

I/32539/2023



भारत सरकार/ Government of India

विद्युत मंत्रालय/ Ministry of Power

केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority

आर. ए. प्रभाग/ Regulatory Affairs Division

सेवा में /To

1. Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi- 110001.
2. Secretary, Ministry of New & Renewable Energy, Atal Akshay Urja Bhawan, CGO Complex, Lodhi Road, New Delhi- 110003.
3. Secretary, CERC, Chanderlok Building, Janpath, New Delhi- 110001.

विषय: अक्टूबर, 2023 माह की मार्केट मॉनिटरिंग रिपोर्ट।

Subject: Monthly Market Monitoring Report for the month of October, 2023.

महोदय/ Sir,

अक्टूबर, 2023 माह के लिए केंद्रीय विद्युत प्राधिकरण द्वारा तैयार की गई मासिक मार्केट मॉनिटरिंग रिपोर्ट (MMMR) की एक प्रति सूचना और अवलोकन के लिए संलग्न है। A copy of the monthly market monitoring report (MMMR) prepared by central Electricity Authority for the month of October, 2023 is enclosed herewith for kind information and perusal.

अक्टूबर, 2023 माह के दौरान मार्केट के संचालन की मुख्य विशेषताएं इस प्रकार रही। Key highlights of the market operation during October, 2023 are as under:

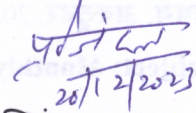
- (i) अक्टूबर, 2023 माह में देश में कुल 139,441 MU विद्युत का कारोबार किया गया, जिसमें से 68,394 MU का कारोबार अंतर्राज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतराराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया। In the month of October, 2023 a total of 139,441 MU of electricity was transacted in the country out of which 68,394 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.
- (ii) अल्पावधि मार्केट के अंतर्गत कुल 19,961 MU का कारोबार किया गया था, जिसमें से 11,728 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ। इस प्रकार अल्पावधि कारोबार, अक्टूबर, 2023 माह में ट्रेड की गई विद्युत की कुल मात्रा का 14.32 % था

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और 8.41 % पावर एक्सचेंजों के माध्यम से रहा। A total of 19,961 MU was transacted under Short Term Market, out of which 11,728 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in October, 2023 was 14.32 % of total volume of electricity traded in October, 2023 and 8.41 % was through Power Exchanges.

- (iii) यदि हम अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से आपूर्ति की गई विद्युत के संबंध में इन कारोबारों की तुलना करते हैं, तो अल्पावधि कारोबार अंतर्राज्यीय पारेषण प्रणाली (ISTS) कारोबार का लगभग 29.19 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 17.15 % रहा। If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 29.19 % of ISTS transactions, out of which transaction through the power exchanges constitutes 17.15 %.

भवदीय/ Yours faithfully,



(प्रदीप जिंदल/ Pardeep Jindal)

मुख्य अभियंता (आर.ए.)/ Chief Engineer (RA)

प्रतिलिपि/ Copy for information, through email, to:

1. O/o Chairperson, CEA
2. O/o Member (E&C), CEA
3. Secretary (All SERCs and JERCS)
4. CMD, Grid Controller of India Limited (GRID-INDIA), B-9 (1st Floor), Qutab Institutional Area, Katwaria Sarai, New Delhi -110016.
5. CMD, Indian Energy Exchange (IEX), 9th Floor, Max Towers, Sector 16B, Noida-201301.
6. MD & CEO, Power Exchange India Limited (PXIL), Sumer Plaza, 9th floor, Unit no - 901, Marol Maroshi Road, Andheri (East), Mumbai-400 059.
7. COO, Hindustan Power Exchange Limited (HPX), World Trade Tower, 8th Floor, Sector 16, Noida, Uttar Pradesh - 201301.

CEA website (<https://cea.nic.in/market-monitoring-report/?lang=en>)



मासिक मार्केट मॉनिटरिंग रिपोर्ट - अक्टूबर, 2023

Monthly Market Monitoring Report

October, 2023



भारत सरकार/ Government of India

विद्युत मंत्रालय/ Ministry of Power

केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority

आर. ए. प्रभाग/ Regulatory Affairs Division

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अक्टूबर, 2023 की मासिक मार्केट
मॉनिटरिंग रिपोर्ट का सारांश

**Summary of Market Monitoring Report
For the month of October, 2023**

अक्टूबर, 2023 माह के लिए सारांश Summary for Month: October, 2023

भारत में विद्युत एक्सचेंजों पर विद्युत के व्यापार का सारांश

Summary of Electricity Transactions on Power Exchanges in India

- अक्टूबर, 2023 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल 11,728 **MU** विद्युत का कारोबार किया गया। विद्युत की यह मात्रा डिलीवरी की तारीख के आधार पर है और इसमें DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM और G-DAC & ID मार्केट खंडों के माध्यम से कारोबार शामिल हैं।

A total volume of **11,728 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of October, 2023. This volume of electricity is on delivery date basis and includes transactions through DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID market segments.

Segment	Transactions happened in the PXs (IEX, PXIL & HPX combined)			
	FSV (MU)	Average MCP (₹/kWh)	Congestion (MU)	Real Time Curtailment (MU)
DAM	4,747	6.40	1.41	0.00
GDAM	184	6.37	0.57	0.00
HP-DAM**	23	16.81	0.00	0.00
RTM	2,442	6.06	0.00	0.00
TAM	3,131	8.48	0.00	67.03
HP-TAM**	168	14.83	0.00	0.00
DAC & ID	815	9.03	0.00	10.30
HP-DAC & ID**	202	16.00	0.00	0.00
GTAM	7	6.54	0.00	0.00
G-DAC & ID	9	6.30	0.00	0.00
Total in PXs	11,728	7.37*	1.98	77.33

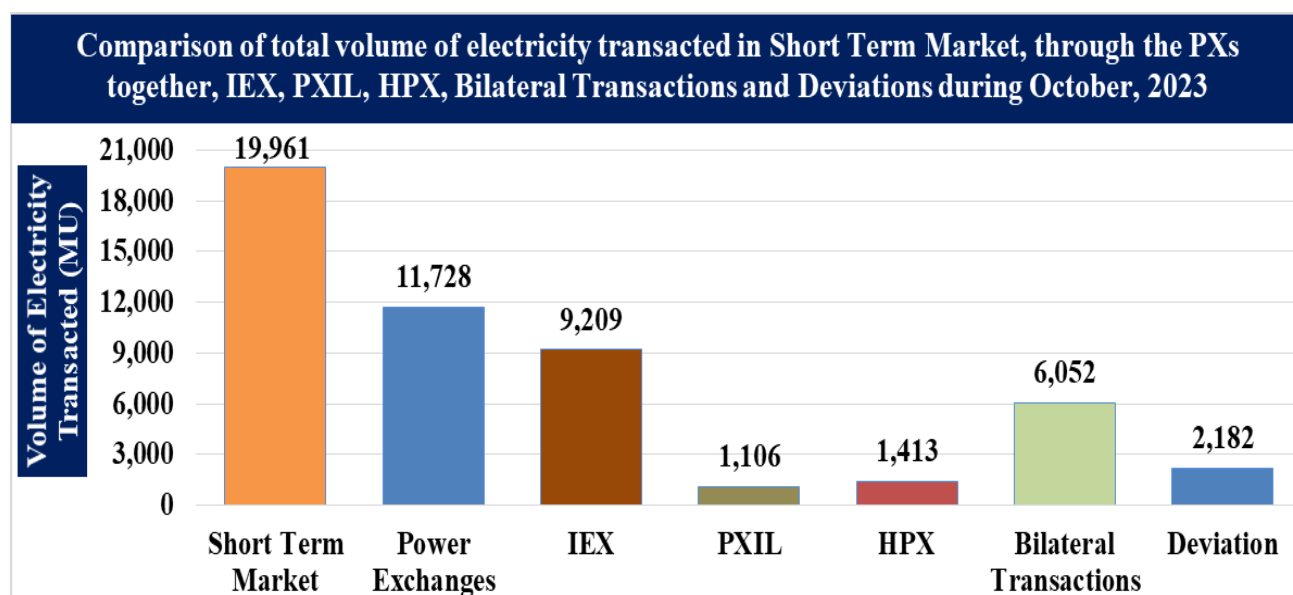
* The total average is weighted average of all market segments.

** The details of the High Price Segment, namely HP-DAM, HP-TAM, and HP-DAC & ID, have been included in DAM, TAM, and DAC & ID, respectively.

- द्विपक्षीय व्यापार के तहत कुल 6,052 **MU** विद्युत का कारोबार किया गया और 2,182 **MU** को विचलन के रूप में लेनदेन किया गया। इस प्रकार कुल 19,961 **MU** विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। अक्टूबर, 2023 के महीने में देश में कुल 139,441 **MU** विद्युत की आपूर्ति की गई थी, इस प्रकार अक्टूबर, 2023 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा **14.32 %** था।

Under the Bilateral trade, a total of **6,052 MU** of electricity was transacted and **2,182 MU** was transacted as deviation. Thus, a total of **19,961 MU** of electricity was transacted as short term trade. In the month of October, 2023, a total of **139,441 MU** of electricity was supplied in the country, thus,

the share of short term market in the total volume of electricity supplied in October, 2023 was **14.32 %**.



- अक्टूबर, 2023 के दौरान संचरण जाम की कुल मात्रा **1.98 MU** थी, जो की विद्युत एक्सचेंजों में कारोबार की गई विद्युत की कुल मात्रा का केवल 0.02 % है और अक्टूबर, 2023 के महीने के दौरान आपूर्ति की गई कुल ऊर्जा का 0.001 % है।

The total volume of transmission congestion that happened during the month of October, 2023 was **1.98 MU** which is only 0.02 % of the total volume of electricity transacted in the power exchanges and 0.001 % of total energy supplied during the month of October, 2023.

DAM में 2 दिन अर्थात् दिनांक 4 एवं 19 अक्टूबर, 2023 और GDAM में 1 दिन अर्थात् दिनांक 4 अक्टूबर, 2023 को संचरण जाम देखा गया। जबकि HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM और G-DAC & ID में कोई संचरण जाम नहीं देखा गया। अक्टूबर, 2023 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **77.33 MU** थी।

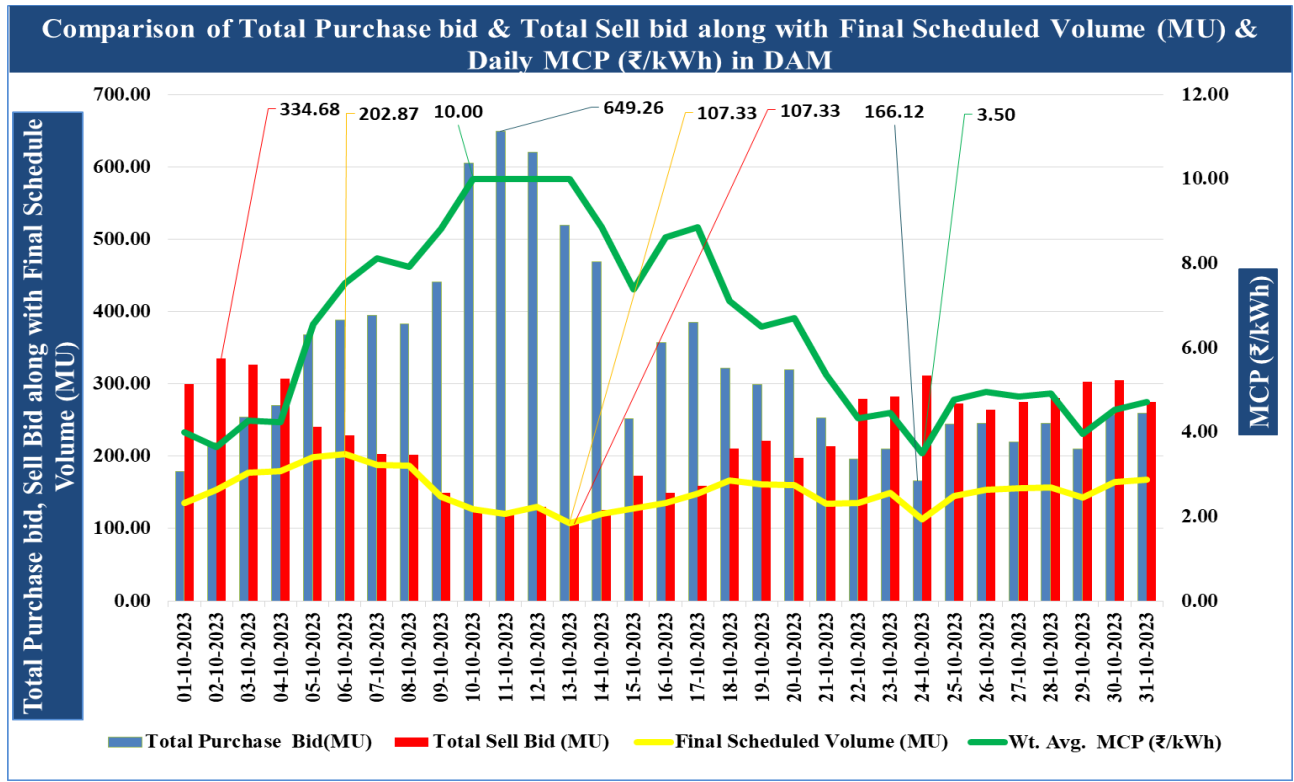
Transmission congestion was observed in DAM on 2 days i.e. 4th & 19th October, 2023 and GDAM on 1 day i.e. 4th October, 2023. There was no congestion in HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID. The total volume of real time curtailment reported in the month of October, 2023 was only **77.33 MU**.

- अक्टूबर, 2023 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (ISTS) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **68,394 MU** थी। अक्टूबर, 2023 के महीने में अल्पावधि बाजार में विद्युत का लेन-देन अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से अनुसूचित की गई कुल विद्युत की मात्रा का **29.18 %** रहा।

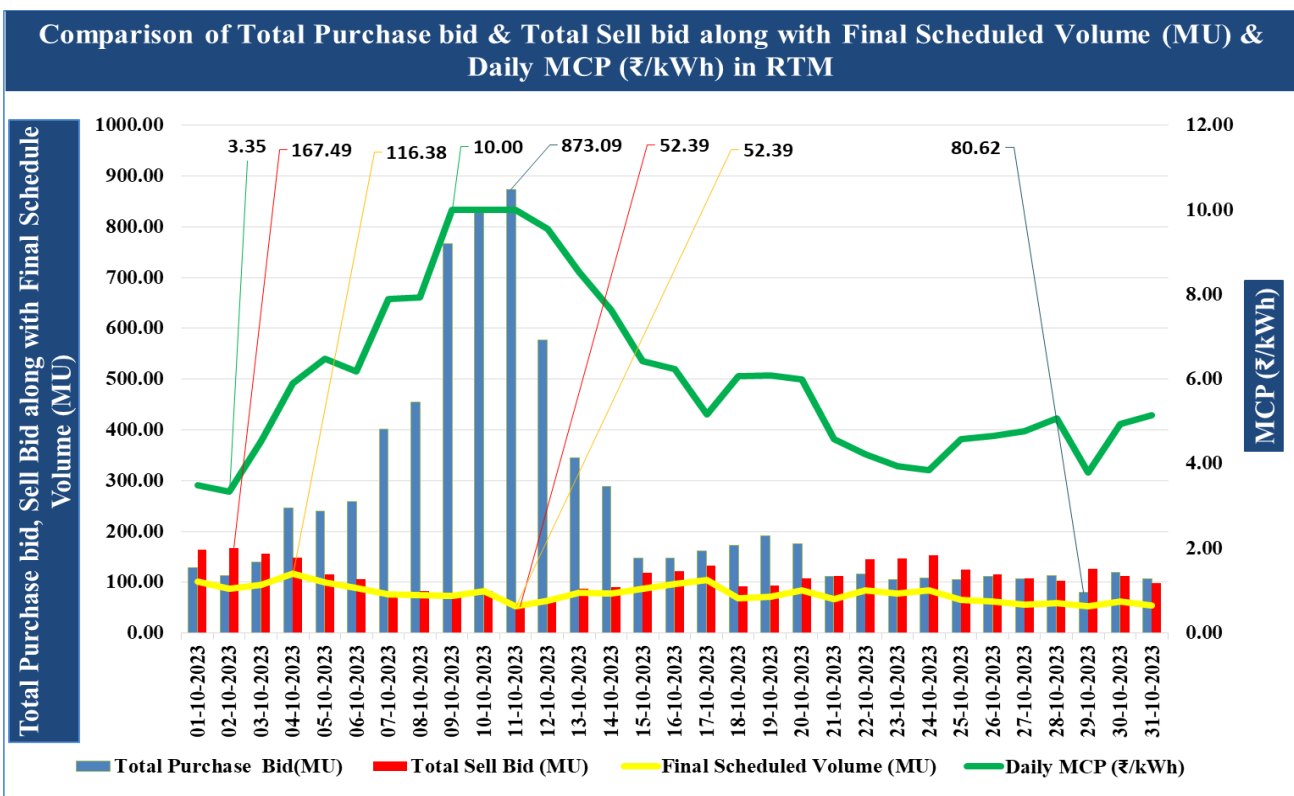
The total volume of electricity scheduled at ISTS during the month of October, 2023 was **68,394 MU**. The total volume of electricity transacted in the short term market was **29.18 %** of total volume schedule at ISTS in the month of October, 2023.

