



# अक्टूबर, 2019 की मासिक मार्केट मॉनिटरिंग रिपोर्ट

## Monthly Market Monitoring Report October, 2019



भारत सरकार/ Government of India  
विद्युत मंत्रालय/ Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority  
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## REPORT FOR MONTH: OCTOBER, 2019

### OVERVIEW OF ELECTRICITY TRANSACTIONS ON POWER EXCHANGES IN INDIA

#### 1. DAY AHEAD MARKET (DAM)

- 1.1. The total volume of electricity transacted on both the power exchanges, viz., IEX and PXIL in the day ahead market in the month of October 2019 was **3,401.30 MU**. The total energy supplied in the country during the month of October, 2019 was **97,847 MU**. The volume of electricity transacted on the power exchanges in DAM represents 3.48% of the total energy supplied in the country. The total volume of electricity transacted in October, 2018 was **6,509.97 MU** which was 5.80% of the total energy supplied [**1,12,175 MU**].
- 1.2. The volume of electricity transacted on IEX and PXIL during October, 2019 are 3,391.49 MU and 9.81 MU, respectively, which means that the total volume transacted on IEX is 99.71 % of the total volume on the power exchanges. The total volume of electricity transacted during October, 2018 on IEX and PXIL was 6,505.17 MU and 4.80 MU, respectively, which means that the total volume transacted on IEX is 99.93 % of the total volume on the power exchanges.
- 1.3. The Average Market Clearing Price (MCP) on IEX during the month October, 2019 was Rs 2.71/ kWh, which shows a decline of 54.38% when compared with average MCP for the month of October, 2018, which was Rs 5.94 /kWh. Similarly, on PXIL, the Average MCP during October, 2019 was Rs 2.62/kWh, which shows a decline of 59.69% when compared with average MCP for the month of October, 2018, which was Rs 6.50 kWh.

#### 2. SUMMARY OF THE MARKET CLEARING PRICE, AREA CLEARING PRICE AND SCHEDULE VOLUME IN THE POWER EXCHANGES

- 2.1. A comparison of the Minimum, Maximum and Average of daily MCP during the months of October, 2019 and October, 2018 are as given below:

MCP (Rs/kWh)	IEX			PXIL		
	October, 2019	October, 2018	% Change	October, 2019	October, 2018 <sup>©</sup>	% Change
<b>Minimum</b>	1.49	4.04	- 63.12	2.26	6.5	-65.23
<b>Maximum</b>	3.24	8.95	- 63.80	2.95	6.5	-54.62
<b>Average</b>	2.71	5.94	- 54.38	2.62	6.5	-59.69

©: Transaction happened only on 1<sup>st</sup> October, 2018 during the month October, 2018

**Table: 1**

- 2.2. The Maximum Area Clearing Price (ACP) in IEX was observed in all regions (all 13 bid areas) at **Rs 8.03 /kWh** during the time block 19:00-19:15 on 7<sup>th</sup> October, 2019 whereas

the MCP for this time-block was **Rs 8.03 kWh** only, as there was no congestion in transmission system. However, the Daily MCP on pan India basis on 7<sup>th</sup> October, 2019 was **Rs 3.03/ kWh**.

- 2.3. The Minimum ACP observed in IEX among all 13 regions was **Rs 0.88 /kWh** during the time block 05:15-05:30 on 28<sup>th</sup> **October, 2019**. As there was no congestion in transmission system, the MCP for this time-block was also **Rs 0.88/ kWh**. However, the Daily MCP on pan India basis on 28<sup>th</sup> October, 2019 was **Rs 1.49/ kWh**.
- 2.4. A comparison of the Minimum and Maximum ACP during the months of October, 2019 and October, 2018 in IEX are as given below:

ACP (Rs/kWh)	IEX		
	October, 2019	October, 2018	% Change
<b>Minimum</b>	0.884	2.680	- 67.00
<b>Maximum</b>	8.025	19.999	- 59.87

**Table: 2**

- 2.5. A comparison of the Minimum, Maximum and Average Scheduled Volume of electricity transactions happened on IEX and PXIL for a day during the months of October, 2019 and October, 2018 are as given below:

Scheduled Volume (MU)	IEX			PXIL		
	October, 2019	October, 2018	% Change	October, 2019	October, 2018 <sup>y</sup>	% Change
<b>Minimum</b>	062.75	156.83	- 59.99	0.06	4.8	-98.75
<b>Maximum</b>	141.48	274.71	- 48.50	4.80	4.8	00.00
<b>Average</b>	109.40	209.84	-47.87	0.46	4.8	-90.42

y: Transaction happened only on 1<sup>st</sup> October, 2018 during the month October, 2018

**Table: 3**

- 2.6. The total volume of electricity transacted on both the power exchanges during the period, April to October, 2019, was 28,383.43 MU. The same was 34,242.72 MU during the same period of 2018, which shows a decline of 17.11%. A comparison of Final Scheduled Volume and the Average MCP for the period of April to October, 2019 of IEX and PXIL are given at **Annexure-I**.

