

Monthly Report on Short-term Transactions of Electricity in India

July, 2019



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Abbreviations

Abbreviation	Expanded Version
ACBIL	ACB (India) Limited
ACP	Area Clearing Price
ACV	Area Clearing Volume
ACME_RUMS	Acme Rewa Ultra Mega Solar Project
ARINSUM_RUMS	Solenergi Rewa Ultra Mega Solar Project
BALCO	Bharat Aluminum Company Limited
BARC	Bhabha Atomic Research Centre
BBMB	Bhakra Beas Management Board
BRBCL	Bhartiya Rail Bijlee Company Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPL	Coastal Gujarat Power Limited
CHUKHA HEP	Chhukha Hydroelectric Project, Bhutan
CHUZACHEN HEP	ChuzachenHydro 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
DIKCHU HEP	Dikchu Hydro-electric Project, Sikkim
DOYANG HEP	DoyangHydro Electric Project
DSM	Deviation Settlement Mechanism
DVC	Damodar Valley Corporation
EMCO	EMCO Energy Limited
ESSAR POWER	Essar Power Limited
ESSAR STEEL	Essar Steel Ltd
GIWEL_BHUI	Green infra wind energy Limited, Bhuj
GMR CHHATTISGARH	GMR Chhattisgarh Energy Limited
GMR KAMALANGA	GMR Kamalanga Energy Ltd.
HVDC CHAMPA	Champa-Kurukshetra High Voltage Direct Current Link
IEX	Indian Energy Exchange Limited
IGSTPS	Indira Gandhi Super Thermal Power Station Jhajjar
IL&FS	Infrastructure Leasing & Financial Services Limited
J&K	Jammu & Kashmir
JAYPEE NIGRIE	JaypeeNigrie Super Thermal Power Project
JHABUA POWER MP	Jhabua 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
KAPP 3&4	Kakrapar Atomic Power Station Unit 3 & 4
KARCHAM WANGTOO	KarchamWangtoo H.E. Project
KORBA WEST POWER	Korba West Power Company Limited

KOTESHWAR	Koteshwar Hydro Power project
KSK MAHANADI	KSK Mahanadi Power Ltd
KURICHU HEP	Kurichhu Hydro-electric Power Station, Bhutan
LANKO_AMK	LancoAmarkantak Power Private Limited
LANKO BUDHIL	LancoBudhil Hydro Power Private Limited
LANKO KONDAPALLY	LancoKondapally Power Private Limited
LOKTAK	Loktak Power Project
MAHINDRA_RUMS	Mahindra Rewa Ultra Mega Solar Project
MALANA	Malana Hydroelectric Plant
MANGDECHU HEP	Mangdechhu Hydroelectric Project, Mangdechhu River, Bhutan
Maruti Coal	Maruti Clean Coal and Power Limited
MB POWER	MB Power Ltd
MEENAKSHI	Meenakshi Energy Private Limited
MP	Madhya Pradesh
MTPS II	Muzaffarpur Thermal Power Station – Stage II
MUs	Million Units
NAPP	Narora Atomic Power Plant
NEEPCO	North Eastern Electric Power Corporation Limited
NEP	Nepal
NFL	National Fertilisers Limited
NHPC STATIONS	National Hydro Electric Power Corporation Ltd. Stations
NJPC	NathpaJhakri Hydroelectric Power Station
NLC	Neyveli Lignite Corporation Limited
NLDC	National Load Dispatch Centre
NPGC	Nabinagar Power Generating Company (Pvt.) Limited
NSPCL	NTPC - SAIL Power Company Private Limited
NTECL Vallur	NTPC Tamil Nadu Energy Company Limited Vallur
NTPC STATIONS	National Thermal Power Corporation Ltd. Stations
NTPL	NLC Tamil Nadu Power Limited
NVVN	NTPC Vidyut Vyapar Nigam Limited
ONGC Platana	ONGC Tripura Power Company
OPGC	Odisha Power Generation Corporation
OSTRO	Ostro Energy Private Limited
OTC	Over The Counter
PARE HEP	Pare hydroelectric project, Arunachal Pradesh
PX	Power Exchange
PXIL	Power Exchange India Limited
RAIL	Indian Railways
RAMPUR HEP	Rampur Hydro Electric Power Project
RANGIT HEP	Rangit Hydroelectric power project
RANGANADI HEP	Ranganadi Hydro Electric Power Project, Arunachal Pradesh
RAP-B	Rajasthan Atomic Power Plant-B
RAP-C	Rajasthan Atomic Power Plant-C
REC	Renewable Energy Certificate
RENEW_BHACHAU	ReNew Power Limited, Bhachau
RGPPL	Ratnagiri Gas and Power Private Limited
RLDC	Regional Load Dispatch Centre

RTC	Round The Clock
Sasan UMPP	Sasan Ultra Mega Power Project
SEMBCORP	SembcorpGayatri Power Ltd
SHREE CEMENT	Shree Cement Limited
SIMHAPURI	Simhapuri Energy Private Limited
SKS Power	SKS Power Generation Chhattisgarh Limited
SPECTRUM	Spectrum Power Generation Ltd
TALA HEP	Tala Hydroelectric Project, Bhutan
TASHIDENG HEP	Tashiding Hydro Electric Project, Sikkim
TEESTA STG3	Teesta Stage 3 Hydro Power Project
TEHRI	Tehri Hydro Electric Power Project
THERMAL POWERTECH	Thermal Powertech Corporation India Limited
URI-II	Uri-II Hydropower 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) 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 **July, 2019** are as under:

I: Volume of Short-term Transactions of Electricity

During July 2019, total electricity generation excluding generation from renewable and captive power plants in India was 108355.60 MUs (Table-1).

Of the total electricity generation, 14407.09 MUs (13.30%) was transacted through short-term, comprising of 7501.77 MUs (6.92%) through bilateral (through traders and term-ahead contracts on power exchanges and directly between distribution companies), followed by 4800.72 MUs (4.43%) through day ahead collective transactions on power exchanges and 2104.60 MUs (1.94%) through DSM (Table-1 & Figure-2).

Of the total short-term transactions, bilateral constitutes 52.07% (34.39% through traders and term-ahead contracts on power exchanges and 17.68% directly between distribution companies) followed by 33.32% through day ahead collective transactions on power exchanges and 14.61% 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 36 trading licensees as on July, 2019. In July 2019, 24 trading licensees were engaged in short term trading. Top 5 trading licensees had a share of 78.63% in the total volume traded by all the licensees. These are PTC India Ltd., Kreate Energy (I) Pvt. Ltd., Manikaran Power Ltd., Arunachal Pradesh Power Corporation 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 0.1692 for the month of July 2019, which indicates moderate concentration of market power (Table-2).

The volume of electricity transacted through IEX and PXIL in the day ahead market was 4800.37 MUs and 0.35 MUs respectively. The volume of total buy bids and sell bids was 5846.18 MUs and 8391.02 MUs respectively in IEX while the same was 3.95 MUs and 9.93 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 470.27 MUs and 224.35 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 ₹3.01/kWh, ₹5.89/kWh and ₹4.53/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 ₹4.18/kWh, ₹5.85/kWh and ₹5.01/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. The minimum, maximum and weighted average prices were ₹1.05/kWh, ₹9.29/kWh and ₹3.59/kWh respectively in IEX and it were ₹3.14/kWh, ₹3.25/kWh and ₹3.20/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹3.93/kWh and ₹4.05/kWh respectively (Table-6 and Table-7).

(iii) Price of electricity transacted through DSM: The average deviation settlement price was ₹2.91/kWh. The minimum and maximum deviation settlement prices were ₹0.00/kWh and ₹8.00/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: Trading Margin

As per the CERC (Fixation of Trading Margin) Regulations, 2010, the trading licensees are allowed to charge trading margin upto 7 paise/kWh in case the sale price exceeds ₹3/kWh, and 4 paise/kWh where the sale price is less than or equal to ₹3/kWh. The weighted average trading margin charged by the trading licensees for bilateral transactions during the month is ₹0.029/kWh.

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

Of the total bilateral transactions, top 5 regional entities sold 49.09% of the volume, and these were Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Thermal Powertech

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.

Corporation India Limited and GMR Chhattisgarh Energy Limited. Top 5 regional entities purchased 68.77% of the volume, and these were Haryana, Punjab, Delhi, West Bengal and Uttar Pradesh (Table-9 & 10).

Of the total power exchange transactions, top 5 regional entities sold 35.45% of the volume, and these were Teesta Stage 3 Hydro Power Project, Himachal Pradesh, Madhya Pradesh, Maharashtra and Assam. Top 5 regional entities purchased 49.77% of the volume, and these were West Bengal, Tamil Nadu, Telangana, Bihar and Chhattisgarh (Table-11 & 12).

Of the total DSM transactions, top 5 regional entities under drew 25.79% of the volume, and these were NTPC Station (Western Region), NHPC Stations, Madhya Pradesh, Rajasthan and Maharashtra (Table-13). Top 5 regional entities overdrew 23.51% of the volume, and these were NTPC Station (Western Region), Rajasthan, NTPC Station (Northern Region), Tamil Nadu and Karnataka (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, Andhra Pradesh, Madhya Pradesh, Teesta Stage 3 Hydro Power Project and Thermal Powertech Corporation India Ltd. Top 5 electricity purchasing regional entities were Haryana, Punjab, West Bengal, Delhi and Tamil Nadu.

V: 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

² “Congestion” means a situation where the demand for transmission capacity exceeds the available transfer capability

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 July 2019, congestion did not occur in IEX and PXIL. 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 cleared volume (volume of electricity that would have been scheduled, had there been no congestion) and actual cleared volume.

VI: Bilateral Contracts executed by Traders

The above sections covered an analysis on short-term transactions of electricity in July, 2019. This section covers an analysis of bilateral contracts executed in August, 2019.

(i) Duration of bilateral contracts: During August 2019, a total of 83 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 1501.10 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 54.22% of the bilateral contracts were executed for duration of up to one week, 43.37% of the contracts were executed for duration of more than a week and up to one month, 2.41% of contracts were executed for duration of more than one month and up to three months, while no contracts were executed for duration of more than three months and up to twelve months.