- अक्टूबर, 2023 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:
The variation of Purchase and Sell bids, Final Scheduled Volume and Daily Avg. MCP in DAM and RTM during the month of October, 2023 are shown in following figures:

DAM Volume



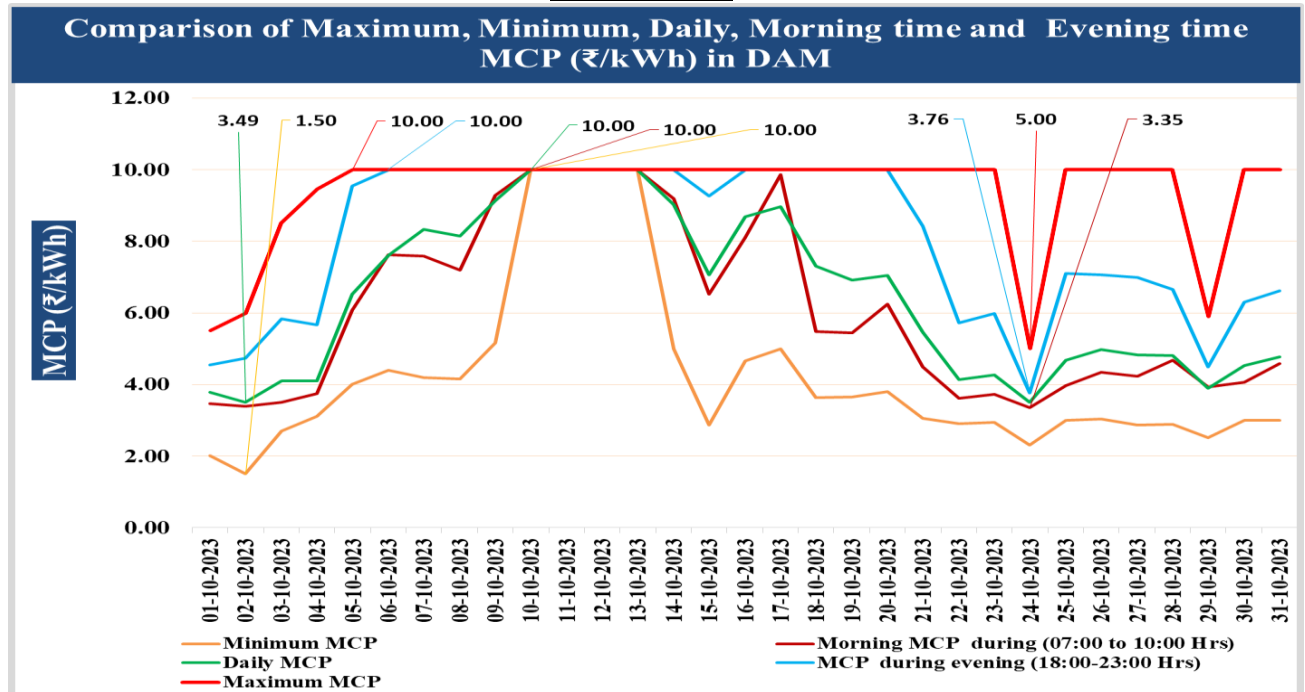
RTM Volume



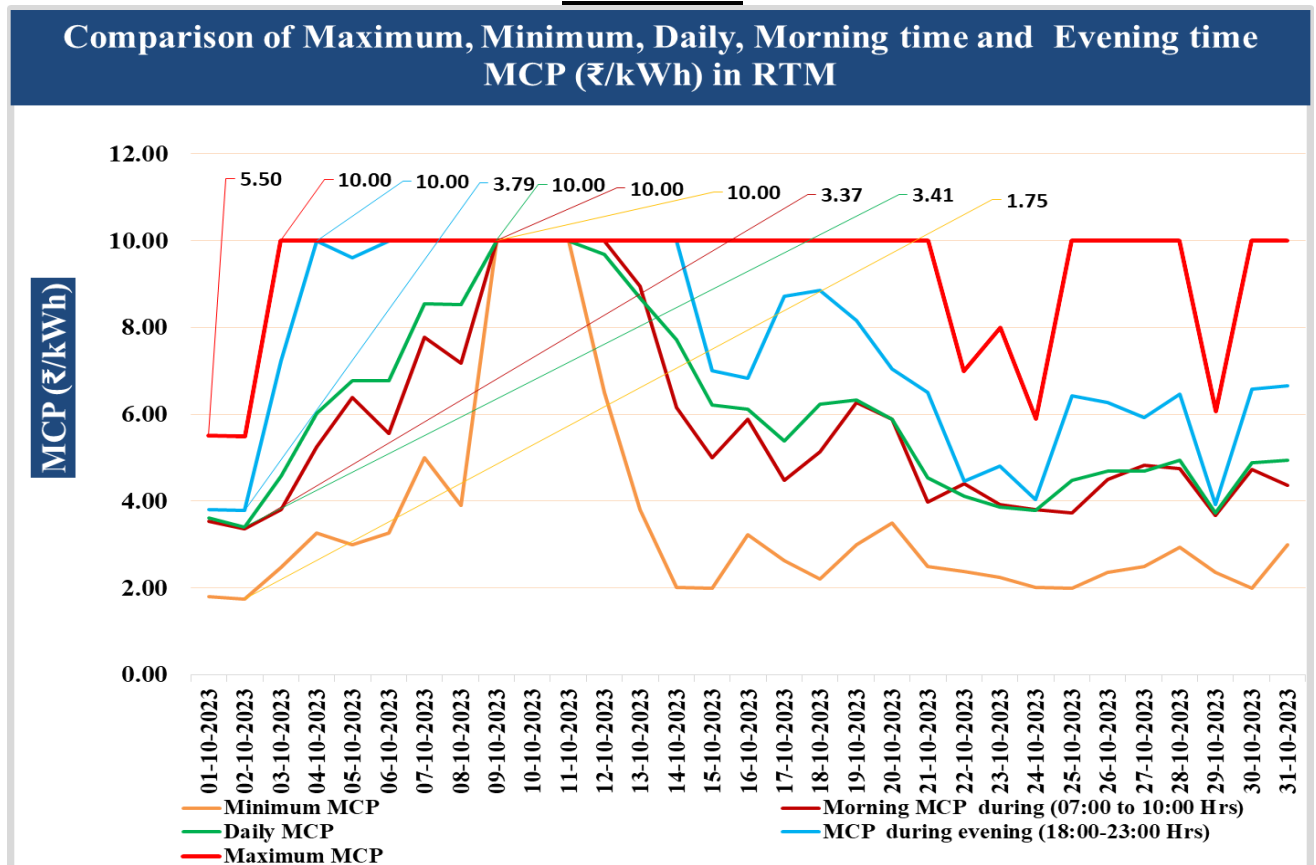
- अक्टूबर, 2023 माह के दौरान DAM और RTM में अधिकतम, न्यूनतम, दैनिक, सुबह और शाम के समय MCP की भिन्नता निम्नलिखित चित्रों में दिखाई गई है:

The variation of Maximum, Minimum, Daily, Morning and Evening time MCPs in DAM and RTM during the month of October, 2023 are shown in following figures:

DAM Prices



RTM Prices



MARKET MONITORING REPORT DETAILS

Electricity Transactions on Power Exchanges in India

1. Day Ahead Market (DAM)

- 1.1.** The total volume of electricity transacted on the power exchanges, viz., IEX, PXIL and HPX in the Day Ahead Market (DAM) in the month of October, 2023 was **4,746.78 MU**. The total energy supplied in the country during the month of October, 2023 was 139,441 MU. Thus, the volume of electricity transacted on the power exchanges in DAM during October, 2023 was 3.40 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted in DAM during last month September, 2023 i.e. **3,435.60 MU** which was 2.43 % of the total energy supplied (141,299 MU) in the country during September, 2023. Similarly, the total volume of electricity transacted in DAM during previous year i.e. October, 2022, was **4,328.02 MU** which was 3.80 % of the total energy supplied (113,944 MU) in the country during October, 2022.
- 1.2.** The volume of electricity transacted on IEX, PXIL and HPX during October, 2023 were **4688.35 MU, 21.60 MU and 36.83 MU**, respectively. The volume of electricity transacted on IEX, PXIL and HPX during September, 2023 were **3405.42 MU, 11.67 MU and 18.51 MU**, respectively. The volume of electricity transacted on IEX and PXIL during October, 2022 were **4325.01 MU and 3.01 MU**, respectively and no transaction of electricity took place in HPX during October, 2022.
- 1.3.** The DAM volume for October, 2023 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **378.15 MU** (i.e. 0.11 MU bought and 352.19 MU sold by Nepal, 25.85 MU sold by Bhutan).
- 1.4.** The Average Market Clearing Price (MCP) on IEX during the month of October, 2023 was ₹ **6.36/kWh**, which shows an increase of 8.35 % & 60.61 % when compared with average MCP's for the month of September, 2023 and October, 2022, which were ₹ **5.87/kWh** and ₹ **3.96/kWh**, respectively. On PXIL, the average MCP during the month of October, 2023 was ₹ **10.00/kWh**, which shows no change & 115.52 % when compared with average MCP's for the month of September, 2023 and October, 2022, which were ₹ **10.00/kWh** and ₹ **4.64/kWh**, respectively. On HPX, the average MCP during the month of October, 2023 was ₹ **10.00/kWh**, which shows no change when compared with average MCP's for the month of September, 2023, which was ₹ **10.00/kWh** and no transaction of electricity took place in HPX during October, 2022.
- 1.5.** The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 1128 time blocks on 5th to 23rd, 25th to 28th, 30th & 31st October, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Whereas, in PXIL, the maximum ACP of ₹ 10.00/kWh was observed in all 13 regions during 492 time blocks on 6th, 7th, 10th to 14th, 16th, 18th, 27th & 31st October, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in HPX, the maximum ACP of ₹ 10.00/kWh was observed in all 13 regions during 553 time blocks on 6th, 7th,

10th to 14th & 17th October, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh.

1.6. The minimum ACP of ₹ 1.50/kWh in IEX was observed in all 13 regions during the time block 13:00 - 13:15 Hrs on 2nd October, 2023. As there was no congestion in transmission system, the MCP for this time-block was also ₹ 1.50/kWh. Whereas, in PXIL, the minimum ACP of ₹ 10.00/kWh was observed in all 13 regions during 492 time blocks on 6th, 7th, 10th to 14th, 16th, 18th, 27th & 31st October, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in HPX, the minimum ACP of ₹ 10.00/kWh was observed in all 13 regions during 553 time blocks on 6th, 7th, 10th to 14th & 17th October, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh.

1.7. In the month of October, 2023, the transaction of electricity in **High Price Day Ahead Market (HP-DAM)** in IEX was **15.80 MU** at an average MCP of **₹ 16.95/kWh** and in PXIL was **6.86 MU** at an average MCP of **₹ 16.48/kWh**. Whereas, no transaction took place in HPX in HP-DAM.

1.8. Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP), Area Clearing Prices (ACP) in Day Ahead Market during the month of October, 2023 as compared with September, 2023 and October, 2022 are shown in Table- 1A & 1B:

(i) Final Scheduled Volume:

Exchange	Period	Final Scheduled Volume (MU)			
		Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	October, 2023*	4688.35	107.33	202.87	151.24
	September, 2023*	3405.42	68.08	142.02	113.51
	%Change (Month over Month)	37.67	57.65	42.85	33.24
	October, 2022*	4325.01	110.26	166.28	139.52
	%Change (Year over Year)	8.40	-2.66	22.01	8.40
PXIL	October, 2023	21.60	0.10	7.29	1.96
	September, 2023	11.67	0.20	4.32	1.95
	%Change (Month over Month)	85.09	-50.00	68.75	0.51
	October, 2022	3.01	0.05	1.71	0.43
	%Change (Year over Year)	617.61	100.00	326.32	355.81
HPX	October, 2023	36.83	0.40	7.73	4.60
	September, 2023	18.51	0.27	6.40	2.06
	%Change (Month over Month)	98.97	48.15	20.78	123.30

Exchange	Period	Final Scheduled Volume (MU)			
		Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	October, 2022	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

*** DAM Volume in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan**

Table: 1A

(ii) Daily Avg. Market Clearing Price (MCP) and Area Clearing Price (ACP):

Exchange	Period	Prices (₹/kWh)				
		Daily MCP (₹/kWh)		ACP (₹/kWh)		Monthly Avg. MCP (₹/kWh)
		Minimum	Maximum	Minimum	Maximum	Average
IEX	October, 2023	3.50	10.00	1.50	10.00	6.36
	September, 2023	3.59	10.00	1.08	10.00	5.87
	%Change (Month over Month)	-2.51	0.00	38.89	0.00	8.35
	October, 2022	3.02	4.88	1.12	12.00	3.96
	%Change (Year over Year)	15.89	104.92	-3.57	-16.67	60.61
PXIL	October, 2023	10.00	10.00	10.00	10.00	10.00
	September, 2023	10.00	10.00	10.00	10.00	10.00
	%Change (Month over Month)	0.00	0.00	0.00	0.00	0.00
	October, 2022	3.95	5.94	0.53	12.00	4.64
	%Change (Year over Year)	153.16	68.35	1786.79	-16.67	115.52
HPX	October, 2023	10.00	10.00	10.00	10.00	10.00
	September, 2023	10.00	10.00	10.00	10.00	10.00
	%Change (Month over Month)	0.00	0.00	0.00	0.00	0.00
	October, 2022	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 1B

2. Real Time Market (RTM)

- 2.1. The total volume of electricity transacted on the power exchanges in Real Time Market in October, 2023 was **2,442.39 MU**, out of which **2,402.26 MU** (98.36 %) was transacted in IEX, **25.42 MU** (1.04 %) was transacted in PXIL and **14.71 MU** (0.60 %) was transacted in HPX.
- 2.2. The RTM volume for October, 2023 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XIII**), which was **9.66 MU** (i.e. 9.66 MU sold by Nepal only).
- 2.3. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP) and Area Clearing Prices (ACP) in Real Time Market during the month of October, 2023 as compared with September, 2023 and October, 2022 are shown in Table- 2A & 2B:

(i) Final Scheduled Volume:

Exchange	Period	Final Scheduled Volume (MU)			
		Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	October, 2023*	2402.26	52.39	116.38	77.49
	September, 2023	2922.95	46.59	133.79	97.43
	% Change (Month over Month)	-17.81	12.45	-13.01	-20.47
	October, 2022	2264.59	45.12	124.36	73.05
	% Change (Year over Year)	6.08	16.11	-6.42	6.08
PXIL	October, 2023	25.42	0.10	9.50	2.54
	September, 2023	0.25	0.25	0.25	0.25
	% Change (Month over Month)	10068.00	-60.00	3700.00	916.00
	October, 2022	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA
HPX	October, 2023	14.71	0.13	7.69	2.10
	September, 2023	1.00	0.29	0.40	0.33
	% Change (Month over Month)	1371.00	-55.17	1822.50	536.36
	October, 2022	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

*** RTM Volume in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan**

Table-2A

(ii) Daily Avg. Market Clearing Price (MCP) and Area Clearing Price (ACP):

Exchange	Period	Prices (₹/kWh)				
		Daily MCP (₹/kWh)		ACP (₹/kWh)		Monthly Avg. MCP (₹/kWh)
		Minimum	Maximum	Minimum	Maximum	Average
IEX	October, 2023	3.35	10.00	1.75	10.00	5.99
	September, 2023	2.71	10.00	0.50	10.00	5.37
	% Change (Month over Month)	23.62	0.00	250.00	0.00	11.55
	October, 2022	2.20	5.46	0.05	12.00	3.78
	% Change (Year over Year)	52.27	83.15	900.00	-16.67	58.47
PXIL	October, 2023	10.00	10.00	10.00	10.00	10.00
	September, 2023	10.00	10.00	10.00	10.00	10.00
	% Change (Month over Month)	0.00	0.00	0.00	0.00	0.00
	October, 2022	-	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA	NA
HPX	October, 2023	10.00	10.00	10.00	10.00	10.00
	September, 2023	10.00	10.00	10.00	10.00	10.00
	% Change (Month over Month)	0.00	0.00	0.00	0.00	0.00
	October, 2022	-	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-2B

3. Green Day Ahead Market (GDAM):

- 3.1. The volume of electricity transacted in GDAM in October, 2023 was **183.60 MU** (57.14 MU in Solar, **104.46 MU** in Non-Solar and **22.00 MU** in Hydro) in IEX at an average MCP of ₹ **6.37/kWh** and no transaction took place in PXIL & HPX in GDAM.
- 3.2. There was no real time curtailment in the power exchanges in Green Day Ahead Market during the month of October, 2023, September, 2023 and October, 2022.
- 3.3. The **top 10 sellers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of October, 2023 were **Karnataka, J&K, Renew Surya Ravi Private Limited (solar), Singoli Bhagwati, Ostro Kannada Power Private Limited, ADANI WIND ENERGY KUTCHH FOUR Ltd. Nakhatrana, SBSR Power Cleantech Eleven Private Limited, Continuum Power Trading (TN) Private Limited, Sorang HEP, (Himachal Sorang Power Private Ltd) and ADANI SOLAR ENERGY JAISALMER TWO PRIVATE LIMITED(Project-2)**, which constituted **77.71 %** of the market volume.
- 3.4. The **top 10 buyers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of October, 2023 were **ArcelorMittal Nippon steel (ESIL), Kerala, BHARAT ALUMINIUM COMPANY LTD (Bulk Consumer), Maharashtra, Punjab, Rajasthan, Goa SR, DVC, Tamil Nadu and Uttar Pradesh**, which constituted **84.11 %** of the market volume.
- 3.5. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP), Area Clearing Prices (ACP), Real Time Curtailment and details of Transmission Congestion under three segments (i.e. Solar, Non Solar and Hydro) in Green Day Ahead Market during the month of October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 3A & 3B:

(i) Final Scheduled Volume :

Exchange	Segment	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Solar	October, 2023	57.14	0.11	3.25	1.84
		September, 2023	33.81	0.24	3.52	1.13
		% Change (Month over Month)	69.00	-54.17	-7.67	62.83
		October, 2022	145.40	1.20	8.13	4.69
		%Change (Year over Year)	-60.70	-90.83	-60.02	-60.77
	Non Solar	October, 2023	104.46	2.30	5.13	3.37
		September, 2023	96.96	2.12	5.58	3.23
		% Change (Month over Month)	7.74	8.49	-8.06	4.33
		October, 2022	147.53	2.98	8.33	4.76
		%Change (Year over Year)	-29.19	-22.82	-38.42	-29.20
	Hydro	October, 2023	22.00	0.06	2.11	0.81
		September, 2023	4.15	0.07	1.15	0.38
		% Change (Month over Month)	430.12	-14.29	83.48	113.16
		October, 2022	-	-	-	-

Exchange	Segment	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Solar, Non Solar and Hydro	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Solar, Non Solar and Hydro	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA

∴ No transaction took place

NA: Not Applicable

Table-3A

(ii) Daily Avg. Market Clearing Price (MCP) and Area Clearing Price (ACP):

