

Monthly Report on Short-term Transactions of Electricity in India

August, 2019



Economics Division
Central Electricity Regulatory Commission
36, Janpath, Chanderlok Building



Contents

S.No.	Contents	Page No
	Contents	i
	List of Tables and Figures	ii
	Abbreviations	iii
	Introduction	1
I	Volume of Short-term Transactions of Electricity	1
II	Price of Short-term Transactions of Electricity	2
(i)	<i>Price of electricity transacted through Traders</i>	2
(ii)	<i>Price of electricity transacted through Power Exchanges</i>	3
(iii)	<i>Price of electricity transacted through DSM</i>	3
III	Trading Margin	3
IV	Volume of Short-term Transactions of Electricity (Regional Entity-wise)	3
V	Congestion on Inter-State Transmission Corridor for Day-Ahead Market on Power Exchanges	4
VI	Bilateral Contracts executed by Traders	5
(i)	<i>Duration of bilateral contracts</i>	5
(ii)	<i>Forward Curve based on Price of bilateral contracts</i>	6
VII	Volume and Price of Renewable Energy Certificates (RECs)	6
VIII	Inferences	8

List of Tables and Figures

S.No.	List of Tables and Figures	Page No.
I	List of Tables	
Table-1	Volume of Short-term Transactions of Electricity in India	10
Table-2	Percentage Share of Electricity Transacted by Trading Licensees	12
Table-3	Price of Electricity Transacted through Traders	13
Table-4	Price of Electricity Transacted through Traders (Time-wise)	13
Table-5	Price of Electricity Transacted through Power Exchanges	13
Table-6	Volume and Price of Electricity in Term Ahead Market of IEX	13
Table-7	Volume and Price of Electricity in Term Ahead Market of PXIL	13
Table-8	Price of Electricity Transacted through DSM	13
Table-9	Volume of Electricity Sold through Bilateral	15
Table-10	Volume of Electricity Purchased through Bilateral	17
Table-11	Volume of Electricity Sold through Power Exchanges	18
Table-12	Volume of Electricity Purchased through Power Exchanges	20
Table-13	Volume of Electricity Underdrawal through DSM	21
Table-14	Volume of Electricity Over drawal through DSM	24
Table-15	Total Volume of Net Short-term Transactions of Electricity (Regional Entity-wise)	27
Table-16	Details of Congestion in Power Exchanges	30
Table-17	Volume of Short-term Transactions of Electricity in India (Day-wise)	31
Table-18	Price of Electricity in Short-term Transactions (Day-wise)	32
Table-19	Volume of Short-term Transactions of Electricity (Regional Entity-wise)	33
Table-20	Volume and Price of Renewable Energy Certificates (RECs) Transacted through Power Exchanges	37
II	List of Figures	
Figure-1	Volume of Short-term Transactions of Electricity	10
Figure-2	Volume of Various Kinds of Electricity Transactions in Total Electricity Generation	10
Figure-3	Volume of Short-term Transactions of Electricity (Day-wise)	11
Figure-4	Percentage Share of Electricity Transacted by Trading Licensees	12
Figure-5	Price of Electricity in Short-term Transactions	14
Figure-6	Price of Electricity in Short-term Transactions (Day-wise)	14
Figure-7	Bilateral Contracts Executed by Traders in September, 2019	36
Figure-8	Forward Curve based on Prices of Bilateral Contracts	36

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 **August, 2019** are as under:

I: Volume of Short-term Transactions of Electricity

During August 2019, total electricity generation excluding generation from renewable and captive power plants in India was 105500.65 MUs (Table-1).

Of the total electricity generation, 14980.38 MUs (14.20%) was transacted through short-term, comprising of 7969.23 MUs (7.55%) through bilateral (through traders and term-ahead contracts on power exchanges and directly between distribution companies), followed by 4675.23 MUs (4.43%) through day ahead collective transactions on power exchanges and 2335.92 MUs (2.21%) through DSM (Table-1 & Figure-2).

Of the total short-term transactions, bilateral constitutes 53.20% (36.70% through traders and term-ahead contracts on power exchanges and 16.49% directly between distribution companies) followed by 31.21% through day ahead collective transactions on power exchanges and 15.59% 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 August, 2019. In August 2019, 23 trading licensees were engaged in short term trading. Top 5 trading licensees had a share of 76.29% 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 0.1753 for the month of August 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 4674.88 MUs and 0.35 MUs respectively. The volume of total buy bids and sell bids was 5622.42 MUs and 8485.34 MUs respectively in IEX while the same was 0.35 MUs and 12.17 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 726.07 MUs and 555.51 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, ₹6.15/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 ₹4.10/kWh, ₹5.57/kWh and ₹5.09/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 ₹1.00/kWh, ₹8.95/kWh and ₹3.46/kWh respectively in IEX and these were ₹3.10/kWh, ₹3.10/kWh and ₹3.10/kWh respectively in PXIL (Table-5).

The price of electricity transacted through IEX and PXIL in the term-ahead market was ₹3.73/kWh and ₹3.86/kWh respectively (Table-6 and Table-7).

(iii) Price of electricity transacted through DSM: The average deviation settlement price was ₹3.04/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 ₹0.026/kWh.

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

Of the total bilateral transactions, top 5 regional entities sold 48.83% of the volume, and these were Andhra Pradesh, Himachal Pradesh, Gujarat, Madhya Pradesh and Thermal

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.

Powertech Corporation India Limited. Top 5 regional entities purchased 66.60% of the volume, and these were Haryana, Punjab, West Bengal, Delhi, and Tamil Nadu (Table-9 & 10).

Of the total power exchange transactions, top 5 regional entities sold 42.01% of the volume, and these were Teesta Stage 3 Hydro Power Project, Himachal Pradesh, Karnataka, Madhya Pradesh and Rajasthan. Top 5 regional entities purchased 55.56% of the volume, and these were Bihar, West Bengal, Chhattisgarh, Telangana, and Odisha (Table-11 & 12).

Of the total DSM transactions, top 5 regional entities under drew 35.05% of the volume, and these were Mangdechhu Hydroelectric Project Bhutan, NTPC Station (Western Region), Odisha Power Generation Corporation, Madhya Pradesh and Jammu & Kashmir (Table-13). Top 5 regional entities overdrew 28.08% of the volume, and these were Odisha, Tala Hydroelectric Project Bhutan, Uttar Pradesh, NTPC Station (Western Region) and West Bengal (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, Andhra Pradesh, Thermal Powertech Corporation India Ltd. and Teesta Stage 3 Hydro Power Project. Top 5 electricity purchasing regional entities were Haryana, West Bengal, Punjab, Bihar and Uttar Pradesh.

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 August 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 & other reasons 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 August, 2019. This section covers an analysis of bilateral contracts executed in September, 2019.

(i) Duration of bilateral contracts: During September 2019, a total of 80 bilateral contracts (excluding banking/swap contracts) have been executed by traders for the volume of 719.56 MUs. Figure-7 shows the percentage of contracts categorized according to the period of power supply. It can be observed from the figure that 67.50% of the bilateral contracts were executed for duration of up to one week, 32.50% of the contracts were executed for duration of more than a week and up to one month, while no contracts were executed for duration of more than one month and up to twelve months.

During the month, 75 banking/swapping bilateral contracts were also executed for the volume of 338.74 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 September, 2019 to 31st December, 2019 based on the bilateral contracts⁴ executed till September, 2019. Forward curves have been drawn for the contracts executed in August, 2019 and September, 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 September 2019, during the period from 1st October 2019 to 31st October 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 August, 2019 are shown in Table-20. The market clearing volume of solar RECs transacted on IEX and PXIL were 56809 and 12038 respectively and the weighted average market clearing price of these RECs was ₹2100/MWh in IEX and ₹2000/MWh in PXIL. Market clearing volume of non-solar RECs transacted on IEX and PXIL were 236671 and 124865 respectively and the weighted average market clearing price of these RECs was ₹1750/MWh in IEX and ₹1500/MWh in

⁴Excluding Banking/Swapping contracts

PXIL. For Non-solar RECs issued before 1st April 2017, the market clearing volume on IEX was 130 and the weighted average market clearing price was ₹1500/MWh.

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 6.05 and 3.53 in IEX and PXIL respectively. For non-solar RECs, the ratio of buy bids to sell bids was 2.69 and 1.59 in IEX and PXIL respectively.

VIII: Inferences:

- The percentage of short-term transactions of electricity to total electricity generation was 14.20%.
- Of the total short-term transactions, bilateral constitutes 53.20% (36.70% through traders and term-ahead contracts on power exchanges and 16.49% directly between distribution companies) followed by 31.21% through day ahead collective transactions on power exchanges and 15.59% through DSM.
- Top 5 trading licensees had a share of 76.29% 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 0.1753, 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 ₹3.46/kWh and ₹3.10/kWh respectively.
- The average price of electricity transacted through DSM was ₹3.04/kWh.
- The weighted average trading margin charged by the trading licensees for bilateral transactions during the month was ₹0.026/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, Madhya Pradesh, Andhra Pradesh, Thermal Powertech Corporation India Ltd. and Teesta Stage 3 Hydro Power Project. Top 5 electricity purchasing regional entities were Haryana, West Bengal, Punjab, Bihar and Uttar Pradesh.
- During the month of August 2019, both IEX and PXIL did not witness any congestion.
- In September 2019, 67.50% of the bilateral contracts were executed for duration of up to one week, 32.50% of the contracts were executed for duration of more than a week

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

- The forward curves for contracts executed in September 2019 show that forward contract prices are lower for the contracts executed in August 2019 compared to the contracts executed in September 2019, during the period from 1st October 2019 – 30th October 2019.
- The market clearing volume of solar RECs transacted on IEX and PXIL were 56809 and 12038 respectively and the weighted average market clearing price of these RECs was ₹2100/MWh in IEX and ₹2000/MWh in PXIL. Market clearing volume of non-solar RECs transacted on IEX and PXIL were 236671 and 124865 respectively and the weighted average market clearing price of these RECs was ₹1750/MWh in IEX and ₹1500/MWh in PXIL.