During the month, 92 banking/swapping bilateral contracts were also executed for the volume of 414.44 MUs.

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.

(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 August, 2019 to 30th November, 2019 based on the bilateral contracts⁴ executed till August, 2019. Forward curves have been drawn for the contracts executed in July, 2019 and August, 2019 for the purpose of comparison. It is observed that the forward contract prices are lower for the contracts executed in August 2019 compared to the contracts executed in July 2019, during the period from 5th August 2019 to 10th August 2019.

VII: 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 was held on power exchanges in May, 2011.

The details of REC transactions for the month of July, 2019 are shown in Table-20. The market clearing volume of solar RECs transacted on IEX and PXIL were 104760 and 24296 respectively and the weighted average market clearing price of these RECs was ₹2000/MWh in IEX and ₹2000/MWh in PXIL. Market clearing volume of non-solar RECs transacted on IEX and PXIL were 387679 and 102076 respectively and the weighted average market clearing price of these RECs was ₹1650/MWh in IEX and

⁴Excluding Banking/Swapping contracts

₹1705/MWh in PXIL. For Non-solar RECs issued before 1st April 2017, the market clearing volume on IEX and PXIL were 36 and 10781 respectively and the weighted average market clearing price of these RECs was ₹1500/MWh in IEX and ₹1603/MWh in PXIL.

The gap between the volume of buy and sell bids of RECs placed through power exchanges shows about the variation in demand for both solar and non-solar RECs. For Solar RECs, the ratio of buy bids to sell bids was 3.14 and 2.77 in IEX and PXIL respectively. For non-solar RECs, the ratio of buy bids to sell bids was 1.94 and 1.88 in IEX and PXIL respectively.

VIII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 13.30%.
- Of the total short-term transactions, bilateral constitutes 52.07% (34.39% through traders and term-ahead contracts on power exchanges and 17.68% directly between distribution companies) followed by 33.32% through day ahead collective transactions on power exchanges and 14.61% through DSM.
- Top 5 trading licensees had a share of 78.63% 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 0.1692, indicating moderate concentration of market power.
- The weighted average price of electricity transacted through trading licensees was ₹4.53/kWh. The weighted average price of electricity transacted through IEX and PXIL were ₹3.59/kWh and ₹3.20/kWh respectively.
- The average price of electricity transacted through DSM was ₹2.91/kWh.
- The weighted average trading margin charged by the trading licensees for bilateral transactions during the month was ₹0.029/kWh. The trading margin charged during the month was in line with the Trading Margin regulations.
- Top 5 electricity selling regional entities were Himachal Pradesh, Andhra Pradesh, Madhya Pradesh, Teesta Stage 3 Hydro Power Project and Thermal Powertech Corporation India Ltd. Top 5 electricity purchasing regional entities were Haryana, Punjab, West Bengal, Delhi and Tamil Nadu.
- During the month of July 2019, both IEX and PXIL did not witness any congestion.
- In August 2019, 54.22% of the bilateral contracts were executed for duration of up to one week, 43.37% of the contracts were executed for duration of more than a week and up to one month, 2.41% of contracts were executed for duration of more than one

month and up to three months, while no contracts were executed for duration of more than three months and up to twelve months.

- The forward curves for contracts executed in August 2019 show that forward contract prices are lower for the contracts executed in August 2019 compared to the contracts executed in July 2019, during the period from 5th August 2019 – 10th August 2019.
- The market clearing volume of solar RECs transacted on IEX and PXIL were 104760 and 24296 respectively and the weighted average market clearing price of these RECs was ₹2000/MWh in IEX and ₹2000/MWh in PXIL. Market clearing volume of non-solar RECs transacted on IEX and PXIL were 387679 and 102076 respectively and the weighted average market clearing price of these RECs was ₹1650/MWh in IEX and ₹1705/MWh in PXIL. For Non-solar RECs issued before 1st April 2017, the market clearing volume on IEX and PXIL were 36 and 10781 respectively and the weighted average market clearing price of these RECs was ₹1500/MWh in IEX and ₹1603/MWh in PXIL.

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), JULY 2019				
Sr. No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	7501.77	52.07	6.92
	(i) Through Traders and PXs	4955.07	34.39	4.57
	(ii) Direct	2546.71	17.68	2.35
2	Through Power Exchanges	4800.72	33.32	4.43
	(i) IEX	4800.37	33.32	4.43
	(ii) PXIL	0.35	0.002	0.0003
3	Through DSM	2104.60	14.61	1.94
	Total	14407.09	-	13.30
	Total Generation	108355.60	-	-

Source: NLDC

Figure-1: Volume of Short-term Transactions of Electricity, July 2019

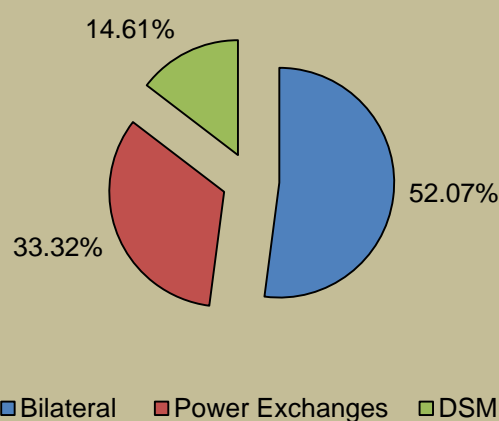
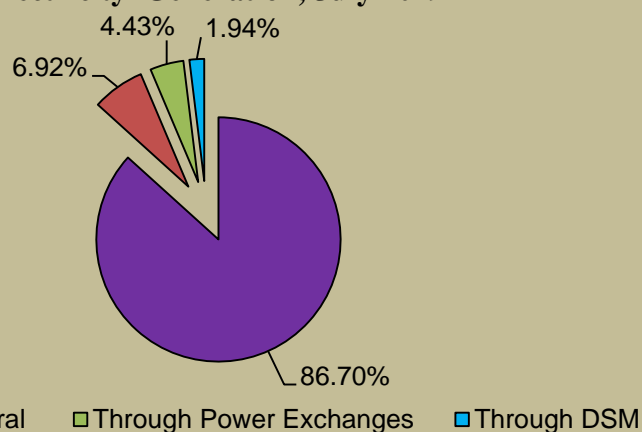


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, July 2019



**Figure-3: Volume of Short-term Transactions of Electricity,
July 2019 (Day-wise)**

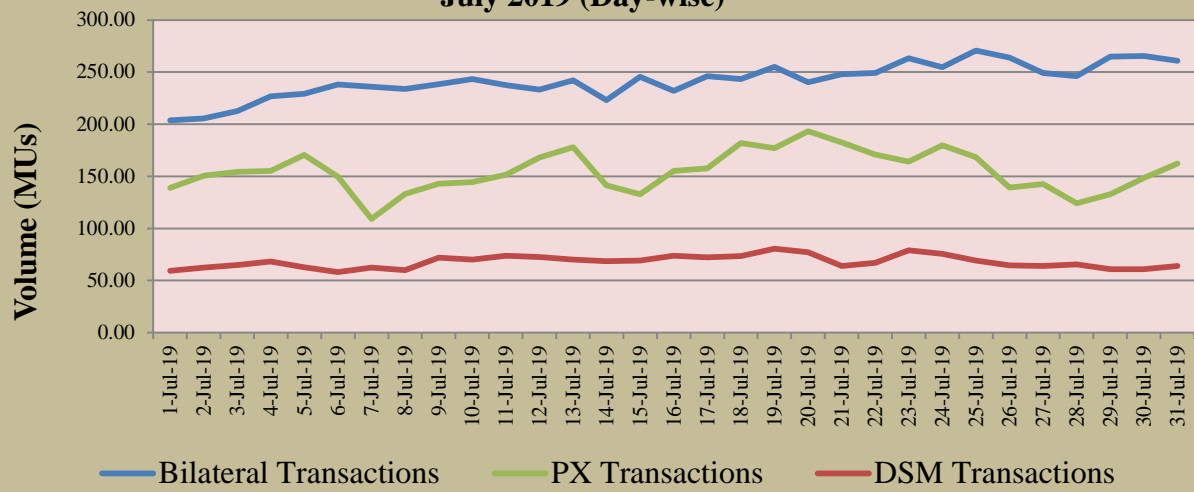


Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANSACTED BY TRADING LICENSEES, JULY 2019			
Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	32.44	0.1052
2	Kreate Energy (I) Pvt Ltd	13.89	0.0193
3	Manikaran Power Ltd.	13.41	0.0180
4	Arunachal Pradesh Power Corporation (P) ltd	12.45	0.0155
5	GMR Energy Trading Ltd.	6.44	0.0041
6	Tata Power Trading Company (P) Ltd.	5.38	0.0029
7	Adani Enterprises Ltd.	5.14	0.0026
8	NTPC Vidyut Vyapar Nigam Ltd.	2.72	0.0007
9	Statkraft Markets Pvt. Ltd.	1.87	0.0004
10	Jaiprakash Associates Ltd.	1.20	0.0001
11	Knowledge Infrastructure Systems (P) Ltd	1.05	0.0001
12	National Energy Trading & Services Ltd.	0.79	0.0001
13	Essar Electric Power Development Corp. Ltd.	0.65	0.0000
14	JSW Power Trading Company Ltd	0.61	0.0000
15	RPG Power Trading Company Ltd.	0.49	0.0000
16	Refex Energy Limited	0.42	0.0000
17	Instinct Infra & Power Ltd.	0.28	0.0000
18	NHPC Limited	0.23	0.0000
19	Shree Cement Ltd.	0.15	0.0000
20	Gita Power & Infrastructure Private Limited	0.12	0.0000
21	Customized Energy Solutions India (P) Ltd.	0.09	0.0000
22	Phillip Commodities India (P) Ltd.	0.08	0.0000
23	IPCL Power Trading Pvt. Ltd.	0.06	0.0000
24	Abja Power Private Limited	0.04	0.0000
TOTAL		100.00%	0.1692
Top 5 trading licensees		78.63%	
<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>			