Exchange	Segment	Period	Prices (₹/kWh)				
			Daily MCP (₹/kWh)		ACP (₹/kWh)		Monthly Avg. MCP (₹/kWh)
			Minimum	Maximum	Minimum	Maximum	Average
IEX	Solar, Non Solar and Hydro	October, 2023	4.64	10.00	1.70	10.00	6.37
		September, 2023	4.93	10.00	3.00	10.00	6.47
		% Change (Month over Month)	-5.88	0.00	-43.33	0.00	-1.55
		October, 2022	3.40	4.97	2.58	12.00	4.03
		% Change (Year over Year)	36.47	101.21	16.28	-16.67	58.06
PXIL	Solar, Non Solar and Hydro	October, 2023	-	-	-	-	-
		September, 2023	-	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA	NA
		October, 2022	-	-	-	-	-
		% Change (Year over Year)	NA	NA	NA	NA	NA
HPX	Solar, Non Solar and Hydro	October, 2023	-	-	-	-	-
		September, 2023	-	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA	NA

∴ No transaction took place

NA: Not Applicable

Table-3B

4. Term Ahead Market (TAM)

- 4.1. The total volume of electricity transacted on the power exchanges in Term Ahead Market in October, 2023 on delivery date basis was **3130.57 MU**, out of which **1677.00 MU** (53.57 %) was transacted on IEX, **611.28 MU** (19.53 %) was transacted on PXIL and **842.29 MU** (26.91 %) was transacted on HPX.
- 4.2. The total volume of electricity transacted on the power exchanges in Term Ahead Market in September, 2023 on delivery date basis was **2664.96 MU**, out of which **1131.71 MU** (42.47 %) was transacted on IEX, **1017.15 MU** (38.17 %) was transacted on PXIL and **516.10 MU** (19.37 %) was transacted on HPX.
- 4.3. No transaction of electricity took place in IEX, PXIL & HPX in Term Ahead Market in October, 2022.
- 4.4. With respect to the total energy supplied during the month of October, 2023 in the country, the volume of electricity traded on the power exchanges in TAM on delivery date basis represents **2.23 %** of the total energy supplied. The same was **1.89 %** in September, 2023 and no transaction took place in October, 2022.
- 4.5. In the month of October, 2023, there was no transmission congestion in IEX, PXIL & HPX in TAM.
- 4.6. In the month of October, 2023, there was real time curtailment of **67.03 MU** in TAM, Out of which **5.37 MU** was under Monthly contract and **33.27 MU** was under Anyday Single Sided contract in IEX. Whereas, in PXIL, there was real time curtailment of **4.44 MU** under Daily-Anyday contract. Whereas, in HPX, there was real time curtailment of **13.95 MU** under Daily-Anyday contract and **10.01 MU** under Anyday Single Sided contract in TAM.
- 4.7. In the month of October, 2023, the transaction of electricity in HPX in **High Price Term Ahead Market (HP-TAM)** under Daily-Anyday contract was **167.71 MU** at an average MCP of ₹ **14.83/kWh**. HP-TAM segment has not been introduced in IEX & PXIL.
- 4.8. The comparison of total volume of electricity transacted and Average MCP in the power exchanges in Term Ahead Market (TAM) on delivery date basis during October, 2023 with September, 2023 and October, 2022 are shown in Table – 4A & 4B:

(i) **Final Scheduled Volume (MU), October, 2023 vis- a- vis September, 2023 and October, 2022**

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
IEX	October, 2023	390.32	246.96	230.48	809.24	1677.00
	September, 2023	534.89	-	-	596.82	1131.71
	%Change (Month over Month)	-27.03	NA	NA	35.59	48.18
	October, 2022	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA
PXIL	October, 2023	392.41	41.79	-	177.08	611.28

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
	September, 2023	433.45	135.95	-	447.75	1017.15
	%Change (Month over Month)	-9.47	-69.26	NA	-60.45	-39.90
	October, 2022	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA
HPX	October, 2023	438.92	86.35	-	317.02	842.29
	September, 2023	94.00	-	-	422.10	516.10
	%Change (Month over Month)	366.94	NA	NA	-24.89	63.20
	October, 2022	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA

- : No transaction took place

NA: Not Applicable

Table: 4A

(ii) Average MCP, October, 2023 vis- a- vis September, 2023 and October, 2022

Exchange	Period	Average MCP (₹/kWh)			
		Daily or Any Day	Weekly	Monthly	Anyday Single Side
IEX	October, 2023	9.18	8.95	7.07	7.36
	September, 2023	8.26	-	-	8.82
	%Change (Month over Month)	11.14	NA	NA	-16.55
	October, 2022	-	-	-	-
	%Change Year over Year)	NA	NA	NA	NA
PXIL	October, 2023	9.81	9.67	-	8.52
	September, 2023	8.69	8.85	-	9.13
	%Change (Month over Month)	12.89	9.27	NA	-6.68
	October, 2022	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA
HPX	October, 2023	9.92	7.56	-	7.53
	September, 2023	9.14	-	-	8.33
	%Change (Month over Month)	8.53	NA	NA	-9.60
	October, 2022	-	-	-	-
	%Change Year over Year)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 4B

5. Day Ahead Contingency & Intra Day (DAC & ID)

- 5.1. The total volume of electricity transacted in the IEX, PXIL & HPX in DAC & ID on delivery date basis during October, 2023 was **814.51 MU**.
- 5.2. In the month of October, 2023, there was no transmission congestion in IEX, PXIL and HPX under DAC & ID.
- 5.3. In the month of October, 2023, there was real time curtailment of **10.30 MU** in DAC & ID, Out of which **7.23 MU** happened under Day Ahead Contingency contract & **0.01 MU** happened under Intra Day contract in IEX, **2.88 MU** happened under Day Ahead Contingency contract in PXIL and **0.18 MU** happened under Day Ahead Contingency contract in HPX under DAC & ID.
- 5.4. In the month of October, 2023, the transaction of electricity in **High Price Day Ahead Contingency & Intra Day (HP- DAC & ID)** in PXIL under Day Ahead Contingency contract was **76.22 MU** at an average MCP of ₹ **16.29/kWh** and Intra Day contract was **45.83 MU** at an average MCP of ₹ **17.67/kWh**. Whereas, in HPX the transaction of electricity in HP- DAC & ID under Day Ahead Contingency contract was **62.94 MU** at an average MCP of ₹ **14.46/kWh** and Intra Day contract was **17.24 MU** at an average MCP of ₹ **15.86/kWh**. HP- DAC & ID segment has not been introduced in IEX.
- 5.5. The total volume of electricity transacted in DAC & ID in Day Ahead Contingency & Intra Day contracts during October, 2023 and its comparison with September, 2023 and October, 2022 on delivery date basis are shown in Tables- 5A & 5B:

(i) Final Scheduled Volume (MU), October, 2023 vis- a- vis September, 2023 and October, 2022

Exchange	Period	Final Scheduled Volume (MU)		
		Day Ahead Contingency	Intra Day	Total
IEX	October, 2023	229.85	4.22	234.07
	September, 2023	758.79	4.92	763.71
	%Change (Month over Month)	-69.71	-14.23	-69.35
	October, 2022	523.90	-	523.90
	%Change (Year over Year)	-56.13	NA	-55.32
PXIL	October, 2023	302.08	12.88	314.96
	September, 2023	524.93	10.99	535.92
	%Change (Month over Month)	-42.45	17.20	-41.23
	October, 2022	294.25	5.15	299.40
	%Change (Year over Year)	2.66	150.10	5.20
HPX	October, 2023	257.55	7.93	265.48
	September, 2023	571.04	4.70	575.74
	%Change (Month over Month)	-54.90	68.72	-53.89
	October, 2022	90.78	-	90.78
	%Change (Year over Year)	183.71	NA	192.44

- : No transaction took place

NA: Not Applicable

Table: 5A

(ii) Average MCP, October, 2023 vis- a- vis September, 2023 and October, 2022

Exchange	Period	Average MCP (₹/kWh)	
		Day Ahead Contingency	Intra Day
IEX	October, 2023	8.66	9.79
	September, 2023	6.94	9.29
	%Change (Month over Month)	24.78	5.38
	October, 2022	4.08	-
	%Change Year over Year)	112.25	NA
PXIL	October, 2023	9.19	9.35
	September, 2023	7.89	9.59
	%Change (Month over Month)	16.48	-2.50
	October, 2022	4.30	7.67
	%Change (Year over Year)	113.72	21.90
HPX	October, 2023	9.13	9.99
	September, 2023	6.81	9.57
	%Change (Month over Month)	34.07	4.39
	October, 2022	3.85	-
	%Change Year over Year)	137.14	NA

- : No transaction took place

NA: Not Applicable

Table: 5B

6. Green Term Ahead Market (GTAM):

The total volume of electricity transacted in the IEX in GTAM on delivery date basis during October, 2023 was **7.03 MU** in Non-Solar only. Whereas, no transactions took place in PXIL & HPX under GTAM.

The total volume of electricity transacted in GTAM in Daily/ Anyday, Weekly, Monthly and Anyday Single Side contracts during October, 2023 and its comparison with September, 2023 and October, 2022 on delivery date basis are shown in tables 6A to 6F.

6.1. Solar Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM (Solar) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 6A & 6B:

(i) Final Scheduled Volume:

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change Month over Month)	NA	NA	NA	NA
		October, 2022	3.90	0.30	0.30	0.30
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	4.20	0.30	0.30	0.30
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
		%Change (Year over Year)	NA	NA	NA	NA
		October, 2023	-	-	-	-
		September, 2023	-	-	-	-
	Weekly	%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

:- No transaction took place

NA: Not Applicable

Table-6A

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	4.50	4.50	4.50

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
		%Change (Year over Year)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	4.50	4.50	4.50
		%Change (Year over Year)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Weekly	%Change (Month over Month)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
	Monthly	%Change (Month over Month)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
	Anyday Single Side	%Change (Month over Month)	NA	NA	NA
		October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-6B

6.1.1. In October, 2023, there was no transaction under GTAM (Solar) in IEX, PXIL & HPX.

6.2. Non-Solar Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM (Non-Solar) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 6C & 6D:

(i) Final Scheduled Volume:

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Daily/Anyday	October, 2023	7.03	0.17	0.26	0.23
		September, 2023	0.77	0.05	0.05	0.05
		%Change (Month over Month)	812.99	240.00	420.00	360.00
		October, 2022	1.80	0.07	0.10	0.09
		%Change (Year over Year)	290.56	142.86	160.00	155.56
		October, 2023	-	-	-	-
	Weekly	September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
		October, 2023	-	-	-	-
	Monthly	September, 2023	4.32	0.14	0.14	0.14
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
		October, 2023	-	-	-	-

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
PXIL	Anyday Single Side	September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	7.49	0.29	0.29	0.29
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table - 6C

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	October, 2023	6.50	6.55	6.54
		September, 2023	6.10	6.10	6.10
		%Change (Month over Month)	6.56	7.38	7.21
		October, 2022	5.70	5.70	5.70
		%Change (Year over Year)	14.04	14.91	14.74
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	6.50	6.50	6.50
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	8.50	8.50	8.50
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table - 6D

6.2.1. In October, 2023, there was no transmission congestion in IEX. There was no transaction in PXIL and HPX under GTAM (Non Solar).

6.2.2. In October, 2023, there was no real time curtailment in IEX. There was no transaction in PXIL and HPX under GTAM (Non Solar).

6.3 Hydro Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM (Hydro) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 6E & 6F:

(i) Final Scheduled Volume:

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Daily/Anyday	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-	-

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 6E

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Monthly	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Anyday Single Side	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table – 6F

6.3.1. In October, 2023, there was no transaction under GTAM (Hydro) in IEX, PXIL & HPX.

7. Green Day Ahead Contingency & Intra Day (G-DAC & ID):

The total volume of electricity transacted in the IEX, PXIL & HPX in G-DAC & ID on delivery date basis during October, 2023 was **8.97 MU** (1.52 MU in Solar, 5.54 MU in Non-Solar and 1.91 MU in Hydro), respectively.

The total volume of electricity transacted in G-DAC & ID in Day Ahead Contingency and Intra Day contracts during October, 2023 and its comparison with September, 2023 and October, 2022 on delivery date basis are shown in tables 7A to 7F.

7.1. Solar Energy Segment in G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Solar) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 7A & 7B:

(i) Final Scheduled Volume:

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Day Ahead Contingency	October, 2023	-	-	-	-
		September, 2023	12.55	0.17	1.41	0.70
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	6.14	0.14	2.01	0.77
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	0.76	0.15	0.45	0.25
		September, 2023	9.63	0.28	0.82	0.48
		%Change (Month over Month)	-92.11	-46.43	-45.12	-47.92
		October, 2022	3.33	0.09	1.00	0.67
		%Change (Year over Year)	-77.18	66.67	-55.00	-62.69
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	0.76	0.04	0.08	0.05
		September, 2023	12.22	0.01	1.07	0.47
		%Change (Month over Month)	-93.78	300.00	-92.52	-89.36

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-7A

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	October, 2023	-	-	-
		September, 2023	3.70	10.00	5.72
		%Change (Month over Month)	NA	NA	NA
		October, 2022	2.30	4.50	3.56
		%Change (Year over Year)	NA	NA	NA
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	5.26	6.29	6.03
		September, 2023	4.09	10.00	5.21
		%Change (Month over Month)	28.61	-37.10	15.74
		October, 2022	2.90	4.34	3.67
		%Change (Year over Year)	81.38	44.93	64.31
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	4.97	10.00	6.86
		September, 2023	2.20	10.00	5.64
		%Change (Month over Month)	125.91	0.00	21.63
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-7B

7.1.1. In October, 2023, there was no transmission congestion under G-DAC & ID (Solar) in PXIL & HPX. There was no transaction in IEX under G-DAC & ID (Solar).

7.1.2. In October, 2023, there was no real time curtailment under G-DAC & ID (Solar) in PXIL & HPX. There was no transaction in IEX under G-DAC & ID (Solar).

7.2. Non-Solar Energy Segment in G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Non-Solar) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 7C & 7D:

(i) Final Scheduled Volume:

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Day Ahead Contingency	October, 2023	0.21	0.05	0.16	0.10
		September, 2023	33.73	0.33	2.70	1.12
		%Change (Month over Month)	-99.38	-84.85	-94.07	-91.07
		October, 2022	4.60	0.07	0.54	0.24
		%Change (Year over Year)	-95.43	-28.57	-70.37	-58.33
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	2.19	0.03	0.62	0.20
		September, 2023	16.68	0.14	2.52	0.58
		%Change (Month over Month)	-86.87	-78.57	-75.40	-65.52
		October, 2022	29.53	0.60	1.25	0.95
		%Change (Year over Year)	-92.58	-95.00	-50.40	-78.95
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	3.14	0.01	1.73	0.17
		September, 2023	28.68	0.37	3.23	0.96
		%Change (Month over Month)	-89.05	-97.30	-46.44	-82.29
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		%Change (Year over Year)	NA	NA	NA	NA

∴ No transaction took place

NA: Not Applicable

Table - 7C

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	October, 2023	8.58	10.00	9.65
		September, 2023	4.70	9.97	6.58
		%Change (Month over Month)	82.55	0.30	46.66
		October, 2022	3.50	5.80	5.00
		%Change (Year over Year)	145.14	72.41	93.00
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	4.58	10.00	8.17
		September, 2023	4.76	10.00	6.51
		%Change (Month over Month)	-3.78	0.00	25.50
		October, 2022	3.19	5.12	4.40
		%Change (Year over Year)	43.57	95.31	85.68
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	3.68	10.00	5.48
		September, 2023	4.77	9.91	6.63
		%Change (Month over Month)	-22.85	0.91	-17.35
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table - 7D

7.2.1. In October, 2023, there was no transmission congestion in IEX, PXIL & HPX under G-DAC & ID (Non Solar).

7.2.2. In October, 2023, there was no real time curtailment under G-DAC & ID (Non Solar) in IEX, PXIL & HPX.

7.3. Hydro Energy Segment in G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Hydro) in Power Exchanges during October, 2023 and its comparison with September, 2023 and October, 2022 are shown in Table- 7E & 7F:

(i) Final Scheduled Volume:

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
IEX	Day Ahead Contingency	October, 2023	-	-	-	-
		September, 2023	38.14	0.80	2.11	1.32
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	77.71	1.17	3.57	2.51
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	October, 2023	-	-	-	-
		September, 2023	0.26	0.06	0.20	0.13
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	October, 2023	-	-	-	-
		September, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		October, 2022	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	1.91	0.84	1.08	0.96
		September, 2023	18.45	0.33	1.63	0.97
		%Change (Month over Month)	-89.65	154.55	-33.74	-1.03
	Intra Day	October, 2023	-	-	-	-
		September, 2023	0.10	0.10	0.10	0.10
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 7E

(ii) Daily Avg. Market Clearing Price (MCP):

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	October, 2023	-	-	-
		September, 2023	3.90	10.00	6.69
		%Change (Month over Month)	NA	NA	NA
		October, 2022	2.96	4.83	3.95
		%Change (Year over Year)	NA	NA	NA
	Intra Day	October, 2023	-	-	-
		September, 2023	7.97	10.00	9.53
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intra Day	October, 2023	-	-	-
		September, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		October, 2022	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Day Ahead Contingency	October, 2023	4.66	5.34	5.04
		September, 2023	4.87	7.71	5.97
		%Change (Month over Month)	-4.31	-30.74	-15.58
	Intra Day	October, 2023	-	-	-
		September, 2023	10.00	10.00	10.00
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table – 7F

7.3.1. In October, 2023, there was no transmission congestion in HPX under G-DAC & ID (Hydro). There was no transaction in IEX and PXIL under G-DAC & ID (Hydro).

7.3.2. In October, 2023, there was no real time curtailment in HPX under G-DAC & ID (Hydro). There was no transaction in IEX and PXIL under G-DAC & ID (Hydro).

