

I/34167/2024



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: जनवरी, 2024 माह की मार्केट मॉनिटरिंग रिपोर्ट

Subject: Monthly Market Monitoring Report for the month of January, 2024.

महोदय/ Sir,

जनवरी, 2024 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 January, 2024 is enclosed herewith for kind information and perusal.

जनवरी, 2024 माह के दौरान मार्केट के संचालन की मुख्य विशेषताएं इस प्रकार रही। Key highlights of the market operation during January, 2024 are as under:

- (i) जनवरी, 2024 माह में देश में कुल 133,188 MU विद्युत का कारोबार किया गया, जिसमें से 63,794 MU का कारोबार अंतर्राज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतरराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया। In the month of January, 2024 a total of 133,188 MU of electricity was transacted in the country out of which 63,794 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.
- (ii) अल्पावधि मार्केट के अंतर्गत कुल 14,839 MU का कारोबार किया गया था, जिसमें से 10,485 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ। इस प्रकार अल्पावधि कारोबार, जनवरी, 2024 माह में ट्रेड की गई विद्युत की कुल मात्रा का 11.14 %

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था और 7.87 % पावर एक्सचेंजों के माध्यम से रहा। A total of 14,839 MU was transacted under Short Term Market, out of which 10,485 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in January, 2024 was 11.14 % of total volume of electricity traded in January, 2024 and 7.87% 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 24.50 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 14.87 % रहा। If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 24.50 % of ISTS transactions, out of which transaction through the power exchanges constitutes 14.87 %.

भवदीय/ Yours faithfully,

(विक्रम सिंह / Vikram Singh)

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 - जनवरी, 2024

Monthly Market Monitoring Report

January 2024



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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**जनवरी, 2024 की मासिक मार्केट
मॉनिटरिंग रिपोर्ट का सारांश**

**Summary of Market Monitoring Report
For the month of January, 2024**

जनवरी, 2024 माह के लिए सारांश Summary for Month: January, 2024

भारत में विद्युत एक्सचेंजों पर विद्युत के व्यापार का सारांश

Summary of Electricity Transactions on Power Exchanges in India

- जनवरी, 2024 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल **10,485 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।

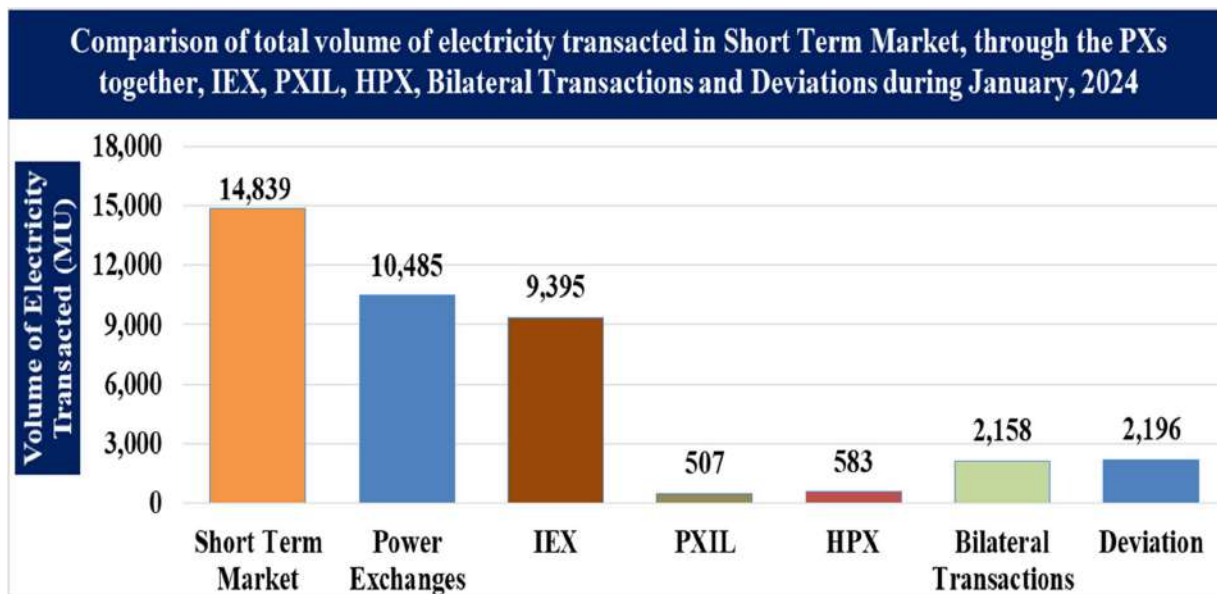
A total volume of **10,485 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of January, 2024. This volume of electricity is on delivery date basis and includes transactions through DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID market segments.

Segment	Transactions happened in the PXs (IEX, PXIL & HPX combined)			
	FSV (MU)	Wt. Avg. MCP (₹/kWh)	Congestion (MU)	Real Time Curtailment (MU)
DAM	5,588	6.05	0.00	0.00
GDAM	209	5.90	0.00	0.00
HP-DAM	0	-	0.00	0.00
RTM	2,386	6.08	2.52	0.00
TAM	1,652	5.90	0.00	43.47
HP-TAM	0	-	0.00	0.00
DAC & ID	595	7.09	0.09	0.98
HP-DAC & ID	0	-	0.00	0.00
GTAM	51	6.55	0.00	0.00
G-DAC & ID	4	6.78	0.00	0.00
Total in PXs	10,485	6.09*	2.61	44.45

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

- द्विपक्षीय व्यापार के तहत कुल **2,158 MU** विद्युत का कारोबार किया गया और **2,196 MU** को विचलन के रूप में लेनदेन किया गया। इस प्रकार कुल **14,839 MU** विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। जनवरी, 2024 के महीने में देश में कुल **133,188 MU** विद्युत की आपूर्ति की गई थी, इस प्रकार जनवरी, 2024 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा **11.14 %** था।

Under the Bilateral trade, a total of **2,158 MU** of electricity was transacted and **2,196 MU** was transacted as deviation. Thus, a total of **14,839 MU** of electricity was transacted as short term trade. In January, 2024, a total of **133,188 MU** of electricity was supplied in the country, thus, the share of short term market in the total volume of electricity supplied in January, 2024 was **11.14 %**.



- जनवरी, 2024 के दौरान संचरण जाम की कुल मात्रा **2.61 MU** थी, जो की विद्युत एक्सचेंजों में कारोबार की गई विद्युत की कुल मात्रा का केवल 0.02 % है और जनवरी, 2024 के महीने के दौरान आपूर्ति की गई कुल ऊर्जा का 0.002 % है।

The total volume of transmission congestion that happened during the month of January, 2024 was **2.61 MU** which is only 0.02 % of the total volume of electricity transacted in the power exchanges and 0.002 % of total energy supplied during the month of January, 2024.

RTM में 2 दिन अर्थात् दिनांक 3 एवं 5 जनवरी, 2024 और DAC & ID में 3 दिन अर्थात् दिनांक 4, 5 एवं 6 जनवरी, 2024 को संचरण जाम देखा गया। जबकि DAM, HP-DAM, GDAM, TAM, HP-TAM, HP-DAC & ID, GTAM और G-DAC & ID में कोई संचरण जाम नहीं देखा गया। जनवरी, 2024 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **44.45 MU** थी।

Transmission congestion observed in RTM on 2 days i.e. 3rd & 5th January, 2024 and DAC & ID on 3 days i.e. 4th, 5th & 6th January, 2024. Whereas, there was no congestion happened in DAM, HP-DAM, GDAM, TAM, HP-TAM, HP-DAC & ID, GTAM and G-DAC & ID. The total volume of real time curtailment reported in the month of January, 2024 was only **44.45 MU**.

- जनवरी, 2024 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (**ISTS**) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **63,794 MU** थी। जनवरी, 2024 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 **23.26 %** रहा।

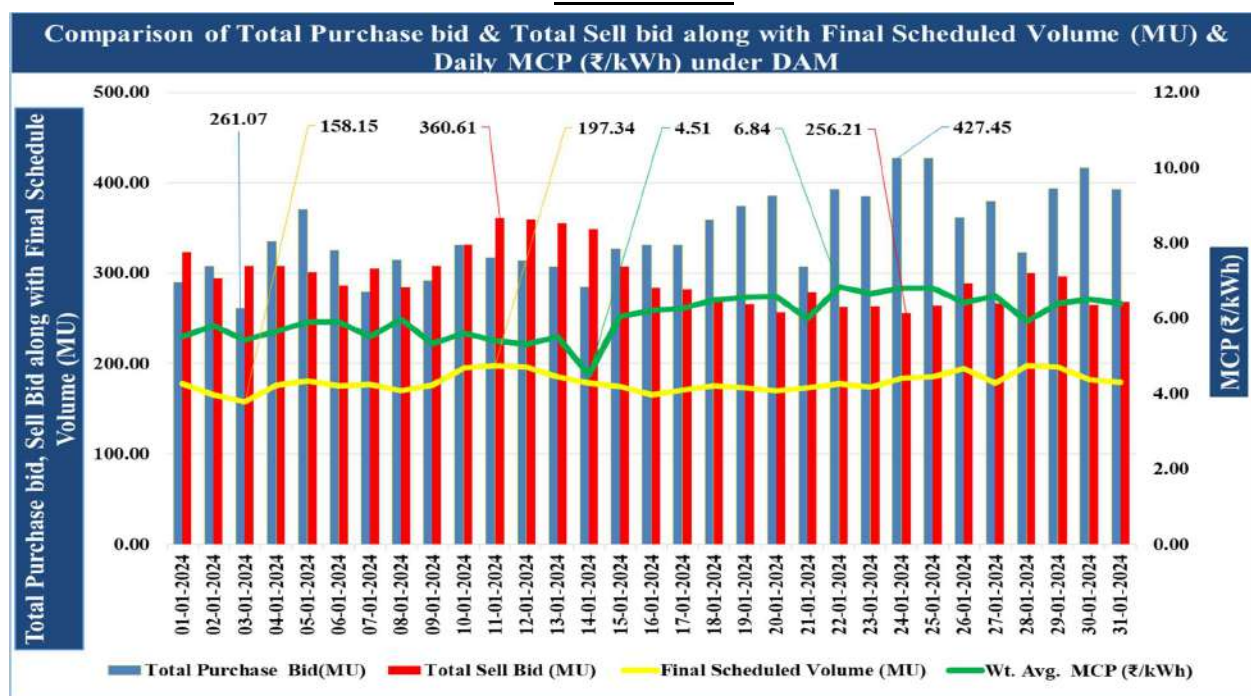
The total volume of electricity scheduled at ISTS during the month of January, 2024 was **63,794 MU**.

The total volume of electricity transacted in the short term market was **23.26 %** of total volume schedule at ISTS in January, 2024.

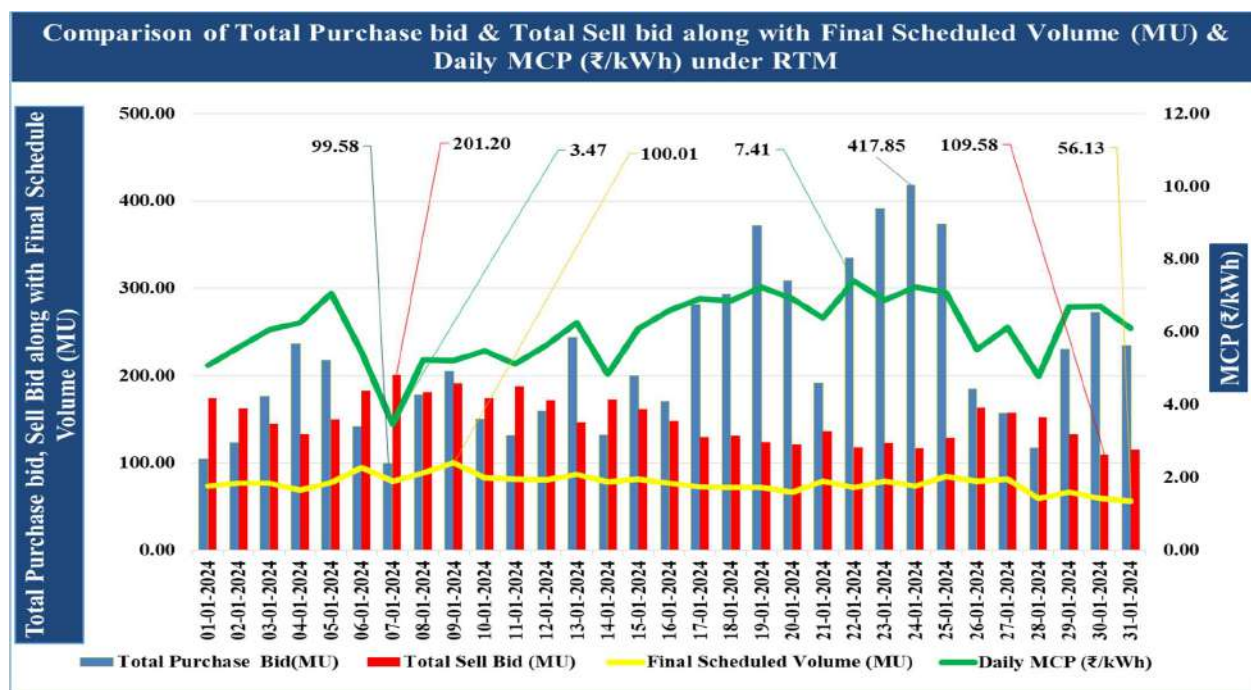
- जनवरी, 2024 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:

The variation of Purchase and Sell bids, Final Scheduled Volume and Daily Wt. Avg. MCP under DAM and RTM during the month of January, 2024 are shown in following figures:

DAM Volume



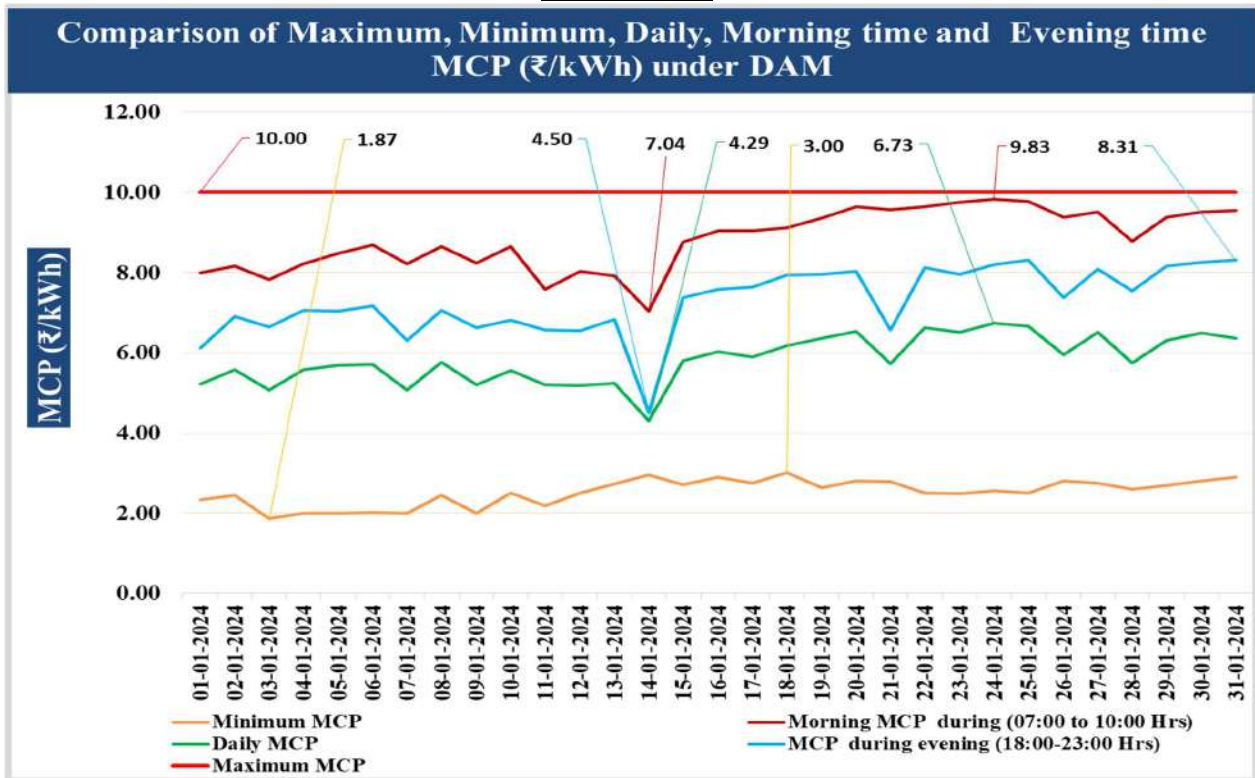
RTM Volume



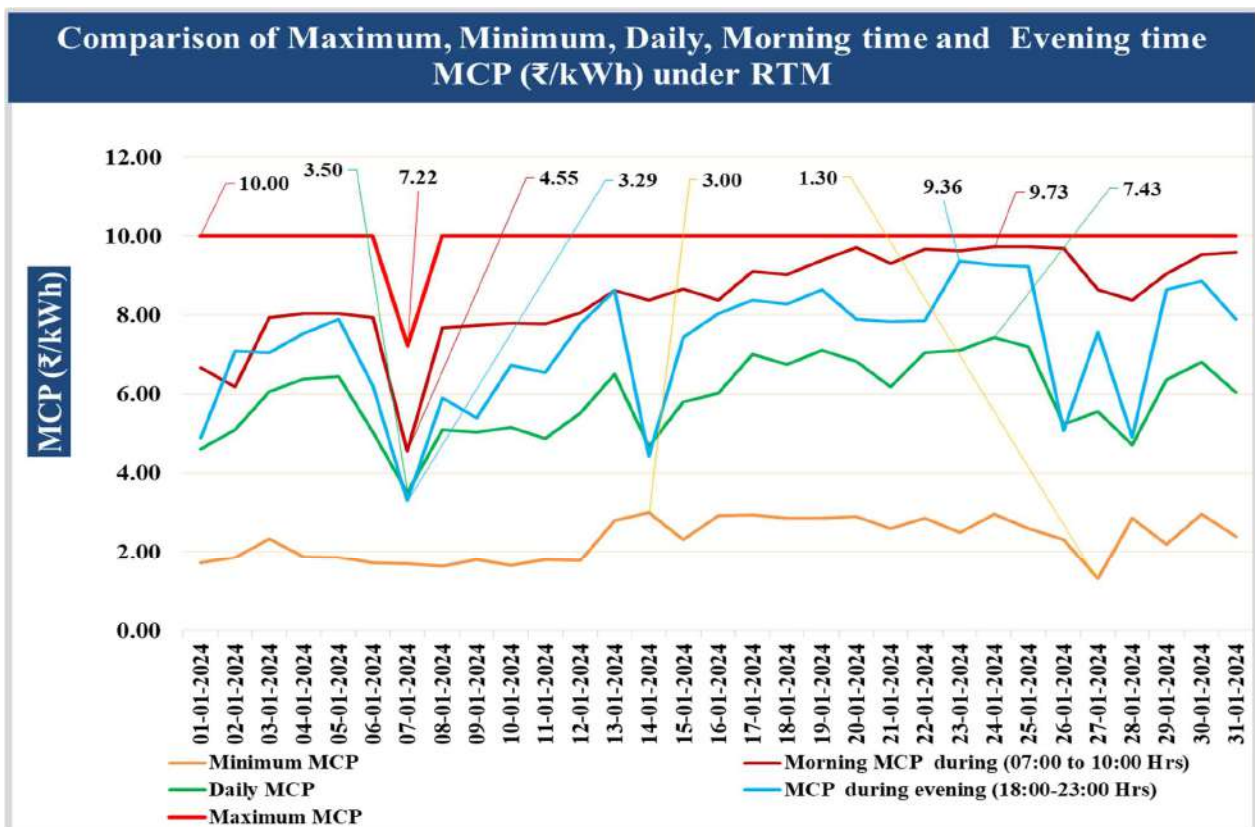
- जनवरी, 2024 माह के दौरान DAM और RTM में अधिकतम, न्यूनतम, दैनिक, सुबह और शाम के समय MCP की भिन्नता निम्नलिखित चित्रों में दिखाई गई है:

The variation of Maximum, Minimum, Daily, Morning and Evening time MCPs under DAM and RTM during the month of January, 2024 are shown in following figures:

DAM Prices



RTM Prices



MARKET MONITORING REPORT DETAILS

1. Day Ahead Market (DAM)

*The volume of electricity transacted under DAM was **5,588.15 MU** at a Wt. Avg. Price of ₹ **6.05/kWh** in January, 2024.*



- 1.1. The total volume of electricity transacted on the power exchanges, viz., IEX, PXIL and HPX in the Day Ahead Market (DAM) in January, 2024 was **5,588.15 MU**. The total energy supplied in the country during the month of January, 2024 was 133,188 MU. Thus, the volume of electricity transacted on the power exchanges under DAM during January, 2024 was 4.20 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted under DAM during last month December, 2023 i.e. **4,771.80 MU** which was 3.88 % of the total energy supplied (123,131 MU) in the country during December, 2023. Similarly, the total volume of electricity transacted under DAM during previous year i.e. January, 2023, was **4,948.08 MU** which was 3.92 % of the total energy supplied (126,302 MU) in the country during January, 2023.
- 1.2. The volume of electricity transacted on IEX, PXIL and HPX during January, 2024 were **5561.85 MU, 17.19 MU and 9.11 MU**, respectively. The volume of electricity transacted on IEX, PXIL and HPX during December, 2023 were **4757.55 MU, 3.30 MU and 10.95 MU**, respectively. The volume of electricity transacted on IEX & PXIL during January, 2023 were **4947.96 MU and 0.12 MU** and no transaction of electricity took place in HPX during January, 2023.
- 1.3. The DAM volume for January, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **545.88 MU** (i.e. 218.90 MU bought by Nepal, 326.98 MU bought by Bhutan).
- 1.4. The Average Market Clearing Price (MCP) on IEX during the month of January, 2024 was ₹ **6.03/kWh**, which shows an increase of 28.57 % & a decrease 5.78 % when compared with Wt. Avg. MCP's for the month of December, 2023 and January, 2023, which were ₹ **4.69/kWh** and ₹ **6.40/kWh**, respectively. On PXIL, the Wt. Avg. MCP during the month of January, 2024 was ₹ **10.00/kWh**, which shows an increase of 4.82 % & a decrease 15.80 % when compared with Wt. Avg. MCP's for the month of December, 2023 and January, 2023, which were ₹ **9.54/kWh** and ₹ **11.33/kWh**, respectively. On HPX, the Wt. Avg. MCP during the month of January, 2024 was ₹ **10.00/kWh**, which shows no change when compared with Wt. Avg. MCP's for the month of December, 2023, which was ₹ **10.00/kWh** and no transaction of electricity took place in HPX during January, 2023.
- 1.5. The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 936 time blocks on 1st to 31st January, 2024. 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 415 time blocks on 11th to 13th & 15th to 31st January, 2024. 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 244 time blocks on 8th, 9th, 11th, 16th to 20th, 22nd to 24th, 30th & 31st January, 2024. 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 ₹ 1.87/kWh in IEX was observed in all 13 regions during the time block 05:00 - 05:15 Hrs on 3rd January, 2024. As there was no congestion in transmission system, the MCP for this time-block was also ₹ 1.87/kWh. Whereas, in PXIL, the minimum ACP of ₹ 9.50/kWh was observed in all 13 regions during the time blocks 07:30-07:45 to 08:45-09:00 Hrs on 7th January, 2024. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 9.50/kWh. Further, in HPX, the minimum ACP of ₹ 10.00/kWh was observed in all 13 regions during 244 time blocks on 8th, 9th, 11th, 16th to 20th, 22nd to 24th, 30th & 31st January, 2024.

1.7. Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP), Area Clearing Prices (ACP) under Day Ahead Market during the month of January, 2024 as compared with December, 2023 and January, 2023 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	January, 2024*	5561.85	158.15	197.60	179.41
	December, 2023*	4757.55	134.77	177.90	153.47
	%Change (Month over Month)	16.91	17.35	11.07	16.90
	January, 2023*	4947.96	129.04	198.30	159.61
	%Change (Year over Year)	12.41	22.56	-0.35	12.41
PXIL	January, 2024	17.19	0.04	2.73	0.82
	December, 2023	3.30	0.04	1.06	0.25
	%Change (Month over Month)	420.91	0.00	157.55	228.00
	January, 2023	0.12	0.12	0.12	0.12
	%Change (Year over Year)	14225.00	-66.67	2175.00	583.33
HPX	January, 2024	9.11	0.43	0.88	0.70
	December, 2023	10.95	0.05	1.90	0.78
	%Change (Month over Month)	-16.80	760.00	-53.68	-10.26
	January, 2023	-	-	-	-
	%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 Wt. 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	January, 2024	4.51	6.84	1.87	10.00	6.03
	December, 2023	3.12	6.10	2.05	10.00	4.69
	%Change (Month over Month)	44.55	12.13	-8.78	0.00	28.57
	January, 2023	4.05	8.39	2.00	12.00	6.40
	%Change (Year over Year)	11.36	-18.47	-6.50	-16.67	-5.78
PXIL	January, 2024	9.50	10.00	9.50	10.00	10.00
	December, 2023	6.21	10.00	4.35	10.00	9.54
	%Change (Month over Month)	52.98	0.00	118.39	0.00	4.82
	January, 2023	11.33	11.33	9.99	12.00	11.33
	%Change (Year over Year)	-16.15	-11.74	-4.90	-16.67	-11.74
HPX	January, 2024	10.00	10.00	10.00	10.00	10.00
	December, 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
	January, 2023	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA

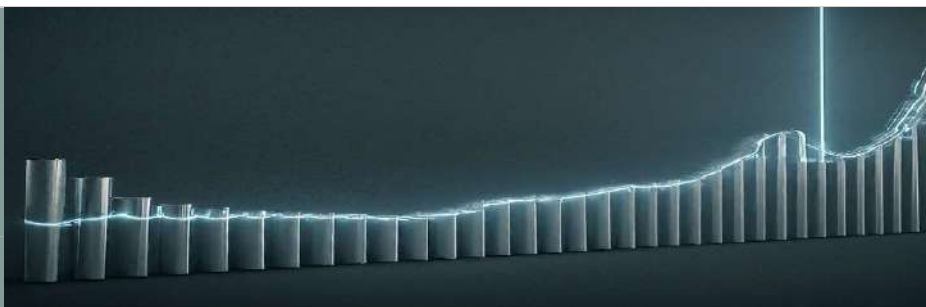
-: No transaction took place

NA: Not Applicable

Table: 1B

2. Real Time Market (RTM)

The volume of electricity transacted under RTM was **2,386.44** at a Wt. Avg. Price of ₹ **6.08/kWh** in January, 2024.



- 2.1.** The total volume of electricity transacted on the power exchanges under Real Time Market in January, 2024 was **2,386.44 MU**, out of which **2,379.90 MU** (99.73%) was transacted in IEX, **0.57 MU** (0.02 %) was transacted in HPX and **5.97 MU** (0.25 %) was transacted in HPX.
- 2.2.** The total volume of electricity transacted on the power exchanges under Real Time Market in January, 2024 was **2,406.02 MU**, out of which **2,404.59 MU** (99.94 %) was transacted in IEX, **0.68 MU** (0.03 %) was transacted in HPX and **0.75 MU** (0.03 %) was transacted in HPX.
- 2.3.** The RTM volume for January, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XIII**), which was **19.54 MU** (i.e. 9.58 MU bought by Nepal, 0.15 MU sold by Nepal, 9.81 MU bought by Bhutan).
- 2.4.** The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP) and Area Clearing Prices (ACP) under Real Time Market during the month of January, 2024 as compared with December, 2023 and January, 2023 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	January, 2024*	2379.90	56.13	100.01	76.77
	December, 2023*	2404.59	60.40	109.42	77.57
	% Change (Month over Month)	-1.03	-7.07	-8.60	-1.03
	January, 2023	2101.89	47.88	104.24	67.80
	% Change (Year over Year)	13.23	17.23	-4.06	13.23
PXIL	January, 2024	0.57	0.01	0.40	0.14
	December, 2023	0.68	0.09	0.16	0.11
	% Change (Month over Month)	-16.18	-88.89	150.00	27.27
	January, 2023	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA
HPX	January, 2024	5.97	0.10	4.04	0.85
	December, 2023	0.75	0.15	0.24	0.19
	% Change (Month over Month)	696.00	-33.33	1583.33	347.37
	January, 2023	-	-	-	-

Exchange	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

-: 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 Wt. 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	January, 2024	3.47	7.41	1.30	10.00	6.07
	December, 2023	2.98	6.40	0.99	10.00	4.61
	% Change (Month over Month)	16.44	15.78	31.31	0.00	31.67
	January, 2023	3.08	9.83	0.49	12.00	6.08
	% Change (Year over Year)	12.66	-24.62	165.31	-16.67	-0.16
PXIL	January, 2024	10.00	10.00	10.00	10.00	10.00
	December, 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
	January, 2023	-	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA	NA
HPX	January, 2024	10.00	10.00	10.00	10.00	10.00
	December, 2023	7.00	10.00	7.00	10.00	9.05
	% Change (Month over Month)	42.86	0.00	42.86	0.00	10.50
	January, 2023	-	-	-	-	-
	% Change (Year over Year)	NA	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-2B

3. Green Day Ahead Market (GDAM)

*The volume of electricity transacted under GDAM was **209.45 MU** at a Wt. Avg. Price of ₹ **5.90/kWh** in January, 2024.*



- 3.1. The volume of electricity transacted under GDAM in January, 2024 was **209.45 MU** (**67.04 MU** in Solar, **137.56 MU** in Non-Solar and **4.85 MU** in Hydro) in IEX at an Wt. Avg. MCP of ₹ **5.90/kWh** and no transaction took place in PXIL & HPX under GDAM.
- 3.2. There was no real time curtailment in the power exchanges under Green Day Ahead Market during the month of January, 2024, December, 2023 and January, 2023.
- 3.3. The **top 10 sellers** on the power exchanges under Green Day Ahead Market (GDAM) in January, 2024 were **Altra Xergi Power Private Limited, Adani Wind Energy Kutchh Four Ltd. Nakhatrana, Ayana Renewable Power Six Private Limited, Andhra Pradesh, J&K, Ostro Kannada Power Private Limited, Madhya Pradesh, Adani Renewable Energy Holding Four Limited, Continuum Power Trading (TN) Private Limited and Renew Surya Roshni Private Limited Koppal PS**, which constituted **79.36 %** of the market volume.
- 3.4. The **top 10 buyers** on the power exchanges under Green Day Ahead Market (GDAM) in January, 2024 were **Arcelor Mittal Nippon steel (ESIL), Delhi, Maharashtra, Tamil Nadu, Punjab, DVC, BHARAT ALUMINIUM COMPANY LTD (Bulk Consumer), Karnataka, Madhya Pradesh and Uttar Pradesh**, which constituted **80.99 %** 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) under Green Day Ahead Market during the month of January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	67.04	0.47	3.93	2.16
		December, 2023	53.32	1.09	3.39	1.72
		% Change (Month over Month)	25.73	-56.88	15.93	25.58
		January, 2023	26.06	0.18	1.40	0.84
		%Change (Year over Year)	157.25	161.11	180.71	157.14
	Non Solar	January, 2024	137.56	2.74	6.83	4.44
		December, 2023	157.71	3.49	8.12	5.09

Exchange	Segment	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
		% Change (Month over Month)	-12.78	-21.49	-15.89	-12.77
		January, 2023	259.10	4.11	11.58	8.36
		%Change (Year over Year)	-46.91	-33.33	-41.02	-46.89
	Hydro	January, 2024	4.85	0.01	0.61	0.16
		December, 2023	7.73	0.02	0.78	0.25
		% Change (Month over Month)	-37.26	-50.00	-21.79	-36.00
		January, 2023	-	-	-	-
PXIL	Solar, Non Solar and Hydro	%Change (Year over Year)	NA	NA	NA	NA
		January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
HPX	Solar, Non Solar and Hydro	%Change (Year over Year)	NA	NA	NA	NA
		January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-3A

(ii) Daily Wt. 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	January, 2024	4.82	7.27	3.20	10.00	5.90
		December, 2023	4.11	6.58	2.85	10.00	4.86
		% Change (Month over Month)	17.27	10.49	12.28	0.00	21.40
		January, 2023	4.13	9.25	2.86	12.00	6.44
		% Change (Year over Year)	16.71	-21.41	11.89	-16.67	-8.39
PXIL		January, 2024	-	-	-	-	-
		December, 2023	-	-	-	-	-

Exchange	Segment	Period	Prices (₹/kWh)				
			Daily MCP (₹/kWh)		ACP (₹/kWh)		Monthly Avg. MCP (₹/kWh)
			Minimum	Maximum	Minimum	Maximum	Average
	Solar, Non Solar and Hydro	% Change (Month over Month)	NA	NA	NA	NA	NA
		January, 2023	-	-	-	-	-
		% Change (Year over Year)	NA	NA	NA	NA	NA
HPX	Solar, Non Solar and Hydro	January, 2024	-	-	-	-	-
		December, 2023	-	-	-	-	-
		% Change (Month over Month)	NA	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-3B

4. Term Ahead Market (TAM)

*The volume of electricity transacted under TAM was **1651.94 MU** at a Wt. Avg. Price of ₹ 5.90/kWh in January, 2024*