Table-1: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY (ALL INDIA), AUGUST 2019

Sr.No	Short-term transactions	Volume (MUs)	% to Volume of short-term transactions	% to Total Generation
1	Bilateral	7969.23	53.20	7.55
	(i) Through Traders and PXs	5498.36	36.70	5.21
	(ii) Direct	2470.87	16.49	2.34
2	Through Power Exchanges	4675.23	31.21	4.43
	(i) IEX	4674.88	31.21	4.43
	(ii) PXIL	0.35	0.002	0.0003
3	Through DSM	2335.92	15.59	2.21
	Total	14980.38	-	14.20
	Total Generation	105500.65	-	-

Source: NLDC

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

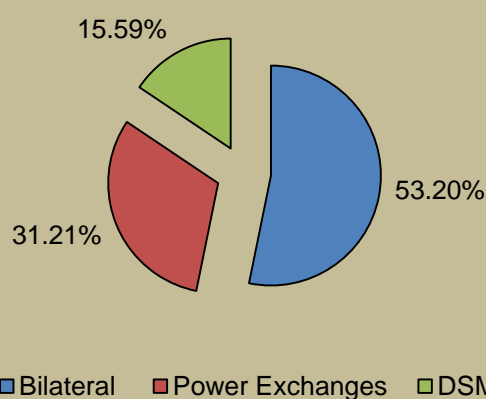
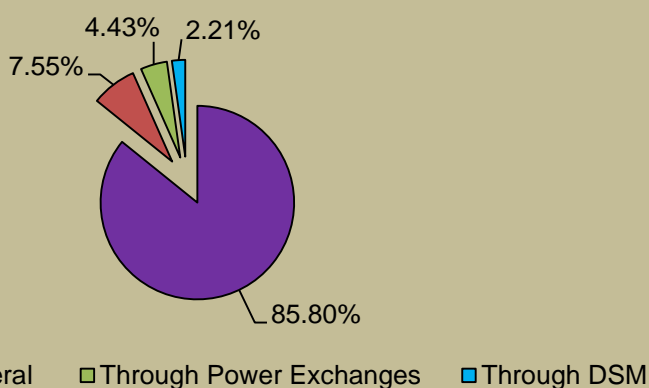
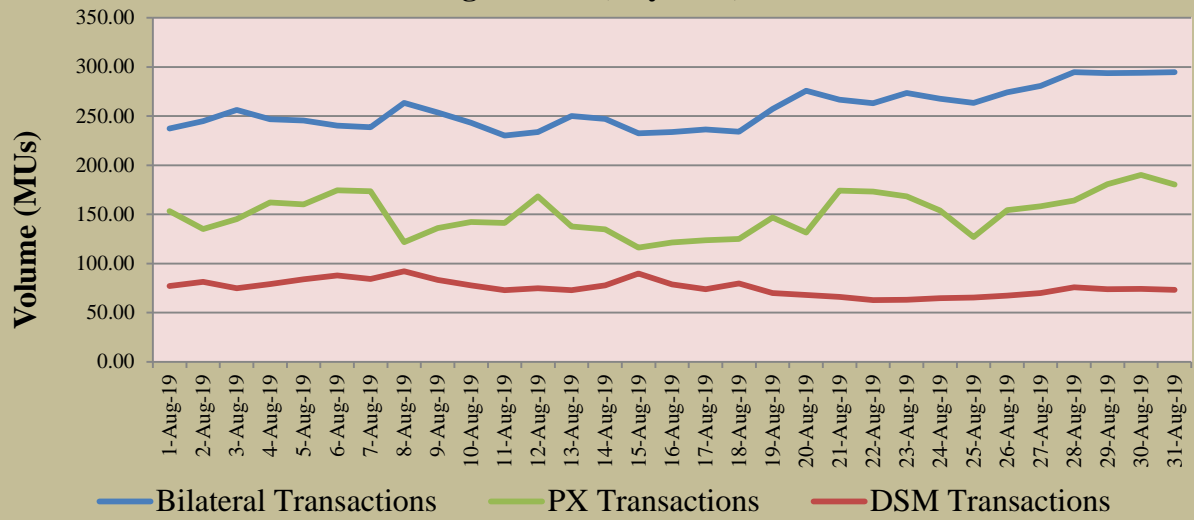


Figure-2: Volume of Various Kinds of Electricity Transactions in Total Electricity Generation, August 2019



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



**Table-2: PERCENTAGE SHARE OF ELECTRICITY TRANACTED BY TRADING
LICENSEES, AUGUST 2019**

Sr.No	Name of the Trading Licensee	% Share in total Volume transacted by Trading Licensees	Herfindahl-Hirschman Index
1	PTC India Ltd.	34.74	0.1207
2	Kreate Energy (I) Pvt Ltd	12.07	0.0146
3	Manikaran Power Ltd.	12.06	0.0145
4	Arunachal Pradesh Power Corporation (P) ltd	11.26	0.0127
5	GMR Energy Trading Ltd.	6.16	0.0038
6	Adani Enterprises Ltd.	6.06	0.0037
7	Tata Power Trading Company (P) Ltd.	5.08	0.0026
8	NTPC Vidyut Vyapar Nigam Ltd.	4.30	0.0019
9	Jaiprakash Associates Ltd.	1.87	0.0003
10	Statkraft Markets Pvt. Ltd.	1.72	0.0003
11	Knowledge Infrastructure Systems (P) Ltd	1.22	0.0002
12	National Energy Trading & Services Ltd.	0.63	0.0000
13	Essar Electric Power Development Corp. Ltd.	0.54	0.0000
14	JSW Power Trading Company Ltd	0.52	0.0000
15	NHPC Limited	0.52	0.0000
16	RPG Power Trading Company Ltd.	0.43	0.0000
17	Abja Power Private Limited	0.17	0.0000
18	Instinct Infra & Power Ltd.	0.17	0.0000
19	Shree Cement Ltd.	0.14	0.0000
20	Gita Power & Infrastructure Private Limited	0.13	0.0000
21	IPCL Power Trading Pvt. Ltd.	0.11	0.0000
22	Customized Energy Solutions India (P) Ltd.	0.09	0.0000
23	Phillip Commodities India (P) Ltd.	0.02	0.0000
TOTAL		100.00%	0.1753
Top 5 trading licensees		76.29%	
<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>			

Figure 4: Percentage Share of Electricity Transacted by Trading Licensees, August 2019

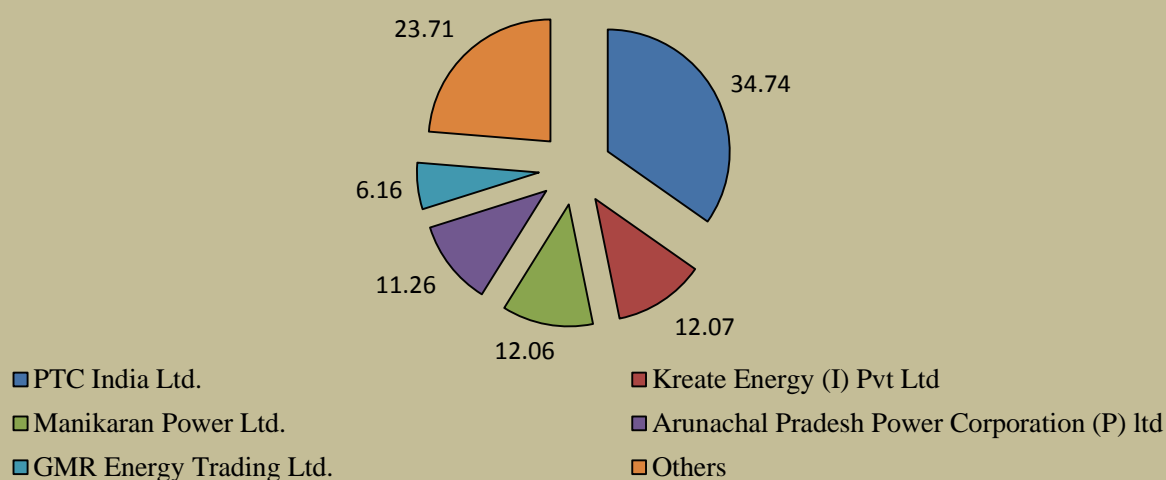


Table-3: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS, AUGUST 2019

Sr.No	Item	Sale Price of Traders (₹/kWh)
-------	------	-------------------------------

1	Minimum	3.01
2	Maximum	6.15
3	Weighted Average	4.53

Source: Information submitted by trading licensees

Table-4: PRICE OF ELECTRICITY TRANSACTED THROUGH TRADERS (TIME-WISE), AUGUST 2019

Sr.No	Period of Trade	Sale Price of Traders (₹/kWh)
1	RTC	4.10
2	PEAK	5.57
3	OFF PEAK	5.09

Source: Information submitted by trading licensees

Table-5: PRICE OF ELECTRICITY TRANSACTED THROUGH POWER EXCHANGES, AUGUST 2019

Sr.No	ACP	Price in IEX (₹/kWh)	Price in PXIL (₹/kWh)
1	Minimum	1.00	3.10
2	Maximum	8.95	3.10
3	Weighted Average	3.46	3.10