8. **Bilateral Transactions:**

The total volume of electricity transacted through **bilateral transactions** in the month of October, 2023 was **6,051.52 MU**. The total buy volume of electricity transacted in bilateral market through direct and trader transactions in the month of October, 2023 were **1,549.42 MU** and **4,502.10 MU** respectively. The details of bilateral transactions of Electricity during October, 2023 are shown in table below:

October, 2023	Direct	Traders	Total Bilateral Transaction (MU)
Total	1,549.42	4,502.10	6,051.52
Minimum	1.21	0.47	-
Maximum	506.92	771.90	-

Table -8A

The region-wise maximum/ minimum volume of electricity transacted bilaterally during October, 2023 are given in table below:

(i) **Region-wise Volume:**

Region-wise Volume (MU)	ER		WR		NR		SR		NER	
	Direct	Trader	Direct	Trader	Direct	Trader	Direct	Trader	Direct	Trader
Total	219.00	119.72	897.41	1451.28	279.85	1535.47	151.94	1373.28	1.21	22.36
Minimum	2.70	1.78	7.75	0.47	1.44	56.67	24.76	0.94	1.21	1.26
Maximum	140.50	87.61	506.92	718.70	109.43	771.90	127.18	649.79	1.21	14.86

Table-8B

8.1. The top 5 buyers on bilateral transaction through direct transactions in the month of October, 2023 were **Chhattisgarh, Madhya Pradesh, Gujarat, Jharkhand** and **Karnataka**, which constituted **74.70 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in the month of October, 2023 were **Rajasthan, Maharashtra, Tamil Nadu, Gujarat** and **Andhra Pradesh**, which constituted **74.41 %** of the market volume. [Annexure III]

8.2. The top 5 sellers on bilateral transaction through direct transactions in the month of October, 2023 were **Gujarat, ADHUNIK POWER & NATURAL RESOURCES LIMITED, Uttar Pradesh, Andhra Pradesh** and **Jammu Kashmir**, which constituted **63.04 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in the month of October, 2023 were **Jindal Power Limited, Stage-2, Jindal India Thermal Power Limited, Tamil Nadu, Adani Power Limited-Raipur TPP** and **Jindal Power Limited, Stage-1**, which constituted **37.97 %** of the market volume. [Annexure III]

8.3. Deviation Volume -The volume of Deviation observed in the month of October, 2023 in import and export were **2,232.62 MU** and **2,130.43 MU** respectively. The total volume of Deviation observed in the month of October, 2023 can be taken as **2,181.53 MU**.

8.4. A comparison of volume of electricity transacted through the Power Exchanges together in DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID (on delivery date basis) with Bilateral transactions and Deviation in the month of October, 2023 is shown in **Figure 1:**

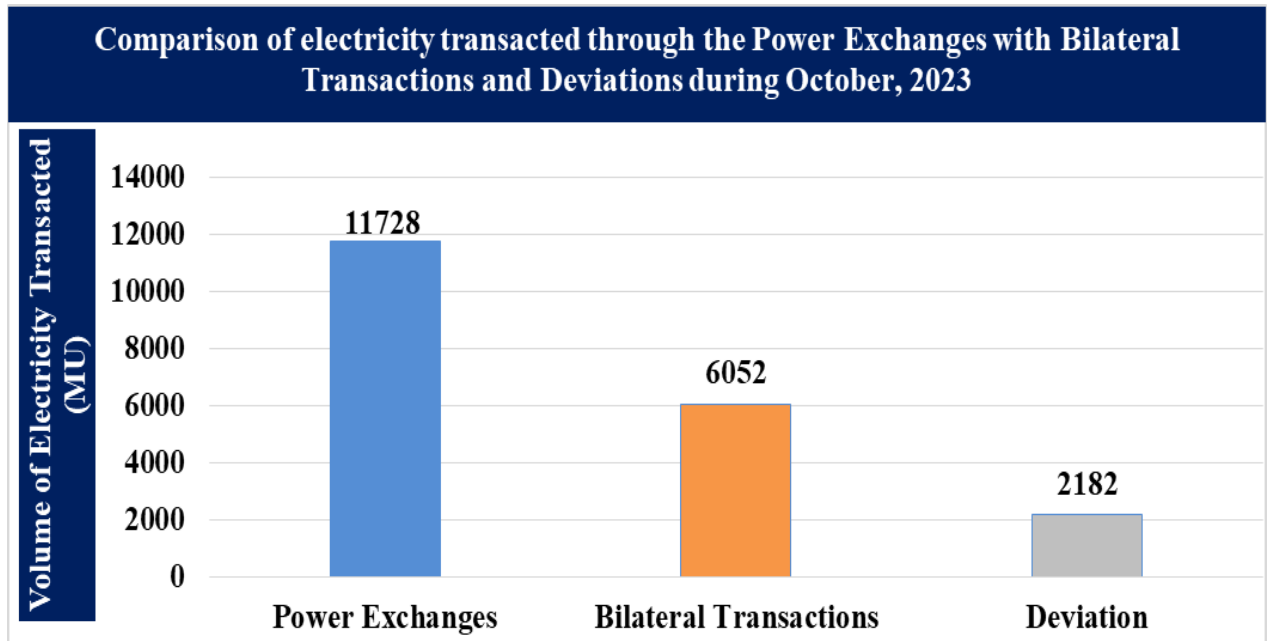
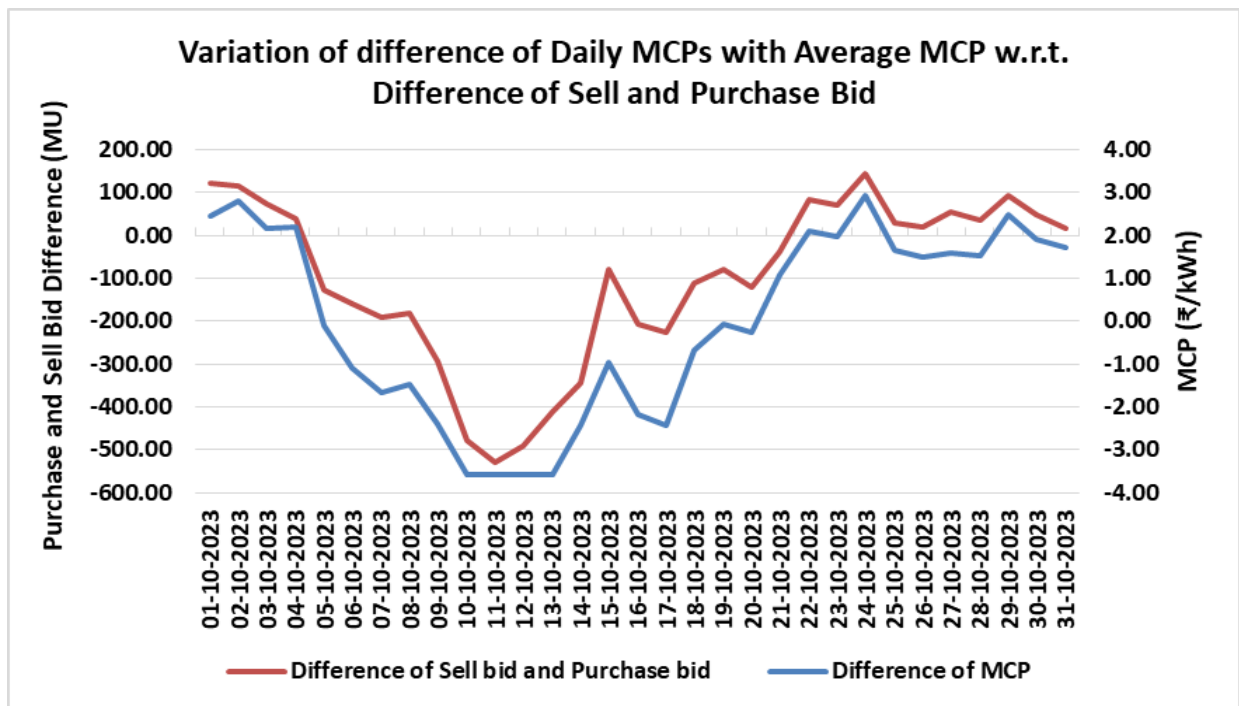


Figure -1

9. Analysis of movement of prices observed in DAM during October, 2023

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, 2023 month. The observations made are as under:

- 9.1. In order to find out the determinants which are responsible for the Daily Avg. MCP, a regression analysis has been carried out where the Daily Avg. 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.
- 9.2. A double log function was used so that elasticity of Daily Avg. MCP could be read off from the coefficients of independent variables. The regression analysis revealed that the most significant variable was the Peak Demand. Further, the regression analysis revealed that the elasticity of the Daily Avg. MCP with respect to Peak Demand was **7.01** in the month of October, 2023.
- 9.3. The variation of difference of Daily Avg. MCPs with Average MCP w.r.t Difference of Sell and Purchase bid is Shown below:



- 9.4. The same relationship is visible from the analysis carried out from the plot in **Figure - 2**

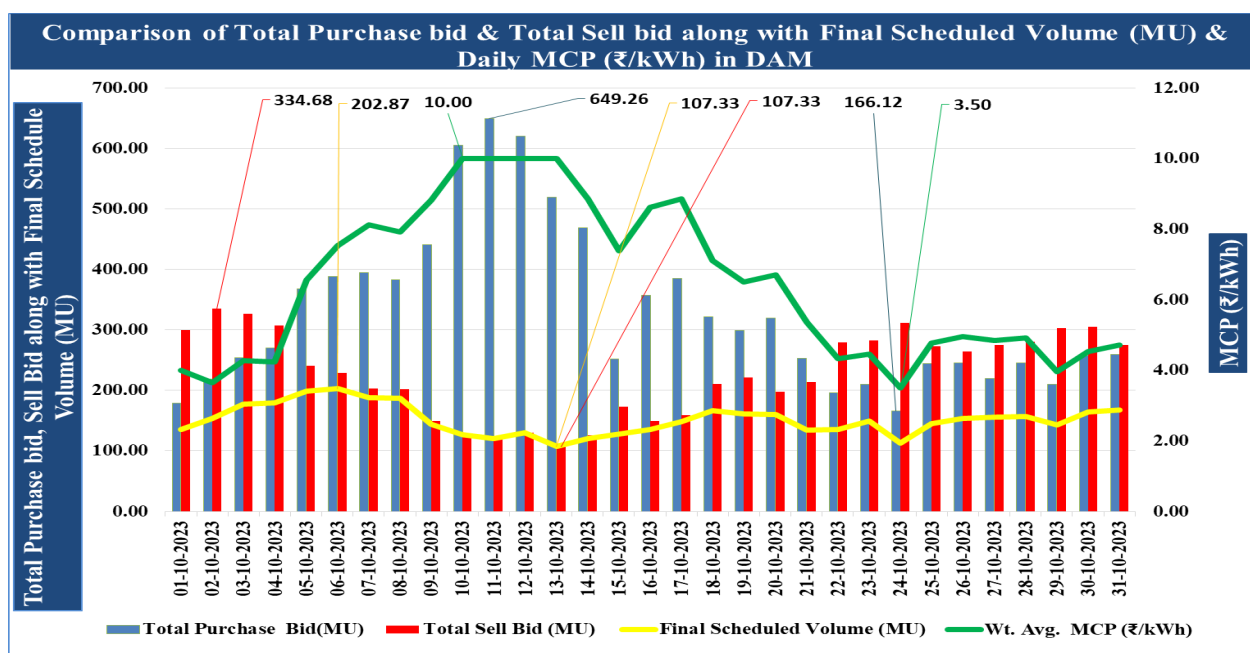


Figure – 2

9.5. Invariably, the Final Scheduled Volume (MU) and the Daily Avg. MCP (₹/kWh) showed decreasing trend on Sundays and increasing trend on Mondays as the demand of electricity in the country was less on Sundays as compared to other days of week. However, during the month of October, 2023, it is observed that on second Monday (9th October, 2023), FSV showed decreasing trend in comparison to second Sunday (8th October, 2023), on third Sunday (15th October, 2023), FSV showed increasing trend in comparison to second Saturday (14th October, 2023). The detailed analysis on this are shown at **Appendix-I**.

9.6. A comparison of maximum, minimum, daily, evening time MCP is shown in **Figure-3**. The same are also tabulated in **Annexure-I**

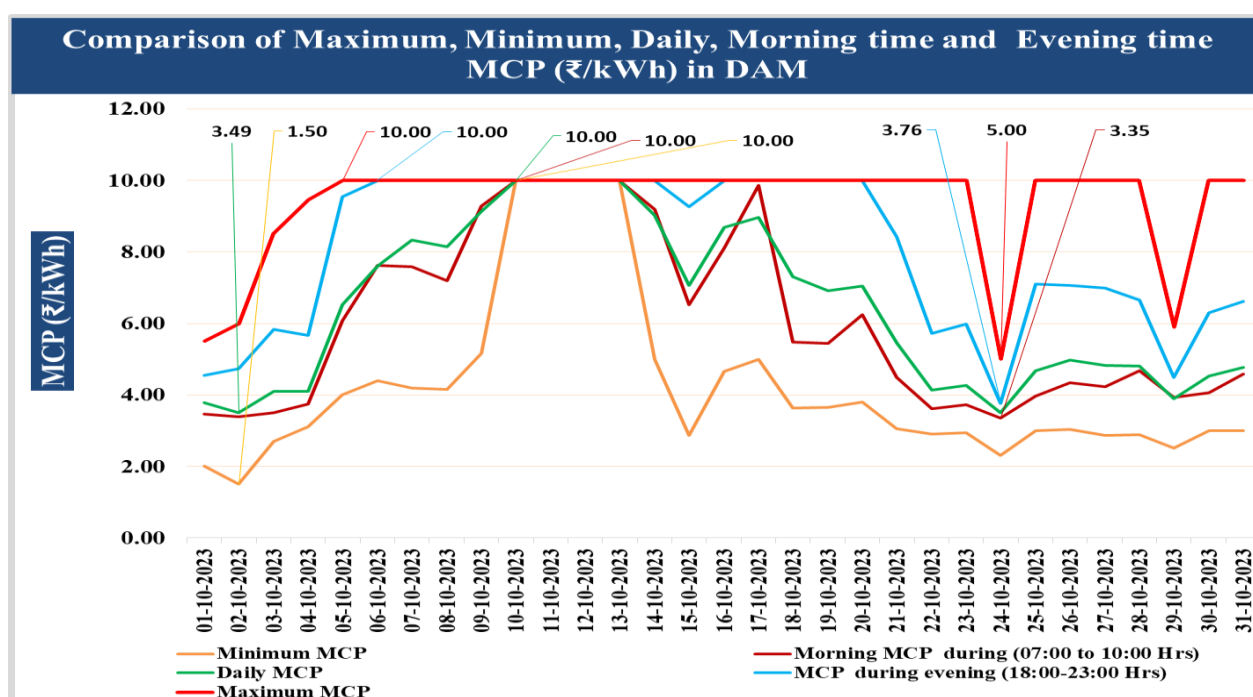


Figure-3

9.7. The Market Clearing Price duration curves for time block wise MCP for the month of October, 2023 is shown in **Figure 4**, whereas the time block wise MCP duration curve for the period 1st April, 2023 to 31st October, 2023 is shown in **Figure 5**.

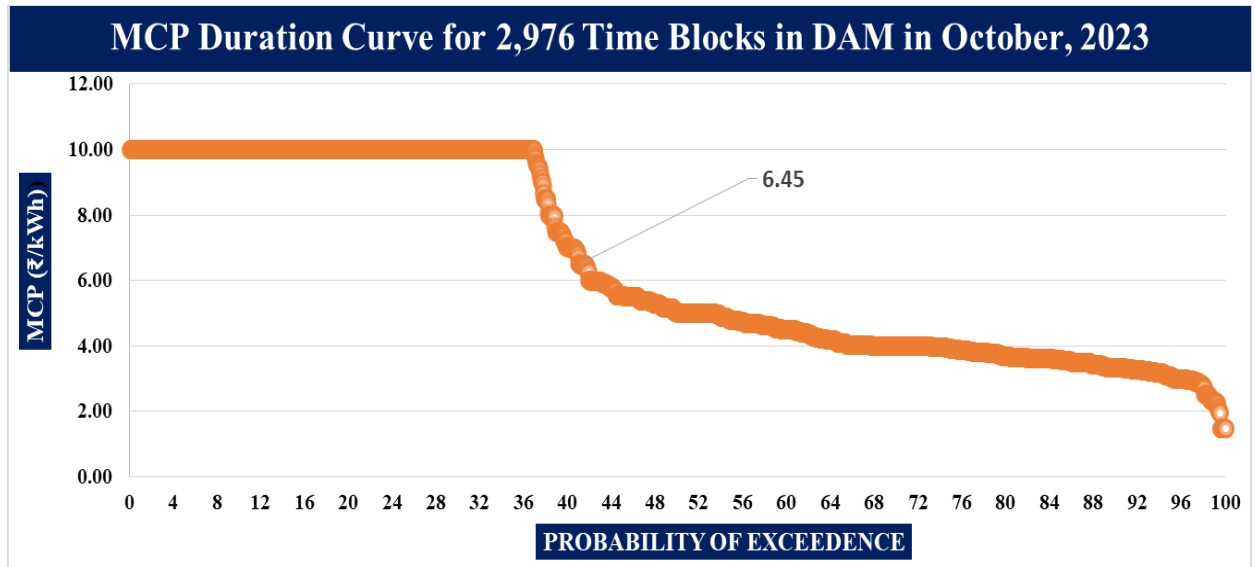


Figure – 4

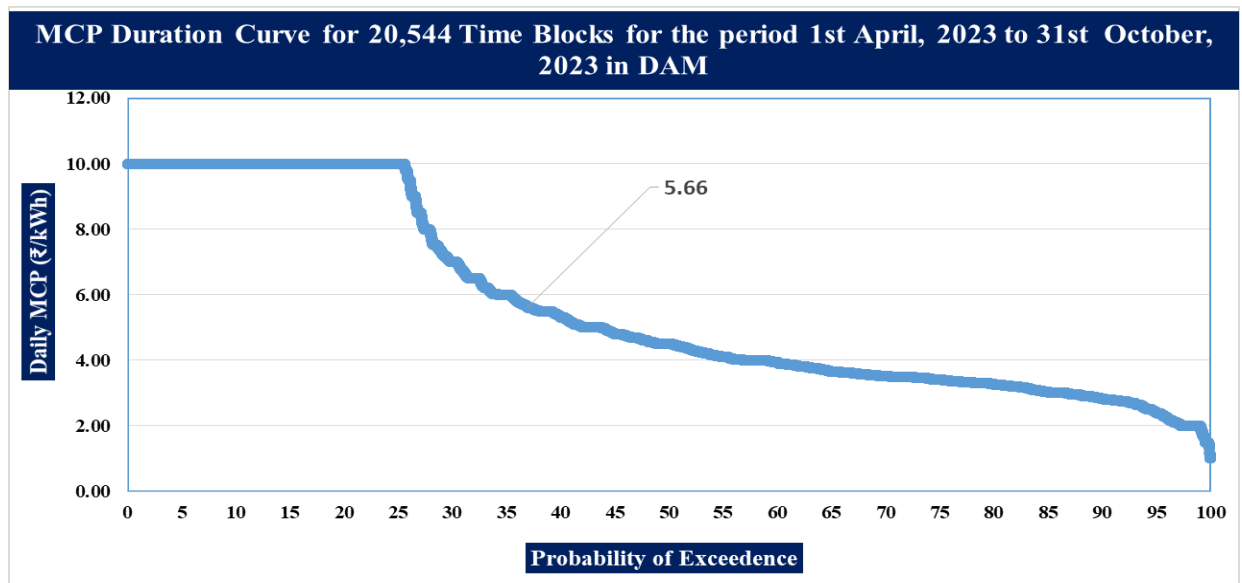


Figure-5

9.8. It can be seen in figure 4 above that in the MCP duration curve of October, 2023, for 41.00 % of the time MCP was above average MCP of the month (i.e. ₹ 6.45/kWh) and almost 59.00 % of the time MCP was below the average MCP of the month. Similarly, it can be seen in the MCP duration curve from 1st April, 2023 to 31st October, 2023 (figure-5), that for 38.00 % of the time the MCP was above the average MCP for the period (i.e. ₹ 5.66/kWh) and for 62.00 % of the time the Daily Avg. MCP was below the average MCP for the period.

