Monthly Report on Short-term Transactions of Electricity in India

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Abbreviations

Abbreviation	Expanded Version
ACBIL	ACB (India) Ltd
ACP	Area Clearing Price
ACV	Area Clearing Volume
AD HYDRO	AD Hydro Power Limited
ADANI HVDC	Adani Power Ltd. (HVDC Mundra)
BALCO	Bharat Aluminium Company Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPL	Coastal Gujarat Power Ltd
DCPP	Donga Mahua Captive Power Plant
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
IEX	Indian Energy Exchange Limited
JINDAL POWER	Jindal Power Limited
KARCHAM WANGTOO	Jaypee Karcham Hydro Corporation Limited
LANKO_AMK	Lanco Amarkantak Power Private Limited
LANCO BUDHIL	Lanco Budhil Hydro 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
REC	Renewable Energy Certificate
RGPPL	Ratnagiri Gas and Power Private Limited
RLDC	Regional Load Despatch Centre
RTC	Round - the- Clock
SIMHAPURI	Simhapuri Energy Private Limited
SHREE CEMENT	Shree Cement Limited
SR Grid	Southern Regional Grid
STERLITE	Sterlite Energy Limited
UI	Unscheduled Interchange
UT	Union Territory
VANDANA VIDYUT	Vandana Vidyut Limited

Introduction

A well-functioning electricity market requires an effective market monitoring process. As part of the market monitoring process, the monthly report on short-term transactions of electricity, is being prepared and posted on the website of CERC since August 2008. Here, "short-term transactions of electricity" refers to the contracts of less than one year period, for electricity transacted (inter-state & intra-state) through Inter-State Trading Licensees and directly by the Distribution Licensees, Power Exchanges (Indian Energy Exchange Ltd (IEX) and Power Exchange India Ltd (PXIL)), and 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 January 2013 is as under:

I: Volume of Short-term Transactions of Electricity

During the month of January 2013, total electricity generation excluding generation from renewable and captive power plants in India was 78403.87 MUs (Table-1).

Of the total electricity generation, 8341.20MUs (10.64%) were transacted through short-term, comprising of 4740.11MUs (6.05%) through Bilateral (through traders and term-ahead contracts on Power Exchanges and directly between distribution companies), followed by 2098.59MUs (2.68%) through day ahead collective transactions on Power Exchanges (IEX and PXIL) and 1502.50MUs (1.92%) through UI (Table-1 & Figure-2).

Of the total short-term transactions, Bilateral constitute 56.83% (42.53% through traders and term-ahead contracts on Power Exchanges and 14.30% directly between distribution companies) followed by 25.16% through day ahead collective transactions on Power Exchanges and 18.01% 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 40 trading licensees as on 31.01.2013, of which only 20 have engaged in trading during January 2013. Top 5 trading licenses had a share of 73.43% 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 0.1328 for the month of January 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 2045.40MUs and 53.18MUs respectively. The volume of total Buy bids and Sale bids was 3654.49 MUs and 3398.70 MUs respectively in IEX and 299.93MUs and 221.76 MUs respectively in PXIL. The gap between the volume of buy bids and sale bids placed through power exchanges shows that there was more demand in both IEX (1.08 times) and PXIL (1.35 times) when compared with the supply offered through these exchanges.

The volume of electricity transacted in term-ahead market through weekly contracts was 67.23 MUs in IEX (Table-6) and 0.00 MUs in PXIL (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 ₹4.42/kWh. Weighted average sale price was also computed for the transactions during Round the Clock (RTC), Peak, and Off-Peak periods separately, and the sale prices were ₹4.38/kWh, ₹4.34/kWh and ₹5.09/kWh respectively. Minimum and Maximum sale prices were ₹2.81/kWh and ₹6.56/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 ₹0.01/kWh, ₹20.00/kWh and ₹3.65/kWh respectively in IEX and ₹1.40/kWh, ₹13.00/kWh and ₹3.66/kWh respectively in PXIL (Table-5).

The weighted average price of electricity transacted in term-ahead market through the weekly contracts was ₹3.75/kWh in IEX (Table-6).

(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 ₹2.31/kWh in the NEW Grid and ₹2.94/kWh in the SR Grid. Minimum and Maximum UI prices were ₹0.00/kWh and ₹10.80/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 53.65% of the volume, and these were Gujarat, Delhi, Jindal Power Limited, Haryana and Karnataka. Top 5 regional entities purchased 53.64% of the volume, and these were Rajasthan, Madhya Pradesh, Tamilnadu, Maharashtra, Uttarakhand and Himachal Pradesh (Table-9, 10 & 19).

Of the total Power Exchange transactions, top 5 regional entities sold 64.50% of the volume, and these were Karnataka, Gujarat, Delhi, Jindal Power Limited and Sterlite Energy Limited. Top 5 regional entities purchased 78.96% of the volume, and these were Rajasthan, Gujarat, Andhra Pradesh, Punjab and Tamil Nadu (Table-11, 12 & 19).

Of the total UI transactions, top 5 regional entities underdrew 44.10% of the volume, and these were Maharashtra, Delhi, Uttar Pradesh, Gujarat and Rajasthan. Top 5 regional entities overdrew 34.99% of the volume, and these were Haryana, Jammu & Kashmir, West Bengal, Uttar Pradesh and Rajasthan (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, Karnataka, Jindal Power Limited, Gujarat and Sterlite Energy Limited. Top 5 electricity purchasing regional entities were Rajasthan, Madhya Pradesh, Andhra Pradesh, Tamilnadu 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 January 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 20.94% and 63.14% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 99.60% and 98.76% in IEX and PXIL, respectively.

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.

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 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.

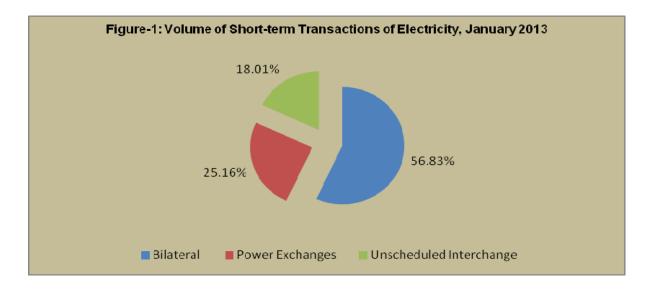
The details of REC transactions for the month of January 2013 are shown in Table-20. The market clearing volume of Solar RECs transacted on IEX and PXIL were 2105 and 203 respectively and the market clearing price of these RECs was ₹12500/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 190875 and 2462 respectively and the market clearing price of these RECs was ₹1500/MWh on both the power exchanges.