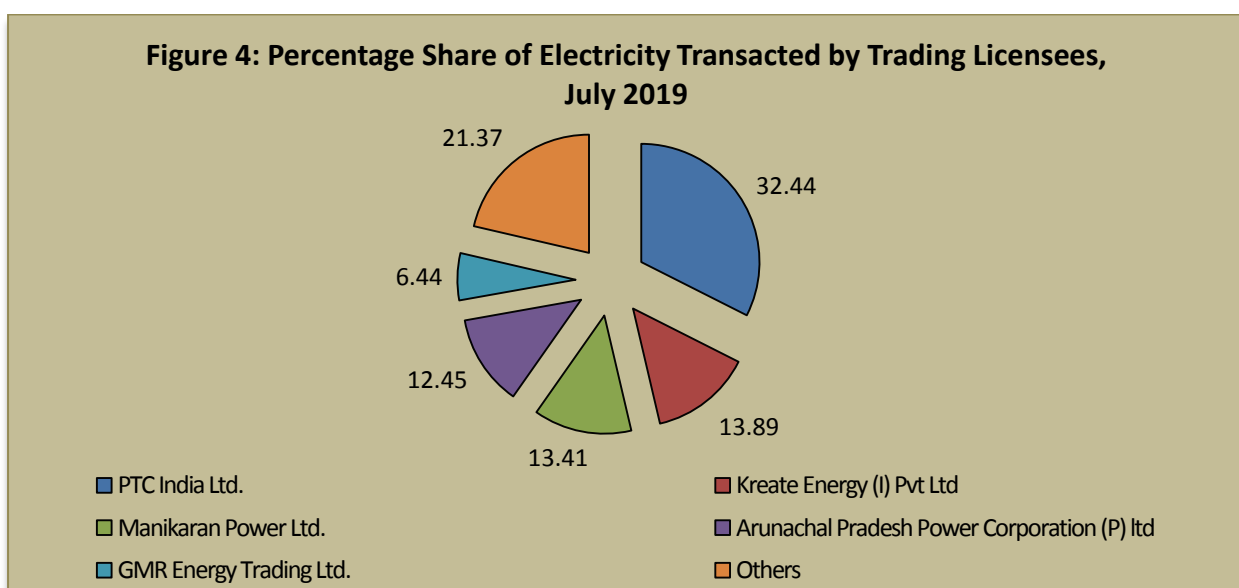


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, JULY 2019		
Sr.No	Item	Sale Price of Traders (₹/kWh)
1	Minimum	3.01
2	Maximum	5.89
3	Weighted Average	4.53

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), JULY 2019		
Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	4.18
2	PEAK	5.85
3	OFF PEAK	5.01

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, JULY 2019			
Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	1.05	3.14
2	Maximum	9.29	3.25
3	Weighted Average	3.59	3.20

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, JULY 2019			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	83.54	5.00
2	Day Ahead Contingency Contracts	63.72	3.93
3	Daily Contracts	237.15	3.74
4	Weekly Contracts	85.86	3.42
	Total	470.27	3.93

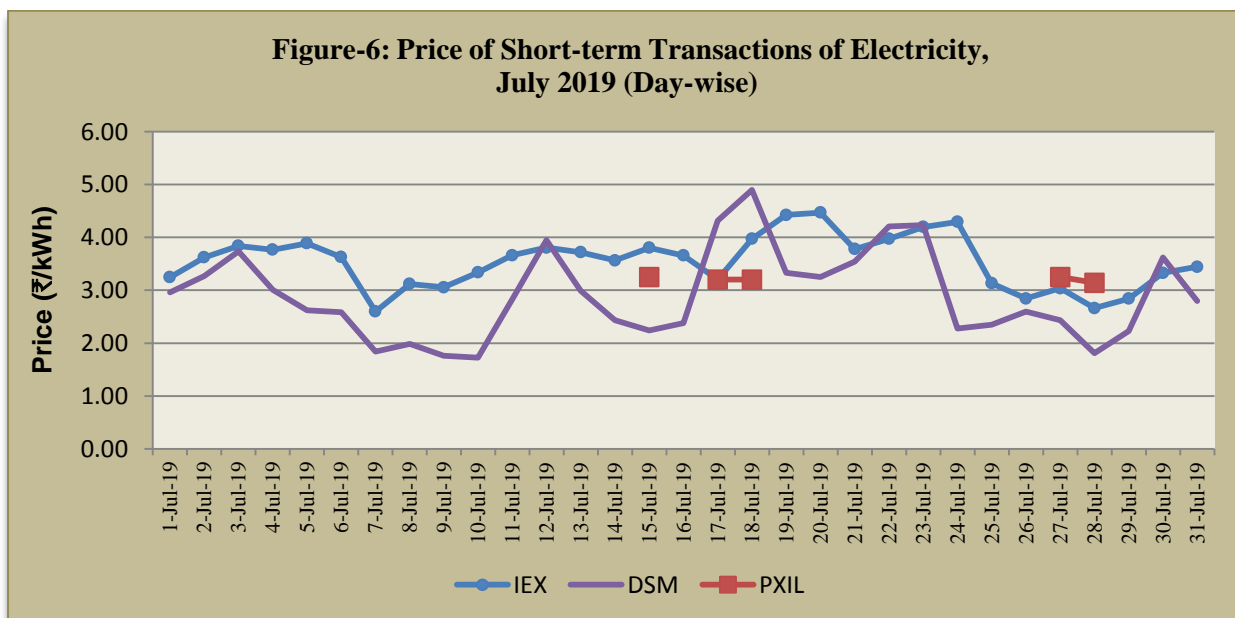
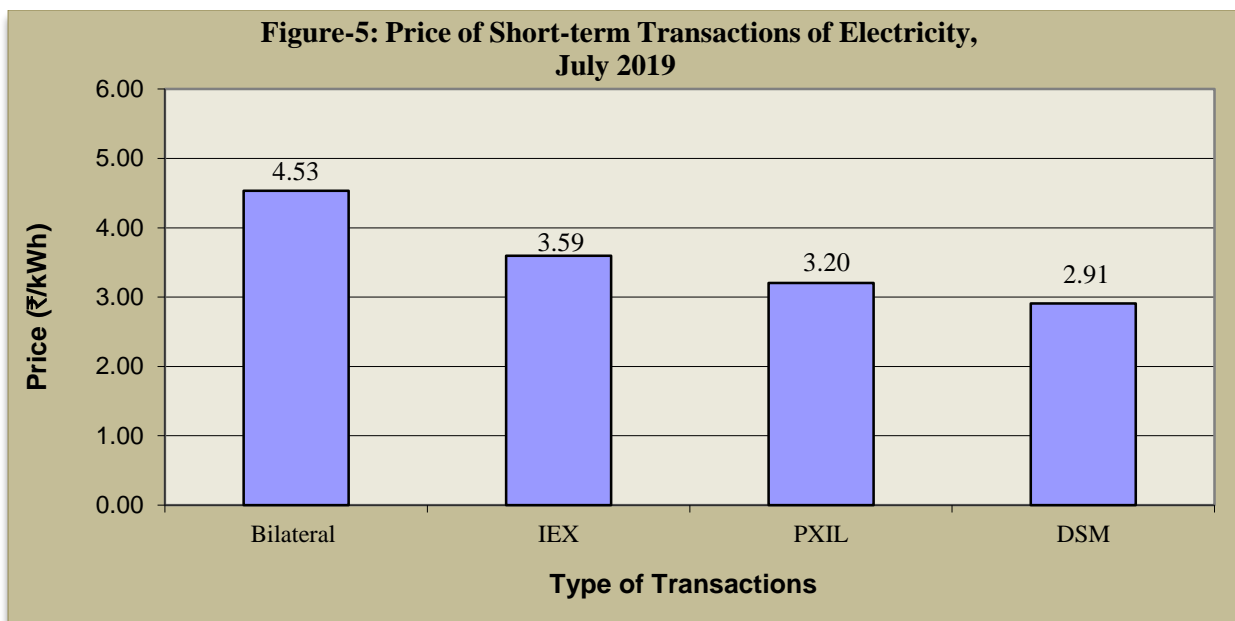
Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, JULY 2019			
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	157.94	4.20
2	Any Day(s) Contracts	66.41	3.71
	Total	224.35	4.05

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH DSM, JULY 2019		
Sr.No	Item	Price in All India Grid (₹/kWh)
1	Minimum	0.00
2	Maximum	8.00
3	Average	2.91

Source: NLDC



Note: In PXIL, transactions were recorded only on 15th, 17th, 18th, 27th and 28th July 2019

Table-9: VOLUME OF ELECTRICITY SOLD THROUGH BILATERAL, JULY 2019		
Name of the Entity	Volume of Sale (MUs)	% of Volume
ANDHRA PRADESH	1340.56	17.81
HIMACHAL PRADESH	808.63	10.74
MP	603.51	8.02
THERMAL POWERTECH	499.20	6.63
GMR CHATTISGARH	443.92	5.90
J & K	390.15	5.18
CHHATTISGARH	389.33	5.17
GUJARAT	312.86	4.16
ESSAR POWER	197.27	2.62
DVC	182.62	2.43
RAJASTHAN	173.20	2.30
DB POWER	162.73	2.16
WEST BENGAL	149.83	1.99
MB POWER	133.74	1.78
SKS POWER	131.64	1.75
ADHUNIK POWER LTD	130.55	1.73
COASTGEN	117.77	1.56
KERALA	115.29	1.53
JAYPEE NIGRIE	100.37	1.33
KARNATAKA	96.56	1.28
DAGACHU	84.23	1.12
UTTARAKHAND	75.81	1.01
KSK MAHANADI	74.53	0.99
JHABUA POWER_MP	66.83	0.89
CHUZACHEN HEP	66.11	0.88
TASHIDENG HEP	63.25	0.84
JORETHANG	62.83	0.83
ONGC PALATANA	47.51	0.63
GMR KAMALANGA	46.94	0.62
MEGHALAYA	44.64	0.59
IL&FS	36.23	0.48
ODISHA	35.92	0.48
SIKKIM	33.48	0.44
KARCHAM WANGTOO	31.20	0.41
MANIPUR	30.53	0.41
UTTAR PRADESH	27.16	0.36
SHREE CEMENT	23.26	0.31
TELANGANA	22.29	0.30
JINDAL STAGE-II	18.27	0.24
ACBIL	17.92	0.24
HARYANA	17.04	0.23
PUNJAB	16.04	0.21
MAHARASHTRA	15.28	0.20
TRIPURA	14.88	0.20
NAGALAND	11.13	0.15
TAMIL NADU	10.54	0.14
LANKO_AMK	9.85	0.13

