



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, 7th Floor, Tower B, World Trade Centre, Nauroji Nagar, New Delhi- 110029.

विषय: नवंबर, 2024 माह की मार्केट मॉनिटरिंग रिपोर्ट।

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

महोदय/ Sir,

नवंबर, 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 November, 2024 is enclosed herewith for kind information and perusal.

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

- i. नवंबर, 2024 माह में देश में कुल 123,790 MU विद्युत का कारोबार किया गया,

जिसमें से 62,627 MU का कारोबार अंतर्राज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया ।

In the month of November, 2024 a total of 123,790 MU of electricity was transacted in the country out of which 62,627 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.

- ii. अल्पावधि मार्केट के अंतर्गत कुल 16,947 MU का कारोबार किया गया था, जिसमें से 10,748 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ । इस प्रकार अल्पावधि कारोबार, नवंबर, 2024 माह में ट्रेड की गई विद्युत की कुल मात्रा का 13.69 % था और 8.68 % पावर एक्सचेंजों के माध्यम से रहा ।

A total of 16,947 MU was transacted under Short Term Market, out of which 10,748 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in November, 2024 was 13.69 % of total volume of electricity traded in November, 2024 and 8.68 % 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 27.06 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 17.16 % रहा ।

If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 27.06 % of ISTS transactions, out of which transaction through the power exchanges constitutes 17.16 %.

भवदीय/ Yours faithfully,

Signed by Vikram Singh

Date: 23-01-2025 17:25:07

(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 - नवंबर, 2024

Monthly Market Monitoring Report

November, 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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नवंबर, 2024 की मासिक मार्केट
मॉनिटरिंग रिपोर्ट का सारांश

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

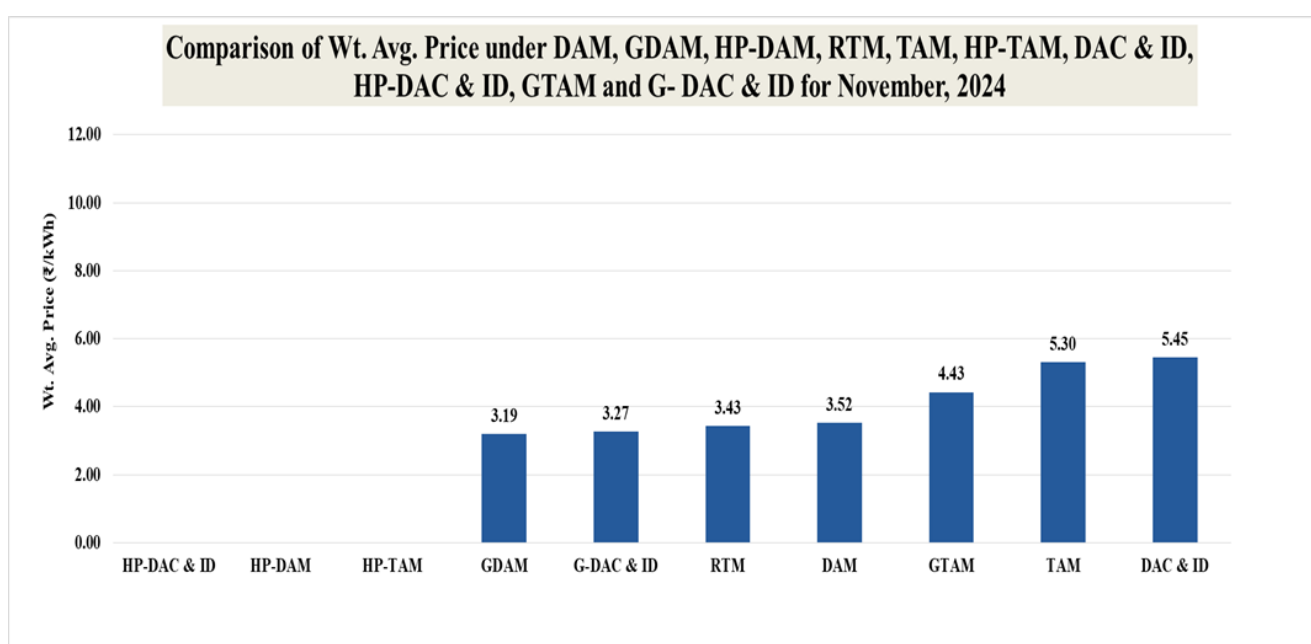
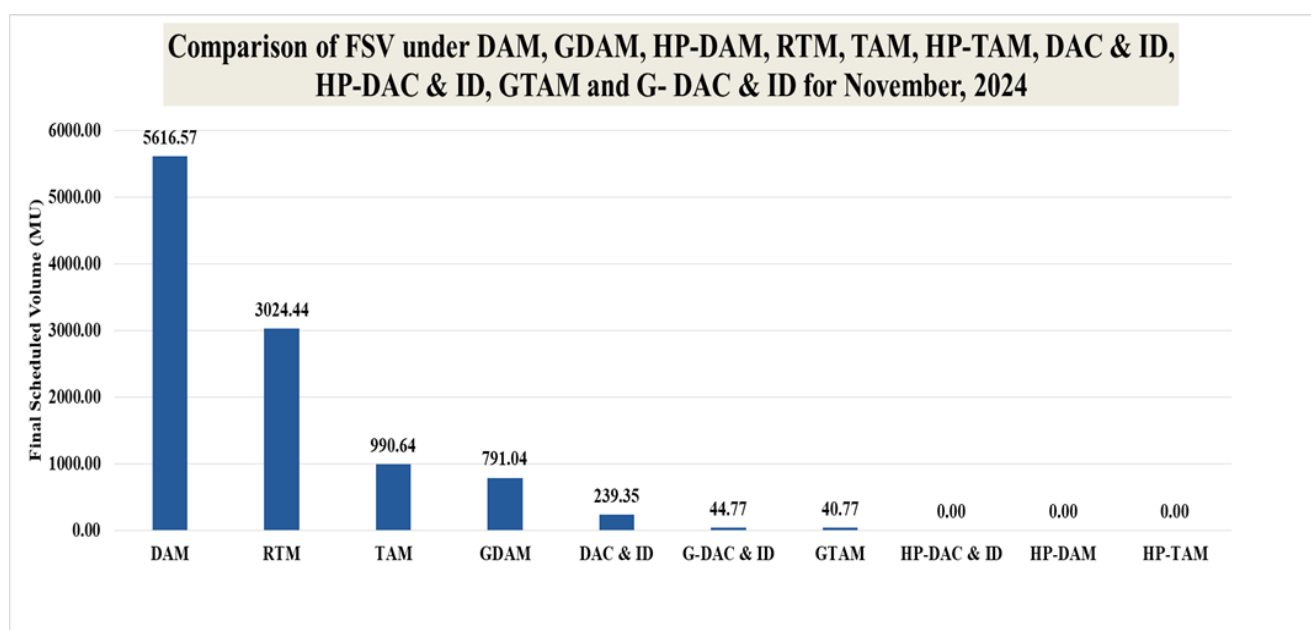
नवंबर, 2024 माह के लिए सारांश Summary for Month: November, 2024

भारत में विद्युत एक्सचेंजों पर विद्युत के व्यापार का सारांश

Summary of Electricity Transactions on Power Exchanges in India

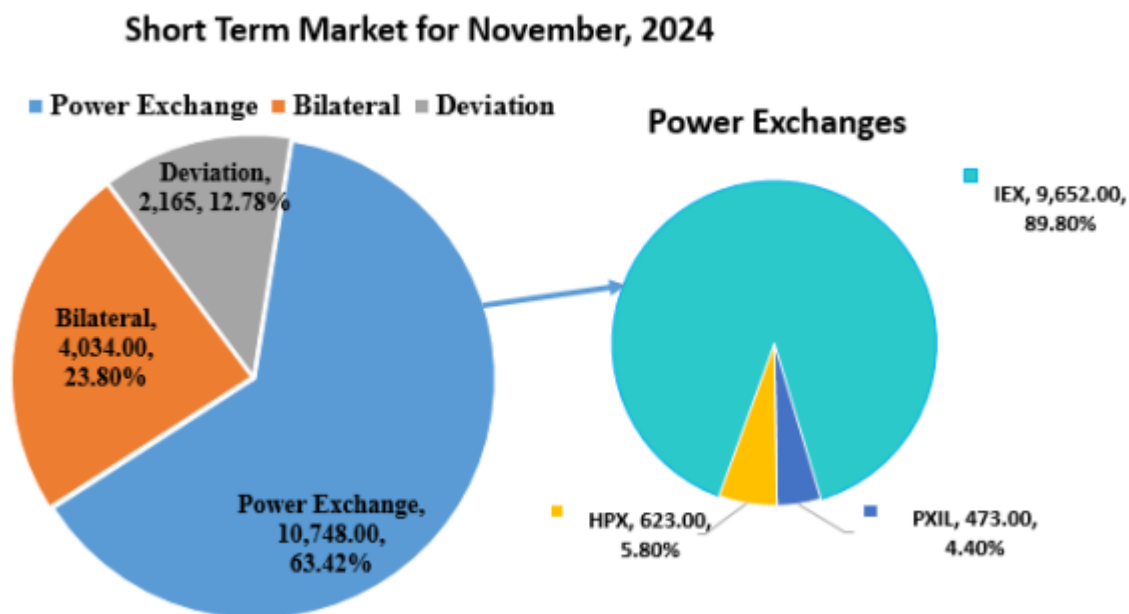
- नवंबर, 2024 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल **10,748 MU** विद्युत का कारोबार किया गया। विद्युत की यह मात्रा डिलीवरी की तारीख के आधार पर है और इसमें DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM और G-DAC & ID मार्केट खंडों के माध्यम से कारोबार शामिल हैं।

A total volume of **10,748 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of November, 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.



- द्विपक्षीय व्यापार के तहत कुल **4,034* MU** विद्युत का कारोबार किया गया और **2,165 MU** को विचलन के रूप में लेनदेन किया गया। इस प्रकार कुल **16,947 MU** विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। नवंबर, 2024 के महीने में देश में कुल **123,790 MU** विद्युत की आपूर्ति की गई थी, इस प्रकार नवंबर, 2024 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा **13.69 %** था।

Under the Bilateral trade, a total of **4,034* MU** of electricity was transacted and **2,165 MU** was transacted as deviation from schedule. Thus, a total of **16,947 MU** of electricity was transacted as short term trade (Power Exchange + Bilateral trade + deviation from schedule). In November, 2024, a total of **123,790 MU** of electricity was supplied in the country, thus, the share of short term market in the total volume of electricity supplied in November, 2024 was **13.69 %**.



*** This bilateral transactions volume include only short-term transactions scheduled under GNA and t-GNA during the month of November 2024.**

- नवंबर, 2024 के महीने के दौरान कोई संचरण जाम नहीं था।
There was no transmission congestion during the month of November, 2024.

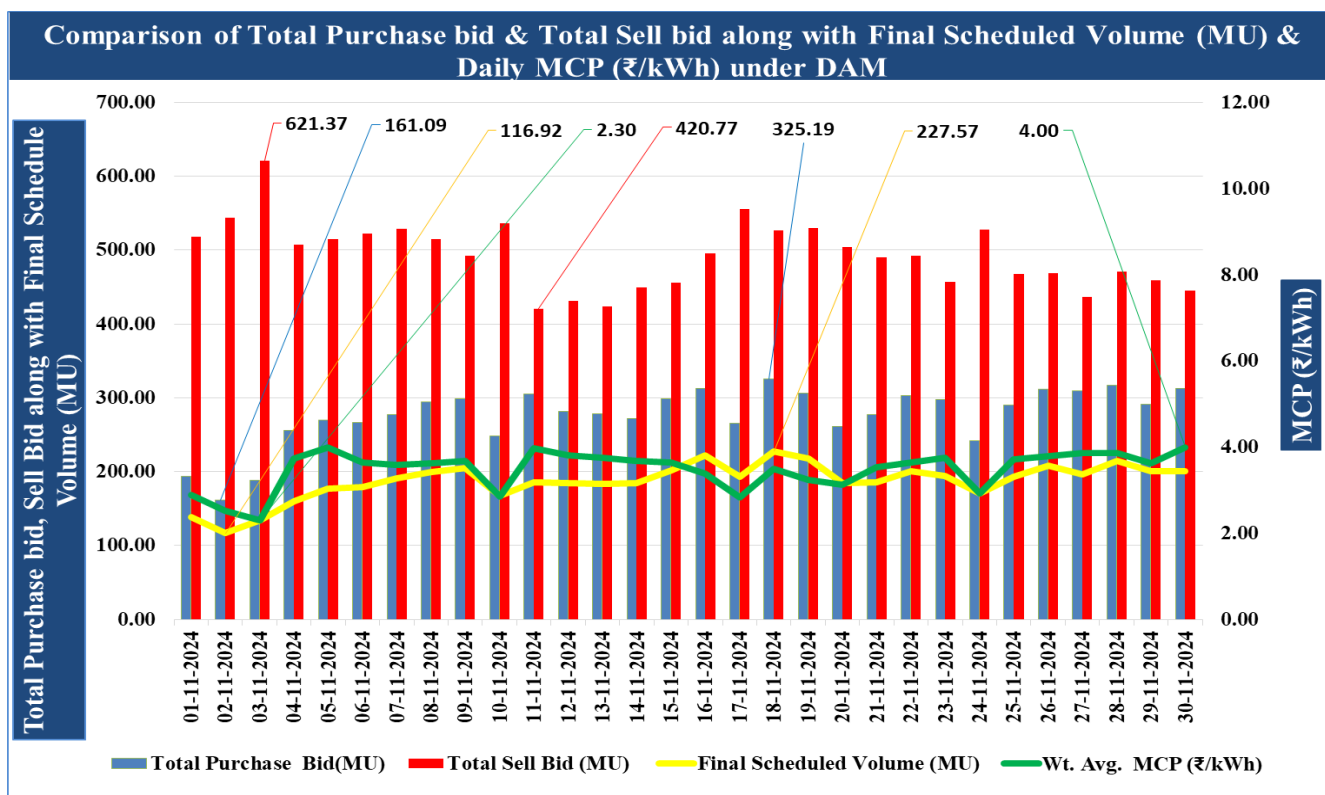
नवंबर, 2024 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **3.77 MU** थी।
The total volume of real time curtailment reported in the month of November, 2024 was only **3.77 MU**.

- नवंबर, 2024 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (ISTS) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **62,627 MU** थी। नवंबर, 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 **27.06 %** रहा।
The total volume of electricity scheduled through ISTS during the month of November, 2024 was **62,627 MU**. The total volume of electricity transacted in the short term market was **27.06 %** of total volume schedule at ISTS in November, 2024.

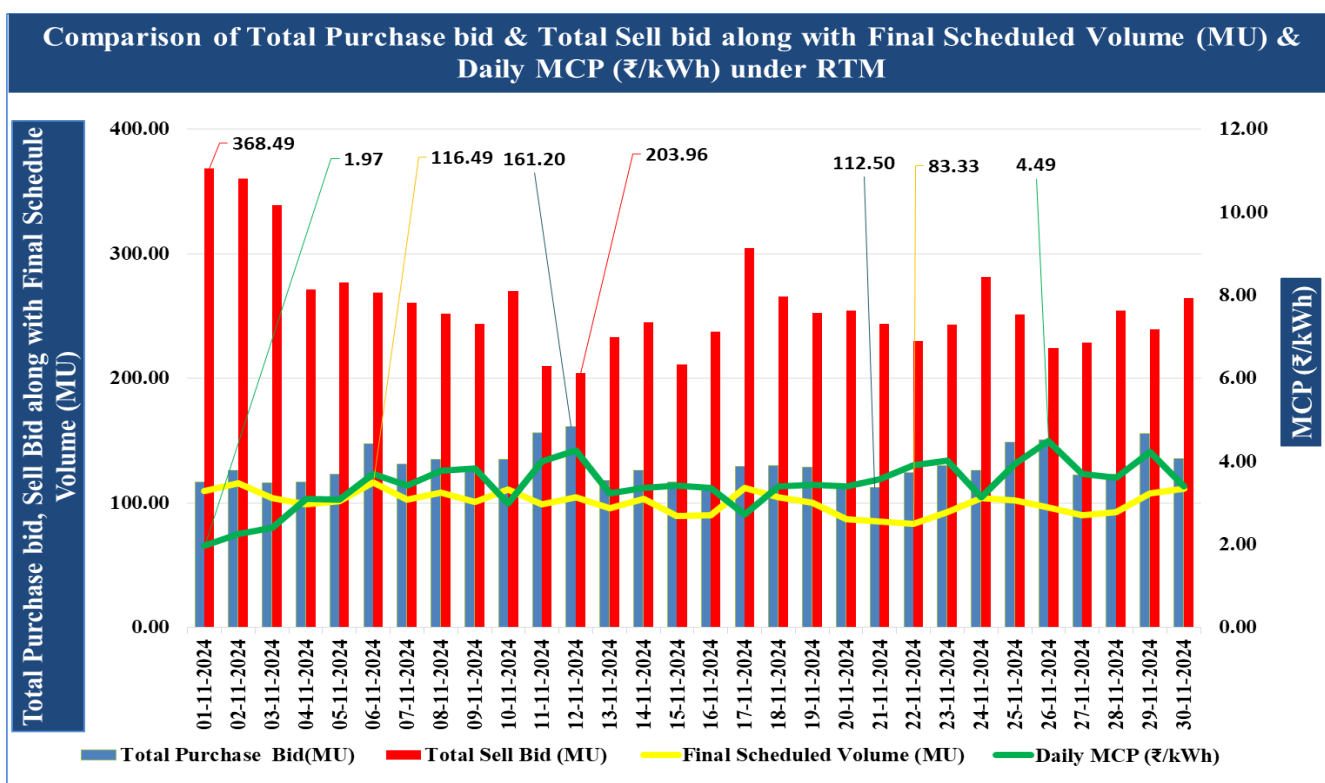
- नवंबर, 2024 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:

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

DAM Volume



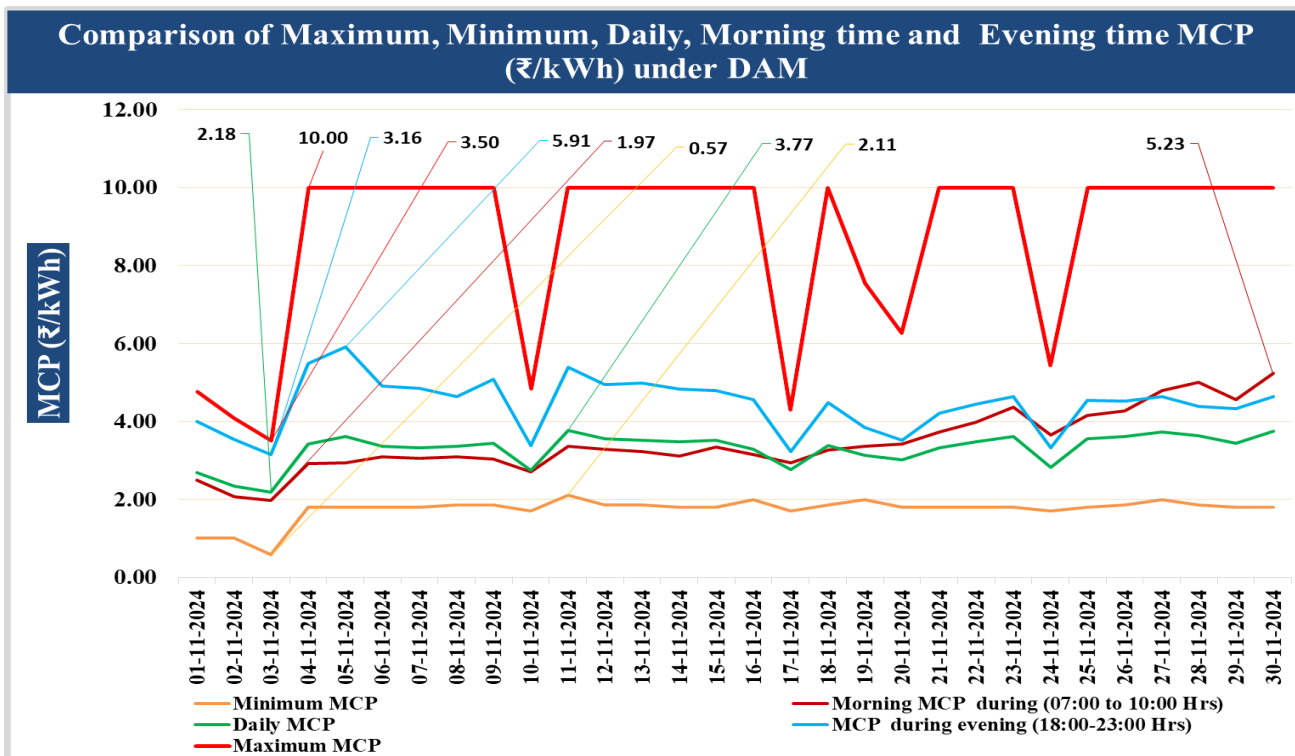
RTM Volume



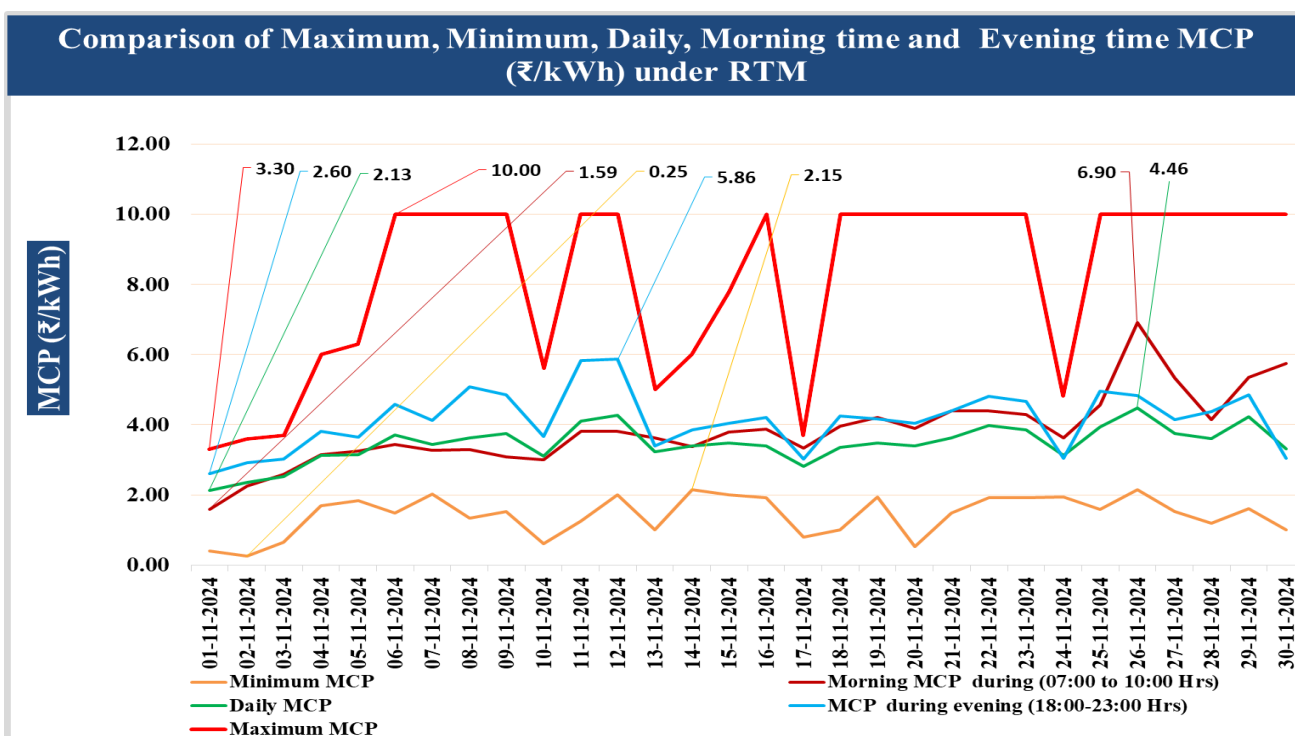
- नवंबर, 2024 माह के दौरान DAM और RTM में अधिकतम, न्यूनतम, दैनिक, सुबह और शाम के समय MCP की भिन्नता निम्नलिखित चित्रों में दिखाई गई है:

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

DAM Prices



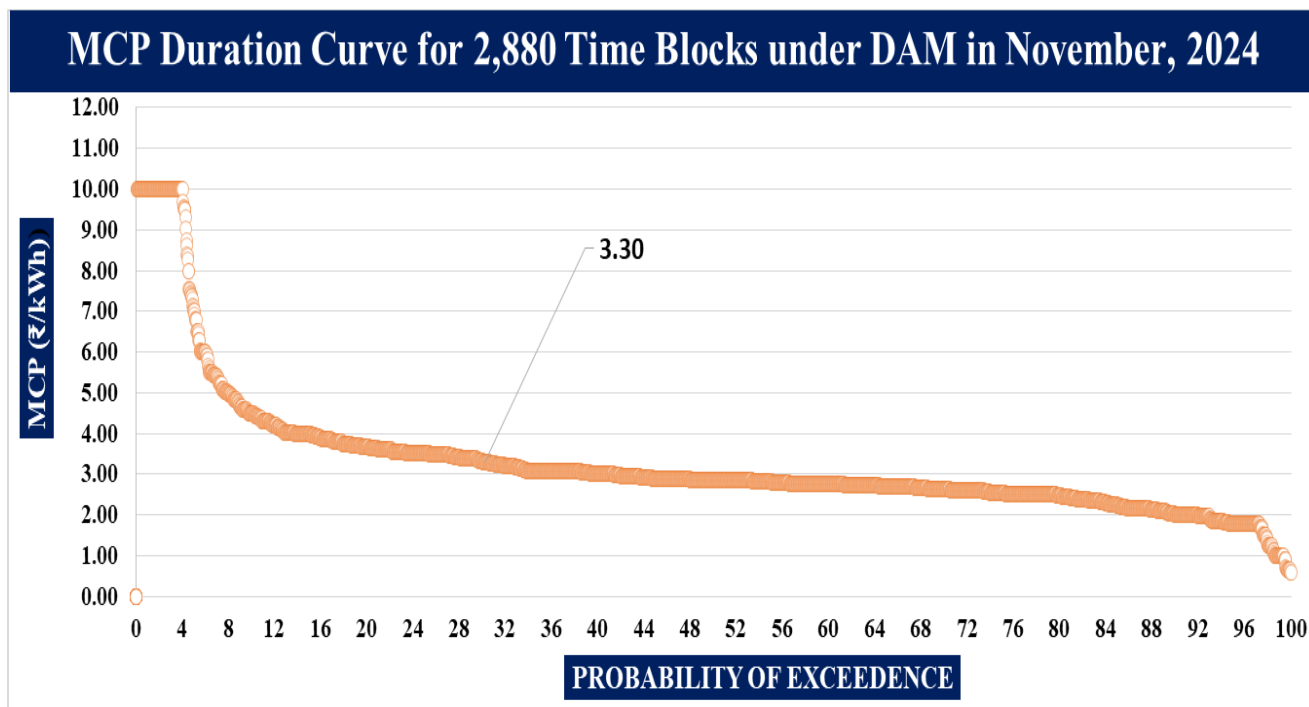
RTM Prices



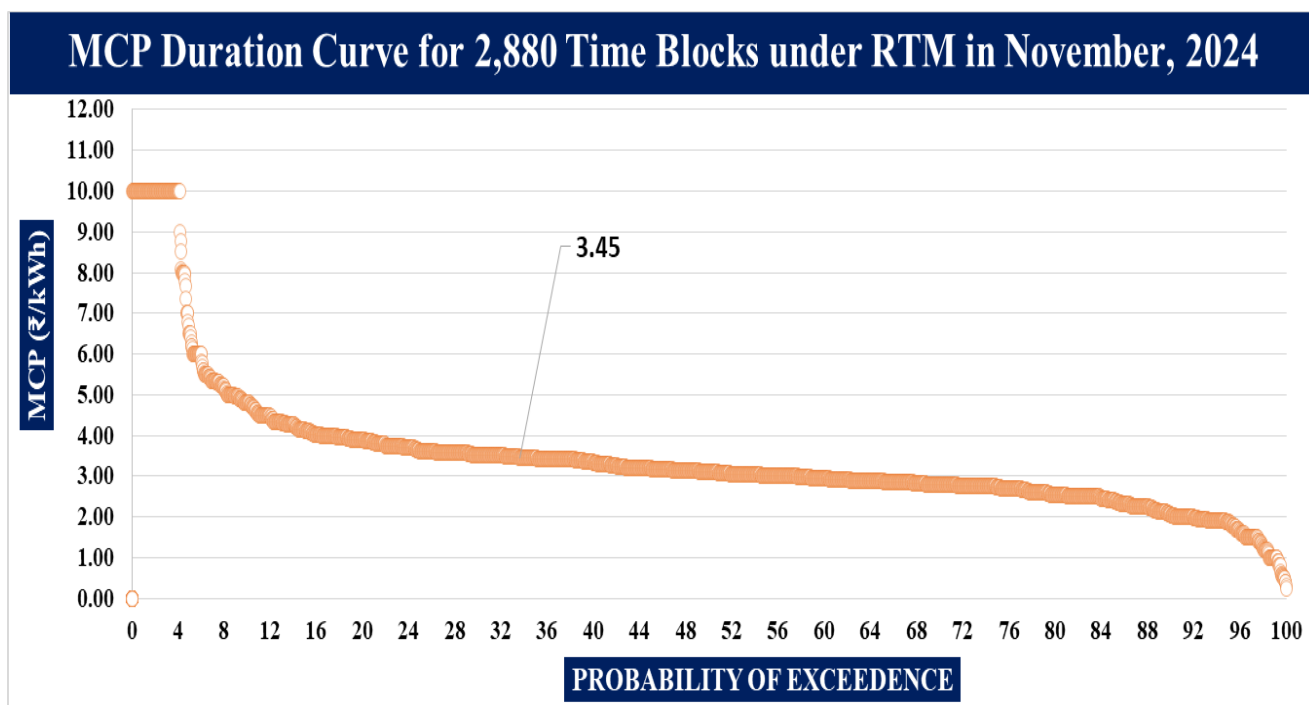
- नवंबर, 2024 के महीने के दौरान DAM और RTM के तहत समय ब्लॉकवार MCP अवधि वक्र निम्नलिखित चित्रों में में दिखाए गए हैं:

The Market Clearing Price duration curves for time block wise under DAM and RTM during the month of November, 2024 are shown in following figures:

DAM MCP duration curve



RTM MCP duration curve



MARKET MONITORING REPORT DETAILS

Electricity Transactions on Power Exchanges in India

1. Day Ahead Market (DAM)

The volume of electricity transacted under DAM was 5,616.57 MU at a Wt. Avg. Price of ₹ 3.52/kWh in November, 2024.

- 1.1. The total volume of electricity transacted on the power exchanges, viz., IEX, HPX and PXIL in the Day Ahead Market (DAM) in November, 2024 was **5,616.57 MU**. The total energy supplied in the country during the month of November, 2024 was **123,790 MU**. Thus, the volume of electricity transacted on the power exchanges under DAM during November, 2024 was 4.54 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted under DAM during last month October, 2024 i.e. **4,419.86 MU** which was 3.18 % of the total energy supplied (**139,188 MU**) in the country during October, 2024. Similarly, the total volume of electricity transacted under DAM during previous year i.e. November, 2023, was **5,201.43 MU** which was 4.36 % of the total energy supplied (**119,308 MU**) in the country during November, 2023.
- 1.2. The DAM volume for November, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **15.15 MU** (i.e. 1.11 MU sold by Nepal, 14.04 MU bought by Bhutan).
- 1.3. The Average Market Clearing Price (MCP) on IEX during the month of November, 2024 was ₹ **3.52/kWh**, which shows of a decrease 12.66 % & 15.38 % when compared with Wt. Avg. MCP's for the month of October, 2024 and November, 2023, which were ₹ **4.03/kWh** and ₹ **4.16/kWh**, respectively. On PXIL, the Average MCP during the month of November, 2024 was ₹ **8.50/kWh**, which shows of a decrease 9.19 % when compared with Wt. Avg. MCP for the month of November, 2023, which was ₹ **9.36/kWh** and no transaction of electricity took place during October, 2024. On HPX, no transaction of electricity took place during November, 2024.
- 1.4. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under DAM for November, 2024 vs October, 2024 and November, 2023 is shown below as **Figure-1**:

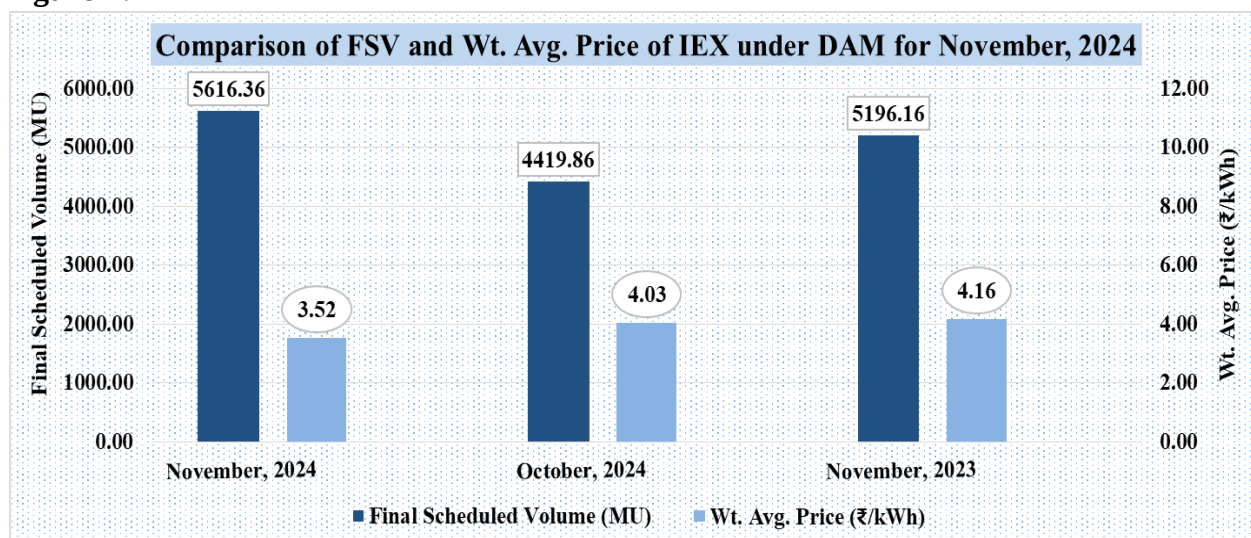


Figure-1

- 1.5.** The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 116 time blocks from 4th to 9th, 11th to 16th, 18th, 21st to 23rd & 25th to 30th November, 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 7 time blocks from 29th to 30th November, 2024. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in HPX, no transaction of electricity took place during November, 2024.
- 1.6.** The minimum ACP of ₹ 0.57/kWh in IEX was observed in 13 regions during the time block 10:45 - 11:00 Hrs on 3rd November, 2024. Whereas, in PXIL, the minimum ACP of ₹ 3.50/kWh was observed in all 13 regions during 4 time blocks (11:00-11:15 to 11:45-12:00) on 27th November, 2024. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in HPX, no transaction of electricity took place during November, 2024.

2. Real Time Market (RTM)

The volume of electricity transacted under RTM was 3,024.44 MU at a Wt. Avg. Price of ₹ 3.43/kWh in November, 2024.

- 2.1. The total volume of electricity transacted on the power exchanges under Real Time Market in November, 2024 was **3,024.44 MU**, out of which **3,019.15 MU** (99.83 %) was transacted in IEX, **5.11 MU** (0.17 %) was transacted in PXIL and **0.18 MU** (0.01 %) was transacted in HPX.
- 2.2. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under RTM for November, 2024 vs October, 2024 and November, 2023 is shown below as **Figure-2, Figure-3 & Figure-4**:

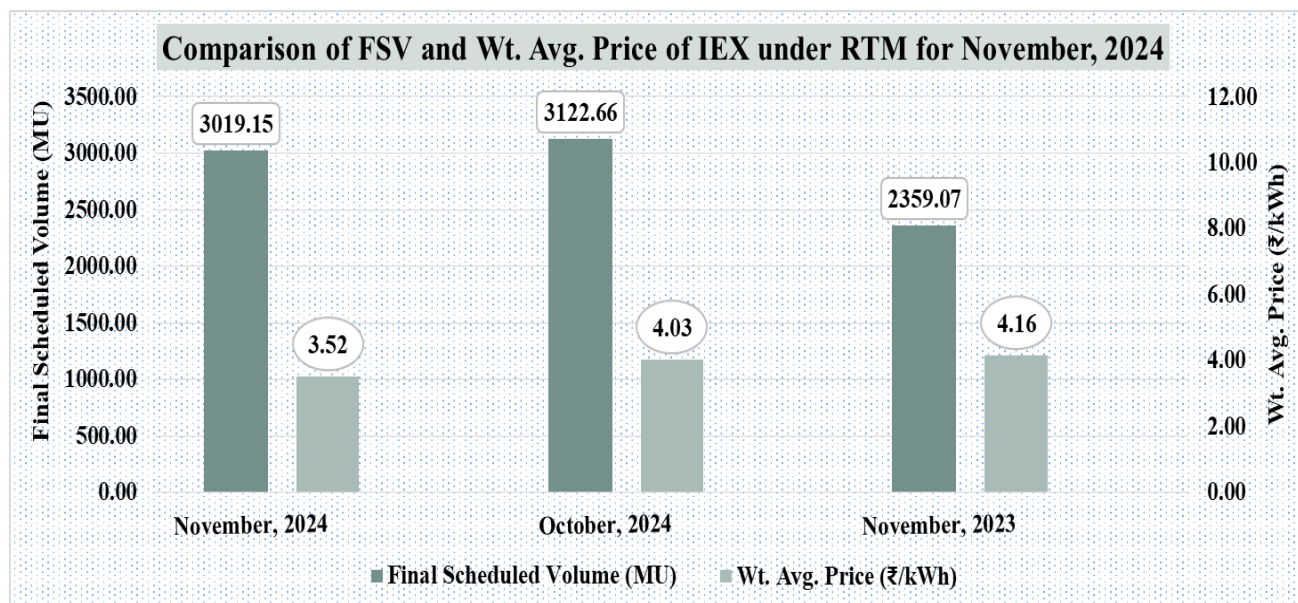


Figure-2

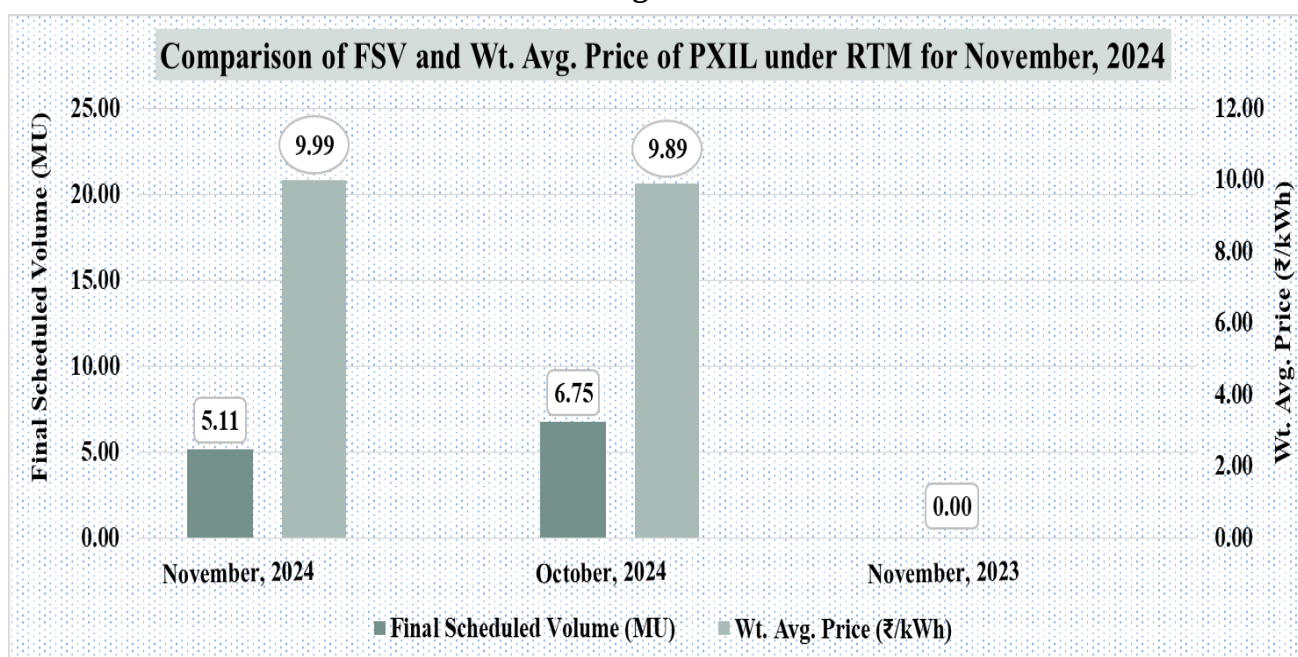


Figure-3

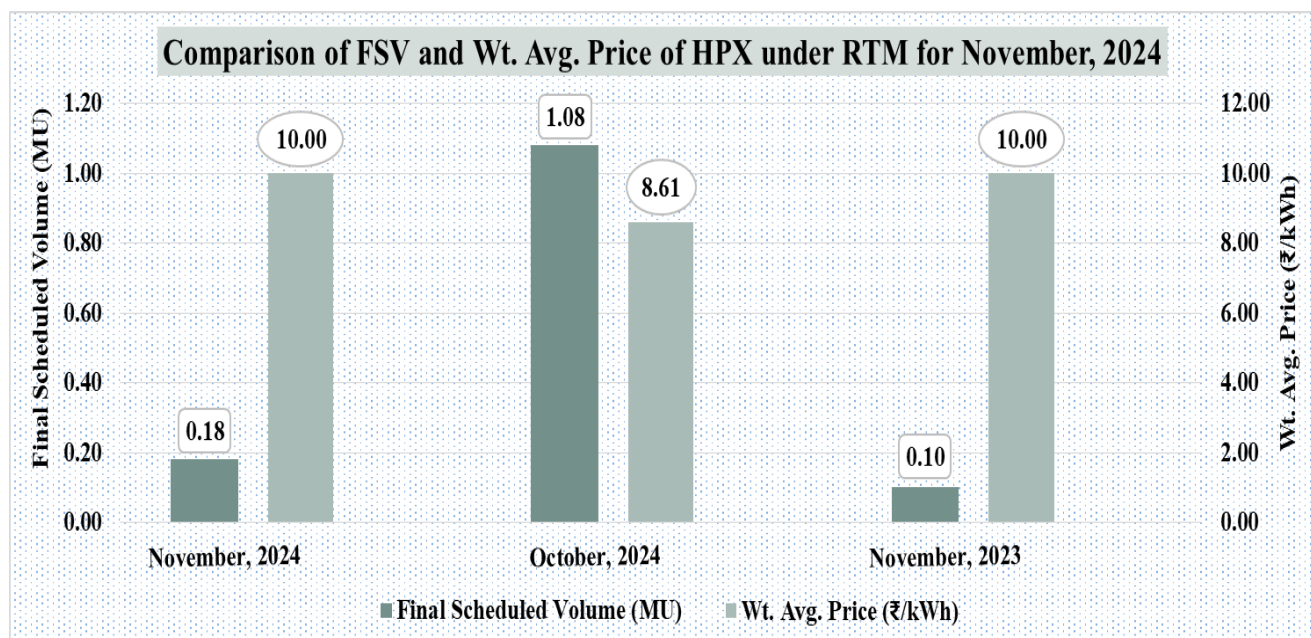


Figure-4

2.3. The RTM volume for November, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XIII**), which was **209.94 MU** (i.e. 1.42 MU bought by Bhutan, 198.37 MU sold by Nepal, 10.15 MU sold by Bhutan).

3. Green Day Ahead Market (GDAM)

The volume of electricity transacted under GDAM was 791.04 MU at a Wt. Avg. Price of ₹ 3.19/kWh in November, 2024.

3.1. The volume of electricity transacted under GDAM in November, 2024 was **790.30 MU (395.70 MU in Solar, 368.41 MU in Non-Solar and 26.19 MU in Hydro)** in IEX at a Wt. Avg. MCP of ₹ **3.19/kWh** & **0.74 MU** was transacted in PXIL at a Wt. Avg. MCP of ₹ **3.40/kWh** and no transaction took place in HPX under GDAM.

3.2. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX under GDAM for November, 2024 vs October, 2024 and November, 2023 is shown below as **Figure-5**:

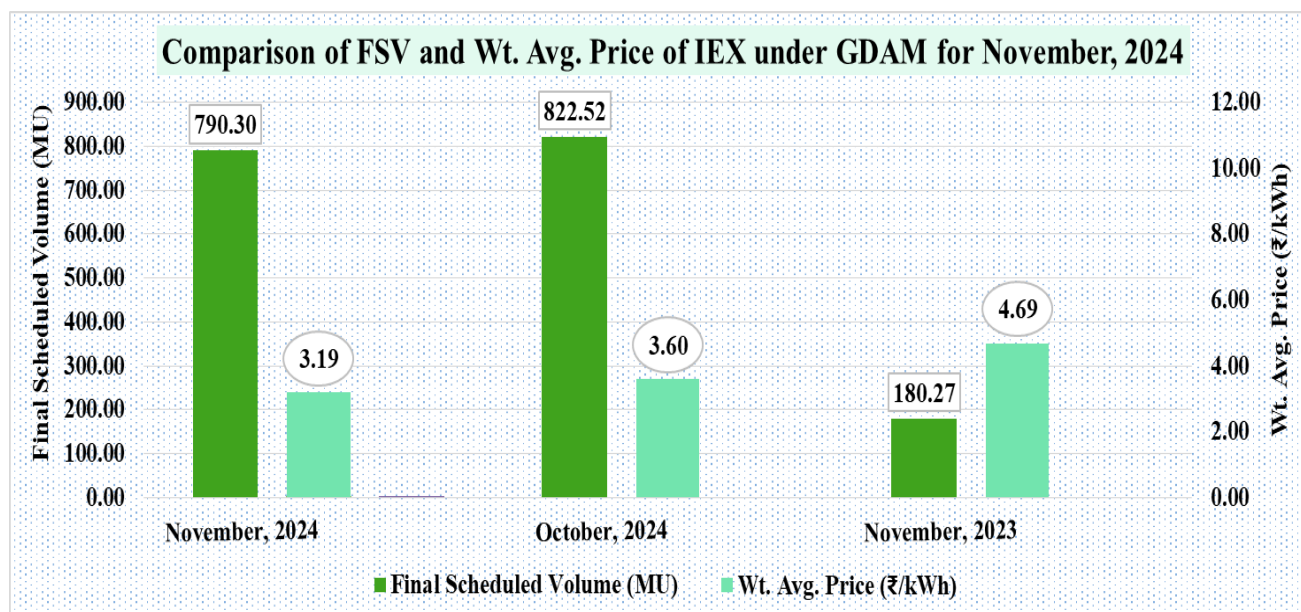


Figure-5

3.3. There was no real time curtailment in the power exchanges under Green Day Ahead Market during the month of November, 2024, October, 2024 and November, 2023.

3.4. The **top 10 sellers** on the power exchanges under Green Day Ahead Market (GDAM) in November, 2024 were **Karnataka, ADANI RENEWABLE ENERGY HOLDING FOUR LIMITED, Adani Green Energy Twenty Five B Limited_infirm, ADANI GREEN ENERGY TWENTY FIVE LIMITED_infirm, Adani Green Energy Twenty Five A Limited_Infirm, ADANI SOLAR ENERGY RJ TWO PRIVATE LIMITED, RENEW SURYA OJAS PRIVATE LIMITED-Wind, ADANI RENEWABLE ENERGY FIFTY FIVE LIMITED_Infirm, Himachal Pradesh and Meghalaya**, which constituted **74.37 %** of the market volume.

3.5. The **top 10 buyers** on the power exchanges under Green Day Ahead Market (GDAM) in November, 2024 were **Odisha, Maharashtra, DVC, ArcelorMittal Nippon steel (ESIL), Tamil Nadu, Haryana, Gujarat, Karnataka, Punjab and Kerala**, which constituted **88.81 %** of the market volume.

4. Term Ahead Market (TAM)

The volume of electricity transacted under TAM was 990.64 MU at a Wt. Avg. Price of ₹ 5.30/kWh in November, 2024.

4.1. The total volume of electricity transacted on the power exchanges on delivery date basis under Term Ahead Market in November, 2024, October, 2024 and November, 2023 is tabulated below:

Month	Total Volume (in MU)	IEX in MU (in % of total volume)	PXIL in MU (in % of total volume)	HPX in MU (in % of total volume)
November, 2024	990.64	151.60 (15.30 %)	295.16 (29.79 %)	543.88 (54.90 %)
October, 2024	2,279.35	1148.34 (50.38 %)	754.37 (33.10 %)	376.64 (16.52 %)
November, 2023	915.37	642.96 (70.24 %)	153.00 (16.71 %)	119.41 (13.04 %)

4.2. In the month of November, 2024, no transaction took place in IEX, PXIL & HPX under **High Price Term Ahead Market (HP-TAM)**.

4.3. With respect to the total energy supplied during the month of November, 2024 in the country, the volume of electricity traded on the power exchanges under TAM on delivery date basis represents **0.80 %** of the total energy supplied. The same was **1.64 %** in October, 2024 and **0.77 %** in November, 2023.

4.4. In November, 2024, there was no transmission congestion under TAM in IEX, PXIL & HPX.

4.5. There was real time curtailment of **2.35 MU** under TAM, out of which 0.71 MU in PXIL and 1.64 MU in HPX and no real time curtailment in IEX under TAM.

4.6. 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 November, 2024 with October, 2024 and November, 2023 are shown in Table – 1A & 1B:

(i) Final Scheduled Volume (MU), November, 2024 vis- a- vis October, 2024 and November, 2023

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
IEX	November, 2024	151.60	-	-	-	151.60
	October, 2024	300.66	-	2.23	845.45	1148.34
	%Change (Month over Month)	-49.58	NA	NA	NA	-86.80
	November, 2023	290.58	45.86	-	306.52	642.96
	%Change (Year over Year)	-47.83	NA	NA	NA	-76.42
PXIL	November, 2024	278.15	-	-	17.01	295.16
	October, 2024	333.13	-	-	421.24	754.37
	%Change (Month over Month)	-16.50	NA	NA	-95.96	-60.87
	November, 2023	75.97	-	60.08	16.95	153.00
	%Change (Year over Year)	266.13	NA	NA	0.35	92.92

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
HPX	November, 2024	166.32	-	23.05	354.51	543.88
	October, 2024	192.31	-	-	184.33	376.64
	%Change (Month over Month)	-13.51	NA	NA	92.32	44.40
	November, 2023	42.10	-	-	77.31	119.41
	%Change (Year over Year)	295.06	NA	NA	358.56	355.47

- : No transaction took place

NA: Not Applicable

Table: 1A

(ii) Wt. Avg. MCP, November, 2024 vis- a- vis October, 2024 and November, 2023

Exchange	Period	Wt. Average MCP (₹/kWh)			
		Daily or Any Day	Weekly	Monthly	Anyday Single Side
IEX	November, 2024	5.18	-	-	-
	October, 2024	7.23	-	5.13	5.89
	%Change (Month over Month)	-28.35	NA	NA	NA
	November, 2023	5.94	5.75	-	7.99
	%Change Year over Year)	-12.79	NA	NA	NA
PXIL	November, 2024	5.36	-	-	5.03
	October, 2024	7.01	-	-	5.93
	%Change (Month over Month)	-23.54	NA	NA	-15.18
	November, 2023	8.22	-	9.43	8.40
	%Change (Year over Year)	-34.79	NA	NA	-40.12
HPX	November, 2024	6.55	-	5.00	4.75
	October, 2024	7.21	-	-	6.08
	%Change (Month over Month)	-9.15	NA	NA	-21.88
	November, 2023	5.63	-	-	9.49
	%Change Year over Year)	16.34	NA	NA	-49.95

-: No transaction took place

NA: Not Applicable

Table: 1B

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

The volume of electricity transacted under DAC & ID was 239.35 MU at a Wt. Avg. Price of ₹ 5.45/kWh in November, 2024.

- 5.1. The volume of electricity transacted on IEX, PXIL and HPX under DAC & ID on delivery date basis during November, 2024 were **50.31 MU, 159.70 MU and 29.34 MU**, respectively.
- 5.2. In the month of November, 2024, no transaction took place in IEX, PXIL and HPX under **High Price Day Ahead Contingency & Intra Day (HP- DAC & ID)**.
- 5.3. In November, 2024, there was no transmission congestion under TAM in IEX, PXIL & HPX.
- 5.4. In November, 2024, there was real time curtailment of **0.53 MU** under DAC & ID. Out of which **0.11 MU** in IEX, **0.05 MU** in PXIL and **0.37 MU** in HPX.
- 5.5. The total volume of electricity transacted under DAC & ID under Day Ahead Contingency & Intra Day contracts during November, 2024 and its comparison with October, 2024 and November, 2023 on delivery date basis are shown in Tables- 2A & 2B:

(i) Final Scheduled Volume (MU), November, 2024 vis- a- vis October, 2024 and November, 2023

Exchange	Period	Final Scheduled Volume (MU)		
		Day Ahead Contingency	Intra Day	Total
IEX	November, 2024	49.73	0.58	50.31
	October, 2024	101.76	9.79	111.55
	%Change (Month over Month)	-51.13	-94.08	-54.90
	November, 2023	36.07	0.10	36.17
	%Change (Year over Year)	37.87	480.00	39.09
PXIL	November, 2024	148.20	11.50	159.70
	October, 2024	323.15	17.66	340.81
	%Change (Month over Month)	-54.14	-34.88	-53.14
	November, 2023	72.98	0.70	73.68
	%Change (Year over Year)	103.07	1542.86	116.75
HPX	November, 2024	20.74	8.60	29.34
	October, 2024	152.95	14.34	167.29
	%Change (Month over Month)	-86.44	-40.03	-82.46
	November, 2023	8.55	1.53	10.08
	%Change (Year over Year)	142.57	462.09	191.07

- : No transaction took place

NA: Not Applicable

Table: 2A

(ii) Wt. Avg. MCP, November, 2024 vis- a- vis October, 2024 and November, 2023

Exchange	Period	Wt. Average MCP (₹/kWh)	
		Day Ahead Contingency	Intra Day
IEX	November, 2024	5.64	8.41
	October, 2024	8.67	9.62
	%Change (Month over Month)	-34.95	-12.58
	November, 2023	5.17	10.00
	%Change Year over Year)	9.09	-15.90
PXIL	November, 2024	4.89	7.13
	October, 2024	7.68	9.10
	%Change (Month over Month)	-36.33	-21.65
	November, 2023	8.28	10.00
	%Change (Year over Year)	-40.94	-28.70
HPX	November, 2024	7.21	7.23
	October, 2024	8.33	9.50
	%Change (Month over Month)	-13.45	-23.89
	November, 2023	9.37	10.00
	%Change Year over Year)	-23.05	-27.70

- : No transaction took place

NA: Not Applicable

Table: 2B

6. Green Term Ahead Market (GTAM)

The volume of electricity transacted under GTAM was 40.77 MU at a Wt. Avg. Price of ₹ 4.43/kWh in November, 2024.

The total volume of electricity transacted in the PXs under GTAM on delivery date basis was **40.77 MU (16.49 MU in Solar and 24.28 MU in Non-Solar)**. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under GTAM for November, 2024 is shown below as **Figure-6, Figure-7 and Figure-8**:

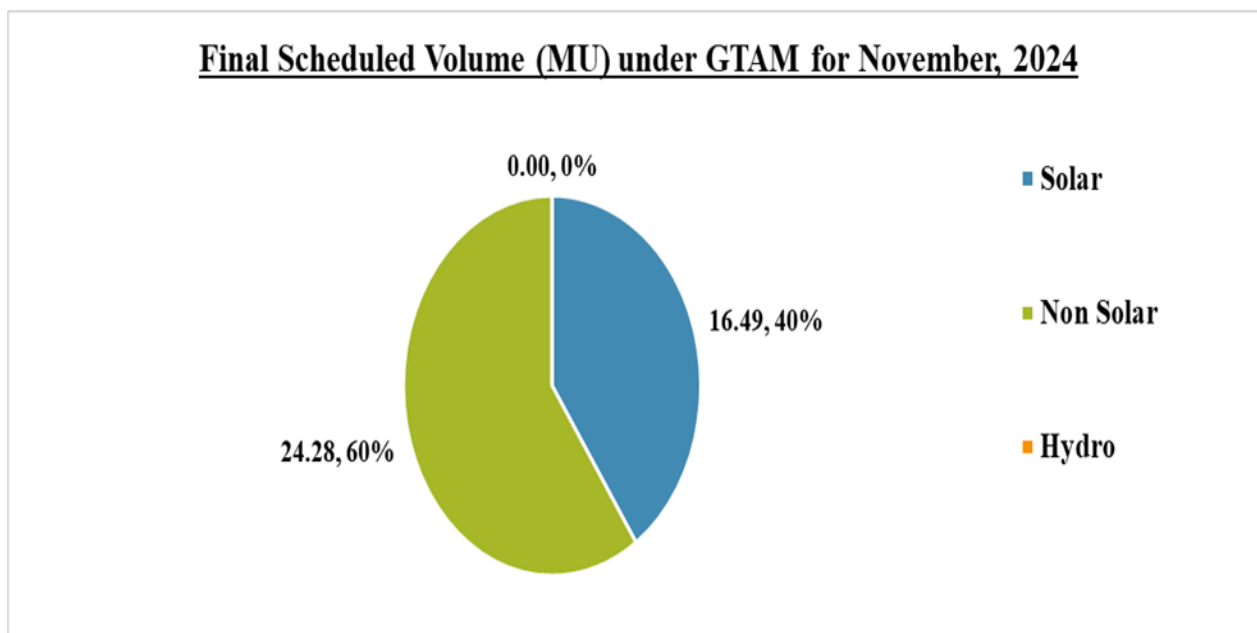


Figure-6

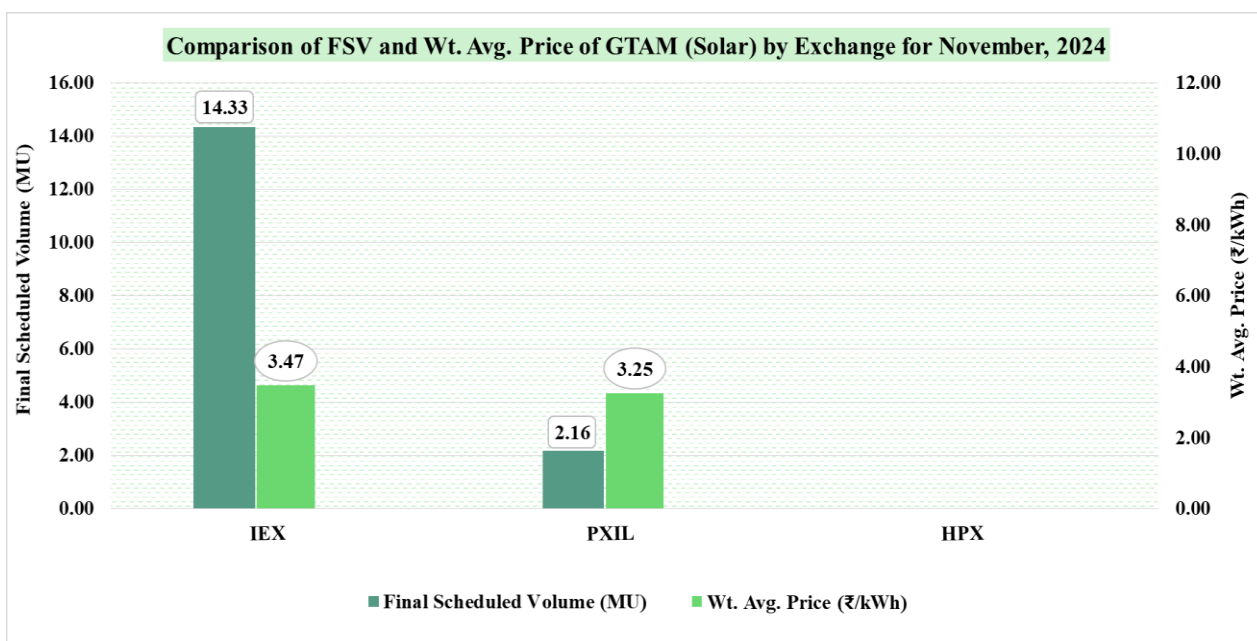


Figure-7

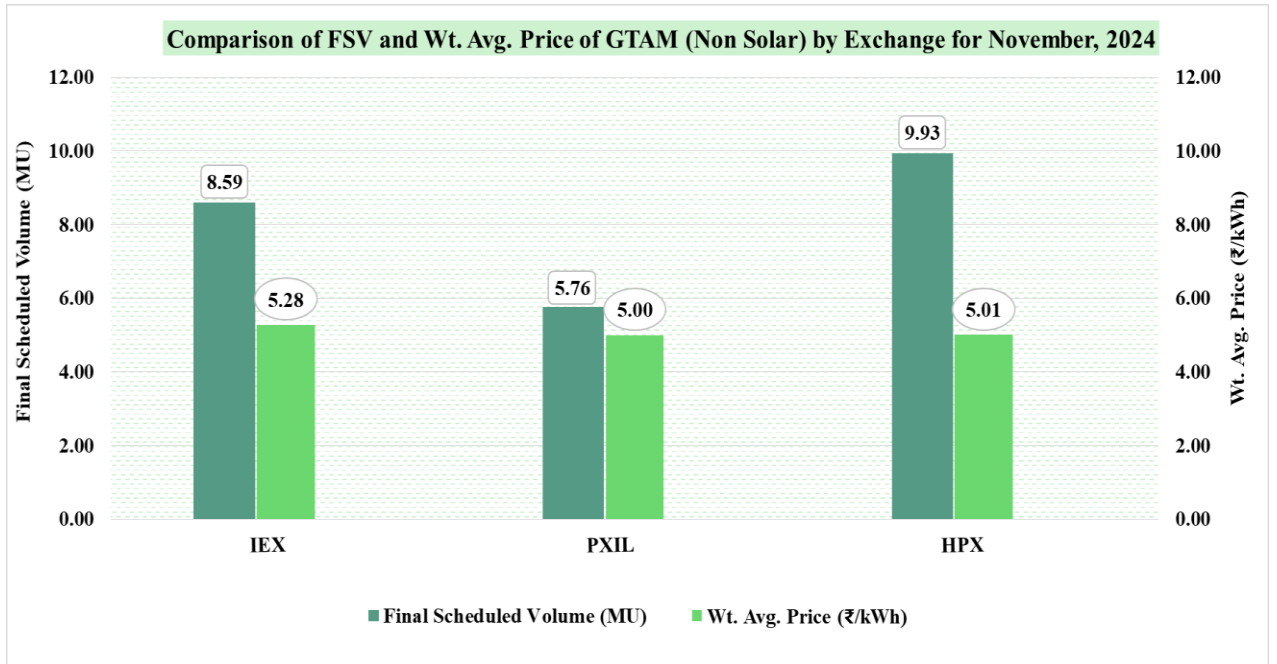


Figure-8

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

The volume of electricity transacted under G-DAC & ID was 44.77 MU at a Wt. Avg. Price of ₹ 3.27/kWh in November 2024.