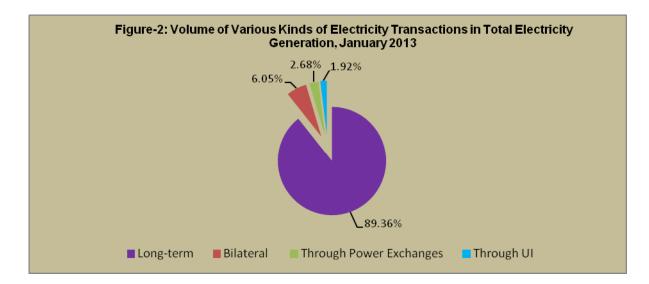
The gap between the volume of buy and sell bids of RECs placed through power exchanges shows that there was more demand for Solar RECs and less demand for Non-Solar RECs. For Solar RECs, the ratio of buy and sell bids was 11.96 and 10.38 in IEX and PXIL respectively. For Non-Solar RECs, the ratio of buy and sell bids was 0.14 and 0.01 in IEX and PXIL respectively.

VI: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 10.64%.
- Of the total short-term transactions of electricity, 56.83% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 25.16% through Power Exchanges and 18.01% through UI.
- Top 5 trading licensees had a share of 73.43% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for volume of electricity traded by trading licensees was 0.1328, indicating an unconcentration of market power.
- The price of electricity transacted through trading licensees (₹4.42/kWh) was higher when compared with the price of electricity transacted through IEX (₹3.65/kWh) and PXIL (₹3.66/kWh) respectively.
- The price of electricity transacted through UI was ₹2.31/kWh in the NEW Grid and ₹2.94/kWh in the SR Grid.
- The gap between the volume of buy bids and sale bids placed through power exchanges indicates that there was more demand in IEX (1: 1.08) and in PXIL (1: 1.35) when compared with the supply offered through these exchanges.
- Top 5 electricity selling regional entities were Delhi, Karnataka, Jindal Power Limited, Gujarat and Sterlite Energy Limited. Top 5 electricity purchasing regional entities were Rajasthan, Madhya Pradesh, Andhra Pradesh, Tamilnadu and Uttarakhand.
- The volume of electricity that could not be cleared in the power exchanges due to congestion was about 20.94% and 63.14% of the unconstrained cleared volume in IEX and PXIL, respectively. In terms of time, congestion occurred was 99.60% and 98.76% in IEX and PXIL, respectively.
- The market clearing volume of Solar RECs transacted on IEX and PXIL were 2105 and 203 respectively and the market clearing price of these RECs was ₹12500/MWh on both the power exchanges. Market clearing volume of Non-Solar RECs transacted on IEX and PXIL were 190875 and 2462 respectively and the market clearing price of these RECs was ₹1500/MWh on both the power exchanges.

Table-1	Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), JANUARY 2013				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation	
1	Bilateral	4740.11	56.83%	6.05%	
	(i) Through Traders and PXs	3547.34	42.53%	4.52%	
	(ii) Direct	1192.76	14.30%	1.52%	
2	Through Power Exchanges	2098.59	25.16%	2.68%	
	(i) IEX	2045.40	24.52%	2.61%	
	(ii) PXIL	53.18	0.64%	0.07%	
3	Through UI	1502.50	18.01%	1.92%	
	Total	8341.20	100.00%	10.64%	
	Total Generation	78403.87	_	_	
Source:	Source: NLDC				





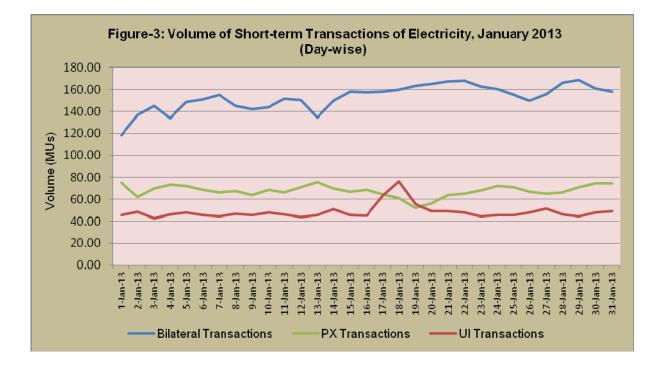


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JANUARY 2013				
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl- Hirschman Index	
1	PTC India Ltd.	24.39%	0.0595	
2	Adani Enterprises Ltd.	15.18%	0.0230	
3	Tata Power Trading Company (P) Ltd.	12.76%	0.0163	
4	JSW Power Trading Company Ltd.	12.62%	0.0159	
5	Reliance Energy Trading (P) Ltd	8.48%	0.0072	
6	NTPC Vidyut Vyapar Nigam Ltd.	6.45%	0.0042	
7	Mittal Processors (P) Ltd.	5.05%	0.0025	
8	Knowledge Infrastructure Systems (P) Ltd	5.02%	0.0025	
9	Shree Cement Ltd.	2.72%	0.0007	
10	National Energy Trading & Services Ltd.	2.29%	0.0005	
11	Instinct Infra & Power Ltd.	1.18%	0.0001	
12	GMR Energy Trading Ltd.	1.12%	0.0001	
13	RPG Power Trading Company Ltd.	0.90%	0.0001	
14	Manikaran Power Ltd.	0.71%	0.0001	
15	Arunachal Pradesh Power Corporation Pvt. Ltd.	0.34%	0.0000	
16	Indrajit Power Technology (P) Ltd.	0.31%	0.0000	
17	Essar Electric Power Development Corp. Ltd.	0.21%	0.0000	
18	Pune Power Development Pvt. Ltd.	0.14%	0.0000	
19	Jindal Power Trading Company Ltd.	0.10%	0.0000	
20	Customized Energy Solutions India Pvt. Ltd.	0.05%	0.0000	
	TOTAL	100.00%	0.1328	
	Top 5 trading licensees	73.43%		
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:	Source: Information submitted by trading licensees			

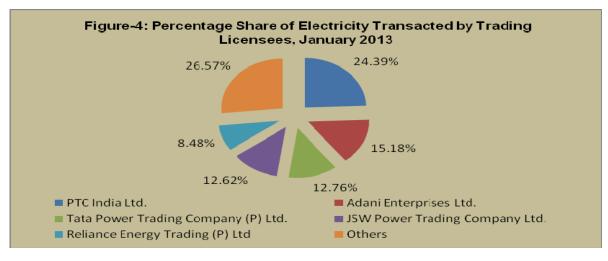


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JANUARY 2013				
Sr.No	Sr.No Sale Price of Traders (₹/kWh)			
1	Minimum	2.81		
2	2 Maximum 6.56			
3	3 Weighted Average 4.42			
Courses Information out mitted by trading licenses				

