



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: सितम्बर, 2024 माह की मार्केट मॉनिटरिंग रिपोर्ट।

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

महोदय/ Sir,

सितम्बर, 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 September, 2024 is enclosed herewith for kind information and perusal.

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

- (i) सितम्बर, 2024 माह में देश में कुल 140,728 MU विद्युत का कारोबार किया गया, जिसमें से 68,096 MU का कारोबार अंतर्राज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतराराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया।
In the month of September, 2024 a total of 140,728 MU of electricity was transacted in the country out of which 68,096 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.
- (ii) अल्पावधि मार्केट के अंतर्गत कुल 23,834 MU का कारोबार किया गया था, जिसमें से 11,608 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ। इस प्रकार अल्पावधि कारोबार, सितम्बर, 2024 माह में ट्रेड की गई विद्युत की कुल मात्रा का 16.94 % था और 8.25% पावर एक्सचेंजों के माध्यम से रहा।

A total of 23,834 MU was transacted under Short Term Market, out of which 11,608 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in September, 2024 was 16.94 % of total volume of electricity traded in September, 2024 and 8.25 % 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 35.00 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 17.05 % रहा।

If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 35.00 % of ISTS transactions, out of which transaction through the power exchanges constitutes 17.05%.

Signed by Vikram Singh

Date: 05-11-2024 11:52:48

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



सत्यमेव जयते

मासिक मार्केट मॉनिटरिंग रिपोर्ट - सितम्बर, 2024

Monthly Market Monitoring Report

September, 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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सितम्बर, 2024 की मासिक मार्केट
मॉनिटरिंग रिपोर्ट का सारांश

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

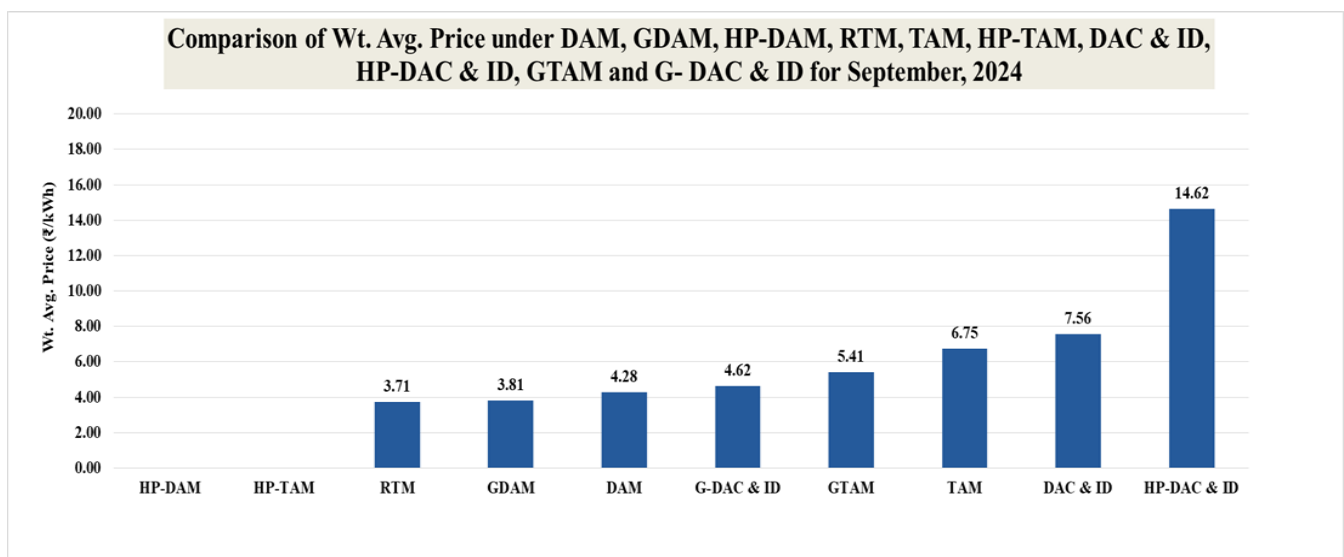
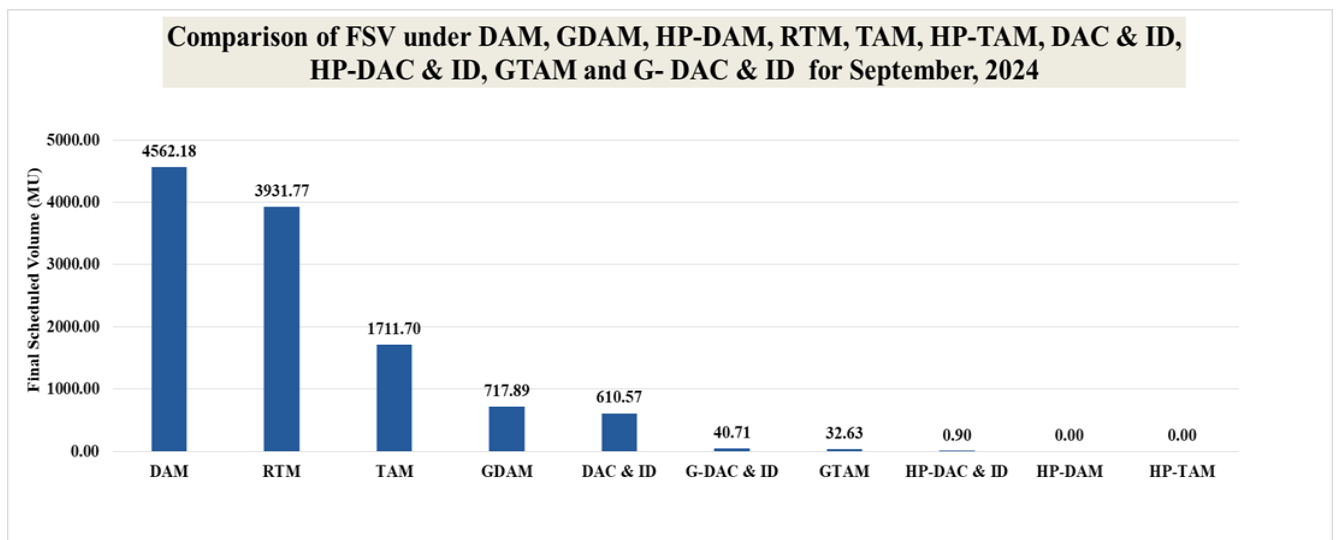
सितम्बर, 2024 माह के लिए सारांश Summary for Month: September, 2024