### **3. TERM AHEAD MARKET (TAM)**

- 3.1 The total volume of electricity transacted on both the power exchanges in term ahead market in October, 2019 was 877.37 **MU** (i.e. 430.16 MU on IEX and 447.21 MU on PXIL), which means that the total volume transacted on IEX was 49.03% and PXIL was

50.97% of total volume in term ahead market in both the power exchanges. The total volume of electricity transacted during October, 2018 in term ahead market on IEX and PXIL was **713.25 MU** (i.e. 543.47 MU on IEX and 169.78 MU on PXIL), which means that the total volume on IEX was 76.20% and PXIL was 23.80% of the total volume on the power exchanges.

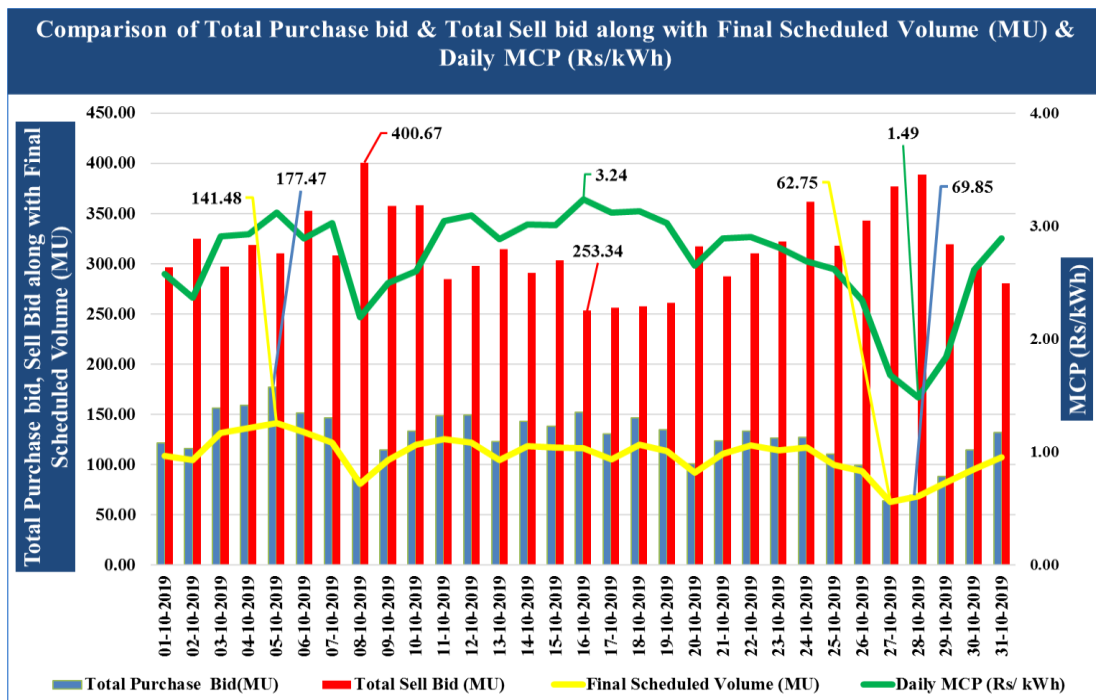
- 3.2 With respect to the total energy supplied during the month of October, 2019 in the country the volume of electricity traded on the power exchanges in TAM represents **0.90%** of the total energy supplied. The same was 0.64% in October, 2018.
- 3.3 The Total Volume of electricity transacted on both the power exchanges during the period, April to October, 2019 in TAM, was 5318.15 MU. The same was 1874.77 MU during the same period of 2018, which shows an increase of 183.67%. A comparison of Final Scheduled Volume for the months of April to October, 2019 of IEX and PXIL are given at **Annexure-II**.

#### **4. ANALYSIS OF MOVEMENT OF PRICES OBSERVED IN DAM DURING OCTOBER, 2019**

**A regression analysis has been carried out on the Day Ahead Market data taken from IEX website. Also, data was plotted in various graphs to observe patterns for each day of the October month. The observations made are as under:**

- 4.1 In order to find out the determinants which are responsible for the Daily MCP, a regression analysis has been carried out where the Daily MCP is the dependent variable and the independent variables are peak demand, total purchase bid, total sell bid, coal generation, hydro generation, wind generation and solar generation.
- 4.2 A double log function was used so that elasticity of Daily MCP could be read off from the coefficients of independent variables. The regression analysis revealed that the significant variables were only the total purchase bid and coal generation. All the other variables were found to be insignificant. The regression analysis further revealed that the maximum elasticity of the Daily MCP was with respect to total purchase bid and elasticity figure was around 0.53. In effect, the regression reveals that the most important variable which determines daily market clearing price is the total purchase bid in the month of October, 2019.