- 4.1. The total volume of electricity transacted on the power exchanges under Term Ahead Market in January, 2024 on delivery date basis was **1651.94 MU**, out of which **1103.79 MU** (66.82 %) was transacted on IEX, **179.26 MU** (10.85 %) was transacted on PXIL and **368.89 MU** (22.33 %) was transacted on HPX.
- 4.2. The total volume of electricity transacted on the power exchanges under Term Ahead Market in December, 2023 on delivery date basis was on the power exchanges under Term Ahead Market in January, 2024 on delivery date basis was **1198.99 MU**, out of which **1071.93 MU** (89.40 %) was transacted on IEX, **23.42 MU** (1.95 %) was transacted on PXIL and **103.64 MU** (8.64 %) was transacted on HPX.
- 4.3. Similarly, the total volume of electricity transacted on the power exchanges under Term Ahead Market in January, 2023 on delivery date basis was **415.31 MU**, out of which **287.48 MU** (75.66 %) was transacted on IEX and **133.60 MU** (24.34 %) was transacted on PXIL. No transaction of electricity took place in HPX.
- 4.4. With respect to the total energy supplied during the month of January, 2024 in the country, the volume of electricity traded on the power exchanges under TAM on delivery date basis represents **1.24 %** of the total energy supplied. The same was **0.97 %** in December, 2023 and **0.43 %** in January, 2023.
- 4.5. In January, 2024, there was no transmission congestion in IEX, PXIL & HPX under TAM.
- 4.6. In January, 2024, there was real time curtailment of **43.47 MU** under TAM, Out of which **5.67 MU** was under Daily-Anyday contract, **14.70 MU** was under Monthly contract and **6.04 MU** was under Anyday Single Sided contract in IEX. Whereas, in PXIL, there was real time curtailment of **5.45 MU** under Daily-Anyday contract and **0.65 MU** under Anyday Single Sided contract. Whereas, in HPX, there was real time curtailment of **5.62 MU** under Daily-Anyday contract, **1.90 MU** was under Monthly contract and **3.44 MU** under Anyday Single Sided contract under TAM.
- 4.7. The comparison of total volume of electricity transacted and Wt. Avg. MCP in the power exchanges under Term Ahead Market (TAM) on delivery date basis during January, 2024 with December, 2023 and January, 2023 are shown in Table – 4A & 4B:

(i) Final Scheduled Volume (MU), January, 2024 vis- a- vis December, 2023 and January, 2023

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
IEX	January, 2024	408.84	-	245.70	449.25	1103.79
	December, 2023	501.63	65.21	140.74	364.35	1071.93

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
	%Change (Month over Month)	-18.50	NA	74.58	23.30	2.97
	January, 2023	90.00	134.40	37.20	153.71	415.31
	%Change (Year over Year)	354.27	NA	560.48	192.27	165.77
PXIL	January, 2024	115.20	-	-	64.06	179.26
	December, 2023	20.17	-	3.25	-	23.42
	%Change (Month over Month)	471.15	NA	NA	NA	665.41
	January, 2023	100.80	16.80	-	16.00	133.60
	%Change (Year over Year)	14.29	NA	NA	300.38	34.18
HPX	January, 2024	147.00	-	72.50	149.39	368.89
	December, 2023	20.60	-	-	83.04	103.64
	%Change (Month over Month)	613.59	NA	NA	79.90	255.93
	January, 2023	-	-	-	-	-
	%Change (Year over Year)	NA	NA	NA	NA	NA

- : No transaction took place

NA: Not Applicable

Table: 4A

(ii) Wt. Avg. MCP, January, 2024 vis- a- vis December, 2023 and January, 2023

Exchange	Period	Wt. Avg. MCP (₹/kWh)			
		Daily or Any Day	Weekly	Monthly	Anyday Single Side
IEX	January, 2024	5.52	-	5.45	6.78
	December, 2023	5.45	6.15	5.90	6.32
	%Change (Month over Month)	1.28	NA	-7.63	7.28
	January, 2023	4.85	6.25	*	*
	%Change Year over Year)	13.81	NA	NA	NA
PXIL	January, 2024	8.23	-	-	8.56
	December, 2023	8.79	-	9.50	-
	%Change (Month over Month)	-6.37	NA	NA	NA
	January, 2023	-	-	*	*
	%Change (Year over Year)	NA	NA	NA	NA
HPX	January, 2024	6.25	-	5.20	8.15
	December, 2023	5.65	-	-	7.46
	%Change (Month over Month)	10.62	NA	NA	9.25
	January, 2023	-	-	*	*
	%Change Year over Year)	NA	NA	NA	NA

-: No transaction took place

*: Data not available

NA: Not Applicable

Table: 4B

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

The volume of electricity transacted under DAC & ID was **594.78 MU** at a Wt. Avg. Price of ₹ 7.09/kWh in January, 2024.



5.1. The total volume of electricity transacted in the IEX, PXIL & HPX under DAC & ID on delivery date basis during January, 2024 was **594.78 MU**.

5.2. In January, 2024, there was transmission congestion of **0.09 MU** under Day Ahead Contingency contract in IEX under DAC & ID.

5.3. In January, 2024, there was real time curtailment of **0.98 MU** under Day Ahead Contingency contract in IEX under DAC & ID.

5.4. The total volume of electricity transacted under DAC & ID under Day Ahead Contingency & Intra Day contracts during January, 2024 and its comparison with December, 2023 and January, 2023 on delivery date basis are shown in Tables- 5A & 5B:

(i) Final Scheduled Volume (MU), January, 2024 vis- a- vis December, 2023 and January, 2023

Exchange	Period	Final Scheduled Volume (MU)		
		Day Ahead Contingency	Intra Day	Total
IEX	January, 2024	111.88	1.61	113.49
	December, 2023	147.43	0.94	148.37
	%Change (Month over Month)	-24.11	71.28	-23.51
	January, 2023	502.59	0.84	503.43
	%Change (Year over Year)	-77.74	91.67	-77.46
PXIL	January, 2024	305.96	2.02	307.98
	December, 2023	127.82	13.46	141.28
	%Change (Month over Month)	-12.47	-88.04	-19.67
	January, 2023	522.38	5.13	527.51
	%Change (Year over Year)	-78.58	-68.62	-78.49
HPX	January, 2024	172.74	0.57	173.31
	December, 2023	72.20	3.42	75.62
	%Change (Month over Month)	139.25	-83.33	129.19
	January, 2023	410.30	-	410.30
	%Change (Year over Year)	-57.90	NA	-57.76

- : No transaction took place

NA: Not Applicable

Table: 5A

(ii) Wt. Avg. MCP, January, 2024 vis- a- vis December, 2023 and January, 2023

Exchange	Period	Wt. Avg. MCP (₹/kWh)	
		Day Ahead Contingency	Intra Day
IEX	January, 2024	7.07	8.41
	December, 2023	6.36	9.42
	%Change (Month over Month)	11.16	-10.72
	January, 2023	7.14	12.00
	%Change Year over Year)	-0.98	-29.92
PXIL	January, 2024	8.17	8.82
	December, 2023	7.62	9.22
	%Change (Month over Month)	7.22	-4.34
	January, 2023	7.57	11.32
	%Change (Year over Year)	7.93	-22.08
HPX	January, 2024	8.24	9.57
	December, 2023	8.65	9.77
	%Change (Month over Month)	-4.74	-2.05
	January, 2023	8.17	-
	%Change Year over Year)	0.86	NA

- : No transaction took place

NA: Not Applicable

Table: 5B

6. Green Term Ahead Market (GTAM)

The volume of electricity transacted under GTAM was **51.20 MU** at a Wt. Avg. Price of ₹ **6.55/kWh** in January, 2024.



The total volume of electricity transacted in the IEX & HPX under GTAM on delivery date basis during January, 2024 was **51.20 MU** in Non-Solar. Whereas, no transactions took place in PXIL under GTAM.

The total volume of electricity transacted under GTAM in Daily/ Anyday, Weekly, Monthly and Anyday Single Side contracts during January, 2024 and its comparison with December, 2023 and January, 2023 on delivery date basis are shown in tables 6A to 6F.

6.1. Solar Energy Segment under GTAM

The Final Scheduled Volume and the Price of electricity transacted under GTAM (Solar) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
PXIL		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-6A

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

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-6B

6.1.1. In January, 2024, there was no transaction under GTAM (Solar) in IEX, PXIL & HPX.

6.2. Non-Solar Energy Segment under GTAM

The Final Scheduled Volume and the Price of electricity transacted under GTAM (Non-Solar) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	9.53	0.10	0.41	0.31
		December, 2023	9.58	0.29	0.31	0.31
		%Change (Month over Month)	-0.52	-65.52	32.26	0.00
		January, 2023	5.57	0.10	0.26	0.18
		%Change (Year over Year)	71.10	0.00	57.69	72.22
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	1.86	0.06	0.06	0.06
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	Anyday Single Side	%Change (Year over Year)	NA	NA	NA	NA
		January, 2024	15.25	0.49	0.49	0.49
		December, 2023	5.90	0.49	0.49	0.49
		%Change (Month over Month)	158.47	0.00	0.00	0.00
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Daily/Anyday	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	January, 2024	0.92	0.18	0.19	0.18
		December, 2023	2.28	0.22	0.31	0.25
		%Change (Month over Month)	-59.65	-18.18	-38.71	-28.00
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	23.64	0.60	0.84	0.76
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

Table - 6C

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

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	January, 2024	6.08	6.13	6.09
		December, 2023	6.03	6.10	6.04
		%Change (Month over Month)	0.83	0.49	0.83
		January, 2023	5.70	6.10	5.82
		%Change (Year over Year)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	6.10	6.10	6.10
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	January, 2024	6.69	6.69	6.69
		December, 2023	6.69	6.69	6.69
		%Change (Month over Month)	0.00	0.00	0.00
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Anyday Single Side	%Change (Year over Year)	NA	NA	NA
		January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	January, 2024	5.50	5.50	5.50
		December, 2023	5.50	5.50	5.50
		%Change (Month over Month)	0.00	0.00	0.00
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Anyday Single Side	January, 2024	6.70	6.74	6.73
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table - 6D

6.2.1. In January, 2024, there was no transmission congestion in IEX & HPX. Whereas, no transaction took place in PXIL under GTAM (Non Solar).

6.2.2. In January, 2024, there was no real time curtailment in IEX & HPX. Whereas, no transaction took place in PXIL under GTAM (Non Solar).

6.3 Hydro Energy Segment under GTAM

The Final Scheduled Volume and the Price of electricity transacted under GTAM (Hydro) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Daily/Anyday	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Daily/Anyday	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Monthly	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 6E

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

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Weekly	%Change (Year over Year)	NA	NA	NA
		January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Daily/Anyday	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Monthly	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Anyday Single Side	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table – 6F

6.3.1. In January, 2024, there was no transaction under GTAM (Hydro) in IEX, PXIL & HPX.

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

The volume of electricity transacted under G-DAC & ID was **3.81 MU** at a Wt. Avg. Price of ₹ 6.78/kWh in January, 2024.



The total volume of electricity transacted in the PXIL & HPX under G-DAC & ID on delivery date basis during January, 2024 was **3.81 MU** (**0.53 MU** in Solar and **3.28 MU** in Non-Solar), respectively. There was no transaction under G-DAC & ID in IEX in January, 2024

The total volume of electricity transacted under G-DAC & ID in Day Ahead Contingency and Intra Day contracts during January, 2024 and its comparison with December, 2023 and January, 2023 on delivery date basis are shown in tables 7A to 7F.

7.1. Solar Energy Segment under G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted under G-DAC & ID (Solar) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Day Ahead Contingency	January, 2024	0.53	0.01	0.03	0.02
		December, 2023	0.67	0.01	0.04	0.03
		%Change (Month over Month)	-20.90	0.00	-25.00	-33.33
		January, 2023	0.20	0.20	0.20	0.20
		%Change (Year over Year)	165.00	-95.00	-85.00	-90.00
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-7A

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

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-

Exchange	Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
HPX		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Day Ahead Contingency	January, 2024	4.12	7.61	5.91
		December, 2023	3.79	7.09	4.92
		%Change (Month over Month)	8.71	7.33	20.12
		January, 2023	7.28	7.28	7.28
		%Change (Year over Year)	-43.41	4.53	-18.82
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table-7B

7.1.1. In January, 2024, there was no transmission congestion under G-DAC & ID (Solar) in HPX. There was no transaction in IEX & PXIL under G-DAC & ID (Solar).

7.1.2. In January, 2024, there was no real time curtailment under G-DAC & ID (Solar) in HPX. There was no transaction in IEX & PXIL under G-DAC & ID (Solar).

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

The Final Scheduled Volume and the Price of electricity transacted under G-DAC & ID (Non-Solar) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	41.41	0.08	3.19	1.53
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL		January, 2024	2.06	0.03	0.16	0.09

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum (on a day)	Maximum (on a day)	Average (per day)
	Day Ahead Contingency	December, 2023	1.64	0.01	0.11	0.08
		%Change (Month over Month)	25.61	200.00	45.45	12.50
		January, 2023	44.84	0.11	2.24	1.45
		%Change (Year over Year)	-95.41	-72.73	-92.86	-93.79
		January, 2024	0.005	0.005	0.005	0.005
	Intra Day	December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
		January, 2024	1.22	0.004	0.22	0.04
HPX	Day Ahead Contingency	December, 2023	0.86	0.004	0.11	0.04
		%Change (Month over Month)	41.86	0.00	100.00	0.00
		January, 2023	18.41	0.10	1.13	0.68
		%Change (Year over Year)	-93.37	-96.00	-80.53	-94.12
		January, 2024	-	-	-	-
	Intra Day	December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
		January, 2024	1.22	0.004	0.22	0.04

∴ No transaction took place

NA: Not Applicable

Table - 7C

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

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	4.32	8.64	6.45
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	January, 2024	6.19	8.02	7.06
		December, 2023	4.22	8.14	5.90
		%Change (Month over Month)	46.68	-1.47	19.66
		January, 2023	3.79	8.60	6.00
		%Change (Year over Year)	63.32	-6.74	17.67

Exchange	Non- Solar Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Intra Day	January, 2024	10.00	10.00	10.00
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
HPX	Day Ahead Contingency	January, 2024	4.60	9.59	6.66
		December, 2023	4.47	8.91	5.46
		%Change (Month over Month)	NA	NA	NA
		January, 2023	4.48	10.06	7.25
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table - 7D

7.2.1. In January, 2024, there was no transmission congestion in PXIL & HPX under G-DAC & ID (Non Solar). There was no transaction in IEX under G-DAC & ID (Non Solar).

7.2.2. In January, 2024, there was no real time curtailment in PXIL & HPX. There was no transaction in IEX under G-DAC & ID (Non Solar).

7.3. Hydro Energy Segment under G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted under G-DAC & ID (Hydro) in Power Exchanges during January, 2024 and its comparison with December, 2023 and January, 2023 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	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	14.37	0.28	0.71	0.46
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	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)
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		January, 2023	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
HPX	Day Ahead Contingency	January, 2024	-	-	-	-
		December, 2023	1.38	0.04	0.52	0.13
		%Change (Month over Month)	NA	NA	NA	NA
	Intra Day	January, 2024	-	-	-	-
		December, 2023	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table: 7E

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

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	5.45	11.85	8.58
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
PXIL		January, 2024	-	-	-

Exchange	Hydro Energy Contract	Period	Prices(₹/kWh)		
			Minimum	Maximum	Average
	Day Ahead Contingency	December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA
		January, 2023	-	-	-
		%Change (Year over Year)	NA	NA	NA
	HPX	January, 2024	-	-	-
		December, 2023	4.49	7.49	6.10
		%Change (Month over Month)	NA	NA	NA
	Intra Day	January, 2024	-	-	-
		December, 2023	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction took place

NA: Not Applicable

Table – 7F

7.3.1. In January, 2024, there was no transaction in IEX, PXIL and HPX under G-DAC & ID (Hydro).

7.3.2. In January, 2024, there was no transaction in IEX, PXIL and HPX under G-DAC & ID (Hydro).

8. Bilateral Transactions:

The total volume of electricity transacted through **bilateral transactions** in January, 2024 was **2,157.68 MU**. The total buy volume of electricity transacted in bilateral market through direct and trader transactions in January, 2024 were **701.44 MU** and **1,456.24 MU** respectively. The details of bilateral transactions of Electricity during January, 2024 are shown in table below:

January, 2024	Direct	Traders	Total Bilateral Transaction (MU)
Total	701.44	1,456.24	2,157.68
Minimum	0.21	0.33	-
Maximum	366.69	342.24	-

Table -8A

The region-wise maximum/ minimum volume of electricity transacted bilaterally during January, 2024 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	196.48	14.11	82.71	311.18	32.85	757.69	389.39	342.23	-	31.03
Minimum	9.25	0.33	5.81	0.40	0.21	13.62	22.71	3.86	-	4.65
Maximum	135.97	5.97	59.52	191.82	31.91	342.24	366.69	197.52	-	14.88

Table-8B

8.1. The top 5 buyers on bilateral transaction through direct transactions in January, 2024 were **Karnataka, Jharkhand, Daman and Diu - Dadra and Nagar Haveli, Odisha and Jammu Kashmir**, which constituted **92.01 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in January, 2024 were **Jammu Kashmir, Himachal Pradesh, Kerala, Maharashtra and Rajasthan**, which constituted **75.79 %** of the market volume. [Annexure III]

8.2. The top 5 sellers on bilateral transaction through direct transactions in January, 2024 were **ADHUNIK POWER & NATURAL RESOURCES LIMITED, Uttar Pradesh, NTPC Talcher Super Thermal Power Station Stage II, NTPC Ramagundam Stage I &II and Punjab**, which constituted **62.70 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in January, 2024 were **Jindal India Thermal Power Limited, Punjab, Jindal Power Limited, Stage-1, R.K.M POWERGEN PRIVATE LIMITED and SKS Power Generation Chhattisgarh Limited**, which constituted **53.33 %** of the market volume. [Annexure III]

8.3. Deviation Volume -The volume of Deviation observed in January, 2024 in import and export were **2,295.31 MU** and **2,097.63 MU** respectively. The total volume of Deviation observed in January, 2024 can be taken as **2,196.47 MU**.