BALCO	9.25	0.12
MIZORAM	7.62	0.10
BIHAR	7.30	0.10
GOA	5.86	0.08
NTPC STATIONS-NER	5.58	0.07
DELHI	2.82	0.04
TEESTA STG3	2.38	0.03
JHARKHAND	2.11	0.03
BRBCL,NABINAGAR	1.06	0.01
DADRA & NAGAR HAVELI	0.41	0.01
NTPC STATIONS-NR	0.13	0.002
Total	7527.93	100.00
Volume Sold by top 5 Regional Entities	3695.81	49.09

Table-10: VOLUME OF ELECTRICITY PURCHASED THROUGH BILATERAL, JULY 2019		
Name of the Entity	Volume of Purchase (MUs)	% of Volume
HARYANA	1632.86	21.77
PUNJAB	1557.19	20.76
DELHI	886.17	11.81
WEST BENGAL	616.20	8.21
UTTAR PRADESH	466.81	6.22
GUJARAT	392.39	5.23
BANGLADESH	312.24	4.16
CHHATTISGARH	285.15	3.80
ANDHRA PRADESH	210.74	2.81
BIHAR	166.27	2.22
ESSAR STEEL	163.23	2.18
NEPAL(NVVN)	142.67	1.90
TAMIL NADU	142.28	1.90
JHARKHAND	130.48	1.74
ODISHA	114.13	1.52
MAHARASHTRA	102.72	1.37
TELANGANA	62.87	0.84
MP	55.42	0.74
ASSAM	52.53	0.70
GOA	3.92	0.05
KARNATAKA	1.49	0.02
UTTARAKHAND	1.35	0.02
DVC	1.06	0.01
DADRA & NAGAR HAVELI	0.90	0.01
RAJASTHAN	0.35	0.005
KERALA	0.34	0.005
TOTAL	7501.77	100.00
Volume Purchased by top 5 Regional Entities	5159.24	68.77

Table-11: VOLUME OF ELECTRICITY SOLD THROUGH POWER EXCHANGES, JULY 2019		
Name of the Entity	Volume of Sale (MUs)	% of Volume
TEESTA STG3	706.71	14.72
HIMACHAL PRADESH	369.85	7.70
MP	264.91	5.52
MAHARASHTRA	186.33	3.88
ASSAM	174.00	3.62
GUJARAT	158.92	3.31
HARYANA	155.70	3.24
RAJASTHAN	151.68	3.16
AD HYDRO	149.50	3.11
COASTGEN	148.85	3.10
KARNATAKA	107.79	2.25
SEMBCORP	107.27	2.23
SHREE CEMENT	101.95	2.12
UTTAR PRADESH	101.76	2.12
MEGHALAYA	98.44	2.05
DELHI	93.40	1.95
JHARKHAND	92.32	1.92
NLC	90.57	1.89
JINDAL STAGE-II	83.91	1.75
TELANGANA	81.66	1.70
SAINJ HEP	78.74	1.64
DIKCHU HEP	75.01	1.56
THERMAL POWERTECH	74.13	1.54
KARCHAM WANGTOO	66.17	1.38
JITPL	61.34	1.28
SPECTRUM	57.74	1.20
MB POWER	56.68	1.18
DB POWER	55.91	1.16
GMR CHATTISGARH	53.72	1.12
JAYPEE NIGRIE	51.50	1.07
PUNJAB	47.86	1.00
ODISHA	40.12	0.84
TRIPURA	36.77	0.77
SKS POWER	36.56	0.76
MARUTI COAL	35.02	0.73
ACBIL	31.35	0.65
IL&FS	31.22	0.65
DVC	28.98	0.60
SIKKIM	28.97	0.60
UTTARAKHAND	28.08	0.58
NTPC STATIONS-NER	27.17	0.57
ANDHRA PRADESH	26.48	0.55
ESSAR POWER	26.28	0.55
MIZORAM	25.31	0.53
J & K	24.92	0.52
ADHUNIK POWER LTD	23.45	0.49
BIHAR	22.44	0.47
ARUNACHAL PRADESH	21.02	0.44

TAMIL NADU	17.65	0.37
ONGC PALATANA	16.84	0.35
JINDAL POWER	15.41	0.32
BALCO	15.25	0.32
GOA	14.35	0.30
CHANDIGARH	13.31	0.28
KERALA	11.96	0.25
CHUZACHEN HEP	10.34	0.22
TASHIDENG HEP	9.32	0.19
WEST BENGAL	9.09	0.19
MALANA	9.06	0.19
GMR KAMALANGA	8.62	0.18
JORETHANG	8.33	0.17
JHABUA POWER_MP	6.76	0.14
LANCO BUDHIL	5.76	0.12
TRN ENERGY	5.63	0.12
RGPPL (DABHOL)	4.91	0.10
CHHATTISGARH	4.69	0.10
NTPC STATIONS-SR	4.35	0.09
MANIPUR	3.69	0.08
NAGALAND	2.18	0.05
BRBCL,NABINAGAR	1.90	0.04
EMCO	1.33	0.03
NTPC STATIONS-WR	0.63	0.01
DADRA & NAGAR HAVELI	0.42	0.01
DHARIWAL POWER	0.40	0.01
NTPC STATIONS-NR	0.05	0.001
Total	4800.52	100.00
Volume sold by top 5 Regional Entities	1701.80	35.45

Table-12: VOLUME OF ELECTRICITY PURCHASED THROUGH POWER EXCHANGES, JULY 2019		
Name of the Entity	Volume of Purchase (MUs)	% of Volume
WEST BENGAL	650.53	13.55
TAMIL NADU	575.78	11.99
TELANGANA	418.17	8.71
BIHAR	379.32	7.90
CHHATTISGARH	365.61	7.62
KERALA	346.26	7.21
ODISHA	341.49	7.11
GUJARAT	310.79	6.47
ANDHRA PRADESH	259.32	5.40
UTTAR PRADESH	243.13	5.06
MAHARASHTRA	230.14	4.79
HARYANA	108.74	2.27
DADRA & NAGAR HAVELI	89.95	1.87
DELHI	86.84	1.81
RAJASTHAN	80.38	1.67
KARNATAKA	73.45	1.53
UTTARAKHAND	40.55	0.84
ASSAM	39.36	0.82
MP	34.15	0.71
DAMAN AND DIU	31.81	0.66
HIMACHAL PRADESH	30.14	0.63
ESSAR STEEL	17.16	0.36
MEGHALAYA	13.79	0.29
CHANDIGARH	9.98	0.21
GOA	9.22	0.19
PUNJAB	9.15	0.19
JHARKHAND	5.04	0.10
NAGALAND	0.48	0.01
TOTAL	4800.72	100.00
Volume purchased by top 5 Regional Entities	2389.41	49.77

Table-13: VOLUME OF ELECTRICITY UNDER DRAWAL (EXPORTED) THROUGH DSM, JULY 2019		
Name of the Entity	Volume of Under Drawal (MUs)	% of Volume
NTPC STATIONS-WR	181.32	8.86
NHPC STATIONS	98.92	4.83
MP	87.53	4.28
RAJASTHAN	82.48	4.03
MAHARASHTRA	77.58	3.79
UTTAR PRADESH	76.23	3.72
J & K	74.70	3.65
HARYANA	69.97	3.42
TAMIL NADU	63.63	3.11
NPGC	62.45	3.05
OPGC	61.35	3.00
TELANGANA	58.72	2.87
KARNATAKA	58.21	2.84
GUJARAT	55.08	2.69
ANDHRA PRADESH	53.90	2.63
PUNJAB	51.64	2.52
BIHAR	47.48	2.32
SASAN UMPP	47.13	2.30
NTPC STATIONS-NR	39.53	1.93
DELHI	34.20	1.67
CHUKHA HEP	31.84	1.56
NLC	31.23	1.53
ODISHA	29.95	1.46
WEST BENGAL	24.35	1.19
ESSAR STEEL	22.72	1.11
CHHATTISGARH	22.48	1.10
UTTARAKHAND	22.19	1.08
DVC	22.11	1.08
BBMB	21.84	1.07
KURICHU HEP	21.32	1.04
NTPC STATIONS-ER	19.70	0.96
JHARKHAND	18.60	0.91
ARUNACHAL PRADESH	18.56	0.91
TRIPURA	17.90	0.87
NTPC STATIONS-SR	17.14	0.84
KARCHAM WANGTOO	14.26	0.70
HIMACHAL PRADESH	11.80	0.58
NEEPCO STATIONS	10.86	0.53
GOA	10.37	0.51
RAP C	9.99	0.49
TEESTA HEP	9.81	0.48
MEGHALAYA	9.61	0.47
TEESTA STG3	9.06	0.44
MAHINDRA_RUMS	7.61	0.37
RGPPL (DABHOL)	7.34	0.36
DIKCHU HEP	7.25	0.35
PONDICHERRY	7.14	0.35