Source: Information submitted by IEX and PXIL

Table-6: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF IEX, AUGUST 2019

Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	97.85	4.51
2	Day Ahead Contingency Contracts	58.15	3.53
3	Daily Contracts	269.52	3.75
4	Weekly Contracts	300.55	3.50
	Total	726.07	3.73

Source: IEX

Table-7: VOLUME AND PRICE OF ELECTRICITY IN TERM AHEAD MARKET OF PXIL, AUGUST 2019

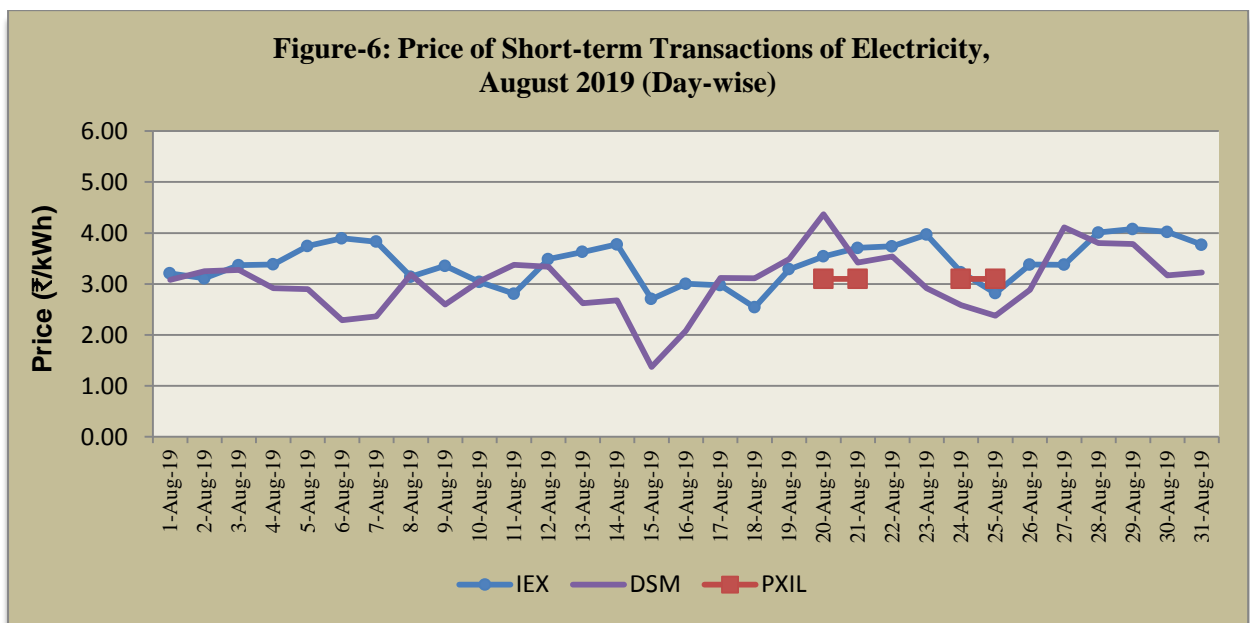
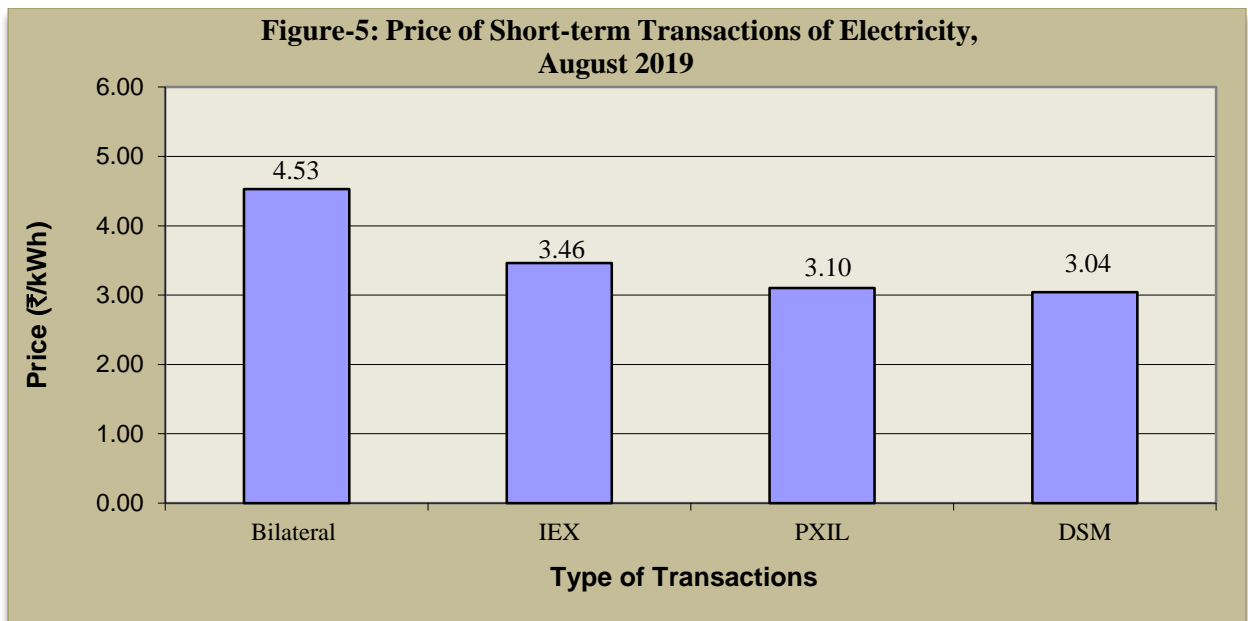
Sr.No	Term ahead contracts	Actual Scheduled Volume (MUs)	Weighted Average Price (₹/kWh)
1	Intra-Day Contracts	223.11	4.19
2	Any Day(s) Contracts	105.60	3.63
3	Weekly Contracts	226.80	3.65
	Total	555.51	3.86

Source: PXIL

Table-8: PRICE OF ELECTRICITY TRANSACTED THROUGH DSM, AUGUST 2019

Sr.No	Item	Price in All India Grid (₹/kWh)
1	Minimum	0.00
2	Maximum	8.00
3	Average	3.04

Source: NLDC



Note: In PXIL, transactions were recorded only on 20th, 21st, 24th and 25th August 2019

Table-9: VOLUME OF ELECTRICITY SOLD THROUGH BILATERAL, AUGUST 2019		
Name of the Entity	Volume of Sale (MUs)	% of Volume
ANDHRA PRADESH	1283.87	16.03
HIMACHAL PRADESH	798.98	9.98
GUJARAT	676.82	8.45
MP	606.93	7.58
THERMAL POWERTECH	544.24	6.80
J & K	422.50	5.28
GMR CHATTISGARH	359.93	4.49
CHHATTISGARH	315.41	3.94
KSK MAHANADI	254.31	3.18
UTTARAKHAND	186.00	2.32
MB POWER	184.49	2.30
ESSAR POWER	163.96	2.05
SKS POWER	161.04	2.01
DVC	157.04	1.96
RAJASTHAN	155.77	1.95
ADHUNIK POWER LTD	135.25	1.69
KARNATAKA	129.88	1.62
BALCO	121.73	1.52
WEST BENGAL	114.27	1.43
COASTGEN	105.82	1.32
DB POWER	101.70	1.27
IL&FS	100.43	1.25
DAGACHU	86.97	1.09
JAYPEE NIGRIE	84.32	1.05
KERALA	76.74	0.96
CHUZACHEN HEP	70.09	0.88
ODISHA	67.90	0.85
TASHIDENG HEP	65.75	0.82
JORETHANG	64.51	0.81
MEGHALAYA	55.73	0.70
SHREE CEMENT	53.40	0.67
ONGC PALATANA	40.42	0.50
JHABUA POWER_MP	30.69	0.38
MANIPUR	30.15	0.38
GMR KAMALANGA	26.66	0.33
UTTAR PRADESH	26.41	0.33
HARYANA	22.33	0.28
TELANGANA	21.35	0.27
SIKKIM	18.24	0.23
JINDAL STAGE-II	13.36	0.17
PUNJAB	9.13	0.11
MAHARASHTRA	7.65	0.10
KARCHAM WANGTOO	7.54	0.09
NAGALAND	6.93	0.09
GOA	6.85	0.09
SAINJ HEP	6.00	0.07
LANKO_AMK	5.30	0.07

TAMIL NADU	5.19	0.06
TEESTA STG3	4.57	0.06
BIHAR	3.69	0.05
AD HYDRO	3.50	0.04
TRN ENERGY	3.06	0.04
NTPC STATIONS-NER	1.47	0.02
JHARKHAND	1.11	0.01
ACBIL	0.76	0.01
DIKCHU HEP	0.24	0.003
DELHI	0.20	0.002
Total	8008.55	100.00
Volume Sold by top 5 Regional Entities	3910.83	48.83

Table-10: VOLUME OF ELECTRICITY PURCHASED THROUGH BILATERAL, AUGUST 2019		
Name of the Entity	Volume of Purchase (MUs)	% of Volume
HARYANA	1675.65	21.03
PUNJAB	1452.65	18.23
WEST BENGAL	914.19	11.47
DELHI	713.78	8.96
TAMIL NADU	550.96	6.91
UTTAR PRADESH	545.21	6.84
ANDHRA PRADESH	466.97	5.86
GUJARAT	327.19	4.11
ODISHA	176.04	2.21
BIHAR	171.73	2.15
TELANGANA	167.11	2.10
MAHARASHTRA	149.85	1.88
JHARKHAND	138.32	1.74
NEPAL(NVVN)	125.83	1.58
ESSAR STEEL	124.99	1.57
BANGLADESH	110.61	1.39
MP	53.54	0.67
ASSAM	41.71	0.52
CHHATTISGARH	28.89	0.36
GOA	24.53	0.31
UTTARAKHAND	4.73	0.06
DADRA & NAGAR HAVELI	2.24	0.03
DVC	1.30	0.02
KARNATAKA	1.21	0.02
TOTAL	7969.23	100.00
Volume Purchased by top 5 Regional Entities	5307.23	66.60