भारत में विद्युत एक्सचेंजों पर विद्युत के व्यापार का सारांश

Summary of Electricity Transactions on Power Exchanges in India

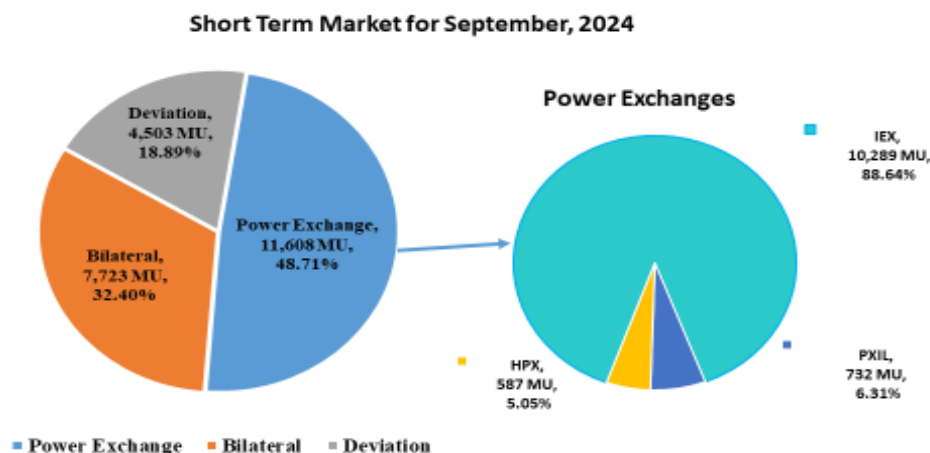
- सितम्बर, 2024 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल **11,608 MU** विद्युत का कारोबार किया गया। विद्युत की यह मात्रा डिलीवरी की तारीख के आधार पर है और इसमें DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM और G-DAC & ID मार्केट खंडों के माध्यम से कारोबार शामिल हैं।

A total volume of **11,608 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of September, 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 **7,723 MU** विद्युत का कारोबार किया गया और **4,503 MU** को विचलन के रूप में लेनदेन किया गया। इस प्रकार कुल **23,834 MU** विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। सितम्बर, 2024 के महीने में देश में कुल **140,728 MU** विद्युत की आपूर्ति की गई थी, इस प्रकार सितम्बर, 2024 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा **16.94 %** था।

Under the Bilateral trade, a total of **7,723 MU** of electricity was transacted and **4,503 MU** was transacted as deviation from schedule. Thus, a total of **23,834 MU** of electricity was transacted as short term trade (Power Exchange + Bilateral trade + deviation from schedule). In September, 2024, a total of **140,728 MU** of electricity was supplied in the country, thus, the share of short term market in the total volume of electricity supplied in September, 2024 was **16.94 %**.



- सितम्बर, 2024 के दौरान संचरण जाम की कुल मात्रा **21.80 MU** थी, जो की विद्युत एक्सचेंजों में कारोबार की गई विद्युत की कुल मात्रा का केवल **0.19 %** है और सितम्बर, 2024 के महीने के दौरान आपूर्ति की गई कुल ऊर्जा का **0.02 %** है।

The total volume affected by the transmission congestion during the month of September, 2024 was **21.80 MU** which is only **0.19 %** of the total volume of electricity transacted in the power exchanges and **0.02 %** of total energy supplied during the month of September, 2024.

DAM में **11** दिन अर्थात् दिनांक 7, 11, 12, 14, 15, 18 एवं 20 से 24 सितम्बर, 2024, GDAM में **2** दिन अर्थात् दिनांक 22 एवं 24 सितम्बर, 2024 और RTM में **7** दिन अर्थात् दिनांक 1, 2 एवं 22 से 26 सितम्बर, 2024 को संचरण जाम देखा गया। जबकि HP-DAM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM और G-DAC & ID में कोई संचरण जाम नहीं देखा गया। सितम्बर, 2024 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **75.22 MU** थी।

Transmission congestion was observed in DAM on **11** days i.e. 7th, 11th, 12th, 14th, 15th, 18th & 20th to 24th September, 2024, in GDAM on **2** days i.e. 22nd & 24th September, 2024 and in RTM on **7** days i.e. 1st, 2nd & 22nd to 26th September, 2024. Whereas, there was no impact of congestion in HP-DAM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID. The total volume of real time curtailment reported in the month of September, 2024 was only **75.22 MU**.