MANGDECHU HEP	6.97	0.34
DADRA & NAGAR HAVELI	6.86	0.34
NEPAL(NVVN)	6.85	0.33
ASSAM	6.68	0.33
AD HYDRO	6.66	0.33
MIZORAM	6.44	0.31
ARINSUM_RUMS	6.34	0.31
CHANDIGARH	6.32	0.31
ACME_RUMS	5.62	0.27
MAITHON POWER LTD	5.08	0.25
NAGALAND	5.00	0.24
BRBCL,NABINAGAR	4.95	0.24
OSTRO	4.92	0.24
ACBIL	4.86	0.24
NAPP	4.71	0.23
GIWEL_BHUJ	4.27	0.21
NTPC STATIONS-NER	4.27	0.21
CGPL	4.17	0.20
TRN ENERGY	4.11	0.20
RENEW_BHACHAU	4.04	0.20
TALA HEP	3.99	0.19
RAIL	3.97	0.19
JAYPEE NIGRIE	3.76	0.18
RANGANADI HEP	3.57	0.17
BANGLADESH	3.54	0.17
EMCO	3.41	0.17
CHUZACHEN HEP	3.31	0.16
BARC	3.30	0.16
KERALA	3.23	0.16
SIKKIM	3.01	0.15
MANIPUR	2.87	0.14
TEHRI	2.78	0.14
TASHIDENG HEP	2.53	0.12
MB POWER	2.45	0.12
DAMAN AND DIU	2.39	0.12
BALCO	2.38	0.12
KOTESHWAR	2.25	0.11
GMR CHATTISGARH	2.19	0.11
ESSAR POWER	2.19	0.11
IGSTPS	2.13	0.10
DB POWER	2.12	0.10
LANKO_AMK	2.07	0.10
JITPL	2.05	0.10
NJPC	1.93	0.09
JINDAL POWER	1.89	0.09
JINDAL STAGE-II	1.88	0.09
SKS POWER	1.86	0.09
COASTGEN	1.82	0.09
RAMPUR HEP	1.68	0.08
RKM POWER	1.58	0.08
MTPS II	1.55	0.08

NSPCL	1.44	0.07
KSK MAHANADI	1.33	0.07
DHARIWAL POWER	1.29	0.06
NETCL VALLUR	1.24	0.06
PARE HEP	1.23	0.06
RAP B	1.19	0.06
ADHUNIK POWER LTD	1.11	0.05
NTPL	1.10	0.05
SEMBCORP	1.08	0.05
JORETHANG	1.06	0.05
THERMAL POWERTECH	0.98	0.05
GMR KAMALANGA	0.87	0.04
ONGC PALATANA	0.83	0.04
RANGIT HEP	0.70	0.03
LOKTAK	0.68	0.03
IL&FS	0.43	0.02
SHREE CEMENT	0.42	0.02
DOYANG HEP	0.36	0.02
DAGACHU	0.34	0.02
JHABUA POWER_MP	0.30	0.01
LANCO BUDHIL	0.26	0.01
NFF	0.25	0.01
DCPP	0.14	0.01
MALANA	0.14	0.01
HVDC CHAMPA	0.10	0.00
KAPP 3&4	0.04	0.00
SIMHAPURI	0.002	0.00
Total	2046.76	100.00
Volume Exported by top 5 Regional Entities	527.82	25.79

Table-14: VOLUME OF ELECTRICITY OVER DRAWAL (IMPORTED) THROUGH DSM, JULY 2019		
Name of the Entity	Volume of Over drawal (MUs)	% of Volume
NTPC STATIONS-WR	142.34	6.60
RAJASTHAN	110.42	5.12
NTPC STATIONS-NR	85.62	3.97
TAMIL NADU	85.38	3.96
KARNATAKA	83.54	3.87
UTTAR PRADESH	81.07	3.76
GUJARAT	79.18	3.67
KERALA	77.16	3.58
ODISHA	74.06	3.43
WEST BENGAL	68.55	3.18
MP	65.78	3.05
NTPC STATIONS-ER	63.61	2.95
MAHARASHTRA	62.73	2.91
ANDHRA PRADESH	58.73	2.72
TELANGANA	55.76	2.58
BIHAR	55.03	2.55
NTPC STATIONS-SR	53.80	2.49
HARYANA	52.08	2.41
DVC	41.42	1.92
CHHATTISGARH	41.09	1.90
HIMACHAL PRADESH	38.52	1.79
ASSAM	32.54	1.51
TEESTA STG3	30.23	1.40
PUNJAB	28.78	1.33
DELHI	26.15	1.21
ESSAR STEEL	23.63	1.10
RGPL (DABHOL)	22.71	1.05
CGPL	22.04	1.02
JHARKHAND	21.67	1.00
UTTARAKHAND	20.89	0.97
CHUKHA HEP	17.44	0.81
DAGACHU	16.05	0.74
GMR CHATTISGARH	15.06	0.70
JHABUA POWER_MP	14.47	0.67
J & K	14.46	0.67
GMR KAMALANGA	14.41	0.67
NHPC STATIONS	13.61	0.63
DAMAN AND DIU	13.26	0.61
MB POWER	13.26	0.61
NLC	13.16	0.61
EMCO	11.23	0.52
NTPC STATIONS-NER	10.22	0.47
CHANDIGARH	10.16	0.47
OPGC	10.01	0.46
IGSTPS	8.92	0.41
SEMBCORP	8.04	0.37
NJPC	7.23	0.34

NPGC	7.11	0.33
ADHUNIK POWER LTD	6.96	0.32
KURICHU HEP	6.88	0.32
NETCL VALLUR	6.66	0.31
TASHIDENG HEP	6.63	0.31
DB POWER	6.59	0.31
BALCO	6.51	0.30
JORETHANG	6.47	0.30
BBMB	6.44	0.30
JINDAL STAGE-II	6.08	0.28
OSTRO	5.84	0.27
MTPS II	5.78	0.27
BANGLADESH	5.76	0.27
NEPAL(NVVN)	5.74	0.27
RAIL	5.73	0.27
COASTGEN	5.69	0.26
TALA HEP	5.62	0.26
NAPP	5.60	0.26
RENEW_BHACHAU	5.06	0.23
SIKKIM	4.98	0.23
PONDICHERRY	4.92	0.23
DIKCHU HEP	4.79	0.22
BRBCL,NABINAGAR	4.75	0.22
GOA	4.70	0.22
THERMAL POWERTECH	4.44	0.21
ACME_RUMS	4.29	0.20
ARINSUM_RUMS	4.22	0.20
RAP C	4.09	0.19
JITPL	4.00	0.19
DADRA & NAGAR HAVELI	3.92	0.18
TRIPURA	3.92	0.18
GIWEL_BHUJ	3.79	0.18
SHREE CEMENT	3.75	0.17
CHUZACHEN HEP	3.58	0.17
NSPCL	3.44	0.16
NTPL	3.33	0.15
MAITHON POWER LTD	3.28	0.15
ESSAR POWER	3.15	0.15
MANIPUR	2.92	0.14
KARCHAM WANGTOO	2.81	0.13
KAPP 3&4	2.58	0.12
JINDAL POWER	2.53	0.12
MEGHALAYA	2.53	0.12
SASAN UMPP	2.22	0.10
SKS POWER	2.01	0.09
KOTESHWAR	1.93	0.09
TEHRI	1.93	0.09
KSK MAHANADI	1.82	0.08
RKM POWER	1.80	0.08
MAHINDRA_RUMS	1.69	0.08
IL&FS	1.67	0.08

ACBIL	1.47	0.07
RAMPUR HEP	1.42	0.07
NEEPCO STATIONS	1.30	0.06
ONGC PALATANA	1.27	0.06
LANKO_AMK	1.25	0.06
DGEN MEGA POWER	1.13	0.05
RAP B	1.00	0.05
JAYPEE NIGRIE	0.93	0.04
MIZORAM	0.86	0.04
TRN ENERGY	0.86	0.04
NAGALAND	0.79	0.04
AD HYDRO	0.72	0.03
DHARIWAL POWER	0.71	0.03
ARUNACHAL PRADESH	0.66	0.03
LANKO KONDAPALLI	0.64	0.03
KORBA WEST POWER	0.56	0.03
HVDC CHAMPA	0.55	0.03
SIMHAPURI	0.54	0.02
RANGIT HEP	0.41	0.02
LOKTAK	0.34	0.02
NEP	0.30	0.01
TEESTA HEP	0.28	0.01
RANGANADI HEP	0.27	0.01
NFF	0.25	0.01
DOYANG HEP	0.13	0.01
PARE HEP	0.12	0.01
MALANA	0.12	0.01
LANCO BUDHIL	0.09	0.00
DCPP	0.08	0.00
MANGDECHU HEP	0.002	0.00
TOTAL	2157.45	100.00
Volume Imported by top 5 Regional Entities	507.30	23.51

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), JULY 2019

S. No.	Name of the Entity	Total volume of net short-term transactions of electricity*
1	HARYANA	1550.97
2	PUNJAB	1479.58
3	WEST BENGAL	1152.01
4	DELHI	868.73
5	TAMIL NADU	711.63
6	UTTAR PRADESH	585.85
7	BIHAR	523.40
8	ODISHA	423.69
9	TELANGANA	374.13
10	BANGLADESH	314.46
11	KERALA	293.28
12	CHHATTISGARH	275.34
13	GUJARAT	255.50
14	ESSAR STEEL	181.30
15	NEPAL(NVVN)	141.56
16	MAHARASHTRA	116.40
17	DADRA & NAGAR HAVELI	87.08
18	NTPC STATIONS-NR	45.91
19	JHARKHAND	44.16
20	NTPC STATIONS-ER	43.91
21	DAMAN AND DIU	42.68
22	NTPC STATIONS-SR	32.31
23	CGPL	17.87
24	RGPPL (DABHOL)	10.45
25	IGSTPS	6.79
26	EMCO	6.49
27	NETCL VALLUR	5.41
28	NJPC	5.30
29	MTPS II	4.24
30	KAPP 3&4	2.54
31	NTPL	2.23
32	NSPCL	2.00
33	RAIL	1.77
34	TALA HEP	1.63
35	DGEN MEGA POWER	1.13
36	RENEW_BHACHAU	1.02
37	OSTRO	0.92
38	NAPP	0.89
39	LANKO KONDAPALLI	0.64
40	KORBA WEST POWER	0.56
41	SIMHAPURI	0.54
42	CHANDIGARH	0.51
43	HVDC CHAMPA	0.46
44	NEP	0.30
45	RKM POWER	0.22
46	DCPP	-0.06
47	RAP B	-0.19
48	DOYANG HEP	-0.23

