



Monthly Report on Short-term Transactions of Electricity in India

June, 2017



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Abbreviations

Abbreviation	Expanded Version
ACBIL	ACB (India) Limited
ACP	Area Clearing Price
ACV	Area Clearing Volume
Adani HVDC	Adani Power Limited (High Voltage Direct Line Current Line)
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
COASTGEN	Coastal Energen Private Limited
DAGACHU	Dagachhu Hydro Power Corporation
DB POWER	Diligent Power Pvt. Ltd.
DCPP	Donga Mahua Captive Power Plant
DGEN MEGA POWER	DGEN Mega Power Project
DHARIWAL POWER	Dhariwal Power Station
DOYANG HEP	Doyang Hydro Electric Project
DSM	Deviation Settlement Mechanism
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR POWER	Essar Power Limited
ESSAR STEEL	Essar Steel Ltd
GMR CHHATTISGARH	GMR Chhattisgarh Energy Limited
GMR KAMALANGA	GMR Kamalanga Energy Ltd.
IEX	Indian Energy Exchange Limited
ILF&S	Infrastructure Leasing & Financial Services Limited
J&K	Jammu & Kashmir
JAYPEE NIGRIE	Jaypee Nigrie Super Thermal Power Project
JINDAL POWER	Jindal Power Limited
JINDAL STAGE-II	Jindal Power Ltd Stage II
JITPL	Jindal India Thermal Power Ltd.
JORETHANG	Jorethang Loop Hydroelectric Power Project
KARCHAM WANGTOO	Jaypee Karcham Hydro Corporation Limited
KORBA WEST POWER	Korba West Power Company Limited
KSK MAHANADI	KSK Mahanadi Power Ltd
LANKO BUDHIL	LancoBudhil Hydro Power Private Limited
LANKOAMK	LancoAmarkantak Power Private Limited
LANKOKONDAPALLY	LancoKondapally Power Private Limited
LOKTAK	Loktak Power Project
MALANA	Malana Hydroelectric Plant
Maruti Coal	Maruti Clean Coal and Power Limited
MB POWER	MB Power Ltd
MEENAKSHI	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MUs	Million Units
NEEPCO	North Eastern Electric Power Corporation Limited

NHPC STATIONS	National Hydro Electric Power Corporation Ltd. Stations
NLC	Neyveli Lignite Corporation Limited
NTPC STATIONS	National Thermal Power Corporation Ltd. Stations
NJPC	Nathpa Jhakri Hydroelectric Power Station
NLDC	National Load Despatch Centre
NSPCL	NTPC - SAIL Power Company Private Limited
NVVN	NTPC Vidyut Vyapar Nigam Limited
ONGC Platana	ONGC Tripura Power Company
OTC	Over The Counter
PX	Power Exchange
PXIL	Power Exchange India Limited
RANGIT HEP	Rangit Hydro electric power project
REC	Renewable Energy Certificate
RGPPL	Ratnagiri Gas and Power Private Limited
RLDC	Regional Load Despatch Centre
RTC	Round The Clock
Sasan UMPP	Sasan Ultra Mega Power Project
SEMBCORP	Sembcorp Gayatri Power Ltd
SHREE CEMENT	Shree Cement Limited
SIMHAPURI	Simhapuri Energy Private Limited
SPECTRUM	Spectrum Power Generation Ltd
TEESTA STG3	TEESTA STG3 Hydro Power Project

Introduction

A well-functioning electricity market requires an effective market monitoring process. As part of the market monitoring process, the monthly report on short-term transactions of electricity, is being prepared and posted on the website of CERC since August 2008. Here, “short-term transactions of electricity” refers to the contracts of less than one year period, for electricity transacted (inter-State & intra-State) through inter-State Trading Licensees and directly by the Distribution Licensees, Power Exchanges (Indian Energy Exchange Ltd (IEX) and Power Exchange India Ltd (PXIL), and Deviation Settlement Mechanism (DSM). The objectives of the report are: (i) to observe the trends in volume and price of the short-term transactions of electricity; (ii) to analyse competition among the market players; (iii) to analyse effect of congestion on volume of electricity transacted through power exchanges; (iv) to analyse bilateral contracts executed by traders; (v) to provide information on volume and price of Renewable Energy Certificates (RECs) transacted through power exchanges; and (vi) to disclose/disseminate all relevant market information. The details of the report for the month of **June, 2017** are as under:

I: Volume of Short-term Transactions of Electricity

During June 2017, total electricity generation excluding generation from renewable and captive power plants in India was 97207.83 MUs (Table-1).

Of the total electricity generation, 10834.89 MUs (11.15%) was transacted through short-term, comprising of 4853.82 MUs (4.99%) through bilateral (through traders and term-ahead contracts on power exchanges and directly between distribution companies), followed by 3935.79 MUs (4.05%) through day ahead collective transactions on power exchanges (IEX and PXIL) and 2045.29 MUs (2.10%) through DSM (Table-1 & Figure-2).

Of the total short-term transactions, bilateral constitutes 44.80% (32.96% through traders and term-ahead contracts on power exchanges and 11.83% directly between distribution companies) followed by 36.33% through day ahead collective transactions on power exchanges and 18.88% through DSM (Table-1 & Figure-1). Daily volume of short-term transactions is shown in Table-17 & Figure-3.

The percentage share of electricity traded by each trading licensee in the total volume of electricity traded by all the trading licensees is provided in Table-2 & Figure-4. The volume of electricity transacted by the trading licensees includes bilateral transactions and the transactions undertaken through power exchanges. There were 35 trading licensees as on June, 2017. In June, 2017, 25 trading licensees were engaged in short term trading. Top 5 trading licensees had a share of 73.95% in the total volume traded by all the licensees. These are PTC India Ltd., Mittal Processor (P) Ltd., Manikaran Power Ltd., Tata Power Trading Company Pvt. Ltd. and GMR Energy Trading Ltd.

Herfindahl-Hirschman Index (HHI) has been used for measuring the competition among the trading licensees. Increase in the HHI generally indicates decrease in competition and increase of market concentration, and vice versa. The HHI below 0.15 indicates non-concentration, HHI between 0.15 and 0.25 indicates moderate concentration and HHI above 0.25 indicates high concentration. The HHI has been computed based on the volume of electricity traded (inter-State & intra-State) by inter-State trading licensees, and it was 0.1806 for the month of June, 2017, which indicates moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 3920.07 MUs and 15.72 MUs respectively. The volume of total buy bids and sell bids was 4427.42 MUs and 7348.76 MUs respectively in IEX while the same was 16.94 MUs and 72.46 MUs respectively in PXIL. The variation in the volume of buy bids and sell bids placed through power exchanges shows variation in the demand and supply position.

The volume of electricity transacted through IEX and PXIL in the term-ahead market was 28.09 MUs and 23.54 MUs respectively (Table-6 & Table-7).

II: Price of Short-term Transactions of Electricity

(i) *Price of electricity transacted through Traders:* The minimum, maximum and weighted average sale prices have been computed for the electricity transacted through traders and the sale prices were ₹2.40/kWh, ₹4.70/kWh and ₹3.31/kWh respectively (Table-3). The weighted average sale prices were also computed for the transactions during Round

the Clock (RTC), Peak and Off-peak periods separately, and the sale prices were ₹3.25/kWh, ₹3.88/kWh, and ₹3.32/kWh respectively (Table-4).

(ii) Price of electricity transacted through Power Exchanges: The 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 ₹0.80/kWh, ₹6.50/kWh and ₹2.73/kWh respectively in IEX and ₹0.00/kWh, ₹4.65/kWh and ₹3.36/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹3.60/kWh and ₹3.45/kWh respectively (Table-6 and Table-7).

(iii) Price of electricity transacted through DSM: The average deviation settlement price was ₹1.75/kWh. The minimum and maximum deviation settlement prices were ₹0.00/kWh and ₹5.95/kWh respectively (Table-8).

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

III: Volume of Short-term Transactions of Electricity (Regional Entity¹-Wise)

Of the total bilateral transactions, top 5 regional entities sold 47.81% of the volume, and these were Himachal Pradesh, Jammu & Kashmir, Sembcorp Gayatri Power Ltd, Jaypee Nigrie Super Thermal Power Project and Essar Power Limited. Top 5 regional entities purchased 60.42% of the volume, and these were Punjab, Delhi, Haryana, Bihar and Maharashtra (Table-9 & 10).

Of the total power exchange transactions, top 5 regional entities sold 46.81% of the volume, and these were Madhya Pradesh, Teesta Stage 3 Hydro Power Project, Jindal Power Ltd., Jaypee Karcham Hydro Corporation Limited and Delhi. Top 5 regional entities purchased 58.33% of the volume, and these were Gujarat, West Bengal, Maharashtra, Uttar Pradesh and Karnataka (Table-11 & 12).

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.

