20	Essar Electric Power Development Corp. Ltd.	0.03%	0.0000
TOTAL		100.00%	0.1623
Top 5 trading licensees		71.71%	
<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>			

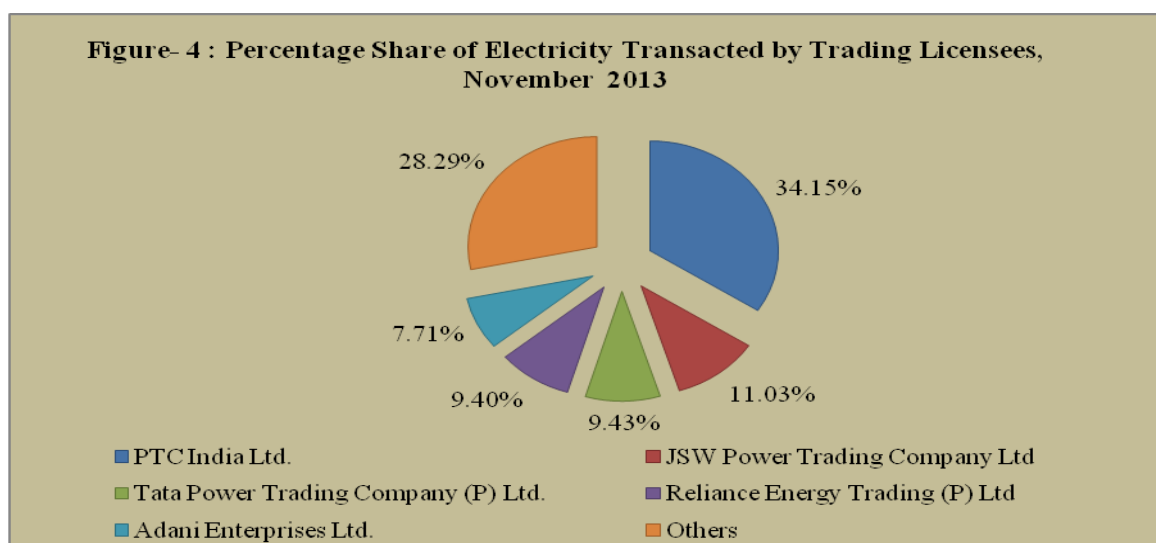


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, NOVEMBER 2013		
Sr.No		Sale Price of Traders (₹/kWh)
1	Minimum	2.78
2	Maximum	7.80
3	Weighted Average	3.53

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), NOVEMBER 2013		
Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	3.48
2	PEAK	4.54
3	OFF PEAK	3.84

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, NOVEMBER 2013			
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	1.10	1.25
2	Maximum	20.00	4.25
3	Weighted Average	2.69	2.59

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, NOVEMBER 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	11.24	3.35
2	Day Ahead Contingency Contracts	2.58	3.94
4	Weekly Contracts	41.83	2.60
	Total	55.65	2.81

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, NOVEMBER 2013			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	5.55	2.86
3	Day Ahead Contingency Contracts	0.68	3.99
2	Weekly Contracts	2.94	3.01
	Total	9.17	2.99

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, NOVEMBER 2013			
Sr.No		Price in NEW Grid (₹/kWh)	Price in SR Grid (₹/kWh)
1	Minimum	0.00	0.00
2	Maximum	7.93	10.80
3	Average	2.04	2.02