Table-11: VOLUME OF ELECTRICITY SOLD THROUGH POWER EXCHANGES, AUGUST 2019		
Name of the Entity	Volume of Sale (MUs)	% of Volume
TEESTA STG3	586.77	12.55
HIMACHAL PRADESH	416.32	8.90
KARNATAKA	354.93	7.59
MP	349.69	7.48
RAJASTHAN	256.42	5.48
GUJARAT	217.46	4.65
NLC	167.77	3.59
SEMBCORP	149.96	3.21
AD HYDRO	143.80	3.08
HARYANA	143.73	3.07
JHARKHAND	118.68	2.54
THERMAL POWERTECH	105.77	2.26
SHREE CEMENT	97.10	2.08
MAHARASHTRA	95.48	2.04
KARCHAM WANGTOO	84.26	1.80
SAINJ HEP	72.93	1.56
PUNJAB	71.56	1.53
GMR CHATTISGARH	66.09	1.41
DIKCHU HEP	61.43	1.31
DELHI	60.80	1.30
DB POWER	58.72	1.26
MB POWER	55.57	1.19
UTTAR PRADESH	50.89	1.09
J & K	48.69	1.04
JAYPEE NIGRIE	47.30	1.01
IL&FS	46.99	1.01
SPECTRUM	45.35	0.97
COASTGEN	44.17	0.94
ACBIL	42.99	0.92
SIKKIM	40.59	0.87
KERALA	35.23	0.75
MARUTI COAL	33.29	0.71
CHHATTISGARH	32.80	0.70
MEGHALAYA	32.03	0.68
ADHUNIK POWER LTD	31.04	0.66
MIZORAM	30.11	0.64
ANDHRA PRADESH	29.73	0.64
TAMIL NADU	26.70	0.57
CHANDIGARH	24.57	0.53
GOA	23.72	0.51
TRIPURA	21.73	0.46
ASSAM	19.46	0.42
JINDAL STAGE-II	17.36	0.37
ODISHA	16.87	0.36
NTPC STATIONS-NER	16.85	0.36
ESSAR POWER	14.92	0.32
ARUNACHAL PRADESH	14.91	0.32
SKS POWER	14.87	0.32

TELANGANA	13.38	0.29
UTTARAKHAND	10.90	0.23
CHUZACHEN HEP	10.88	0.23
JINDAL POWER	9.85	0.21
TASHIDENG HEP	9.69	0.21
MALANA	9.29	0.20
WEST BENGAL	9.26	0.20
JORETHANG	8.83	0.19
DVC	8.54	0.18
ONGC PALATANA	7.95	0.17
JHABUA POWER_MP	6.93	0.15
LANCO BUDHIL	6.10	0.13
NTPC STATIONS-SR	5.67	0.12
NJPC	4.11	0.09
RGPPL (DABHOL)	3.57	0.08
NTPC STATIONS-WR	2.56	0.05
MANIPUR	2.51	0.05
DGEN MEGA POWER	2.42	0.05
NAGALAND	1.10	0.02
EMCO	0.69	0.01
BRBCL,NABINAGAR	0.51	0.01
DHARIWAL POWER	0.51	0.01
RAMPUR HEP	0.33	0.01
JITPL	0.32	0.01
NTPC STATIONS-ER	0.30	0.01
DADRA & NAGAR HAVELI	0.22	0.005
GMR KAMALANGA	0.21	0.005
NTPC STATIONS-NR	0.19	0.004
Total	4675.23	100.00
Volume sold by top 5 Regional Entities	1964.13	42.01

Table-12: VOLUME OF ELECTRICITY PURCHASED THROUGH POWER EXCHANGES, AUGUST 2019		
Name of the Entity	Volume of Purchase (MUs)	% of Volume
BIHAR	771.98	16.51
WEST BENGAL	544.03	11.64
CHHATTISGARH	453.22	9.69
TELANGANA	422.26	9.03
ODISHA	406.19	8.69
MAHARASHTRA	320.09	6.85
UTTAR PRADESH	271.70	5.81
GUJARAT	199.36	4.26
ASSAM	196.30	4.20
ANDHRA PRADESH	162.33	3.47
DADRA & NAGAR HAVELI	136.66	2.92
TAMIL NADU	131.47	2.81
HARYANA	130.45	2.79
KERALA	127.68	2.73
KARNATAKA	70.32	1.50
RAJASTHAN	69.34	1.48
DELHI	68.49	1.46
UTTARAKHAND	63.89	1.37
DAMAN AND DIU	47.95	1.03
ESSAR STEEL	33.81	0.72
HIMACHAL PRADESH	9.91	0.21
GOA	9.31	0.20
MEGHALAYA	8.02	0.17
MP	4.64	0.10
NAGALAND	2.92	0.06
J & K	2.90	0.06
DVC	2.39	0.05
CHANDIGARH	2.12	0.05
MANIPUR	2.06	0.04
JHARKHAND	1.76	0.04
TRIPURA	1.60	0.03
PUNJAB	0.08	0.002
TOTAL	4675.23	100.00
Volume purchased by top 5 Regional Entities	2597.68	55.56

Table-13: VOLUME OF ELECTRICITY UNDER DRAWAL (EXPORTED) THROUGH DSM, AUGUST 2019		
Name of the Entity	Volume of Under Drawal (MUs)	% of Volume
MANGDECHU HEP	272.55	11.15
NTPC STATIONS-WR	179.49	7.34
OPGC	148.53	6.08
MP	135.38	5.54
J & K	120.97	4.95
NHPC STATIONS	111.85	4.58
RAJASTHAN	89.15	3.65
CHUKHA HEP	80.96	3.31
TAMIL NADU	71.77	2.94
MAHARASHTRA	70.81	2.90
KARNATAKA	69.85	2.86
HARYANA	62.44	2.55
SASAN UMPP	60.25	2.46
UTTAR PRADESH	58.92	2.41
PUNJAB	58.46	2.39
TELANGANA	55.36	2.26
GUJARAT	53.25	2.18
ANDHRA PRADESH	48.21	1.97
KURICHU HEP	45.86	1.88
NTPC STATIONS-NR	44.47	1.82
BIHAR	43.89	1.80
NLC	35.12	1.44
DVC	29.32	1.20
DELHI	26.47	1.08
NTPC STATIONS-SR	23.70	0.97
ESSAR STEEL	23.45	0.96
NTPC STATIONS-ER	20.99	0.86
UTTARAKHAND	20.91	0.86
BBMB	19.06	0.78
KARCHAM WANGTOO	16.21	0.66
CHHATTISGARH	15.46	0.63
WEST BENGAL	15.36	0.63
HIMACHAL PRADESH	14.17	0.58
JHARKHAND	12.64	0.52
TRIPURA	11.49	0.47
MAHINDRA_RUMS	11.06	0.45
ASSAM	10.44	0.43
NEEPCO STATIONS	10.06	0.41
GOA	9.01	0.37
ARUNACHAL PRADESH	8.50	0.35
ODISHA	7.84	0.32
OSTRO	7.55	0.31
RGPPL (DABHOL)	7.43	0.30
RENEW_BHACHAU	7.14	0.29
AD HYDRO	7.13	0.29
NAPP	6.85	0.28
ARINSUM_RUMS	6.76	0.28
MEGHALAYA	6.59	0.27

MAITHON POWER LTD	6.09	0.25
PONDICHERRY	6.00	0.25
TEESTA HEP	5.81	0.24
KERALA	5.56	0.23
ACME_RUMS	5.55	0.23
DADRA & NAGAR HAVELI	5.28	0.22
MIZORAM	5.26	0.22
BRBCL,NABINAGAR	5.09	0.21
CHANDIGARH	5.08	0.21
GIWEL_BHUJ	5.08	0.21
TEHRI	4.39	0.18
CGPL	4.25	0.17
ACBIL	4.02	0.16
MB POWER	3.56	0.15
NEPAL(NVVN)	3.45	0.14
BARC	3.40	0.14
JAYPEE NIGRIE	3.36	0.14
NAGALAND	3.28	0.13
SIKKIM	3.16	0.13
RAIL	3.15	0.13
TASHIDENG HEP	2.99	0.12
DIKCHU HEP	2.87	0.12
TEESTA STG3	2.85	0.12
RANGANADI HEP	2.82	0.12
DAMAN AND DIU	2.77	0.11
GMR CHATTISGARH	2.57	0.11
TRN ENERGY	2.53	0.10
KOTESHWAR	2.30	0.09
ESSAR POWER	2.29	0.09
RAP B	2.26	0.09
LANKO_AMK	2.12	0.09
NJPC	2.07	0.08
JINDAL POWER	2.05	0.08
EMCO	2.03	0.08
NTPC STATIONS-NER	2.01	0.08
IGSTPS	1.99	0.08
SKS POWER	1.98	0.08
MANIPUR	1.98	0.08
NTPL	1.90	0.08
KSK MAHANADI	1.87	0.08
NPGC	1.84	0.08
RAMPUR HEP	1.82	0.07
BANGLADESH	1.73	0.07
JINDAL STAGE-II	1.67	0.07
RAP C	1.67	0.07
JITPL	1.66	0.07
CHUZACHEN HEP	1.65	0.07
JHABUA POWER_MP	1.65	0.07
DHARIWAL POWER	1.60	0.07
THERMAL POWERTECH	1.59	0.06
DB POWER	1.55	0.06
COASTGEN	1.52	0.06
ADHUNIK POWER LTD	1.51	0.06