Of the total DSM transactions, top 5 regional entities underdrew 32.02% of the volume, and these were NTPC Stations (WR), Tamil Nadu, Telangana, Punjab and Haryana (Table-13). Top 5 regional entities overdrew 25.65% of the volume, and these were West Bengal, Andhra Pradesh, Rajasthan, NTPC Stations (ER) and NTPC Stations (NR) (Table-14).

Regional entity-wise total volume of net short-term transactions of electricity i.e. volume of net transactions through bilateral, power exchanges and DSM is shown in Table-15 & 19. Top 5 electricity selling regional entities were Himachal Pradesh, Madhya Pradesh, Jammu & Kashmir, Sembcorp Gayatri Power Ltd. and Teesta Stage 3 Hydro Power Project. Top 5 electricity purchasing regional entities were Punjab, Gujarat, Bihar, Haryana and Uttar Pradesh.

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 June, congestion occurred in IEX. The details of congestion 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

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.

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 IEX due to congestion was 0.14% of the unconstrained cleared volume. In terms of time, congestion occurred was 3.75% in IEX (Table-16). There was no congestion witnessed in PXIL.

V: Bilateral Contracts executed by Traders

In addition to the analysis on short-term transactions of electricity in June, 2017, this section covers an analysis of bilateral contracts executed in July, 2017.

(i) Duration of bilateral contracts: During July, 2017, a total of 97 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 1405.80 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 84.5% of the bilateral contracts were executed for duration of up to one week, 15.5% of the contracts were executed for duration of more than a week and up to one month and no bilateral contracts were executed for duration for more than one month.

During the month, 79 banking/swapping bilateral contracts were also executed for the volume of 668.14 MUs.

(ii) Forward Curve based on price of bilateral contracts: A forward curve reflects present day's expectation of prices for a future period. The forward curve of electricity prices are based on sale prices of bilateral contracts executed by traders. The price of each contract for each day is taken into consideration while constructing the forward curve. On the basis of these prices, the weighted average price for each day is calculated using various sale prices of contracts for delivery on that particular day.

Figure-8 represents the forward curve of electricity sale prices for the period from 1st July, 2017 to 9th October, 2017 based on the bilateral contracts⁴ executed till July, 2017. Forward curves have been drawn for the contracts executed in June, 2017 and July, 2017 for

⁴Excluding Banking/Swapping contracts

the purpose of comparison. It is observed that forward contract prices are significantly higher (for the period from 1st July 2017 to 5th August 2017) for the contracts executed in July, 2017 compared to the contracts executed in June, 2017, after which, the prices of both the contracts have been moving together.

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

The concept of Renewable Energy Certificates (RECs) seeks to address mismatch between availability of renewable energy 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 electricity market.

One REC is equivalent to 1 MWh 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 June, 2011.

In May 2017, the Supreme Court stayed trading in Renewable Energy Certificates (RECs). Hence, there were no transactions of REC during June, 2017.

VII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 11.15%.
- Of the total short-term transactions of electricity, 44.80% was transacted through bilateral (through traders and term ahead contracts on power exchanges and directly by distribution companies), followed by 36.33% through power exchanges and 18.88% through DSM.
- Top 5 trading licensees had a share of 73.95% in the total volume traded by all the trading licensees.
- The Herfindahl Hirschman Index computed for the volume of electricity traded by trading licensees was 0.1806, indicating moderate concentration of market power.
- The weighted average price of electricity transacted through trading licensees was ₹3.31/kWh. The weighted average prices of electricity transacted through IEX and PXIL were ₹2.73/kWh and ₹3.36/kWh respectively.
- The average price of electricity transacted through DSM was ₹1.75/kWh.
- Top 5 electricity selling regional entities were Himachal Pradesh, Madhya Pradesh, Jammu & Kashmir, Sembcorp Gayatri Power Ltd. and Teesta Stage 3 Hydro Power Project. Top 5 electricity purchasing regional entities were Punjab, Gujarat, Bihar, Haryana and Uttar Pradesh.
- The volume of electricity that could not be cleared in IEX due to congestion was 0.14% of the unconstrained cleared volume. In terms of time, congestion occurred was 3.75% in IEX. There was no congestion witnessed in PXIL.
- In July, 2017, 84.5% of the bilateral contracts were executed for duration of up to one week, 15.5% of the contracts were executed for duration of more than a week and up to one month and no bilateral contracts were executed for duration of more than one month.

- The forward curve of electricity sale prices for the period from 1st July, 2017 to 9th October, 2017 based on the bilateral contracts⁵ executed till July, 2017 shows that forward contract prices are significantly higher (for the period from 1st July 2017 to 5th August 2017) for the contracts executed in July, 2017 compared to the contracts executed in June, 2017, after which, the prices of both the contracts have been moving together.

⁵*Excluding Banking/Swapping contracts*

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), JUNE 2017				
Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	4853.82	44.80	4.99
	(i) Through Traders and PXs	3571.52	32.96	3.67
	(ii) Direct	1282.31	11.83	1.32
2	Through Power Exchanges	3935.79	36.33	4.05
	(i) IEX	3920.07	36.18	4.03
	(ii) PXIL	15.72	0.15	0.016
3	Through DSM	2045.29	18.88	2.10
	Total	10834.89	-	11.15
	Total Generation	97207.83	-	-

Source: NLDC

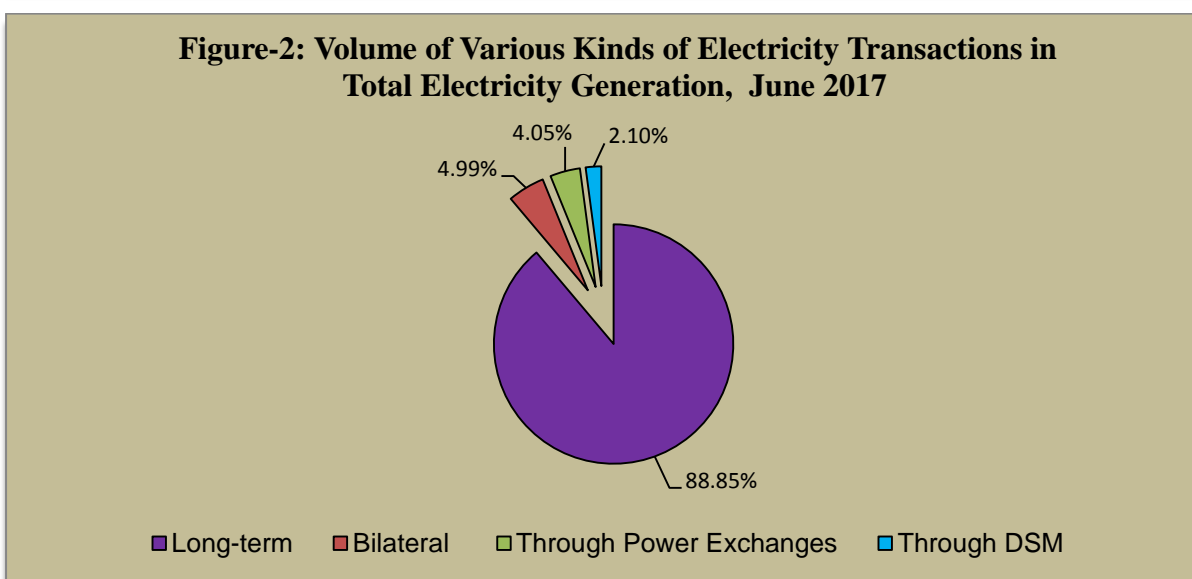
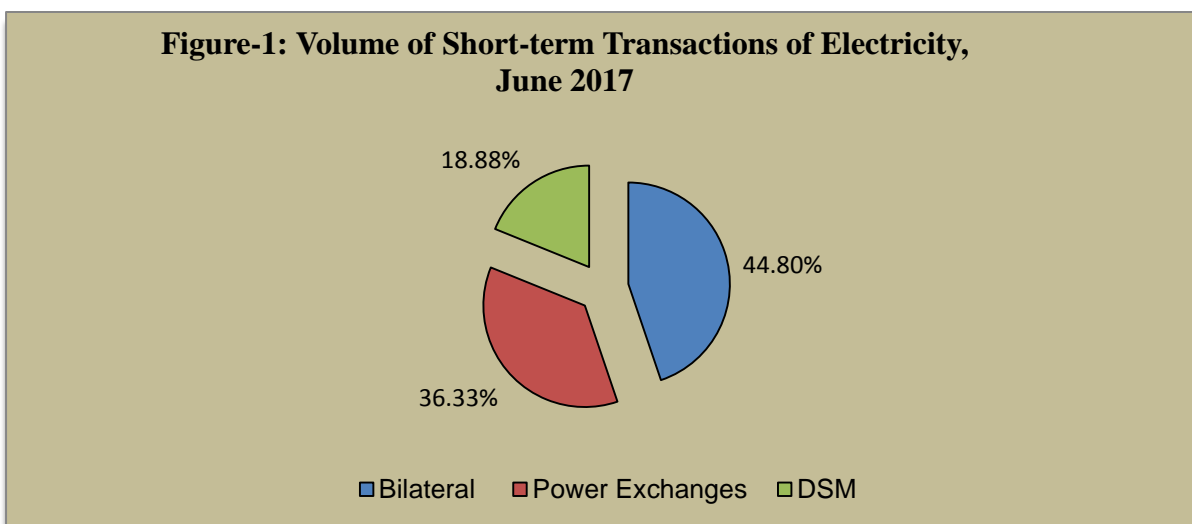