8.4. A comparison of volume of electricity transacted through the Power Exchanges together under 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 January, 2024 is shown in **Figure 1**:

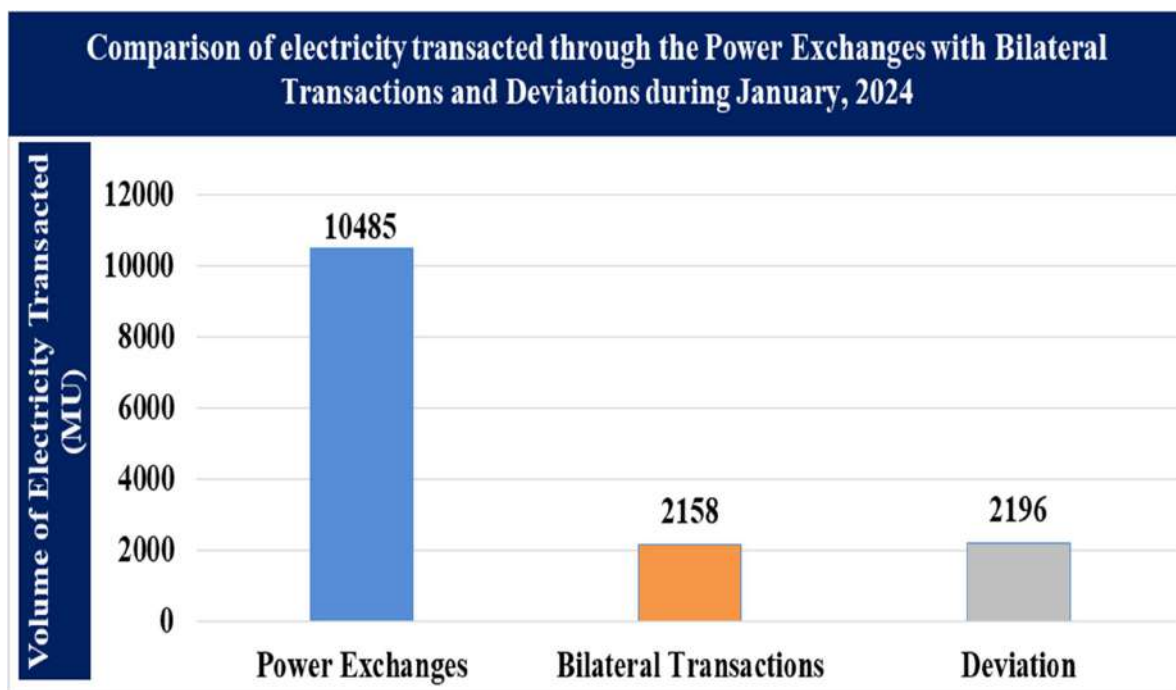
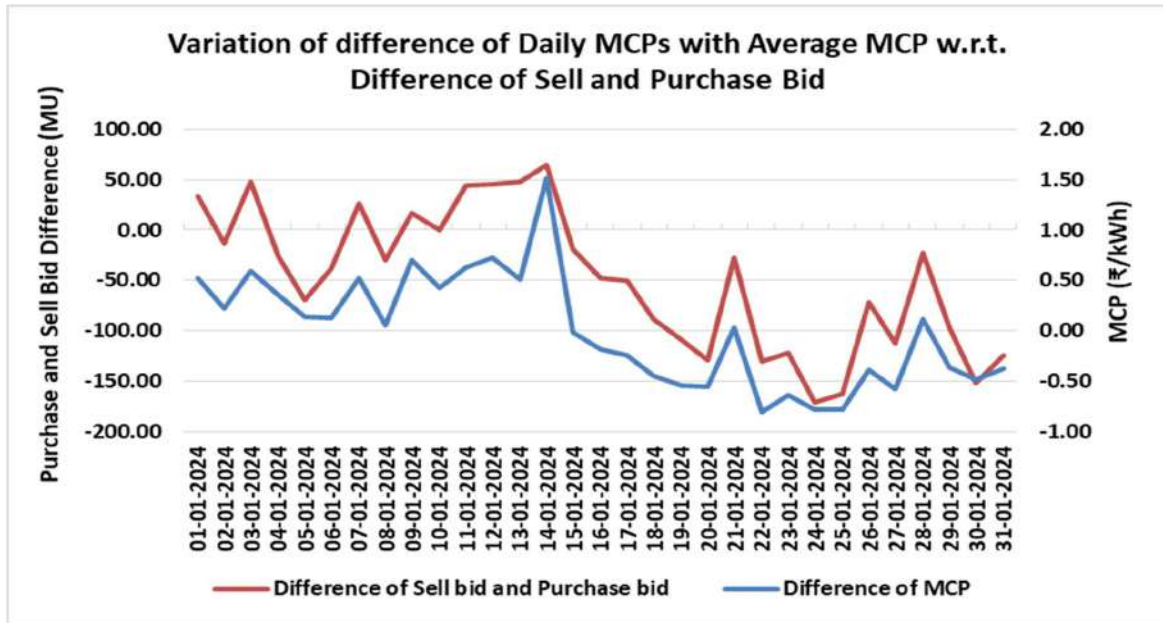


Figure -1

9. Analysis of movement of prices observed under DAM during January, 2024

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 January, 2024 month. The observations made are as under:

- 9.1. In order to find out the determinants which are responsible for the Daily Wt. Avg. MCP, a regression analysis has been carried out where the Daily Wt. 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 Wt. 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 Wt. Avg. MCP with respect to Peak Demand was **2.51** in January, 2024.
- 9.3. The variation of difference of Daily Wt. Avg. MCPs with Wt. Avg. 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**

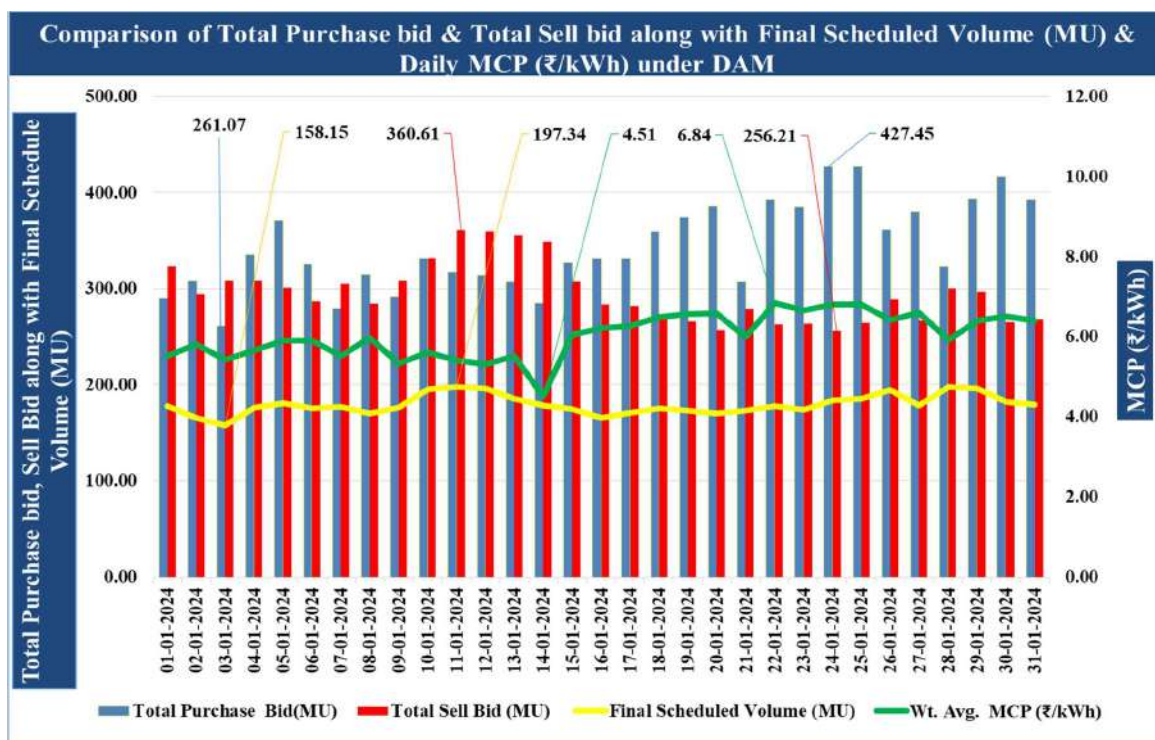


Figure – 2

9.5. Invariably, the Final Scheduled Volume (MU) and the Daily Wt. 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 January, 2024, it is observed that on second Monday (8th January, 2024), FSV showed decreasing trend in comparison to first Sunday (7th January, 2024), on third Monday (15th January, 2024), FSV showed decreasing trend in comparison to second Sunday (14th January, 2024), on fourth Sunday (28th January, 2024), FSV showed increasing trend in comparison to fourth Saturday (27th January, 2024). The detailed analysis on this is given 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**

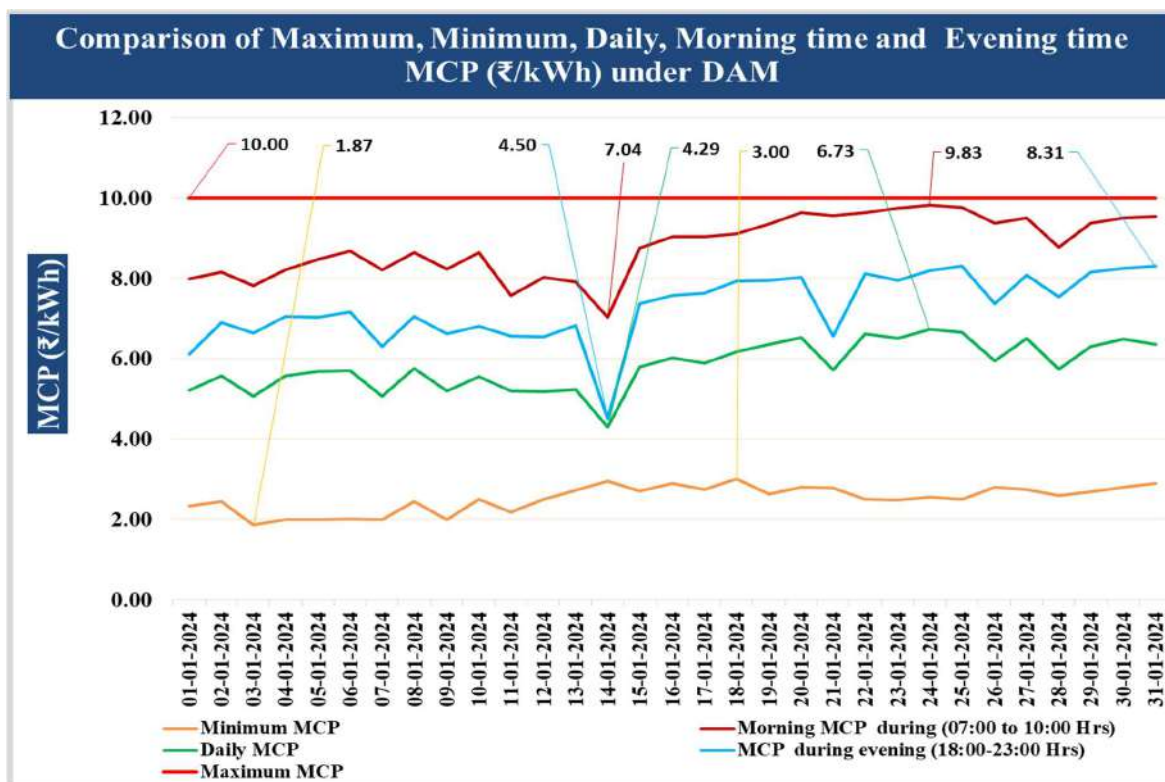


Figure-3

9.7. The Market Clearing Price duration curves for time block wise MCP for the month of January, 2024 is shown in **Figure 4**, whereas the time block wise MCP duration curve for the period 1st April, 2023 to 31st January, 2024 is shown in **Figure 5**.

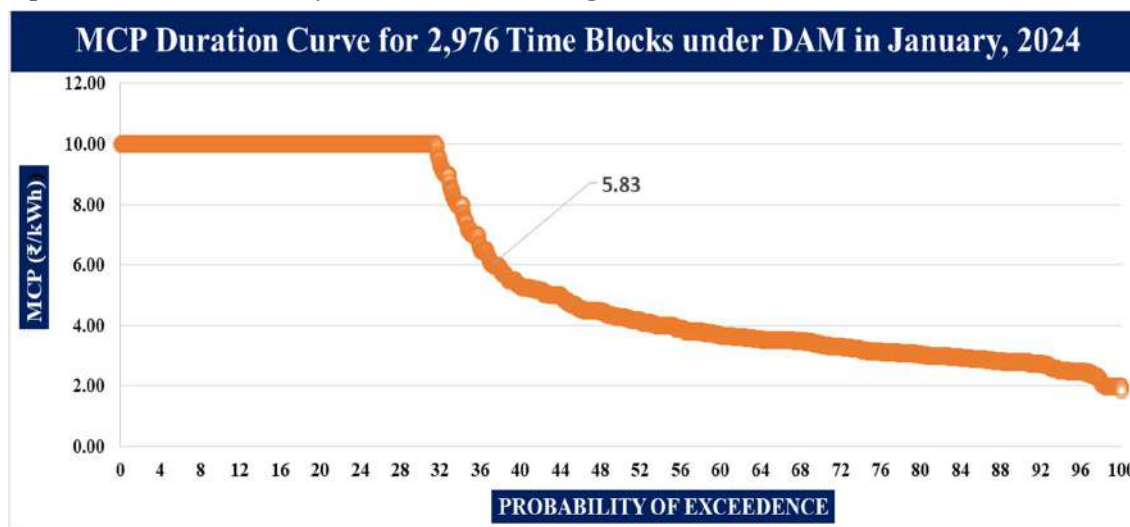


Figure – 4

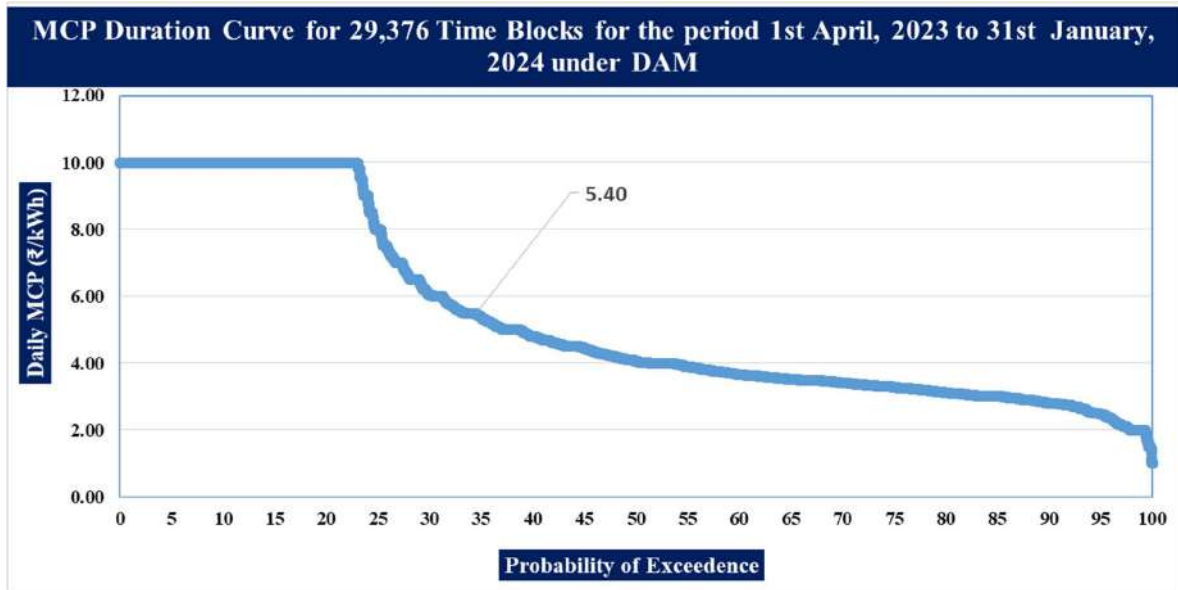


Figure-5

- 9.8. It can be seen in figure 4 above that in the MCP duration curve of January, 2024, for 37.00 % of the time MCP was above Wt. Avg. MCP of the month (i.e. ₹ 5.83/kWh) and almost 63.00 % of the time MCP was below the Wt. Avg. MCP of the month. Similarly, it can be seen in the MCP duration curve from 1st April, 2023 to 31st January, 2024 (figure-5), that for 35.00 % of the time the MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 5.40/kWh) and for 65.00 % of the time the Daily Wt. Avg. MCP was below the Wt. Avg. 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 January, 2024, the maximum FSV occurred mostly during the **time period 15-17 Hrs** (on 9 no. of days). Whereas, the maximum MCP occurred mostly during the **time period 07-08 Hrs** (on 15 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 23-24 Hrs** (on 15 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 03-04 Hrs** (on 26 no. of days). [Annexure VI]
- 9.11. In January, 2024, there was no congestion in IEX, PXIL & HPX. Further, in December, 2023, there was no congestion in IEX, PXIL & HPX. Further, in January, 2023, there was no congestion in IEX & PXIL and no transaction of electricity took place in HPX.
- 9.12. In January, 2024, there was **no** real time curtailment in IEX, PXIL & HPX. Further, in December, 2023, there was **no** real time curtailment in IEX, PXIL & HPX. Further in January, 2023, 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 under Day Ahead Market (**DAM**) in January, 2024 were **Chhattisgarh, Jindal Power Ltd. Stg-II, Mahan Energy Limited, Adani Power Limited**