Source: NLDC

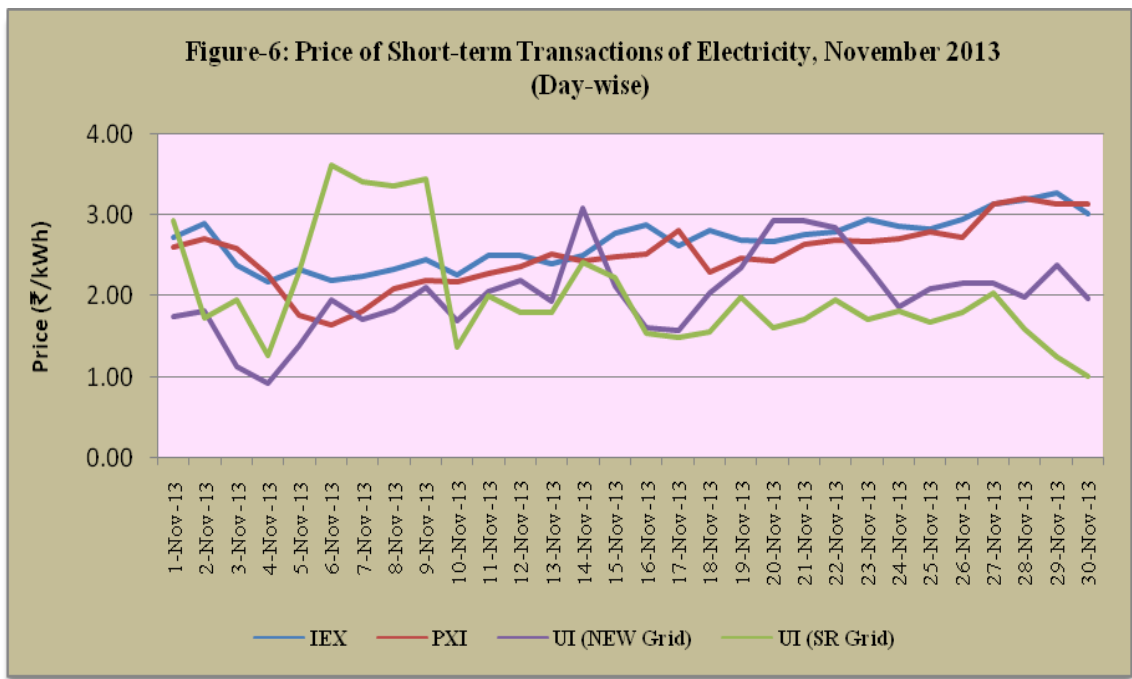
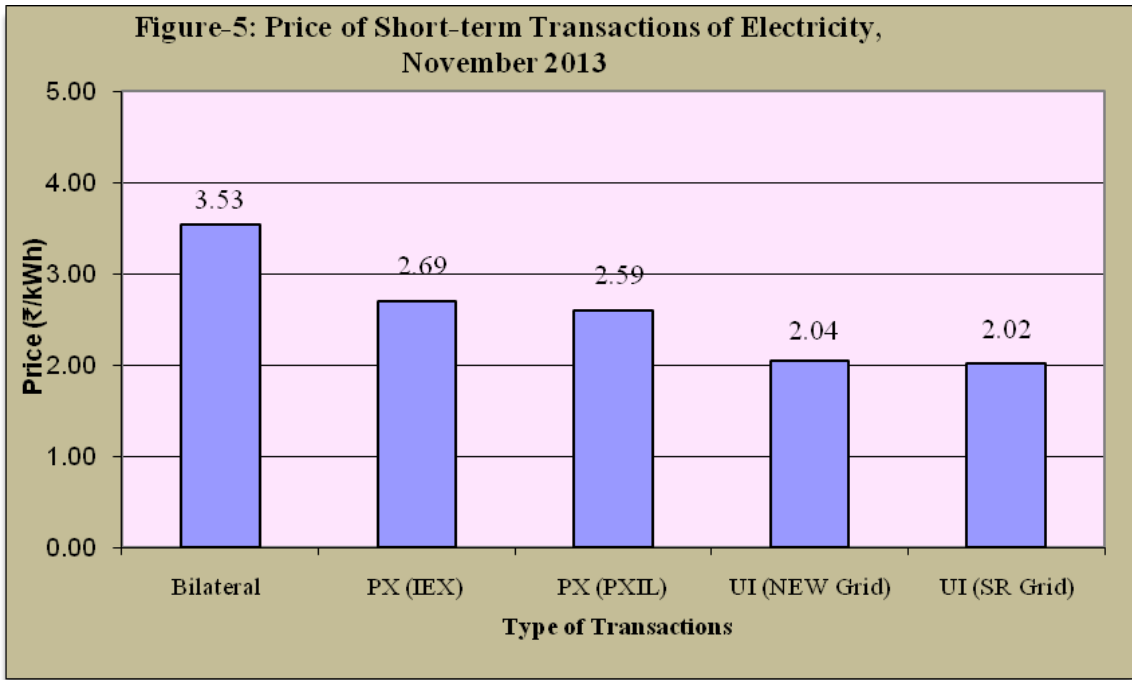