9.9. The Purchase Bids and the MCP discovered in each of the 15-minute time block during the month almost followed the same trend [Annexure V]. This is also corroborated with the outcome of regression analysis mentioned at para 9.1 and 9.2 above.

- 9.10.** In October, 2023, the maximum FSV occurred mostly during the **time period 07-08 Hrs** (on 12 no. of days). Whereas, the maximum MCP occurred mostly during the **time period 00-01 Hrs** (on 14 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 17-19 Hrs** (on 13 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 13-14 Hrs** (on 25 no. of days). **[Annexure VI]**
- 9.11.** In the month of October, 2023, there was congestion of **1.41 MU** in IEX and no congestion in PXIL & HPX during October, 2023. Further, in the month of September, 2023, there was no congestion in IEX, PXIL & HPX. Further, in the month of October, 2022, there was no congestion in IEX & PXIL and no transaction of electricity took place in HPX.
- 9.12.** In the month of October, 2023, there was **no** real time curtailment in IEX, PXIL & HPX. Further, in the month of September, 2023, there was **no** real time curtailment in IEX, PXIL & HPX. Further in the month of October, 2022, there was **no** real time curtailment in IEX & PXIL and no transaction of electricity took place in HPX.
- 9.13.** The **top 10 sellers** on the power exchanges in **Day Ahead Market (DAM)** in the month of October, 2023 were **Uttar Pradesh, NVVN (SNA) – NEA, Adani Power Limited-Raipur TPP, Mahan Energy Limited, DB Power, Chhattisgarh, Jaypee Nigrie, Delhi, JITPL and Odisha**, which constituted **50.78 %** of the market volume. **[Annexure VII]**
- 9.14.** The **top 10 purchasers** on the power exchanges in **Day Ahead Market (DAM)** in the month of October, 2023 were **Maharashtra, Telangana, Gujarat, Uttar Pradesh, Andhra Pradesh, West Bengal, Uttarakhand, Tamil Nadu, Karnataka and J&K**, which constituted **81.20 %** of the market volume. **[Annexure VII]**
- 9.15.** The total volume of electricity purchased by Discoms/Licensees in DAM in the month of October, 2023 was **4,576.57 MU**, which constituted **96.41 %** of total volume of electricity purchased on the power exchanges.
- 9.16.** Similarly, the total volume of electricity sold by Discoms/Licensees in DAM in the month of October, 2023 was **2,123.87 MU**, which constituted **44.74 %** of total volume of electricity sold on the power exchanges.

10. Analysis of movement of prices observed in Real Time Market (RTM) transactions in October, 2023

10.1. Similar to the regression analysis carried out for Day Ahead Market, the regression analysis for Real Time Market was also done. The regression analysis revealed that the significant variable was the Peak Demand. Further, the regression analysis revealed that the elasticity of the Daily Avg. MCP with respect to Peak Demand was **7.21** in the month of October, 2023.

10.2. The Purchase Bids and the MCP discovered in each of the 15-minute time block during the month almost followed the same trend [Annexure IX]. This is also corroborated with the outcome of regression analysis mentioned at **para 10.1 above**.

10.3. The Total Purchase Bid, Total Sell Bid, Daily Avg. MCP and FSV are shown in Figure-6 below:

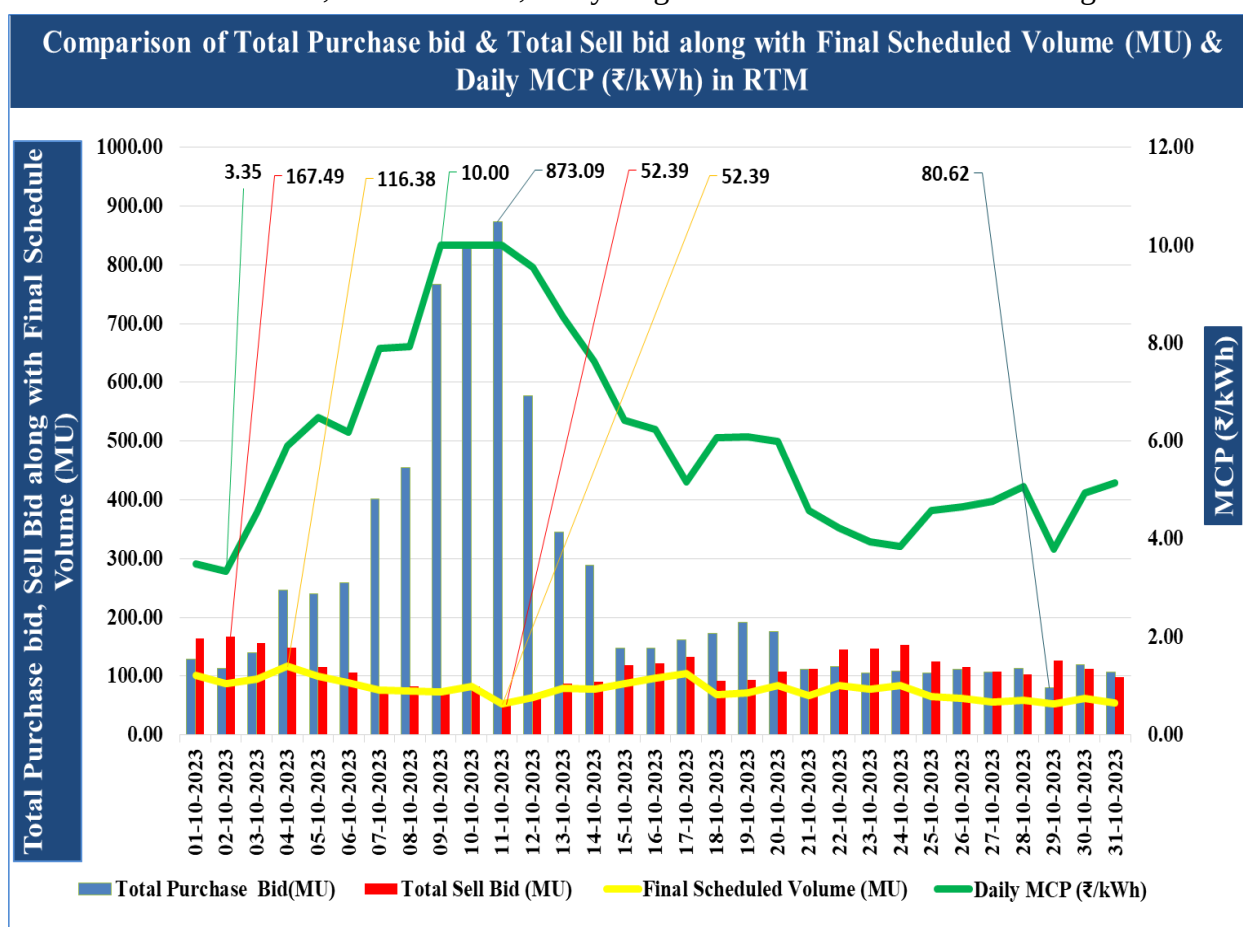


Figure-6

10.4. A comparison of maximum, minimum, daily, evening time MCP is shown in **Figure-7**. The same are also tabulated in **Annexure-VIII**.

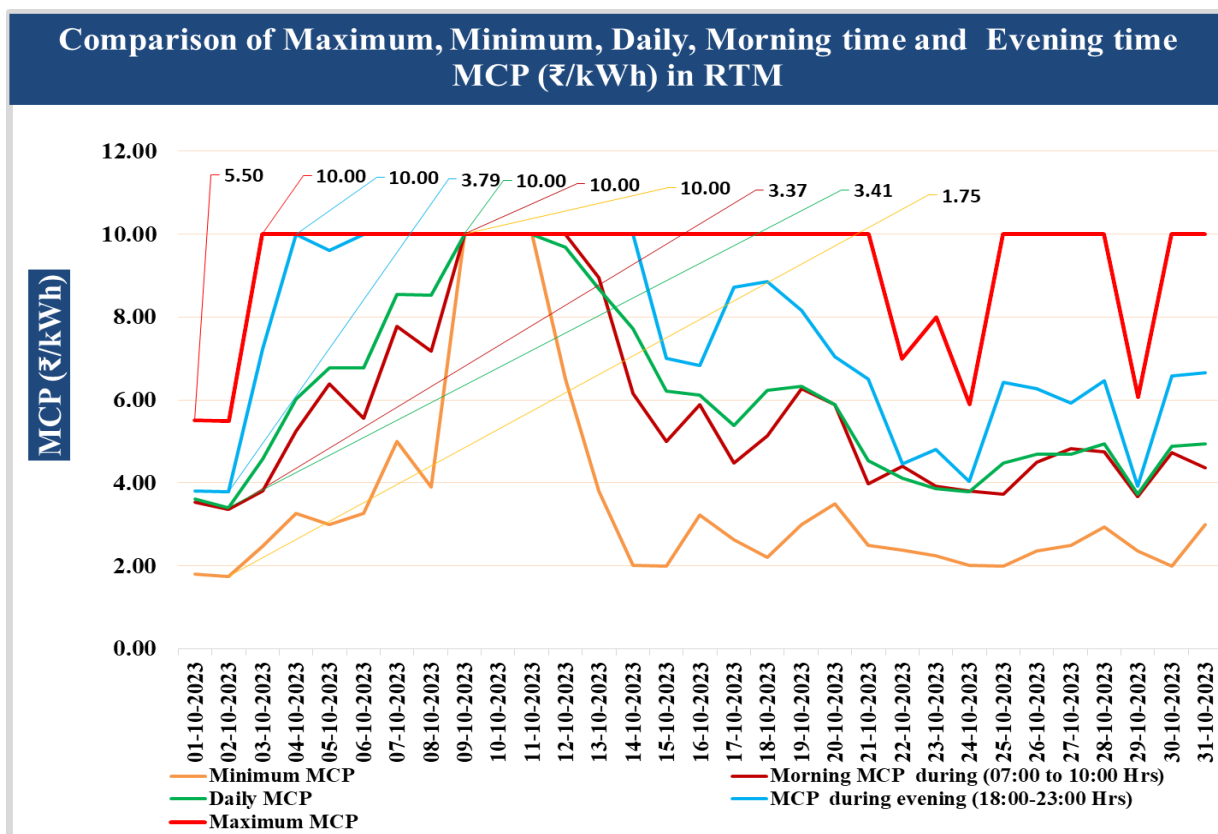


Figure-7

10.5. The Market Clearing Price duration curves for time block wise MCP for the month of October, 2023 is shown in **Figure 8**, whereas the day wise MCP duration curve for the period 1st April, 2023 to 31st October, 2023 is shown in **Figure 9**.

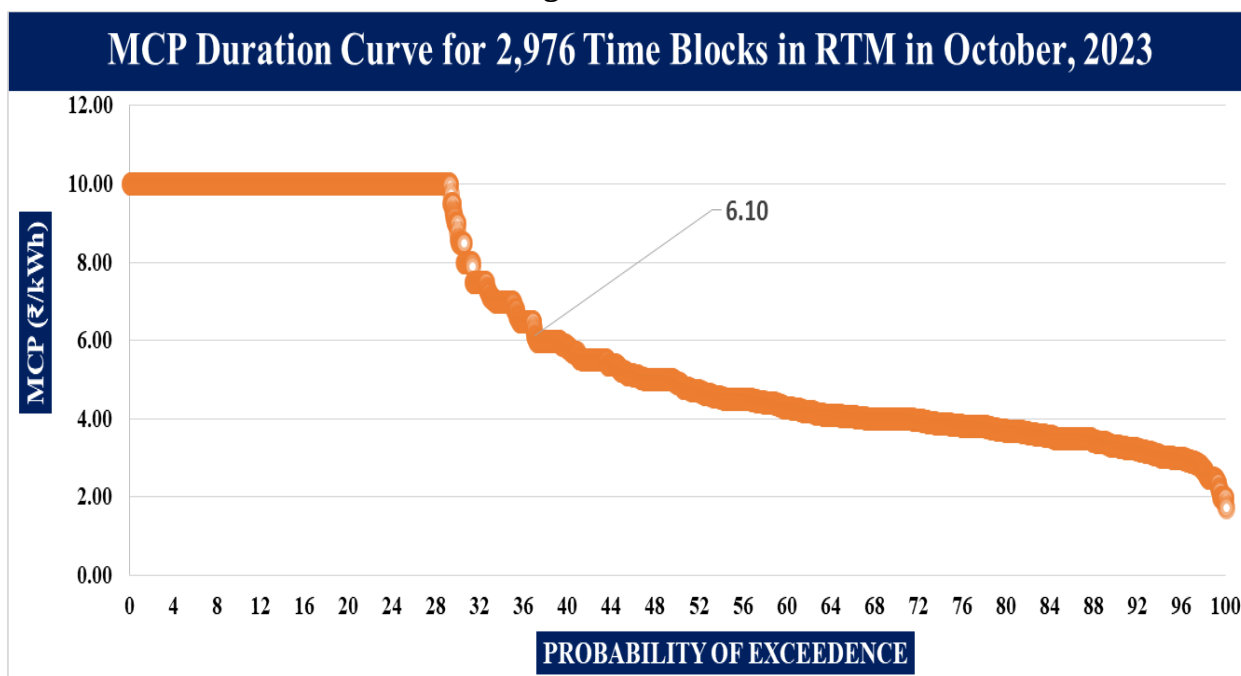


Figure-8

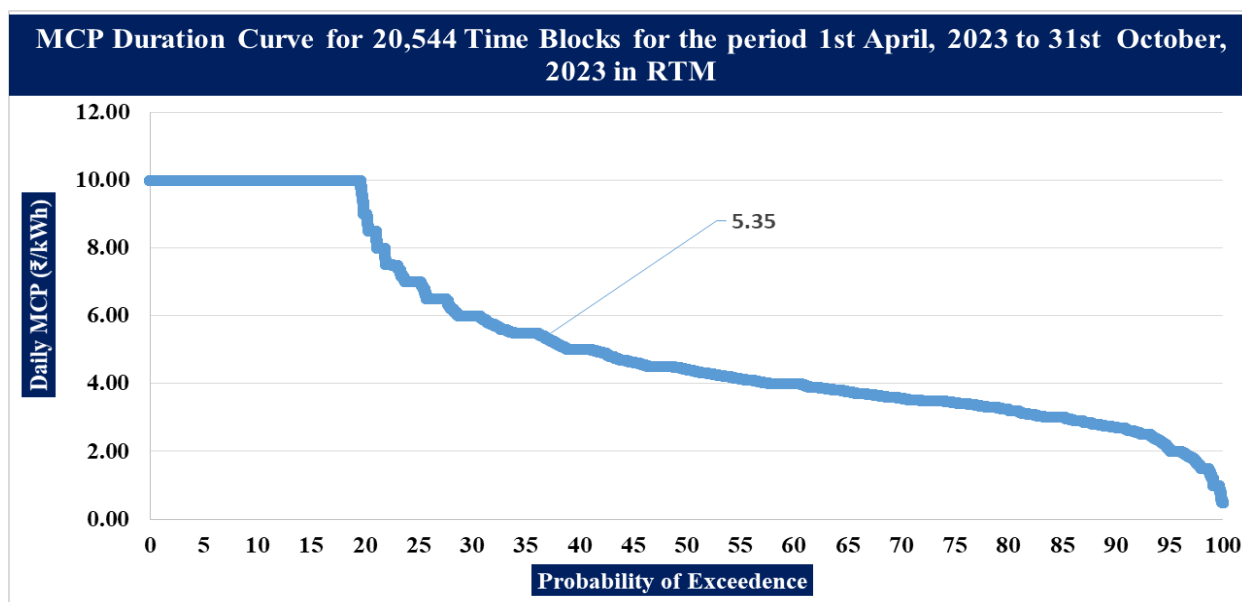


Figure-9

- 10.6.** It can be seen in figure 8 above that in the MCP duration curve of October, 2023, for 37.00 % of the time the MCP was above the average MCP of the month (i.e. ₹ 6.10/kWh) and for 63.00 % of the time the MCP was below the average MCP of the month. Similarly, it can be seen in the cumulative MCP duration curve from 1st April, 2023 to 31st October, 2023 (figure 9) that, for 36.00 % of the time the Daily Avg. MCP was above the average MCP for the period (i.e. ₹ 5.35/kWh) and for 64.00 % of the time the Daily Avg. MCP was below the average MCP for the period.
- 10.7.** In October, 2023, the maximum FSV occurred mostly during the **time period 14-16 Hrs** (on 9 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 00-01 Hrs** (on 13 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 17-19 Hrs** (on 14 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 13-14 Hrs** (on 14 no. of days).[Annexure X]
- 10.8.** There was **no** real time curtailment in IEX, PXIL and HPX in Real Time Market (RTM) during October, 2023. Further, in September, 2023 **no** real time curtailment occurred IEX, PXIL and HPX. Similarly, in October, 2022, there was **no** real time curtailment in IEX and no transaction took place in PXIL & HPX.
- 10.9.** In the month of October, 2023 there was no congestion in IEX, PXIL & HPX. Further, in the month of September, 2023, there was congestion of **2.26 MU** in IEX and there was no congestion in PXIL & HPX. Similarly, in the month of October, 2022, there was **no** congestion in the transmission system in IEX and no transaction took place in PXIL & HPX.