The total volume of electricity transacted in the IEX, PXIL & HPX under G-DAC & ID on delivery date basis was **44.77 MU** (**15.58 MU** in Solar, **15.97 MU** in Non-Solar and **13.22 MU** in Hydro, respectively). The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under G-DAC & ID for November, 2024 is shown below as **Figure-9, Figure-10, Figure-11 and Figure-12:**

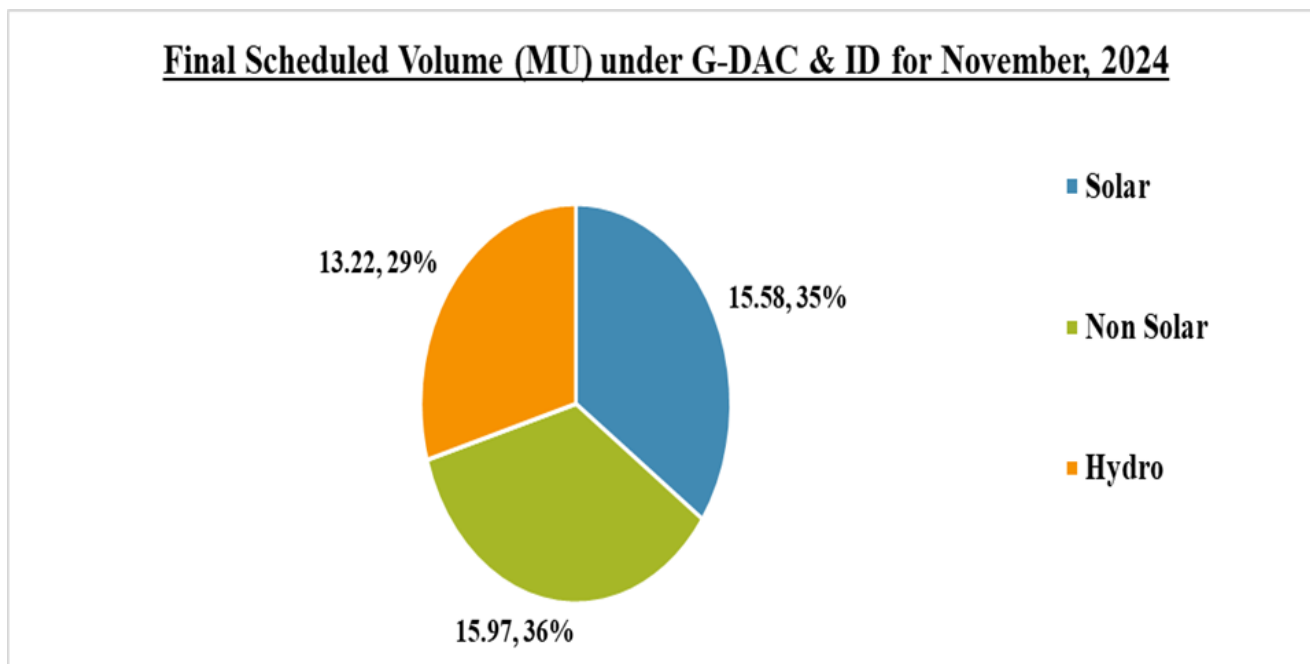


Figure-9

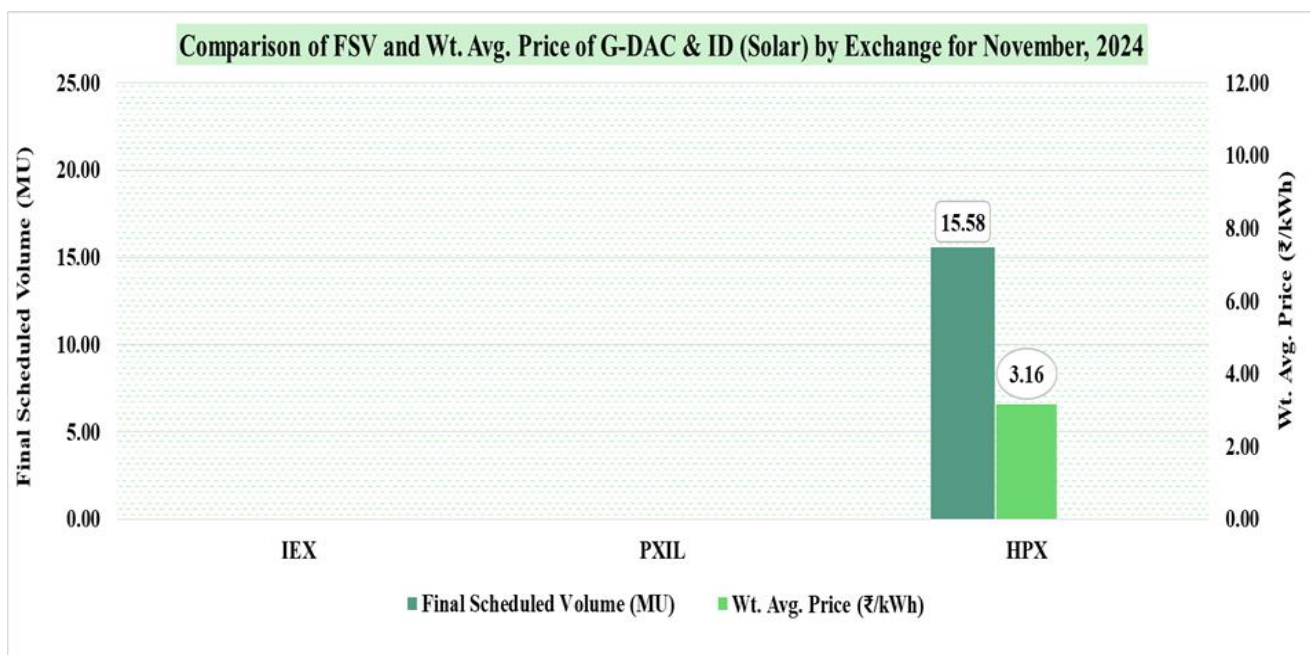


Figure-10

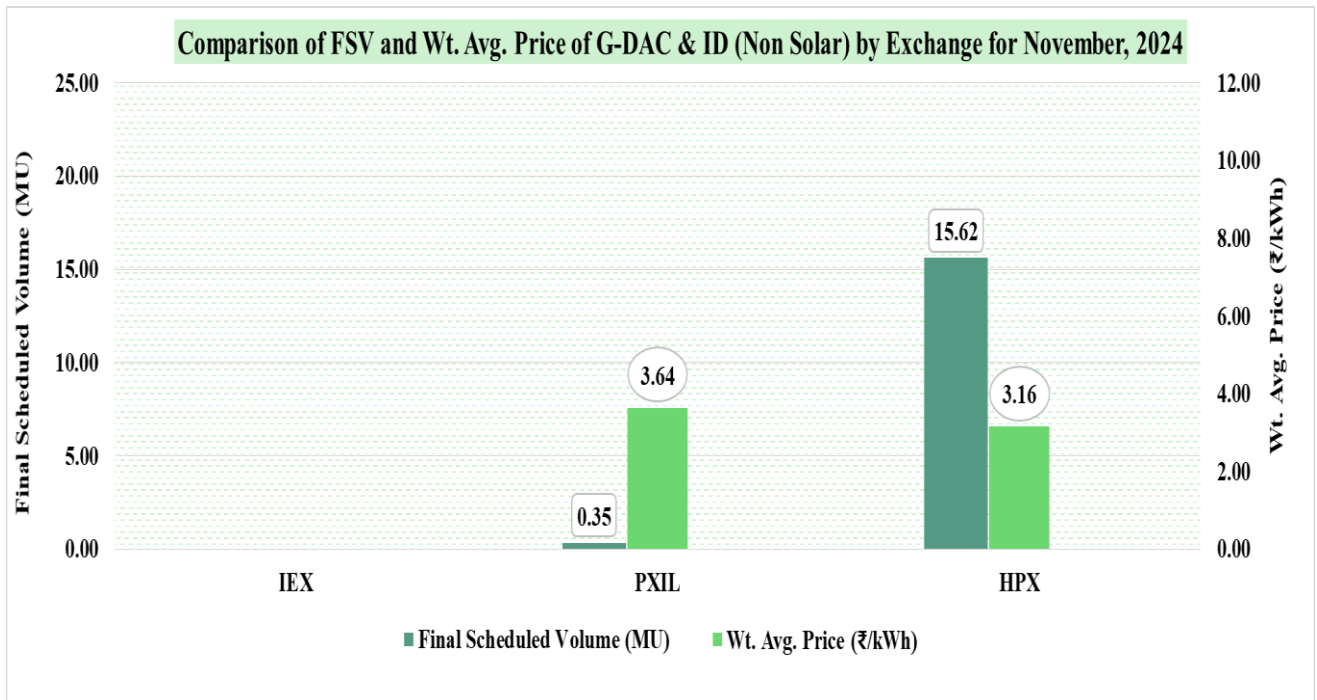


Figure-11

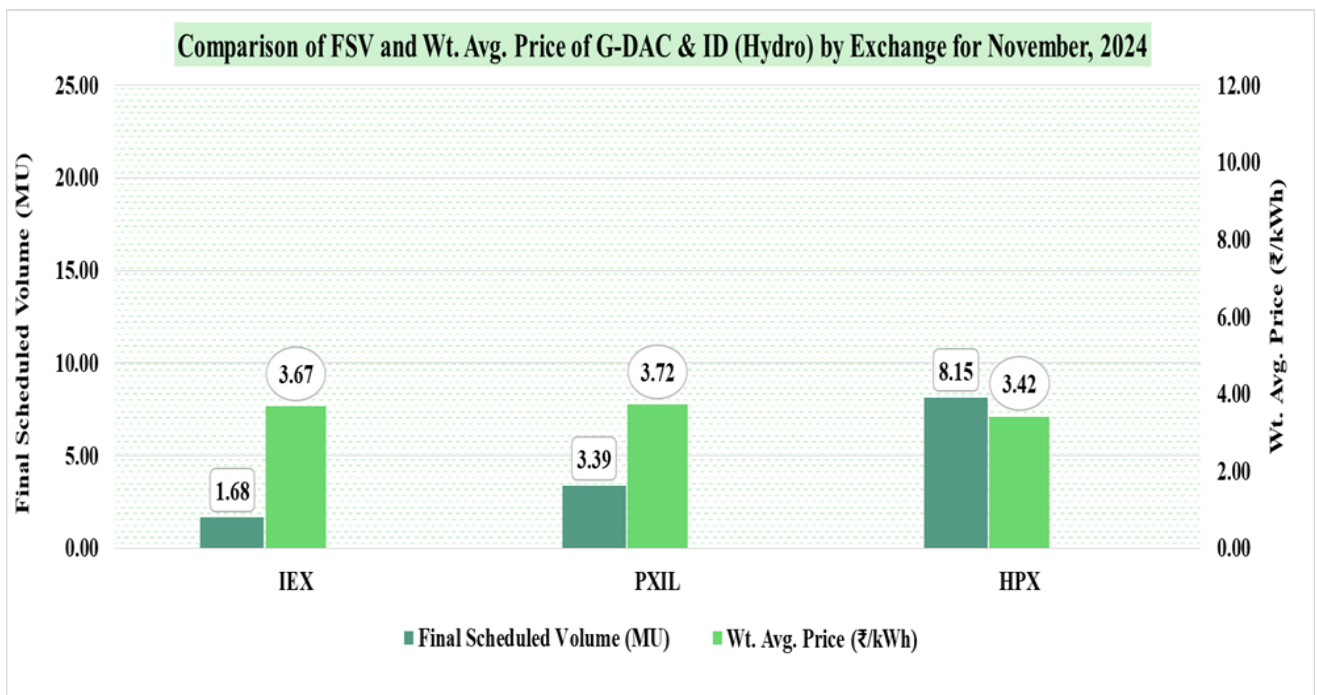


Figure-12

8. Bilateral Transactions:

The total volume of electricity transacted through **bilateral transactions** in November, 2024 was **4034.03 MU**. The total buy volume of electricity transacted in bilateral market through direct and trader transactions in November, 2024 were **1846.64 MU** and **2187.39 MU** respectively. The details of bilateral transactions of Electricity during November, 2024 are shown in table below:

November, 2024	Direct	Traders	Total Bilateral Transaction (MU)
Total	1846.64	2187.39	4034.03
Minimum	0.30	0.03	0.03
Maximum	269.20	229.94	341.70

Table -3A

The region-wise maximum/ minimum volume of electricity transacted bilaterally during November, 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	405.19	178.22	492.05	1253.90	760.04	484.89	189.35	267.50	-	2.88
Minimum	0.63	0.22	0.25	0.03	0.30	0.84	0.55	0.03	-	0.38
Maximum	111.58	57.22	151.20	229.94	269.20	139.53	53.31	85.33	-	2.50

Table-3B

8.1. The top 5 buyers on bilateral transaction through direct transactions in November, 2024 were **MPPMCL, JK_LADAKH, Bihar, NDMC and Kerala**, which constituted **65.13%** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in November, 2024 were **RUVNL, Himachal Pradesh, KSEB, Uttarakhand and TANGEDCO**, which constituted **67.17 %** of the market volume. [Annexure III]

8.2. The top 5 sellers on bilateral transaction through direct transactions in November, 2024 were **UPPCL, DHARIWAL_STU_MH, RKM_POWER, PUNJAB and ODISHA**, which constituted **43.49 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in November, 2024 were **JPL2, SKS_Raigarh, Punjab, JPNIGRIE_JNSTPP and JPL**, which constituted **36.45 %** of the market volume. [Annexure III]

8.3. Deviation Volume -The volume of Deviation observed in November, 2024 in import and export were **2,403.87 MU** and **1,925.71 MU** respectively. The total volume of Deviation observed in November, 2024 can be taken as **2,164.79 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 November, 2024 is shown in **Figure 13**:

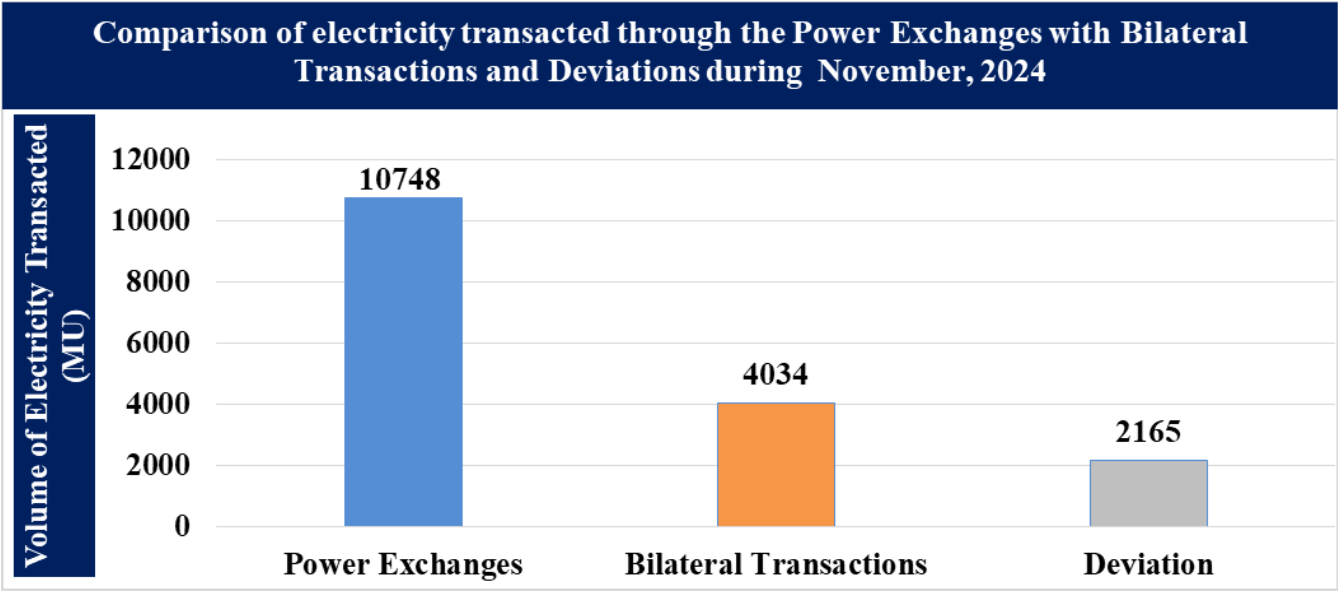
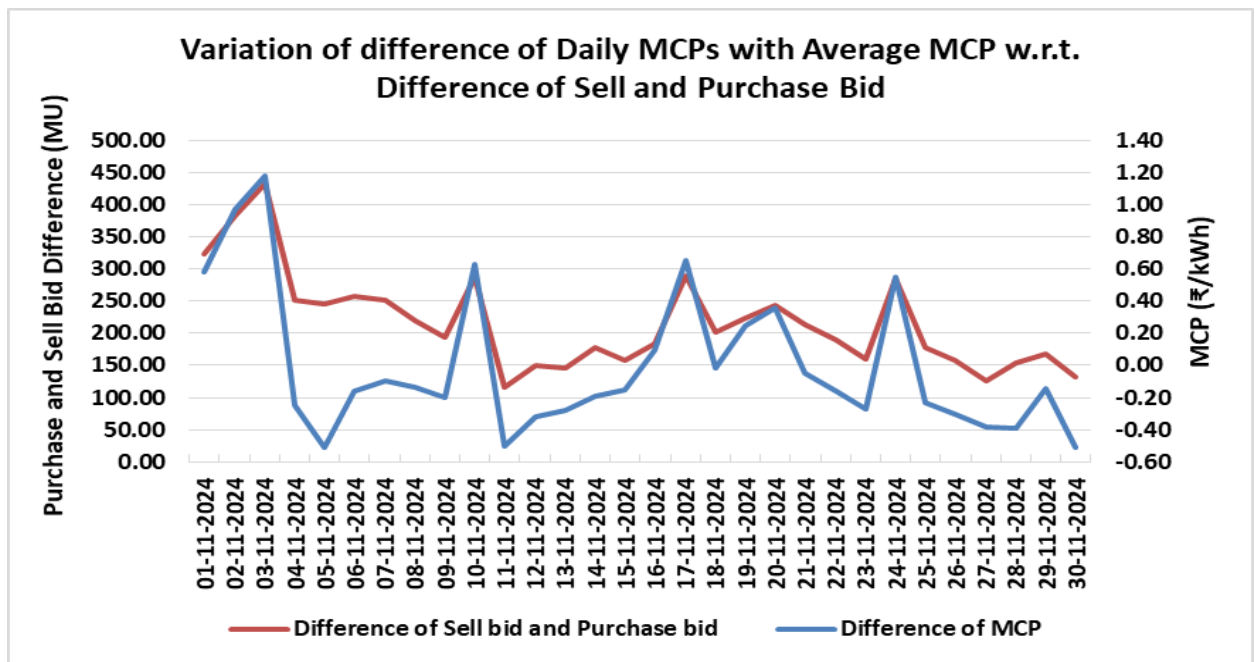