Table-9: VOLUME OF ELECTRICITY SALE THROUGH BILATERAL, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Haryana	895.00	22.73%
Punjab	523.99	13.31%
Delhi	377.54	9.59%
Gujarat	299.54	7.61%
Karnataka	282.66	7.18%
Uttar Pradesh	259.09	6.58%
West Bengal	253.17	6.43%
JINDAL POWER	200.53	5.09%
STERLITE	140.86	3.58%
DVC	138.34	3.51%
SIMHAPURI	105.61	2.68%
MAITHON POWER LTD	81.28	2.06%
Himachal Pradesh	69.73	1.77%
Rajasthan	62.89	1.60%
SHREE CEMENT	60.45	1.54%
Chhattisgarh	43.91	1.12%
KARCHAM WANGTOO	35.26	0.90%
DCPP	24.60	0.62%
J & K	19.92	0.51%
ACBIL	19.56	0.50%
Jharkhand	12.31	0.31%
Orissa	12.05	0.31%
Tripura	11.11	0.28%
Meghalaya	3.92	0.10%
AD HYDRO	2.23	0.06%
Maharashtra	1.20	0.03%
Total	3936.72	100.00%
Volume of sale by top 5 States	2378.72	60.42%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
MP	1312.21	30.55%
Rajasthan	770.96	17.95%
Andhra Pradesh	587.40	13.68%
J & K	236.64	5.51%
Himachal Pradesh	185.38	4.32%
Jharkhand	176.19	4.10%
Uttarakhand	156.53	3.64%
West Bengal	140.55	3.27%
Uttar Pradesh	107.72	2.51%
Maharashtra	94.33	2.20%
Dadra & Nagar Haveli	72.00	1.68%
DVC	68.44	1.59%
Tamilnadu	62.70	1.46%
Gujarat	59.81	1.39%
Assam	48.33	1.13%
Bihar	39.58	0.92%
Orissa	38.91	0.91%
Kerala	31.82	0.74%
Haryana	23.94	0.56%
Meghalaya	23.08	0.54%
Karnataka	19.94	0.46%
Delhi	12.02	0.28%
Goa	12.00	0.28%
Chhattisgarh	8.31	0.19%
Punjab	4.38	0.10%
Meenakshi	0.95	0.02%
Nagaland	0.83	0.02%
Total	4294.96	100.00%
Volume of Purchase by top 5 States	3092.60	72.01%

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	362.76	13.67%
Delhi	269.47	10.15%
Orissa	263.29	9.92%
MP	238.38	8.98%
West Bengal	185.47	6.99%
Chhattisgarh	157.75	5.94%
JINDAL POWER	140.67	5.30%
ADHUNIK POWER LTD	138.97	5.24%
KARCHAM WANGTOO	130.33	4.91%
Rajasthan	110.09	4.15%
DCPP	93.75	3.53%
Karnataka	93.58	3.53%
STERLITE	75.93	2.86%
EMCO	59.45	2.24%
Himachal Pradesh	42.87	1.62%
Haryana	40.70	1.53%
Andhra Pradesh	40.20	1.51%
CHUZACHEN HEP	22.24	0.84%
NEEPCO Stations	21.32	0.80%
SIMHAPURI	17.33	0.65%
MAITHON POWER LTD	17.14	0.65%
AD HYDRO	15.76	0.59%
ESSAR POWER	13.31	0.50%
DVC	12.17	0.46%
J & K	11.22	0.42%
BALCO	11.09	0.42%
SHREE CEMENT	9.64	0.36%
Assam	9.38	0.35%
Uttarakhand	8.20	0.31%
NJPC	7.68	0.29%
Maharashtra	7.55	0.28%
Sikkim	6.83	0.26%
Tripura	5.71	0.22%
RANGANADI HEP	4.87	0.18%
ACBIL	2.05	0.08%
UT Chandigarh	1.79	0.07%
Mizoram	1.40	0.05%
LANCO BUDHIL	1.28	0.05%
Punjab	0.64	0.02%
Meenakshi	0.62	0.02%
Meghalaya	0.50	0.02%
DOYANG HEP	0.37	0.01%
Total	2653.76	100.00%
Volume of sale by top 5 States	1319.38	49.72%

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume
Gujarat	550.35	20.74%
Maharashtra	360.48	13.58%
Punjab	330.82	12.47%
Rajasthan	315.54	11.89%
Andhra Pradesh	223.35	8.42%
Haryana	158.83	5.99%
ESSAR STEEL	151.84	5.72%
Uttarakhand	118.86	4.48%
Uttar Pradesh	117.45	4.43%
Tamilnadu	50.65	1.91%
MP	41.24	1.55%
Karnataka	40.04	1.51%
Kerala	29.23	1.10%
West Bengal	26.86	1.01%
Orissa	25.95	0.98%
Delhi	22.30	0.84%
Daman and Diu	21.99	0.83%
Bihar	20.04	0.76%
J & K	17.16	0.65%
Assam	13.37	0.50%
Meghalaya	11.27	0.42%
Arunachal Pradesh	3.09	0.12%
Himachal Pradesh	1.91	0.07%
Tripura	0.64	0.02%
UT Chandigarh	0.52	0.02%
Total	2653.76	100.00%
Volume of purchase by top 5 States	1780.54	67.10%