- Raigarh TPP, JITPL, Uttar Pradesh, Gujarat, Adani Power Limited-Raipur TPP, Odisha and Jaypee Nigrie, which constituted **58.34 %** of the market volume. [Annexure VII]

9.14. The **top 10 purchasers** on the power exchanges under Day Ahead Market (**DAM**) in January, 2024 were **Telangana, Punjab, Uttar Pradesh, Gujarat, J&K, Andhra Pradesh, Druk Green Power Corporation Limited (DGPCL-Bhutan), Maharashtra, Haryana and Rajasthan**, which constituted **77.79 %** of the market volume. [Annexure VII]

9.15. The total volume of electricity purchased by Discoms/Licensees under DAM in January, 2024 was **4,952.44 MU**, which constituted **88.62 %** of total volume of electricity purchased on the power exchanges.

9.16. Similarly, the total volume of electricity sold by Discoms/Licensees under DAM in January, 2024 was **2,312.08 MU**, which constituted **41.37 %** of total volume of electricity sold on the power exchanges.

10. Analysis of movement of prices observed under Real Time Market (RTM) transactions in January, 2024

- 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 Coal Generation. Further, the regression analysis revealed that the elasticity of the Daily Wt. Avg. MCP with respect to Coal Generation was **4.81** in January, 2024.
- 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 Wt. Avg. MCP and FSV are shown in Figure-6 below:

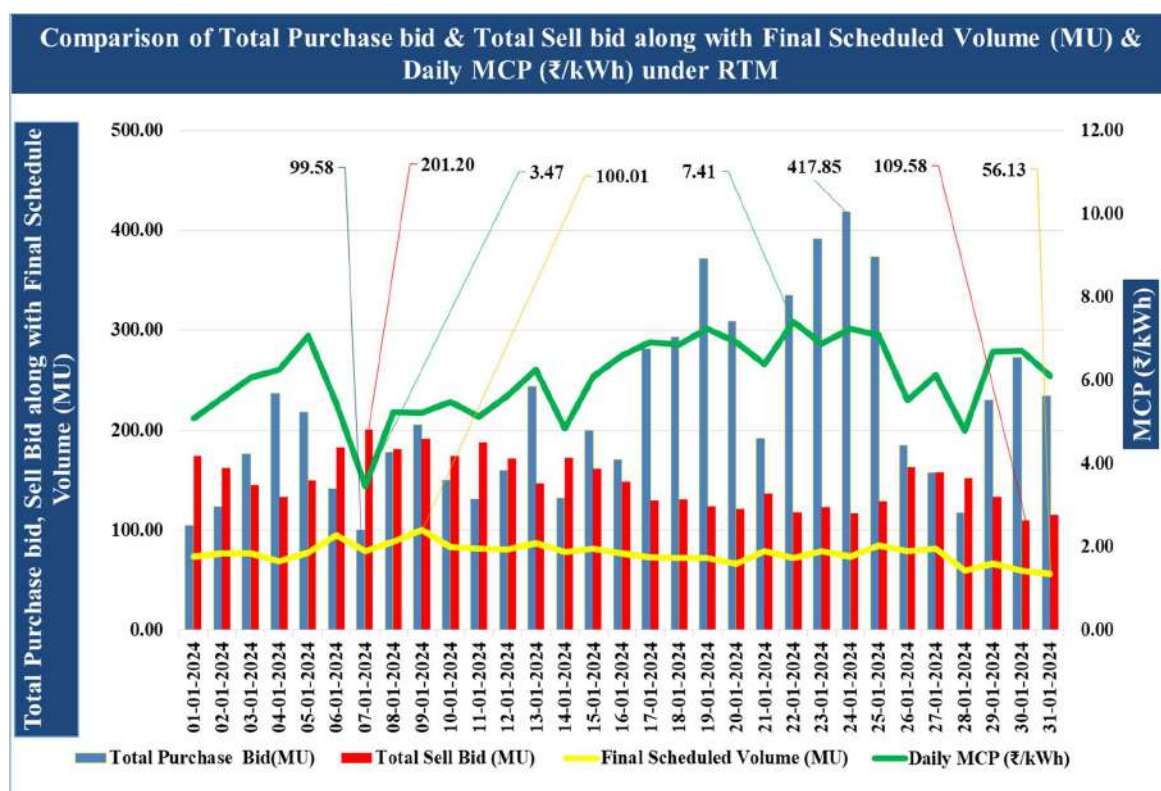


Figure-6

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

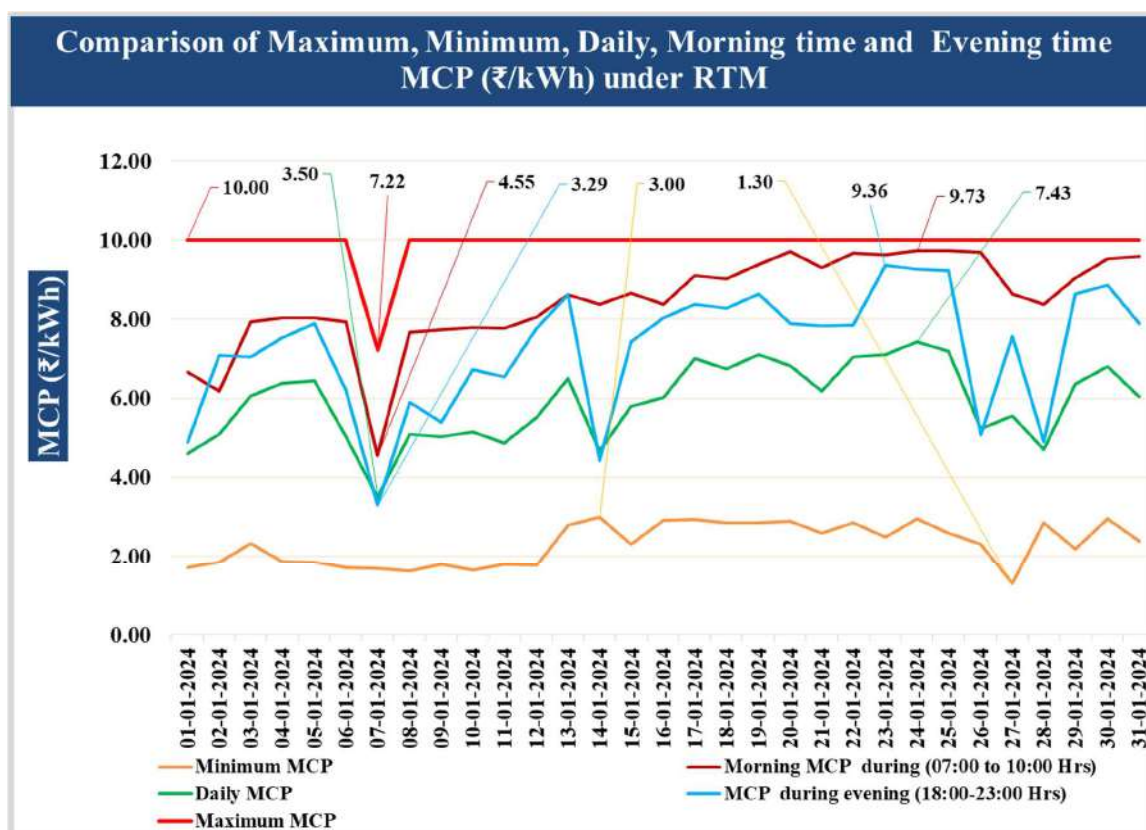


Figure-7

10.5. The Market Clearing Price duration curves for time block wise MCP for the month of January, 2024 is shown in **Figure 8**, whereas the day wise MCP duration curve for the period 1st April, 2023 to 31st January, 2024 is shown in **Figure 9**.

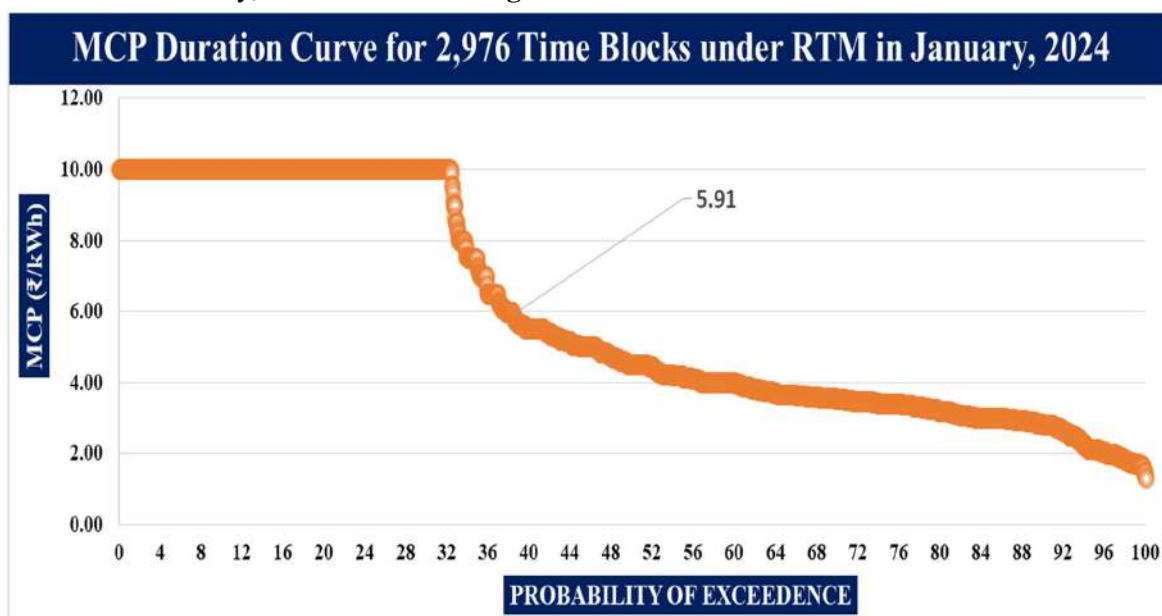


Figure-8

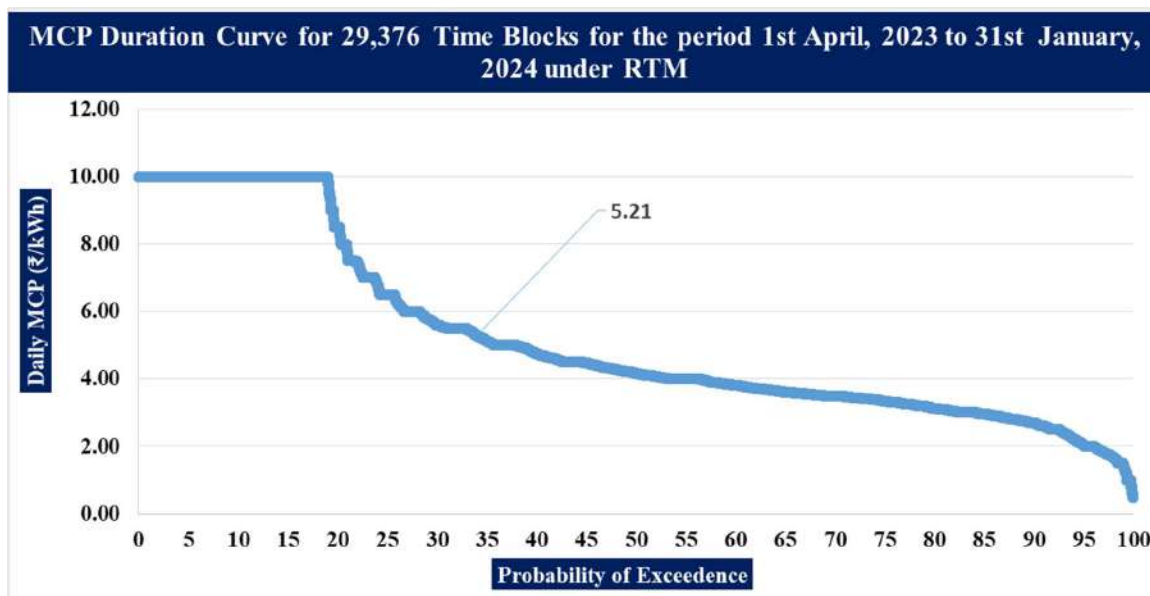


Figure-9

10.6. It can be seen in figure 8 above that in the MCP duration curve of January, 2024, for 39.00 % of the time the MCP was above the Wt. Avg. MCP of the month (i.e. ₹ 5.91/kWh) and for 61.00 % of the time the MCP was below the Wt. Avg. MCP of the month. Similarly, it can be seen in the cumulative MCP duration curve from 1st April, 2023 to 31st January, 2024 (figure 9) that, for 33.00 % of the time the Daily Wt. Avg. MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 5.21/kWh) and for 67.00 % of the time the Daily Wt. Avg. MCP was below the Wt. Avg. MCP for the period.

10.7. In January, 2024, the maximum FSV occurred mostly during the **time period 12-14 Hrs** (on 7 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 07-08 Hrs** (on 15 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 17-19 Hrs** (on 7 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 03-04 Hrs** (on 11 no. of days).[Annexure X]

10.8. There was **no** real time curtailment in IEX, PXIL and HPX under Real Time Market (RTM) during January, 2024. Further, in December, 2023 **no** real time curtailment occurred in IEX, PXIL and HPX. Similarly, in January, 2023, there was **no** real time curtailment in IEX and no transaction took place in PXIL & HPX.

10.9. In January, 2024, there was congestion of **2.52 MU** in IEX, no congestion in PXIL & HPX. Further, in December, 2023, there was **no** congestion in IEX, PXIL & HPX. Similarly, in January, 2023, there was **no** congestion in IEX and no transaction took place in PXIL & HPX.

10.10. The **top 10 sellers** on the power exchanges under Real Time Market (RTM) in January, 2024 were **Madhya Pradesh, Odisha, Bihar, Chhattisgarh, West Bengal, Uttar Pradesh, Maharashtra, Tamil Nadu, Telangana and Andhra Pradesh**, which constituted **57.67 %** of the market volume. [Annexure XI]

10.11. The **top 10 buyers** on the power exchanges under Real Time Market (**RTM**) in January, 2024 were **Punjab, Telangana, Rajasthan, Uttar Pradesh, Kerala, J&K, Maharashtra, Andhra Pradesh, Haryana** and **West Bengal**, which constituted **76.07 %** of the market volume. [Annexure XI]

10.12. The total volume of electricity purchased by Discoms/Licensees under RTM in January, 2024 was **2,326.66 MU**, which constituted **97.49 %** of total volume of electricity purchased on the power exchanges.