Figure -13

9. Analysis of movement of prices observed under DAM during November, 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 November, 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 Peak Demand was **2.33** in November, 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 – 14**:

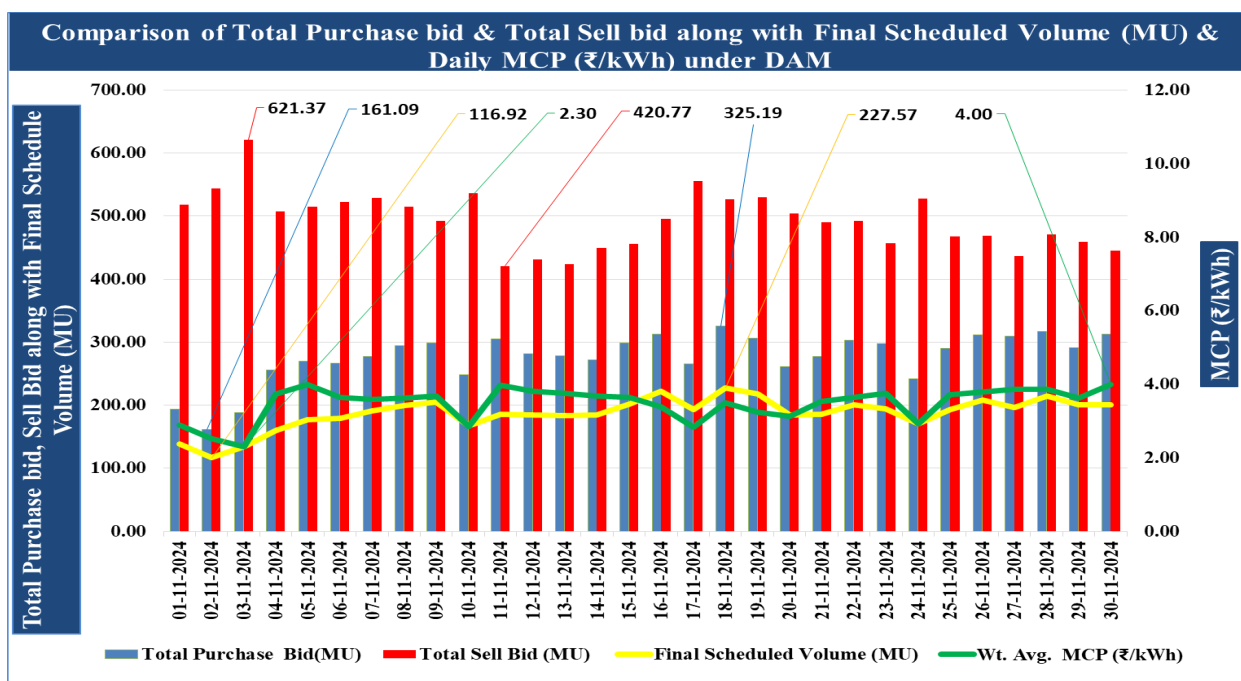


Figure – 14

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 November, 2024, it is observed that on first Sunday (3rd November, 2024), FSV showed increasing trend in comparison to first Saturday (2nd November, 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-15**. The same are also tabulated in **Annexure-I**.

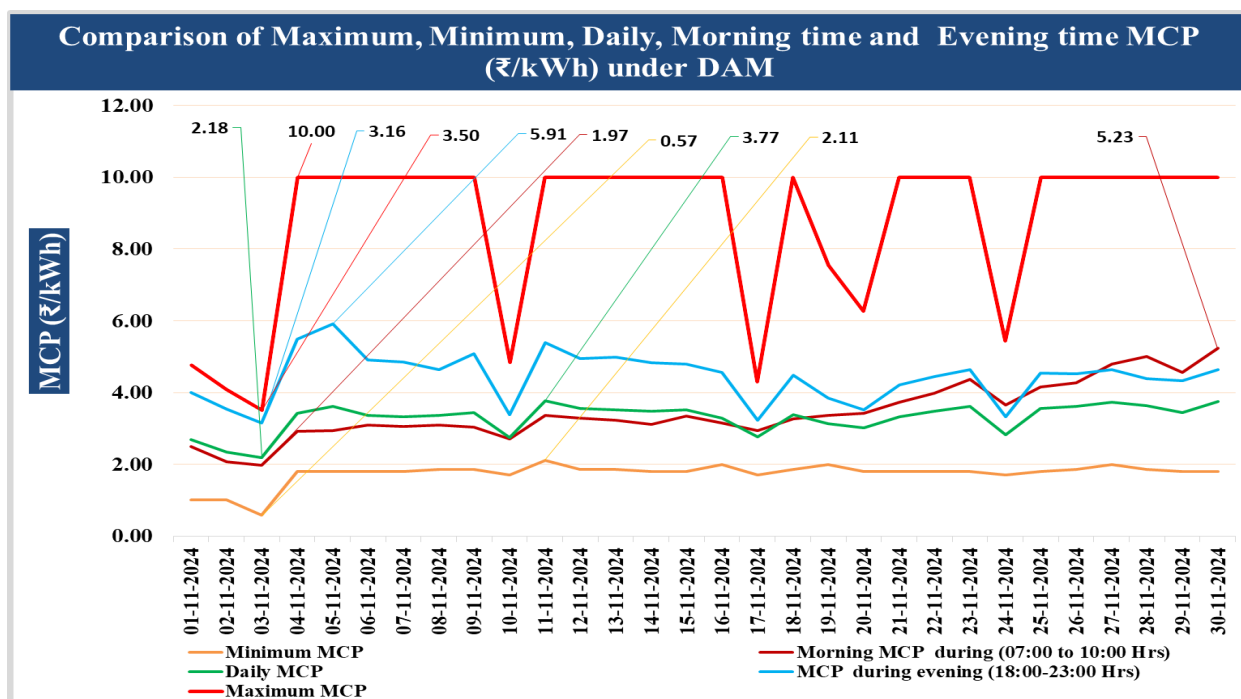


Figure-15

9.7. The Market Clearing Price duration curves for time block wise MCP for the month of November, 2024 is shown in **Figure-16**, whereas the day wise MCP duration curve for the period 1st April, 2024 to 30th November, 2024 is shown in **Figure-17**.

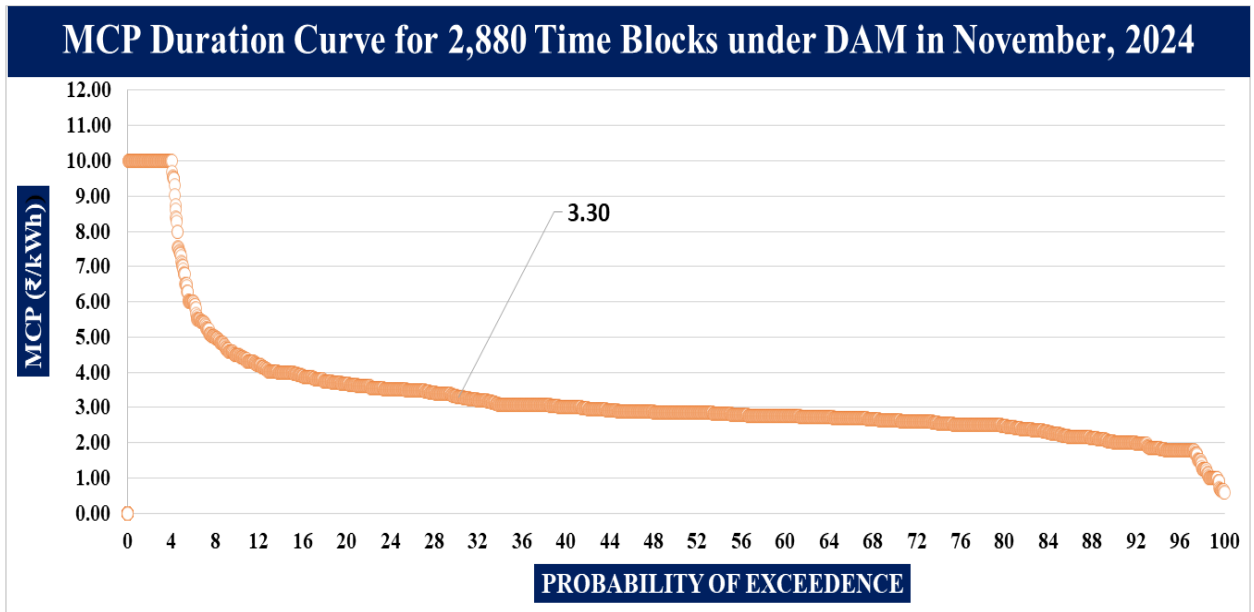


Figure – 16

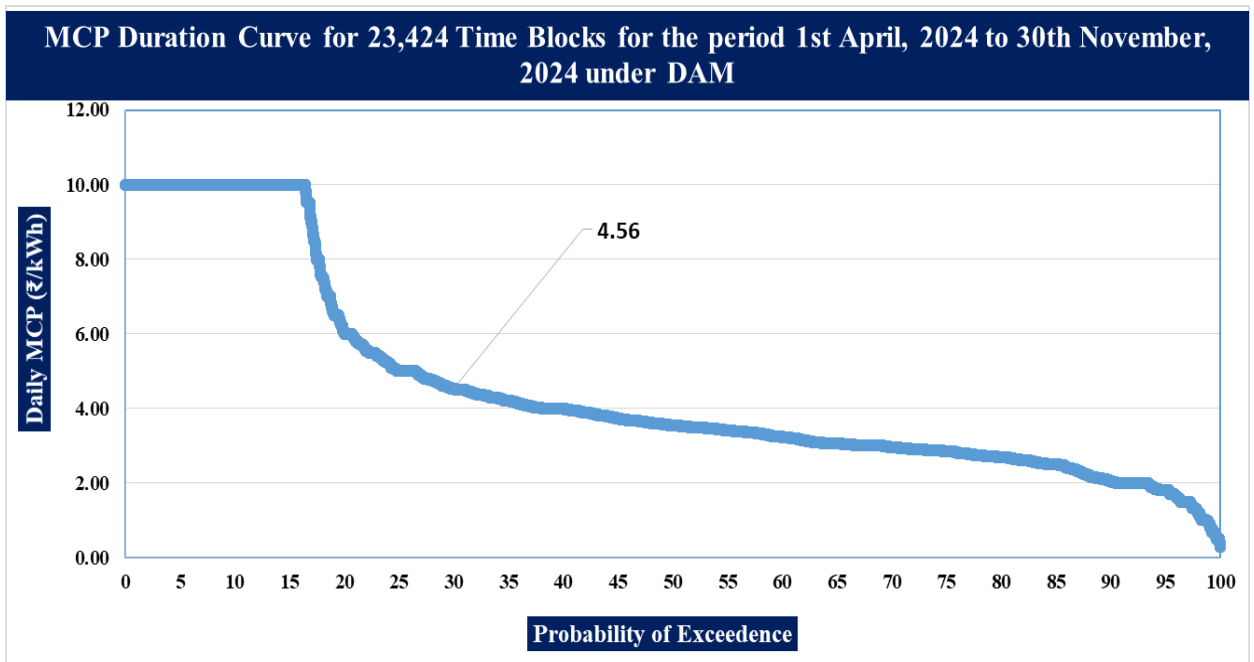


Figure – 17

9.8. It can be seen in figure 16 above that in the MCP duration curve of November, 2024, for 29.00 % of the time MCP was above Wt. Avg. MCP of the month (i.e. ₹ 3.30/kWh) and almost 71.00 % 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, 2024 to 30th November, 2024 (figure-16), that for 30.00 % of the time the MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 4.56/kWh) and for 70.00 % 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 November, 2024, the maximum FSV occurred mostly during **the time period 07-08 Hrs** (on 14 no. of days). Whereas, the maximum MCP occurred mostly during **the time period 18-19 Hrs** (on 11 no. of days). Similarly, the minimum FSV occurred mostly during **the time period 12-14 Hrs** (on 17 no. of days). Whereas, the minimum MCP occurred mostly during **the time period 13-14 Hrs** (on 29 no. of days). [**Annexure VI**]
- 9.11.** In November, 2024, there was no congestion in IEX & PXIL and no transaction of electricity took place in HPX. Further, in October, 2024, there was no congestion in IEX and no transaction of electricity took place in PXIL & HPX. Further, in November, 2023, there was no congestion in IEX, PXIL & HPX.
- 9.12.** In November, 2024, there was **no** real time curtailment in IEX & PXIL and no transaction of electricity took place in HPX. Further, in October, 2024, there was **no** real time curtailment in IEX and no transaction of electricity took place in PXIL & HPX. Further in November, 2023, there was **no** real time curtailment IEX, PXIL & HPX.
- 9.13.** The **top 10 sellers** on the power exchanges under Day Ahead Market (**DAM**) in November, 2024 were **Chhattisgarh, Odisha, Jindal Power Ltd. Stg-II, Bihar, Adani Power Limited-Raipur TPP, Uttar Pradesh, Jaypee Nigrie, MAHAN ENERGEN LIMITED U#2, Haryana and MAHAN ENERGEN LIMITED U#1**, which constituted **61.90 %** of the market volume. [**Annexure VII**]
- 9.14.** The **top 10 buyers** on the power exchanges under Day Ahead Market (**DAM**) in November, 2024 were **Gujarat, Maharashtra, Telangana, Andhra Pradesh, Rajasthan, Uttar Pradesh, Tamil Nadu, Madhya Pradesh, Uttarakhand and West Bengal**, which constituted **83.71 %** of the market volume. [**Annexure VII**]
- 9.15.** The total volume of electricity purchased by Discoms/Licensees under DAM in November, 2024 was **5,498.39 MU**, which constituted **97.90 %** 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 November, 2024 was **2,838.58 MU**, which constituted **50.54 %** of total volume of electricity sold on the power exchanges.

10. Analysis of movement of prices observed under Real Time Market (RTM) transactions in November, 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 Peak Demand. Further, the regression analysis revealed that the elasticity of the Daily Wt. Avg. MCP with respect to Peak Demand was **3.46** in November, 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-18** below:

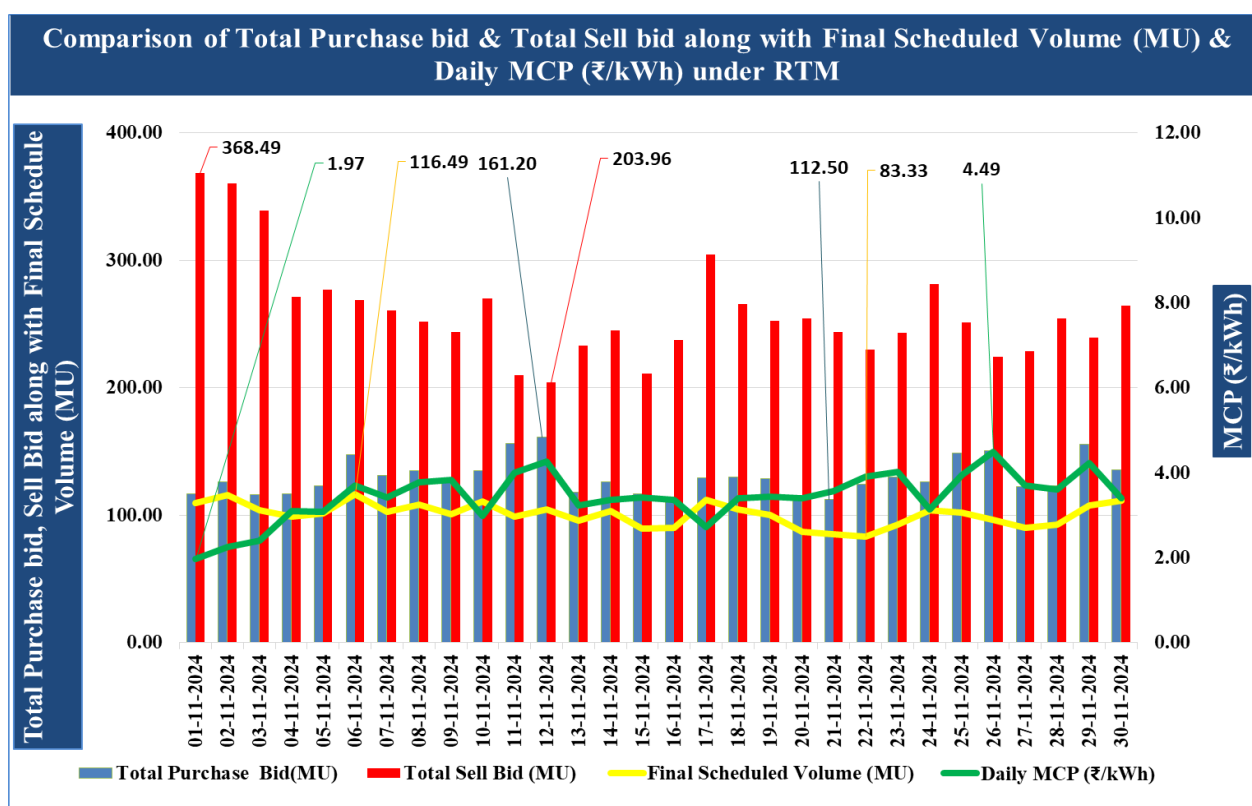


Figure-18

- 10.4. A comparison of maximum, minimum, daily, evening time MCP is shown in **Figure-19**. The same are also tabulated in **Annexure-VIII**.

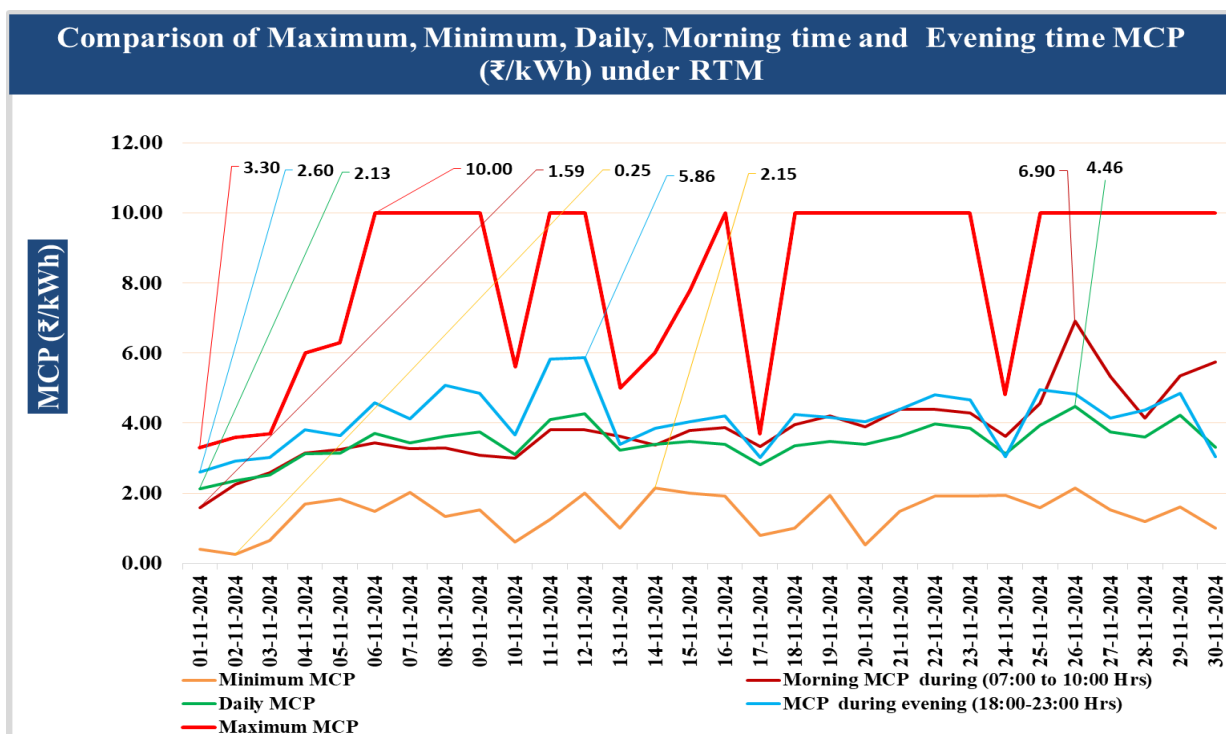


Figure-19

10.5. The Market Clearing Price duration curves for time block wise MCP for the month of November, 2024 is shown in **Figure-20**, whereas the day wise MCP duration curve for the period 1st April, 2024 to 30th November, 2024 is shown in **Figure-21**.