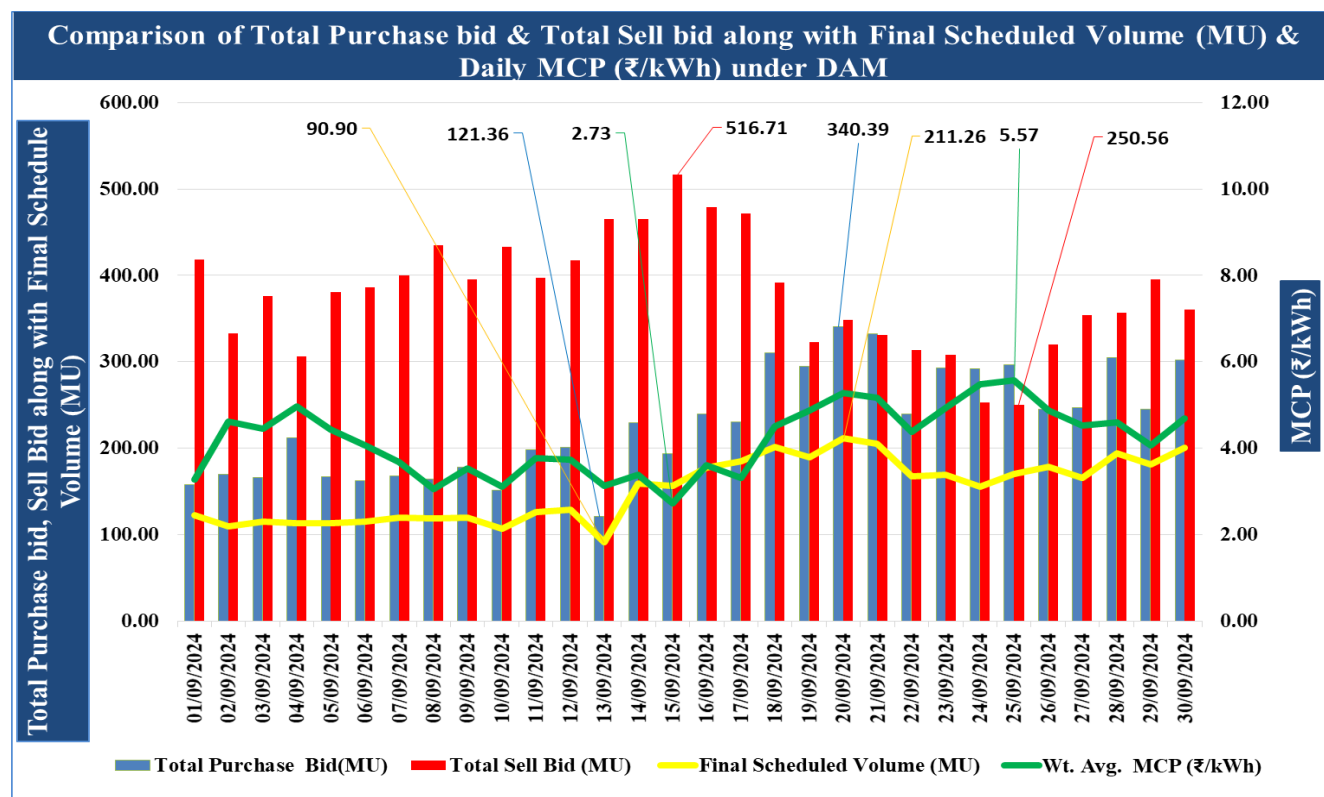
- सितम्बर, 2024 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (ISTS) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **68,096 MU** थी। सितम्बर, 2024 के महीने में अल्पावधि बाजार में विद्युत का लेन-देन अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से अनुसूचित की गई कुल विद्युत की मात्रा का **35.00 %** रहा।

The total volume of electricity scheduled through ISTS during the month of September, 2024 was **68,096 MU**. The total volume of electricity transacted in the short term market was **35.00 %** of total volume schedule at ISTS in September, 2024.

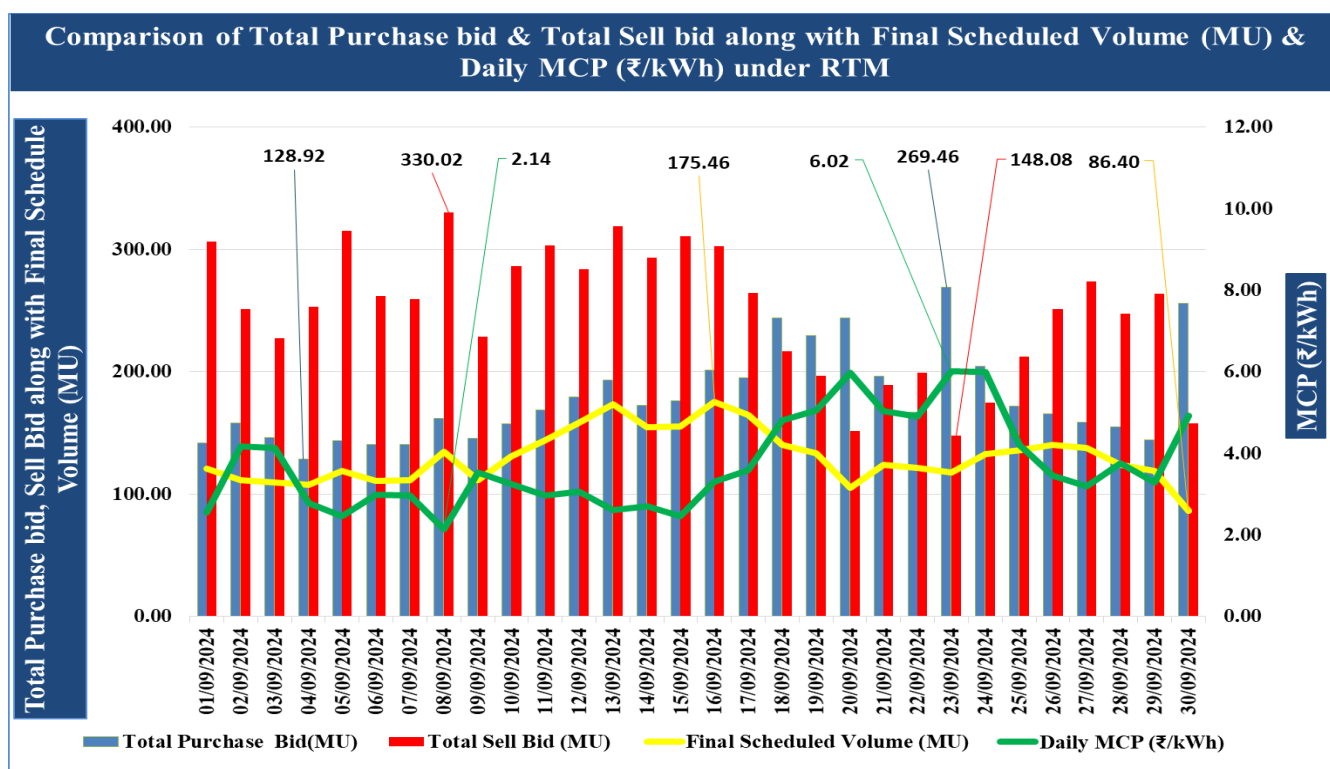
- सितम्बर, 2024 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:

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

DAM Volume



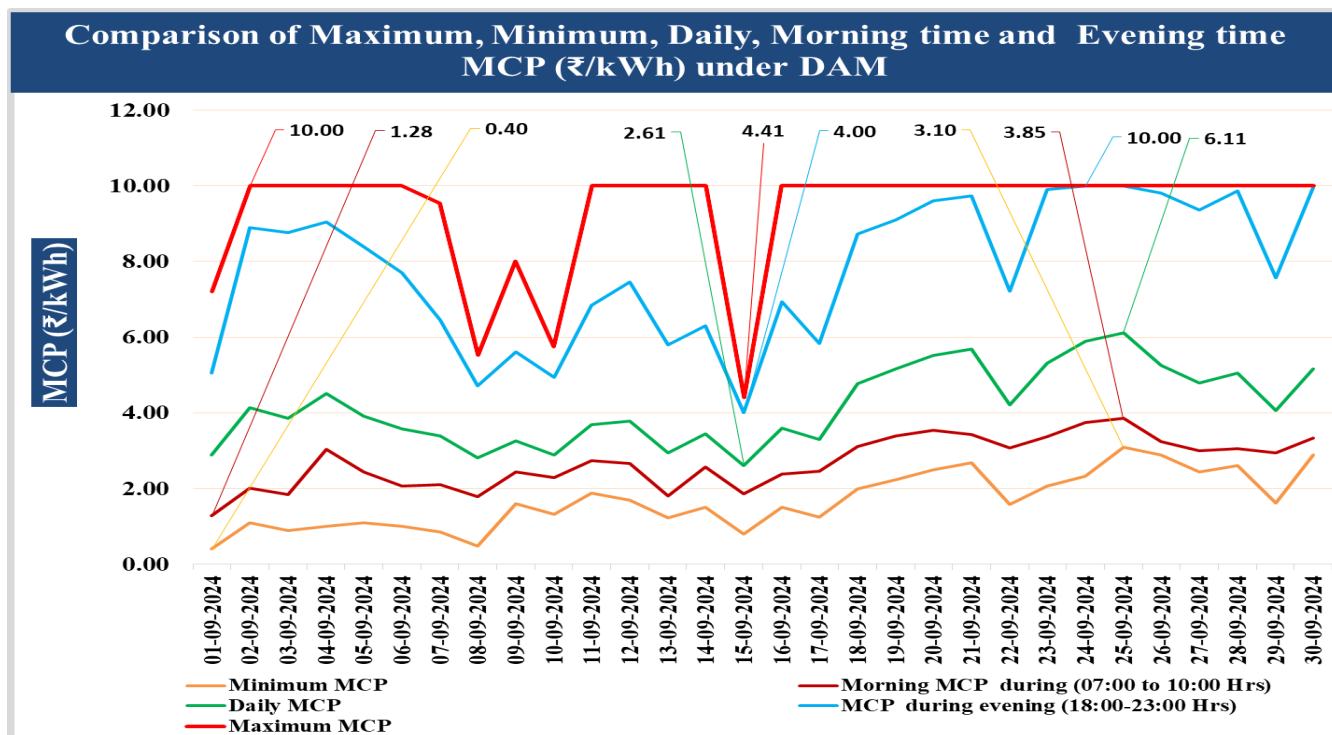
RTM Volume



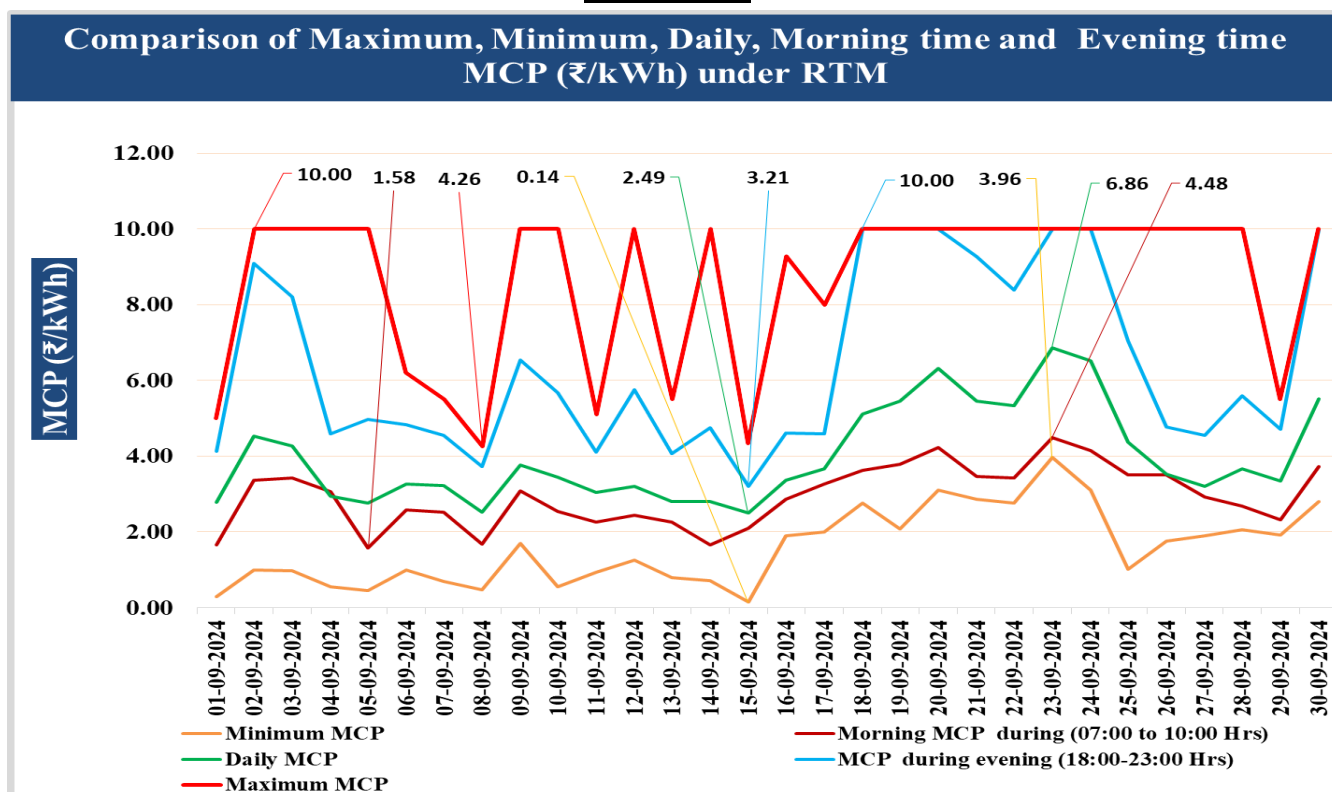
- सितम्बर, 2024 माह के दौरान DAM और RTM में अधिकतम, न्यूनतम, दैनिक, सुबह और शाम के समय MCP की भिन्नता निम्नलिखित चित्रों में दिखाई गई है:

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

DAM Prices



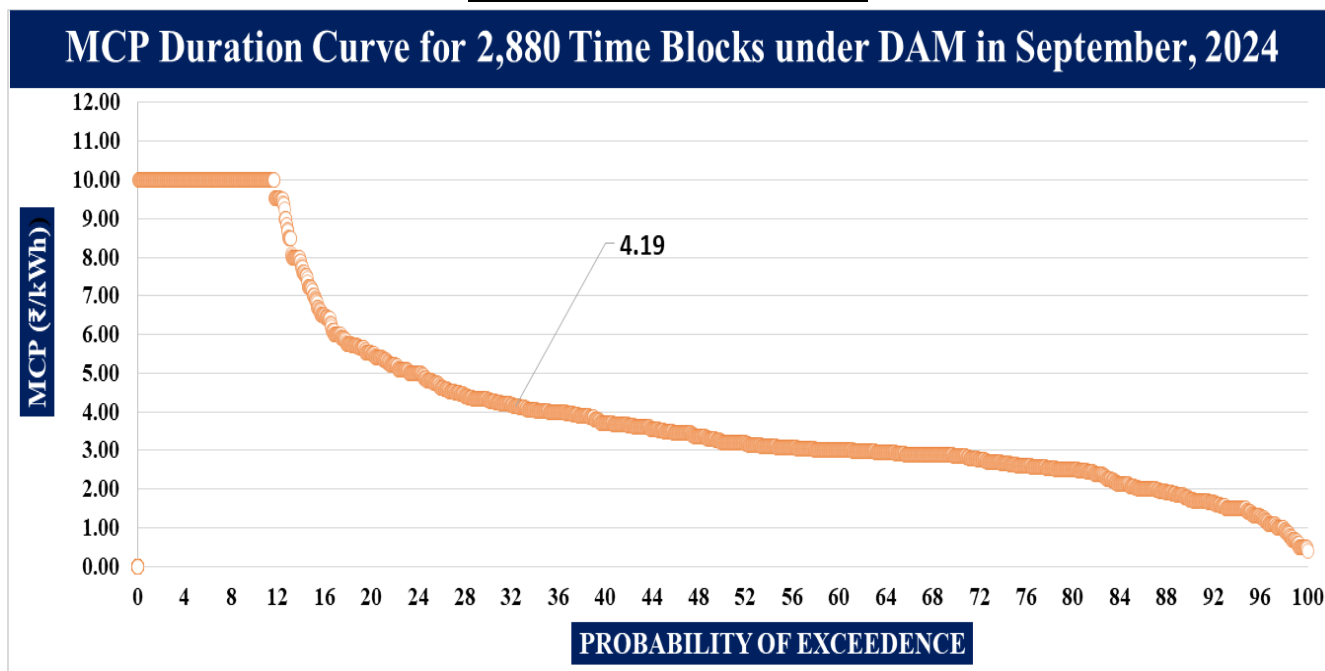
RTM Prices



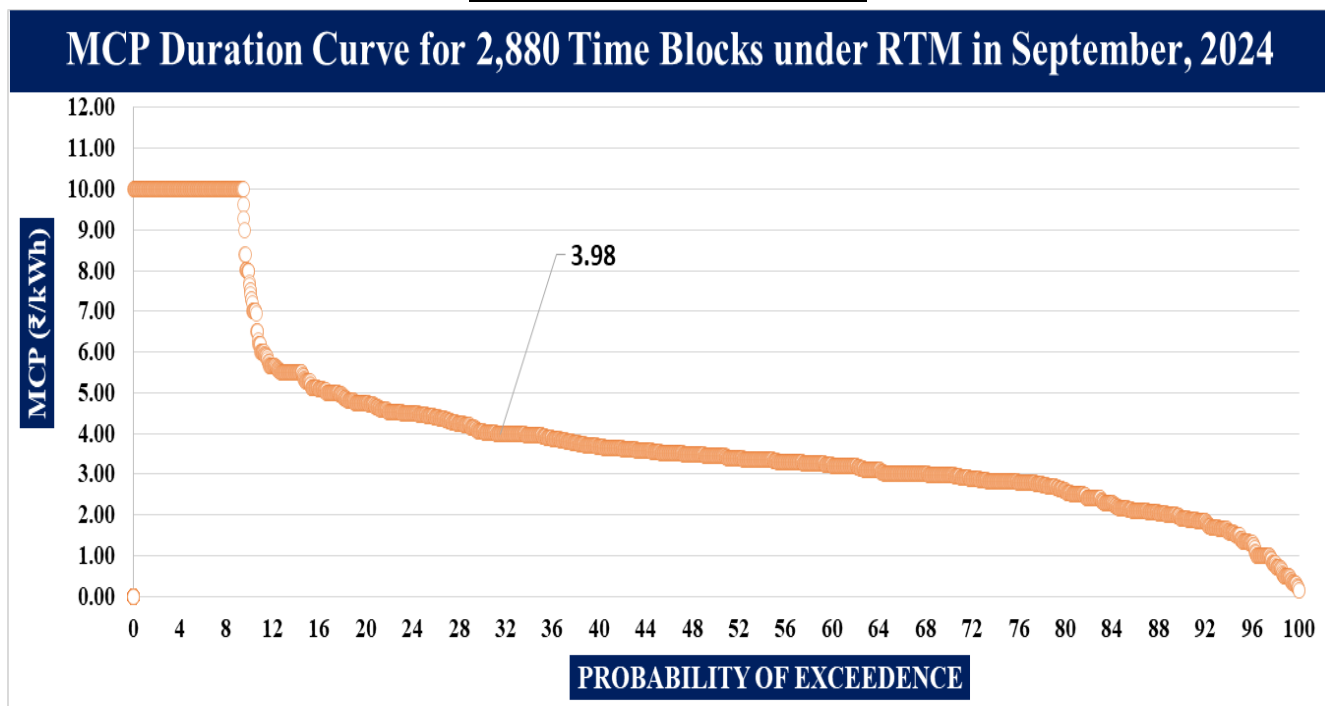
- सितम्बर, 2024 के महीने के दौरान DAM और RTM के तहत समय ब्लॉकवार MCP अवधि वक्र निम्नलिखित चित्रों में में दिखाए गए हैं:

The Market Clearing Price duration curves for time block wise under DAM and RTM during the month of September, 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 4,562.18 MU at a Wt. Avg. Price of ₹ 4.28/kWh in September, 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 September, 2024 was **4,562.18 MU**. The total energy supplied in the country during the month of September, 2024 was **140,728 MU**. Thus, the volume of electricity transacted on the power exchanges under DAM during September, 2024 was 3.24 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted under DAM during last month August, 2024 i.e. **4,711.98 MU** which was 3.27 % of the total energy supplied (**144,117 MU**) in the country during August, 2024. Similarly, the total volume of electricity transacted under DAM during previous year i.e. September, 2023, was **3,435.60 MU** which was 2.43 % of the total energy supplied (**141,299 MU**) in the country during September, 2023.
- 1.2. The DAM volume for September, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **347.16 MU** (i.e. 298.46 MU sold by Nepal, 48.70 MU sold by Bhutan).
- 1.3. The Average Market Clearing Price (MCP) on IEX during the month of September, 2024 was ₹ **4.28/kWh**, which shows of an increase 3.13 % & a decrease 27.09 % when compared with Wt. Avg. MCP's for the month of August, 2024 and September, 2023, which were ₹ **4.15/kWh** and ₹ **5.87/kWh**, respectively. On HPX, the Average MCP during the month of September, 2024 was ₹ **10.00/kWh**, which shows no change when compared with Wt. Avg. MCP for the month of September, 2023, which was ₹ **10.00/kWh** and no transaction of electricity took place during August, 2024. On PXIL, no transaction of electricity took place during September, 2024.
- 1.4. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under DAM for September, 2024 vs August, 2024 and September, 2023 is shown below as **Figure-1**:

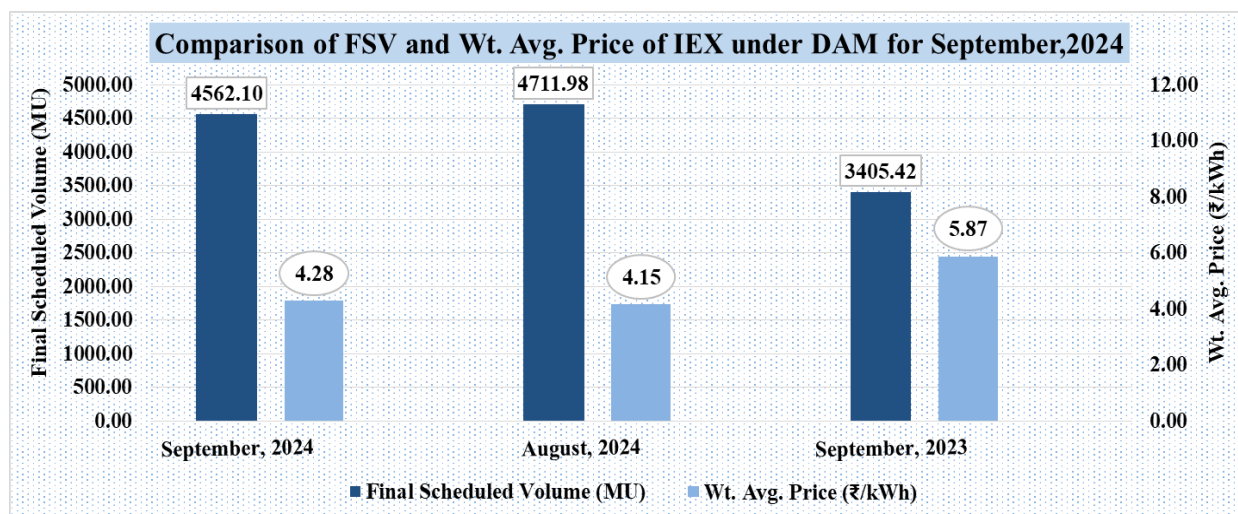


Figure-1

- 1.5.** The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 333 time blocks from 2nd to 6th, 11th to 14th & 16th to 30th September, 2024. Whereas, in HPX, the maximum ACP of ₹ 10.00/kWh was observed in all 13 regions during 12 time blocks on 21st September, 2024. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in PXIL, no transaction of electricity took place during September, 2024.
- 1.6.** The minimum ACP of ₹ 0.40/kWh in IEX was observed in 13 regions during the time block 08:45 - 09:00 Hrs on 1st September, 2024. Whereas, in HPX, the minimum ACP of ₹ 10.00/kWh was observed in all 13 regions during 12 time blocks on 21st September, 2024. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in PXIL, no transaction of electricity took place during September, 2024.

2. Real Time Market (RTM)

The volume of electricity transacted under RTM was 3,931.77 MU at a Wt. Avg. Price of ₹ 3.35/kWh in September, 2024.