SEMBCORP	1.34	0.05
RKM POWER	1.30	0.05
MTPS II	1.22	0.05
PARE HEP	1.17	0.05
NSPCL	1.15	0.05
BALCO	0.98	0.04
ONGC PALATANA	0.86	0.04
NETCL VALLUR	0.78	0.03
IL&FS	0.66	0.03
RANGIT HEP	0.65	0.03
LOKTAK	0.58	0.02
SHREE CEMENT	0.50	0.02
DOYANG HEP	0.39	0.02
LANCO BUDHIL	0.33	0.01
JORETHANG	0.24	0.01
MALANA	0.18	0.01
DCPP	0.16	0.01
DAGACHU	0.13	0.01
GMR KAMALANGA	0.11	0.005
HVDC CHAMPA	0.09	0.004
NFF	0.05	0.002
TALA HEP	0.04	0.002
KAPP 3&4	0.001	0.000
Total	2444.54	100.00
Volume Exported by top 5 Regional Entities	856.92	35.05

Table-14: VOLUME OF ELECTRICITY OVER DRAWAL (IMPORTED) THROUGH DSM, AUGUST 2019		
Name of the Entity	Volume of Over drawal (MUs)	% of Volume
ODISHA	157.76	7.13
TALA HEP	154.89	7.00
UTTAR PRADESH	107.70	4.87
NTPC STATIONS-WR	104.14	4.71
WEST BENGAL	96.88	4.38
RAJASTHAN	83.04	3.75
NTPC STATIONS-ER	78.95	3.57
GUJARAT	72.96	3.30
NTPC STATIONS-NR	70.25	3.18
TAMIL NADU	68.46	3.09
ANDHRA PRADESH	66.75	3.02
TELANGANA	66.37	3.00
KARNATAKA	60.79	2.75
CHHATTISGARH	60.51	2.74
KERALA	59.65	2.70
MAHARASHTRA	55.64	2.51
BIHAR	50.92	2.30
NTPC STATIONS-SR	38.48	1.74
HARYANA	37.85	1.71
HIMACHAL PRADESH	36.44	1.65
ASSAM	28.28	1.28
DVC	26.32	1.19
DELHI	25.68	1.16
CGPL	23.68	1.07
UTTARAKHAND	22.52	1.02
MP	22.49	1.02
PUNJAB	22.46	1.02
JHARKHAND	21.62	0.98
ESSAR STEEL	21.44	0.97
BALCO	19.27	0.87
RGPPL (DABHOL)	19.02	0.86
DAGACHU	18.44	0.83
NLC	17.42	0.79
GMR KAMALANGA	14.71	0.66
KAPP 3&4	14.37	0.65
MB POWER	12.57	0.57
DAMAN AND DIU	12.06	0.55
NHPC STATIONS	11.73	0.53
J & K	11.37	0.51
TRIPURA	10.20	0.46
JHABUA POWER_MP	9.50	0.43
CHANDIGARH	9.48	0.43
EMCO	8.63	0.39
NEPAL(NVVN)	8.37	0.38
ADHUNIK POWER LTD	8.36	0.38
JINDAL STAGE-II	8.20	0.37
NETCL VALLUR	8.15	0.37

GMR CHATTISGARH	8.05	0.36
NTPC STATIONS-NER	7.88	0.36
NPGC	7.74	0.35
IGSTPS	7.66	0.35
SHREE CEMENT	7.57	0.34
JAYPEE NIGRIE	6.81	0.31
ESSAR POWER	6.68	0.30
DB POWER	6.58	0.30
OPGC	6.47	0.29
ARUNACHAL PRADESH	6.10	0.28
OSTRO	5.99	0.27
MTPS II	5.76	0.26
KARCHAM WANGTOO	5.67	0.26
NJPC	5.57	0.25
JORETHANG	5.56	0.25
TEESTA STG3	5.43	0.25
ARINSUM_RUMS	5.35	0.24
ACME_RUMS	5.33	0.24
NTPL	5.02	0.23
NAPP	4.77	0.22
BRBCL,NABINAGAR	4.66	0.21
BBMB	4.61	0.21
GOA	4.59	0.21
MAITHON POWER LTD	4.52	0.20
ACBIL	4.35	0.20
COASTGEN	4.34	0.20
MANIPUR	4.23	0.19
PONDICHERRY	4.13	0.19
RENEW_BHACHAU	4.12	0.19
SEMBICORP	4.09	0.18
RAP C	3.82	0.17
TEHRI	3.74	0.17
DADRA & NAGAR HAVELI	3.63	0.16
MAHINDRA_RUMS	3.49	0.16
MEGHALAYA	3.46	0.16
THERMAL POWERTECH	3.29	0.15
SIKKIM	3.26	0.15
NSPCL	3.07	0.14
BANGLADESH	2.89	0.13
NFF	2.86	0.13
RAIL	2.79	0.13
KSK MAHANADI	2.50	0.11
SASAN UMPP	2.44	0.11
IL&FS	2.37	0.11
JITPL	2.36	0.11
DIKCHU HEP	2.21	0.10
RANGANADI HEP	2.08	0.09
TASHIDENG HEP	2.00	0.09
NAGALAND	1.73	0.08
JINDAL POWER	1.68	0.08
KOTESHWAR	1.68	0.08

RKM POWER	1.67	0.08
NEEPCO STATIONS	1.46	0.07
CHUZACHEN HEP	1.37	0.06
MIZORAM	1.33	0.06
DGEN MEGA POWER	1.25	0.06
AD HYDRO	1.24	0.06
RAMPUR HEP	1.11	0.05
GIWEL_BHUI	1.08	0.05
ONGC PALATANA	1.08	0.05
LANKO_AMK	0.88	0.04
LANCO BUDHIL	0.67	0.03
SKS POWER	0.59	0.03
RAP B	0.59	0.03
SIMHAPURI	0.58	0.03
MALANA	0.57	0.03
TRN ENERGY	0.56	0.03
LANKO KONDAPALLI	0.55	0.02
KORBA WEST POWER	0.55	0.02
MEENAKSHI	0.52	0.02
DOYANG HEP	0.49	0.02
PARE HEP	0.47	0.02
HVDC CHAMPA	0.42	0.02
LOKTAK	0.40	0.02
NEP	0.34	0.02
RANGIT HEP	0.32	0.01
TEESTA HEP	0.30	0.01
DHARIWAL POWER	0.23	0.01
CHUKHA HEP	0.06	0.003
DCPP	0.05	0.002
KURICHU HEP	0.002	0.000
TOTAL	2212.50	100.00
Volume Imported by top 5 Regional Entities	621.38	28.08

Table-15: TOTAL VOLUME OF NET SHORT-TERM TRANSACTIONS OF ELECTRICITY (REGIONAL ENTITY-WISE), AUGUST 2019		
S.No.	Name of the Entity	Total volume of net short-term transactions of electricity*
1	HARYANA	1615.46
2	WEST BENGAL	1416.21
3	PUNJAB	1336.04
4	BIHAR	947.05
5	UTTAR PRADESH	788.39
6	DELHI	720.47
7	ODISHA	647.38
8	TAMIL NADU	647.24
9	TELANGANA	565.64
10	MAHARASHTRA	351.64
11	ASSAM	236.40
12	CHHATTISGARH	178.96
13	ESSAR STEEL	156.78
14	TALA HEP	154.85
15	DADRA & NAGAR HAVELI	137.03
16	NEPAL(NVVN)	130.75
17	BANGLADESH	111.78
18	KERALA	69.81
19	NTPC STATIONS-ER	57.67
20	DAMAN AND DIU	57.24
21	JHARKHAND	29.28
22	NTPC STATIONS-NR	25.59
23	CGPL	19.43
24	KAPP 3&4	14.37
25	NTPC STATIONS-SR	9.10
26	RGPPL (DABHOL)	8.03
27	NETCL VALLUR	7.37
28	EMCO	5.92
29	NPGC	5.91
30	IGSTPS	5.67
31	MTPS II	4.54
32	NTPL	3.12
33	NFF	2.81
34	RAP C	2.15
35	NSPCL	1.92
36	SIMHAPURI	0.58
37	LANKO KONDAPALLI	0.55
38	KORBA WEST POWER	0.55
39	MEENAKSHI	0.52
40	JITPL	0.38
41	RKM POWER	0.37
42	NEP	0.34
43	HVDC CHAMPA	0.33
44	DOYANG HEP	0.10
45	DCPP	-0.12
46	LOKTAK	-0.18
47	ACME_RUMS	-0.22
48	RANGIT HEP	-0.33