Figure-3: Volume of Short-term Transactions of Electricity, June 2017 (Day-wise)

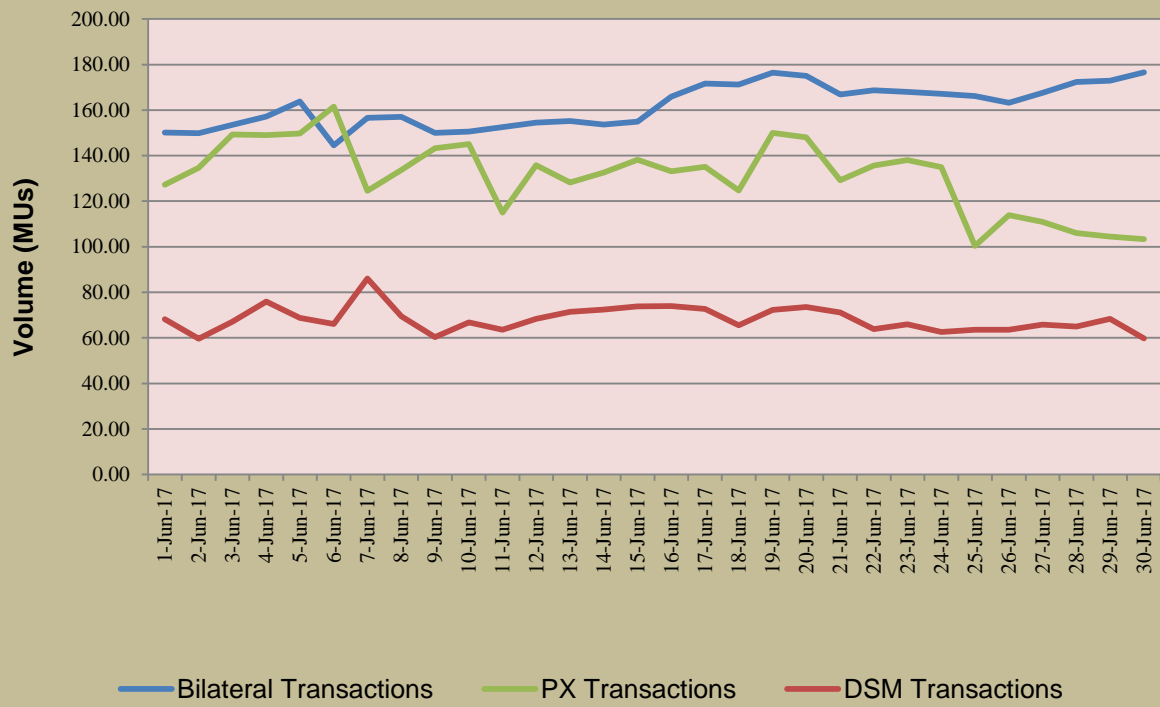


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JUNE 2017			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	36.63	0.1342
2	Mittal Processors (P) Ltd.	12.69	0.0161
3	Manikaran Power Ltd.	9.67	0.0093
4	Tata Power Trading Company (P) Ltd.	8.29	0.0069
5	GMR Energy Trading Ltd.	6.66	0.0044
6	Arunachal Pradesh Power Corporation (P) Ltd	5.01	0.0025
7	NTPC Vidyut Vyapar Nigam Ltd.	4.88	0.0024
8	JSW Power Trading Company Ltd	4.59	0.0021
9	Jaiprakash Associates Ltd.	4.26	0.0018
10	Adani Enterprises Ltd.	2.02	0.0004
11	Knowledge Infrastructure Systems (P) Ltd	1.25	0.0002
12	National Energy Trading & Services Ltd.	1.01	0.0001
13	RPG Power Trading Company Ltd.	0.47	0.0000
14	Essar Electric Power Development Corp. Ltd.	0.45	0.0000
15	Statkraft Markets Pvt. Ltd.	0.42	0.0000
16	Instinct Infra & Power Ltd.	0.40	0.0000
17	Customized Energy Solutions India (P) Ltd.	0.37	0.0000
18	Shyam Indus Power Solutions Private Limited	0.29	0.0000
19	Shree Cement Ltd.	0.24	0.0000
20	Parshavanath Power Projects Private Limited	0.20	0.0000
21	Gita Power & Infrastructure Private Limited	0.07	0.0000
22	Ambitious Power Trading Company Ltd.	0.07	0.0000
23	Phillip Commodities India (P) Ltd.	0.04	0.0000
24	My Home Power Private Ltd.	0.01	0.0000
25	Greenko Energies Pvt Ltd	0.01	0.0000
TOTAL		100.00%	0.1806
Top 5 trading licensees		73.95%	
<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>			

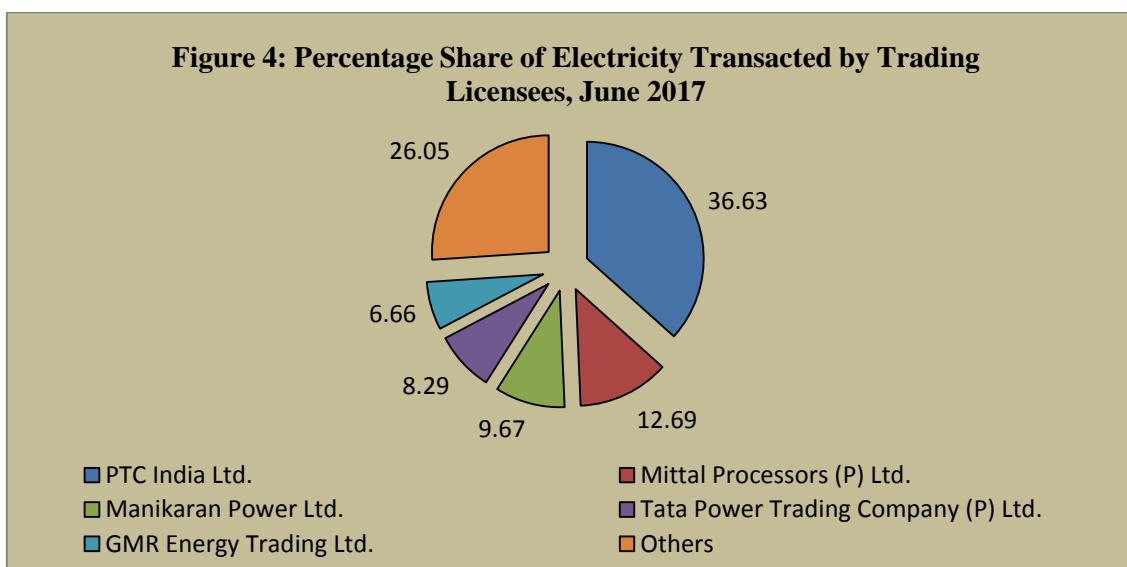


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JUNE 2017		
Sr.No	Item	Sale Price of Traders (₹/kWh)
1	Minimum	2.40
2	Maximum	4.70
3	Weighted Average	3.31

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), JUNE 2017		
Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	3.25
2	PEAK	3.88
3	OFF PEAK	3.32

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JUNE 2017			
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	0.80	0.00
2	Maximum	6.50	4.65
3	Weighted Average	2.73	3.36

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JUNE 2017			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	25.10	3.76
2	Day Ahead Contingency Contracts	2.99	2.28
	Total	28.09	3.60