- 2.1. The total volume of electricity transacted on the power exchanges under Real Time Market in September, 2024 was **3,931.77 MU**, out of which **3,912.78 MU** (99.52 %) was transacted in IEX, **18.99 MU** (0.48 %) was transacted in PXIL and no transaction of electricity took place in HPX.
- 2.2. The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under RTM for September, 2024 vs August, 2024 and September, 2023 is shown below as **Figure-2, Figure-3 & Figure-4**:

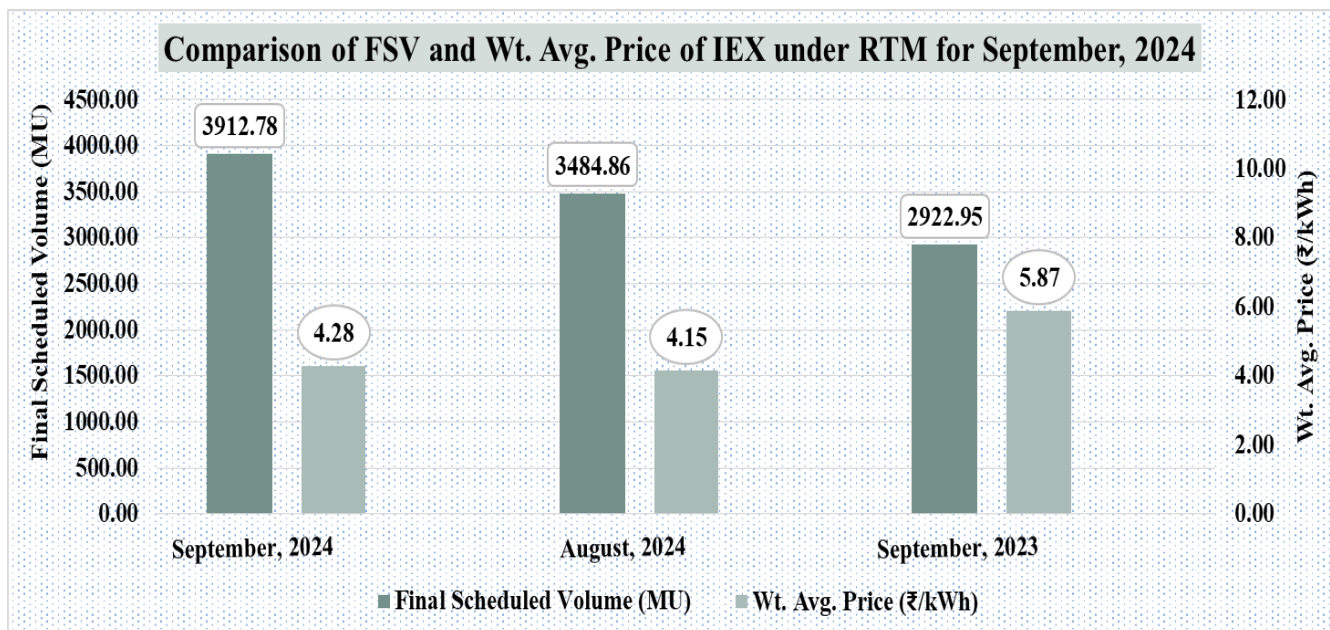


Figure-2

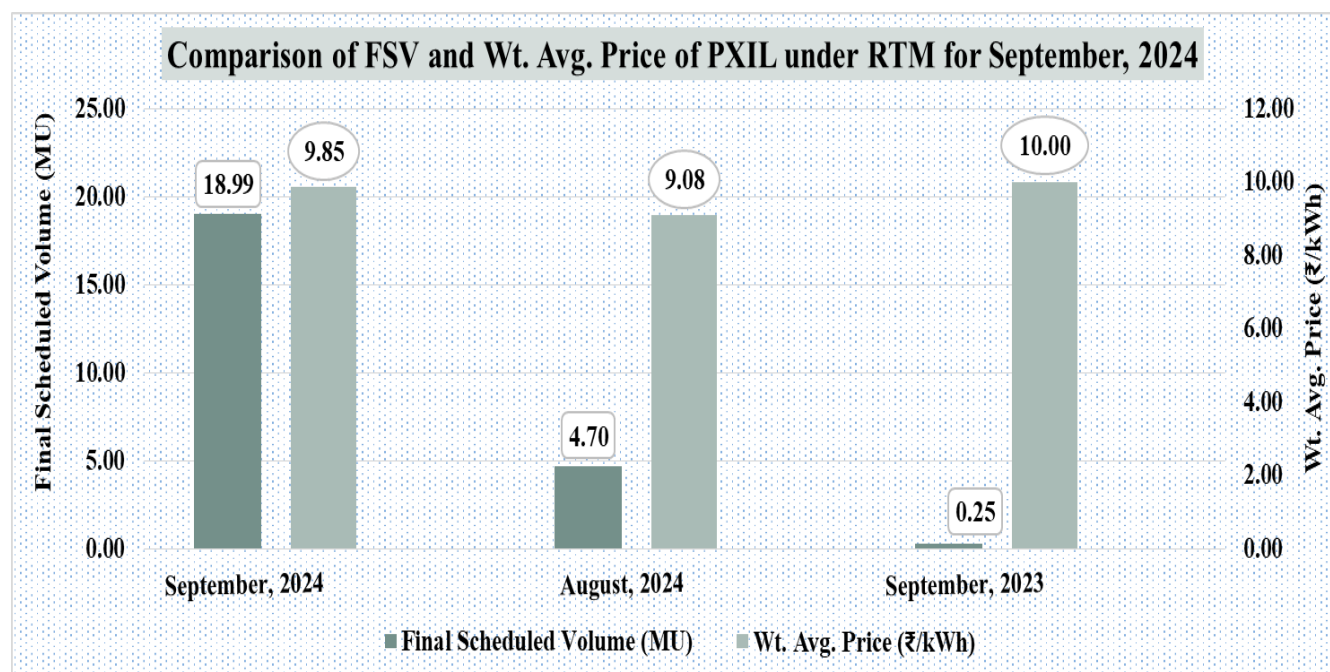


Figure-3

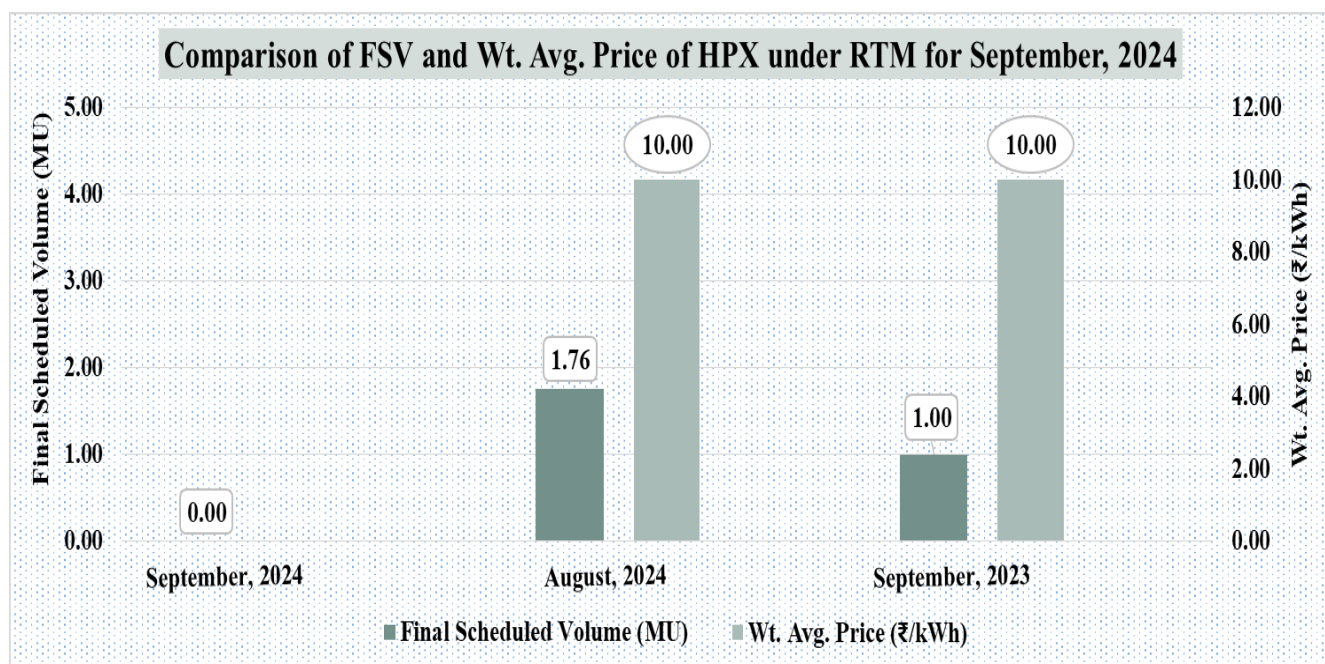


Figure-4

2.3. The RTM volume for September, 2024 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XIII**), which was **23.14 MU** (i.e. 20.61 MU sold by Nepal, 2.53 MU sold by Bhutan).