10.10. The **top 10 sellers** on the power exchanges in **Real Time Market (RTM)** in the month of October, 2023 were **Bihar, Rajasthan, Madhya Pradesh, Odisha, Chhattisgarh, Assam, Punjab, Jharkhand, West Bengal and Delhi**, which constituted **60.11 %** of the market volume. **[Annexure XI]**

10.11. The **top 10 buyers** on the power exchanges in **Telangana, Maharashtra, Uttar Pradesh, Karnataka, Andhra Pradesh, Kerala, J&K, Punjab, West Bengal and Tamil Nadu**, which constituted **73.44 %** of the market volume. **[Annexure XI]**

10.12. The total volume of electricity purchased by Discoms/Licensees in RTM in the month of October, 2023 was **2,375.10 MU**, which constituted **97.25 %** of total volume of electricity purchased on the power exchanges.

10.13. Similarly, the total volume of electricity sold by Discoms/Licensees in RTM in the month of October, 2023 was **2,006.04 MU**, which constituted **82.14 %** of total volume of electricity sold on the power exchanges.

-
- **Source DAM, GDAM, TAM, GTAM and RTM data: IEX, PXIL and HPX**
 - **Source Entity wise sale and purchase on PXs data: NLDC**
 - **Source Total Energy supplied: CEA**
 - **Source Generation & other data for Regression: NLDC and IEX**

Annexure-I

Final Scheduled Volume, Average MCP and Real-Time Curtailment in Day Ahead Market (DAM) for the months of April, 2023 to October, 2023 of IEX, PXIL and HPX.										
Quarter	Months	Final Scheduled Volume (MU)			Market Clearing Price (₹/kWh)			Real Time Curtailment (MU)		
		IEX	PXIL	HPX	IEX	PXIL	HPX	IEX	PXIL	HPX
Quarter -I	April, 2023	4,408.93	0	0	5.08	0	0	0	0	0
	May, 2023	3,999.76	1.56	0	4.77	6.94	0	0	1.55	0
	June, 2023	4,123.34	0.03	0	5.16	10.00	0	0	0	0
Total Quarter -I	April - June, 2023	12,532.03	1.59	0	5.01	7.00	0	0	1.55	0
Quarter -II	July, 2023	3,966.20	0	0	4.52	0	0	0	0	0
	August, 2023	3,881.41	16.34	0.27	6.43	9.33	10.00	0	0	0
	September, 2023	3405.42	11.67	18.51	5.87	10.00	10.00	0	0	0
Total Quarter -II	July - September , 2023	11,253.03	28.01	18.78	5.59	9.61	10.00	0.00	0.00	0.00
Quarter -III	October, 2023	4,688.35	21.60	36.83	6.36	10.00	10.00	0	0	0
	November, 2023									
	December, 2023									
Total Quarter -III	October - December , 2023	4,688.35	21.60	36.83	6.36	10.00	10.00	0	0	0
Total April, 2023 – October, 2023		28,473.41	51.20	55.61	5.46	9.69	10.00	0.00	1.55	0.00

Annexure-II

Final Scheduled Volume in Term Ahead Market (TAM) for the months of April, 2023 to October, 2023 of IEX, PXIL and HPX (Delivery date basis)					
Quarter	Months	Final Scheduled Volume (MU)			
		IEX	PXIL	HPX	Total
Quarter -I	April, 2023	317.91	111.30	321.83	751.04
	May, 2023	607.72	133.80	198.75	940.27
	June, 2023	322.49	172.80	95.24	590.53
Total Quarter – I	April - June, 2023	1,248.12	417.90	615.82	2,281.84
Quarter -II	July, 2023	287.60	20.40	154.02	462.02
	August, 2023	768.73	287.36	355.21	1,411.30
	September, 2023	1,131.71	1,017.15	516.10	2,664.96
Total Quarter – II	July - September , 2023	2,188.04	1,324.91	1,025.33	4,538.28
Quarter -III	October, 2023	1,677.00	611.28	842.29	3,130.57
	November, 2023				
	December, 2023				
Total Quarter – III	October - December , 2023	1,677.00	611.28	842.29	3,130.57
Total April, 2023 – October, 2023		5,113.16	2,354.09	2,483.44	9,950.69

Top Five Entities (Buyers and Sellers) in Bilateral transactions in the month of October, 2023

(i) Top five Buyers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
Chhattisgarh	506.92	32.72%	Rajasthan	771.90	17.15%
Madhya Pradesh	236.46	15.26%	Maharashtra	718.70	15.96%
Gujarat	146.28	9.44%	Tamil Nadu	649.79	14.43%
Jharkhand	140.50	9.07%	Gujarat	612.37	13.60%
Karnataka	127.18	8.21%	Andhra Pradesh	597.04	13.26%
Total Volume	1,157.35	74.70%	Total Volume	3,349.81	74.41%
Total Volume in Bilateral	1,549.42		Total Volume in Bilateral	4,502.10	

(ii) Top five Sellers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
Gujarat	483.84	31.23%	Jindal Power Limited, Stage-2	459.10	10.20%
ADHUNIK POWER & NATURAL RESOURCES LIMITED	140.50	9.07%	Jindal India Thermal Power Limited	361.58	8.03%
Uttar Pradesh	140.43	9.06%	Tamil Nadu	349.16	7.76%
Andhra Pradesh	133.69	8.63%	Adani Power Limited-Raipur TPP	276.86	6.15%
Jammu Kashmir	78.29	5.05%	Jindal Power Limited, Stage-1	262.57	5.83%
Total Volume	976.77	63.04%	Total Volume	1,709.28	37.97%
Total Volume in Bilateral	1,549.42		Total Volume in Bilateral	4,502.10	

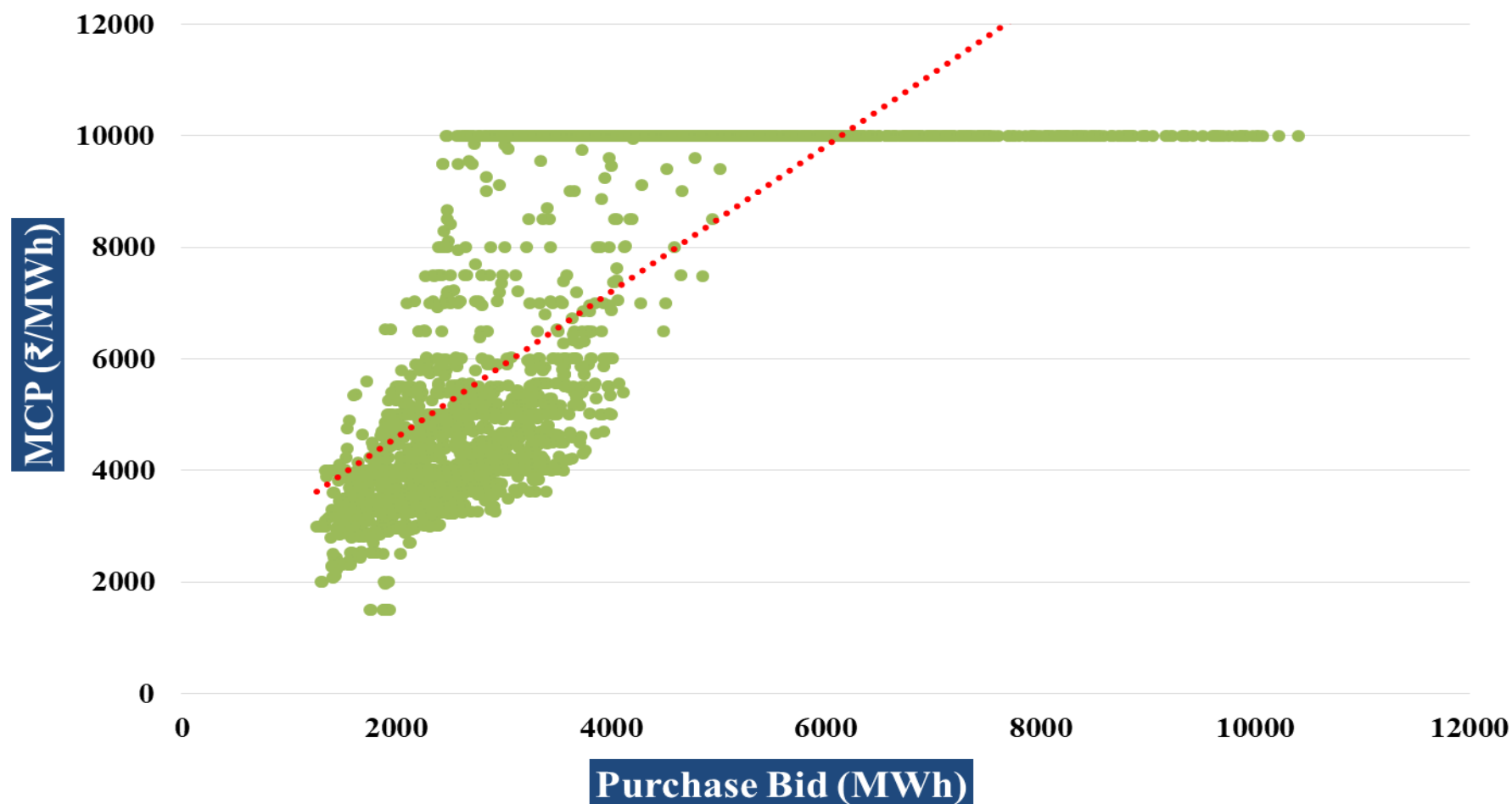
Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) in DAM

Date	Morning MCP (07:00-10:00)	Day MCP (11:00-17:00)	Evening MCP (18:00- 23:00)	Night MCP (01:00- 06:00, 23:00-24:00)	Maximum MCP	Minimum MCP	Average MCP	Final Scheduled Volume (MU)
01-10-2023	3.47	2.58	4.55	4.48	5.50	2.00	3.78	135.29
02-10-2023	3.40	2.13	4.73	3.84	6.00	1.50	3.49	153.53
03-10-2023	3.51	3.30	5.83	3.75	8.50	2.70	4.10	177.50
04-10-2023	3.75	3.31	5.66	3.76	9.45	3.11	4.10	178.88
05-10-2023	6.08	4.57	9.55	6.11	10.00	4.00	6.51	198.24
06-10-2023	7.62	6.26	10.00	6.90	10.00	4.40	7.61	202.87
07-10-2023	7.58	6.41	10.00	9.23	10.00	4.20	8.33	188.43
08-10-2023	7.20	5.25	10.00	10.00	10.00	4.15	8.15	186.43
09-10-2023	9.28	7.43	10.00	10.00	10.00	5.16	9.13	143.61
10-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	126.38
11-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	120.13
12-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	130.49
13-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	107.33
14-10-2023	9.20	7.10	10.00	10.00	10.00	5.00	9.02	120.78
15-10-2023	6.52	3.78	9.27	8.74	10.00	2.87	7.06	127.81
16-10-2023	8.10	6.82	10.00	9.74	10.00	4.67	8.68	135.80
17-10-2023	9.86	7.08	10.00	9.47	10.00	4.99	8.97	148.38
18-10-2023	5.48	5.56	10.00	7.77	10.00	3.62	7.30	166.44
19-10-2023	5.45	4.94	10.00	7.06	10.00	3.66	6.91	160.87
20-10-2023	6.25	5.43	10.00	6.58	10.00	3.80	7.05	159.77
21-10-2023	4.50	4.47	8.42	4.44	10.00	3.05	5.45	134.69
22-10-2023	3.62	3.37	5.73	3.86	10.00	2.90	4.14	135.26
23-10-2023	3.72	3.43	5.98	3.95	10.00	2.94	4.27	149.73
24-10-2023	3.35	2.68	3.76	4.17	5.00	2.30	3.50	113.27
25-10-2023	3.97	3.98	7.10	3.68	10.00	3.00	4.67	145.03
26-10-2023	4.34	3.99	7.06	4.51	10.00	3.04	4.97	153.55
27-10-2023	4.23	3.72	6.99	4.45	10.00	2.88	4.83	156.22
28-10-2023	4.67	3.89	6.65	4.24	10.00	2.88	4.81	156.85
29-10-2023	3.94	3.20	4.48	4.05	5.90	2.52	3.89	142.80
30-10-2023	4.07	3.97	6.29	3.86	10.00	3.00	4.54	164.11
31-10-2023	4.58	3.91	6.61	4.18	10.00	3.00	4.77	167.87
Maximum	10.00	10.00	10.00	10.00	10.00	10.00	10.00	202.87
Minimum	3.35	2.13	3.76	3.68	5.00	1.50	3.49	107.33
Average	6.06	5.24	8.02	6.54	9.37	4.24	6.45	151.24

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,976 Time Blocks during the month of October, 2023 in DAM



Annexure-VI**Maximum Final Schedule Volume (FSV), Minimum FSV, Maximum Market Clearing Price (MCP) and Minimum MCP in DAM**

Date	Max. FSV (MU)		Max. MCP (₹/kWh)		Min FSV (MU)		Min. MCP (₹/kWh)	
	Time Block	Value	Time Block	Value	Time Block	Value	Time Block	Value
01-10-2023	19:15 - 19:30	2.00	19:30 - 19:45	5.50	15:15 - 15:30	1.00	13:15 - 13:30	2.00
02-10-2023	19:30 - 19:45	2.31	19:15 - 19:30	6.00	05:00 - 05:15	1.20	13:00 - 13:15	1.50
03-10-2023	21:30 - 21:45	2.47	19:00 - 19:15	8.50	03:00 - 03:15	1.19	13:00 - 13:15	2.70
04-10-2023	07:15 - 07:30	2.57	19:15 - 19:30	9.45	04:15 - 04:30	1.30	13:00 - 13:15	3.11
05-10-2023	16:30 - 16:45	2.78	17:30 - 17:45	10.00	04:15 - 04:30	1.65	09:00 - 09:15	4.00
06-10-2023	08:00 - 08:15	2.61	00:00 - 00:15	10.00	18:15 - 18:30	1.54	04:00 - 04:15	4.40
07-10-2023	07:00 - 07:15	2.51	00:00 - 00:15	10.00	18:15 - 18:30	1.25	13:00 - 13:15	4.20
08-10-2023	15:30 - 15:45	2.41	00:00 - 00:15	10.00	18:15 - 18:30	1.56	13:15 - 13:30	4.15
09-10-2023	09:15 - 09:30	2.13	00:00 - 00:15	10.00	18:00 - 18:15	0.94	13:00 - 13:15	5.16
10-10-2023	13:15 - 13:30	1.64	00:00 - 00:15	10.00	18:15 - 18:30	0.99	00:00 - 00:15	10.00
11-10-2023	09:00 - 09:15	1.60	00:00 - 00:15	10.00	18:00 - 18:15	0.85	00:00 - 00:15	10.00
12-10-2023	13:00 - 13:15	1.95	00:00 - 00:15	10.00	18:30 - 18:45	0.91	00:00 - 00:15	10.00
13-10-2023	08:45 - 09:00	1.43	00:00 - 00:15	10.00	18:15 - 18:30	0.80	00:00 - 00:15	10.00
14-10-2023	14:00 - 14:15	1.56	00:00 - 00:15	10.00	18:15 - 18:30	0.92	13:15 - 13:30	5.00
15-10-2023	07:00 - 07:15	1.73	00:00 - 00:15	10.00	10:45 - 11:00	0.92	13:00 - 13:15	2.87
16-10-2023	07:00 - 07:15	1.81	00:00 - 00:15	10.00	17:45 - 18:00	1.10	13:00 - 13:15	4.67
17-10-2023	14:30 - 14:45	1.86	00:00 - 00:15	10.00	22:45 - 23:00	1.18	13:00 - 13:15	4.99
18-10-2023	07:00 - 07:15	2.56	00:00 - 00:15	10.00	17:30 - 17:45	1.12	13:15 - 13:30	3.62
19-10-2023	06:45 - 07:00	2.60	05:45 - 06:00	10.00	17:30 - 17:45	0.95	13:45 - 14:00	3.66
20-10-2023	07:00 - 07:15	2.58	05:30 - 05:45	10.00	17:45 - 18:00	0.88	13:45 - 14:00	3.80
21-10-2023	08:15 - 08:30	2.23	16:30 - 16:45	10.00	02:15 - 02:30	0.83	13:15 - 13:30	3.05
22-10-2023	18:45 - 19:00	2.17	17:30 - 17:45	10.00	02:30 - 02:45	0.99	13:15 - 13:30	2.90
23-10-2023	18:45 - 19:00	2.27	17:30 - 17:45	10.00	03:15 - 03:30	1.00	13:15 - 13:30	2.94
24-10-2023	06:45 - 07:00	1.61	00:15 - 00:30	5.00	23:30 - 23:45	0.75	13:15 - 13:30	2.30
25-10-2023	06:45 - 07:00	2.30	16:45 - 17:00	10.00	03:30 - 03:45	0.91	13:00 - 13:15	3.00
26-10-2023	07:15 - 07:30	2.62	16:45 - 17:00	10.00	03:00 - 03:15	1.17	13:15 - 13:30	3.04
27-10-2023	07:00 - 07:15	2.59	17:00 - 17:15	10.00	03:30 - 03:45	1.21	13:15 - 13:30	2.88
28-10-2023	07:00 - 07:15	2.79	17:00 - 17:15	10.00	03:15 - 03:30	1.17	13:15 - 13:30	2.88
29-10-2023	07:00 - 07:15	2.70	18:30 - 18:45	5.90	03:15 - 03:30	1.09	13:15 - 13:30	2.52
30-10-2023	07:00 - 07:15	2.90	16:45 - 17:00	10.00	03:00 - 03:15	1.10	13:15 - 13:30	3.00
31-10-2023	07:00 - 07:15	3.11	16:45 - 17:00	10.00	01:45 - 02:00	1.19	13:15 - 13:30	3.00