49	RAIL	-0.36
50	NJPC	-0.61
51	KOTESHWAR	-0.62
52	TEHRI	-0.65
53	PARE HEP	-0.71
54	RANGANADI HEP	-0.74
55	BRBCL,NABINAGAR	-0.94
56	RAMPUR HEP	-1.03
57	GOA	-1.14
58	DGEN MEGA POWER	-1.16
59	ARINSUM_RUMS	-1.41
60	OSTRO	-1.56
61	MAITHON POWER LTD	-1.58
62	RAP B	-1.67
63	PONDICHERRY	-1.87
64	DHARIWAL POWER	-1.88
65	NAPP	-2.09
66	RENEW_BHACHAU	-3.01
67	BARC	-3.40
68	GIWEL_BHUJ	-4.00
69	TRN ENERGY	-5.04
70	TEESTA HEP	-5.51
71	LANCO BUDHIL	-5.76
72	LANKO_AMK	-6.54
73	NAGALAND	-6.67
74	MAHINDRA_RUMS	-7.57
75	NEEPCO STATIONS	-8.60
76	MALANA	-8.90
77	JINDAL POWER	-10.21
78	GMR KAMALANGA	-12.27
79	NTPC STATIONS-NER	-12.45
80	BBMB	-14.45
81	ARUNACHAL PRADESH	-17.31
82	CHANDIGARH	-18.05
83	TRIPURA	-21.42
84	JINDAL STAGE-II	-24.20
85	MANIPUR	-28.36
86	JHABUA POWER_MP	-29.77
87	MARUTI COAL	-33.29
88	MIZORAM	-34.04
89	ACBIL	-43.42
90	SPECTRUM	-45.35
91	KURICHU HEP	-45.85
92	ONGC PALATANA	-48.15
93	SASAN UMPP	-57.81
94	SIKKIM	-58.74
95	DIKCHU HEP	-62.32
96	JORETHANG	-68.03
97	DAGACHU	-68.66
98	TASHIDENG HEP	-76.42
99	NTPC STATIONS-WR	-77.91
100	SAINJ HEP	-78.93

101	CHUKHA HEP	-80.90
102	CHUZACHEN HEP	-81.25
103	MEGHALAYA	-82.87
104	NHPC STATIONS	-100.12
105	KARCHAM WANGTOO	-102.34
106	BALCO	-103.44
107	UTTARAKHAND	-126.67
108	JAYPEE NIGRIE	-128.17
109	OPGC	-142.06
110	SHREE CEMENT	-143.43
111	IL&FS	-145.71
112	COASTGEN	-147.17
113	SEMBCORP	-147.21
114	AD HYDRO	-153.18
115	DB POWER	-155.39
116	ADHUNIK POWER LTD	-159.44
117	DVC	-164.88
118	ESSAR POWER	-174.49
119	SKS POWER	-177.30
120	NLC	-185.47
121	MB POWER	-231.06
122	KSK MAHANADI	-253.68
123	MANGDECHU HEP	-272.55
124	GUJARAT	-348.02
125	RAJASTHAN	-348.96
126	GMR CHATTISGARH	-420.55
127	KARNATAKA	-422.34
128	J & K	-577.89
129	TEESTA STG3	-588.75
130	THERMAL POWERTECH	-648.31
131	ANDHRA PRADESH	-665.77
132	MP	-1011.32
133	HIMACHAL PRADESH	-1183.10
* 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, AUGUST 2019			
	Details of Congestion	IEX	PXIL
A	Unconstrained Cleared Volume* (MUs)	4679.31	0.35
B	Actual Cleared Volume and hence scheduled (MUs)	4674.88	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)*	4.424	0.00
E	Volume of electricity that could not be cleared as % to Unconstrained Cleared Volume	0.09%	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 1.606 MUs on 7th, 1.416 MUs on 8th, 0.273 MUs on 9th and 1.129 MUs on 10th August 2019 at IEX			
Source: IEX & PXIL & NLDC			

Table-17: VOLUME OF SHORT-TERM TRANSACTIONS OF ELECTRICITY IN INDIA (DAY-WISE) (MUs), AUGUST 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-Aug-19	162.08	75.37	153.37	0.00	77.21	3382.85
2-Aug-19	165.30	79.76	134.98	0.00	81.32	3332.83
3-Aug-19	176.36	79.96	145.22	0.00	74.68	3293.61
4-Aug-19	166.91	80.04	162.23	0.00	78.94	3205.41
5-Aug-19	162.94	82.48	160.24	0.00	83.85	3339.17
6-Aug-19	156.81	83.40	174.39	0.00	87.73	3272.61
7-Aug-19	154.99	83.59	173.39	0.00	84.29	3175.25
8-Aug-19	179.45	84.16	121.68	0.00	92.15	3245.96
9-Aug-19	173.41	80.21	135.97	0.00	83.44	3177.44
10-Aug-19	169.22	74.04	142.25	0.00	77.91	3193.75
11-Aug-19	158.79	71.51	141.19	0.00	72.73	3289.72
12-Aug-19	159.72	74.07	168.20	0.00	74.86	3522.35
13-Aug-19	169.69	80.48	137.85	0.00	72.80	3485.24
14-Aug-19	170.43	76.74	134.71	0.00	77.77	3418.54
15-Aug-19	159.48	73.05	116.16	0.00	89.87	3116.54
16-Aug-19	173.21	60.66	121.52	0.00	78.82	3244.56
17-Aug-19	174.38	62.09	123.63	0.00	73.93	3246.19
18-Aug-19	168.97	65.08	124.94	0.00	79.59	3161.35
19-Aug-19	194.31	62.95	146.99	0.00	70.03	3373.44
20-Aug-19	208.87	66.87	131.41	0.09	67.95	3519.03
21-Aug-19	195.64	71.06	173.96	0.09	66.04	3502.69
22-Aug-19	191.93	71.07	173.11	0.00	62.63	3516.99
23-Aug-19	193.72	79.85	168.47	0.00	63.09	3539.85
24-Aug-19	185.76	82.00	154.07	0.08	64.64	3427.50
25-Aug-19	177.18	86.36	126.75	0.09	65.37	3299.79
26-Aug-19	183.25	91.11	154.46	0.00	67.30	3479.92
27-Aug-19	189.15	91.67	158.22	0.00	70.04	3635.63
28-Aug-19	196.28	98.32	164.21	0.00	75.75	3770.09
29-Aug-19	193.92	99.98	180.79	0.00	73.68	3818.95
30-Aug-19	193.01	101.23	190.02	0.00	74.32	3772.47
31-Aug-19	193.19	101.72	180.52	0.00	73.19	3740.93
Total	5498.36	2470.87	4674.88	0.35	2335.92	105500.65
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), AUGUST 2019									
Market Segment	Day ahead market of IEX			Day ahead market of PXIL			Under Drawl/Over Drawl from the Grid (DSM)		
Date	Mini mum ACP	Maxi mum ACP	Weighted Average Price*	Mini mum ACP	Maxi mum ACP	Weighted Average Price*	All India Grid		
							Mini mum Price	Maxim um Price	Average Price**
1-Aug-19	2.65	4.89	3.21	-	-	-	0.00	8.00	3.08
2-Aug-19	2.00	5.00	3.11	-	-	-	0.00	6.75	3.25
3-Aug-19	2.39	5.89	3.37	-	-	-	0.00	8.00	3.27
4-Aug-19	2.40	5.71	3.38	-	-	-	0.00	8.00	2.91
5-Aug-19	2.79	7.30	3.74	-	-	-	0.00	7.18	2.90
6-Aug-19	2.79	8.09	3.89	-	-	-	0.00	6.42	2.29
7-Aug-19	2.50	8.66	3.83	-	-	-	0.00	7.46	2.36
8-Aug-19	2.01	7.00	3.14	-	-	-	0.00	8.00	3.19
9-Aug-19	2.00	7.56	3.36	-	-	-	0.00	7.38	2.60
10-Aug-19	2.06	5.50	3.04	-	-	-	0.00	8.00	3.05
11-Aug-19	1.80	4.87	2.81	-	-	-	0.00	8.00	3.38
12-Aug-19	2.30	7.33	3.49	-	-	-	0.00	8.00	3.34
13-Aug-19	2.30	6.77	3.63	-	-	-	0.00	7.72	2.62
14-Aug-19	2.25	7.40	3.78	-	-	-	0.00	6.92	2.68
15-Aug-19	1.00	4.47	2.70	-	-	-	0.00	8.00	1.37
16-Aug-19	1.26	6.21	3.00	-	-	-	0.00	7.35	2.08
17-Aug-19	1.93	5.47	2.97	-	-	-	0.00	7.03	3.11
18-Aug-19	1.80	4.27	2.54	-	-	-	0.00	8.00	3.11
19-Aug-19	2.00	7.61	3.29	-	-	-	0.00	8.00	3.49
20-Aug-19	2.25	8.43	3.54	3.10	3.10	3.10	0.68	8.00	4.37
21-Aug-19	2.52	8.42	3.71	3.10	3.10	3.10	0.00	8.00	3.42
22-Aug-19	2.80	8.95	3.74	-	-	-	0.00	7.20	3.54
23-Aug-19	2.71	8.60	3.97	-	-	-	0.00	6.19	2.91
24-Aug-19	2.25	5.52	3.23	3.10	3.10	3.10	0.00	6.49	2.58
25-Aug-19	1.80	3.95	2.82	3.10	3.10	3.10	0.00	7.67	2.37
26-Aug-19	2.80	7.00	3.38	-	-	-	0.00	7.71	2.89
27-Aug-19	2.75	7.00	3.38	-	-	-	0.00	8.00	4.11
28-Aug-19	2.98	8.00	4.01	-	-	-	0.00	8.00	3.80
29-Aug-19	3.05	8.00	4.08	-	-	-	0.00	8.00	3.78
30-Aug-19	3.08	6.00	4.02	-	-	-	0.00	8.00	3.17
31-Aug-19	2.99	4.87	3.77	-	-	-	0.00	7.20	3.22
	1.00	8.95	3.46	3.10	3.10	3.10	0.00	8.00	3.04
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), AUGUST 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	9.13	1452.65	1443.52	71.56	0.08	-71.48	22.46	58.46	-36.00	1336.04
HARYANA	22.33	1675.65	1653.33	143.73	130.45	-13.28	37.85	62.44	-24.59	1615.46
RAJASTHAN	155.77	0.00	-155.77	256.42	69.34	-187.08	83.04	89.15	-6.11	-348.96
DELHI	0.20	713.78	713.58	60.80	68.49	7.69	25.68	26.47	-0.79	720.47
UTTAR PRADESH	26.41	545.21	518.80	50.89	271.70	220.81	107.70	58.92	48.78	788.39
UTTARAKHAND	186.00	4.73	-181.27	10.90	63.89	52.99	22.52	20.91	1.61	-126.67
HIMACHAL P	798.98	0.00	-798.98	416.32	9.91	-406.40	36.44	14.17	22.28	-1183.10
J & K	422.50	0.00	-422.50	48.69	2.90	-45.79	11.37	120.97	-109.60	-577.89
CHANDIGARH	0.00	0.00	0.00	24.57	2.12	-22.45	9.48	5.08	4.40	-18.05
MP	606.93	53.54	-553.38	349.69	4.64	-345.05	22.49	135.38	-112.89	-1011.32
MAHARASHTRA	7.65	149.85	142.20	95.48	320.09	224.61	55.64	70.81	-15.18	351.64
GUJARAT	676.82	327.19	-349.63	217.46	199.36	-18.10	72.96	53.25	19.71	-348.02
CHHATTISGARH	315.41	28.89	-286.51	32.80	453.22	420.42	60.51	15.46	45.06	178.96
GOA	6.85	24.53	17.69	23.72	9.31	-14.41	4.59	9.01	-4.42	-1.14
DAMAN AND DIU	0.00	0.00	0.00	0.00	47.95	47.95	12.06	2.77	9.30	57.24
DADRA & NAGAR	0.00	2.24	2.24	0.22	136.66	136.44	3.63	5.28	-1.65	137.03
ANDHRA P	1283.87	466.97	-816.90	29.73	162.33	132.59	66.75	48.21	18.54	-665.77
KARNATAKA	129.88	1.21	-128.67	354.93	70.32	-284.61	60.79	69.85	-9.06	-422.34
KERALA	76.74	0.00	-76.74	35.23	127.68	92.46	59.65	5.56	54.09	69.81
TAMIL NADU	5.19	550.96	545.77	26.70	131.47	104.78	68.46	71.77	-3.31	647.24
PONDICHERRY	0.00	0.00	0.00	0.00	0.00	0.00	4.13	6.00	-1.87	-1.87
TELANGANA	21.35	167.11	145.76	13.38	422.26	408.87	66.37	55.36	11.01	565.64
WEST BENGAL	114.27	914.19	799.92	9.26	544.03	534.77	96.88	15.36	81.52	1416.21
ODISHA	67.90	176.04	108.13	16.87	406.19	389.32	157.76	7.84	149.92	647.38
BIHAR	3.69	171.73	168.04	0.00	771.98	771.98	50.92	43.89	7.03	947.05
JHARKHAND	1.11	138.32	137.21	118.68	1.76	-116.92	21.62	12.64	8.99	29.28
SIKKIM	18.24	0.00	-18.24	40.59	0.00	-40.59	3.26	3.16	0.09	-58.74
DVC	157.04	1.30	-155.74	8.54	2.39	-6.14	26.32	29.32	-3.00	-164.88
ARUNACHAL P	0.00	0.00	0.00	14.91	0.00	-14.91	6.10	8.50	-2.40	-17.31
ASSAM	0.00	41.71	41.71	19.46	196.30	176.84	28.28	10.44	17.84	236.40
MANIPUR	30.15	0.00	-30.15	2.51	2.06	-0.46	4.23	1.98	2.24	-28.36
MEGHALAYA	55.73	0.00	-55.73	32.03	8.02	-24.01	3.46	6.59	-3.13	-82.87
MIZORAM	0.00	0.00	0.00	30.11	0.00	-30.11	1.33	5.26	-3.93	-34.04
NAGALAND	6.93	0.00	-6.93	1.10	2.92	1.82	1.73	3.28	-1.56	-6.67
TRIPURA	0.00	0.00	0.00	21.73	1.60	-20.13	10.20	11.49	-1.29	-21.42
NTPC STNS-NR	0.00	0.00	0.00	0.19	0.00	-0.19	70.25	44.47	25.78	25.59
NHPC STNS	0.00	0.00	0.00	0.00	0.00	0.00	11.73	111.85	-100.12	-100.12
NFF	0.00	0.00	0.00	0.00	0.00	0.00	2.86	0.05	2.81	2.81
RAIL	0.00	0.00	0.00	0.00	0.00	0.00	2.79	3.15	-0.36	-0.36
NEP	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.34	0.34
NAPP	0.00	0.00	0.00	0.00	0.00	0.00	4.77	6.85	-2.09	-2.09
RAP B	0.00	0.00	0.00	0.00	0.00	0.00	0.59	2.26	-1.67	-1.67
NJPC	0.00	0.00	0.00	4.11	0.00	-4.11	5.57	2.07	3.50	-0.61
TEHRI	0.00	0.00	0.00	0.00	0.00	0.00	3.74	4.39	-0.65	-0.65
BBMB	0.00	0.00	0.00	0.00	0.00	0.00	4.61	19.06	-14.45	-14.45