Table-13: VOLUME OF ELECTRICITY EXPORT THROUGH UI, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume
Maharashtra	174.86	12.36%
Rajasthan	123.38	8.72%
MP	122.78	8.68%
Gujarat	90.78	6.42%
Tamilnadu	82.79	5.85%
Chhattisgarh	75.42	5.33%
Orissa	75.27	5.32%
Haryana	70.49	4.98%
Uttar Pradesh	62.58	4.42%
Delhi	61.47	4.35%
Jharkhand	47.47	3.36%
NHPC Stations	44.38	3.14%
Andhra Pradesh	33.16	2.34%
Karnataka	30.87	2.18%
West Bengal	30.51	2.16%
Daman and Diu	27.20	1.92%
DVC	25.23	1.78%
Bihar	18.65	1.32%
Goa	18.21	1.29%
Pondicherry	17.76	1.26%
JINDAL POWER	17.15	1.21%
Assam	14.11	1.00%
STERLITE	13.99	0.99%
J & K	13.43	0.95%
NJPC	13.17	0.93%
Punjab	11.35	0.80%
Uttarakhand	11.09	0.78%
DCPP	10.26	0.73%
Himachal Pradesh	9.66	0.68%
Sikkim	6.78	0.48%
MAITHON POWER LTD	6.34	0.45%
NSPCL	6.11	0.43%
ACBIL	5.70	0.40%
NEEPCO Stations	5.64	0.40%
Manipur	4.36	0.31%
CGPL	4.18	0.30%
LANKO_AMK	4.06	0.29%
Tripura	3.23	0.23%
UT Chandigarh	2.86	0.20%
Dadra & Nagar Haveli	2.65	0.19%
KARCHAM WANGTOO	2.57	0.18%
Kerala	2.54	0.18%
Meghalaya	1.89	0.13%
BALCO	1.78	0.13%
AD HYDRO	1.77	0.13%
SHREE CEMENT	1.52	0.11%
SIMHAPURI	1.16	0.08%
Arunachal Pradesh	0.86	0.06%
Nagaland	0.62	0.04%
Mizoram	0.30	0.02%
RGPPL(Dabhol)	0.03	0.00%
LANKO_KONDAPALLY	0.01	0.00%
Total	1414.46	100.00%
Volume of Export by top 5 States	594.60	42.04%

Table-14: VOLUME OF ELECTRICITY IMPORT THROUGH UI, NOVEMBER 2013		
Name of the State/UT/Other Regional Entity	Volume of Import (MUs)	% of Volume
Uttar Pradesh	155.91	13.27%
Punjab	92.08	7.84%
Haryana	89.31	7.60%
West Bengal	65.31	5.56%
J & K	54.66	4.65%
Gujarat	54.32	4.62%
Bihar	53.09	4.52%
Uttarakhand	43.67	3.72%
Kerala	41.87	3.56%
Himachal Pradesh	39.89	3.40%
Maharashtra	39.26	3.34%
DVC	38.20	3.25%
NHPC Stations	37.92	3.23%
Rajasthan	31.49	2.68%
Chhattisgarh	30.17	2.57%
Andhra Pradesh	24.23	2.06%
Assam	23.58	2.01%
CGPL	19.93	1.70%
Delhi	16.95	1.44%
Arunachal Pradesh	16.75	1.43%
MP	16.38	1.39%
Dadra & Nagar Haveli	16.35	1.39%
STERLITE	16.02	1.36%
Karnataka	12.68	1.08%
Meghalaya	11.42	0.97%
Orissa	11.01	0.94%
UT Chandigarh	10.08	0.86%
Goa	9.51	0.81%
NJPC	8.87	0.76%
MAITHON POWER LTD	8.20	0.70%
SHREE CEMENT	7.66	0.65%
Mizoram	7.53	0.64%
Jharkhand	7.32	0.62%
Manipur	6.35	0.54%
Nagaland	6.26	0.53%
RGPPL(Dabhol)	5.73	0.49%
Tamilnadu	5.64	0.48%
SIMHAPURI	5.11	0.44%
JINDAL POWER	5.09	0.43%
ACBIL	5.02	0.43%
NEEPCO Stations	4.03	0.34%
Tripura	3.58	0.30%
DCPP	2.94	0.25%
Daman and Diu	2.82	0.24%
LANKO_AMK	2.81	0.24%
KARCHAM WANGTOO	2.64	0.22%
Sikkim	1.57	0.13%
BALCO	1.33	0.11%
NSPCL	0.89	0.08%
Pondicherry	0.73	0.06%
AD HYDRO	0.66	0.06%
LANKO_KONDAPALLY	0.01	0.00%
Total	1174.81	100.00%
Volume of Import by top 5 States	457.28	38.92%