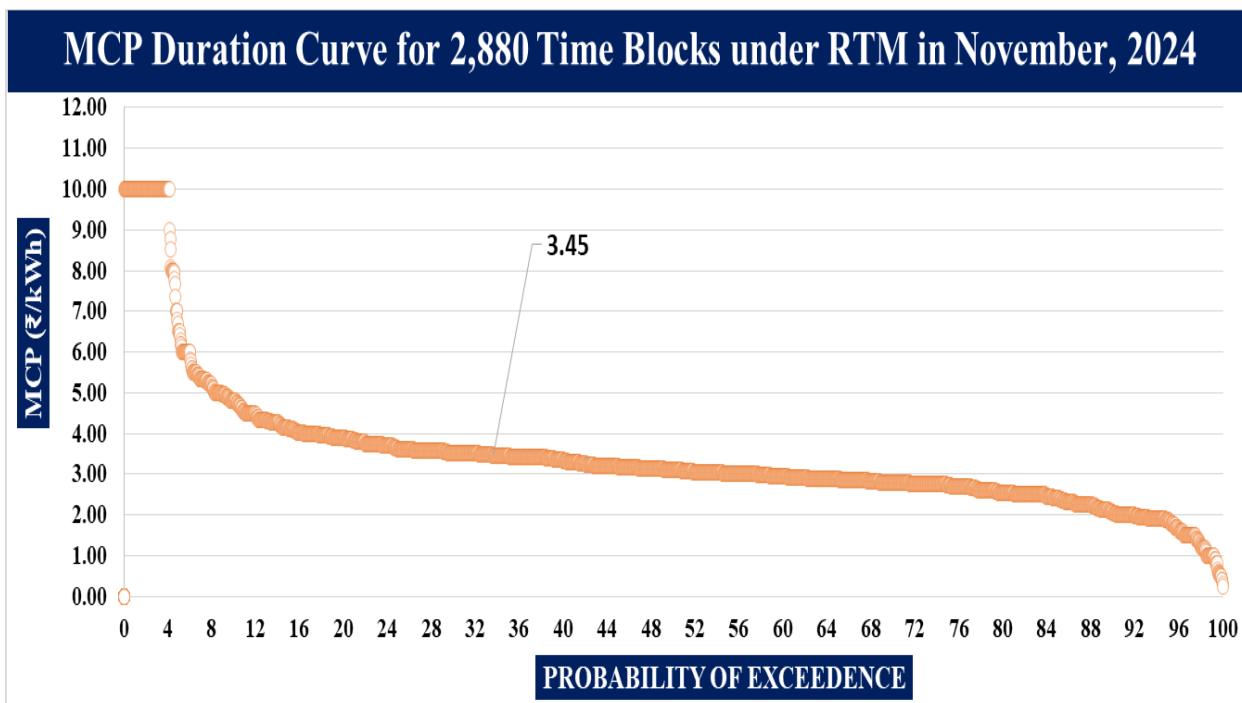


Figure-20

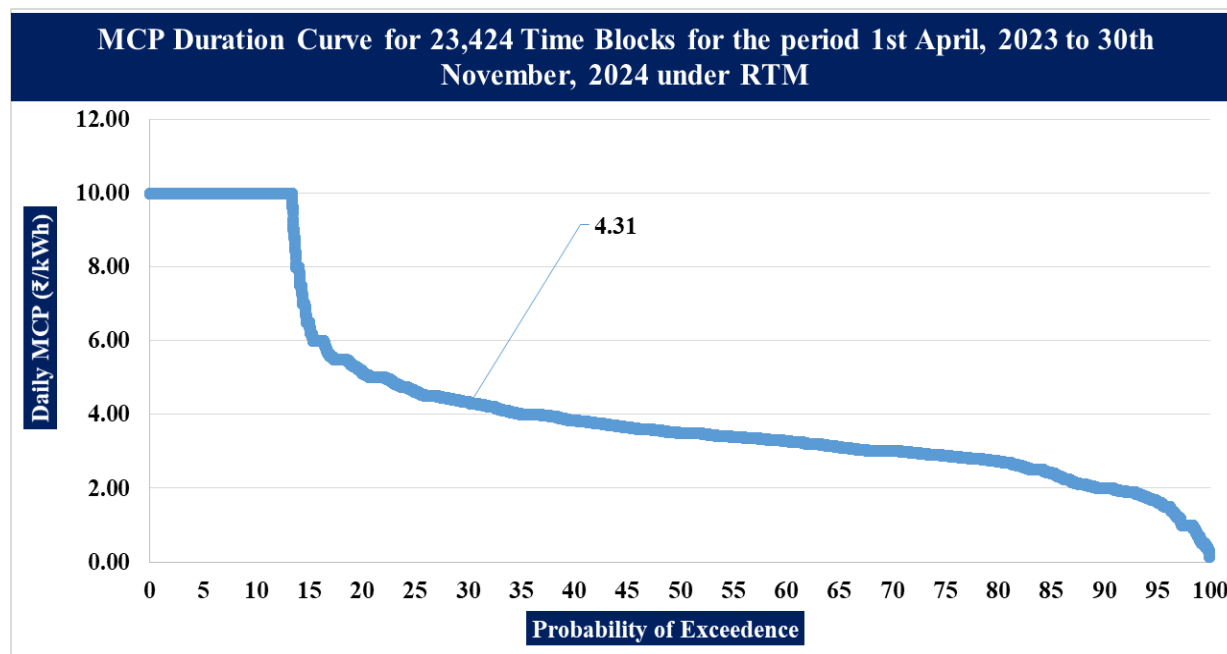


Figure-21

- 10.6.** It can be seen in figure 20 above that in the MCP duration curve of November, 2024, for 33.00 % of the time the MCP was above the Wt. Avg. MCP of the month (i.e. ₹ 3.45/kWh) and for 67.00 % 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, 2024 to 30th November, 2024 (figure 20) that, for 31.00 % of the time the Daily Wt. Avg. MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 4.31/kWh) and for 69.00 % of the time the Daily Wt. Avg. MCP was below the Wt. Avg. MCP for the period.
- 10.7.** In November, 2024, the maximum FSV occurred mostly during the **time period 13-15 Hrs** (on 12 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 17-18 Hrs** (on 8 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 00-02 Hrs** (on 8 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 13-14 Hrs** (on 18 no. of days).[Annexure X]
- 10.8.** There was no real time curtailment of in IEX, PXIL and HPX under Real Time Market (RTM) during November, 2024. Further, in October, 2024 no real time curtailment in IEX, PXIL and HPX. Similarly, in November, 2023, there was **no** real time curtailment IEX & HPX and no transaction of electricity took place in PXIL.
- 10.9.** In November, 2024, there was no congestion in IEX, PXIL and HPX. Further, in October, 2024, there was no congestion in IEX, PXIL and HPX. Similarly, in November, 2023, there was no congestion in IEX & HPX and no transaction of electricity took place in PXIL.
- 10.10.** The **top 10 sellers** on the power exchanges under Real Time Market (**RTM**) in November, 2024 were **Bihar, Haryana, Odisha, NVVN (SNA) – NEA, Tamil Nadu, Jharkhand, Uttar Pradesh, Chhattisgarh, West Bengal and Assam**, which constituted **58.01 %** of the market volume. [Annexure XI]

10.11. The **top 10 buyers** on the power exchanges under Real Time Market (**RTM**) in November, 2024 were **Maharashtra, Telangana, Punjab, Rajasthan, Andhra Pradesh, J&K, Tamil Nadu, Uttar Pradesh, Kerala and Gujarat**, which constituted **79.86 %** of the market volume. [Annexure XI]

10.12. The total volume of electricity purchased by Discoms/Licensees under RTM in November, 2024 was **2,918.70 MU**, which constituted **96.50 %** 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 November, 2024 was **1,940.11 MU**, which constituted **64.15 %** 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, 2024 to March, 2025 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, 2024	4,131.42	3.85	0	4.65	10.00	-	0	0	0
	May, 2024	4,315.58	0	0.10	4.76	-	10.00	0	0	0
	June, 2024	4,836.23	0	0	4.84	-	-	0	0	0
Total Quarter -I	April - June, 2024	13,283.23	3.85	0.10	4.75	10.00	10.00	0	0	0
Quarter -II	July, 2024	5,070.64	0	0	4.64	-	-	0	0	0
	August, 2024	4,711.98	0	0	4.15	-	-	0	0	0
	September, 2024	4,562.10	0	0.08	4.28	-	10.00	0	0	0
Total Quarter -II	July - September, 2024	14,344.72	0.00	0.08	4.36	-	10.00	0	0	0
Quarter -III	October, 2024	4,419.86	0	0	4.03	-	-	0	0	0
	November, 2024	5,616.36	0.21	0	3.52	8.50	-	0	0	0
	December, 2024									
Total Quarter -III	October - December, 2024	10,036.22	0.21	0	3.74	8.50	-	0	0	0
Total April, 2024 – March, 2025		37,664.17	4.06	0.18	4.33	9.92	10.00	0	0	0

Annexure-II

Final Scheduled Volume under Term Ahead Market (TAM) for the months of April, 2024 to March, 2025 of IEX, PXIL and HPX (Delivery date basis)					
Quarter	Months	Final Scheduled Volume (MU)			
		IEX	PXIL	HPX	Total
Quarter -I	April, 2024	1141.57	1521.03	897.57	3560.17
	May, 2024	911.93	1003.55	964.68	2880.16
	June, 2024	1054.97	564.87	396.82	2016.66
Total Quarter – I	April - June, 2024	3,108.47	3,089.45	2,259.07	8,456.99
Quarter -II	July, 2024	337.92	253.37	177.63	768.92
	August, 2024	646.40	463.63	119.80	1,229.83
	September, 2024	966.43	339.17	406.10	1,711.70
Total Quarter -II	July - September, 2024	1,950.75	1,056.17	703.53	3,710.45
Quarter -III	October, 2024	1,148.34	754.37	376.64	2,279.35
	November, 2024	151.60	295.16	543.88	990.64
	December, 2024				
Total Quarter -III	October - December, 2024	1,299.94	1,049.53	920.52	3,269.99
Total April, 2024 – March, 2025		6,359.16	5,195.15	3,883.12	15,437.43

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

(i) Top five Buyers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
MPPMCL	573.40	31.05%	RUVNL	541.46	24.75%
JK_LADAKH	332.79	18.02%	HP	358.87	16.41%
Bihar	139.19	7.54%	KSEB	253.88	11.61%
NDMC	88.08	4.77%	UTTARAKHAND	172.56	7.89%
Kerala	69.23	3.75%	TANGEDCO	142.52	6.52%
Total Volume	1202.69	65.13%	Total Volume	1469.30	67.17%
Total Volume in Bilateral	1846.64		Total Volume in Bilateral	2187.39	

(ii) Top five Sellers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
UPPCL	269.20	14.58%	JPL2	229.94	10.51%
DHARIWAL_STU_MH	151.20	8.19%	SKS_Raigarh	219.82	10.05%
RKM_POWER	141.65	7.67%	PUNJAB	139.53	6.38%
PUNJAB	129.60	7.02%	JPNIGRUE_JNSTPP	114.58	5.24%
ODISHA	111.58	6.04%	JPL	93.43	4.27%
Total Volume	803.22	43.49%	Total Volume	797.29	36.45%
Total Volume in Bilateral	1846.64		Total Volume in Bilateral	2187.39	

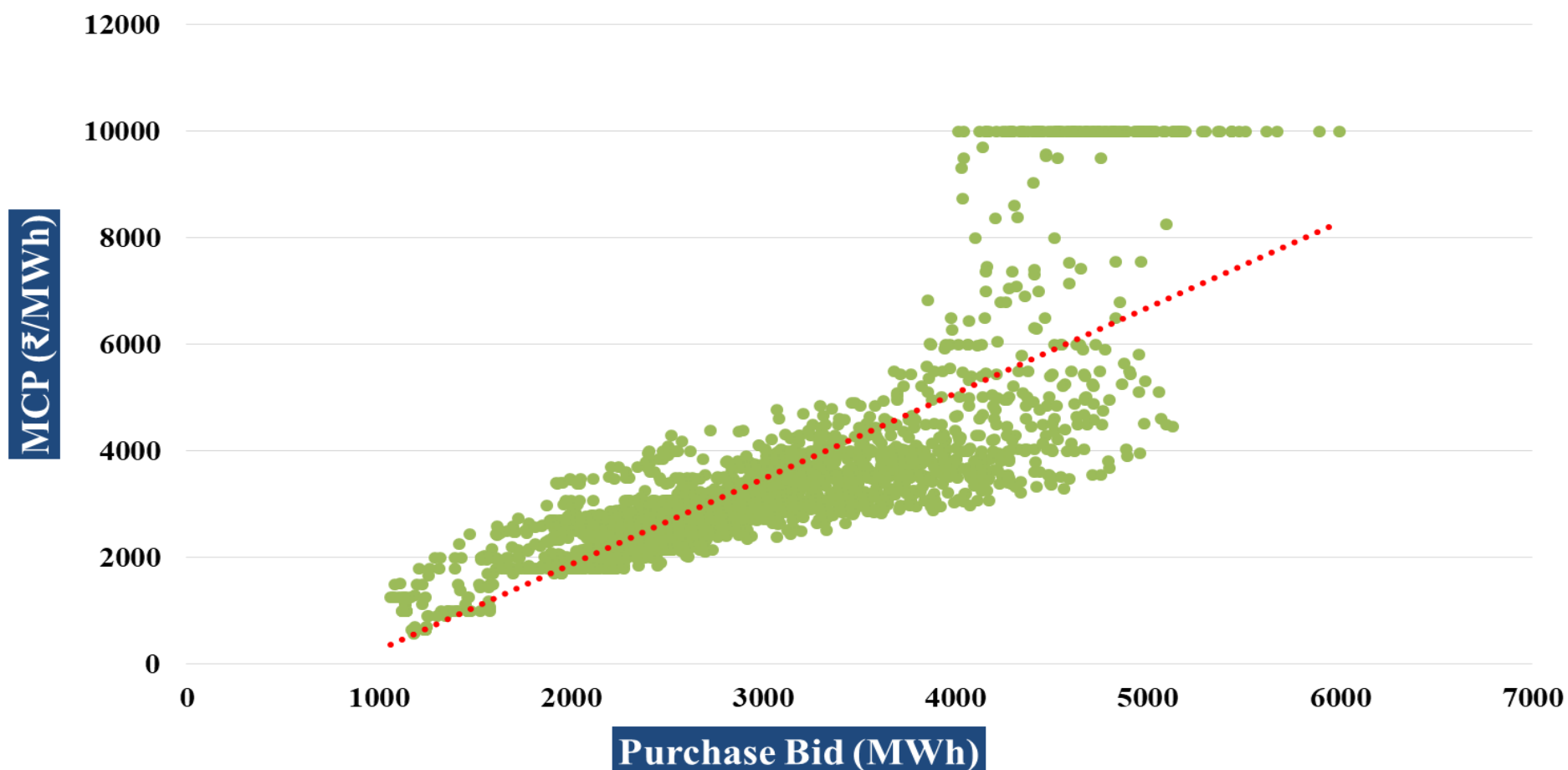
Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under DAM

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)
01-11-2024	2.49	1.53	3.99	2.85	4.77	1.00	2.68	138.87
02-11-2024	2.06	1.39	3.54	2.37	4.09	1.00	2.34	116.92
03-11-2024	1.97	1.15	3.16	2.48	3.50	0.57	2.18	134.43
04-11-2024	2.92	2.29	5.49	2.95	10.00	1.80	3.42	160.30
05-11-2024	2.93	2.34	5.91	3.03	10.00	1.80	3.61	176.58
06-11-2024	3.09	2.37	4.91	2.85	10.00	1.80	3.37	178.87
07-11-2024	3.06	2.50	4.86	2.76	10.00	1.80	3.32	190.55
08-11-2024	3.09	2.57	4.64	2.83	10.00	1.85	3.37	199.26
09-11-2024	3.04	2.52	5.09	2.78	10.00	1.85	3.44	205.07
10-11-2024	2.70	2.14	3.38	2.74	4.85	1.70	2.75	166.89
11-11-2024	3.36	2.77	5.39	2.90	10.00	2.11	3.77	185.40
12-11-2024	3.28	2.73	4.94	2.76	10.00	1.85	3.56	184.07
13-11-2024	3.24	2.61	4.99	2.78	10.00	1.85	3.53	183.21
14-11-2024	3.12	2.60	4.84	2.77	10.00	1.80	3.48	184.16
15-11-2024	3.34	2.60	4.79	2.84	10.00	1.80	3.52	201.83
16-11-2024	3.16	2.56	4.56	2.80	10.00	2.00	3.29	221.67
17-11-2024	2.94	2.16	3.24	2.76	4.30	1.70	2.76	193.41
18-11-2024	3.27	2.72	4.49	2.77	10.00	1.85	3.38	227.57
19-11-2024	3.36	2.57	3.84	2.64	7.55	1.99	3.12	218.18
20-11-2024	3.42	2.39	3.52	2.63	6.27	1.80	3.01	185.02
21-11-2024	3.74	2.59	4.20	2.55	10.00	1.80	3.33	185.22
22-11-2024	3.98	2.66	4.44	2.61	10.00	1.80	3.47	200.95
23-11-2024	4.37	2.61	4.63	2.68	10.00	1.80	3.61	194.59
24-11-2024	3.65	2.13	3.32	2.56	5.45	1.70	2.83	170.54
25-11-2024	4.16	2.72	4.55	2.45	10.00	1.80	3.55	192.85
26-11-2024	4.28	2.74	4.51	2.63	10.00	1.85	3.62	207.96
27-11-2024	4.79	2.81	4.63	2.62	10.00	1.99	3.74	196.55
28-11-2024	5.00	2.70	4.38	2.52	10.00	1.85	3.64	214.28
29-11-2024	4.55	2.55	4.34	2.37	10.00	1.80	3.44	201.07
30-11-2024	5.23	2.85	4.64	2.49	10.00	1.80	3.76	200.69
Maximum	5.23	2.85	5.91	3.03	10.00	2.11	3.77	227.57
Minimum	1.97	1.15	3.16	2.37	3.50	0.57	2.18	116.92
Average	3.45	2.43	4.44	2.69	8.69	1.74	3.30	187.23

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,880 Time Blocks during the month of November, 2024 under DAM



Time Blocks during the Month [96 time blocks in a day x 30 days = 2,880]