4.3 The same relationship is visible from the analysis carried out from the plot in **Figure 1**.

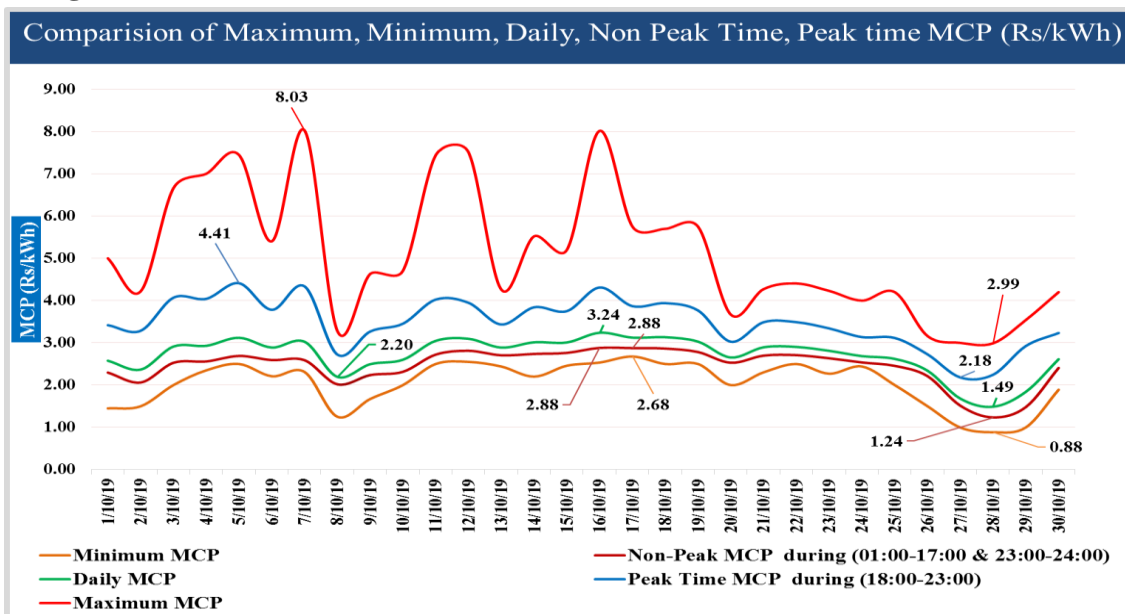


**Figure -1**

4.4 The Final Scheduled Volume (MU) and the Daily MCP (Rs/ kWh) invariably showed decreasing trend on Sundays as the demand of electricity in the country is less compared to other days of week [**Figure 1**]. However, in the month of October, 2019, it is observed that on first Monday and second Tuesday (i.e. 7<sup>th</sup> and 8<sup>th</sup> October, 2019), FSV showed decreasing trend in comparison to Sunday (i.e. 6<sup>th</sup> October, 2019). The detailed analysis on this is given at **Appendix-I**.

4.5 The Final Scheduled Volume and the total Purchase Bid were minimum on 27<sup>th</sup> October, 2019. The demand was less as compared to other days of the month because of national holiday on 27<sup>th</sup> October, 2019 on account of Diwali festival.

4.6 A comparison of maximum, minimum, daily, non-peak time, peak time MCP is shown in **Figure -2**. The same are also tabulated in **Annexure III**.



**Figure -2**

- 4.7 The Purchase Bids and the MCP discovered in each of the 15-minute time block during the month almost followed the same trend [**Annexure IV**]. This is also corroborated with the outcome of regression analysis mentioned in at para 4.1 and 4.2 above.
- 4.8 On **all 31 days** during the month, the maximum Daily MCP occurred during the **time period 18:30 – 19:30**. [**Annexure V**].
- 4.9 On **25 days** during the month, the maximum FSV occurred during the **time period 17:45 – 20:15**. [**Annexure V**].
- 4.10 On **20 days** during the month, the minimum FSV occurred during the **time period 04:30 – 06:00** [**Annexure V**].
- 4.11 The maximum demand met during the month of October 2019 in the country occurred on **14<sup>th</sup> October 2019 at 164.26 GW**, which is 3.76% less as compared to maximum demand during the month of October, 2018 i.e. [**170.68 GW on 3<sup>rd</sup> October, 2018**].
- 4.12 One nation One Price was observed for **whole month** during the month, as there was no transmission congestion during the month.
- 4.13 There was no real time curtailment on IEX and PXIL in October, 2019. Also, there was no real time curtailment in October, 2018.
- 4.14 The cumulative real time curtailment during the period April to October, 2019 was **12.68 MU** in DAM. During months of April to October, 2018 the real time curtailment was **72.84 MU** in DAM. The month wise real time curtailment is given at **Annexure-I**
- 4.15 The **top 10 sellers** on the power exchanges during the month are: **Madhya Pradesh, Teesta -3, Karnataka, Himachal Pradesh, Sembcorp Gayatri, Assam, Thermal Powertech, Odisha, Rajasthan and Jharkhand**, which constituted 59.83% of the market share. [**Annexure VI**]
- 4.16 **The top 10 purchaser** on the power exchanges during the month are: **Maharashtra, Gujarat, Tamil Nadu, Delhi, DVC, Andhra Pradesh, Bihar, Haryana, West Bengal and Telangana**, which constituted 71.59% of the market share. [**Annexure VI**]