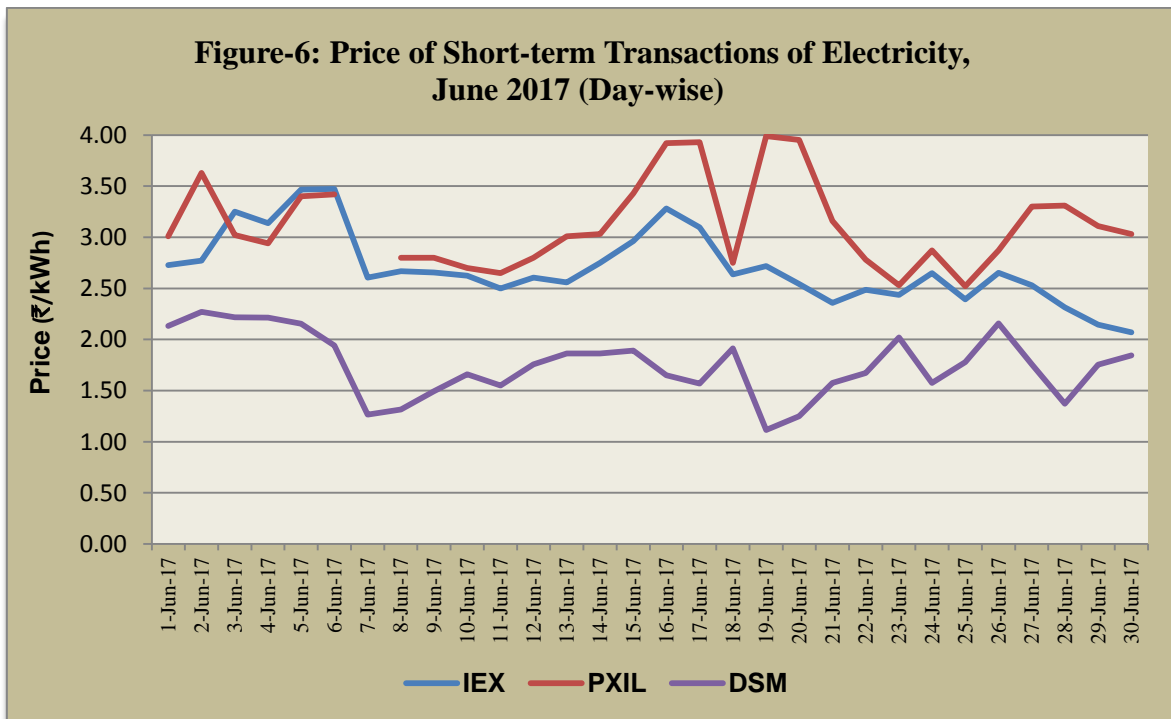
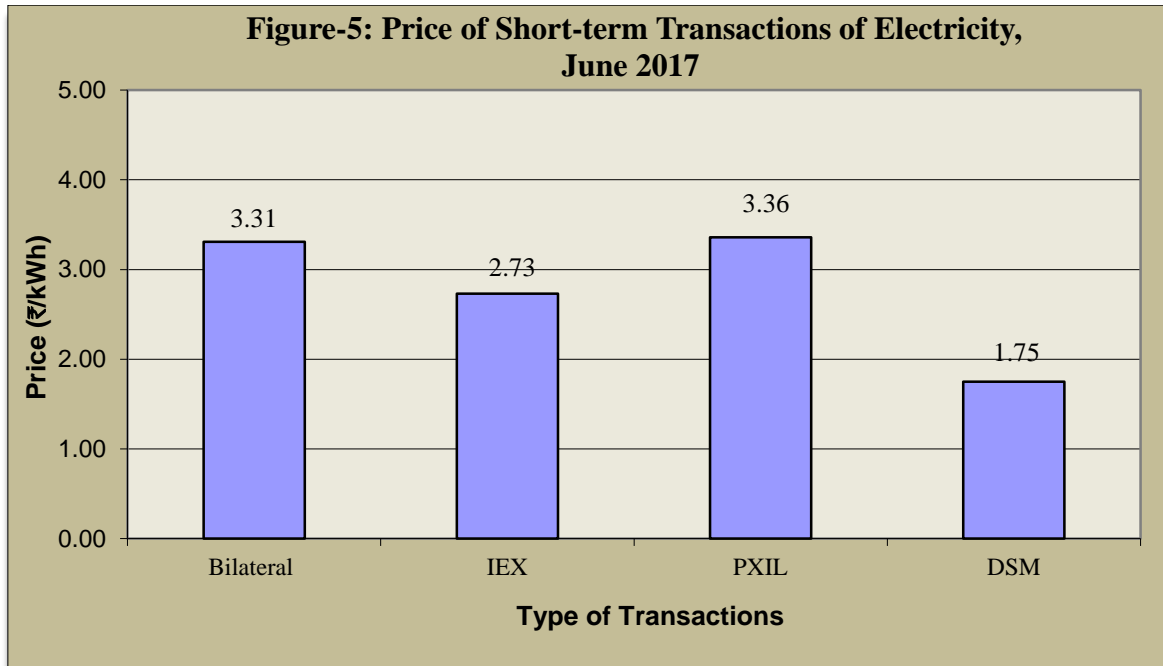
Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JUNE 2017			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	13.94	3.76
2	Weekly Contracts	9.60	3.00
	Total	23.54	3.45

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH DSM, JUNE 2017		
Sr.No	Item	Price in All India Grid (₹/kWh)
1	Minimum	0.00
2	Maximum	5.95
3	Average	1.75

Source: NLDC



Note: For PXIL, on 7th June 2017, there were no sellers in Day Ahead Product, hence, discontinuous price curve.

Table-9: VOLUME OF ELECTRICITY SOLD THROUGH BILATERAL, JUNE 2017		
Name of the Entity	Volume of Sale (MUs)	% of Volume
HIMACHAL PRADESH	859.28	17.34
J & K	552.48	11.15
SEMBCORP	487.13	9.83
JAYPEE NIGRIE	254.65	5.14
ESSAR POWER	215.77	4.35
DB POWER	214.56	4.33
ANDHRA PRADESH	186.38	3.76
RAJASTHAN	182.34	3.68
MB POWER	178.67	3.61
WEST BENGAL	177.70	3.59
KARCHAM WANGTOO	142.36	2.87
ADHUNIK POWER LTD	135.07	2.73
GMR CHATTISGARH	133.73	2.70
JITPL	120.34	2.43
GUJARAT	103.72	2.09
UTTARAKHAND	96.20	1.94
GMR KAMALANGA	89.35	1.80
MP	80.86	1.63
MEGHALAYA	76.20	1.54
AD HYDRO	74.32	1.50
MAHARASHTRA	73.79	1.49
JINDAL POWER	67.23	1.36
SHREE CEMENT	63.25	1.28
DVC	46.83	0.95
ONGC PALATANA	43.77	0.88
BALCO	43.03	0.87
DAGACHU	41.00	0.83
ACBIL	29.03	0.59
THERMAL POWERTECH	26.89	0.54
TELANGANA	25.57	0.52
MEENAKSHI	22.35	0.45
ASSAM	18.44	0.37
JINDAL STAGE-II	13.84	0.28
HARYANA	11.55	0.23
UTTAR PRADESH	10.77	0.22
LANKO_AMK	8.97	0.18
SPECTRUM	7.02	0.14
TAMIL NADU	6.93	0.14
MANIPUR	6.44	0.13
MARUTI COAL	5.82	0.12
ODISHA	5.37	0.11
CHUZACHEN HEP	4.79	0.10
KARNATAKA	4.39	0.09
GOA	2.82	0.06
DELHI	2.28	0.05
DIKCHU HEP	0.94	0.02
TEESTA STG3	0.82	0.02
COASTGEN	0.60	0.01
Total	4955.64	100.00
Volume Sold by top 5 Regional Entities	2369.30	47.81

Table-10: VOLUME OF ELECTRICITY PURCHASED THROUGH BILATERAL, JUNE 2017		
Name of the Entity	Volume of Purchase (MUs)	% of Volume
PUNJAB	1137.24	23.43
DELHI	656.18	13.52
HARYANA	451.53	9.30
BIHAR	359.56	7.41
MAHARASHTRA	328.31	6.76
UTTAR PRADESH	304.81	6.28
TAMIL NADU	238.51	4.91
ANDHRA PRADESH	235.77	4.86
ESSAR STEEL	196.76	4.05
BANGLADESH	176.98	3.65
JHARKHAND	128.19	2.64
NEPAL(NVVN)	94.68	1.95
UTTARAKHAND	91.89	1.89
CHHATTISGARH	88.36	1.82
WEST BENGAL	82.47	1.70
KERALA	69.80	1.44
ASSAM	48.05	0.99
ODISHA	45.89	0.95
GUJARAT	38.41	0.79
DADRA & NAGAR HAVELI	23.55	0.49
TELANGANA	19.20	0.40
MP	18.93	0.39
GOA	15.94	0.33
KARNATAKA	1.54	0.03
TRIPURA	0.71	0.01
BALCO	0.54	0.01
MEGHALAYA	0.03	0.00
TOTAL	4853.82	100.00
Volume Purchased by top 5 Regional Entities	2932.82	60.42