10.13. Similarly, the total volume of electricity sold by Discoms/Licensees under RTM in January, 2024 was **1,792.65 MU**, which constituted **75.12 %** 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

Final Scheduled Volume, Wt. Avg. MCP and Real-Time Curtailment under Day Ahead Market (DAM) for the months of April, 2023 to January, 2024 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	3,405.42	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	5,196.16	3.12	2.15	4.16	9.36	10.00	0	0	0
	December, 2023	4,757.55	3.30	10.95	4.69	9.54	10.00	0	0	0
Total Quarter -III	October - December, 2023	14,642.06	28.02	49.93	5.04	9.87	10.00	0.00	0.00	0.00
Quarter -IV	January, 2024	5,561.85	17.19	9.11	6.03	10.00	10.00	0	0	0
	February, 2024									
	March, 2024									
Total Quarter -IV	January - March, 2024	5,561.85	17.19	9.11	6.03	10.00	10.00	0	0	0
Total April, 2023 – January, 2024		43,988.97	74.81	77.82	5.30	9.74	10.00	0.00	1.55	0.00

Annexure-II

Final Scheduled Volume under Term Ahead Market (TAM) for the months of April, 2023 to January, 2024 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	642.96	153.00	119.41	915.37
	December, 2023	1071.93	23.42	103.64	1198.99
Total Quarter - III	October -December, 2023	3,391.89	787.70	1,065.34	5,244.93
Quarter -IV	January, 2024	1,103.79	179.26	368.89	1,651.94
	February, 2024				
	March, 2024				
Total Quarter - IV	January - March, 2024	1,103.79	179.26	368.89	1,651.94
Total April, 2023 – January, 2024		7,931.84	2,709.77	3,075.38	13,716.99

Top Five Entities (Buyers and Sellers) in Bilateral transactions in January, 2024

(i) Top five Buyers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
Karnataka	366.69	52.28%	Jammu Kashmir	342.24	23.50%
Jharkhand	135.97	19.38%	Himachal Pradesh	202.48	13.90%
Daman and Diu - Dadra and Nagar Haveli	59.52	8.49%	Kerala	197.52	13.56%
Odisha	51.27	7.31%	Maharashtra	191.82	13.17%
Jammu Kashmir	31.91	4.55%	Rajasthan	169.60	11.65%
Total Volume	645.36	92.01%	Total Volume	1,103.66	75.79%
Total Volume in Bilateral	701.44		Total Volume in Bilateral	1,456.24	

(ii) Top five Sellers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
ADHUNIK POWER & NATURAL RESOURCES	135.97	19.38%	Jindal India Thermal Power Limited	197.52	13.56%
Uttar Pradesh	94.69	13.50%	Punjab	176.91	12.15%
NTPC Talcher Super Thermal Power Station Stage II	79.50	11.33%	Jindal Power Limited, Stage-1	164.47	11.29%
NTPC Ramagundam Stage I & II	67.65	9.64%	R.K.M POWERGEN PRIVATE LIMITED	155.36	10.67%
Punjab	62.00	8.84%	SKS Power Generation Chhattisgarh Limited	82.34	5.65%
Total Volume	439.81	62.70%	Total Volume	776.60	53.33%
Total Volume in Bilateral	701.44		Total Volume in Bilateral	1,456.24	

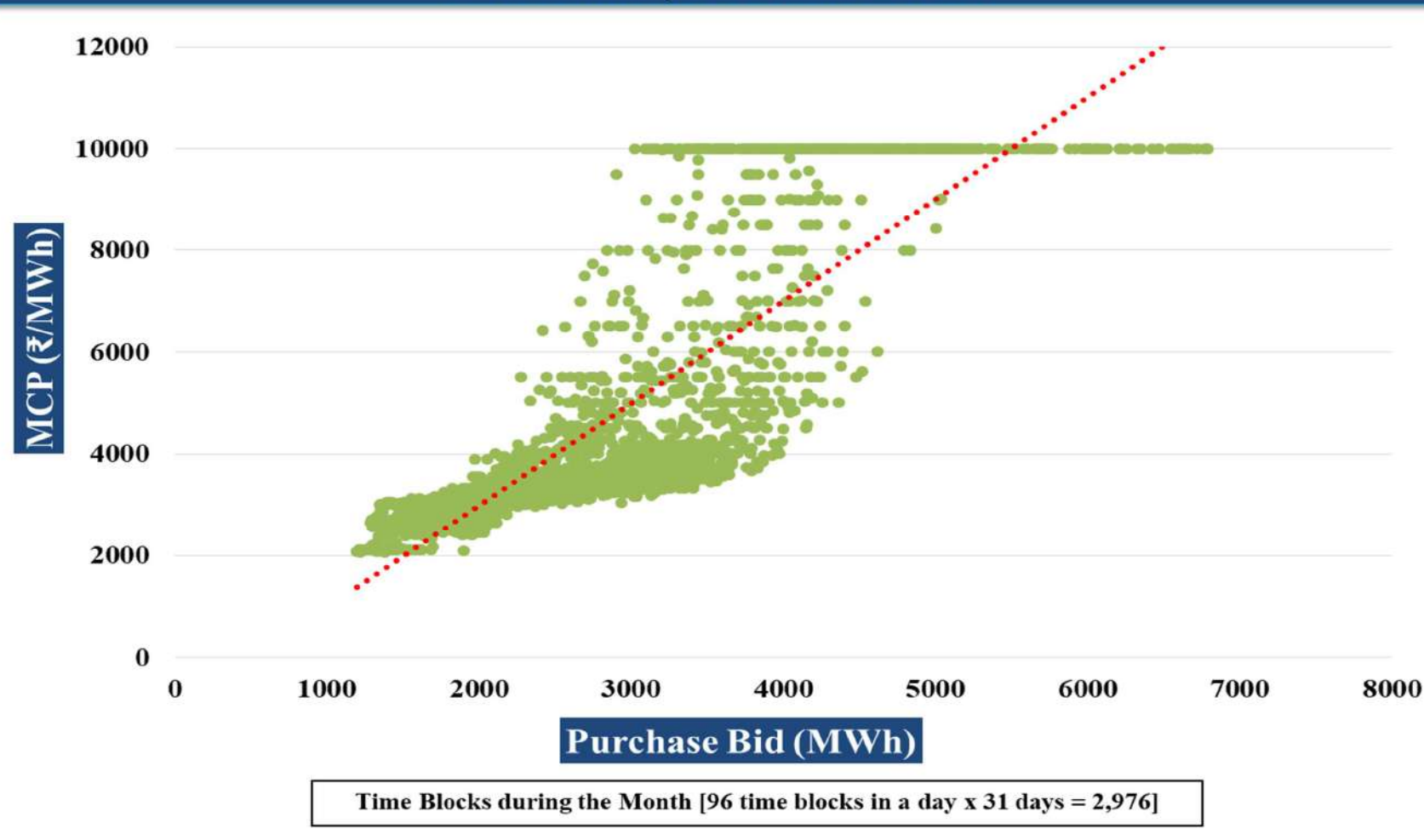
Annexure-IV**Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under DAM**

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	Wt. Avg. MCP	Final Scheduled Volume (MU)
01-01-2024	8.00	5.43	6.12	2.65	10.00	2.34	5.22	177.61
02-01-2024	8.15	5.72	6.91	2.82	10.00	2.45	5.58	165.87
03-01-2024	7.81	5.12	6.65	2.12	10.00	1.87	5.08	158.15
04-01-2024	8.21	5.82	7.05	2.56	10.00	2.00	5.57	175.98
05-01-2024	8.47	6.15	7.03	2.51	10.00	2.00	5.69	180.63
06-01-2024	8.68	5.74	7.17	2.69	10.00	2.01	5.70	175.62
07-01-2024	8.21	4.83	6.31	2.49	10.00	2.00	5.08	177.34
08-01-2024	8.65	5.97	7.05	2.81	10.00	2.45	5.77	169.73
09-01-2024	8.23	4.95	6.63	2.47	10.00	2.00	5.19	176.33
10-01-2024	8.65	5.36	6.81	2.87	10.00	2.50	5.55	195.50
11-01-2024	7.57	5.15	6.56	2.75	10.00	2.18	5.20	197.34
12-01-2024	8.02	4.73	6.54	2.87	10.00	2.50	5.19	195.87
13-01-2024	7.91	4.55	6.83	3.01	10.00	2.73	5.23	185.32
14-01-2024	7.04	3.71	4.50	3.13	10.00	2.96	4.29	178.29
15-01-2024	8.76	5.52	7.37	3.03	10.00	2.71	5.80	174.44
16-01-2024	9.04	5.72	7.58	3.25	10.00	2.90	6.02	165.87
17-01-2024	9.05	5.36	7.64	3.16	10.00	2.75	5.90	171.06
18-01-2024	9.11	5.87	7.93	3.31	10.00	3.00	6.18	175.15
19-01-2024	9.35	6.54	7.95	3.08	10.00	2.64	6.35	173.02
20-01-2024	9.64	6.93	8.02	3.11	10.00	2.80	6.54	170.27
21-01-2024	9.57	5.50	6.57	3.05	10.00	2.79	5.73	172.80
22-01-2024	9.64	7.32	8.13	2.92	10.00	2.51	6.62	177.95
23-01-2024	9.76	7.06	7.96	2.86	10.00	2.49	6.51	174.00
24-01-2024	9.83	7.39	8.19	3.04	10.00	2.56	6.73	183.78
25-01-2024	9.77	7.21	8.31	2.93	10.00	2.51	6.66	185.66
26-01-2024	9.38	5.65	7.38	3.05	10.00	2.80	5.95	194.58
27-01-2024	9.51	6.93	8.08	3.02	10.00	2.75	6.51	178.44
28-01-2024	8.78	5.24	7.55	3.00	10.00	2.60	5.75	197.60
29-01-2024	9.37	6.27	8.16	3.00	10.00	2.70	6.31	196.28
30-01-2024	9.51	6.62	8.25	3.12	10.00	2.80	6.49	182.38
31-01-2024	9.55	6.00	8.31	3.21	10.00	2.90	6.36	178.97
Maximum	9.83	7.39	8.31	3.31	10.00	3.00	6.73	197.60
Minimum	7.04	3.71	4.50	2.12	10.00	1.87	4.29	158.15
Average	8.81	5.82	7.28	2.90	10.00	2.52	5.83	179.41

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 December, 2023 under DAM



Annexure-VI

Maximum Final Schedule Volume (FSV), Minimum FSV, Maximum Market Clearing Price (MCP) and Minimum MCP under 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
01-01-2024	07:15 - 07:30	2.67	07:30 - 07:45	10.00	23:00 - 23:15	1.23	02:45 - 03:00	2.34
02-01-2024	15:45 - 16:00	2.54	07:15 - 07:30	10.00	00:30 - 00:45	1.28	04:45 - 05:00	2.45
03-01-2024	15:45 - 16:00	2.34	07:30 - 07:45	10.00	03:30 - 03:45	1.03	05:00 - 05:15	1.87
04-01-2024	15:30 - 15:45	2.66	07:15 - 07:30	10.00	17:30 - 17:45	1.30	03:15 - 03:30	2.00
05-01-2024	15:45 - 16:00	2.80	07:15 - 07:30	10.00	00:30 - 00:45	1.40	03:15 - 03:30	2.00
06-01-2024	15:00 - 15:15	2.45	07:00 - 07:15	10.00	23:15 - 23:30	1.28	03:45 - 04:00	2.01
07-01-2024	08:00 - 08:15	2.59	07:30 - 07:45	10.00	22:45 - 23:00	1.26	03:45 - 04:00	2.00
08-01-2024	20:00 - 20:15	2.39	07:00 - 07:15	10.00	22:45 - 23:00	1.35	03:45 - 04:00	2.45
09-01-2024	16:15 - 16:30	2.23	07:30 - 07:45	10.00	22:15 - 22:30	1.46	04:00 - 04:15	2.00
10-01-2024	15:45 - 16:00	2.81	07:00 - 07:15	10.00	22:30 - 22:45	1.60	03:00 - 03:15	2.50
11-01-2024	07:30 - 07:45	2.78	07:45 - 08:00	10.00	22:30 - 22:45	1.51	03:45 - 04:00	2.18
12-01-2024	07:30 - 07:45	2.58	07:30 - 07:45	10.00	22:45 - 23:00	1.48	03:15 - 03:30	2.50
13-01-2024	07:15 - 07:30	2.86	07:45 - 08:00	10.00	23:00 - 23:15	1.27	03:45 - 04:00	2.73
14-01-2024	07:30 - 07:45	2.85	08:15 - 08:30	10.00	22:30 - 22:45	1.28	02:45 - 03:00	2.96
15-01-2024	20:00 - 20:15	2.45	07:00 - 07:15	10.00	23:00 - 23:15	1.29	03:15 - 03:30	2.71
16-01-2024	20:30 - 20:45	2.47	07:00 - 07:15	10.00	00:30 - 00:45	1.26	03:00 - 03:15	2.90
17-01-2024	20:15 - 20:30	2.45	07:00 - 07:15	10.00	04:15 - 04:30	1.25	03:45 - 04:00	2.75
18-01-2024	20:15 - 20:30	2.50	06:45 - 07:00	10.00	00:00 - 00:15	1.35	03:15 - 03:30	3.00
19-01-2024	11:15 - 11:30	2.26	06:45 - 07:00	10.00	23:15 - 23:30	1.33	03:45 - 04:00	2.64
20-01-2024	11:00 - 11:15	2.31	06:30 - 06:45	10.00	23:15 - 23:30	1.36	03:00 - 03:15	2.80
21-01-2024	20:00 - 20:15	2.24	06:30 - 06:45	10.00	23:15 - 23:30	1.08	03:30 - 03:45	2.79
22-01-2024	11:15 - 11:30	2.30	06:30 - 06:45	10.00	23:30 - 23:45	1.35	03:00 - 03:15	2.51
23-01-2024	11:15 - 11:30	2.35	06:15 - 06:30	10.00	23:30 - 23:45	1.29	03:15 - 03:30	2.49
24-01-2024	05:45 - 06:00	2.34	06:15 - 06:30	10.00	23:30 - 23:45	1.40	03:15 - 03:30	2.56
25-01-2024	05:45 - 06:00	2.47	06:15 - 06:30	10.00	23:15 - 23:30	1.52	03:30 - 03:45	2.51
26-01-2024	20:00 - 20:15	2.79	06:30 - 06:45	10.00	22:45 - 23:00	1.35	03:15 - 03:30	2.80
27-01-2024	11:45 - 12:00	2.31	06:30 - 06:45	10.00	23:00 - 23:15	1.45	03:30 - 03:45	2.75
28-01-2024	06:45 - 07:00	2.86	07:00 - 07:15	10.00	23:00 - 23:15	1.41	03:30 - 03:45	2.60
29-01-2024	06:45 - 07:00	2.68	06:45 - 07:00	10.00	23:00 - 23:15	1.65	03:15 - 03:30	2.70
30-01-2024	16:15 - 16:30	2.67	06:30 - 06:45	10.00	23:00 - 23:15	1.46	03:15 - 03:30	2.80
31-01-2024	16:15 - 16:30	2.45	06:30 - 06:45	10.00	08:30 - 08:45	1.56	03:15 - 03:30	2.90