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), NOVEMBER 2013		
Sr.No.	Name of the State/UT/Other Regional Entity	Total volume of net short-term transactions of electricity*
1	MP	1008.67
2	Rajasthan	821.64
3	Andhra Pradesh	761.62
4	Maharashtra	310.46
5	Uttarakhand	299.78
6	J & K	263.88
7	ESSAR STEEL	151.84
8	Jharkhand	123.73
9	Himachal Pradesh	104.92
10	Kerala	100.37
11	Bihar	94.07
12	Dadra & Nagar Haveli	85.70
13	Assam	61.78
14	Uttar Pradesh	59.41
15	Meghalaya	39.45
16	Tamilnadu	36.20
17	Arunachal Pradesh	18.98
18	CGPL	15.76
19	Nagaland	6.46
20	UT Chandigarh	5.94
21	Mizoram	5.82
22	RGPPL(Dabhol)	5.69
23	Goa	3.30
24	Manipur	1.99
25	Meenakshi	0.34
26	DOYANG HEP	-0.37
27	LANKO_AMK	-1.25
28	LANCO BUDHIL	-1.28
29	Daman and Diu	-2.40
30	RANGANADI HEP	-4.87
31	NSPCL	-5.22
32	NHPC Stations	-6.46
33	BALCO	-11.54
34	NJPC	-11.98
35	Sikkim	-12.03
36	ESSAR POWER	-13.31
37	Tripura	-15.84
38	Pondicherry	-17.03
39	AD HYDRO	-19.11
40	CHUZACHEN HEP	-22.24
41	ACBIL	-22.28
42	NEEPCO Stations	-22.93
43	EMCO	-59.45
44	SHREE CEMENT	-63.95
45	DVC	-69.10
46	Gujarat	-88.61
47	MAITHON POWER LTD	-96.55
48	Punjab	-108.69
49	SIMHAPURI	-118.99
50	DCPP	-125.68
51	ADHUNIK POWER LTD	-138.97
52	KARCHAM WANGTOO	-165.53
53	STERLITE	-214.76
54	West Bengal	-236.42
55	Chhattisgarh	-238.60
56	Orissa	-274.75
57	Karnataka	-334.44
58	JINDAL POWER	-353.25
59	Delhi	-657.20
60	Haryana	-734.11
* 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, NOVEMBER 2013			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	2977.79	211.30
B	Actual Cleared Volume and hence scheduled (MUs)	2480.86	172.89
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	496.93	38.40
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	16.69%	18.17%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	100.00%	96.35%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	25.00%	25.95%
	6.00 - 12.00 hours	25.00%	25.05%
	12.00 - 18.00 hours	25.00%	25.05%
	18.00 - 24.00 hours	25.00%	23.96%
* 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), NOVEMBER 2013 (DAY-WISE)						
Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Unscheduled Interchange (Over Draw+Under Generation)	Total Electricity Generation (MU) as given at CEA Website*
	Through Traders and PXs**	Direct	IEX	PXI		
1-Nov-13	62.56	72.21	90.30	9.10	52.90	2658.55
2-Nov-13	77.44	75.61	87.98	11.24	51.34	2643.92
3-Nov-13	80.79	72.74	70.65	8.73	65.38	2526.00
4-Nov-13	78.24	71.78	59.06	6.82	68.89	2408.08
5-Nov-13	68.34	70.62	72.68	2.93	61.84	2443.16
6-Nov-13	68.54	82.99	78.14	1.92	58.77	2490.00
7-Nov-13	69.24	71.49	76.54	2.14	89.99	2536.10
8-Nov-13	66.85	72.34	77.02	4.47	56.09	2532.03
9-Nov-13	69.76	73.43	82.64	5.55	54.43	2518.00
10-Nov-13	66.69	73.04	88.70	6.83	51.15	2504.17
11-Nov-13	71.15	73.43	84.23	5.86	51.18	2568.05
12-Nov-13	70.01	73.62	84.02	4.43	50.79	2595.00
13-Nov-13	69.72	73.72	82.53	5.59	51.75	2622.89
14-Nov-13	67.89	73.60	87.95	5.10	51.91	2593.05
15-Nov-13	65.29	73.56	77.82	4.05	55.84	2555.00
16-Nov-13	67.22	75.88	78.06	3.89	54.67	2517.57
17-Nov-13	67.24	74.31	74.99	6.28	58.72	2464.40
18-Nov-13	67.69	75.75	73.18	3.93	57.19	2548.16
19-Nov-13	67.53	75.90	82.90	5.08	50.59	2621.57
20-Nov-13	68.17	75.92	83.93	5.61	52.31	2649.51
21-Nov-13	69.42	73.56	86.59	5.04	47.96	2653.79
22-Nov-13	70.40	75.51	87.18	5.19	46.54	2632.57
23-Nov-13	66.87	76.09	96.90	5.42	44.74	2645.70
24-Nov-13	60.52	74.62	91.24	4.94	48.72	2572.88
25-Nov-13	62.68	76.06	88.50	5.80	45.36	2622.33
26-Nov-13	66.06	76.13	85.49	6.89	44.41	2649.94
27-Nov-13	69.87	76.02	86.68	7.16	43.85	2661.77
28-Nov-13	68.49	74.14	86.26	9.28	47.47	2648.97
29-Nov-13	71.76	73.47	88.25	7.49	48.88	2591.45
30-Nov-13	69.44	70.60	90.43	6.12	49.77	2629.94
Total	2065.88	2228.13	2480.86	172.89	1613.42	77304.55