RAP C	0.00	0.00	0.00	0.00	0.00	0.00	3.82	1.67	2.15	2.15
AD HYDRO	3.50	0.00	-3.50	143.80	0.00	-143.80	1.24	7.13	-5.88	-153.18
IGSTPS	0.00	0.00	0.00	0.00	0.00	0.00	7.66	1.99	5.67	5.67
KOTESHWAR	0.00	0.00	0.00	0.00	0.00	0.00	1.68	2.30	-0.62	-0.62
KARCHAM WANG	7.54	0.00	-7.54	84.26	0.00	-84.26	5.67	16.21	-10.54	-102.34
SHREE CEMENT	53.40	0.00	-53.40	97.10	0.00	-97.10	7.57	0.50	7.07	-143.43
LANCO BUDHIL	0.00	0.00	0.00	6.10	0.00	-6.10	0.67	0.33	0.34	-5.76
RAMPUR HEP	0.00	0.00	0.00	0.33	0.00	-0.33	1.11	1.82	-0.71	-1.03
MALANA	0.00	0.00	0.00	9.29	0.00	-9.29	0.57	0.18	0.39	-8.90
SAINJ HEP	6.00	0.00	-6.00	72.93	0.00	-72.93	0.00	0.00	0.00	-78.93
NTPC STNS-WR	0.00	0.00	0.00	2.56	0.00	-2.56	104.14	179.49	-75.35	-77.91
JINDAL POWER	0.00	0.00	0.00	9.85	0.00	-9.85	1.68	2.05	-0.36	-10.21
LANKO_AMK	5.30	0.00	-5.30	0.00	0.00	0.00	0.88	2.12	-1.24	-6.54
NSPCL	0.00	0.00	0.00	0.00	0.00	0.00	3.07	1.15	1.92	1.92
ACBIL	0.76	0.00	-0.76	42.99	0.00	-42.99	4.35	4.02	0.33	-43.42
BALCO	121.73	0.00	-121.73	0.00	0.00	0.00	19.27	0.98	18.29	-103.44
RGPPL (DABHOL)	0.00	0.00	0.00	3.57	0.00	-3.57	19.02	7.43	11.60	8.03
CGPL	0.00	0.00	0.00	0.00	0.00	0.00	23.68	4.25	19.43	19.43
DCPP	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16	-0.12	-0.12
EMCO	0.00	0.00	0.00	0.69	0.00	-0.69	8.63	2.03	6.61	5.92
ESSAR STEEL	0.00	124.99	124.99	0.00	33.81	33.81	21.44	23.45	-2.01	156.78
KSK MAHANADI	254.31	0.00	-254.31	0.00	0.00	0.00	2.50	1.87	0.63	-253.68
ESSAR POWER	163.96	0.00	-163.96	14.92	0.00	-14.92	6.68	2.29	4.39	-174.49
JINDAL STAGE-II	13.36	0.00	-13.36	17.36	0.00	-17.36	8.20	1.67	6.53	-24.20
DB POWER	101.70	0.00	-101.70	58.72	0.00	-58.72	6.58	1.55	5.03	-155.39
DHARIWAL POWE	0.00	0.00	0.00	0.51	0.00	-0.51	0.23	1.60	-1.37	-1.88
JAYPEE NIGRIE	84.32	0.00	-84.32	47.30	0.00	-47.30	6.81	3.36	3.45	-128.17
DGEN MEGA POW	0.00	0.00	0.00	2.42	0.00	-2.42	1.25	0.00	1.25	-1.16
GMR CHATTISGAR	359.93	0.00	-359.93	66.09	0.00	-66.09	8.05	2.57	5.48	-420.55
KORBA WEST POW	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.55	0.55
MB POWER	184.49	0.00	-184.49	55.57	0.00	-55.57	12.57	3.56	9.00	-231.06
MARUTI COAL	0.00	0.00	0.00	33.29	0.00	-33.29	0.00	0.00	0.00	-33.29
SPECTRUM	0.00	0.00	0.00	45.35	0.00	-45.35	0.00	0.00	0.00	-45.35
JHABUA POWER_N	30.69	0.00	-30.69	6.93	0.00	-6.93	9.50	1.65	7.85	-29.77
SASAN UMPP	0.00	0.00	0.00	0.00	0.00	0.00	2.44	60.25	-57.81	-57.81
TRN ENERGY	3.06	0.00	-3.06	0.00	0.00	0.00	0.56	2.53	-1.98	-5.04
RKM POWER	0.00	0.00	0.00	0.00	0.00	0.00	1.67	1.30	0.37	0.37
SKS POWER	161.04	0.00	-161.04	14.87	0.00	-14.87	0.59	1.98	-1.39	-177.30
BARC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	-3.40	-3.40
KAPP 3&4	0.00	0.00	0.00	0.00	0.00	0.00	14.37	0.00	14.37	14.37
HVDC CHAMPA	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.09	0.33	0.33
MAHINDRA_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	3.49	11.06	-7.57	-7.57
ARINSUM_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	5.35	6.76	-1.41	-1.41
OSTRO	0.00	0.00	0.00	0.00	0.00	0.00	5.99	7.55	-1.56	-1.56
ACME_RUMS	0.00	0.00	0.00	0.00	0.00	0.00	5.33	5.55	-0.22	-0.22
RENEW_BHACHA	0.00	0.00	0.00	0.00	0.00	0.00	4.12	7.14	-3.01	-3.01
GIWEL_BHUJ	0.00	0.00	0.00	0.00	0.00	0.00	1.08	5.08	-4.00	-4.00
NTPC STNS-SR	0.00	0.00	0.00	5.67	0.00	-5.67	38.48	23.70	14.78	9.10
LANKO KONDAPA	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.55	0.55
SIMHAPURI	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.58	0.58
MEENAKSHI	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.52	0.52