**Table-11: VOLUME OF ELECTRICITY SOLD THROUGH POWER EXCHANGES,
JUNE 2017**

Name of the Entity	Volume of Sale (MUs)	% of Volume
MP	695.62	17.67
TEESTA STG3	523.80	13.31
JINDAL POWER	231.91	5.89
KARCHAM WANGTOO	218.03	5.54
DELHI	172.96	4.39
J & K	162.72	4.13
JAYPEE NIGRIE	137.05	3.48
HIMACHAL PRADESH	131.36	3.34
TELANGANA	124.89	3.17
DVC	120.81	3.07
DB POWER	92.11	2.34
ODISHA	83.34	2.12
UTTARAKHAND	71.48	1.82
JITPL	71.15	1.81
SEMBCORP	70.73	1.80
MAHARASHTRA	68.47	1.74
TRIPURA	52.98	1.35
SIKKIM	51.12	1.30
JORETHANG	49.62	1.26
DIKCHU HEP	44.37	1.13
CHUZACHEN HEP	42.49	1.08
RAJASTHAN	41.04	1.04
GUJARAT	40.24	1.02
UTTAR PRADESH	36.58	0.93
NLC	36.11	0.92
SPECTRUM	35.52	0.90
AD HYDRO	32.26	0.82
ESSAR POWER	32.24	0.82
THERMAL POWERTECH	30.90	0.79
MANIPUR	30.58	0.78
ASSAM	30.39	0.77
MB POWER	29.90	0.76
CHHATTISGARH	29.89	0.76
ADHUNIK POWER LTD	26.49	0.67
NJPC	24.66	0.63
ACBIL	23.98	0.61
MEGHALAYA	22.28	0.57
MEENAKSHI	22.01	0.56
MIZORAM	18.00	0.46
KARNATAKA	16.44	0.42
DADRA & NAGAR HAVELI	16.05	0.41

NTPC STATIONS-WR	15.58	0.40
MAITHON POWER LTD	13.48	0.34
SHREE CEMENT	11.62	0.30
JHABUA POWER_MP	10.81	0.27
TAMIL NADU	10.75	0.27
HARYANA	10.33	0.26
BALCO	8.19	0.21
ANDHRA PRADESH	6.27	0.16
NETCL VALLUR	6.23	0.16
CHANDIGARH	5.46	0.14
MARUTI COAL	5.35	0.14
MALANA	5.34	0.14
GMR CHATTISGARH	5.11	0.13
JINDAL STAGE-II	4.98	0.13
LANCO BUDHIL	4.67	0.12
PUNJAB	4.03	0.10
KERALA	3.93	0.10
NTPC STATIONS-ER	3.51	0.09
NAGALAND	1.83	0.05
GOA	1.59	0.04
ILF&S	0.98	0.02
WEST BENGAL	0.73	0.02
DHARIWAL POWER	0.68	0.02
ONGC PALATANA	0.63	0.02
GMR KAMALANGA	0.52	0.01
NTPC STATIONS-SR	0.37	0.01
EMCO	0.23	0.01
NTPC STATIONS-NR	0.04	0.00
Total	3935.79	100.00
Volume sold by top 5 Regional Entities	1842.32	46.81

Table-12: VOLUME OF ELECTRICITY PURCHASED THROUGH POWER EXCHANGES, JUNE 2017

Name of the Entity	Volume of Purchase (MUs)	% of Volume
GUJARAT	958.76	24.36
WEST BENGAL	450.48	11.45
MAHARASHTRA	334.28	8.49
UTTAR PRADESH	286.03	7.27
KARNATAKA	266.03	6.76
RAJASTHAN	263.30	6.69
BIHAR	251.74	6.40
ANDHRA PRADESH	232.94	5.92
TELANGANA	221.47	5.63
HARYANA	152.35	3.87
ASSAM	114.64	2.91
KERALA	73.83	1.88
UTTARAKHAND	48.62	1.24
DADRA & NAGAR HAVELI	40.77	1.04
DELHI	36.33	0.92
DAMAN AND DIU	35.95	0.91
HIMACHAL PRADESH	31.00	0.79
MP	29.88	0.76
PUNJAB	25.75	0.65
ODISHA	22.04	0.56
MEGHALAYA	12.69	0.32
GOA	10.84	0.28
TAMIL NADU	8.77	0.22
ESSAR STEEL	7.84	0.20
PONDICHERRY	5.06	0.13
CHANDIGARH	3.92	0.10
CHHATTISGARH	3.82	0.10
NAGALAND	3.55	0.09
ARUNACHAL PRADESH	1.47	0.04
J & K	1.24	0.03
TRIPURA	0.39	0.01
TOTAL	3935.79	100.00
Volume purchased by top 5 Regional Entities	2295.59	58.33

Table-13: VOLUME OF ELECTRICITY UNDER DRAWAL (EXPORTED) THROUGH DSM, JUNE 2017

Name of the Entity	Volume of Under drawal (MUs)	% of Volume
NTPC STATIONS-WR	164.87	8.71
TAMIL NADU	138.91	7.34
TELANGANA	110.45	5.84
PUNJAB	101.43	5.36
HARYANA	90.05	4.76
MAHARASHTRA	86.71	4.58
UTTAR PRADESH	83.56	4.42
MP	80.61	4.26
GUJARAT	77.22	4.08
NLC	70.10	3.71
NTPC STATIONS-NR	64.50	3.41
NTPC STATIONS-ER	49.28	2.61
SASAN UMPP	40.23	2.13
DELHI	39.93	2.11
RAJASTHAN	35.07	1.85
CHHATTISGARH	34.93	1.85
NHPC STATIONS	34.36	1.82
DVC	33.61	1.78
KARNATAKA	31.89	1.69
NJPC	31.48	1.66
ANDHRA PRADESH	28.76	1.52
BIHAR	25.45	1.35
GOA	22.48	1.19
ODISHA	21.62	1.14
JHARKHAND	19.84	1.05
UTTARAKHAND	18.30	0.97
NEEPCO STATIONS	17.67	0.93
ARUNACHAL PRADESH	17.01	0.90
NTPC STATIONS-SR	16.92	0.89
WEST BENGAL	16.78	0.89
ESSAR STEEL	15.16	0.80
HIMACHAL PRADESH	14.62	0.77
MEGHALAYA	13.33	0.70
TRIPURA	11.86	0.63
MB POWER	10.46	0.55
TEESTA STG3	9.83	0.52
JITPL	9.65	0.51
JINDAL POWER	9.35	0.49
DADRA & NAGAR HAVELI	9.26	0.49
KARCHAM WANGTOO	9.26	0.49
MAITHON POWER LTD	8.56	0.45
PONDICHERRY	8.34	0.44
ASSAM	8.33	0.44
SIKKIM	8.10	0.43
TEESTA HEP	7.66	0.41
NEPAL(NVVN)	7.54	0.40
LANKO_AMK	6.59	0.35
CGPL	6.26	0.33

NSPCL	5.86	0.31
CHUZACHEN HEP	5.55	0.29
DB POWER	5.46	0.29
AD HYDRO	5.29	0.28
THERMAL POWERTECH	4.88	0.26
JINDAL STAGE-II	4.83	0.26
RGPPL (DABHOL)	4.79	0.25
RANGANADI HEP	4.38	0.23
MANIPUR	4.17	0.22
JAYPEE NIGRIE	3.89	0.21
SEMBCORP	3.83	0.20
DAGACHU	3.63	0.19
EMCO	3.41	0.18
ADHUNIK POWER LTD	3.28	0.17
ACBIL	3.21	0.17
KSK MAHANADI	3.16	0.17
CHANDIGARH	3.12	0.16
JORETHANG	3.05	0.16
URI-2	2.93	0.15
DCPP	2.92	0.15
NAGALAND	2.89	0.15
MIZORAM	2.70	0.14
BALCO	2.51	0.13
GMR KAMALANGA	2.50	0.13
KERALA	2.49	0.13
GMR CHATTISGARH	2.34	0.12
BANGLADESH	2.18	0.12
LANCO BUDHIL	1.73	0.09
RANGIT HEP	1.65	0.09
ESSAR POWER	1.59	0.08
COASTGEN	1.21	0.06
NETCL VALLUR	1.10	0.06
SHREE CEMENT	1.09	0.06
DAMAN AND DIU	1.09	0.06
ILF&S	0.94	0.05
RKM POWER	0.87	0.05
MEENAKSHI	0.86	0.05
TRN ENERGY	0.51	0.03
LOKTAK	0.50	0.03
DHARIWAL POWER	0.47	0.02
MALANA	0.36	0.02
DOYANG HEP	0.33	0.02
JHABUA POWER_MP	0.15	0.01
Total	1891.88	100.00
Volume Exported by top 5 Regional Entities	605.71	32.02

Table-14: VOLUME OF ELECTRICITY OVER DRAWAL (IMPORTED) THROUGH DSM, JUNE 2017

Name of the Entity	Volume of Over drawal (MUs)	% of Volume
WEST BENGAL	121.72	5.98
ANDHRA PRADESH	114.36	5.62
RAJASTHAN	98.36	4.84
NTPC STATIONS-ER	95.90	4.71
NTPC STATIONS-NR	91.39	4.49
MAHARASHTRA	91.07	4.48
UTTAR PRADESH	87.64	4.31
BIHAR	85.40	4.20
KARNATAKA	80.39	3.95
NTPC STATIONS-WR	76.76	3.77
GUJARAT	75.46	3.71
NTPC STATIONS-SR	73.13	3.60
HARYANA	60.68	2.98
PUNJAB	58.67	2.88
ASSAM	55.04	2.71
KERALA	52.32	2.57
TAMIL NADU	49.94	2.46
MP	42.39	2.08
ODISHA	40.40	1.99
CGPL	34.16	1.68
DVC	32.86	1.62
ESSAR STEEL	32.45	1.60
JHARKHAND	31.49	1.55
BALCO	29.08	1.43
HIMACHAL PRADESH	28.36	1.39
UTTARAKHAND	26.55	1.31
DELHI	25.96	1.28
CHHATTISGARH	22.56	1.11
DAMAN AND DIU	17.98	0.88
THERMAL POWERTECH	14.75	0.73
DAGACHU	13.77	0.68
NETCL VALLUR	12.69	0.62
GOA	12.01	0.59
NLC	11.63	0.57
TELANGANA	11.27	0.55
CHANDIGARH	11.02	0.54
AD HYDRO	10.34	0.51
JAYPEE NIGRIE	10.03	0.49
SEMBCORP	9.78	0.48
JORETHANG	9.55	0.47
TRIPURA	9.55	0.47
EMCO	9.54	0.47
SHREE CEMENT	8.06	0.40
RKM POWER	7.76	0.38
JINDAL STAGE-II	7.40	0.36
ILF&S	6.71	0.33
NSPCL	6.66	0.33
GMR KAMALANGA	6.11	0.30
ESSAR POWER	5.72	0.28