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), NOVEMBER 2013 (DAY-WISE)

Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Draw/Over Draw 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-Nov-13	1.95	15.00	2.73	1.94	3.51	2.60	0.00	7.37	1.76	0.66	7.65	2.94
2-Nov-13	1.95	10.00	2.90	1.70	3.60	2.71	0.17	4.22	1.83	0.00	4.78	1.74
3-Nov-13	1.33	20.00	2.39	1.85	4.25	2.58	0.00	4.78	1.13	0.00	10.80	1.96
4-Nov-13	1.25	19.50	2.19	1.80	3.02	2.26	0.00	4.50	0.93	0.00	5.06	1.27
5-Nov-13	1.70	20.00	2.33	1.25	3.55	1.76	0.00	4.22	1.40	0.00	5.34	2.30
6-Nov-13	1.70	20.00	2.20	1.25	3.56	1.64	0.00	5.34	1.96	0.99	7.65	3.62
7-Nov-13	1.70	10.00	2.26	1.25	3.56	1.81	0.00	4.78	1.71	0.00	7.93	3.42
8-Nov-13	1.70	7.00	2.34	1.25	3.01	2.09	0.00	5.06	1.85	0.50	8.49	3.36
9-Nov-13	1.36	5.01	2.45	1.25	2.73	2.18	0.17	4.78	2.12	0.17	7.09	3.45
10-Nov-13	1.73	12.00	2.27	1.25	3.10	2.17	0.00	5.06	1.70	0.00	4.22	1.37
11-Nov-13	1.20	12.00	2.52	1.25	3.15	2.28	0.00	7.65	2.06	0.00	7.65	2.02
12-Nov-13	1.70	20.00	2.52	1.25	3.52	2.36	0.00	5.63	2.20	0.00	5.06	1.80
13-Nov-13	1.70	3.70	2.41	1.50	3.30	2.51	0.17	4.50	1.94	0.00	5.06	1.80
14-Nov-13	1.69	14.00	2.50	1.50	3.52	2.43	0.17	7.65	3.09	0.33	5.91	2.43
15-Nov-13	1.70	9.01	2.79	1.55	3.20	2.48	0.00	7.09	2.12	0.00	5.34	2.23
16-Nov-13	1.54	18.00	2.89	1.69	4.00	2.51	0.00	4.22	1.62	0.00	4.22	1.56
17-Nov-13	1.69	19.50	2.62	2.10	3.50	2.81	0.00	5.63	1.59	0.00	4.22	1.51
18-Nov-13	1.90	20.00	2.82	1.50	3.01	2.29	0.00	5.63	2.04	0.00	5.06	1.57
19-Nov-13	1.90	20.00	2.70	1.96	3.51	2.47	0.17	7.93	2.35	0.00	4.50	2.00
20-Nov-13	1.90	5.00	2.68	1.93	2.95	2.42	0.17	5.91	2.93	0.00	4.22	1.62
21-Nov-13	1.90	19.50	2.76	2.00	3.51	2.64	0.00	5.63	2.93	0.33	5.91	1.72
22-Nov-13	1.90	5.60	2.81	1.75	3.51	2.68	0.00	7.09	2.86	0.00	5.34	1.97
23-Nov-13	1.95	9.01	2.95	2.00	3.50	2.67	0.00	5.91	2.37	0.00	5.06	1.73
24-Nov-13	2.00	19.50	2.87	1.97	3.50	2.70	0.00	4.22	1.88	0.00	5.91	1.83
25-Nov-13	2.00	20.00	2.83	2.00	3.50	2.79	0.33	4.50	2.10	0.00	4.22	1.69
26-Nov-13	1.99	20.00	2.96	2.00	3.55	2.72	0.00	5.06	2.16	0.17	5.06	1.81
27-Nov-13	1.10	19.50	3.14	2.25	4.00	3.14	0.50	4.50	2.16	0.00	5.06	2.05
28-Nov-13	1.46	5.27	3.19	2.01	4.00	3.20	0.00	3.93	1.99	0.00	5.91	1.60
29-Nov-13	1.56	20.00	3.28	1.90	4.00	3.14	0.00	4.78	2.38	0.00	4.78	1.25
30-Nov-13	1.45	20.00	3.01	1.90	4.00	3.13	0.00	4.78	1.98	0.00	3.36	1.02
	1.10#	20.00#	2.69	1.25#	4.25#	2.59	0.00#	7.93#	2.04	0.00#	10.80#	2.02