Source: Information submitted by trading licensees

Table-4	Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), JANUARY 2013		
Sr.NoPeriod of TradeSale Price of Traders (₹/kWh)			
1	RTC	4.38	
2	PEAK	4.34	
3	3 OFF PEAK 5.09		

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JANUARY 2013					
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)		
1	Minimum	0.01	1.40		
2	Maximum	20.00	13.00		
3	3 Weighted Average 3.65 3.66				
Source: Information submitted by IEV and DVII					

Source: Information submitted by IEX and PXIL

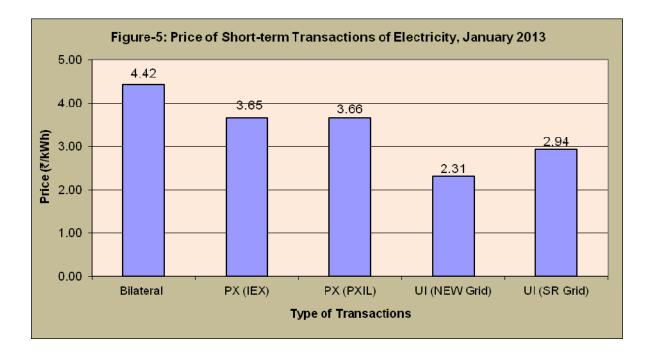
Table-6	Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JANUARY 2013				
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)		
1	Intra-Day Contracts	6.55	3.82		
2	Day-ahead Contingency Contracts	0.79	4.58		
3	Daily Contracts	40.66	4.30		
4	Weekly Contracts	67.23	3.75		
	Total	115.23	3.95		
Source: IEX					

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JANUARY 2013				
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)	
1	Intra-Day Contracts	1.85	3.91	
2	Day-ahead Contingency Contracts	0.32	6.26	
3	Daily Contracts	1.84	3.55	
	Total	4.01	3.93	
Source: PXII				

Source: PXIL

	Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH UI, JANUARY 2013			
Sr.No		Price in NEW Grid (₹/kWh)	Price in SR Grid (₹/kWh)	
1	Minimum	0.00	0.00	
2	Maximum	10.80	10.80	
3	Average	2.31	2.94	
Source: NLDC				



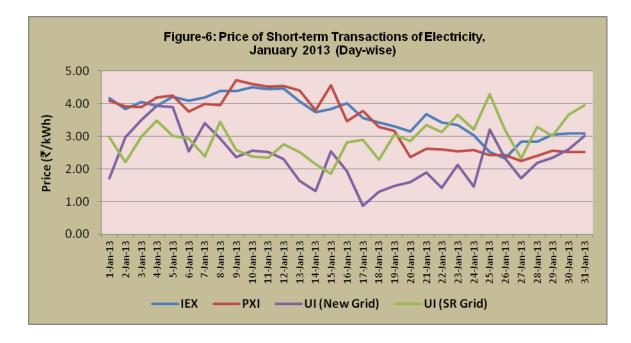


Table-9: VOLUME OF ELECTRICITY SALE	THROUGH BILATERAL, J	ANUARY 2013
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume
Gujarat	692.84	15.86%
Delhi	536.48	12.28%
JINDAL POWER	391.03	8.95%
Haryana	380.57	8.71%
Karnataka	342.29	7.84%
West Bengal	323.06	7.40%
DVC	316.50	7.25%
Punjab	303.18	6.94%
Uttar Pradesh	251.42	5.76%
STERLITE	221.97	5.08%
Orissa	96.59	2.21%
LANKO_AMK	89.22	2.04%
Chattisgarh	89.09	2.04%
Rajasthan	88.16	2.02%
SHREE CEMENT	88.16	2.02%
Himachal Pradesh	50.46	1.16%
MAITHON POWER LTD	35.72	0.82%
LANKO_KONDAPALLY	28.11	0.64%
J&K	11.70	0.27%
AD HYDRO	9.98	0.23%
UT Chandigarh	7.44	0.17%
MP	5.74	0.13%
Jharkhand	4.19	0.10%
ACBIL	1.86	0.04%
Tripura	1.44	0.03%
Andhra Pradesh	0.23	0.01%
Total	4367.43	100.00%
Volume of sale by top 5 States	2343.20	53.65%

Table-10: VOLUME OF ELECTRICITY PURCHASE THROUGH BILATERAL, JANUARY 2013							
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume					
Rajasthan	659.43	15.07%					
MP	646.97	14.78%					
Tamilnadu	392.69	8.97%					
Uttarakhand	346.30	7.91%					
Himachal Pradesh	301.96	6.90%					
J&K	287.88	6.58%					
Andhra Pradesh	282.07	6.45%					
Maharashtra	256.68	5.87%					
Kerala	248.57	5.68%					
Bihar	178.94	4.09%					
West Bengal	142.15	3.25%					
Jharkhand	137.05	3.13%					
Haryana	100.33	2.29%					
Gujarat	77.95	1.78%					
Uttar Pradesh	63.84	1.46%					
DVC	61.11	1.40%					
Assam	54.33	1.24%					
Meghalaya	44.09	1.01%					
Dadra & Nagar Haveli	38.64	0.88%					
Delhi	36.07	0.82%					
Punjab	8.48	0.19%					
Karnataka	5.48	0.13%					
GOA	2.40	0.05%					
Tripura	1.62	0.04%					
Meenakshi	0.99	0.02%					
Mizoram	0.28	0.01%					
Total	4376.32	100.00%					
Volume of sale by top 5 States	2347.37	53.64%					

Table-11: VOLUME OF ELECTRICITY SALE THROUGH POWER EXCHANGES, JANUARY 2013							
Name of the State/UT/Other Regional Entity	Volume of Sale (MUs)	% of Volume					
Karnataka	410.23	19.55%					
Gujarat	373.40	17.79%					
Delhi	242.99	11.58%					
JINDAL POWER	216.12	10.30%					
STERLITE	110.82	5.28%					
NHPC Stations	96.69	4.61%					
Maharashtra	92.63	4.41%					
Chattisgarh	90.73	4.32%					
DCPP	68.94	3.29%					
Andhra Pradesh	65.68	3.13%					
West Bengal	56.68	2.70%					
MP	47.29	2.25%					
Orissa	28.78	1.37%					
ADHUNIK POWER LTD	23.88	1.14%					
Haryana	23.65	1.13%					
MAITHON POWER LTD	23.08	1.10%					
ADANI HVDC	21.31	1.02%					
SHREE CEMENT	17.62	0.84%					
NEEPCO Stations	16.20	0.77%					
Rajasthan	12.54	0.60%					
DVC	12.52	0.60%					
ACBIL	11.55	0.55%					
Sikkim	8.35	0.40%					
SIMHAPURI	7.41	0.35%					
Uttar Pradesh	3.99	0.19%					
Uttarakhand	3.60	0.17%					
Tripura	3.23	0.15%					
BALCO	1.80	0.09%					
Himachal Pradesh	1.69	0.08%					
Meghalaya	1.68	0.08%					
J&K	1.10	0.05%					
Punjab	1.02	0.05%					
AD HYDRO	0.73	0.03%					
LANCO BUDHIL	0.41	0.02%					
UT Chandigarh	0.26	0.01%					
Total	2098.58	100.00%					
Volume of sale by top 5 States	1353.55	64.50%					