JINDAL POWER	5.66	0.28
NAGALAND	5.36	0.26
JHABUA POWER_MP	5.08	0.25
MB POWER	5.07	0.25
MAITHON POWER LTD	4.62	0.23
ACBIL	4.56	0.22
SASAN UMPP	4.38	0.22
NHPC STATIONS	4.17	0.21
JITPL	4.11	0.20
DB POWER	3.82	0.19
MANIPUR	3.76	0.18
DADRA & NAGAR HAVELI	3.65	0.18
COASTGEN	3.39	0.17
MEGHALAYA	3.08	0.15
GMR CHATTISGARH	2.95	0.14
KSK MAHANADI	2.91	0.14
MIZORAM	2.87	0.14
KARCHAM WANGTOO	2.86	0.14
TRN ENERGY	2.81	0.14
LANCO BUDHIL	2.62	0.13
TEESTA STG3	2.36	0.12
BANGLADESH	2.24	0.11
SIKKIM	2.18	0.11
ARUNACHAL PRADESH	2.14	0.11
PONDICHERRY	2.00	0.10
MEENAKSHI	1.93	0.09
DCPP	1.84	0.09
ADHUNIK POWER LTD	1.67	0.08
NJPC	1.60	0.08
DGEN MEGA POWER	1.49	0.07
CHUZACHEN HEP	1.41	0.07
RGPPL (DABHOL)	1.17	0.06
LANKO KONDAPALLI	1.04	0.05
NEPAL(NVVN)	0.94	0.05
KORBA WEST POWER	0.88	0.04
NEEPCO STATIONS	0.86	0.04
RANGANADI HEP	0.75	0.04
LANKO_AMK	0.65	0.03
SIMHAPURI	0.62	0.03
LOKTAK	0.39	0.02
RANGIT HEP	0.38	0.02
MALANA	0.33	0.02
DHARIWAL POWER	0.29	0.01
URI-2	0.16	0.01
DOYANG HEP	0.13	0.01
TEESTA HEP	0.08	0.00
TOTAL	2034.06	100.00
Volume Imported by top 5 Regional Entities	521.72	25.65

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JUNE 2017

Sr.No.	Name of the Entity	Total volume of net short-term transactions of electricity*
1	PUNJAB	1116.19
2	GUJARAT	851.44
3	BIHAR	671.25
4	HARYANA	552.63
5	UTTAR PRADESH	547.58
6	MAHARASHTRA	524.70
7	DELHI	503.31
8	WEST BENGAL	459.45
9	ANDHRA PRADESH	361.67
10	KARNATAKA	295.24
11	ESSAR STEEL	221.90
12	KERALA	189.54
13	BANGLADESH	177.03
14	ASSAM	160.57
15	TAMIL NADU	140.64
16	JHARKHAND	139.83
17	RAJASTHAN	103.20
18	NEPAL(NVVN)	88.08
19	NTPC STATIONS-SR	55.84
20	DAMAN AND DIU	52.85
21	CHHATTISGARH	49.93
22	NTPC STATIONS-ER	43.11
23	DADRA & NAGAR HAVELI	42.66
24	CGPL	27.90
25	NTPC STATIONS-NR	26.85
26	GOA	11.90
27	RKM POWER	6.89
28	CHANDIGARH	6.35
29	EMCO	5.90
30	NETCL VALLUR	5.36
31	ILF&S	4.80
32	NAGALAND	4.18
33	TRN ENERGY	2.30
34	COASTGEN	1.58
35	DGEN MEGA POWER	1.49
36	LANKO KONDAPALLI	1.04
37	KORBA WEST POWER	0.88
38	NSPCL	0.80
39	SIMHAPURI	0.62
40	LOKTAK	-0.11
41	DOYANG HEP	-0.20
42	KSK MAHANADI	-0.25
43	DHARIWAL POWER	-0.86
44	DCPP	-1.08
45	RANGIT HEP	-1.27
46	PONDICHERRY	-1.28
47	ODISHA	-2.00
48	URI-2	-2.77
49	RGPPL (DABHOL)	-3.62
50	RANGANADI HEP	-3.63
51	LANCO BUDHIL	-3.77

52	MALANA	-5.37
53	JHABUA POWER_MP	-5.89
54	TEESTA HEP	-7.58
55	TELANGANA	-8.96
56	MARUTI COAL	-11.17
57	ARUNACHAL PRADESH	-13.40
58	LANKO_AMK	-14.92
59	JINDAL STAGE-II	-16.24
60	NEEPCO STATIONS	-16.81
61	MAITHON POWER LTD	-17.42
62	MIZORAM	-17.83
63	UTTARAKHAND	-18.92
64	BALCO	-24.11
65	NHPC STATIONS	-30.19
66	DAGACHU	-30.86
67	SASAN UMPP	-35.84
68	MANIPUR	-37.43
69	SPECTRUM	-42.54
70	JORETHANG	-43.11
71	MEENAKSHI	-43.28
72	ONGC PALATANA	-44.40
73	DIKCHU HEP	-45.31
74	THERMAL POWERTECH	-47.93
75	CHUZACHEN HEP	-51.41
76	ACBIL	-51.66
77	TRIPURA	-54.19
78	NJPC	-54.54
79	SIKKIM	-57.04
80	SHREE CEMENT	-67.90
81	GMR KAMALANGA	-86.26
82	NLC	-94.58
83	MEGHALAYA	-96.01
84	AD HYDRO	-101.53
85	NTPC STATIONS-WR	-103.70
86	GMR CHATTISGARH	-138.22
87	ADHUNIK POWER LTD	-163.17
88	DVC	-168.40
89	JITPL	-197.03
90	MB POWER	-213.97
91	ESSAR POWER	-243.89
92	JINDAL POWER	-302.84
93	DB POWER	-308.31
94	KARCHAM WANGTOO	-366.79
95	JAYPEE NIGRIE	-385.56
96	TEESTA STG3	-532.09
97	SEMBCORP	-551.91
98	J & K	-713.96
99	MP	-765.90
100	HIMACHAL PRADESH	-945.90

* 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, JUNE 2017			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	3925.75	15.72
B	Actual Cleared Volume and hence scheduled (MUs)	3920.07	15.72
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs) (A-B)	5.68	0.00
D	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	0.14%	0.00%
E	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	3.75%	0.00%
F	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	19.44%	0.00%
	6.00 - 12.00 hours	12.96%	0.00%
	12.00 - 18.00 hours	10.19%	0.00%
	18.00 - 24.00 hours	57.41%	0.00%
* This power would have been scheduled had there been no congestion.			
Source: IEX & PXIL & NLDC			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (DAY-WISE) (MUs), JUNE 2017

Date	Bilateral		Power Exchange (Area Clearing Volume# of Day Ahead Market)		Deviation Settlement (Over Drawl+Under Generation)	Total Electricity Generation (MU) as given at CEA Website*
	Through Traders and PXs**	Direct	IEX	PXIL		
1-June-17	114.55	35.60	127.00	0.18	68.15	
2-June-17	113.03	36.84	134.51	0.16	59.63	
3-June-17	113.71	39.87	149.15	0.14	67.11	
4-June-17	115.34	41.78	148.89	0.10	75.97	
5-June-17	113.75	50.01	142.49	7.20	68.82	
6-June-17	98.32	46.19	156.71	4.80	66.11	
7-June-17	112.56	44.07	124.59	0.00	86.07	
8-June-17	114.07	42.90	133.71	0.05	69.44	
9-June-17	109.53	40.47	143.17	0.05	60.38	
10-June-17	108.77	41.79	145.05	0.07	66.83	
11-June-17	112.26	40.22	114.96	0.07	63.56	
12-June-17	114.10	40.38	135.67	0.07	68.32	
13-June-17	113.12	42.06	128.01	0.17	71.45	
14-June-17	113.46	40.19	132.40	0.20	72.46	
15-June-17	110.87	44.04	137.96	0.20	73.83	
16-June-17	122.25	43.63	132.99	0.20	73.99	
17-June-17	124.97	46.62	134.94	0.20	72.64	
18-June-17	123.14	48.10	124.72	0.05	65.49	
19-June-17	127.53	48.89	149.78	0.16	72.32	
20-June-17	127.27	47.79	147.92	0.16	73.48	
21-June-17	129.29	37.63	129.07	0.16	71.21	
22-June-17	130.96	37.78	135.46	0.21	63.81	
23-June-17	129.31	38.69	138.03	0.04	65.94	
24-June-17	128.72	38.43	134.69	0.21	62.55	
25-June-17	126.55	39.64	100.39	0.04	63.51	
26-June-17	122.80	40.44	113.73	0.21	63.53	
27-June-17	123.20	44.44	110.77	0.16	65.83	
28-June-17	124.39	47.93	105.89	0.16	64.92	
29-June-17	125.40	47.56	104.29	0.16	68.28	
30-June-17	128.30	48.34	103.15	0.16	59.69	
Total	3571.52	1282.31	3920.07	15.72	2045.29	97207.83

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.