49	RAMPUR HEP	-0.26
50	RANGIT HEP	-0.30
51	KOTESHWAR	-0.32
52	LOKTAK	-0.34
53	GIWEL_BHUJ	-0.48
54	TEHRI	-0.86
55	DHARIWAL POWER	-0.97
56	PARE HEP	-1.11
57	ACME_RUMS	-1.32
58	MAITHON POWER LTD	-1.80
59	ARINSUM_RUMS	-2.12
60	PONDICHERRY	-2.21
61	BRBCL,NABINAGAR	-3.16
62	RANGANADI HEP	-3.30
63	BARC	-3.30
64	RAP C	-5.89
65	MAHINDRA_RUMS	-5.92
66	LANCO BUDHIL	-5.93
67	MANGDECHU HEP	-6.96
68	TRN ENERGY	-8.88
69	MALANA	-9.08
70	TEESTA HEP	-9.52
71	NEEPCO STATIONS	-9.56
72	LANKO_AMK	-10.68
73	GOA	-12.73
74	CHUKHA HEP	-14.40
75	KURICHU HEP	-14.45
76	JINDAL POWER	-14.77
77	BBMB	-15.40
78	NAGALAND	-17.05
79	BALCO	-20.37
80	NTPC STATIONS-NER	-26.80
81	MANIPUR	-34.17
82	MARUTI COAL	-35.02
83	MIZORAM	-38.50
84	ARUNACHAL PRADESH	-38.92
85	NTPC STATIONS-WR	-39.61
86	GMR KAMALANGA	-42.02
87	SASAN UMPP	-44.92
88	OPGC	-51.34
89	ACBIL	-52.66
90	NPGC	-55.33
91	ASSAM	-56.24
92	SPECTRUM	-57.74
93	JITPL	-59.39
94	JHABUA POWER_MP	-59.42
95	SIKKIM	-60.48
96	UTTARAKHAND	-63.29
97	ONGC PALATANA	-63.91
98	TRIPURA	-65.64
99	JORETHANG	-65.76
100	IL&FS	-66.22

101	TASHIDENG HEP	-68.48
102	DAGACHU	-68.51
103	KSK MAHANADI	-74.04
104	CHUZACHEN HEP	-76.18
105	DIKCHU HEP	-77.46
106	SAINJ HEP	-78.74
107	NHPC STATIONS	-85.31
108	JINDAL STAGE-II	-97.98
109	SEMBICORP	-100.31
110	KARNATAKA	-104.08
111	NLC	-108.64
112	KARCHAM WANGTOO	-108.81
113	SHREE CEMENT	-121.88
114	MEGHALAYA	-136.38
115	ADHUNIK POWER LTD	-148.15
116	JAYPEE NIGRIE	-154.71
117	AD HYDRO	-155.44
118	SKS POWER	-168.05
119	MB POWER	-179.62
120	DVC	-191.23
121	DB POWER	-214.17
122	RAJASTHAN	-216.22
123	ESSAR POWER	-222.60
124	COASTGEN	-262.74
125	J & K	-475.31
126	GMR CHATTISGARH	-484.77
127	THERMAL POWERTECH	-569.87
128	TEESTA STG3	-687.93
129	MP	-800.59
130	ANDHRA PRADESH	-892.16
131	HIMACHAL PRADESH	-1121.62
* 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, JULY 2019			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	4800.41	0.35
B	Actual Cleared Volume and hence scheduled (MUs)	4800.37	0.35
C	Volume of electricity that could not be cleared and hence not scheduled because of congestion (MUs)	0.00	0.00
D	Volume of electricity that could not be cleared and hence not scheduled because of reasons other than congestion (MUs)*	0.039	0.00
E	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	0.00%	0.00%
F	Percentage of the time congestion occurred during the month (Number of hours congestion occurred/Total number of hours in the month)	0.00%	0.00%
G	Congestion occurrence (%) time block wise		
	0.00 - 6.00 hours	0.00%	0.00%
	6.00 - 12.00 hours	0.00%	0.00%
	12.00 - 18.00 hours	0.00%	0.00%
	18.00 - 24.00 hours	0.00%	0.00%
* This power could not be cleared due to real time curtailment of 0.039 MU on 24 th July 2019 at IEX			
Source: IEX & PXIL & NLDC			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (DAY-WISE) (MUs), JULY 2019						
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-Jul-19	145.55	58.15	138.77	0.00	59.18	3658.78
2-Jul-19	145.59	59.82	150.60	0.00	62.48	3667.00
3-Jul-19	147.17	65.50	154.35	0.00	64.93	3653.75
4-Jul-19	155.89	70.72	155.31	0.00	68.18	3590.20
5-Jul-19	157.42	71.91	170.59	0.00	62.58	3502.42
6-Jul-19	158.58	79.42	149.75	0.00	58.16	3375.96
7-Jul-19	154.45	81.63	109.10	0.00	62.28	3238.51
8-Jul-19	155.52	78.32	133.09	0.00	59.97	3419.36
9-Jul-19	158.89	79.50	142.90	0.00	71.94	3375.39
10-Jul-19	160.59	82.67	144.45	0.00	70.13	3373.57
11-Jul-19	154.84	82.58	151.55	0.00	73.66	3330.21
12-Jul-19	155.99	77.32	168.06	0.00	72.41	3506.68
13-Jul-19	161.23	80.89	177.85	0.00	70.09	3498.11
14-Jul-19	143.88	79.29	141.29	0.00	68.49	3298.42
15-Jul-19	164.90	80.55	132.75	0.05	69.21	3374.90
16-Jul-19	151.58	80.48	155.24	0.00	73.72	3409.61
17-Jul-19	165.54	80.45	157.55	0.05	72.21	3578.26
18-Jul-19	166.60	76.67	181.87	0.05	73.42	3681.55
19-Jul-19	166.89	88.20	177.06	0.00	80.45	3763.26
20-Jul-19	150.99	89.36	193.12	0.00	77.09	3746.76
21-Jul-19	162.06	85.75	182.37	0.00	63.96	3630.65
22-Jul-19	164.20	84.94	170.97	0.00	66.88	3787.50
23-Jul-19	169.86	93.53	164.19	0.00	78.85	3879.07
24-Jul-19	164.97	89.83	179.90	0.00	75.65	3758.78
25-Jul-19	173.05	97.60	168.49	0.00	69.25	3488.52
26-Jul-19	178.02	85.94	139.12	0.00	64.55	3370.28
27-Jul-19	158.40	90.80	142.49	0.10	64.02	3235.81
28-Jul-19	148.75	97.38	124.18	0.11	65.34	3113.32
29-Jul-19	166.61	98.12	132.67	0.00	60.85	3287.88
30-Jul-19	173.48	92.01	148.50	0.00	60.75	3382.49
31-Jul-19	173.56	87.36	162.25	0.00	63.91	3378.60
Total	4955.07	2546.71	4800.37	0.35	2104.60	108355.60
Source: NLDC						
* Gross Electricity Generation excluding electricity generation from renewables and captive power plants.						
** The volume of bilateral through PXs represents the volume through term-ahead contracts.						
# Area Clearing Volume represents the scheduled volume of all the bid areas.						