Table-12: VOLUME OF ELECTRICITY PURCHASE THROUGH POWER EXCHANGES, JANUARY 2013						
Name of the State/UT/Other Regional Entity	Volume of Purchase (MUs)	% of Volume				
Rajasthan	557.70	26.58%				
Gujarat	500.36	23.84%				
Andhra Pradesh	299.76	14.28%				
Punjab	198.75	9.47%				
Tamilnadu	adu 100.53					
Kerala	68.42					
Uttar Pradesh	65.72	3.13%				
West Bengal	51.32	2.45%				
Haryana	47.83	2.28%				
Uttarakhand	46.18	2.20%				
Assam	35.46	1.69%				
MP	25.20	1.20%				
Himachal Pradesh	20.20	0.96%				
Delhi	15.97	0.76%				
Maharashtra	12.25	0.58%				
Arunachal Pradesh	9.38	0.45%				
Karnataka	9.24	0.44%				
Chattisgarh	8.61	0.41%				
J&K	7.15	0.34%				
Nagaland	7.10	0.34%				
Meghalaya	5.66	0.27%				
UT Chandigarh	5.32	0.25%				
Tripura	0.40	0.02%				
VANDANA VIDYUT	0.08	0.00%				
Total	2098.59	100.00%				
Volume of purchase by top 5 States	1657.10	78.96%				

Table-13: VOLUME OF ELECTRICIT	Y EXPORT THROUGH UI, JANUARY 2013				
Name of the State/UT/Other Regional Entity	Volume of Export (MUs)	% of Volume			
Maharashtra	151.71	13.20%			
Delhi	125.20	10.89%			
Uttar Pradesh	83.72	7.28%			
Gujarat	75.42	6.56%			
Rajasthan	70.82	6.16%			
Punjab	60.85	5.29%			
MP	52.01	4.53%			
NHPC Stations	40.07	3.49%			
Pondicherry	37.73	3.28%			
Tamilnadu	34.94	3.04%			
Orissa	28.57	2.49%			
Chattisgarh	28.48	2.48%			
LANKO_AMK	27.07	2.35%			
Karnataka	26.48	2.30%			
Haryana	23.27	2.02%			
GOA	23.27	1.88%			
J&K	21.56	1.88%			
Andhra Pradesh	20.61	1.79%			
Jharkhand	19.23	1.67%			
Uttarakhand	18.65	1.62%			
West Bengal	17.61	1.53%			
JINDAL POWER	15.59	1.36%			
CGPL	15.26	1.33%			
Assam	14.56	1.27%			
Dadra & Nagar Haveli	14.52	1.26%			
DVC	12.17	1.06%			
Himachal Pradesh	9.43	0.82%			
MAITHON POWER LTD	8.97	0.78%			
STERLITE	8.48	0.74%			
Daman and Diu	7.45	0.65%			
Bihar	6.81	0.59%			
NJPC	6.54	0.57%			
Sikkim	6.33	0.55%			
NEEPCO Stations	5.30	0.46%			
SHREE CEMENT	4.45	0.39%			
ACBIL	3.98	0.35%			
DCPP	3.80	0.33%			
Manipur	3.35	0.33%			
	2.83	0.29%			
Tripura					
UT Chandigarh	2.48	0.22%			
Meghalaya	2.39	0.21%			
BALCO	1.84	0.16%			
RGPPL(Dabhol)	1.63	0.14%			
NSPCL	1.19	0.10%			
Kerala	1.07	0.09%			
SIMHAPURI	1.00	0.09%			
KARCHAM WANGTOO	0.94	0.08%			
Mizoram	0.60	0.05%			
AD HYDRO	0.49	0.04%			
Arunachal Pradesh	0.40	0.03%			
LANKO_KONDAPALLY	0.38	0.03%			
Nagaland	0.29	0.03%			
Total	1149.33	100.00%			
Volume of Export by top 5 States	506.86	44.10%			

Table-14: VOLUME OF ELECTRICITY I Name of the State/UT/Other Regional Entity Haryana	Volume of Import			
Haryana	/·· ·	0/ of Valuesa		
	(MUs)	% of Volume		
	133.68	10.20%		
J&K	96.29	7.35%		
West Bengal	83.89	6.40%		
Uttar Pradesh	77.81	5.94%		
Rajasthan	66.95	5.11%		
Kerala	61.34	4.68%		
Chattisgarh	60.00	4.58%		
Gujarat	56.40	4.30%		
DVC	54.07	4.13%		
MP	53.54	4.08%		
CGPL	45.24	3.45%		
Uttarakhand	43.46	3.32%		
Andhra Pradesh	40.33	3.08%		
Orissa	38.25	2.92%		
NHPC Stations	31.80	2.43%		
Jharkhand	31.53	2.41%		
Himachal Pradesh	30.01	2.29%		
Punjab	27.71	2.11%		
Tamilnadu	27.02	2.06%		
Maharashtra	25.65	1.96%		
UT Chandigarh	22.05	1.68%		
Bihar	22.05	1.61%		
JINDAL POWER	13.01	0.99%		
	12.95	0.99%		
Karnataka				
Arunachal Pradesh	11.76	0.90%		
LANKO_AMK	11.68	0.89%		
DCPP	11.59	0.88%		
Meghalaya	10.90	0.83%		
STERLITE	9.73	0.74%		
Manipur	8.96	0.68%		
MAITHON POWER LTD	8.55	0.65%		
SHREE CEMENT	8.48	0.65%		
Nagaland	8.21	0.63%		
Assam	7.95	0.61%		
NJPC	7.03	0.54%		
Daman and Diu	6.01	0.46%		
Mizoram	5.24	0.40%		
NEEPCO Stations	4.81	0.37%		
RGPPL(Dabhol)	4.71	0.36%		
Delhi	4.70	0.36%		
GOA	4.67	0.36%		
Tripura	4.52	0.34%		
Dadra & Nagar Haveli	4.25	0.32%		
ACBIL	3.24	0.25%		
BALCO	1.94	0.15%		
SIMHAPURI	1.65	0.13%		
LANKO_KONDAPALLY	1.63	0.12%		
Sikkim	1.55	0.12%		
NSPCL	1.36	0.10%		
KARCHAM WANGTOO	0.89	0.07%		
AD HYDRO	0.49	0.04%		
Pondicherry	0.13	0.01%		
Total	1310.72	100.00%		
Volume of Export by top 5 States	458.62	34.99%		