Note: The data on total electricity generation (day-wise) could not be accessed from CEA website.

Table-18: PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (DAY-WISE)(₹/kWh), JUNE, 2017

Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Drawl/Over Drawl from the Grid (DSM)		
Date	Minimum ACP	Maximum ACP	Weighted Average Price*	Minimum ACP	Maximum ACP	Weighted Average Price*	All India Grid		
							Minimum Price	Maximum Price	Average Price**
1-June-17	0.80	4.75	2.73	2.93	3.02	3.01	0.00	5.11	2.13
2-June-17	2.09	3.48	2.77	2.10	3.90	3.63	0.00	4.91	2.27
3-June-17	2.20	5.00	3.25	2.80	3.20	3.02	0.00	5.95	2.22
4-June-17	1.44	5.50	3.14	2.94	2.94	2.94	0.00	5.95	2.21
5-June-17	1.00	5.75	3.47	3.40	3.40	3.40	0.00	4.91	2.15
6-June-17	1.85	5.80	3.47	3.42	3.42	3.42	0.00	3.45	1.94
7-June-17	1.00	4.00	2.61	0.00	0.00	0.00	0.00	3.45	1.26
8-June-17	2.14	3.41	2.67	2.80	2.80	2.80	0.00	3.24	1.31
9-June-17	1.97	4.00	2.66	2.80	2.80	2.80	0.00	3.45	1.49
10-June-17	1.97	3.71	2.62	1.97	3.59	2.70	0.00	3.45	1.66
11-June-17	1.09	3.42	2.50	2.65	2.65	2.65	0.00	3.24	1.55
12-June-17	1.85	3.55	2.60	2.80	2.80	2.80	0.00	3.45	1.76
13-June-17	1.73	3.40	2.56	2.30	3.30	3.01	0.00	3.45	1.86
14-June-17	2.14	4.01	2.75	2.38	3.25	3.03	0.00	4.91	1.86
15-June-17	2.07	4.63	2.96	2.18	3.85	3.43	0.00	3.45	1.89
16-June-17	1.70	5.60	3.28	2.16	4.62	3.92	0.00	3.45	1.65
17-June-17	1.70	6.50	3.10	2.61	4.65	3.93	0.00	3.45	1.57
18-June-17	1.60	4.00	2.64	2.75	2.75	2.75	0.00	3.45	1.91
19-June-17	1.71	4.60	2.72	1.98	4.35	3.99	0.00	3.45	1.12
20-June-17	1.70	3.60	2.54	1.98	4.30	3.95	0.00	3.45	1.25
21-June-17	1.66	3.14	2.36	2.00	3.35	3.16	0.00	3.24	1.58
22-June-17	1.99	3.45	2.49	2.06	3.22	2.78	0.00	4.91	1.67
23-June-17	2.01	3.20	2.44	2.06	3.22	2.53	0.00	3.45	2.02
24-June-17	2.08	4.13	2.65	2.06	3.25	2.87	0.00	4.91	1.57
25-June-17	1.75	3.40	2.39	2.11	3.30	2.52	0.00	3.45	1.78
26-June-17	1.17	4.76	2.65	2.11	3.30	2.87	0.00	5.74	2.16
27-June-17	1.18	4.13	2.53	2.11	3.50	3.30	0.00	3.45	1.76
28-June-17	0.87	5.70	2.31	2.11	3.51	3.31	0.00	3.45	1.37
29-June-17	0.80	3.40	2.15	2.11	3.28	3.11	0.00	5.11	1.75
30-June-17	0.81	3.70	2.07	2.11	3.18	3.03	0.00	3.45	1.84
	0.80#	6.50#	2.73	0.00#	4.65#	3.36	0.00#	5.95#	1.75

Source: Data on price of PX transactions from IEX and PXIL and data on DSM 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 DSM of 96 time blocks of 15 minutes each in a day. DSM price includes Ceiling DSM Rate +40% additional DSM charge.

Maximum/Minimum in the month

**Table-19: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY*-WISE)
(MUs), JUNE 2017**

Name of the Entity	Through Bilateral			Through Power Exchange			Through DSM with Regional Grid			Total Net***
	Sale	Purchase	Net**	Sale	Purchase	Net**	Import (Over Drawl)	Export (Under Drawl)	Net**	
PUNJAB	0.00	1137.24	1137.24	4.03	25.75	21.72	58.67	101.43	-42.76	1116.19
HARYANA	11.55	451.53	439.98	10.33	152.35	142.02	60.68	90.05	-29.37	552.63
RAJASTHAN	182.34	0.00	-182.34	41.04	263.30	222.26	98.36	35.07	63.29	103.20
DELHI	2.28	656.18	653.90	172.96	36.33	-136.62	25.96	39.93	-13.97	503.31
UP	10.77	304.81	294.05	36.58	286.03	249.45	87.64	83.56	4.08	547.58
UTTARAKHAND	96.20	91.89	-4.31	71.48	48.62	-22.86	26.55	18.30	8.26	-18.92
HP	859.28	0.00	-859.28	131.36	31.00	-100.36	28.36	14.62	13.74	-945.90
J & K	552.48	0.00	-552.48	162.72	1.24	-161.48	0.00	0.00	0.00	-713.96
CHANDIGARH	0.00	0.00	0.00	5.46	3.92	-1.54	11.02	3.12	7.90	6.35
MP	80.86	18.93	-61.94	695.62	29.88	-665.74	42.39	80.61	-38.23	-765.90
MAHARASHTRA	73.79	328.31	254.53	68.47	334.28	265.82	91.07	86.71	4.36	524.70
GUJARAT	103.72	38.41	-65.31	40.24	958.76	918.52	75.46	77.22	-1.76	851.44
CHHATTISGARH	0.00	88.36	88.36	29.89	3.82	-26.06	22.56	34.93	-12.36	49.93
GOA	2.82	15.94	13.12	1.59	10.84	9.25	12.01	22.48	-10.47	11.90
DAMAN & DIU	0.00	0.00	0.00	0.00	35.95	35.95	17.98	1.09	16.90	52.85
D&N HAVELI	0.00	23.55	23.55	16.05	40.77	24.72	3.65	9.26	-5.61	42.66
AP	186.38	235.77	49.39	6.27	232.94	226.68	114.36	28.76	85.60	361.67
KARNATAKA	4.39	1.54	-2.85	16.44	266.03	249.60	80.39	31.89	48.50	295.24
KERALA	0.00	69.80	69.80	3.93	73.83	69.91	52.32	2.49	49.84	189.54
TAMIL NADU	6.93	238.51	231.59	10.75	8.77	-1.98	49.94	138.91	-88.97	140.64
PONDICHERRY	0.00	0.00	0.00	0.00	5.06	5.06	2.00	8.34	-6.34	-1.28
TELANGANA	25.57	19.20	-6.37	124.89	221.47	96.58	11.27	110.45	-99.17	-8.96
WEST BENGAL	177.70	82.47	-95.24	0.73	450.48	449.75	121.72	16.78	104.93	459.45
ODISHA	5.37	45.89	40.52	83.34	22.04	-61.31	40.40	21.62	18.78	-2.00
BIHAR	0.00	359.56	359.56	0.00	251.74	251.74	85.40	25.45	59.95	671.25
JHARKHAND	0.00	128.19	128.19	0.00	0.00	0.00	31.49	19.84	11.65	139.83
SIKKIM	0.00	0.00	0.00	51.12	0.00	-51.12	2.18	8.10	-5.92	-57.04
DVC	46.83	0.00	-46.83	120.81	0.00	-120.81	32.86	33.61	-0.75	-168.40
AR. PRADESH	0.00	0.00	0.00	0.00	1.47	1.47	2.14	17.01	-14.87	-13.40
ASSAM	18.44	48.05	29.61	30.39	114.64	84.25	55.04	8.33	46.71	160.57
MANIPUR	6.44	0.00	-6.44	30.58	0.00	-30.58	3.76	4.17	-0.41	-37.43
MEGHALAYA	76.20	0.03	-76.18	22.28	12.69	-9.58	3.08	13.33	-10.25	-96.01
MIZORAM	0.00	0.00	0.00	18.00	0.00	-18.00	2.87	2.70	0.17	-17.83
NAGALAND	0.00	0.00	0.00	1.83	3.55	1.72	5.36	2.89	2.46	4.18
TRIPURA	0.00	0.71	0.71	52.98	0.39	-52.59	9.55	11.86	-2.31	-54.19
NTPC -NR	0.00	0.00	0.00	0.04	0.00	-0.04	91.39	64.50	26.89	26.85
NHPC	0.00	0.00	0.00	0.00	0.00	0.00	4.17	34.36	-30.19	-30.19
NJPC	0.00	0.00	0.00	24.66	0.00	-24.66	1.60	31.48	-29.87	-54.54
AD HYDRO	74.32	0.00	-74.32	32.26	0.00	-32.26	10.34	5.29	5.05	-101.53
KARCHAM WANGT	142.36	0.00	-142.36	218.03	0.00	-218.03	2.86	9.26	-6.39	-366.79
SHREE CEMENT	63.25	0.00	-63.25	11.62	0.00	-11.62	8.06	1.09	6.97	-67.90
LANCO BUDHIL	0.00	0.00	0.00	4.67	0.00	-4.67	2.62	1.73	0.90	-3.77
MALANA	0.00	0.00	0.00	5.34	0.00	-5.34	0.33	0.36	-0.02	-5.37
NTPC -WR	0.00	0.00	0.00	15.58	0.00	-15.58	76.76	164.87	-88.12	-103.70
JINDAL POWER	67.23	0.00	-67.23	231.91	0.00	-231.91	5.66	9.35	-3.69	-302.84
LANKO_AMK	8.97	0.00	-8.97	0.00	0.00	0.00	0.65	6.59	-5.95	-14.92
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	6.66	5.86	0.80	0.80
ACBIL	29.03	0.00	-29.03	23.98	0.00	-23.98	4.56	3.21	1.35	-51.66
BALCO	43.03	0.54	-42.49	8.19	0.00	-8.19	29.08	2.51	26.58	-24.11