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**Final Scheduled Volume, Average MCP and Real-Time Curtailment in Day Ahead Market (DAM) for the months of April to October, 2019 of IEX and PXIL**

Months	Final Scheduled Volume (MU)		Market Clearing Price (Rs/kWh)		Real Time Curtailment (MU)	
	IEX	PXIL	IEX	PXIL	IEX	PXIL
<b>April, 2019</b>	4,005.41	31.43	3.22	3.75	3.090	-
<b>May, 2019</b>	3,772.47	1.17	3.34	3.45	0.217	-
<b>June, 2019</b>	4,206.68	0.42	3.32	3.48	4.910	-
<b>July, 2019</b>	4,800.37	0.35	3.38	3.21	0.039	-
<b>August, 2019</b>	4,674.88	0.35	3.32	3.10	4.420	-
<b>September, 2019</b>	3,487.57	1.03	2.77	2.85	-	-
<b>October, 2019</b>	3,391.49	9.81	2.71	2.62	-	-
<b>Total</b>	<b>28,338.87</b>	<b>44.56</b>			<b>12.676</b>	<b>-</b>

**[Source: IEX and PXIL]**

- There was no real time curtailment.



**Annexure-II**

**Final Scheduled Volume in Term Ahead Market (TAM) for the months of April to October, 2019 of IEX and PXIL**

Months	Final Scheduled Volume (MU)		
	IEX	PXIL	Total
<b>April, 2019</b>	334.13	293.47	627.6
<b>May, 2019</b>	326.72	122.10	448.82
<b>June, 2019</b>	368.84	139.22	508.06
<b>July, 2019</b>	523.59	224.35	747.94
<b>August, 2019</b>	808.07	555.51	1363.58
<b>September, 2019</b>	354.33	390.45	744.78
<b>October, 2019</b>	430.16	447.21	877.37
<b>Total</b>	<b>3,145.84</b>	<b>2,172.31</b>	<b>5,318.15</b>