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JANUARY 2013									
Sr.No.	Total volume of								
1	Rajasthan	1112.56							
2	MP	620.67							
3	Andhra Pradesh	535.64							
4	Tamilnadu	485.30							
5	Uttarakhand	413.70							
6	Kerala	377.27							
7	J&K	357.73							
8	Himachal Pradesh	290.59							
9	Bihar	193.26							
10	Jharkhand	145.16							
11	Assam	83.18							
12	Meghalaya	<u> </u>							
<u>13</u> 14	Maharashtra CGPL	29.98							
<u>15</u> 16	Dadra & Nagar Haveli Arunachal Pradesh	<u>28.37</u> 20.73							
17	UT Chandigarh	17.19							
18	Nagaland	15.01							
19	Manipur	5.61							
20	Millou	4.92							
20	RGPPL(Dabhol)	3.09							
22	Meenakshi	0.99							
23	NJPC	0.99							
23	NSPCL	0.17							
25	VANDANA VIDYUT	0.08							
26	KARCHAM WANGTOO	-0.04							
20	LANCO BUDHIL	-0.41							
28	Tripura	-0.95							
29	Daman and Diu	-1.45							
30	BALCO	-1.71							
31	SIMHAPURI	-6.76							
32	AD HYDRO	-10.71							
33	Sikkim	-13.14							
34	ACBIL	-14.16							
35	GOA	-14.49							
36	NEEPCO Stations	-16.69							
37	ADANI HVDC	-21.31							
38	ADHUNIK POWER LTD	-23.88							
39	LANKO_KONDAPALLY	-26.86							
40	Pondicherry	-37.60							
41	MAITHON POWER LTD	-59.22							
42	DCPP	-61.17							
43	SHREE CEMENT	-101.76							
44	LANKO_AMK	-104.93							
45	NHPC Stations	-104.97							
46	Orissa	-115.69							
47	West Bengal	-120.00							
48	Punjab	-130.10							
49	Uttar Pradesh	-131.75							
50	Chattisgarh	-139.70							
51	Haryana	-145.65							
52	DVC	-226.01							
53	STERLITE	-331.54							
54	Gujarat	-506.95							
55	JINDAL POWER	-609.72							
56	Karnataka	-751.31							
57	Delhi	-847.93							
* Total volu	me of net short-term transactions of electricity includes ne	et of transactions of electricity through							

* 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, JANUARY 2013							
	Details of Congestion	IEX	PXIL					
А	Unconstrained Cleared Volume* (MUs)	2587.01	144.30					
В	Actual Cleared Volume and hence scheduled (MUs)	2045.40	53.18					
С	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	541.61	91.11					
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	20.94%	63.14%					
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	99.60%	98.76%					
F	Congestion occurrence (%) time block wise							
	0.00 - 6.00 hours	25.10%	25.31%					
	6.00 - 12.00 hours	24.97%	25.04%					
	12.00 - 18.00 hours	25.10%	24.36%					
	18.00 - 24.00 hours	24.83%	25.28%					
* This	power would have been scheduled had there been no conges	stion.						
Sourc	e: IEX & PXIL							

Table-17:				ACTIONS OF (DAY-WISE	ELECTRICITY IN	
Date	Bilate	eral	(Area (Volume	Exchange Clearing # of day market)	Unscheduled Interchange (Over	Total Electricity Generation (MUs) as given at CEA
	Through Traders and PXs**	Direct	IEX	ΡΧΙ	Drawl+Under Generation)	Website*
1-Jan-13	84.96	33.44	72.12	2.88	45.54	2560
2-Jan-13	103.04	33.94	59.59	2.59	48.61	2519
3-Jan-13	110.41	34.32	67.12	2.83	42.50	2538
4-Jan-13	101.21	32.46	70.63	2.62	46.00	2546
5-Jan-13	115.36	33.03	69.44	2.65	47.87	2535
6-Jan-13	117.39	33.77	67.09	1.68	45.47	2486
7-Jan-13	119.40	35.75	64.51	1.70	44.69	2520
8-Jan-13	105.62	39.50	65.91	1.74	46.95	2531
9-Jan-13	101.54	40.59	62.32	1.80	45.51	2585
10-Jan-13	105.63	38.27	65.91	2.58	48.21	2590
11-Jan-13	110.12	41.31	64.84	1.42	46.19	2609
12-Jan-13	110.32	40.10	69.08	1.94	43.76	2590
13-Jan-13	93.37	41.25	73.76	2.24	45.83	2514
14-Jan-13	110.82	39.04	66.51	3.27	51.10	2486
15-Jan-13	117.80	40.46	65.08	1.63	45.62	2509
16-Jan-13	118.02	39.52	67.43	1.28	44.79	2536
17-Jan-13	116.63	41.24	62.71	1.95	63.26	2513
18-Jan-13	118.75	40.92	59.88	0.98	76.40	2445
19-Jan-13	122.86	40.54	51.61	0.69	55.37	2474
20-Jan-13	124.11	41.25	55.30	0.69	49.23	2456
21-Jan-13	125.61	41.56	62.70	1.43	49.02	2505
22-Jan-13	127.35	40.74	63.67	1.44	48.21	2559
23-Jan-13	122.62	40.35	66.69	1.16	44.46	2544
24-Jan-13	121.44	38.94	71.24	1.13	45.57	2557
25-Jan-13	116.83	37.93	69.96	1.16	45.51	2539
26-Jan-13	115.04	34.49	65.26	1.72	47.72	2503
27-Jan-13	117.73	37.99	63.97	1.17	51.32	2458
28-Jan-13	127.16	38.98	64.97	1.10	46.14	2529
29-Jan-13	129.49	39.01	69.92	1.25	44.32	2551
30-Jan-13	119.81	41.16	73.00	1.35	48.01	2586
31-Jan-13	116.92	40.94	73.20	1.11	49.32	2532
Total	3547.34	1192.76	2045.40	53.18	1502.50	78403.87
Source: NLD						
* Gross Elect	ricity Generatio	n excluding e	lectricity gene	ration from rei	newables and captive p	ower plants.