Table-18: PRICE OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (DAY-WISE) (₹/kWh), JULY 2019									
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-Jul-19	1.05	5.12	3.25	-	-	-	0.00	7.69	2.96
2-Jul-19	2.00	5.59	3.62	-	-	-	0.00	7.43	3.27
3-Jul-19	1.20	6.24	3.84	-	-	-	0.00	8.00	3.74
4-Jul-19	1.25	6.50	3.77	-	-	-	0.00	8.00	3.01
5-Jul-19	2.51	6.47	3.89	-	-	-	0.00	7.73	2.62
6-Jul-19	2.50	6.38	3.63	-	-	-	0.00	6.84	2.59
7-Jul-19	1.21	3.99	2.60	-	-	-	0.00	5.90	1.84
8-Jul-19	1.72	5.54	3.12	-	-	-	0.00	6.72	1.98
9-Jul-19	2.03	6.50	3.06	-	-	-	0.00	6.72	1.76
10-Jul-19	2.25	7.01	3.34	-	-	-	0.00	5.58	1.72
11-Jul-19	2.48	7.78	3.66	-	-	-	0.00	8.00	2.83
12-Jul-19	2.30	8.54	3.81	-	-	-	0.00	8.00	3.95
13-Jul-19	2.60	9.29	3.72	-	-	-	0.00	6.66	2.99
14-Jul-19	1.22	6.50	3.57	-	-	-	0.00	6.55	2.43
15-Jul-19	1.89	8.85	3.80	3.25	3.25	3.25	0.00	7.17	2.24
16-Jul-19	1.97	8.85	3.66	-	-	-	0.00	6.33	2.38
17-Jul-19	2.25	5.00	3.20	3.20	3.20	3.20	0.00	8.00	4.32
18-Jul-19	2.57	7.51	3.97	3.20	3.20	3.20	0.00	8.00	4.90
19-Jul-19	3.10	8.85	4.42	-	-	-	0.00	7.31	3.33
20-Jul-19	2.84	8.85	4.47	-	-	-	0.00	7.55	3.25
21-Jul-19	1.66	6.62	3.78	-	-	-	0.00	8.00	3.55
22-Jul-19	2.40	7.49	3.97	-	-	-	0.00	8.00	4.21
23-Jul-19	2.25	7.95	4.20	-	-	-	0.00	8.00	4.23
24-Jul-19	2.71	8.10	4.30	-	-	-	0.00	7.02	2.28
25-Jul-19	2.25	4.75	3.13	-	-	-	0.00	6.15	2.35
26-Jul-19	1.50	4.14	2.84	-	-	-	0.00	8.00	2.60
27-Jul-19	1.97	4.61	3.04	3.25	3.25	3.25	0.00	7.05	2.43
28-Jul-19	1.57	4.47	2.66	3.14	3.14	3.14	0.00	5.26	1.81
29-Jul-19	1.06	5.18	2.84	-	-	-	0.00	6.33	2.23
30-Jul-19	1.90	6.20	3.33	-	-	-	0.00	8.00	3.62
31-Jul-19	2.60	6.65	3.44	-	-	-	0.00	8.00	2.80
	1.05[#]	9.29[#]	3.59	3.14[#]	3.25[#]	3.20	0.00[#]	8.00[#]	2.91
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), JULY 2019										
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	16.04	1557.19	1541.15	47.86	9.15	-38.71	28.78	51.64	-22.86	1479.58
HARYANA	17.04	1632.86	1615.83	155.70	108.74	-46.97	52.08	69.97	-17.89	1550.97
RAJASTHAN	173.20	0.35	-172.85	151.68	80.38	-71.31	110.42	82.48	27.94	-216.22
DELHI	2.82	886.17	883.35	93.40	86.84	-6.57	26.15	34.20	-8.05	868.73
UTTAR PRADESH	27.16	466.81	439.64	101.76	243.13	141.36	81.07	76.23	4.84	585.85
UTTARAKHAND	75.81	1.35	-74.46	28.08	40.55	12.48	20.89	22.19	-1.30	-63.29
HIMACHAL P	808.63	0.00	-808.63	369.85	30.14	-339.70	38.52	11.80	26.71	-1121.62
J & K	390.15	0.00	-390.15	24.92	0.00	-24.92	14.46	74.70	-60.24	-475.31
CHANDIGARH	0.00	0.00	0.00	13.31	9.98	-3.33	10.16	6.32	3.84	0.51
MP	603.51	55.42	-548.09	264.91	34.15	-230.76	65.78	87.53	-21.74	-800.59
MAHARASHTRA	15.28	102.72	87.43	186.33	230.14	43.81	62.73	77.58	-14.85	116.40
GUJARAT	312.86	392.39	79.54	158.92	310.79	151.86	79.18	55.08	24.10	255.50
CHHATTISGARH	389.33	285.15	-104.18	4.69	365.61	360.91	41.09	22.48	18.61	275.34
GOA	5.86	3.92	-1.94	14.35	9.22	-5.12	4.70	10.37	-5.67	-12.73
DAMAN AND DIU	0.00	0.00	0.00	0.00	31.81	31.81	13.26	2.39	10.87	42.68
DADRA & NAGAR	0.41	0.90	0.49	0.42	89.95	89.53	3.92	6.86	-2.94	87.08
ANDHRA P	1340.56	210.74	-1129.82	26.48	259.32	232.84	58.73	53.90	4.83	-892.16
KARNATAKA	96.56	1.49	-95.07	107.79	73.45	-34.34	83.54	58.21	25.33	-104.08
KERALA	115.29	0.34	-114.95	11.96	346.26	334.30	77.16	3.23	73.94	293.28
TAMIL NADU	10.54	142.28	131.74	17.65	575.78	558.13	85.38	63.63	21.76	711.63
PONDICHERRY	0.00	0.00	0.00	0.00	0.00	0.00	4.92	7.14	-2.21	-2.21
TELANGANA	22.29	62.87	40.58	81.66	418.17	336.51	55.76	58.72	-2.96	374.13
WEST BENGAL	149.83	616.20	466.38	9.09	650.53	641.44	68.55	24.35	44.20	1152.01
ODISHA	35.92	114.13	78.21	40.12	341.49	301.37	74.06	29.95	44.11	423.69
BIHAR	7.30	166.27	158.97	22.44	379.32	356.88	55.03	47.48	7.54	523.40
JHARKHAND	2.11	130.48	128.37	92.32	5.04	-87.29	21.67	18.60	3.08	44.16
SIKKIM	33.48	0.00	-33.48	28.97	0.00	-28.97	4.98	3.01	1.97	-60.48
DVC	182.62	1.06	-181.56	28.98	0.00	-28.98	41.42	22.11	19.31	-191.23
ARUNACHAL P	0.00	0.00	0.00	21.02	0.00	-21.02	0.66	18.56	-17.90	-38.92
ASSAM	0.00	52.53	52.53	174.00	39.36	-134.63	32.54	6.68	25.86	-56.24
MANIPUR	30.53	0.00	-30.53	3.69	0.00	-3.69	2.92	2.87	0.05	-34.17
MEGHALAYA	44.64	0.00	-44.64	98.44	13.79	-84.65	2.53	9.61	-7.09	-136.38
MIZORAM	7.62	0.00	-7.62	25.31	0.00	-25.31	0.86	6.44	-5.58	-38.50
NAGALAND	11.13	0.00	-11.13	2.18	0.48	-1.70	0.79	5.00	-4.21	-17.05
TRIPURA	14.88	0.00	-14.88	36.77	0.00	-36.77	3.92	17.90	-13.99	-65.64
NTPC STNS-NR	0.13	0.00	-0.13	0.05	0.00	-0.05	85.62	39.53	46.09	45.91
NHPC STNS	0.00	0.00	0.00	0.00	0.00	0.00	13.61	98.92	-85.31	-85.31
NFF	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00	0.00
RAIL	0.00	0.00	0.00	0.00	0.00	0.00	5.73	3.97	1.77	1.77
NEP	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.30	0.30
NAPP	0.00	0.00	0.00	0.00	0.00	0.00	5.60	4.71	0.89	0.89
RAP B	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.19	-0.19	-0.19
NJPC	0.00	0.00	0.00	0.00	0.00	0.00	7.23	1.93	5.30	5.30
TEHRI	0.00	0.00	0.00	0.00	0.00	0.00	1.93	2.78	-0.86	-0.86
BBMB	0.00	0.00	0.00	0.00	0.00	0.00	6.44	21.84	-15.40	-15.40

RAP C	0.00	0.00	0.00	0.00	0.00	0.00	4.09	9.99	-5.89	-5.89
AD HYDRO	0.00	0.00	0.00	149.50	0.00	-149.50	0.72	6.66	-5.94	-155.44
IGSTPS	0.00	0.00	0.00	0.00	0.00	0.00	8.92	2.13	6.79	6.79
KOTESHWAR	0.00	0.00	0.00	0.00	0.00	0.00	1.93	2.25	-0.32	-0.32
KARCHAM WANG	31.20	0.00	-31.20	66.17	0.00	-66.17	2.81	14.26	-11.45	-108.81
SHREE CEMENT	23.26	0.00	-23.26	101.95	0.00	-101.95	3.75	0.42	3.32	-121.88
LANCO BUDHIL	0.00	0.00	0.00	5.76	0.00	-5.76	0.09	0.26	-0.17	-5.93
RAMPUR HEP	0.00	0.00	0.00	0.00	0.00	0.00	1.42	1.68	-0.26	-0.26
MALANA	0.00	0.00	0.00	9.06	0.00	-9.06	0.12	0.14	-0.02	-9.08
SAINJ HEP	0.00	0.00	0.00	78.74	0.00	-78.74	0.00	0.00	0.00	-78.74
NTPC STNS-WR	0.00	0.00	0.00	0.63	0.00	-0.63	142.34	181.32	-38.98	-39.61
JINDAL POWER	0.00	0.00	0.00	15.41	0.00	-15.41	2.53	1.89	0.64	-14.77
LANKO_AMK	9.85	0.00	-9.85	0.00	0.00	0.00	1.25	2.07	-0.83	-10.68
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	3.44	1.44	2.00	2.00
ACBIL	17.92	0.00	-17.92	31.35	0.00	-31.35	1.47	4.86	-3.39	-52.66
BALCO	9.25	0.00	-9.25	15.25	0.00	-15.25	6.51	2.38	4.13	-20.37
RGPPL (DABHOL)	0.00	0.00	0.00	4.91	0.00	-4.91	22.71	7.34	15.36	10.45
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	22.04	4.17	17.87	17.87
DCPP	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.14	-0.06	-0.06
EMCO	0.00	0.00	0.00	1.33	0.00	-1.33	11.23	3.41	7.82	6.49
ESSAR STEEL	0.00	163.23	163.23	0.00	17.16	17.16	23.63	22.72	0.91	181.30
KSK MAHANADI	74.53	0.00	-74.53	0.00	0.00	0.00	1.82	1.33	0.49	-74.04
ESSAR POWER	197.27	0.00	-197.27	26.28	0.00	-26.28	3.15	2.19	0.96	-222.60
JINDAL STAGE-II	18.27	0.00	-18.27	83.91	0.00	-83.91	6.08	1.88	4.20	-97.98
DB POWER	162.73	0.00	-162.73	55.91	0.00	-55.91	6.59	2.12	4.47	-214.17
DHARIWAL POWE	0.00	0.00	0.00	0.40	0.00	-0.40	0.71	1.29	-0.57	-0.97
JAYPEE NIGRIE	100.37	0.00	-100.37	51.50	0.00	-51.50	0.93	3.76	-2.83	-154.71
DGEN MEGA POW	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.00	1.13	1.13
GMR CHATTISGAR	443.92	0.00	-443.92	53.72	0.00	-53.72	15.06	2.19	12.87	-484.77
KORBA WEST POW	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.56	0.56
MB POWER	133.74	0.00	-133.74	56.68	0.00	-56.68	13.26	2.45	10.80	-179.62
MARUTI COAL	0.00	0.00	0.00	35.02	0.00	-35.02	0.00	0.00	0.00	-35.02
SPECTRUM	0.00	0.00	0.00	57.74	0.00	-57.74	0.00	0.00	0.00	-57.74
JHABUA POWER_N	66.83	0.00	-66.83	6.76	0.00	-6.76	14.47	0.30	14.17	-59.42
SASAN UMPP	0.00	0.00	0.00	0.00	0.00	0.00	2.22	47.13	-44.92	-44.92
TRN ENERGY	0.00	0.00	0.00	5.63	0.00	-5.63	0.86	4.11	-3.25	-8.88
RKM POWER	0.00	0.00	0.00	0.00	0.00	0.00	1.80	1.58	0.22	0.22
SKS POWER	131.64	0.00	-131.64	36.56	0.00	-36.56	2.01	1.86	0.15	-168.05
BARC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	-3.30	-3.30
KAPP 3&4	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.04	2.54	2.54
HVDC CHAMPA	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.10	0.46	0.46
MAHINDRA_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	1.69	7.61	-5.92	-5.92
ARINSUM_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	4.22	6.34	-2.12	-2.12
OSTRO	0.00	0.00	0.00	0.00	0.00	0.00	5.84	4.92	0.92	0.92
ACME_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	4.29	5.62	-1.32	-1.32
RENEW_BHACHA	0.00	0.00	0.00	0.00	0.00	0.00	5.06	4.04	1.02	1.02
GIWEL_BHUJ	0.00	0.00	0.00	0.00	0.00	0.00	3.79	4.27	-0.48	-0.48
NTPC STNS-SR	0.00	0.00	0.00	4.35	0.00	-4.35	53.80	17.14	36.66	32.31
LANKO KONDAPA	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.64	0.64
SIMHAPURI	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.54	0.54
COASTGEN	117.77	0.00	-117.77	148.85	0.00	-148.85	5.69	1.82	3.87	-262.74