**[Source: IEX and PXIL]**

**Annexure-III**

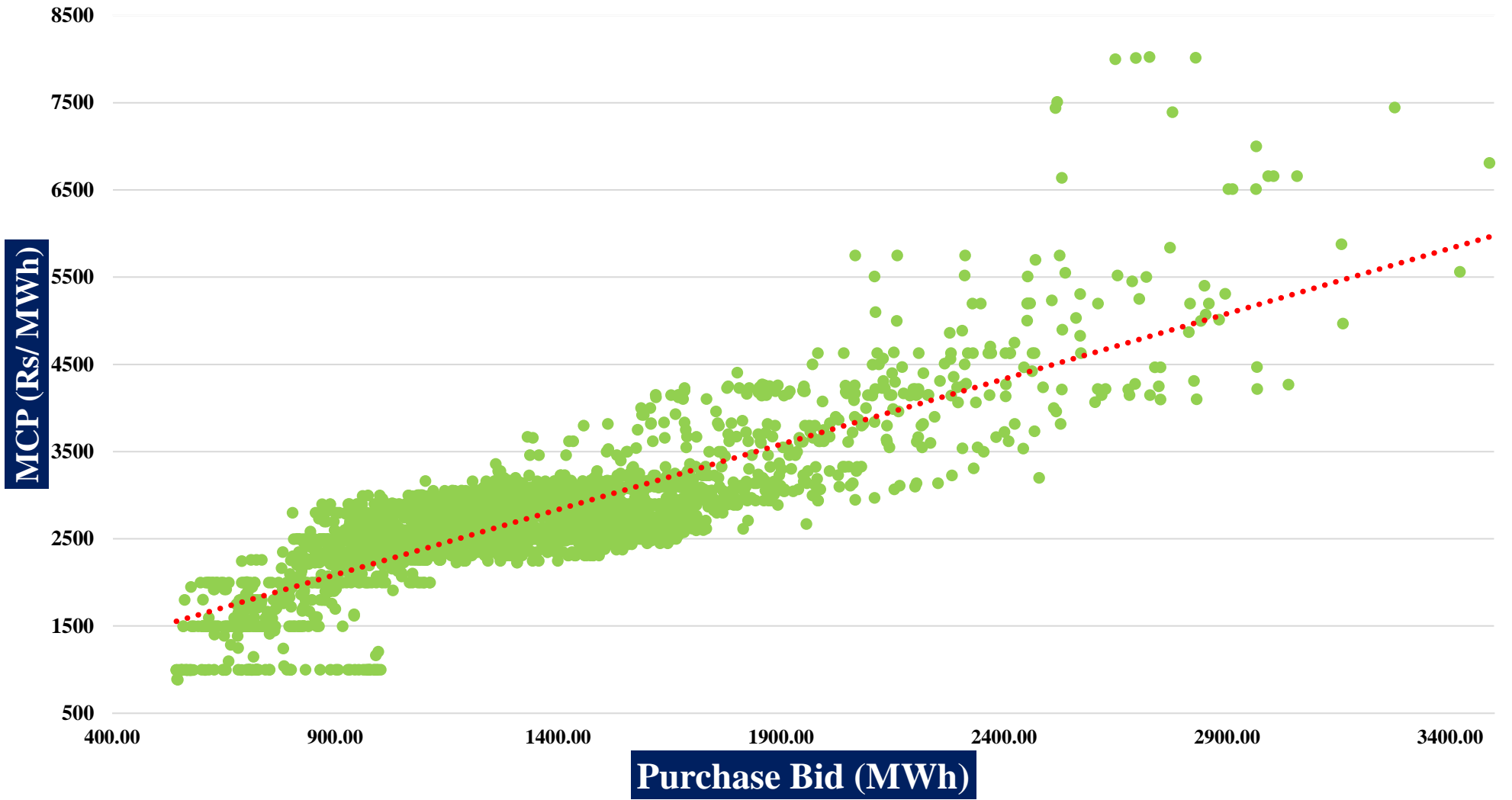
Date	MCP during (01:00-06:00, 23:00-24:00)	MCP during (07:00-10:00)	MCP during (11:00-17:00)	Peak Time MCP during (18:00-23:00)	Non-Peak MCP during (01:00-17:00 & 23:00-24:00)	Maximum MCP	Minimum MCP	Average MCP	Final Scheduled Volume (MU)
01/10/2019	2.02	2.67	2.35	3.42	2.30	5.00	1.45	2.58	108.83
02/10/2019	2.30	2.47	1.59	3.29	2.06	4.22	1.50	2.37	104.82
03/10/2019	2.41	2.75	2.51	4.07	2.53	6.66	2.00	2.91	131.53
04/10/2019	2.54	2.76	2.46	4.04	2.56	7.00	2.35	2.93	136.86
05/10/2019	2.71	2.78	2.62	4.41	2.69	7.45	2.50	3.12	141.48
06/10/2019	2.84	2.69	2.29	3.78	2.59	5.40	2.21	2.89	132.44
07/10/2019	2.59	2.77	2.49	4.34	2.59	8.03	2.31	3.03	122.18
08/10/2019	2.33	1.96	1.75	2.72	2.02	3.28	1.25	2.20	81.40
09/10/2019	2.11	2.27	2.34	3.27	2.24	4.63	1.67	2.49	104.64
10/10/2019	2.30	2.34	2.32	3.45	2.32	4.71	2.00	2.60	119.67
11/10/2019	2.77	2.77	2.64	4.02	2.72	7.44	2.50	3.05	125.24
12/10/2019	2.88	2.87	2.71	3.95	2.81	7.51	2.55	3.10	122.37
13/10/2019	2.89	2.74	2.50	3.43	2.71	4.26	2.44	2.89	104.94
14/10/2019	2.67	2.86	2.74	3.84	2.74	5.52	2.20	3.01	118.51
15/10/2019	2.68	2.84	2.80	3.75	2.76	5.20	2.46	3.01	116.99
16/10/2019	2.91	2.90	2.84	4.31	2.88	8.02	2.53	3.24	116.73
17/10/2019	2.87	2.94	2.84	3.87	2.88	5.75	2.68	3.12	105.23
18/10/2019	2.85	3.00	2.80	3.94	2.86	5.70	2.50	3.13	119.75
19/10/2019	2.72	2.89	2.78	3.77	2.78	5.75	2.50	3.03	113.97
20/10/2019	2.58	2.58	2.45	3.03	2.53	3.67	2.00	2.65	91.97
21/10/2019	2.54	2.68	2.86	3.49	2.70	4.27	2.30	2.90	110.66
22/10/2019	2.58	2.77	2.80	3.49	2.71	4.41	2.50	2.90	119.38
23/10/2019	2.48	2.81	2.69	3.34	2.63	4.23	2.27	2.81	114.14
24/10/2019	2.49	2.66	2.51	3.14	2.54	4.00	2.44	2.69	117.38
25/10/2019	2.27	2.64	2.54	3.12	2.46	4.20	2.00	2.62	100.00
26/10/2019	1.94	2.42	2.37	2.73	2.21	3.16	1.50	2.34	93.26
27/10/2019	1.69	1.22	1.50	2.18	1.51	3.00	1.00	1.68	62.75
28/10/2019	1.10	1.22	1.38	2.25	1.24	2.99	0.88	1.49	68.74
29/10/2019	1.41	1.76	1.39	2.92	1.48	3.54	1.00	1.84	82.23
30/10/2019	2.25	2.59	2.46	3.23	2.41	4.20	1.89	2.61	95.61
31/10/2019	2.54	2.89	2.67	3.55	2.67	4.40	2.30	2.89	107.79
<b>Maximum</b>	<b>2.91</b>	<b>3.00</b>	<b>2.86</b>	<b>4.41</b>	<b>2.88</b>	<b>8.03</b>	<b>2.68</b>	<b>3.24</b>	<b>141.48</b>
<b>Minimum</b>	<b>1.10</b>	<b>1.22</b>	<b>1.38</b>	<b>2.18</b>	<b>1.24</b>	<b>2.99</b>	<b>0.88</b>	<b>1.49</b>	<b>62.75</b>
<b>Average</b>	<b>2.43</b>	<b>2.56</b>	<b>2.42</b>	<b>3.49</b>	<b>2.46</b>	<b>5.08</b>	<b>2.05</b>	<b>2.71</b>	<b>109.40</b>