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
01-11-2024	18:45 - 19:00	2.23	18:30 - 18:45	4.77	15:00 - 15:15	0.87	13:30 - 13:45	1.00
02-11-2024	19:15 - 19:30	1.85	18:30 - 18:45	4.09	15:15 - 15:30	0.79	13:00 - 13:15	1.00
03-11-2024	07:00 - 07:15	2.08	18:00 - 18:15	3.50	10:00 - 10:15	1.07	10:45 - 11:00	0.57
04-11-2024	06:45 - 07:00	2.55	18:00 - 18:15	10.00	13:15 - 13:30	1.04	13:15 - 13:30	1.80
05-11-2024	19:30 - 19:45	2.75	17:30 - 17:45	10.00	10:15 - 10:30	1.13	13:15 - 13:30	1.80
06-11-2024	17:45 - 18:00	2.74	17:45 - 18:00	10.00	10:45 - 11:00	1.22	13:15 - 13:30	1.80
07-11-2024	17:45 - 18:00	3.08	18:00 - 18:15	10.00	10:45 - 11:00	1.45	13:15 - 13:30	1.80
08-11-2024	17:45 - 18:00	3.11	17:45 - 18:00	10.00	11:15 - 11:30	1.46	13:00 - 13:15	1.85
09-11-2024	18:45 - 19:00	3.07	17:45 - 18:00	10.00	10:45 - 11:00	1.51	13:15 - 13:30	1.85
10-11-2024	07:00 - 07:15	2.29	18:15 - 18:30	4.85	13:15 - 13:30	1.05	13:00 - 13:15	1.70
11-11-2024	07:15 - 07:30	2.76	17:00 - 17:15	10.00	12:00 - 12:15	1.38	13:15 - 13:30	2.11
12-11-2024	18:45 - 19:00	2.77	17:30 - 17:45	10.00	12:00 - 12:15	1.48	13:15 - 13:30	1.85
13-11-2024	18:45 - 19:00	2.69	17:30 - 17:45	10.00	10:30 - 10:45	1.54	13:15 - 13:30	1.85
14-11-2024	16:45 - 17:00	2.65	17:15 - 17:30	10.00	11:00 - 11:15	1.51	13:15 - 13:30	1.80
15-11-2024	07:00 - 07:15	2.91	17:15 - 17:30	10.00	11:30 - 11:45	1.68	13:15 - 13:30	1.80
16-11-2024	07:15 - 07:30	3.35	18:00 - 18:15	10.00	12:30 - 12:45	1.68	13:15 - 13:30	2.00
17-11-2024	07:15 - 07:30	2.83	18:00 - 18:15	4.30	13:00 - 13:15	1.33	13:15 - 13:30	1.70
18-11-2024	16:45 - 17:00	3.45	17:45 - 18:00	10.00	13:00 - 13:15	1.86	13:00 - 13:15	1.85
19-11-2024	16:45 - 17:00	3.21	18:00 - 18:15	7.55	11:30 - 11:45	1.76	13:15 - 13:30	1.99
20-11-2024	07:15 - 07:30	2.71	18:00 - 18:15	6.27	13:00 - 13:15	1.41	13:15 - 13:30	1.80
21-11-2024	16:15 - 16:30	2.79	17:30 - 17:45	10.00	13:15 - 13:30	1.34	13:15 - 13:30	1.80
22-11-2024	16:45 - 17:00	2.99	17:30 - 17:45	10.00	13:00 - 13:15	1.47	13:00 - 13:15	1.80
23-11-2024	07:15 - 07:30	3.06	17:15 - 17:30	10.00	13:00 - 13:15	1.46	13:00 - 13:15	1.80
24-11-2024	07:15 - 07:30	2.49	18:00 - 18:15	5.45	13:00 - 13:15	1.18	13:15 - 13:30	1.70
25-11-2024	07:15 - 07:30	2.97	17:00 - 17:15	10.00	12:45 - 13:00	1.54	13:00 - 13:15	1.80
26-11-2024	07:15 - 07:30	3.12	17:00 - 17:15	10.00	12:00 - 12:15	1.65	13:00 - 13:15	1.85
27-11-2024	07:15 - 07:30	2.99	17:00 - 17:15	10.00	12:00 - 12:15	1.58	13:15 - 13:30	1.99
28-11-2024	07:00 - 07:15	3.27	17:15 - 17:30	10.00	12:00 - 12:15	1.61	13:15 - 13:30	1.85
29-11-2024	07:15 - 07:30	3.08	17:15 - 17:30	10.00	13:00 - 13:15	1.53	13:00 - 13:15	1.80
30-11-2024	16:00 - 16:15	3.42	17:00 - 17:15	10.00	22:15 - 22:30	1.47	13:15 - 13:30	1.80

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

Annexure-VII

Sellers and Buyers under Day Ahead Market (DAM) in November, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Chhattisgarh	633.79	11.28%	Gujarat	1213.87	21.61%
2	Orissa	529.41	9.43%	Maharashtra	903.04	16.08%
3	Jindal Power Ltd. Stg-	493.50	8.79%	Telangana	698.50	12.44%
4	Bihar	349.31	6.22%	Andhra Pradesh	391.35	6.97%
5	Adani Power Limited-	341.81	6.09%	Rajasthan	374.05	6.66%
6	Uttar Pradesh	269.94	4.81%	Uttar Pradesh	269.69	4.80%
7	Jaypee Nigrie	236.19	4.21%	Tamilnadu	262.23	4.67%
8	MAHAN ENERGEN	233.79	4.16%	Madhya Pradesh	220.65	3.93%
9	Haryana	227.86	4.06%	Uttarakhand	212.31	3.78%
10	MAHAN ENERGEN	160.90	2.86%	West Bengal	155.72	2.77%
11	Jindal Power	145.54	2.59%	Daman & Diu - Dadra &	123.66	2.20%
12	Assam	142.22	2.53%	Karnataka	120.82	2.15%
13	JITPL	132.18	2.35%	Delhi	98.79	1.76%
14	West Bengal	124.71	2.22%	J&K	88.84	1.58%
15	Adani Power Limited	119.27	2.12%	Kerala	84.15	1.50%
16	IND BARATH	105.89	1.89%	Punjab	79.37	1.41%
17	Jindal Steel	94.06	1.67%	ArcelorMittal Nippon steel	79.12	1.41%
18	Madhya Pradesh	88.99	1.58%	Orissa	74.02	1.32%
19	Rajasthan	79.34	1.41%	Meghalaya	38.42	0.68%
20	Delhi	65.30	1.16%	Himachal Pradesh	31.12	0.55%
21	DB Power	46.44	0.83%	Haryana	24.42	0.43%
22	Karnataka	43.97	0.78%	DVC	18.15	0.32%
23	Sembcorp Energy	41.31	0.74%	Railways	15.07	0.27%
24	Himachal Pradesh	40.22	0.72%	Druk Green Power	14.02	0.25%
25	ACBIL	38.78	0.69%	SKS Power	6.55	0.12%
26	Government of	31.74	0.57%	Tripura	5.76	0.10%
27	Telangana	30.92	0.55%	Jharkhand	4.31	0.08%
28	ADANI	29.91	0.53%	BHARAT ALUMINIUM	3.42	0.06%
29	Tamilnadu	28.51	0.51%	Chandigarh	2.54	0.05%
30	Chandigarh	27.76	0.49%	Goa WR	1.32	0.02%
31	Gujarat	26.24	0.47%	Nagaland	0.98	0.02%
32	Karcham Wangtoo	25.98	0.46%	Goa SR	0.34	0.01%
33	RENEW SURYA	24.63	0.44%			
34	Andhra Pradesh	22.62	0.40%			
35	ADANI SOLAR	21.50	0.38%			
36	Jharkhand	20.67	0.37%			
37	AD Hydro	20.44	0.36%			
38	Maharashtra	19.64	0.35%			
39	Simhapuri Energy	18.86	0.34%			
40	Jhabua Power	18.71	0.33%			
41	Sembcorp Gayatri	18.50	0.33%			
42	Renew Surya Ravi	17.91	0.32%			
43	DVC	17.82	0.32%			
44	SKS Power	16.74	0.30%			
45	Farakka	16.07	0.29%			
46	Barh Stg-2	15.86	0.28%			
47	Adani Green Energy	15.28	0.27%			
48	Talcher	15.25	0.27%			
49	Barh STPS Stg - I	13.49	0.24%			
50	NTPC North	13.09	0.23%			
51	Government of	12.93	0.23%			
52	Adept Renewable	11.97	0.21%			
53	Palatana	11.74	0.21%			

54	Amp Energy Green	11.25	0.20%			
55	MB Power	9.80	0.17%			
56	ADANI GREEN	9.54	0.17%			
57	Government of	9.45	0.17%			
58	Uttarakhand	9.08	0.16%			
59	Kameng HEP	8.19	0.15%			
60	Goa WR	8.09	0.14%			
61	KBUNL(MTPS-II)	8.06	0.14%			
62	Nagaland	7.66	0.14%			
63	Adani Green Energy	7.60	0.14%			
64	ADANI SOLAR	7.49	0.13%			
65	IGSTPS JHAJJAR	7.25	0.13%			
66	RKM Power	7.23	0.13%			
67	Dhariwal ISTS	6.87	0.12%			
68	Sainj HEP	6.83	0.12%			
69	Sikkim	6.51	0.12%			
70	ADANI	5.84	0.10%			
71	Adani Green Energy	5.27	0.09%			
72	Government of	5.01	0.09%			
73	BALCO 2	4.75	0.08%			
74	J&K	4.69	0.08%			
75	Nabinagar Power	4.67	0.08%			
76	ADANI WIND	4.47	0.08%			
77	JUNIPER GREEN	4.30	0.08%			
78	Dadri Stg-2	4.10	0.07%			
79	Government of	3.97	0.07%			
80	Punjab	3.92	0.07%			
81	RENEW SURYA	3.70	0.07%			
82	Kerala	3.56	0.06%			
83	Government of	3.50	0.06%			
84	Singoli Bhagwati	3.37	0.06%			
85	Farakka Stg 3	3.09	0.05%			
86	Adani Green Energy	3.05	0.05%			
87	Mizoram	3.05	0.05%			
88	The Tata Power Co	2.80	0.05%			
89	Maruti Clean Coal	2.78	0.05%			
90	Dadri TPS	2.65	0.05%			
91	Dikchu	2.59	0.05%			
92	TRN Energy	2.58	0.05%			
93	Government of	2.53	0.05%			
94	Meghalaya	2.49	0.04%			
95	NTPP BRBCL	2.27	0.04%			
96	ADANI	2.25	0.04%			
97	Korba	2.14	0.04%			
98	Sipat Stg-1	1.94	0.03%			
99	Transition Energy	1.91	0.03%			
100	TPSL 200MW	1.89	0.03%			
101	Kahalgaon-II	1.88	0.03%			
102	Government of	1.69	0.03%			
103	GMR Warora	1.66	0.03%			
104	Ramagundam Floating	1.54	0.03%			
105	AMBUJA CEMENTS	1.52	0.03%			
106	DHARIWAL STU	1.41	0.03%			
107	Lanco Budhil	1.28	0.02%			
108	Ostro Kannada Power	1.25	0.02%			
109	AGTPP	1.15	0.02%			
110	Kahalgaon	1.03	0.02%			
111	NTPC Sholapur	1.00	0.02%			
112	Bongaigaon	0.99	0.02%			

113	NVVN (SNA) - NEA	0.93	0.02%			
114	Sipat Stg-2	0.86	0.02%			
115	Tanda Stg-2	0.82	0.01%			
116	Simhadri FSP 15 MW	0.78	0.01%			
117	Vindhyachal stg-1	0.75	0.01%			
118	NTPC Lara	0.74	0.01%			
119	Shree Cement	0.73	0.01%			
120	IL&FS	0.69	0.01%			
121	Korba Stg 3	0.69	0.01%			
122	Serentica Renewables	0.63	0.01%			
123	NTPC Simhadri 25	0.63	0.01%			
124	NTPC Kudgi	0.59	0.01%			
125	GMR Kamalanga	0.58	0.01%			
126	Unchahar-I	0.55	0.01%			
127	WIND FIVE	0.54	0.01%			
128	Unchahar-IV	0.50	0.01%			
129	ADANI WIND	0.44	0.01%			
130	Vindhyachal stg-3	0.38	0.01%			
131	Khargone STPP	0.37	0.01%			
132	Vindhyachal stg-4	0.35	0.01%			
133	Unchahar-III	0.32	0.01%			
134	Pondicherry	0.29	0.01%			
135	Vindhyachal stg-2	0.28	0.01%			
136	ADANI GREEN	0.25	0.004%			
137	Darlipalli	0.21	0.004%			
138	NEA-NR	0.17	0.003%			
139	Simhadri Stg-2	0.15	0.003%			
140	Vindhyachal stg-5	0.09	0.002%			
141	NTPC SOLAPUR	0.08	0.001%			
142	TPSL Banderwala	0.08	0.001%			
143	Mouda Stg-2	0.06	0.001%			
144	Mouda Stg-1	0.05	0.001%			
145	Unchahar-II	0.04	0.001%			
146	Neyveli New Thermal	0.02	0.0003%			
147	NTPC Gadawara	0.01	0.0001%			
148	Nani Virani Wind	0.01	0.0001%			
Total Volume of top 10		3,476.50	61.90%	Total Volume of top 10	4,701.40	83.71%
Total Volume in PXs		5,616.57		Total Volume in PXs	5,616.57	

Annexure-VIII

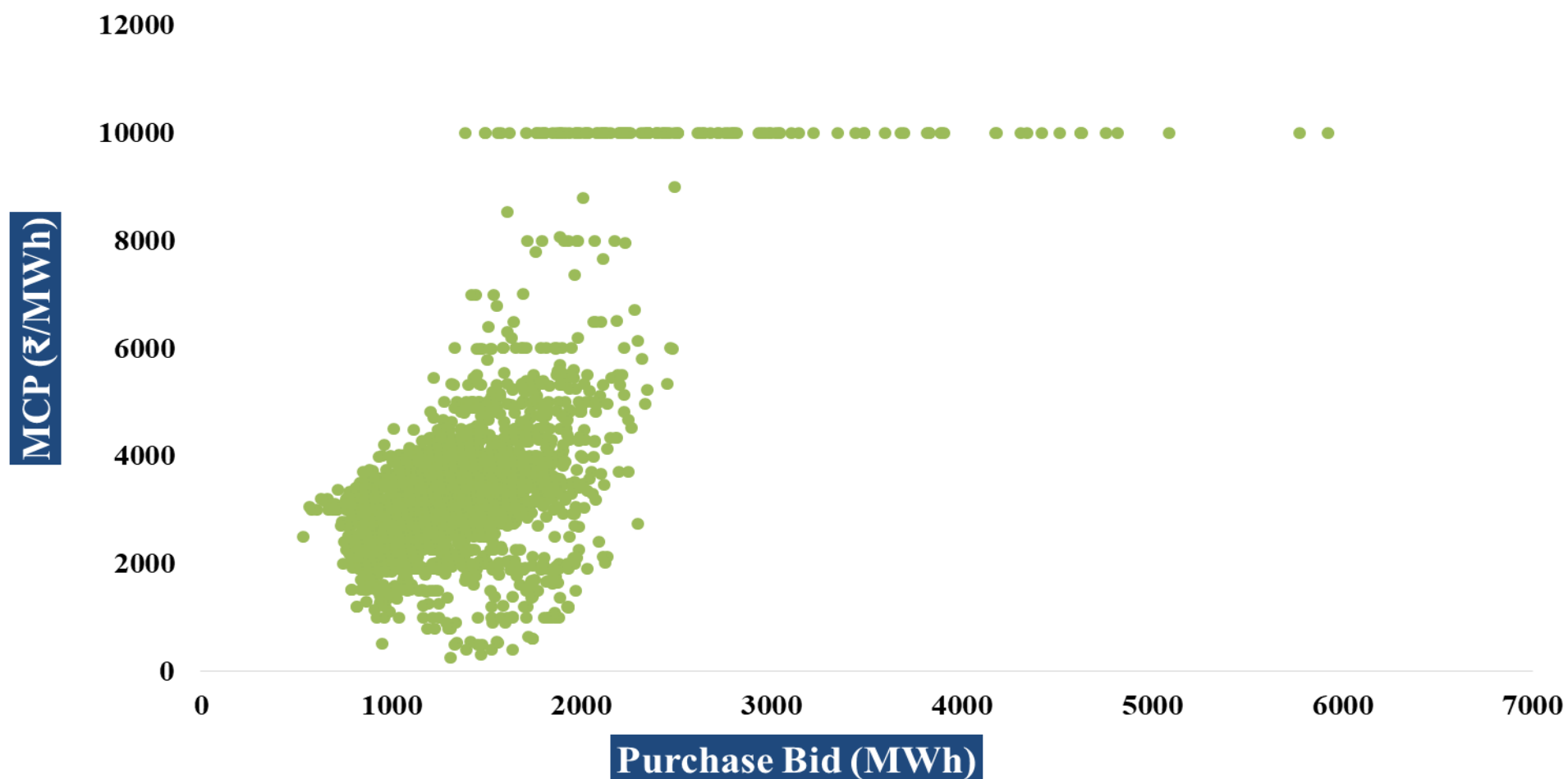
Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under RTM

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)
01-11-2024	1.59	1.53	2.60	2.55	3.30	0.40	2.13	109.44
02-11-2024	2.24	1.68	2.92	2.55	3.58	0.25	2.36	115.65
03-11-2024	2.58	1.94	3.03	2.57	3.69	0.65	2.53	104.20
04-11-2024	3.15	2.80	3.81	2.71	6.01	1.68	3.12	98.62
05-11-2024	3.25	2.68	3.64	2.95	6.30	1.84	3.14	101.30
06-11-2024	3.43	3.17	4.57	3.06	10.00	1.48	3.71	116.49
07-11-2024	3.26	3.16	4.12	3.02	10.00	2.02	3.43	102.42
08-11-2024	3.29	3.18	5.07	2.79	10.00	1.34	3.63	108.64
09-11-2024	3.08	3.20	4.84	3.01	10.00	1.51	3.75	100.76
10-11-2024	3.00	2.25	3.66	3.27	5.60	0.60	3.11	110.57
11-11-2024	3.80	3.48	5.82	2.91	10.00	1.25	4.10	98.71
12-11-2024	3.82	3.60	5.86	3.19	10.00	2.00	4.28	104.45
13-11-2024	3.62	2.81	3.40	3.02	5.00	1.00	3.22	95.80
14-11-2024	3.37	3.27	3.85	2.88	6.01	2.15	3.39	103.38
15-11-2024	3.79	3.36	4.04	2.72	7.79	2.00	3.47	89.59
16-11-2024	3.88	3.05	4.20	2.65	10.00	1.92	3.39	90.08
17-11-2024	3.33	2.22	3.01	2.74	3.70	0.80	2.80	112.01
18-11-2024	3.94	2.97	4.24	2.10	10.00	1.00	3.36	104.55
19-11-2024	4.21	3.11	4.16	2.68	10.00	1.93	3.48	100.06
20-11-2024	3.90	2.77	4.04	2.63	10.00	0.52	3.39	86.80
21-11-2024	4.39	3.04	4.39	2.61	10.00	1.49	3.61	84.86
22-11-2024	4.38	3.71	4.80	2.64	10.00	1.91	3.97	83.33
23-11-2024	4.28	3.48	4.65	2.69	10.00	1.91	3.86	92.45
24-11-2024	3.63	3.12	3.03	2.73	4.82	1.93	3.13	103.65
25-11-2024	4.55	3.78	4.96	2.33	10.00	1.59	3.93	102.34
26-11-2024	6.90	4.09	4.82	2.77	10.00	2.14	4.46	96.60
27-11-2024	5.32	3.40	4.14	2.33	10.00	1.51	3.75	90.35
28-11-2024	4.13	3.52	4.37	2.10	10.00	1.20	3.61	92.44
29-11-2024	5.34	4.30	4.84	2.40	10.00	1.61	4.22	107.87
30-11-2024	5.75	3.23	3.04	2.11	10.00	1.00	3.31	111.75
Maximum	6.90	4.30	5.86	3.27	10.00	2.15	4.46	116.49
Minimum	1.59	1.53	2.60	2.10	3.30	0.25	2.13	83.33
Average	3.84	3.06	4.13	2.69	8.19	1.42	3.46	100.64

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,880 Time Blocks during the month of November, 2024 under RTM