THERMAL POWER	499.20	0.00	-499.20	74.13	0.00	-74.13	4.44	0.98	3.46	-569.87
IL&FS	36.23	0.00	-36.23	31.22	0.00	-31.22	1.67	0.43	1.24	-66.22
NLC	0.00	0.00	0.00	90.57	0.00	-90.57	13.16	31.23	-18.07	-108.64
SEMBCORP	0.00	0.00	0.00	107.27	0.00	-107.27	8.04	1.08	6.96	-100.31
NETCL VALLUR	0.00	0.00	0.00	0.00	0.00	0.00	6.66	1.24	5.41	5.41
NTPL	0.00	0.00	0.00	0.00	0.00	0.00	3.33	1.10	2.23	2.23
NTPC STNS-ER	0.00	0.00	0.00	0.00	0.00	0.00	63.61	19.70	43.91	43.91
MAITHON POWER	0.00	0.00	0.00	0.00	0.00	0.00	3.28	5.08	-1.80	-1.80
NPGC	0.00	0.00	0.00	0.00	0.00	0.00	7.11	62.45	-55.33	-55.33
ADHUNIK POWER	130.55	0.00	-130.55	23.45	0.00	-23.45	6.96	1.11	5.85	-148.15
CHUZACHEN HEP	66.11	0.00	-66.11	10.34	0.00	-10.34	3.58	3.31	0.27	-76.18
RANGIT HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.70	-0.30	-0.30
GMR KAMALANG	46.94	0.00	-46.94	8.62	0.00	-8.62	14.41	0.87	13.53	-42.02
JITPL	0.00	0.00	0.00	61.34	0.00	-61.34	4.00	2.05	1.95	-59.39
TEESTA HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.28	9.81	-9.52	-9.52
DAGACHU	84.23	0.00	-84.23	0.00	0.00	0.00	16.05	0.34	15.72	-68.51
JORETHANG	62.83	0.00	-62.83	8.33	0.00	-8.33	6.47	1.06	5.41	-65.76
NEPAL(NVVN)	0.00	142.67	142.67	0.00	0.00	0.00	5.74	6.85	-1.11	141.56
BANGLADESH	0.00	312.24	312.24	0.00	0.00	0.00	5.76	3.54	2.21	314.46
TEESTA STG3	2.38	0.00	-2.38	706.71	0.00	-706.71	30.23	9.06	21.16	-687.93
DIKCHU HEP	0.00	0.00	0.00	75.01	0.00	-75.01	4.79	7.25	-2.45	-77.46
TASHIDENG HEP	63.25	0.00	-63.25	9.32	0.00	-9.32	6.63	2.53	4.10	-68.48
OPGC	0.00	0.00	0.00	0.00	0.00	0.00	10.01	61.35	-51.34	-51.34
BRBCL,NABINAGA	1.06	0.00	-1.06	1.90	0.00	-1.90	4.75	4.95	-0.20	-3.16
MTPS II	0.00	0.00	0.00	0.00	0.00	0.00	5.78	1.55	4.24	4.24
TALA HEP	0.00	0.00	0.00	0.00	0.00	0.00	5.62	3.99	1.63	1.63
CHUKHA HEP	0.00	0.00	0.00	0.00	0.00	0.00	17.44	31.84	-14.40	-14.40
KURICHU HEP	0.00	0.00	0.00	0.00	0.00	0.00	6.88	21.32	-14.45	-14.45
MANGDECHU HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.97	-6.96	-6.96
NTPC STNS-NER	5.58	0.00	-5.58	27.17	0.00	-27.17	10.22	4.27	5.96	-26.80
NEEPCO STNS	0.00	0.00	0.00	0.00	0.00	0.00	1.30	10.86	-9.56	-9.56
RANGANADI HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.27	3.57	-3.30	-3.30
DOYANG HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.36	-0.23	-0.23
ONGC PALATANA	47.51	0.00	-47.51	16.84	0.00	-16.84	1.27	0.83	0.44	-63.91
LOKTAK	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.68	-0.34	-0.34
PARE HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.12	1.23	-1.11	-1.11

Source: NLDC

* in case of a state, the entities which are "selling" also include generators connected to state grid and the entities which are "buying" also include open access consumers.

** (-) indicates sale and (+) indicates purchase,

*** Total net includes net of transactions through bilateral, power exchange and DSM

Figure 7: Bilateral Contracts executed by Traders in August, 2019

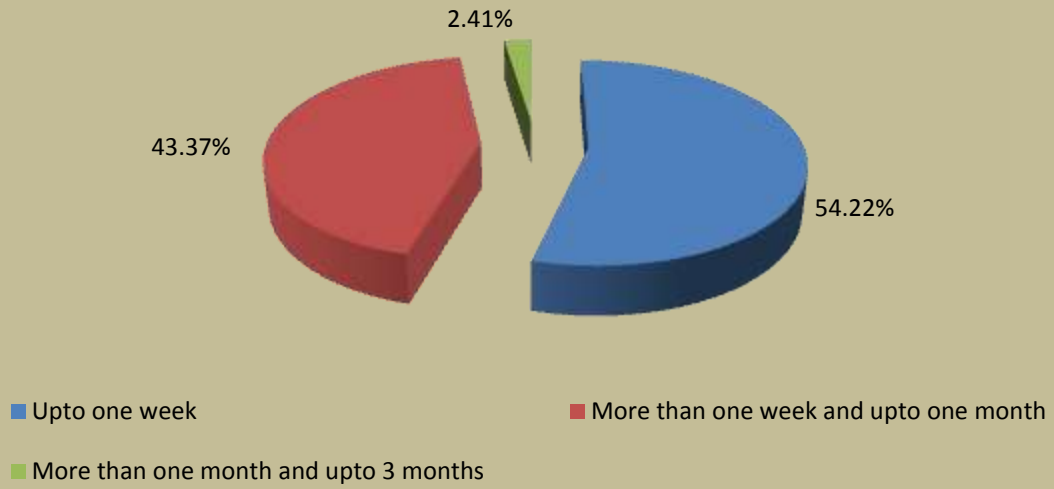


Figure-8: Forward Curve based on Prices of Bilateral Contracts

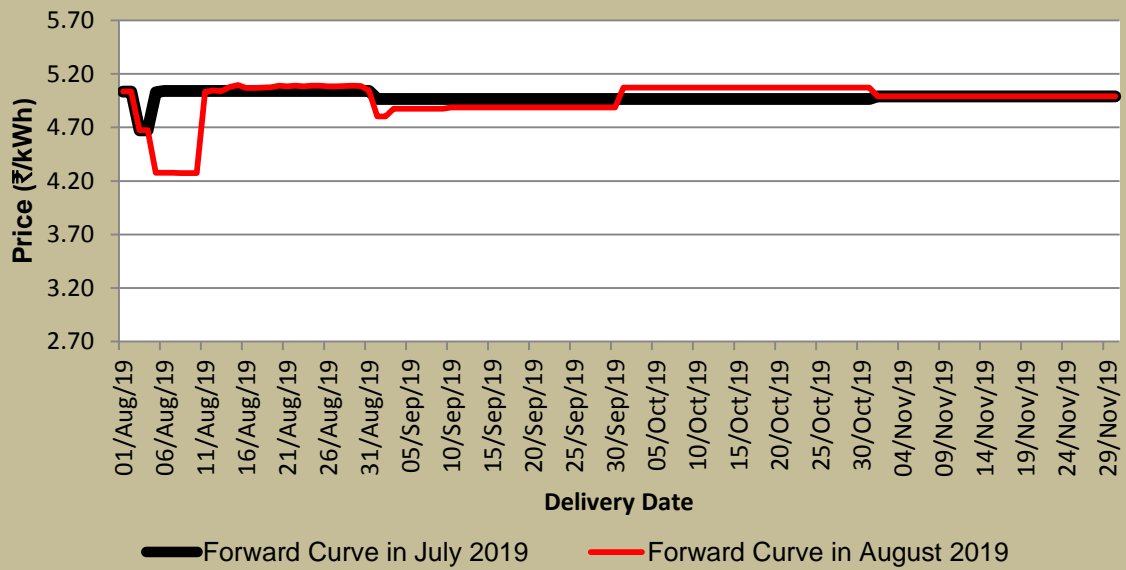


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTED THROUGH POWER EXCHANGES, JULY 2019							
Sr.No.	Details of REC Transactions	IEX			PXIL		
		Solar	Non-Solar	Non-Solar (issued before 1st April 2017)	Solar	Non-Solar	Non-Solar (issued before 1st April 2017)
A	Volume of Buy Bid	424546	787418	25000	132789	198527	35781
B	Volume of Sell Bid	135029	405761	36	47875	105823	10781
C	Ratio of Buy Bid to Sell Bid Volume	3.14	1.94	694.44	2.77	1.88	3.32
D	Market Clearing Volume (MWh)	104760	387679	36	24296	102076	10781
E	Weighted average Market Clearing Price (₹/MWh)	2000	1650	1500	2000	1705	1603

Source: IEX and PXIL

Note 1: 1 REC = 1 MWh

Note 2:

Forbearance and Floor Price w.e.f 1st April 2017		
Type of REC	Floor Price (₹/MWh)	Forbearance Price (₹/MWh)
Solar	1000.00	2400.00
Non-Solar	1000.00	3000.00