COASTGEN	105.82	0.00	-105.82	44.17	0.00	-44.17	4.34	1.52	2.82	-147.17
THERMAL POWER	544.24	0.00	-544.24	105.77	0.00	-105.77	3.29	1.59	1.70	-648.31
IL&FS	100.43	0.00	-100.43	46.99	0.00	-46.99	2.37	0.66	1.71	-145.71
NLC	0.00	0.00	0.00	167.77	0.00	-167.77	17.42	35.12	-17.70	-185.47
SEMBCORP	0.00	0.00	0.00	149.96	0.00	-149.96	4.09	1.34	2.75	-147.21
NETCL VALLUR	0.00	0.00	0.00	0.00	0.00	0.00	8.15	0.78	7.37	7.37
NTPL	0.00	0.00	0.00	0.00	0.00	0.00	5.02	1.90	3.12	3.12
NTPC STNS-ER	0.00	0.00	0.00	0.30	0.00	-0.30	78.95	20.99	57.97	57.67
MAITHON POWER	0.00	0.00	0.00	0.00	0.00	0.00	4.52	6.09	-1.58	-1.58
NPGC	0.00	0.00	0.00	0.00	0.00	0.00	7.74	1.84	5.91	5.91
ADHUNIK POWER	135.25	0.00	-135.25	31.04	0.00	-31.04	8.36	1.51	6.85	-159.44
CHUZACHEN HEP	70.09	0.00	-70.09	10.88	0.00	-10.88	1.37	1.65	-0.28	-81.25
RANGIT HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.65	-0.33	-0.33
GMR KAMALANG	26.66	0.00	-26.66	0.21	0.00	-0.21	14.71	0.11	14.60	-12.27
JITPL	0.00	0.00	0.00	0.32	0.00	-0.32	2.36	1.66	0.70	0.38
TEESTA HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.30	5.81	-5.51	-5.51
DAGACHU	86.97	0.00	-86.97	0.00	0.00	0.00	18.44	0.13	18.31	-68.66
JORETHANG	64.51	0.00	-64.51	8.83	0.00	-8.83	5.56	0.24	5.31	-68.03
NEPAL(NVVN)	0.00	125.83	125.83	0.00	0.00	0.00	8.37	3.45	4.92	130.75
BANGLADESH	0.00	110.61	110.61	0.00	0.00	0.00	2.89	1.73	1.16	111.78
TEESTA STG3	4.57	0.00	-4.57	586.77	0.00	-586.77	5.43	2.85	2.58	-588.75
DIKCHU HEP	0.24	0.00	-0.24	61.43	0.00	-61.43	2.21	2.87	-0.66	-62.32
TASHIDENG HEP	65.75	0.00	-65.75	9.69	0.00	-9.69	2.00	2.99	-0.99	-76.42
OPGC	0.00	0.00	0.00	0.00	0.00	0.00	6.47	148.53	-142.06	-142.06
BRBCL,NABINAGA	0.00	0.00	0.00	0.51	0.00	-0.51	4.66	5.09	-0.43	-0.94
MTPS II	0.00	0.00	0.00	0.00	0.00	0.00	5.76	1.22	4.54	4.54
TALA HEP	0.00	0.00	0.00	0.00	0.00	0.00	154.89	0.04	154.85	154.85
CHUKHA HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.06	80.96	-80.90	-80.90
KURICHU HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.86	-45.85	-45.85
MANGDECHU HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	272.55	-272.55	-272.55
NTPC STNS-NER	1.47	0.00	-1.47	16.85	0.00	-16.85	7.88	2.01	5.88	-12.45
NEEPCO STNS	0.00	0.00	0.00	0.00	0.00	0.00	1.46	10.06	-8.60	-8.60
RANGANADI HEP	0.00	0.00	0.00	0.00	0.00	0.00	2.08	2.82	-0.74	-0.74
DOYANG HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.39	0.10	0.10
ONGC PALATANA	40.42	0.00	-40.42	7.95	0.00	-7.95	1.08	0.86	0.22	-48.15
LOKTAK	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.58	-0.18	-0.18
PARE HEP	0.00	0.00	0.00	0.00	0.00	0.00	0.47	1.17	-0.71	-0.71

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 September, 2019

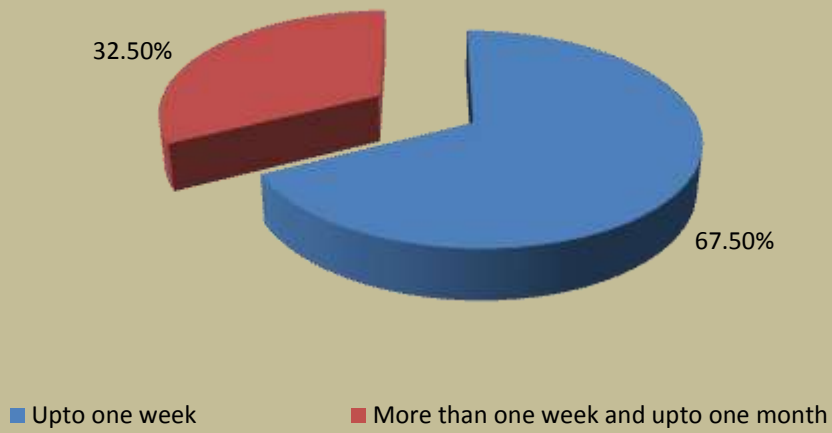


Figure-8: Forward Curve based on Prices of Bilateral Contracts

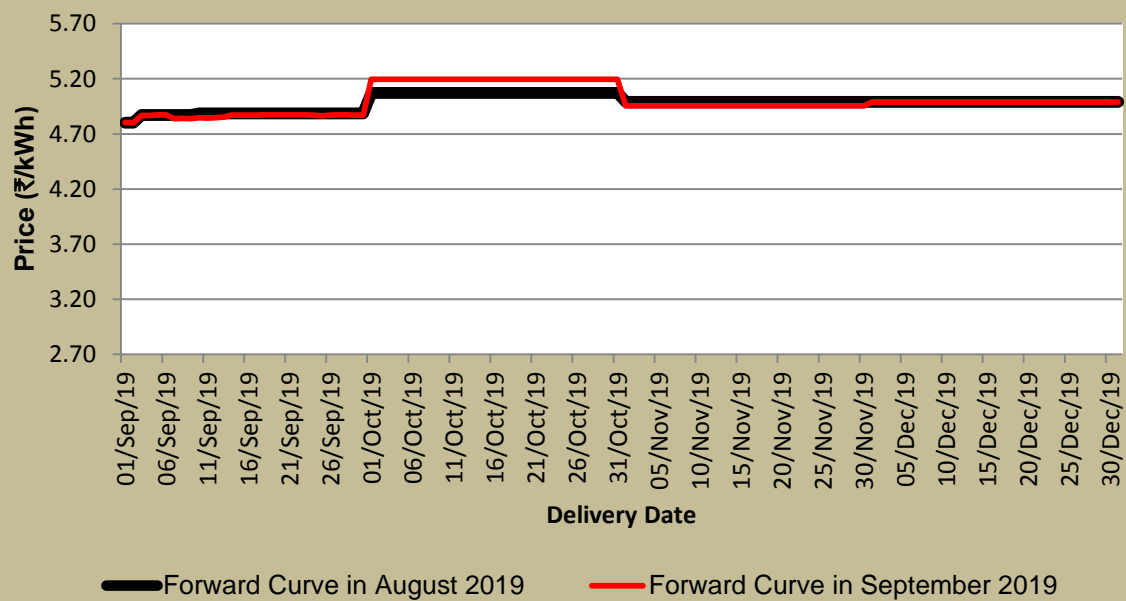


Table-20 : VOLUME AND PRICE OF RENEWABLE ENERGY CERTIFICATES (RECs) TRANSACTIONED THROUGH POWER EXCHANGES, AUGUST 2019						
Sr.No.	Details of REC Transactions	IEX			PXIL	
		Solar	Non-Solar	Non-Solar (issued before 1st April 2017)	Solar	Non Solar
A	Volume of Buy Bid	452334	731139	20100	122200	209663
B	Volume of Sell Bid	74731	271491	130	34640	132001
C	Ratio of Buy Bid to Sell Bid Volume	6.05	2.69	154.62	3.53	1.59
D	Market Clearing Volume (MWh)	56809	236671	130	12038	124865
E	Weighted average Market Clearing Price (₹/MWh)	2100	1750	1500	2000	1500

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)
<i>Solar</i>	<i>1000.00</i>	<i>2400.00</i>
<i>Non-Solar</i>	<i>1000.00</i>	<i>3000.00</i>