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

[Source: IEX]

# Comparison of MCP w.r.t. Purchase Bid for 2976 Time Blocks during the month of October, 2019



**Time Blocks during the Month [96 time blocks in a day x 31 days = 2976]**

Annexure-V

Date	Max. FSV (MU)		Max. MCP (Rs./kWh)		Min FSV (MU)		Min. MCP (Rs./kWh)	
	Time Block	Value	Time Block	Value	Time Block	Value	Time Block	Value
01/10/2019	17:45 - 18:00	1.65	19:00 - 19:15	5.00	05:00 - 05:15	0.72	05:00 - 05:15	1.45
02/10/2019	19:00 - 19:15	1.81	19:15 - 19:30	4.22	13:45 - 14:00	0.69	14:15 - 14:30	1.50
03/10/2019	18:15 - 18:30	1.95	19:00 - 19:15	6.66	03:45 - 04:00	0.77	03:45 - 04:00	2.00
04/10/2019	18:30 - 18:45	2.07	19:00 - 19:15	7.00	03:45 - 04:00	0.84	04:15 - 04:30	2.35
05/10/2019	19:45 - 20:00	2.12	18:45 - 19:00	7.45	03:45 - 04:00	1.04	13:15 - 13:30	2.50
06/10/2019	19:30 - 19:45	2.31	18:45 - 19:00	5.40	13:00 - 13:15	0.94	13:00 - 13:15	2.21
07/10/2019	20:00 - 20:15	1.72	19:00 - 19:15	8.03	04:30 - 04:45	0.90	13:15 - 13:30	2.31
08/10/2019	20:00 - 20:15	1.22	19:15 - 19:30	3.28	07:30 - 07:45	0.65	16:30 - 16:45	1.25
09/10/2019	18:30 - 18:45	1.67	18:45 - 19:00	4.63	04:45 - 05:00	0.75	03:30 - 03:45	1.67
10/10/2019	18:45 - 19:00	1.84	18:45 - 19:00	4.71	05:45 - 06:00	0.78	03:45 - 04:00	2.00
11/10/2019	19:15 - 19:30	1.89	18:45 - 19:00	7.44	05:45 - 06:00	0.81	13:15 - 13:30	2.50
12/10/2019	19:15 - 19:30	1.87	18:45 - 19:00	7.51	05:45 - 06:00	0.87	13:15 - 13:30	2.55
13/10/2019	20:45 - 21:00	1.56	18:45 - 19:00	4.26	05:45 - 06:00	0.73	13:15 - 13:30	2.44
14/10/2019	19:30 - 19:45	1.90	19:00 - 19:15	5.52	04:45 - 05:00	0.68	05:30 - 05:45	2.20
15/10/2019	19:00 - 19:15	1.81	18:45 - 19:00	5.20	03:45 - 04:00	0.71	02:15 - 02:30	2.46
16/10/2019	18:00 - 18:15	1.80	18:45 - 19:00	8.02	04:45 - 05:00	0.70	05:30 - 05:45	2.53
17/10/2019	17:45 - 18:00	1.56	18:45 - 19:00	5.75	05:30 - 05:45	0.65	13:15 - 13:30	2.68
18/10/2019	18:00 - 18:15	1.72	19:00 - 19:15	5.70	04:30 - 04:45	0.82	13:15 - 13:30	2.50
19/10/2019	17:45 - 18:00	1.66	18:30 - 18:45	5.75	04:30 - 04:45	0.75	03:00 - 03:15	2.50
20/10/2019	17:45 - 18:00	1.26	18:45 - 19:00	3.67	05:45 - 06:00	0.68	14:00 - 14:15	2.00
21/10/2019	20:30 - 20:45	1.61	18:45 - 19:00	4.27	05:30 - 05:45	0.64	03:45 - 04:00	2.30
22/10/2019	11:45 - 12:00	1.67	18:45 - 19:00	4.41	05:30 - 05:45	0.77	03:30 - 03:45	2.50
23/10/2019	12:00 - 12:15	1.62	18:45 - 19:00	4.23	05:45 - 06:00	0.73	05:45 - 06:00	2.27
24/10/2019	12:15 - 12:30	1.64	18:45 - 19:00	4.00	05:30 - 05:45	0.79	13:15 - 13:30	2.44
25/10/2019	17:45 - 18:00	1.43	18:30 - 18:45	4.20	05:00 - 05:15	0.65	04:00 - 04:15	2.00
26/10/2019	17:45 - 18:00	1.32	18:30 - 18:45	3.16	05:15 - 05:30	0.74	03:45 - 04:00	1.50
27/10/2019	17:45 - 18:00	1.03	18:30 - 18:45	3.00	23:45 - 24:00	0.52	06:30 - 06:45	1.00
28/10/2019	18:45 - 19:00	1.25	18:45 - 19:00	2.99	03:00 - 03:15	0.54	05:15 - 05:30	0.88
29/10/2019	18:15 - 18:30	1.33	18:30 - 18:45	3.54	04:30 - 04:45	0.67	02:45 - 03:00	1.00
30/10/2019	17:45 - 18:00	1.46	18:45 - 19:00	4.20	02:30 - 02:45	0.66	04:30 - 04:45	1.89
31/10/2019	12:30 - 12:45	1.58	18:45 - 19:00	4.40	06:15 - 06:30	0.77	03:30 - 03:45	2.30