RGPPL	0.00	0.00	0.00	0.00	0.00	0.00	1.17	4.79	-3.62	-3.62
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	34.16	6.26	27.90	27.90
DCPP	0.00	0.00	0.00	0.00	0.00	0.00	1.84	2.92	-1.08	-1.08
EMCO	0.00	0.00	0.00	0.23	0.00	-0.23	9.54	3.41	6.13	5.90
ESSAR STEEL	0.00	196.76	196.76	0.00	7.84	7.84	32.45	15.16	17.30	221.90
KSK MAHANAD	0.00	0.00	0.00	0.00	0.00	0.00	2.91	3.16	-0.25	-0.25
ESSAR POWER	215.77	0.00	-215.77	32.24	0.00	-32.24	5.72	1.59	4.12	-243.89
JINDAL STG-II	13.84	0.00	-13.84	4.98	0.00	-4.98	7.40	4.83	2.57	-16.24
DB POWER	214.56	0.00	-214.56	92.11	0.00	-92.11	3.82	5.46	-1.64	-308.31
JAYPEE NIGRIE	254.65	0.00	-254.65	137.05	0.00	-137.05	10.03	3.89	6.14	-385.56
GMR CHATTIS	133.73	0.00	-133.73	5.11	0.00	-5.11	2.95	2.34	0.61	-138.22
KORBA WEST	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.88	0.88
MB POWER	178.67	0.00	-178.67	29.90	0.00	-29.90	5.07	10.46	-5.40	-213.97
MARUTI COAL	5.82	0.00	-5.82	5.35	0.00	-5.35	0.00	0.00	0.00	-11.17
SPECTRUM	7.02	0.00	-7.02	35.52	0.00	-35.52	0.00	0.00	0.00	-42.54
JHABUA_MP	0.00	0.00	0.00	10.81	0.00	-10.81	5.08	0.15	4.92	-5.89
SASAN UMPP	0.00	0.00	0.00	0.00	0.00	0.00	4.38	40.23	-35.84	-35.84
TRN ENERGY	0.00	0.00	0.00	0.00	0.00	0.00	2.81	0.51	2.30	2.30
RKM POWER	0.00	0.00	0.00	0.00	0.00	0.00	7.76	0.87	6.89	6.89
NTPC -SR	0.00	0.00	0.00	0.37	0.00	-0.37	73.13	16.92	56.21	55.84
SIMHAPURI	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.62	0.62
MEENAKSHI	22.35	0.00	-22.35	22.01	0.00	-22.01	1.93	0.86	1.07	-43.28
COASTGEN	0.60	0.00	-0.60	0.00	0.00	0.00	3.39	1.21	2.18	1.58
THERMAL POW	26.89	0.00	-26.89	30.90	0.00	-30.90	14.75	4.88	9.87	-47.93
ILF&S	0.00	0.00	0.00	0.98	0.00	-0.98	6.71	0.94	5.78	4.80
NLC	0.00	0.00	0.00	36.11	0.00	-36.11	11.63	70.10	-58.47	-94.58
SEBFCORP	487.13	0.00	-487.13	70.73	0.00	-70.73	9.78	3.83	5.95	-551.91
NETCL VALLUR	0.00	0.00	0.00	6.23	0.00	-6.23	12.69	1.10	11.58	5.36
NTPC -ER	0.00	0.00	0.00	3.51	0.00	-3.51	95.90	49.28	46.62	43.11
MAITHON POW	0.00	0.00	0.00	13.48	0.00	-13.48	4.62	8.56	-3.94	-17.42
ADHUNIK POW	135.07	0.00	-135.07	26.49	0.00	-26.49	1.67	3.28	-1.61	-163.17
CHUZACHEN H	4.79	0.00	-4.79	42.49	0.00	-42.49	1.41	5.55	-4.14	-51.41
GMR KAMALA	89.35	0.00	-89.35	0.52	0.00	-0.52	6.11	2.50	3.61	-86.26
JITPL	120.34	0.00	-120.34	71.15	0.00	-71.15	4.11	9.65	-5.54	-197.03
TEESTA HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.08	7.66	-7.58	-7.58
DAGACHU	41.00	0.00	-41.00	0.00	0.00	0.00	13.77	3.63	10.14	-30.86
JORETHANG	0.00	0.00	0.00	49.62	0.00	-49.62	9.55	3.05	6.50	-43.11
NEPAL(NVVN)	0.00	94.68	94.68	0.00	0.00	0.00	0.94	7.54	-6.60	88.08
BANGLADESH	0.00	176.98	176.98	0.00	0.00	0.00	2.24	2.18	0.05	177.03
TEESTA STG3	0.82	0.00	-0.82	523.80	0.00	-523.80	2.36	9.83	-7.47	-532.09
DIKCHU HEP	0.94	0.00	-0.94	44.37	0.00	-44.37	0.00	0.00	0.00	-45.31
NEEPCO	0.00	0.00	0.00	0.00	0.00	0.00	0.86	17.67	-16.81	-16.81
ONGC PALATA	43.77	0.00	-43.77	0.63	0.00	-0.63	0.00	0.00	0.00	-44.40
TOTAL	4955.64	4853.82	-101.82	3935.10	3935.79	0.68	2029.42	1881.62	147.80	46.66
<i>Source: NLDC</i>										
<i>* 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.</i>										
<i>** (-) indicates sale and (+) indicates purchase,</i>										
<i>*** Total net includes net of transactions through bilateral, power exchange and DSM</i>										

Figure 7: Bilateral Contracts Executed by Traders in July, 2017 (%)

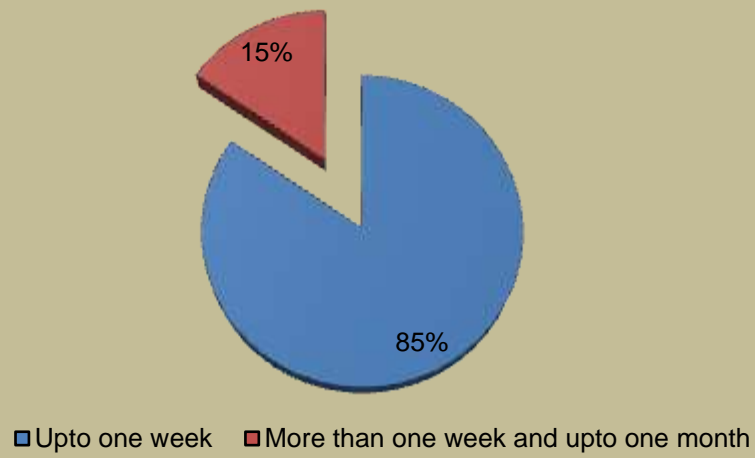


Figure-8: Forward Curve based on Prices of Bilateral Contracts