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), NOVEMBER 2013

Name of the State/UT/Other Regional Entity	Through Bilateral			Through Power Exchange			Through UI with Regional Grid			Total Net***
	Sale	Purchase	Net**	Sale	Purchase	Net**	Export (Under Drawl)	Import (Over Drawl)	Net**	
Punjab	523.99	4.38	-519.60	0.64	330.82	330.19	11.35	92.08	80.73	-108.69
Haryana	895.00	23.94	-871.06	40.70	158.83	118.13	70.49	89.31	18.82	-734.11
Rajasthan	62.89	770.96	708.08	110.09	315.54	205.45	123.38	31.49	-91.89	821.64
Delhi	377.54	12.02	-365.51	269.47	22.30	-247.17	61.47	16.95	-44.52	-657.20
Uttar Pradesh	259.09	107.72	-151.36	0.00	117.45	117.45	62.58	155.91	93.33	59.41
Uttarakhand	0.00	156.53	156.53	8.20	118.86	110.67	11.09	43.67	32.58	299.78
Himachal Pradesh	69.73	185.38	115.66	42.87	1.91	-40.97	9.66	39.89	30.23	104.92
J & K	19.92	236.64	216.72	11.22	17.16	5.93	13.43	54.66	41.23	263.88
UT Chandigarh	0.00	0.00	0.00	1.79	0.52	-1.27	2.86	10.08	7.21	5.94
MP	0.00	1312.21	1312.21	238.38	41.24	-197.14	122.78	16.38	-106.40	1008.67
Maharashtra	1.20	94.33	93.13	7.55	360.48	352.94	174.86	39.26	-135.61	310.46
Gujarat	299.54	59.81	-239.73	362.76	550.35	187.59	90.78	54.32	-36.47	-88.61
Chhattisgarh	43.91	8.31	-35.60	157.75	0.00	-157.75	75.42	30.17	-45.25	-238.60
Daman and Diu	0.00	0.00	0.00	0.00	21.99	21.99	27.20	2.82	-24.38	-2.40
Dadra & Nagar Haveli	0.00	72.00	72.00	0.00	0.00	0.00	2.65	16.35	13.70	85.70
Andhra Pradesh	0.00	587.40	587.40	40.20	223.35	183.15	33.16	24.23	-8.92	761.62
Karnataka	282.66	19.94	-262.72	93.58	40.04	-53.54	30.87	12.68	-18.19	-334.44
Kerala	0.00	31.82	31.82	0.00	29.23	29.23	2.54	41.87	39.32	100.37
Tamilnadu	0.00	62.70	62.70	0.00	50.65	50.65	82.79	5.64	-77.15	36.20
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	17.76	0.73	-17.03	-17.03
West Bengal	253.17	140.55	-112.61	185.47	26.86	-158.61	30.51	65.31	34.80	-236.42
Orissa	12.05	38.91	26.85	263.29	25.95	-237.34	75.27	11.01	-64.26	-274.75
Bihar	0.00	39.58	39.58	0.00	20.04	20.04	18.65	53.09	34.45	94.07
Jharkhand	12.31	176.19	163.88	0.00	0.00	0.00	47.47	7.32	-40.15	123.73
Sikkim	0.00	0.00	0.00	6.83	0.00	-6.83	6.78	1.57	-5.21	-12.03
DVC	138.34	68.44	-69.90	12.17	0.00	-12.17	25.23	38.20	12.97	-69.10
Arunachal Pradesh	0.00	0.00	0.00	0.00	3.09	3.09	0.86	16.75	15.89	18.98
Assam	0.00	48.33	48.33	9.38	13.37	3.98	14.11	23.58	9.47	61.78
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	4.36	6.35	1.99	1.99
Meghalaya	3.92	23.08	19.16	0.50	11.27	10.76	1.89	11.42	9.53	39.45
Mizoram	0.00	0.00	0.00	1.40	0.00	-1.40	0.30	7.53	7.22	5.82
Nagaland	0.00	0.83	0.83	0.00	0.00	0.00	0.62	6.26	5.64	6.46
Tripura	11.11	0.00	-11.11	5.71	0.64	-5.07	3.23	3.58	0.34	-15.84
Goa	0.00	12.00	12.00	0.00	0.00	0.00	18.21	9.51	-8.70	3.30
NHPC Stations	0.00	0.00	0.00	0.00	0.00	0.00	44.38	37.92	-6.46	-6.46
NJPC	0.00	0.00	0.00	7.68	0.00	-7.68	13.17	8.87	-4.30	-11.98
AD HYDRO	2.23	0.00	-2.23	15.76	0.00	-15.76	1.77	0.66	-1.12	-19.11
KARCHAM WANGTOO	35.26	0.00	-35.26	130.33	0.00	-130.33	2.57	2.64	0.07	-165.53
SHREE CEMENT	60.45	0.00	-60.45	9.64	0.00	-9.64	1.52	7.66	6.14	-63.95
LANCO BUDHIL	0.00	0.00	0.00	1.28	0.00	-1.28	0.00	0.00	0.00	-1.28
JINDAL POWER	200.53	0.00	-200.53	140.67	0.00	-140.67	17.15	5.09	-12.06	-353.25
LANKO_AMK	0.00	0.00	0.00	0.00	0.00	0.00	4.06	2.81	-1.25	-1.25
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	6.11	0.89	-5.22	-5.22
ACBIL	19.56	0.00	-19.56	2.05	0.00	-2.05	5.70	5.02	-0.68	-22.28
BALCO	0.00	0.00	0.00	11.09	0.00	-11.09	1.78	1.33	-0.45	-11.54
RGPPL(Dabhol)	0.00	0.00	0.00	0.00	0.00	0.00	0.03	5.73	5.69	5.69
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	4.18	19.93	15.76	15.76
DCPP	24.60	0.00	-24.60	93.75	0.00	-93.75	10.26	2.94	-7.33	-125.68
EMCO	0.00	0.00	0.00	59.45	0.00	-59.45	0.00	0.00	0.00	-59.45
ESSAR STEEL	0.00	0.00	0.00	0.00	151.84	151.84	0.00	0.00	0.00	151.84
ESSAR POWER	0.00	0.00	0.00	13.31	0.00	-13.31	0.00	0.00	0.00	-13.31