[Source: IEX]

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

**Top Ten Entity (Sellers and Purchaser) during the month of October, 2019**

Entity Name	Sell		Entity Name	Purchase	
	(MU)	Percent (%)		(MU)	Percent (%)
<b>Madhya Pradesh</b>	500.02	14.70%	<b>Maharashtra</b>	417.69	12.28%
<b>Teesta -3</b>	415.98	12.23%	<b>Gujarat</b>	311.94	9.17%
<b>Karnataka</b>	316.75	9.31%	<b>Tamil Nadu</b>	301.80	8.87%
<b>Himachal Pradesh</b>	184.67	5.43%	<b>Delhi</b>	258.71	7.61%
<b>Sembcorp Gayatri</b>	149.92	4.41%	<b>DVC</b>	239.35	7.04%
<b>Assam</b>	139.87	4.11%	<b>Andhra Pradesh</b>	231.47	6.81%
<b>Thermal Powertech</b>	85.16	2.50%	<b>Bihar</b>	185.49	5.45%
<b>Odisha</b>	84.57	2.49%	<b>Haryana</b>	164.80	4.85%
<b>Rajasthan</b>	80.01	2.35%	<b>West Bengal</b>	162.44	4.78%
<b>Jharkhand</b>	77.91	2.29%	<b>Telangana</b>	161.24	4.74%
<b>Total</b>	<b>2034.87</b>	<b>59.83%</b>	<b>Total</b>	<b>2434.94</b>	<b>71.59%</b>
<b>Total Volume in PXs</b>	<b>3401.29</b>		<b>Total Volume in PXs</b>	<b>3401.29</b>	

[Source: POSOCO]

**Appendix-I****Analysis for change in trend of Final Scheduled Volume on 1<sup>st</sup> Monday and 2<sup>nd</sup> Tuesday of October, 2019 i.e. on 7<sup>th</sup> and 8<sup>th</sup> October, 2019**