* 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), JANUARY 2013 (DAY-WISE)												
Market Day ahead market of IEX Day ahead market of PXIL Under Drawl/Ove								awl/Over Di	awl from	the Grid (UI)	
	Mini-	Maxi-	Weighted	Mini-	Maxi-	Weighted	NEW Grid		NEW Grid SR Gr		SR Grie	id
Date	mum ACP	mum ACP	Average Price*	mum ACP	mum ACP	Average Price*	Mini- mum Price	Maxi- mum Price	Average Price**	Mini- mum Price	Maxi- mum Price	Average Price**
1-Jan-13	0.01	5.96	4.18	1.90	13.00	4.10	0.00	5.63	1.71	0.00	5.34	2.98
2-Jan-13	0.77	20.00	3.85	1.50	5.80	3.92	0.00	8.21	2.97	0.00	4.78	2.22
3-Jan-13	1.35	10.00	4.06	1.40	8.00	3.90	0.33	7.65	3.51	0.00	5.34	2.99
4-Jan-13	1.35	18.00	3.93	2.00	8.00	4.20	1.16	10.80	3.93	0.33	8.49	3.48
5-Jan-13	1.34	12.00	4.20	2.00	5.50	4.26	0.00	10.80	3.91	0.33	5.34	3.01
6-Jan-13	1.42	12.00	4.09	2.00	12.00	3.76	0.00	8.21	2.55	0.00	5.34	2.94
7-Jan-13	1.30	11.50	4.19	2.00	12.00	3.99	0.00	10.80	3.40	0.00	5.06	2.39
8-Jan-13	1.50	14.00	4.39	2.00	5.73	3.96	0.00	8.21	2.93	0.00	7.65	3.44
9-Jan-13	1.43	15.00	4.39	2.00	5.99	4.73	0.00	5.91	2.36	0.00	5.63	2.59
10-Jan-13	1.30	15.00	4.50	1.47	5.99	4.61	0.00	9.06	2.55	0.00	5.63	2.38
11-Jan-13	1.00	15.10	4.46	2.00	8.00	4.53	0.00	9.06	2.52	0.00	5.06	2.35
12-Jan-13	1.27	15.50	4.47	2.00	8.00	4.55	0.00	5.91	2.31	0.00	5.34	2.76
13-Jan-13	1.20	15.00	4.07	2.00	5.95	4.41	0.00	4.50	1.64	0.00	5.63	2.51
14-Jan-13	1.25	15.50	3.75	2.00	5.95	3.81	0.00	4.78	1.33	0.00	7.65	2.15
15-Jan-13	1.25	13.00	3.83	1.80	5.80	4.56	0.00	7.37	2.54	0.00	5.34	1.85
16-Jan-13	1.24	15.00	4.01	1.85	5.95	3.47	0.00	7.93	1.93	0.00	7.65	2.82
17-Jan-13	0.10	15.03	3.57	1.83	5.90	3.78	0.00	3.93	0.87	0.00	10.80	2.89
18-Jan-13	1.25	16.00	3.43	2.00	5.35	3.29	0.00	5.34	1.30	0.17	5.91	2.29
19-Jan-13	1.25	18.00	3.30	2.34	3.70	3.18	0.00	4.50	1.48	0.00	5.91	3.05
20-Jan-13	1.20	18.00	3.15	2.00	2.70	2.37	0.00	7.65	1.59	0.00	5.63	2.86
21-Jan-13	1.24	19.50	3.68	2.00	8.00	2.63	0.00	7.65	1.90	0.50	7.93	3.35
22-Jan-13	1.20	18.00	3.43	1.80	10.00	2.61	0.00	5.34	1.41	0.50	7.37	3.13
23-Jan-13	1.20	17.00	3.35	1.70	8.00	2.54	0.00	7.37	2.13	0.99	7.93	3.66
24-Jan-13	1.35	16.20	3.03	1.63	8.00	2.58	0.00	5.34	1.47	0.00	7.09	3.21
25-Jan-13	1.15	7.05	2.53	1.63	6.00	2.43	0.00	9.06	3.22	0.00	9.62	4.29
26-Jan-13	1.12	7.05	2.33	1.60	3.75	2.43	0.00	8.21	2.32	0.00	5.91	3.20
27-Jan-13	1.20	19.00	2.83	1.60	4.01	2.24	0.00	4.78	1.72	0.00	7.09	2.32
28-Jan-13	1.19	19.00	2.83	1.75	4.01	2.40	0.00	7.65	2.19	0.50	7.93	3.29
29-Jan-13	1.24	19.00	3.05	1.75	4.20	2.57	0.00	7.09	2.35	0.00	5.91	3.02
30-Jan-13	1.25	18.03	3.10	2.00	4.01	2.53	0.00	8.78	2.61	0.00	7.37	3.67
31-Jan-13	1.25	19.00	3.09	1.99	4.01	2.53	0.00	8.49	3.02	0.99	8.49	3.96
	0.01#	20.00#	3.65	1.40#	13.00#	3.66	0.00#	10.80#	2.31	0.00#	10.80#	2.94
* Weighted a and ACP rep	average poresent the	rice compu e schedule	uted based or ed volume and	n Area Cle d weighte	earing Volu d average	data on UI Pr ume (ACV) ar price of all th	id Area Cle e bid area	earing Pric s of power	exchanges.			
· · ·	0 1			s of 15 m	inutes eac	h in a day. Ul	price inclu	udes Ceilir	ng UI Rate +4	10% additi	onal UI cha	arge.
# Maximum	# Maximum/Minimum in the month											