SIMHAPURI	105.61	0.00	-105.61	17.33	0.00	-17.33	1.16	5.11	3.95	-118.99
Meenakshi	0.00	0.95	0.95	0.62	0.00	-0.62	0.00	0.00	0.00	0.34
STERLITE	140.86	0.00	-140.86	75.93	0.00	-75.93	13.99	16.02	2.03	-214.76
MAITHON POWER LTD	81.28	0.00	-81.28	17.14	0.00	-17.14	6.34	8.20	1.86	-96.55
ADHUNIK POWER LTD	0.00	0.00	0.00	138.97	0.00	-138.97	0.00	0.00	0.00	-138.97
CHUZACHEN HEP	0.00	0.00	0.00	22.24	0.00	-22.24	0.00	0.00	0.00	-22.24
NEEPCO Stations	0.00	0.00	0.00	21.32	0.00	-21.32	5.64	4.03	-1.61	-22.93
RANGANADI HEP	0.00	0.00	0.00	4.87	0.00	-4.87	0.00	0.00	0.00	-4.87
DOYANG HEP	0.00	0.00	0.00	0.37	0.00	-0.37	0.00	0.00	0.00	-0.37

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, NOVEMBER 2013					
Sr.No.	Details of REC Transactions	IEX		PXIL	
		Solar	Non-Solar	Solar	Non Solar
A	Volume of Buy Bid	6983	97743	371	211185
B	Volume of Sell Bid	45819	2760452	15538	1379113
C	Ratio of Buy Bid to Sell Bid Volume	0.15	0.04	0.02	0.15
D	Market Clearing Volume (MWh)	6983	97743	371	211185
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>