1. It has been observed that during the months of April to June, 2019, the Final Scheduled Volume (FSV) and Daily Market Clearing Price (MCP) invariably showed similar decreasing trend on Sundays and increasing trend on Mondays as demand is less on Sundays as compared to other days of the week. Further, in the month of July, 2019, it was observed that the FSV showed decreasing trend on Mondays (15<sup>th</sup> and 22<sup>nd</sup> July, 2019) and Tuesday (23<sup>rd</sup> July, 2019) instead of Sundays (14<sup>th</sup> and 21<sup>st</sup> July, 2019). Also in the month of August, 2019, FSV invariably showed increasing trend on Sundays (4<sup>th</sup> and 18<sup>th</sup> August, 2018) and decreasing trend on Monday (5<sup>th</sup> August, 2019).
2. In the month of September, 2019 also, FSV showed decreasing trend on Mondays (2<sup>nd</sup> and 23<sup>rd</sup> September, 2019 instead of Sundays (1<sup>st</sup> and 22<sup>nd</sup> September, 2019).
3. In the month of October, 2019, it is observed that on first Monday and second Tuesday (i.e. 7<sup>th</sup> and 8<sup>th</sup> October, 2019), FSV showed decreasing trend in comparison to previous Sunday (i.e. 6<sup>th</sup> October, 2019). On analysis of this variation in trends of FSV on 7<sup>th</sup> and 8<sup>th</sup> October, 2019, it has been observed as under:
  - (i) On 7<sup>th</sup> October, 2019, the energy supplied in the country decreased by 16 MU in comparison to the previous day. Although there was increase in purchase on power exchange by some of the States by 17.78 MU [i.e. Telangana (8.09 MU), Maharashtra (4.48 MU), Delhi (1.82 MU), Uttar Pradesh (0.96 MU), etc.]. There was also marked decrease in purchase on power exchange by some of the States and entities by 28.05 MU [i.e. Andhra Pradesh (14.23 MU), Chhattisgarh (4.75), Bihar (4.74), Tamil Nadu (0.98), Dadra & Nagar Haveli (0.97) etc.] This resulted in decrease in FSV by 10.27 MU on 7<sup>th</sup> October, 2019.
  - (ii) Further, on 8<sup>th</sup> October, 2019, the energy supplied in the country decreased by 146 MU. On this day coal generation decreased by 188.13 MU and Renewable Energy generation increased by 30.85 MU as compared to 7<sup>th</sup> October, 2019. The purchase bid volume decreased by 59.52 MU and the sell bid volume increased by 92.38 MU in the power exchange as compared to 7<sup>th</sup> October, 2019. Although there was increase in purchase on power exchange by some of the States by 8.09 MU [i.e. Andhra Pradesh (2.48 MU), Tamil Nadu (2.13 MU), Kerala (1.95 MU), Karnataka (0.47 MU), etc.]. There was also marked decrease in purchase on power exchange by some of the States and entities by 48.87 MU [i.e. Telangana (15.83 MU), Maharashtra (9.87), Gujarat (5.93), DVC (4.53), Delhi (2.90), Dadra & Nagar Haveli (1.77) etc.]. These resulted in decrease in FSV by 40.78 MU on 8<sup>th</sup> October, 2019. Incidentally, 8<sup>th</sup> October, 2019 was also a national holiday on account of Dussehra festival.

**[Source: National Power Portal]**

## Definitions/ Terminologies used in the Report

**Area Clearing Price (ACP)** is area clearing price in each time block in each of 13 bid areas. The country has been divided into 13 bid areas for the purpose of calculating prices in Power Exchanges.

**13 Bid area are as under:**

**N1:** Jammu and Kashmir, Himachal Pradesh, Chandigarh, Haryana; **N2:** Uttar Pradesh, Uttaranchal, Rajasthan, Delhi; **N3:** Punjab; **E1:** West Bengal, Sikkim, Bihar, Jharkhand; **E2:** Odisha; **W1:** Madhya Pradesh; **W2:** Maharashtra, Gujarat, Daman and Diu, Dadar and Nagar Haveli, North Goa; **W3:** Chhattisgarh; **S1:** Andhra Pradesh, Telangana, Karnataka, Pondicherry (Yanam), South Goa; **S2:** Tamil Nadu, Pondicherry (Puducherry), Pondicherry (Karaikal), Pondicherry (Mahe); **S3:** Kerala; **A1:** Tripura, Manipur, Mizoram, Nagaland; **A2:** Assam, Arunachal Pradesh, Meghalaya.

1. **Daily MCP** is the average of MCP of all 96 Time Blocks of the day during which transaction happened.
2. **Average MCP** is the average of daily MCP of all days during the month on which transaction happened.
3. **Average Scheduled Volume** is the average of scheduled volume of all days during the month on which transaction happened.
4. **Day-Ahead Market (DAM)** on the power exchanges are market for electricity where market participants purchase and sell electricity at financially binding day-ahead prices for the following day.
5. **Elasticity** is percentage of change in MCP with respect to change in independent variable viz. peak demand, average purchase bid, average sell bid, generation from coal based plants, generation from hydro based plants, generation from wind based plants and generation from solar plants.
6. **Energy Supplied** is the total energy (MU) available at the States' periphery.
7. **MCP** is the price discovered in each of the 15 Minute Time Block. The day is divided in 96 time blocks of 15 minutes each.
8. **Term Ahead Market (TAM)** on the power exchanges are market for electricity where market participants buy/sell electricity on a term basis ranging from 3 hours before actual despatch (i.e. intra-day) and up to 11 days in advance. There are 4 types of contracts in TAM; namely, Intraday, Day Ahead Contingency, Daily and Weekly.