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Annexure-VII

Sellers and Buyers under Day Ahead Market (DAM) in January, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Chhattisgarh	440.28	7.88%	Telangana	1076.71	19.27%
2	Jindal Power Ltd.	427.06	7.64%	Punjab	488.41	8.74%
3	Mahan Energy	388.43	6.95%	Uttar Pradesh	472.08	8.45%
4	Adani Power	376.02	6.73%	Gujarat	416.23	7.45%
5	JITPL	330.19	5.91%	J&K	370.94	6.64%
6	Uttar Pradesh	299.49	5.36%	Andhra Pradesh	359.46	6.43%
7	Gujarat	296.34	5.30%	Druk Green Power	326.98	5.85%
8	Adani Power	251.63	4.50%	Maharashtra	285.39	5.11%
9	Odisha	249.50	4.46%	Haryana	277.91	4.97%
10	Jaypee Nigrie	201.24	3.60%	Rajasthan	272.92	4.88%
11	Jindal Power	189.06	3.38%	Uttarakhand	197.16	3.53%
12	DB Power	167.10	2.99%	Tamil Nadu	193.80	3.47%
13	Madhya Pradesh	166.53	2.98%	NVVN (SNA) - NEA	188.76	3.38%
14	Tamil Nadu	132.27	2.37%	Delhi	83.67	1.50%
15	Delhi	128.63	2.30%	Kerala	76.23	1.36%
16	Costal Energen	122.21	2.19%	ArcelorMittal Nippon	70.84	1.27%
17	West Bengal	118.63	2.12%	Daman & Diu - Dadra &	65.48	1.17%
18	Maharashtra	103.75	1.86%	Madhya Pradesh	63.04	1.13%
19	Jindal Steel	90.63	1.62%	West Bengal	49.03	0.88%
20	ACBIL	73.34	1.31%	Karnataka	38.69	0.69%
21	Telangana	63.82	1.14%	Bihar	35.15	0.63%
22	Pondicherry	62.23	1.11%	NEA-NR	30.14	0.54%
23	MB Power	60.18	1.08%	Meghalaya	24.52	0.44%
24	Bihar	57.39	1.03%	Himachal Pradesh	22.45	0.40%
25	Sembcorp Gayatri	57.30	1.03%	Chandigarh	20.58	0.37%
26	Himachal Pradesh	52.90	0.95%	Railways	16.92	0.30%
27	GMR Warora	51.54	0.92%	DVC	15.59	0.28%
28	Simhapuri Energy	43.95	0.79%	Goa WR	10.23	0.18%
29	Sembcorp Energy	41.05	0.73%	Odisha	9.61	0.17%
30	Rajasthan	40.12	0.72%	Assam	6.61	0.12%
31	Adhunik Power	35.04	0.63%	Jharkhand	6.45	0.12%
32	Andhra Pradesh	32.55	0.58%	Chhattisgarh	5.23	0.09%
33	SKS Power	31.06	0.56%	Arunachal Pradesh	4.34	0.08%
34	Shree Cement	28.26	0.51%	Goa SR	3.12	0.06%
35	IL&FS	27.79	0.50%	Nagaland	1.33	0.02%
36	Haryana	25.54	0.46%	BHARAT ALUMINIUM	1.05	0.02%
37	Renew Surya Ravi	25.37	0.45%	IND BARATH ENERGY	0.74	0.01%
38	ADANI WIND	21.79	0.39%	MB Power	0.27	0.005%
39	RKM Power	16.92	0.30%	Tripura	0.10	0.002%
40	Karcham Wangtoo	16.72	0.30%			
41	BALCO 2	16.60	0.30%			
42	DVC	16.50	0.30%			
43	Barh Stg-2	15.05	0.27%			
44	Maruti Clean Coal	14.61	0.26%			
45	DHARIWAL STU	14.29	0.26%			
46	AD Hydro	12.75	0.23%			
47	Dhariwal ISTS	12.30	0.22%			
48	Farakka	11.94	0.21%			
49	Jhabua Power	8.89	0.16%			
50	Ramagundam	7.16	0.13%			
51	Nabinagar Power	6.90	0.12%			
52	Adani Green Energy	6.54	0.12%			
53	Amp Energy Green	6.52	0.12%			

54	RENEW SURYA	6.36	0.11%			
55	ADANI SOLAR	6.35	0.11%			
56	Sorang HEP,	6.26	0.11%			
57	RENEW SURYA	5.86	0.10%			
58	Sainj HEP	5.49	0.10%			
59	Ostro Kannada	5.29	0.09%			
60	J&K	5.17	0.09%			
61	Meghalaya	4.90	0.09%			
62	ADANI	3.31	0.06%			
63	Singoli Bhagwati	3.30	0.06%			
64	Darlipalli	3.25	0.06%			
65	Singrauli	3.01	0.05%			
66	Kerala	2.74	0.05%			
67	Chandigarh	2.70	0.05%			
68	Dadri TPS	2.46	0.04%			
69	Goa WR	2.37	0.04%			
70	Tripura	2.33	0.04%			
71	Simhadri FSP 15	2.04	0.04%			
72	RENEW SURYA	1.93	0.03%			
73	Barh STPS Stg - I	1.80	0.03%			
74	Nagaland	1.74	0.03%			
75	Manipur	1.63	0.03%			
76	Farakka Stg 3	1.47	0.03%			
77	NTPC Simhadri 25	1.40	0.02%			
78	NTPC Kudgi	1.30	0.02%			
79	Bongaigaon	1.10	0.02%			
80	WIND FIVE	1.08	0.02%			
81	Uttarakhand	0.94	0.02%			
82	Rihand-II	0.73	0.01%			
83	Sikkim	0.67	0.01%			
84	Kahalgaon-II	0.64	0.01%			
85	Simhadri Stg-2	0.54	0.01%			
86	KBUNL(MTPS-II)	0.53	0.01%			
87	Lanco Budhil	0.52	0.01%			
88	NTPC Sholapur	0.52	0.01%			
89	Punjab	0.40	0.01%			
90	Kopili Power Station	0.36	0.01%			
91	Kahalgaon	0.34	0.01%			
92	Talcher	0.28	0.005%			
93	Unchahar-I	0.21	0.004%			
94	Dadri Stg-2	0.21	0.004%			
95	NTPC Telangana	0.17	0.003%			
96	NTPC Gadawara	0.13	0.002%			
97	Unchahar-II	0.11	0.002%			
98	Talcher Stg-2	0.09	0.002%			
99	Khargone STPP	0.08	0.001%			
100	Ramagundam Stg-1	0.07	0.001%			
101	Unchahar-III	0.03	0.0005%			
102	GMR Kamalanga	0.01	0.0002%			
103	NTPC North	0.01	0.0001%			
Total Volume of top 10		1,961.99	35.11%	Total Volume of top 10	2,824.37	50.54%
Total Volume in PXs		5,588.15		Total Volume in PXs	5,588.15	

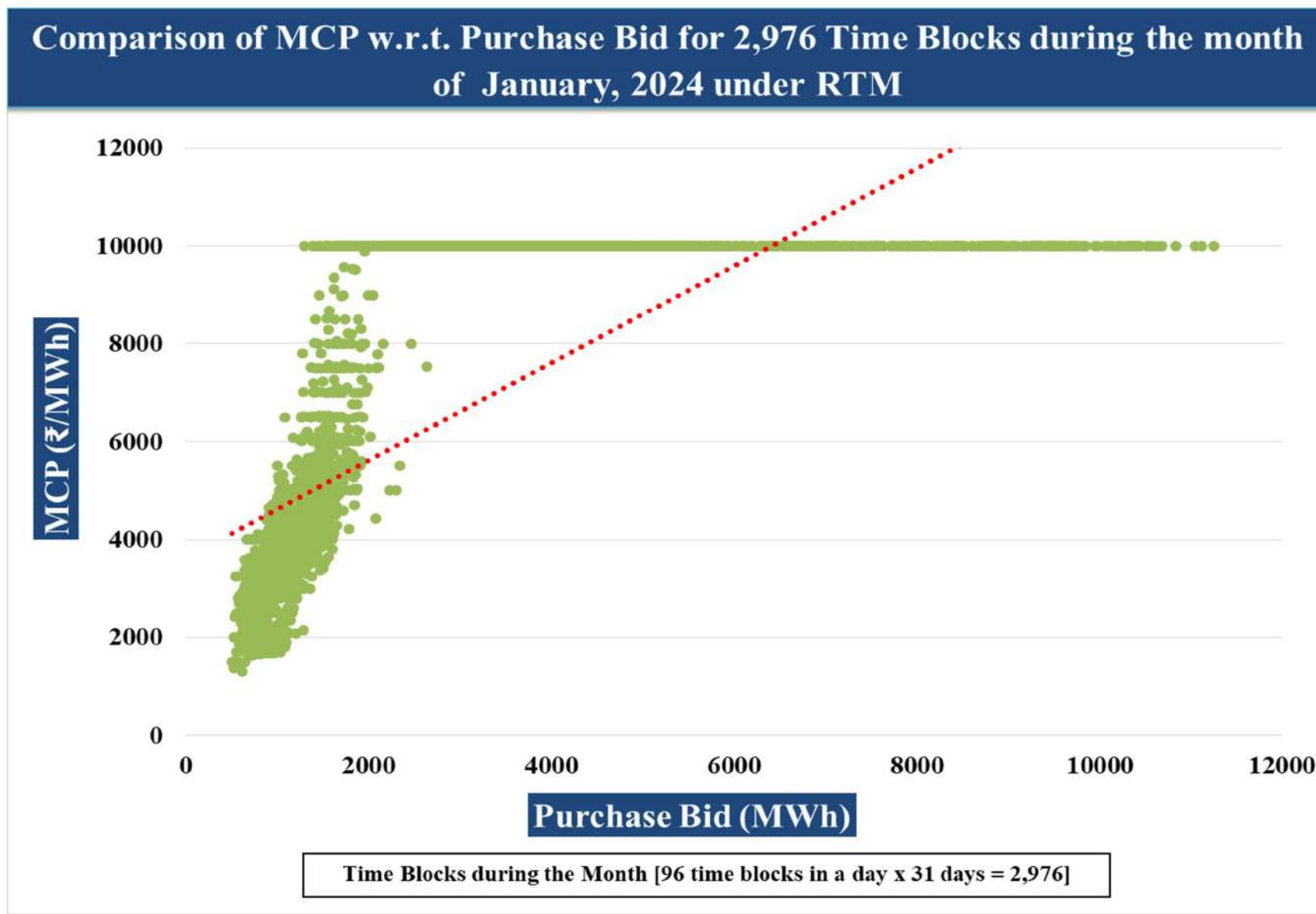
Annexure-VIII

Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under 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	Wt. Avg. MCP	Final Scheduled Volume (MU)
01-01-2024	6.67	5.48	4.90	2.32	10.00	1.71	4.61	73.95
02-01-2024	6.19	5.41	7.09	2.45	10.00	1.85	5.10	76.57
03-01-2024	7.94	7.19	7.05	3.03	10.00	2.34	6.07	76.44
04-01-2024	8.05	8.16	7.53	2.67	10.00	1.87	6.38	69.15
05-01-2024	8.04	7.92	7.90	2.82	10.00	1.85	6.45	77.31
06-01-2024	7.94	5.12	6.19	2.29	10.00	1.71	5.03	94.91
07-01-2024	4.55	4.17	3.29	2.41	7.22	1.68	3.50	78.82
08-01-2024	7.67	6.05	5.91	1.95	10.00	1.62	5.09	88.67
09-01-2024	7.73	5.79	5.39	2.44	10.00	1.79	5.04	100.01
10-01-2024	7.79	5.19	6.72	2.24	10.00	1.65	5.14	82.72
11-01-2024	7.78	4.02	6.54	2.65	10.00	1.79	4.88	81.68
12-01-2024	8.06	4.87	7.78	2.77	10.00	1.77	5.52	80.83
13-01-2024	8.62	6.67	8.62	3.34	10.00	2.80	6.51	87.03
14-01-2024	8.38	3.92	4.44	3.47	10.00	3.00	4.66	78.54
15-01-2024	8.67	5.44	7.44	3.13	10.00	2.31	5.80	81.72
16-01-2024	8.38	5.79	8.03	3.19	10.00	2.92	6.02	76.51
17-01-2024	9.11	8.33	8.38	3.31	10.00	2.93	7.00	73.13
18-01-2024	9.02	7.86	8.29	3.05	10.00	2.85	6.76	72.44
19-01-2024	9.39	8.42	8.65	3.18	10.00	2.85	7.11	71.94
20-01-2024	9.72	7.70	7.90	3.36	10.00	2.89	6.82	66.62
21-01-2024	9.31	5.71	7.84	3.44	10.00	2.60	6.18	79.33
22-01-2024	9.66	8.58	7.85	3.32	10.00	2.85	7.04	72.29
23-01-2024	9.62	7.47	9.36	3.37	10.00	2.50	7.11	78.84
24-01-2024	9.73	8.60	9.27	3.38	10.00	2.95	7.43	73.49
25-01-2024	9.73	7.87	9.24	3.30	10.00	2.59	7.19	84.65
26-01-2024	9.70	4.69	5.08	3.35	10.00	2.30	5.23	78.83
27-01-2024	8.64	5.39	7.57	2.23	10.00	1.30	5.55	81.57
28-01-2024	8.39	3.99	4.91	3.19	10.00	2.85	4.72	59.40
29-01-2024	9.04	6.15	8.64	3.06	10.00	2.18	6.35	66.96
30-01-2024	9.52	7.06	8.86	3.26	10.00	2.95	6.81	59.43
31-01-2024	9.58	5.21	7.89	3.29	10.00	2.40	6.05	56.13
Maximum	9.73	8.60	9.36	3.47	10.00	3.00	7.43	100.01
Minimum	4.55	3.92	3.29	1.95	7.22	1.30	3.50	56.13
Average	8.47	6.27	7.24	2.94	9.91	2.31	5.91	76.77

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)



Annexure-X

Maximum Final Schedule Volume (FSV), Minimum FSV, Maximum Market Clearing Price (MCP) and Minimum MCP under 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
01-01-2024	17:00 - 17:15	1.31	08:30 - 08:45	10.00	00:45 - 01:00	0.41	02:15 - 02:30	1.71
02-01-2024	08:00 - 08:15	1.29	09:00 - 09:15	10.00	00:30 - 00:45	0.45	01:45 - 02:00	1.85
03-01-2024	07:00 - 07:15	1.11	07:45 - 08:00	10.00	13:30 - 13:45	0.41	03:15 - 03:30	2.34
04-01-2024	07:15 - 07:30	1.11	07:30 - 07:45	10.00	10:00 - 10:15	0.35	02:00 - 02:15	1.87
05-01-2024	16:00 - 16:15	1.20	07:30 - 07:45	10.00	00:45 - 01:00	0.28	03:45 - 04:00	1.85
06-01-2024	10:30 - 10:45	1.43	07:45 - 08:00	10.00	00:30 - 00:45	0.47	03:45 - 04:00	1.71
07-01-2024	13:15 - 13:30	1.05	10:00 - 10:15	7.22	08:00 - 08:15	0.55	01:30 - 01:45	1.68
08-01-2024	12:00 - 12:15	1.41	07:45 - 08:00	10.00	23:00 - 23:15	0.44	05:30 - 05:45	1.62
09-01-2024	11:30 - 11:45	1.96	07:30 - 07:45	10.00	00:15 - 00:30	0.58	23:45 - 24:00	1.79
10-01-2024	18:15 - 18:30	1.20	07:30 - 07:45	10.00	23:00 - 23:15	0.47	02:45 - 03:00	1.65
11-01-2024	10:00 - 10:15	1.35	08:00 - 08:15	10.00	00:15 - 00:30	0.51	01:45 - 02:00	1.79
12-01-2024	10:00 - 10:15	1.30	07:30 - 07:45	10.00	04:45 - 05:00	0.56	02:15 - 02:30	1.77
13-01-2024	15:00 - 15:15	1.41	07:15 - 07:30	10.00	18:15 - 18:30	0.47	02:45 - 03:00	2.80
14-01-2024	09:45 - 10:00	1.31	07:15 - 07:30	10.00	23:45 - 24:00	0.47	02:00 - 02:15	3.00
15-01-2024	20:00 - 20:15	1.48	07:15 - 07:30	10.00	04:15 - 04:30	0.51	01:45 - 02:00	2.31
16-01-2024	19:45 - 20:00	1.23	07:30 - 07:45	10.00	04:00 - 04:15	0.39	03:45 - 04:00	2.92
17-01-2024	21:00 - 21:15	1.57	07:00 - 07:15	10.00	17:00 - 17:15	0.38	03:00 - 03:15	2.93
18-01-2024	12:30 - 12:45	1.32	06:45 - 07:00	10.00	17:45 - 18:00	0.38	02:45 - 03:00	2.85
19-01-2024	12:15 - 12:30	1.40	06:30 - 06:45	10.00	17:45 - 18:00	0.32	03:00 - 03:15	2.85
20-01-2024	12:30 - 12:45	1.34	06:15 - 06:30	10.00	08:00 - 08:15	0.34	03:45 - 04:00	2.89
21-01-2024	11:15 - 11:30	1.60	06:45 - 07:00	10.00	01:00 - 01:15	0.47	03:15 - 03:30	2.60
22-01-2024	13:00 - 13:15	1.88	06:15 - 06:30	10.00	03:15 - 03:30	0.38	03:00 - 03:15	2.85
23-01-2024	16:00 - 16:15	1.33	06:15 - 06:30	10.00	17:45 - 18:00	0.27	02:15 - 02:30	2.50
24-01-2024	12:45 - 13:00	1.58	06:15 - 06:30	10.00	17:45 - 18:00	0.21	03:45 - 04:00	2.95
25-01-2024	15:00 - 15:15	1.45	06:15 - 06:30	10.00	18:45 - 19:00	0.37	03:15 - 03:30	2.59
26-01-2024	10:30 - 10:45	1.44	06:15 - 06:30	10.00	04:30 - 04:45	0.50	23:45 - 24:00	2.30
27-01-2024	19:45 - 20:00	1.35	07:15 - 07:30	10.00	03:15 - 03:30	0.47	05:00 - 05:15	1.30
28-01-2024	15:00 - 15:15	0.98	07:15 - 07:30	10.00	00:45 - 01:00	0.39	01:45 - 02:00	2.85
29-01-2024	11:15 - 11:30	1.20	06:45 - 07:00	10.00	04:15 - 04:30	0.33	00:45 - 01:00	2.18
30-01-2024	15:00 - 15:15	1.16	06:30 - 06:45	10.00	07:45 - 08:00	0.23	01:15 - 01:30	2.95
31-01-2024	10:45 - 11:00	0.85	06:30 - 06:45	10.00	19:00 - 19:15	0.38	23:45 - 24:00	2.40