MCP: Market Clearing Price (₹/kWh)**FSV: Final Scheduled Volume (MU)**

Annexure-VII

Sellers and Buyers in Day Ahead Market (DAM) in the month of October, 2023						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Uttar Pradesh	502.42	10.58%	Maharashtra	828.89	17.46%
2	NVVN (SNA) - NEA	311.64	6.57%	Telangana	660.81	13.92%
3	Adani Power	281.33	5.93%	Gujarat	512.64	10.80%
4	Mahan Energy	248.12	5.23%	Uttar Pradesh	465.77	9.81%
5	DB Power	215.40	4.54%	Andhra Pradesh	437.57	9.22%
6	Chhattisgarh	214.14	4.51%	West Bengal	333.10	7.02%
7	Jaypee Nigrie	186.51	3.93%	Uttarakhand	178.05	3.75%
8	Delhi	157.91	3.33%	Tamil Nadu	155.91	3.28%
9	JITPL	146.91	3.09%	Karnataka	151.70	3.20%
10	Odisha	146.28	3.08%	J&K	129.97	2.74%
11	Gujarat	141.19	2.97%	Punjab	127.08	2.68%
12	Raigarh Energy Ltd.	130.61	2.75%	ArcelorMittal Nippon steel	116.92	2.46%
13	Rajasthan	101.57	2.14%	Madhya Pradesh	106.80	2.25%
14	Jindal Steel	97.08	2.05%	Rajasthan	82.17	1.73%
15	Punjab	93.61	1.97%	Bihar	75.25	1.59%
16	Himachal Pradesh	89.78	1.89%	Odisha	74.33	1.57%
17	Madhya Pradesh	88.18	1.86%	Delhi	60.18	1.27%
18	West Bengal	87.37	1.84%	Kerala	45.04	0.95%
19	Jindal Power Ltd.	80.10	1.69%	Daman & Diu - Dadra &	43.31	0.91%
20	Tamil Nadu	76.66	1.61%	Haryana	35.00	0.74%
21	Kameng HEP	72.79	1.53%	DVC	22.46	0.47%
22	MB Power	71.31	1.50%	Railways	22.08	0.47%
23	Jindal Power	60.39	1.27%	Jindal Power Ltd. Stg-II	20.38	0.43%
24	Karnataka	59.11	1.25%	Jharkhand	9.93	0.21%
25	IL&FS	57.11	1.20%	BHARAT ALUMINIUM	9.39	0.20%
26	Maharashtra	56.07	1.18%	Goa SR	8.81	0.19%
27	Telangana	53.63	1.13%	Assam	6.90	0.15%
28	Meghalaya	47.35	1.00%	Goa WR	6.50	0.14%
29	SKS Power	46.40	0.98%	Chhattisgarh	5.83	0.12%
30	Haryana	42.85	0.90%	Chandigarh	5.83	0.12%
31	NEA-NR	40.55	0.85%	Himachal Pradesh	2.46	0.05%
32	ACBIL	40.51	0.85%	Meghalaya	2.24	0.05%
33	Karcham Wangtoo	38.45	0.81%	Tripura	2.04	0.04%
34	Sembcorp Gayatri	36.72	0.77%	Jhabua Power	1.33	0.03%
35	Sikkim Urja Limited	34.60	0.73%	NEA-NR	0.11	0.002%
36	Kahalgaoon	33.89	0.71%			
37	Farakka	30.42	0.64%			
38	Andhra Pradesh	29.46	0.62%			
39	Pondicherry	28.91	0.61%			
40	Barh STPS Stg - I	27.74	0.58%			
41	RKM Power	26.68	0.56%			
42	Druk Green Power	25.85	0.54%			
43	Renew Surva Ravi	25.02	0.53%			
44	AD Hydro	19.93	0.42%			
45	Chandigarh	19.35	0.41%			
46	Sembcorp Energy	18.55	0.39%			
47	Mizoram	18.31	0.39%			
48	Barh Stg-2	17.94	0.38%			
49	Bihar	17.91	0.38%			
50	GMR Warora	15.84	0.33%			
51	ADANI WIND	14.63	0.31%			
52	Simhapuri Energy	14.55	0.31%			
53	Saini HEP	13.33	0.28%			
54	Goa WR	10.14	0.21%			
55	Maruti Clean Coal	9.72	0.20%			

56	Shree Cement	9.12	0.19%			
57	Jhabua Power	8.99	0.19%			
58	Bongaigaon	8.83	0.19%			
59	Palatana	8.08	0.17%			
60	Arunachal Pradesh	7.67	0.16%			
61	SBSR Power	6.98	0.15%			
62	Dhariwal ISTS	6.93	0.15%			
63	J&K	6.75	0.14%			
64	DGEN Mega Power	6.64	0.14%			
65	Kahalgaon-II	6.36	0.13%			
66	Jharkhand	6.06	0.13%			
67	Adani Green Energy	5.63	0.12%			
68	DVC	5.56	0.12%			
69	Sorang HEP,	5.33	0.11%			
70	NTPC Gadawara	5.12	0.11%			
71	NTPC Kudgi	4.98	0.11%			
72	Sikkim	4.25	0.09%			
73	Dikchu	4.08	0.09%			
74	Nagaland	4.04	0.09%			
75	Khargone STPP	4.04	0.09%			
76	Adhunik Power	3.53	0.07%			
77	Farakka Stg 3	3.41	0.07%			
78	Ramagundam	3.17	0.07%			
79	IGSTPS JHAJJAR	2.93	0.06%			
80	Uttarakhand	2.74	0.06%			
81	Kerala	2.66	0.06%			
82	Continuum Power	2.19	0.05%			
83	NTPC Sholapur	2.11	0.04%			
84	Costal Energen	2.09	0.04%			
85	Singoli Bhagwati	2.06	0.04%			
86	WIND FIVE	2.02	0.04%			
87	Manipur	1.96	0.04%			
88	BALCO 2	1.64	0.03%			
89	Ostro Kannada	1.59	0.03%			
90	Mouda Stg-1	1.53	0.03%			
91	Lanco Budhil	1.53	0.03%			
92	PARBATI II HE	1.36	0.03%			
93	Nabinagar Power	1.17	0.02%			
94	DHARIWAL STU	1.13	0.02%			
95	Darlipalli	1.10	0.02%			
96	Mouda Stg-2	1.04	0.02%			
97	Chuzachen	1.03	0.02%			
98	Simhadri FSP 15	0.80	0.02%			
99	GMR Kamalanga	0.79	0.02%			
100	KBUNL(MTPS-II)	0.61	0.01%			
101	NTPC Simhadri 25	0.54	0.01%			
102	Unchahar-I	0.35	0.01%			
103	Talcher	0.31	0.01%			
104	Kopili Power Station	0.28	0.01%			
105	Rihand-II	0.22	0.005%			
106	Unchahar-III	0.20	0.004%			
107	Unchahar-II	0.20	0.004%			
108	Simhadri Stg-2	0.14	0.003%			
109	Nevveli New	0.09	0.002%			
110	The Tata Power Co	0.02	0.0004%			
111	Dadri Stg-2	0.01	0.0002%			
112	Unchahar-IV	0.01	0.0001%			
Total Volume of top 10		2,410.65	50.78%	Total Volume of top 10	3,854.41	81.20%
Total Volume in PXs		4,746.78		Total Volume in PXs	4,746.78	

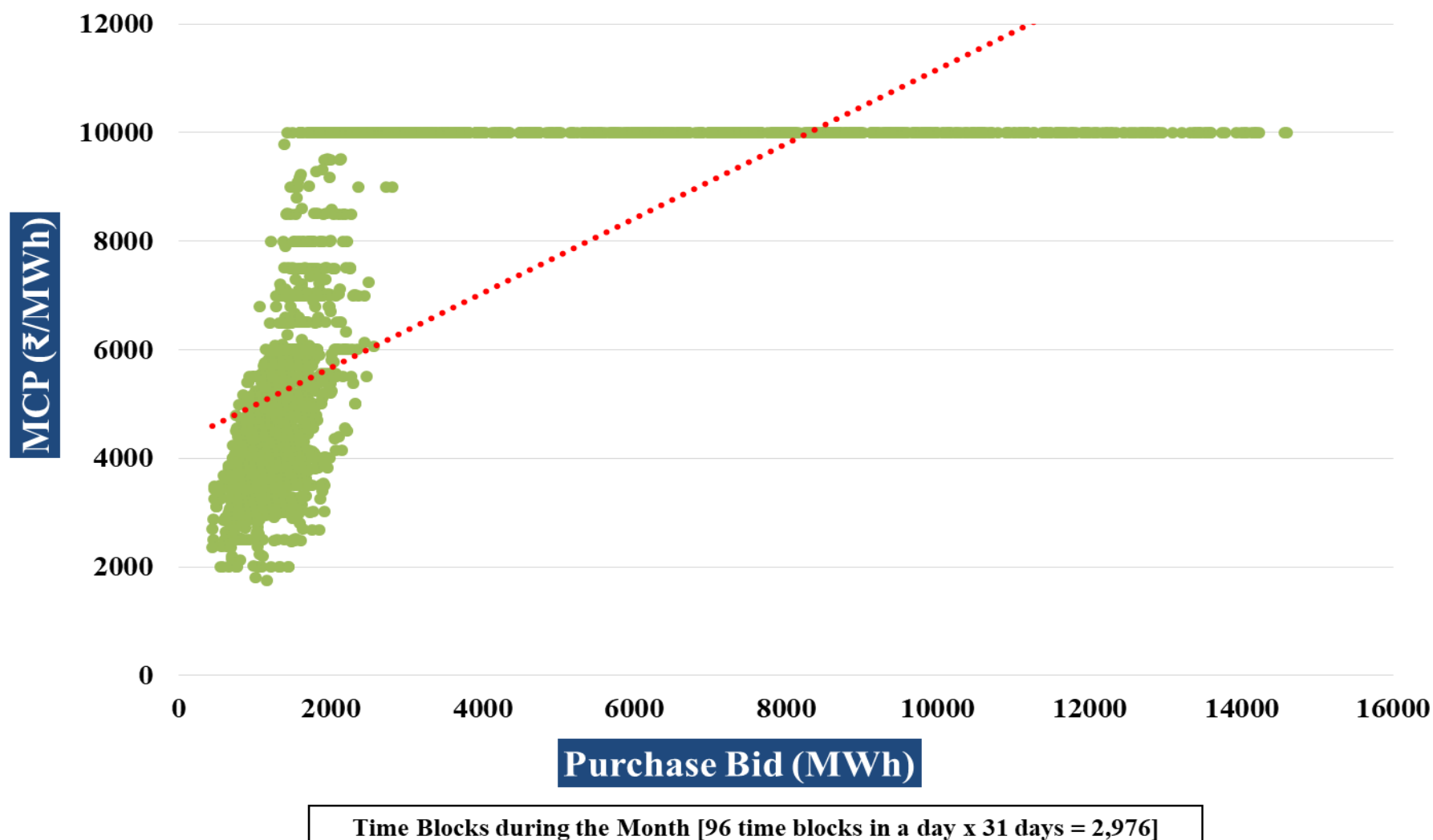
Annexure-VIII**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) in RTM**

Date	Morning MCP (07:00-10:00)	Day MCP (11:00-17:00)	Evening MCP (18:00- 23:00)	Night MCP (01:00- 06:00, 23:00-24:00)	Maximum MCP	Minimum MCP	Average MCP	Final Scheduled Volume (MU)
01-10-2023	3.54	2.77	3.80	4.36	5.50	1.80	3.62	100.55
02-10-2023	3.37	2.80	3.79	3.70	5.50	1.75	3.41	87.83
03-10-2023	3.80	3.59	7.23	3.71	10.00	2.47	4.57	94.76
04-10-2023	5.25	4.80	10.00	4.26	10.00	3.26	6.02	116.38
05-10-2023	6.39	5.58	9.60	5.74	10.00	2.99	6.77	100.46
06-10-2023	5.56	5.93	10.00	5.52	10.00	3.27	6.76	88.41
07-10-2023	7.78	7.04	10.00	9.25	10.00	5.00	8.55	76.49
08-10-2023	7.17	6.59	10.00	10.00	10.00	3.90	8.53	73.89
09-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	73.65
10-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	83.14
11-10-2023	10.00	10.00	10.00	10.00	10.00	10.00	10.00	52.39
12-10-2023	10.00	8.89	10.00	10.00	10.00	6.49	9.68	63.00
13-10-2023	8.95	6.29	10.00	9.76	10.00	3.81	8.68	78.57
14-10-2023	6.16	5.82	10.00	8.57	10.00	2.01	7.72	78.19
15-10-2023	5.00	4.34	7.01	8.08	10.00	2.00	6.21	87.66
16-10-2023	5.88	6.09	6.84	5.68	10.00	3.22	6.12	97.13
17-10-2023	4.48	4.68	8.71	3.77	10.00	2.63	5.39	104.33
18-10-2023	5.13	5.06	8.86	5.76	10.00	2.20	6.23	68.55
19-10-2023	6.28	5.62	8.17	5.48	10.00	3.00	6.32	70.80
20-10-2023	5.88	5.92	7.04	4.85	10.00	3.49	5.88	84.23
21-10-2023	3.97	3.89	6.51	3.84	10.00	2.50	4.54	66.36
22-10-2023	4.41	3.52	4.46	4.21	7.00	2.38	4.11	83.70
23-10-2023	3.92	3.53	4.82	3.37	8.00	2.24	3.87	77.16
24-10-2023	3.81	3.35	4.03	4.02	5.90	2.00	3.79	84.27
25-10-2023	3.73	4.27	6.43	3.47	10.00	2.00	4.49	64.97
26-10-2023	4.49	4.06	6.28	4.05	10.00	2.35	4.68	61.68
27-10-2023	4.83	4.36	5.93	3.89	10.00	2.50	4.69	56.49
28-10-2023	4.75	5.06	6.46	3.62	10.00	2.93	4.94	58.25
29-10-2023	3.66	3.65	3.91	3.68	6.07	2.36	3.73	52.98
30-10-2023	4.73	5.21	6.57	3.21	10.00	2.00	4.89	62.29
31-10-2023	4.36	5.12	6.66	3.61	10.00	3.00	4.94	53.69
Maximum	10.00	10.00	10.00	10.00	10.00	10.00	10.00	116.38
Minimum	3.37	2.77	3.79	3.21	5.50	1.75	3.41	52.39
Average	5.72	5.41	7.52	5.79	9.29	3.53	6.10	77.49

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,976 Time Blocks during the month of October, 2023 in RTM



Maximum Final Schedule Volume (FSV), Minimum FSV, Maximum Market Clearing Price (MCP) and Minimum MCP in RTM

Date	Max. FSV (MU)		Max. MCP (₹/kWh)		Min FSV (MU)		Min. MCP (₹/kWh)	
	Time Block	Value	Time Block	Value	Time Block	Value	Time Block	Value
01-10-2023	14:45 - 15:00	1.78	00:45 - 01:00	5.50	00:45 - 01:00	0.64	10:00 - 10:15	1.80
02-10-2023	14:15 - 14:30	1.36	00:30 - 00:45	5.50	00:45 - 01:00	0.43	13:00 - 13:15	1.75
03-10-2023	11:00 - 11:15	1.44	18:15 - 18:30	10.00	00:30 - 00:45	0.50	13:00 - 13:15	2.47
04-10-2023	15:45 - 16:00	1.80	17:00 - 17:15	10.00	18:45 - 19:00	0.50	13:00 - 13:15	3.26
05-10-2023	14:45 - 15:00	1.49	06:15 - 06:30	10.00	18:45 - 19:00	0.23	08:45 - 09:00	2.99
06-10-2023	16:00 - 16:15	1.35	06:30 - 06:45	10.00	23:30 - 23:45	0.36	08:00 - 08:15	3.27
07-10-2023	13:30 - 13:45	1.51	00:00 - 00:15	10.00	18:30 - 18:45	0.19	09:30 - 09:45	5.00
08-10-2023	10:00 - 10:15	1.28	00:00 - 00:15	10.00	18:15 - 18:30	0.29	11:15 - 11:30	3.90
09-10-2023	13:00 - 13:15	1.71	00:00 - 00:15	10.00	22:00 - 22:15	0.26	00:00 - 00:15	10.00
10-10-2023	05:00 - 05:15	1.62	00:00 - 00:15	10.00	18:45 - 19:00	0.28	00:00 - 00:15	10.00
11-10-2023	09:15 - 09:30	0.96	00:00 - 00:15	10.00	18:45 - 19:00	0.26	00:00 - 00:15	10.00
12-10-2023	03:45 - 04:00	1.21	00:00 - 00:15	10.00	19:00 - 19:15	0.22	13:30 - 13:45	6.49
13-10-2023	23:45 - 24:00	1.25	00:00 - 00:15	10.00	00:00 - 00:15	0.40	12:00 - 12:15	3.81
14-10-2023	02:45 - 03:00	1.16	00:00 - 00:15	10.00	17:45 - 18:00	0.30	12:15 - 12:30	2.01
15-10-2023	01:45 - 02:00	1.29	00:00 - 00:15	10.00	07:00 - 07:15	0.54	12:00 - 12:15	2.00
16-10-2023	18:00 - 18:15	1.40	00:00 - 00:15	10.00	03:30 - 03:45	0.64	23:00 - 23:15	3.22
17-10-2023	06:15 - 06:30	1.66	16:30 - 16:45	10.00	18:30 - 18:45	0.62	13:00 - 13:15	2.63
18-10-2023	05:45 - 06:00	1.05	16:15 - 16:30	10.00	18:30 - 18:45	0.27	13:00 - 13:15	2.20
19-10-2023	06:00 - 06:15	1.13	00:00 - 00:15	10.00	18:00 - 18:15	0.19	13:00 - 13:15	3.00
20-10-2023	06:00 - 06:15	1.29	16:15 - 16:30	10.00	17:45 - 18:00	0.44	23:45 - 24:00	3.49
21-10-2023	16:45 - 17:00	1.01	17:00 - 17:15	10.00	17:45 - 18:00	0.43	13:15 - 13:30	2.50
22-10-2023	19:00 - 19:15	1.42	18:15 - 18:30	7.00	10:00 - 10:15	0.50	13:15 - 13:30	2.38
23-10-2023	19:30 - 19:45	1.23	18:15 - 18:30	8.00	07:45 - 08:00	0.50	20:00 - 20:15	2.24
24-10-2023	18:45 - 19:00	1.38	17:45 - 18:00	5.90	09:15 - 09:30	0.52	13:00 - 13:15	2.00
25-10-2023	21:45 - 22:00	0.92	17:15 - 17:30	10.00	10:15 - 10:30	0.45	13:00 - 13:15	2.00
26-10-2023	14:15 - 14:30	0.87	17:15 - 17:30	10.00	17:30 - 17:45	0.46	13:00 - 13:15	2.35
27-10-2023	17:00 - 17:15	0.95	17:15 - 17:30	10.00	23:30 - 23:45	0.39	13:00 - 13:15	2.50
28-10-2023	15:30 - 15:45	1.03	16:45 - 17:00	10.00	18:00 - 18:15	0.36	04:45 - 05:00	2.93
29-10-2023	15:45 - 16:00	0.85	17:45 - 18:00	6.07	22:00 - 22:15	0.30	19:45 - 20:00	2.36
30-10-2023	15:15 - 15:30	1.09	16:30 - 16:45	10.00	08:15 - 08:30	0.43	03:30 - 03:45	2.00
31-10-2023	15:00 - 15:15	0.92	16:30 - 16:45	10.00	01:00 - 01:15	0.36	13:00 - 13:15	3.00