Punjab30Haryana38Rajasthan8Delhi53Uttar Pradesh25Uttar Pradesh55Uttarakhand1Himachal Pradesh5J & K1UT Chandigarh69Maharashtra69Chattisgarh8Daman and Diu1Dadra & Nagar Haveli1Andhra Pradesh5Karnataka34Kerala32Orissa9Bihar32Jharkhand5Sikkim5DVC31Arunachal Pradesh6Assam6Manipur6Manipur6Manipur6Manipur6Meghalaya6	Sale 03.18 80.57 88.16 36.48 51.42 0.00 50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	Pur- chase 8.48 100.33 659.43 36.07 63.84 346.30 301.96 287.88 0.00 646.97 256.68 77.95 0.00 38.64	Net** -294.69 -280.24 571.27 -500.42 -187.58 346.30 251.50 276.18 -7.44 641.24 256.68 -614.89 -89.09	Sale 1.02 23.65 12.54 242.99 3.99 3.60 1.69 1.10 0.26 47.29 92.63	Pur- chase 198.75 47.83 557.70 15.97 65.72 46.18 20.20 7.15 5.32	Net** 197.73 24.18 545.16 -227.01 61.73 42.58 18.51 6.05	Export (Under Drawl) 60.85 23.27 70.82 125.20 83.72 18.65 9.43	Import (Over Drawl) 27.71 133.68 66.95 4.70 77.81 43.46 30.01	Net** -33.14 110.42 -3.87 -120.50 -5.91 24.81	Total Net*** -130.10 -145.65 1112.56 -847.93 -131.75
Haryana38Rajasthan8Delhi53Uttar Pradesh25Uttarakhand1Himachal Pradesh5J & K1UT ChandigarhMPMaharashtraGujaratGujarat69Chattisgarh8Daman and Diu0Dadra & Nagar Haveli34Kerala34Kerala32Orissa9BiharJharkhandSikkim0DVC31Arunachal Pradesh4Andra Pradesh32Orissa9BiharJharkhandMarkhand31Arunachal Pradesh4Assam34Manipur1Meghalaya1	80.57 88.16 36.48 51.42 0.00 50.46 11.70 7.44 5.74 0.00 92.84 90.00 0.00 0.23 42.29 0.00	100.33 659.43 36.07 63.84 346.30 301.96 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	-280.24 571.27 -500.42 -187.58 346.30 251.50 276.18 -7.44 641.24 256.68 -614.89	23.65 12.54 242.99 3.99 3.60 1.69 1.10 0.26 47.29	47.83 557.70 15.97 65.72 46.18 20.20 7.15 5.32	24.18 545.16 -227.01 61.73 42.58 18.51	23.27 70.82 125.20 83.72 18.65 9.43	27.71 133.68 66.95 4.70 77.81 43.46 30.01	110.42 -3.87 -120.50 -5.91 24.81	-145.65 1112.56 -847.93
Rajasthan8Delhi53Uttar Pradesh25Uttarakhand1Himachal Pradesh5J & K1UT ChandigarhMPMaharashtraGujaratGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKKarnataka34Kerala32Orissa9BiharJharkhandSikkimDVCAssamAnipurManipurManipur	88.16 36.48 51.42 0.00 50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	659.43 36.07 63.84 346.30 301.96 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	571.27 -500.42 -187.58 346.30 251.50 276.18 -7.44 641.24 256.68 -614.89	12.54 242.99 3.99 3.60 1.69 1.10 0.26 47.29	557.70 15.97 65.72 46.18 20.20 7.15 5.32	545.16 -227.01 61.73 42.58 18.51	70.82 125.20 83.72 18.65 9.43	66.95 4.70 77.81 43.46 30.01	-3.87 -120.50 -5.91 24.81	1112.56 -847.93
Delhi53Uttar Pradesh25Uttarakhand1Himachal Pradesh5J & K1UT ChandigarhMPMaharashtraGujaratGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKKarnataka34Kerala7Tamilnadu9BiharJharkhandSikkimDVCAssam31Arunachal Pradesh32Orissa9BiharJharkhandDVC31Arunachal Pradesh4Assam34ManipurMeghalaya	36.48 51.42 0.00 50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	36.07 63.84 346.30 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	-500.42 -187.58 346.30 251.50 276.18 -7.44 641.24 256.68 -614.89	242.99 3.99 3.60 1.69 1.10 0.26 47.29	15.97 65.72 46.18 20.20 7.15 5.32	-227.01 61.73 42.58 18.51	125.20 83.72 18.65 9.43	4.70 77.81 43.46 30.01	-120.50 -5.91 24.81	-847.93
Uttar Pradesh25UttarakhandHimachal Pradesh5J & K1UT ChandigarhMPMaharashtraGujaratGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnatakaKarnataka34Kerala7Tamilnadu9BiharJharkhandSikkimDVCArunachal PradeshArunachal Pradesh	51.42 0.00 50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	63.84 346.30 301.96 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	-187.58 346.30 251.50 276.18 -7.44 641.24 256.68 -614.89	3.99 3.60 1.69 1.10 0.26 47.29	65.72 46.18 20.20 7.15 5.32	61.73 42.58 18.51	83.72 18.65 9.43	77.81 43.46 30.01	-5.91 24.81	
UttarakhandHimachal PradeshJ & KJ & KUT ChandigarhMPMaharashtraGujaratGujaratG9ChattisgarhBaman and DiuDadra & Nagar HaveliAndhra PradeshKarnatakaKeralaTamilnaduPondicherryWest BengalOrissaBiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	0.00 50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.00 0.23 42.29 0.00	346.30 301.96 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	346.30 251.50 276.18 -7.44 641.24 256.68 -614.89	3.60 1.69 1.10 0.26 47.29	46.18 20.20 7.15 5.32	42.58 18.51	18.65 9.43	43.46 30.01	24.81	-131.75
Himachal Pradesh5J & K1UT ChandigarhMPMaharashtraGujaratGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnatakaKarnataka34KeralaTamilnaduPondicherry9BiharJharkhandSikkimDVCArunachal PradeshArunachal PradeshAndhra PradeshManipurManipurMeghalaya	50.46 11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.00 0.23 42.29 0.00	301.96 287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	251.50 276.18 -7.44 641.24 256.68 -614.89	1.69 1.10 0.26 47.29	20.20 7.15 5.32	18.51	9.43	30.01		
J & K1UT ChandigarhMPMaharashtraGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	11.70 7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	287.88 0.00 646.97 256.68 77.95 0.00 0.00 38.64	276.18 -7.44 641.24 256.68 -614.89	1.10 0.26 47.29	7.15 5.32					413.70
UT ChandigarhMPMaharashtraGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	7.44 5.74 0.00 92.84 89.09 0.00 0.23 42.29 0.00	0.00 646.97 256.68 77.95 0.00 0.00 38.64	-7.44 641.24 256.68 -614.89	0.26 47.29	5.32	6.05	00.70	00.00	20.58	290.59
MPMaharashtraGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnatakaKarnataka34KeralaTamilnaduPondicherryWest BengalWest Bengal32Orissa9BiharJharkhandSikkimDVCArunachal PradeshAssamManipurManipurMeghalayaManipur	5.74 0.00 92.84 89.09 0.00 0.20 0.23 42.29 0.00	646.97 256.68 77.95 0.00 0.00 38.64	641.24 256.68 -614.89	47.29		E 00	20.79	96.29	75.50	357.73
MaharashtraGujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	0.00 92.84 89.09 0.00 0.00 0.23 42.29 0.00	256.68 77.95 0.00 0.00 38.64	256.68 -614.89		25.20	5.06 -22.09	2.48 52.01	22.05 53.54	19.57 1.52	<u>17.19</u> 620.67
Gujarat69Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	92.84 89.09 0.00 0.23 42.29 0.00	77.95 0.00 0.00 38.64	-614.89	32.05	12.25	-80.38	151.71	25.65	-126.05	50.24
Chattisgarh8Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	89.09 0.00 0.23 42.29 0.00	0.00 0.00 38.64		373.40	500.36	126.96	75.42	56.40	-19.02	-506.95
Daman and DiuDadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest BengalWest Bengal32Orissa9BiharJharkhandJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	0.00 0.00 0.23 42.29 0.00	0.00 38.64		90.73	8.61	-82.13	28.48	60.00	31.51	-139.70
Dadra & Nagar HaveliAndhra PradeshKarnataka34KeralaTamilnaduPondicherryWest BengalWest Bengal32Orissa9BiharJharkhandSikkimDVCArunachal PradeshAssamManipurMeghalayaImage State Stat	0.00 0.23 42.29 0.00	38.64	0.00	0.00	0.00	0.00	7.45	6.01	-1.45	-1.45
Andhra PradeshKarnataka34KeralaTamilnaduPondicherryWest BengalWest Bengal32Orissa9BiharJharkhandJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	0.23 42.29 0.00		38.64	0.00	0.00	0.00	14.52	4.25	-10.27	28.37
Karnataka34KeralaTamilnaduTamilnaduPondicherryWest Bengal32Orissa9BiharJharkhandJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	42.29 0.00	282.07	281.85	65.68	299.76	234.08	20.61	40.33	19.72	535.64
KeralaTamilnaduPondicherryWest Bengal32Orissa9Bihar3Jharkhand3Sikkim3DVC31Arunachal PradeshAssam3Manipur4Meghalaya3	0.00	5.48	-336.80	410.23	9.24	-400.98	26.48	12.95	-13.53	-751.31
PondicherryWest Bengal32Orissa9Bihar3Jharkhand3Sikkim3DVC31Arunachal PradeshAssam3Manipur4Meghalaya3	0.00	248.57	248.57	0.00	68.42	68.42	1.07	61.34	60.27	377.27
West Bengal32Orissa9Bihar9Jharkhand9Sikkim9DVC31Arunachal PradeshAssam9Manipur9Meghalaya9	0.00	392.69	392.69	0.00	100.53	100.53	34.94	27.02	-7.92	485.30
Orissa9BiharImage: SikkimJharkhandImage: SikkimDVC31Arunachal PradeshAssamManipurMeghalaya	0.00	0.00	0.00	0.00	0.00	0.00	37.73	0.13	-37.60	-37.60
BiharJharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	23.06	142.15	-180.91	56.68	51.32	-5.37	17.61	83.89	66.28	-120.00
JharkhandSikkimDVC31Arunachal PradeshAssamManipurMeghalaya	96.59	0.00	-96.59	28.78	0.00	-28.78	28.57	38.25	9.68	-115.69
Sikkim DVC 31 Arunachal Pradesh Assam Manipur Meghalaya	0.00	178.94	178.94	0.00	0.00	0.00	6.81	21.13	14.32	193.26
DVC31Arunachal PradeshAssamManipurMeghalaya	4.19	137.05	132.86	0.00	0.00	0.00	19.23	31.53	12.30	145.16
Arunachal Pradesh Assam Manipur Meghalaya	0.00	0.00	0.00	8.35	0.00	-8.35	6.33	1.55	-4.78	-13.14
Assam Manipur Meghalaya	16.50	61.11	-255.39	12.52	0.00	-12.52	12.17	54.07	41.90	-226.01
Manipur Meghalaya	0.00	0.00	0.00	0.00	9.38	9.38	0.40	11.76	11.36	20.73
Meghalaya	0.00	54.33	54.33	0.00	35.46	35.46	14.56	7.95	-6.61	83.18
	0.00	0.00	0.00	0.00	0.00	0.00	3.35	8.96	5.61	5.61
Mizoram	0.00	44.09 0.28	44.09 0.28	1.68	5.66 0.00	3.99 0.00	2.39 0.60	10.90 5.24	8.51 4.64	<u>56.58</u> 4.92
	0.00	0.28	0.28	0.00	7.10	7.10	0.80	8.21	7.91	4.92
	1.44	1.62	0.00	3.23	0.40	-2.83	2.83	4.52	1.69	-0.95
	0.00	2.40	2.40	0.00	0.00	0.00	21.56	4.67	-16.89	-14.49
	0.00	0.00	0.00	96.69	0.00	-96.69	40.07	31.80	-8.29	-104.97
	0.00	0.00	0.00	0.00	0.00	0.00	6.54	7.03	0.49	0.49
	9.98	0.00	-9.98	0.73	0.00	-0.73	0.49	0.49	0.00	-10.71
KARCHAM WANGTOO	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.89	-0.04	-0.04
	88.16	0.00	-88.16	17.62	0.00	-17.62	4.45	8.48	4.03	-101.76
	0.00	0.00	0.00	0.41	0.00	-0.41	0.00	0.00	0.00	-0.41
	0.00	0.00	0.00	21.31	0.00	-21.31	0.00	0.00	0.00	-21.31
	91.03	0.00	-391.03	216.12	0.00	-216.12	15.59	13.01	-2.58	-609.72
—	89.22	0.00	-89.54	0.00	0.00	0.00	27.07	11.68	-15.38	-104.93
	0.00	0.00	0.00	0.00	0.00	0.00	1.19	1.36	0.17	0.17
	1.86	0.00	-1.86	11.55	0.00	-11.55	3.98	3.24	-0.75	-14.16
	0.00	0.00	0.00	1.80	0.00	-1.80	1.84	1.94	0.09	-1.71
	0.00	0.00	0.00	0.00	0.00	0.00	1.63	4.71	3.09	3.09
	0.00	0.00	0.00	0.00	0.00	0.00	15.26	45.24	29.98	29.98
	0.00	0.00	0.00	68.94 0.00	0.00	-68.94 0.00	3.81 0.00	11.59 0.00	7.77	<u>-61.17</u> 0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
	28.11	0.00	-28.11	0.00	0.08	0.08	0.00	1.63	1.25	-26.86
	0.00	0.00	0.00	7.41	0.00	-7.41	1.00	1.65	0.65	-6.76
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
	21.97	0.99	-221.97	110.82	0.00	-110.82	8.48	9.73	1.25	-331.54
	35.72	0.00	-35.72	23.08	0.00	-23.08	8.97	8.55	-0.42	-59.22
	0.00	0.00	0.00	23.88	0.00	-23.88	0.00	0.00	0.00	-23.88
	0.00	0.00	0.00	16.20	0.00	-16.20	5.30	4.81	-0.49	-16.69
Source: NLDC										

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, JANUARY 2013** IEX PXIL Sr.No. **Details of REC Transactions Non-Solar** Solar Non Solar Solar А Volume of Buy Bid 40138 190875 2107 2462 Volume of Sell Bid 1371503 203 370389 В 3356 С Ratio of Buy Bid to Sell Bid Volume 11.96 0.14 10.38 0.01 D Market Clearing Volume (MWh) 2105 190875 203 2462 Market Clearing Price (₹/MWh) Е 12500 1500 12500 1500

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:Forbearance and Floor Price w.e.f 1st April 2012Type of RECFloor Price
(₹/MWh)Forbearance
Price (₹/MWh)Solar9300.0013400.00Non-Solar1500.003300.00