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
01-11-2024	10:45 - 11:00	1.90	18:00 - 18:15	3.30	19:15 - 19:30	0.74	11:00 - 11:15	0.40
02-11-2024	15:15 - 15:30	2.04	17:45 - 18:00	3.58	21:45 - 22:00	0.75	13:00 - 13:15	0.25
03-11-2024	12:30 - 12:45	1.79	17:30 - 17:45	3.69	00:30 - 00:45	0.61	13:30 - 13:45	0.65
04-11-2024	13:30 - 13:45	1.50	18:30 - 18:45	6.01	00:00 - 00:15	0.57	13:00 - 13:15	1.68
05-11-2024	14:30 - 14:45	1.72	18:00 - 18:15	6.30	03:15 - 03:30	0.71	13:00 - 13:15	1.84
06-11-2024	14:45 - 15:00	1.68	17:30 - 17:45	10.00	00:15 - 00:30	0.80	13:15 - 13:30	1.48
07-11-2024	16:45 - 17:00	1.46	18:15 - 18:30	10.00	23:30 - 23:45	0.81	20:00 - 20:15	2.02
08-11-2024	16:30 - 16:45	1.85	17:30 - 17:45	10.00	01:00 - 01:15	0.67	13:00 - 13:15	1.34
09-11-2024	16:45 - 17:00	1.55	17:15 - 17:30	10.00	01:15 - 01:30	0.68	13:00 - 13:15	1.51
10-11-2024	12:45 - 13:00	1.99	17:45 - 18:00	5.60	03:15 - 03:30	0.72	13:15 - 13:30	0.60
11-11-2024	13:45 - 14:00	1.52	16:30 - 16:45	10.00	18:00 - 18:15	0.59	12:15 - 12:30	1.25
12-11-2024	19:15 - 19:30	1.62	16:45 - 17:00	10.00	18:00 - 18:15	0.60	13:00 - 13:15	2.00
13-11-2024	14:30 - 14:45	1.26	17:30 - 17:45	5.00	01:15 - 01:30	0.72	19:15 - 19:30	1.00
14-11-2024	13:45 - 14:00	1.58	18:15 - 18:30	6.01	04:00 - 04:15	0.81	13:00 - 13:15	2.15
15-11-2024	14:00 - 14:15	1.46	18:00 - 18:15	7.79	06:45 - 07:00	0.61	23:45 - 24:00	2.00
16-11-2024	13:45 - 14:00	1.52	18:00 - 18:15	10.00	01:15 - 01:30	0.69	13:00 - 13:15	1.92
17-11-2024	12:45 - 13:00	1.90	17:30 - 17:45	3.70	20:45 - 21:00	0.72	11:30 - 11:45	0.80
18-11-2024	18:45 - 19:00	1.48	17:30 - 17:45	10.00	07:15 - 07:30	0.70	13:00 - 13:15	1.00
19-11-2024	14:15 - 14:30	1.43	18:00 - 18:15	10.00	19:45 - 20:00	0.68	13:15 - 13:30	1.93
20-11-2024	16:15 - 16:30	1.39	17:15 - 17:30	10.00	19:30 - 19:45	0.54	13:00 - 13:15	0.52
21-11-2024	07:30 - 07:45	1.26	17:30 - 17:45	10.00	21:00 - 21:15	0.53	13:15 - 13:30	1.49
22-11-2024	14:15 - 14:30	1.28	17:00 - 17:15	10.00	21:15 - 21:30	0.48	23:45 - 24:00	1.91
23-11-2024	16:00 - 16:15	1.87	17:00 - 17:15	10.00	10:00 - 10:15	0.64	13:00 - 13:15	1.91
24-11-2024	16:30 - 16:45	1.61	16:45 - 17:00	4.82	09:00 - 09:15	0.64	13:00 - 13:15	1.93
25-11-2024	15:15 - 15:30	1.45	16:45 - 17:00	10.00	21:15 - 21:30	0.69	03:15 - 03:30	1.59
26-11-2024	09:30 - 09:45	1.46	16:30 - 16:45	10.00	20:30 - 20:45	0.66	13:15 - 13:30	2.14
27-11-2024	14:30 - 14:45	1.42	17:15 - 17:30	10.00	19:00 - 19:15	0.61	02:45 - 03:00	1.51
28-11-2024	12:30 - 12:45	1.56	16:45 - 17:00	10.00	21:30 - 21:45	0.50	00:15 - 00:30	1.20
29-11-2024	15:30 - 15:45	1.68	16:30 - 16:45	10.00	18:00 - 18:15	0.59	02:45 - 03:00	1.61
30-11-2024	14:30 - 14:45	1.82	07:30 - 07:45	10.00	00:00 - 00:15	0.72	23:45 - 24:00	1.00

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Sellers and Buyers under Real Time Market (RTM) in November, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Bihar	518.11	17.13%	Maharashtra	406.97	13.46%
2	Haryana	252.48	8.35%	Telangana	395.76	13.09%
3	Orissa	173.66	5.74%	Punjab	317.92	10.51%
4	NVVN (SNA) -	167.42	5.54%	Rajasthan	263.76	8.72%
5	Tamilnadu	131.71	4.35%	Andhra Pradesh	233.87	7.73%
6	Jharkhand	126.01	4.17%	J&K	227.82	7.53%
7	Uttar Pradesh	120.66	3.99%	Tamilnadu	184.41	6.10%
8	Chhattisgarh	106.00	3.50%	Uttar Pradesh	174.36	5.76%
9	West Bengal	103.48	3.42%	Kerala	116.04	3.84%
10	Assam	55.10	1.82%	Gujarat	94.52	3.13%
11	Madhya Pradesh	44.74	1.48%	West Bengal	79.64	2.63%
12	Karnataka	42.54	1.41%	Orissa	66.33	2.19%
13	Himachal Pradesh	41.67	1.38%	Delhi	54.43	1.80%
14	Delhi	39.43	1.30%	Assam	51.50	1.70%
15	ACME PHALODI	39.36	1.30%	Madhya Pradesh	48.45	1.60%
16	KHURJA STPP	32.90	1.09%	Karnataka	47.55	1.57%
17	NEA-NR	30.97	1.02%	Himachal Pradesh	36.42	1.20%
18	Adani Power	30.36	1.00%	DVC	33.39	1.10%
19	Nabinagar Power	28.39	0.94%	ArcelorMittal Nippon steel	30.45	1.01%
20	ACME RAISAR	27.29	0.90%	Adani Power Limited -	23.67	0.78%
21	Jindal Power Ltd.	26.48	0.88%	Daman & Diu - Dadra &	22.41	0.74%
22	Farakka	25.02	0.83%	Tripura	16.33	0.54%
23	DVC	24.13	0.80%	Meghalaya	15.46	0.51%
24	Sembcorp Energy	23.23	0.77%	SKS Power	12.62	0.42%
25	Arunachal Pradesh	22.75	0.75%	Uttarakhand	11.38	0.38%
26	Manipur	21.32	0.70%	Druk Green Power	10.14	0.34%
27	Singrauli	19.99	0.66%	Adani Power Limited-	8.26	0.27%
28	Uttarakhand	19.48	0.64%	Jharkhand	8.02	0.27%
29	Kahalgaoon-II	19.13	0.63%	Manipur	5.88	0.19%
30	Jindal Power	18.37	0.61%	Jindal Steel	3.81	0.13%
31	Jhabua Power	17.33	0.57%	Jindal Power	3.15	0.10%
32	RENEW SURYA	17.32	0.57%	Ratnagiri Gas & Power	2.66	0.09%
33	TRN Energy	16.96	0.56%	BHARAT ALUMINIUM	2.04	0.07%
34	SKS Power	16.72	0.55%	Goa SR	1.61	0.05%
35	Renew Surya Ravi	16.08	0.53%	Haryana	1.28	0.04%
36	MAHAN	15.70	0.52%	Railways	1.18	0.04%
37	JITPL	14.99	0.50%	Government of Himachal	1.15	0.04%
38	Serentica	14.00	0.46%	Government of Himachal	1.06	0.04%
39	Maharashtra	13.60	0.45%	Goa WR	0.97	0.03%
40	Rihand-III	13.24	0.44%	Chhattisgarh	0.80	0.03%
41	NTPC North	12.91	0.43%	NVVN (SNA) - NEA	0.77	0.03%
42	Transition Green	12.91	0.43%	Gandhar	0.75	0.02%
43	Sasan UMPP	12.89	0.43%	Kawas	0.74	0.02%
44	BALCO 2	12.87	0.43%	NEA-NR	0.65	0.02%
45	Andhra Pradesh	12.29	0.41%	Arunachal Pradesh	0.59	0.02%
46	Rihand-I	12.24	0.40%	Government of Himachal	0.45	0.01%
47	Adani Power	12.24	0.40%	Simhapuri Energy Limited	0.40	0.01%

48	Gujarat	12.04	0.40%	Pondicherry	0.40	0.01%
49	DB Power	11.76	0.39%	ACBIL	0.36	0.01%
50	MB Power	11.54	0.38%	Government of Himachal	0.34	0.01%
51	RENEW SURYA	11.41	0.38%	Nagaland	0.29	0.01%
52	MAHAN	10.54	0.35%	Government of Himachal	0.23	0.01%
53	Telangana	10.40	0.34%	Jindal Power Ltd. Stg-II	0.23	0.01%
54	JUNIPER GREEN	9.43	0.31%	TRN Energy	0.18	0.01%
55	Rihand-II	9.20	0.30%	Government of Himachal	0.18	0.01%
56	Sikkim	9.18	0.30%	Sikkim	0.14	0.005%
57	Barh Stg-2	9.14	0.30%	Government of Himachal	0.11	0.004%
58	J&K	8.83	0.29%	Government of Himachal	0.09	0.003%
59	AGTPP	8.69	0.29%	Sainj HEP	0.07	0.002%
60	Transition	8.40	0.28%	Karcham Wangtoo	0.01	0.0004%
61	Punjab	8.22	0.27%	2X600 VEDANTA	0.01	0.0002%
62	Farakka Stg 3	8.08	0.27%			
63	NTPC Telangana	7.94	0.26%			
64	Kameng HEP	7.72	0.26%			
65	Pondicherry	7.68	0.25%			
66	Darlipalli	7.61	0.25%			
67	Sembcorp Gayatri	7.28	0.24%			
68	Jindal Steel	7.12	0.24%			
69	Transition Energy	7.12	0.24%			
70	The Tata Power Co	7.11	0.23%			
71	Neyveli New	7.09	0.23%			
72	Barh STPS Stg - I	6.88	0.23%			
73	Talcher	6.77	0.22%			
74	Palatana	6.48	0.21%			
75	Kahalgaoon	6.32	0.21%			
76	Maithon Power	6.28	0.21%			
77	Adept Renewable	6.28	0.21%			
78	NTPL	6.15	0.20%			
79	Amp Energy Green	5.75	0.19%			
80	ADANI WIND	5.74	0.19%			
81	Talcher Stg-2	5.56	0.18%			
82	Government of	5.33	0.18%			
83	Tanda Stg-2	5.30	0.18%			
84	SEMBCORP	4.50	0.15%			
85	ADHUNIK POWER	4.48	0.15%			
86	NTPC Sholapur	4.48	0.15%			
87	Kerala	4.38	0.14%			
88	Dadri TPS	4.17	0.14%			
89	Onevolt Energy	4.11	0.14%			
90	NTPC Gadarwara	4.04	0.13%			
91	NTPP BRBCL	3.95	0.13%			
92	ADANI	3.95	0.13%			
93	IND BARATH	3.84	0.13%			
94	Khargone STPP	3.82	0.13%			
95	Tripura	3.74	0.12%			
96	KBUNL(MTPS-II)	3.69	0.12%			
97	Rajasthan	3.64	0.12%			
98	IGSTPS JHAJJAR	3.61	0.12%			
99	ACBIL	3.56	0.12%			

100	Ostro Kannada	3.34	0.11%			
101	Government of	3.13	0.10%			
102	Mouda Stg-2	2.94	0.10%			
103	Dadri Stg-2	2.87	0.09%			
104	Singoli Bhagwati	2.86	0.09%			
105	Unchahar-IV	2.81	0.09%			
106	Karcham Wangtoo	2.80	0.09%			
107	GMR Warora	2.77	0.09%			
108	NTPC Lara	2.75	0.09%			
109	RKM Power	2.64	0.09%			
110	Mouda Stg-1	2.56	0.08%			
111	Amplus Ages	2.39	0.08%			
112	NREL-Dayapar	2.26	0.07%			
113	Vindhyachal stg-3	2.22	0.07%			
114	Dhariwal ISTS	2.20	0.07%			
115	Adani Green Energy	2.05	0.07%			
116	Bongaigaon	1.90	0.06%			
117	Ramagundam	1.89	0.06%			
118	Grian Energy Private	1.77	0.06%			
119	Vindhyachal stg-1	1.75	0.06%			
120	NLC	1.62	0.05%			
121	Ramagundam Stg-1	1.61	0.05%			
122	Government of	1.58	0.05%			
123	NTPC Kudgi	1.54	0.05%			
124	Sainj HEP	1.50	0.05%			
125	Vindhyachal stg-4	1.50	0.05%			
126	AGBPP	1.38	0.05%			
127	NLC TPS-II	1.37	0.05%			
128	Vindhyachal stg-5	1.34	0.04%			
129	Serentica	1.33	0.04%			
130	RENEW SURYA	1.33	0.04%			
131	Simhapuri Energy	1.30	0.04%			
132	ADANI	1.24	0.04%			
133	NLC TPS-II Stg-2	1.18	0.04%			
134	Korba	1.12	0.04%			
135	Government of	1.11	0.04%			
136	Unchahar-I	1.11	0.04%			
137	Unchahar-II	1.10	0.04%			
138	Dikchu	1.08	0.04%			
139	ADANI GREEN	1.07	0.04%			
140	Unchahar-III	1.05	0.03%			
141	Sipat Stg-1	1.01	0.03%			
142	Nagaland	1.01	0.03%			
143	Sipat Stg-2	1.00	0.03%			
144	ADANI SOLAR	0.99	0.03%			
145	Serentica	0.91	0.03%			
146	Sorang HEP,	0.86	0.03%			
147	Government of	0.84	0.03%			
148	TPSL Banderwala	0.82	0.03%			
149	Costal Energen	0.80	0.03%			
150	Chandigarh	0.78	0.03%			
151	Jaypee Nigrie	0.73	0.02%			

152	Simhadri FSP 15	0.70	0.02%			
153	Government of	0.68	0.02%			
154	ADANI SOLAR	0.61	0.02%			
155	NLC TPS-II Expn	0.57	0.02%			
156	Lanco	0.57	0.02%			
157	AD Hydro	0.52	0.02%			
158	Meghalaya	0.51	0.02%			
159	NTPC SOLAPUR	0.50	0.02%			
160	ADANI	0.48	0.02%			
161	DHARIWAL STU	0.43	0.01%			
162	Korba Stg 3	0.42	0.01%			
163	Goa WR	0.41	0.01%			
164	NTPC Simhadri 25	0.39	0.01%			
165	Lanco Budhil	0.38	0.01%			
166	GMR Kamalanga	0.34	0.01%			
167	Government of	0.33	0.01%			
168	Vindhyachal stg-2	0.32	0.01%			
169	NTECL Vallur	0.30	0.01%			
170	Adani Green Energy	0.26	0.01%			
171	Simhadri Stg-2	0.25	0.01%			
172	Government of	0.24	0.01%			
173	DGEN Mega Power	0.22	0.01%			
174	IL&FS	0.17	0.01%			
175	TRANSITION	0.14	0.005%			
176	Adani Green Energy	0.14	0.005%			
177	TPSL 200MW	0.13	0.004%			
178	NSPCL Bhilai	0.10	0.003%			
179	Mizoram	0.10	0.003%			
180	Daman & Diu -	0.06	0.002%			
181	Maruti Clean Coal	0.05	0.002%			
182	Serentica	0.05	0.002%			
183	RENEW SURYA	0.04	0.001%			
184	Nani Virani Wind	0.04	0.001%			
185	ADANI	0.03	0.001%			
186	ADANI	0.02	0.001%			
187	Chuzachen	0.02	0.001%			
188	Simhadri Stg-1	0.01	0.0005%			
189	Jorethang	0.01	0.0004%			
Total Volume of top 10		1,754.62	58.01%	Total Volume of top 10	2,415.44	79.86%
Total Volume in PXs		3,024.43		Total Volume in PXs	3,024.43	

Cross Border Electricity Transactions under Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of November, 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	01-11-2024	-	-	-	-
2	02-11-2024	-	-	-	-
3	03-11-2024	-	-	-	-
4	04-11-2024	-	-	-	-
5	05-11-2024	-	-	-	-
6	06-11-2024	-	-	-	-
7	07-11-2024	-	0.28	-	-
8	08-11-2024	-	-	-	-
9	09-11-2024	-	-	-	-
10	10-11-2024	-	-	-	-
11	11-11-2024	-	0.43	-	-
12	12-11-2024	-	0.20	-	-
13	13-11-2024	-	0.20	-	-
14	14-11-2024	-	-	-	-
15	15-11-2024	-	-	-	-
16	16-11-2024	-	-	-	-
17	17-11-2024	-	-	-	-
18	18-11-2024	-	-	-	-
19	19-11-2024	-	-	-	-
20	20-11-2024	-	-	-	-
21	21-11-2024	-	-	-	-
22	22-11-2024	-	-	-	-
23	23-11-2024	-	-	-	-
24	24-11-2024	-	-	0.50	-
25	25-11-2024	-	-	1.25	-
26	26-11-2024	-	-	2.04	-
27	27-11-2024	-	-	2.87	-
28	28-11-2024	-	-	2.33	-
29	29-11-2024	-	-	2.25	-
30	30-11-2024	-	-	2.80	-
Total		-	1.11	14.04	-
Grand Total		15.15			

-: No transaction took place

Note: Cross Border Transactions of Electricity of **15.15 MU (i.e. 1.11 MU sold by Nepal, 14.04 MU bought by Bhutan)** happened during November, 2024 in IEX, which is included under DAM Volume of November, 2024 in IEX.

Cross Border Electricity Transactions under Real Time Market (RTM) in IEX with Nepal and Bhutan during the month of November, 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	01-11-2024	-	9.87	-	-
2	02-11-2024	-	10.20	-	-
3	03-11-2024	-	10.47	-	-
4	04-11-2024	-	10.68	-	-
5	05-11-2024	-	10.74	-	-
6	06-11-2024	-	10.71	-	-
7	07-11-2024	-	10.55	-	-
8	08-11-2024	-	10.86	-	-
9	09-11-2024	-	10.89	-	-
10	10-11-2024	-	9.92	-	-
11	11-11-2024	-	8.79	-	-
12	12-11-2024	-	8.12	-	-
13	13-11-2024	-	7.21	-	-
14	14-11-2024	-	7.24	-	-
15	15-11-2024	-	6.01	-	-
16	16-11-2024	-	6.72	-	-
17	17-11-2024	-	6.25	-	-
18	18-11-2024	-	6.09	0.93	-
19	19-11-2024	-	4.17	0.18	-
20	20-11-2024	-	3.53	0.22	-
21	21-11-2024	-	3.15	0.06	-
22	22-11-2024	-	3.29	1.07	-
23	23-11-2024	-	5.25	1.42	-
24	24-11-2024	-	3.37	1.60	-
25	25-11-2024	-	3.13	1.13	-
26	26-11-2024	0.14	2.40	0.44	-
27	27-11-2024	0.36	2.40	-	-
28	28-11-2024	0.46	2.09	0.64	-
29	29-11-2024	0.28	2.14	1.26	-
30	30-11-2024	0.18	2.13	1.20	-
Total		1.42	198.37	10.15	-
Grand Total		209.94			

-: No transaction took place

Note: Cross Border Transactions of Electricity of 209.94 MU (i.e. 1.42 MU bought by Bhutan, 198.37 MU sold by Nepal, 10.15 MU sold by Bhutan) happened during November, 2024 in IEX, which is included under RTM Volume of November, 2024 in IEX.

Analysis for change in trend of Final Scheduled Volume under DAM on 1st Sunday of November, 2024 (i.e. 3rd November, 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 November, 2024, it is observed that on first Sunday (3rd November, 2024), FSV showed increasing trend in comparison to first Saturday (2nd November, 2024).

- (i) On first Sunday (3rd November, 2024), although there was decrease in purchase on power exchange by some of the States in comparison to first Saturday (2nd November, 2024) by **9.73 MU** [i.e. Delhi (3.65 MU), Maharashtra (2.57 MU), DVC (1.47 MU), ArcelorMittal Nippon steel (ESIL) (1.10 MU) and West Bengal (0.51 MU) , etc.], there was also increase in purchase on power exchange by some of the States by **27.24 MU** [i.e. Telangana (7.73 MU), Rajasthan (4.26 MU), Gujarat (3.32 MU), Andhra Pradesh (3.05 MU) and Madhya Pradesh (2.57 MU), etc.]. This resulted in an overall increase in FSV by **17.51 MU** on Sunday (3rd November, 2024) as compared to Saturday (2nd November, 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).