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Sellers and Buyers in Real Time Market (RTM) in the month of October, 2023						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Bihar	256.08	10.49%	Telangana	332.69	13.62%
2	Rajasthan	236.08	9.67%	Maharashtra	331.43	13.57%
3	Madhya Pradesh	170.79	6.99%	Uttar Pradesh	218.24	8.94%
4	Odisha	168.99	6.92%	Karnataka	207.33	8.49%
5	Chhattisgarh	160.01	6.55%	Andhra Pradesh	163.27	6.68%
6	Assam	121.61	4.98%	Kerala	136.82	5.60%
7	Punjab	110.83	4.54%	J&K	111.74	4.58%
8	Jharkhand	89.61	3.67%	Punjab	105.15	4.31%
9	West Bengal	79.96	3.27%	West Bengal	99.33	4.07%
10	Delhi	74.04	3.03%	Tamil Nadu	87.51	3.58%
11	Uttar Pradesh	66.04	2.70%	DVC	86.25	3.53%
12	Andhra Pradesh	64.82	2.65%	Rajasthan	85.91	3.52%
13	Maharashtra	59.87	2.45%	Gujarat	67.73	2.77%
14	Gujarat	59.38	2.43%	Uttarakhand	60.30	2.47%
15	Himachal Pradesh	41.68	1.71%	Odisha	45.99	1.88%
16	Haryana	41.40	1.70%	Haryana	44.96	1.84%
17	Telangana	30.04	1.23%	Delhi	43.13	1.77%
18	Tripura	28.59	1.17%	Madhya Pradesh	37.98	1.56%
19	Kameng HEP	28.39	1.16%	Bihar	32.93	1.35%
20	Tamil Nadu	26.91	1.10%	Himachal Pradesh	29.26	1.20%
21	Karnataka	25.45	1.04%	Jindal Power Ltd. Stg-II	21.71	0.89%
22	MB Power	23.44	0.96%	ArcelorMittal Nippon	19.94	0.82%
23	Manipur	23.39	0.96%	Assam	13.41	0.55%
24	DGEN Mega	19.82	0.81%	Daman & Diu - Dadra &	10.27	0.42%
25	Nabinagar Power	16.02	0.66%	BHARAT	7.73	0.32%
26	J&K	15.31	0.63%	Railways	6.26	0.26%
27	RKM Power	14.29	0.59%	Chhattisgarh	6.10	0.25%
28	Pondicherry	13.14	0.54%	Meghalaya	5.18	0.21%
29	BALCO 2	12.27	0.50%	Jharkhand	5.05	0.21%
30	Barh STPS Stg - I	12.13	0.50%	Sikkim Urja Limited	3.08	0.13%
31	Barh Stg-2	11.86	0.49%	Simhapuri Energy	2.34	0.10%
32	Mahan Energy	11.78	0.48%	Goa SR	1.62	0.07%
33	Sikkim Urja	11.60	0.48%	Goa WR	1.43	0.06%
34	Sembcorp Gayatri	11.16	0.46%	Maruti Clean Coal	1.20	0.05%
35	Adani Power	10.94	0.45%	Arunachal Pradesh	1.18	0.05%
36	ACBIL	9.95	0.41%	Manipur	1.17	0.05%
37	NVVN (SNA) -	9.66	0.40%	Ratnagiri Gas & Power	1.04	0.04%
38	Farakka	9.57	0.39%	Raigarh Energy Ltd.	0.81	0.03%
39	Arunachal Pradesh	9.40	0.38%	Gandhar	0.80	0.03%
40	Bongaigaon	9.00	0.37%	Tripura	0.77	0.03%
41	Uttarakhand	8.49	0.35%	Mahan Energy Limited	0.58	0.02%
42	DB Power	8.48	0.35%	Kawas	0.54	0.02%
43	The Tata Power Co	8.24	0.34%	Sikkim	0.46	0.02%
44	Sasan UMPP	8.11	0.33%	Jindal Steel	0.44	0.02%
45	Kahalgaoon-II	7.88	0.32%	Chandigarh	0.40	0.02%
46	Khargone STPP	7.53	0.31%	ACBIL	0.35	0.01%

47	NTPC Sholapur	7.24	0.30%	Jhabua Power	0.27	0.01%
48	Kahalgaoon	7.24	0.30%	Pondicherry	0.10	0.004%
49	NTPC Gadarwara	6.95	0.28%	Shree Cement	0.09	0.004%
50	TRN Energy	6.88	0.28%	Sainj HEP	0.02	0.001%
51	Dadri TPS	6.62	0.27%			
52	Ramagundam Stg-	6.21	0.25%			
53	Sikkim	6.05	0.25%			
54	Raigarh Energy	6.00	0.25%			
55	IGSTPS JHAJJAR	5.68	0.23%			
56	Mouda Stg-1	5.14	0.21%			
57	Jindal Power Ltd.	5.13	0.21%			
58	NTPC Kudgi	5.05	0.21%			
59	Jhabua Power	4.79	0.20%			
60	Simhapuri Energy	4.71	0.19%			
61	Tanda Stg-2	4.69	0.19%			
62	Jorethang	4.45	0.18%			
63	Palatana	4.34	0.18%			
64	DVC	4.34	0.18%			
65	Mouda Stg-2	4.19	0.17%			
66	Singrauli	4.09	0.17%			
67	Adhunik Power	4.08	0.17%			
68	Sembcorp Energy	4.02	0.16%			
69	JITPL	3.95	0.16%			
70	Kerala	3.93	0.16%			
71	Dadri Stg-2	3.89	0.16%			
72	Meghalaya	3.76	0.15%			
73	IL&FS	3.62	0.15%			
74	AD Hydro	3.12	0.13%			
75	Jindal Steel	3.03	0.12%			
76	SKS Power	2.92	0.12%			
77	Farakka Stg 3	2.73	0.11%			
78	Jindal Power	2.36	0.10%			
79	Singoli Bhagwati	2.22	0.09%			
80	Tashiding HEP	2.16	0.09%			
81	Nagaland	2.15	0.09%			
82	Darlipalli	2.06	0.08%			
83	Goa WR	2.04	0.08%			
84	Unchahar-IV	1.90	0.08%			
85	Rihand-I	1.72	0.07%			
86	Rihand-III	1.66	0.07%			
87	Ramagundam Stg-	1.60	0.07%			
88	Maruti Clean Coal	1.59	0.07%			
89	Talcher Stg-2	1.41	0.06%			
90	Unchahar-II	1.41	0.06%			
91	Daman & Diu -	1.37	0.06%			
92	Simhadri Stg-2	1.35	0.06%			
93	KBUNL(MTPS-II)	1.19	0.05%			
94	Vindhyachal stg-1	1.15	0.05%			
95	AGBPP	1.14	0.05%			
96	Rihand-II	0.92	0.04%			
97	Unchahar-I	0.88	0.04%			

98	NLC TPS-II Stg-2	0.87	0.04%			
99	Talcher	0.86	0.04%			
100	Sainj HEP	0.80	0.03%			
101	GMR Warora	0.78	0.03%			
102	Shree Cement	0.77	0.03%			
103	Costal Energen	0.76	0.03%			
104	NSPCL Bhilai	0.73	0.03%			
105	Dikchu	0.68	0.03%			
106	Unchahar-III	0.65	0.03%			
107	Neyveli New	0.60	0.02%			
108	NTPC Lara	0.57	0.02%			
109	Korba	0.55	0.02%			
110	Ramagundam	0.52	0.02%			
111	Ostro Kannada	0.51	0.02%			
112	Sorang HEP,	0.48	0.02%			
113	NTECL Vallur	0.46	0.02%			
114	DHARIWAL STU	0.40	0.02%			
115	Simhadri Stg-1	0.39	0.02%			
116	NTPC North	0.39	0.02%			
117	NLC	0.37	0.02%			
118	Vindhyachal stg-5	0.37	0.02%			
119	Vindhyachal stg-2	0.35	0.01%			
120	Doyang HPS,	0.35	0.01%			
121	Sipat Stg-2	0.34	0.01%			
122	Goa SR	0.30	0.01%			
123	Vindhyachal stg-3	0.29	0.01%			
124	AGTPP	0.28	0.01%			
125	Sipat Stg-1	0.23	0.01%			
126	Pare Hydro Power	0.22	0.01%			
127	Jaypee Nigrie	0.21	0.01%			
128	Chandigarh	0.20	0.01%			
129	Vindhyachal stg-4	0.20	0.01%			
130	Karcham Wangtoo	0.18	0.01%			
131	Dhariwal ISTS	0.18	0.01%			
132	Simhadri FSP 15	0.17	0.01%			
133	GMR Kamalanga	0.16	0.01%			
134	NLC TPS-II	0.16	0.01%			
135	Chuzachen	0.15	0.01%			
136	NTPC Simhadri 25	0.11	0.005%			
137	NLC TPS-II Expn	0.11	0.005%			
138	Korba Stg 3	0.11	0.004%			
139	Lanco Budhil	0.11	0.004%			
140	NTPL	0.11	0.004%			
141	Kopili Power	0.07	0.003%			
142	Renew Surya Ravi	0.01	0.0005%			
143	Ranganadi Hydro	0.01	0.0004%			
Total Volume of top 10		1,468.00	60.11%	Total Volume of top 10	1,793.51	73.44%
Total Volume in PXs		2,442.30		Total Volume in PXs	2,442.30	

Cross Border Electricity Transactions in Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of October, 2023				
S. No	Delivery Date	Buy Volume By Nepal (MU)	Sell Volume by Nepal (MU)	Sell Volume By Bhutan(MU)
1	01-10-2023	-	10.11	-
2	02-10-2023	0.11	11.01	-
3	03-10-2023	-	11.33	-
4	04-10-2023	-	11.42	-
5	05-10-2023	-	11.42	-
6	06-10-2023	-	11.47	-
7	07-10-2023	-	12.01	-
8	08-10-2023	-	11.36	-
9	09-10-2023	-	11.47	-
10	10-10-2023	-	11.55	-
11	11-10-2023	-	11.55	1.48
12	12-10-2023	-	10.86	1.49
13	13-10-2023	-	11.14	1.49
14	14-10-2023	-	11.13	1.44
15	15-10-2023	-	11.14	1.37
16	16-10-2023	-	11.12	1.35
17	17-10-2023	-	11.12	1.37
18	18-10-2023	-	11.24	1.32
19	19-10-2023	-	11.24	1.28
20	20-10-2023	-	11.54	1.24
21	21-10-2023	-	12.19	1.22
22	22-10-2023	-	12.51	1.21
23	23-10-2023	-	12.50	1.15
24	24-10-2023	-	12.51	1.12
25	25-10-2023	-	12.52	1.08
26	26-10-2023	-	12.52	1.07
27	27-10-2023	-	12.40	1.06
28	28-10-2023	-	12.40	1.05
29	29-10-2023	-	10.14	1.05
30	30-10-2023	-	9.32	1.03
31	31-10-2023	-	7.98	0.98
Total		0.11	352.19	25.85
Grand Total			378.15	

-: No transaction took place

Note: Cross Border Transactions of Electricity of 378.15 MU (i.e. 0.11 MU bought and 352.19 MU sold by Nepal, 25.85 MU sold by Bhutan) happened during October, 2023 in IEX, which is included in DAM Volume of October, 2023 in IEX. No Cross Border Drawal Transactions of Electricity happened with **Bhutan** for the month of October, 2023 in IEX in DAM.

Cross Border Electricity Transactions in Real Time Market (RTM) in IEX with Nepal and Bhutan during the month of October, 2023			
S. No	Delivery Date	Buy Volume By Nepal (MU)	Sell Volume By Nepal (MU)
1	01-10-2023	-	-
2	02-10-2023	-	0.05
3	03-10-2023	-	0.19
4	04-10-2023	-	0.34
5	05-10-2023	-	0.34
6	06-10-2023	-	0.35
7	07-10-2023	-	-
8	08-10-2023	-	0.34
9	09-10-2023	-	0.34
10	10-10-2023	-	0.31
11	11-10-2023	-	-
12	12-10-2023	-	0.98
13	13-10-2023	-	0.96
14	14-10-2023	-	1.05
15	15-10-2023	-	1.05
16	16-10-2023	-	0.97
17	17-10-2023	-	0.87
18	18-10-2023	-	0.15
19	19-10-2023	-	0.47
20	20-10-2023	-	0.43
21	21-10-2023	-	-
22	22-10-2023	-	-
23	23-10-2023	-	-
24	24-10-2023	-	-
25	25-10-2023	-	-
26	26-10-2023	-	-
27	27-10-2023	-	-
28	28-10-2023	-	-
29	29-10-2023	-	0.49
30	30-10-2023	-	-
31	31-10-2023	-	-
Total		-	9.66
Grand Total		9.66	

-: No transaction took place

Note: Cross Border Transactions of Electricity of 9.66 MU (i.e. 9.66 MU sold by Nepal only) happened during October, 2023 in IEX, which is included in RTM Volume of October, 2023 in IEX. No Cross Border Transactions of Electricity happened with **Bhutan** for the month of October, 2023 in IEX in RTM.

Analysis for change in trend of Final Scheduled Volume in DAM on 2nd Monday & 3rd Sunday of October, 2023 (i.e. 9th & 15th October, 2023)

Final Scheduled Volume (MU) and the Daily Avg. MCP (₹/kWh) invariably shows decreasing trend on Sundays and increasing trend on Mondays as the demand of electricity in the country is less on Sundays as compared to other days of week. However, during the month of October, 2023, it is observed that on second Monday (9th October, 2023), FSV showed decreasing trend in comparison to second Sunday (8th October, 2023), on third Sunday (15th October, 2023), FSV showed increasing trend in comparison to second Saturday (14th October, 2023).

- (i) On second Monday (9th October, 2023), although there was increase in purchase on power exchange by some of the States in comparison to second Sunday (8th October, 2023) by **16.90 MU** [i.e. Maharashtra (10.39 MU), Telangana (3.91 MU), Andhra Pradesh (2.22 MU), Bihar (0.15 MU) and Haryana (0.15 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **59.72 MU** [i.e. Uttar Pradesh (20.89 MU), Odisha (9.32 MU), Punjab (5.48 MU), Gujarat (5.08 MU) and Tamil Nadu (4.17 MU), etc.]. This resulted in an overall decrease in FSV by **42.82 MU** on Monday (9th October, 2023) as compared to Sunday (8th October, 2023).
- (ii) On third Sunday (15th October, 2023), although there was decrease in purchase on power exchange by some of the States in comparison to second Saturday (14th October, 2023) by **42.29 MU** [i.e. West Bengal (20.10 MU), Karnataka (6.81 MU), Haryana (4.83 MU), Maharashtra (3.63 MU) and Tamil Nadu (1.83 MU), etc.], there was also increase in purchase on power exchange by some of the States by **34.83 MU** [i.e. Telangana (12.84 MU), Uttar Pradesh (6.81 MU), Bihar (5.03 MU), J&K (4.25 MU), and Andhra Pradesh (2.45 MU), etc.]. This resulted in an overall increase in FSV by **7.46 MU** on Sunday (15th October, 2023) as compared to Saturday (14th October, 2023).

Definitions/ Terminologies used in the Report

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

The 13 Bid areas 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.

2. **Average MCP** is the average of Daily Avg. MCP of the days during the month on which transaction happened.
3. **Bilateral Transaction** means a transaction for exchange of electrical energy (MWh) between a specified buyer and a specified seller, from a specified point of injection to a specified point of drawal for a fixed or varying quantum of power (MW) for any time block during a month.
4. **Daily Average MCP** is the average of MCP of all 96 Time Blocks of the day during which transaction happened.
5. **Day-Ahead Market (DAM)** means a market where Day Ahead Contracts are transacted on the Power Exchanges, wherein Collective Transactions occur on day (T) and delivery of electricity is on the next day (T+1).
6. **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.
7. **Energy Supplied** is the total energy (MU) available at the States' periphery.
8. **Final Scheduled Volume** is the total of scheduled volume of all 96 time blocks in a day during the month in which transaction happened.
9. **Green Term Ahead Market (GTAM)** is based on the principles of current Term Ahead Market (TAM) and will offer trade for Solar, Non-Solar and Hydro Renewable Energy (RE) generation.

10. **Green Day Ahead Market (GDAM)** is based on the principles of current Day Ahead Market (DAM), where market participants purchase and sell electricity generated from renewable sources.
11. **Long Duration Contracts** on the power exchanges is a product segment under which the participants are allowed to trade for delivery of power upto 90 Days (Delivery Starting from T+2 to T+90 Days).
12. **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.
13. **Real Time Market (RTM)** means a market where Real-Time Contracts are transacted on the Power Exchange(s), i.e. a contract other than Day Ahead Contract or Intraday Contract or Contingency Contract. In RTM collective transactions occur on day (T) or day (T-1) and delivery of electricity is on day (T) for a specified delivery period.
14. **Term Ahead Market (TAM)** means a market where Term Ahead Contracts are transacted on the Power Exchange(s), i.e. a contract wherein transactions occur on day (T) and physical delivery of electricity is on a day more than one day ahead (T + 2 or more).