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Sellers and Buyers under Real Time Market (RTM) in January, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Madhya Pradesh	296.55	12.43%	Punjab	590.82	24.76%
2	Odisha	222.18	9.31%	Telangana	267.95	11.23%
3	Bihar	160.06	6.71%	Rajasthan	185.92	7.79%
4	Chhattisgarh	153.32	6.42%	Uttar Pradesh	159.44	6.68%
5	West Bengal	130.32	5.46%	Kerala	125.06	5.24%
6	Uttar Pradesh	104.32	4.37%	J&K	124.35	5.21%
7	Maharashtra	95.31	3.99%	Maharashtra	120.61	5.05%
8	Tamil Nadu	81.97	3.44%	Andhra Pradesh	84.82	3.55%
9	Telangana	67.62	2.83%	Haryana	78.18	3.28%
10	Andhra Pradesh	64.56	2.71%	West Bengal	78.14	3.27%
11	Assam	59.47	2.49%	DVC	75.92	3.18%
12	Delhi	58.25	2.44%	Delhi	72.48	3.04%
13	Jharkhand	49.28	2.07%	Himachal Pradesh	53.89	2.26%
14	Gujarat	39.16	1.64%	Gujarat	52.68	2.21%
15	Sembcorp Gayatri	36.04	1.51%	Tamil Nadu	49.83	2.09%
16	Rajasthan	35.74	1.50%	Uttarakhand	39.65	1.66%
17	Pondicherry	33.62	1.41%	Odisha	38.11	1.60%
18	BALCO 2	27.60	1.16%	Madhya Pradesh	27.46	1.15%
19	The Tata Power Co	26.21	1.10%	Bihar	26.66	1.12%
20	Tripura	26.15	1.10%	ArcelorMittal Nippon	18.32	0.77%
21	Kerala	22.18	0.93%	Jharkhand	18.05	0.76%
22	Adani Power	19.25	0.81%	Daman & Diu - Dadra &	13.71	0.57%
23	Punjab	17.38	0.73%	Karnataka	12.05	0.51%
24	DVC	15.74	0.66%	Druk Green Power	9.81	0.41%
25	Jhabua Power	15.36	0.64%	NVVN (SNA) - NEA	8.95	0.37%
26	TRN Energy	15.29	0.64%	Assam	7.96	0.33%
27	NTPC North	14.66	0.61%	Mahan Energy Limited	7.16	0.30%
28	IND BARATH	14.21	0.60%	Arunachal Pradesh	6.94	0.29%
29	Haryana	14.12	0.59%	Meghalaya	6.09	0.26%
30	Simhapuri Energy	13.44	0.56%	Chhattisgarh	4.88	0.20%
31	Sembcorp Energy	13.41	0.56%	Simhapuri Energy	3.33	0.14%
32	Dadri TPS	12.95	0.54%	Chandigarh	2.43	0.10%
33	Barh Stg-2	12.43	0.52%	Railways	2.30	0.10%
34	J&K	11.55	0.48%	Adani Power Limited-	2.23	0.09%
35	Kahalgaon-II	10.93	0.46%	Jindal Power	2.23	0.09%
36	ACBIL	10.84	0.45%	Goa WR	1.70	0.07%
37	RKM Power	10.74	0.45%	Jindal Power Ltd. Stg-II	1.03	0.04%
38	GMR Warora	10.74	0.45%	Gandhar	0.78	0.03%
39	NTPC Kudgi	10.70	0.45%	Ratnagiri Gas & Power	0.71	0.03%
40	Rihand-III	10.32	0.43%	MB Power	0.70	0.03%
41	Himachal Pradesh	10.09	0.42%	Kawas	0.64	0.03%
42	Onevolt Energy	9.49	0.40%	NEA-NR	0.64	0.03%
43	Rihand-I	9.43	0.40%	Goa SR	0.39	0.02%
44	NTPC Gadarwara	9.42	0.39%	IND BARATH	0.27	0.01%
45	Grian Energy	9.23	0.39%	Nagaland	0.25	0.01%
46	Sipat Stg-1	9.07	0.38%	GMR Warora	0.23	0.01%

47	Jindal Power Ltd.	9.02	0.38%	ACBIL	0.23	0.01%
48	SKS Power	8.99	0.38%	Jhabua Power	0.21	0.01%
49	Nabinagar Power	8.96	0.38%	Manipur	0.16	0.01%
50	IL&FS	8.91	0.37%	Sikkim	0.06	0.002%
51	Kameng HEP	8.36	0.35%	Pondicherry	0.01	0.0003
52	Amp Energy Green	8.32	0.35%			
53	Amplus Ages	7.99	0.33%			
54	Ramagundam Stg-	7.30	0.31%			
55	Khargone STPP	7.04	0.30%			
56	Mahan Energy	6.84	0.29%			
57	Sikkim	6.66	0.28%			
58	Renew Surya Ravi	6.37	0.27%			
59	Mouda Stg-2	6.36	0.27%			
60	NTPC Sholapur	6.25	0.26%			
61	MB Power	6.17	0.26%			
62	Kahalgaon	6.14	0.26%			
63	Singrauli	6.14	0.26%			
64	Jindal Power	6.07	0.25%			
65	ADANI SOLAR	6.06	0.25%			
66	ADANI WIND	5.09	0.21%			
67	Neyveli New	5.00	0.21%			
68	Uttarakhand	4.91	0.21%			
69	Maruti Clean Coal	4.90	0.21%			
70	Adani Power	4.80	0.20%			
71	Sipat Stg-2	4.77	0.20%			
72	Jindal Steel	4.75	0.20%			
73	Vindhyachal stg-1	4.62	0.19%			
74	Daman & Diu -	4.33	0.18%			
75	Rihand-II	4.30	0.18%			
76	Adhunik Power	4.17	0.17%			
77	Arunachal Pradesh	4.06	0.17%			
78	IGSTPS JHAJJAR	4.06	0.17%			
79	Mouda Stg-1	3.94	0.16%			
80	JITPL	3.88	0.16%			
81	ALTRA XERGI	3.69	0.15%			
82	NREL-Dayapar	3.66	0.15%			
83	Tanda Stg-2	3.46	0.15%			
84	Simhadri Stg-2	3.43	0.14%			
85	Farakka	3.10	0.13%			
86	Sasan UMPP	3.04	0.13%			
87	Vindhyachal stg-2	2.91	0.12%			
88	RENEW SURYA	2.83	0.12%			
89	AGBPP	2.79	0.12%			
90	Vindhyachal stg-3	2.77	0.12%			
91	RENEW SURYA	2.70	0.11%			
92	NLC	2.53	0.11%			
93	Farakka Stg 3	2.43	0.10%			
94	Shree Cement	2.30	0.10%			
95	Bongaigaon	2.26	0.09%			
96	NTPC Telangana	2.20	0.09%			
97	Dadri Stg-2	1.97	0.08%			

98	Vindhyachal stg-4	1.94	0.08%			
99	Ramagundam Stg-	1.89	0.08%			
100	Palatana	1.85	0.08%			
101	Barh STPS Stg - I	1.76	0.07%			
102	DB Power	1.69	0.07%			
103	Ratnagiri Gas &	1.56	0.07%			
104	ADANI	1.47	0.06%			
105	Talcher Stg-2	1.39	0.06%			
106	Karnataka	1.38	0.06%			
107	Vindhyachal stg-5	1.35	0.06%			
108	Goa WR	1.32	0.06%			
109	RENEW SURYA	1.18	0.05%			
110	Jaypee Nigrie	1.14	0.05%			
111	Adani Green	1.09	0.05%			
112	Korba	1.06	0.04%			
113	Ayana Renewable	1.01	0.04%			
114	Unchahar-IV	0.94	0.04%			
115	Unchahar-I	0.86	0.04%			
116	Unchahar-II	0.86	0.04%			
117	Meghalaya	0.77	0.03%			
118	DHARIWAL STU	0.50	0.02%			
119	Ostro Kannada	0.47	0.02%			
120	Korba Stg 3	0.42	0.02%			
121	Maithon Power	0.40	0.02%			
122	Unchahar-III	0.39	0.02%			
123	KBUNL(MTPS-II)	0.36	0.01%			
124	WIND FIVE	0.35	0.01%			
125	Dhariwal ISTS	0.34	0.01%			
126	Darlipalli	0.31	0.01%			
127	Karcham Wangtoo	0.29	0.01%			
128	NTPC Lara	0.28	0.01%			
129	Chandigarh	0.24	0.01%			
130	Tashiding HEP	0.20	0.01%			
131	Talcher	0.18	0.01%			
132	Jorethang	0.15	0.01%			
133	NVVN (SNA) -	0.15	0.01%			
134	Doyang HPS,	0.15	0.01%			
135	Singoli Bhagwati	0.15	0.01%			
136	NSPCL Bhilai	0.10	0.004%			
137	Simhadri Stg-1	0.04	0.002%			
138	Goa SR	0.04	0.002%			
139	Pare Hydro Power	0.04	0.002%			
140	Ranganadi Hydro	0.04	0.002%			
141	AGTPP	0.03	0.001%			
142	Sorang HEP,	0.02	0.001%			
143	Lanco Budhil	0.02	0.001%			
144	NTPC North	0.02	0.001%			
145	GMR Kamalanga	0.01	0.0003%			
Total Volume of top 10		962.44	40.33%	Total Volume of top 10	1,329.18	55.70%
Total Volume in PXs		2,386.44		Total Volume in PXs	2,386.44	

Cross Border Electricity Transactions under Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of January, 2024					
S. No	Delivery Date	Buy Volume By Nepal (MU)	Sell Volume by Nepal (MU)	Buy Volume By Bhutan (MU)	Sell Volume by Bhutan (MU)
1	01-01-2024	3.31	-	10.82	-
2	02-01-2024	3.93	-	11.17	-
3	03-01-2024	3.73	-	10.61	-
4	04-01-2024	5.16	-	10.58	-
5	05-01-2024	5.31	-	10.61	-
6	06-01-2024	5.39	-	10.67	-
7	07-01-2024	6.65	-	11.34	-
8	08-01-2024	6.23	-	11.18	-
9	09-01-2024	6.59	-	11.34	-
10	10-01-2024	5.90	-	11.28	-
11	11-01-2024	7.82	-	11.44	-
12	12-01-2024	7.58	-	11.39	-
13	13-01-2024	6.80	-	9.64	-
14	14-01-2024	7.95	-	9.88	-
15	15-01-2024	7.33	-	11.72	-
16	16-01-2024	8.13	-	11.62	-
17	17-01-2024	7.86	-	11.63	-
18	18-01-2024	7.57	-	11.81	-
19	19-01-2024	7.36	-	11.40	-
20	20-01-2024	7.13	-	11.08	-
21	21-01-2024	8.22	-	12.65	-
22	22-01-2024	7.77	-	10.63	-
23	23-01-2024	7.79	-	10.54	-
24	24-01-2024	7.84	-	8.59	-
25	25-01-2024	7.77	-	7.41	-
26	26-01-2024	9.11	-	6.65	-
27	27-01-2024	8.32	-	9.54	-
28	28-01-2024	9.81	-	10.19	-
29	29-01-2024	8.43	-	10.09	-
30	30-01-2024	7.96	-	9.83	-
31	31-01-2024	8.14	-	9.68	-
Total		218.90	-	326.98	-
Grand Total		545.88			

-: No transaction took place

Note: Cross Border Transactions of Electricity of 545.88 MU (i.e. 218.90 MU bought by Nepal, 326.98 MU bought by Bhutan) happened during January, 2024 in IEX, which is included under DAM Volume of January, 2024 in IEX. No Cross Border Import Transactions of Electricity happened with Nepal and Bhutan for the month of January, 2024 in IEX under DAM.

Cross Border Electricity Transactions under Real Time Market (RTM) in IEX with Nepal and Bhutan during the month of January, 2024					
S. No	Delivery Date	Buy Volume By Nepal (MU)	Sell Volume by Nepal (MU)	Buy Volume By Bhutan (MU)	Sell Volume by Bhutan (MU)
1	01-01-2024	0.92	-	1.00	-
2	02-01-2024	1.02	-	0.00	-
3	03-01-2024	1.20	-	0.08	-
4	04-01-2024	0.26	-	0.00	-
5	05-01-2024	0.29	-	0.00	-
6	06-01-2024	-	-	0.44	-
7	07-01-2024	-	-	0.57	-
8	08-01-2024	0.60	-	0.21	-
9	09-01-2024	0.30	-	0.01	-
10	10-01-2024	1.17	-	0.00	-
11	11-01-2024	0.00	-	0.02	-
12	12-01-2024	0.00	-	0.00	-
13	13-01-2024	0.09	-	0.80	-
14	14-01-2024	0.11	-	2.67	-
15	15-01-2024	0.00	-	0.08	-
16	16-01-2024	0.07	0.15	0.21	-
17	17-01-2024	0.09	-	0.17	-
18	18-01-2024	0.07	-	0.12	-
19	19-01-2024	0.07	-	0.10	-
20	20-01-2024	0.14	-	0.87	-
21	21-01-2024	0.32	-	0.69	-
22	22-01-2024	0.23	-	0.48	-
23	23-01-2024	0.20	-	0.60	-
24	24-01-2024	0.14	-	0.14	-
25	25-01-2024	0.36	-	0.00	-
26	26-01-2024	0.29	-	0.00	-
27	27-01-2024	0.46	-	0.09	-
28	28-01-2024	-	-	0.00	-
29	29-01-2024	0.46	-	0.00	-
30	30-01-2024	0.22	-	0.11	-
31	31-01-2024	0.50	-	0.36	-
Total		9.58	0.15	9.81	
Grand Total		19.54			

-: No transaction took place

Note: Cross Border Transactions of Electricity of 19.54 MU (i.e. 9.58 MU bought by Nepal, 0.15 MU sold by Nepal, 9.81 MU bought by Bhutan) happened during January, 2024 in IEX, which is included under RTM Volume of January, 2024 in IEX. No Cross Border Import Transactions of Electricity happened with Bhutan for the month of January, 2024 in IEX under RTM.

Analysis for change in trend of Final Scheduled Volume under DAM on 2nd Monday, 3rd Monday & 4th Sunday of January, 2024 (i.e. 8th, 15th & 28th January, 2024)

Final Scheduled Volume (MU) and the Daily Wt. 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 January, 2024, it is observed that on second Monday (8th January, 2024), FSV showed decreasing trend in comparison to first Sunday (7th January, 2024), on third Monday (15th January, 2024), FSV showed decreasing trend in comparison to second Sunday (14th January, 2024), on fourth Sunday (28th January, 2024), FSV showed increasing trend in comparison to fourth Saturday (27th January, 2024).

- (i) On second Monday (8th January, 2024), although there was increase in purchase on power exchange by some of the States in comparison to first Sunday (7th January, 2024) by **24.41 MU** [i.e. Haryana (4.22 MU), Tamil Nadu (3.84 MU), Kerala (3.73 MU), ArcelorMittal Nippon steel (ESIL) (3.24 MU) and Uttarakhand (1.36 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **31.29 MU** [i.e. Punjab (9.77 MU), Uttar Pradesh (6.43 MU), Rajasthan (5.35 MU), Telangana (4.09 MU) and Gujarat (3.16 MU), etc.]. This resulted in an overall decrease in FSV by **6.88 MU** on Monday (8th January, 2024) as compared to Sunday (7th January, 2024).
- (ii) On third Monday (15th January, 2024), although there was increase in purchase on power exchange by some of the States in comparison to second Sunday (14th January, 2024) by **12.93 MU** [i.e. Haryana (2.69 MU), Druk Green Power Corporation Limited (DGPCL-Bhutan)(1.84 MU), Delhi (1.70 MU), Bihar (1.62 MU) and Gujarat (1.57 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **16.22 MU** [i.e. Andhra Pradesh (2.77 MU), Telangana (2.41 MU), Tamil Nadu (2.29 MU), Maharashtra (2.24 MU) and Daman & Diu - Dadra & Nagar Haveli (0.98 MU), etc.]. This resulted in an overall decrease in FSV by **3.30 MU** on Monday (15th January, 2024) as compared to Sunday (14th January, 2024).
- (iii) On fourth Sunday (28th January, 2024), although there was decrease in purchase on power exchange by some of the States in comparison to fourth Saturday (27th January, 2024) by **21.44 MU** [i.e. Haryana (8.70 MU), Kerala (2.88 MU), West Bengal (2.21 MU), Gujarat (1.57 MU) and DVC (1.42 MU), etc.], there was also increase in purchase on power exchange by some of the States by **40.00 MU** [i.e. Andhra Pradesh (12.28 MU), Rajasthan (8.55 MU), Telangana (6.23 MU), Uttar Pradesh (5.43 MU) and J&K (2.49 MU), etc.]. This resulted in an overall increase in FSV by **18.56 MU** on Sunday (28th January, 2024) as compared to Saturday (27th January, 2024).

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. **Wt. Avg. MCP** is the average of Daily Wt. 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 Wt. Avg. 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. Under 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).