3. Green Day Ahead Market (GDAM)

The volume of electricity transacted under GDAM was 717.89 MU at a Wt. Avg. Price of ₹ 3.81/kWh in September, 2024.

3.1. The volume of electricity transacted under GDAM in September, 2024 was **717.89 MU** (307.05 MU in Solar, 338.05 MU in Non-Solar and 72.79 MU in Hydro) in IEX at a Wt. Avg. MCP of ₹ **3.81/kWh** and no transaction took place in PXIL & HPX under GDAM.

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

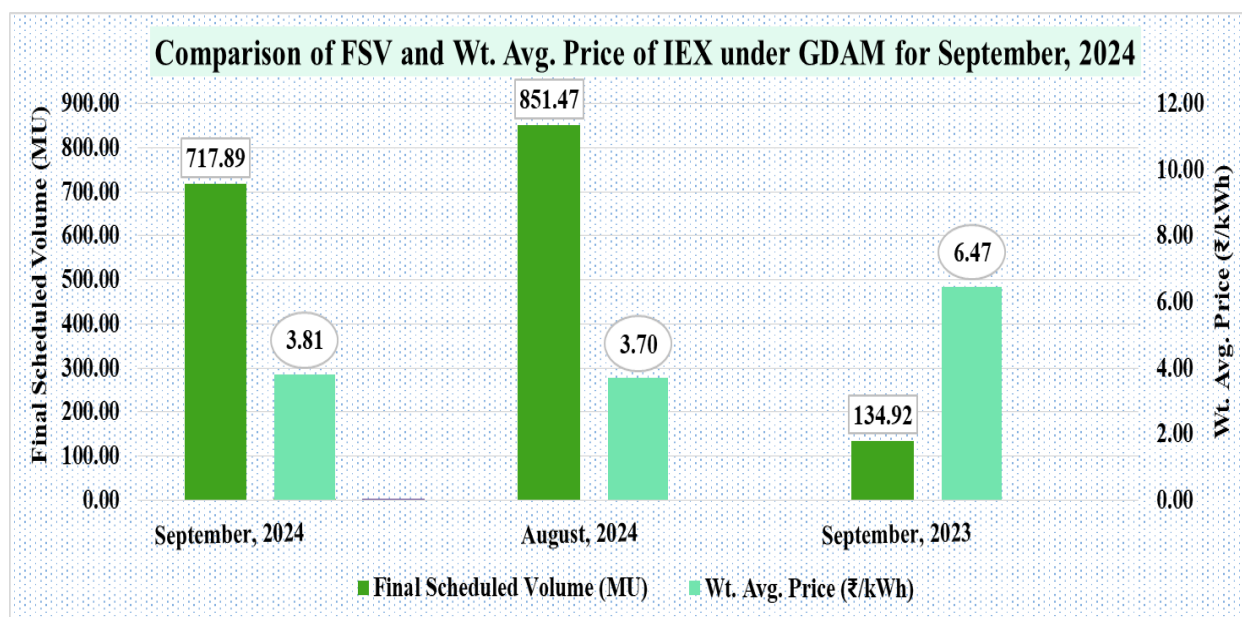


Figure-5

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

3.4. The **top 10 sellers** on the power exchanges under Green Day Ahead Market (GDAM) in September, 2024 were **ADANI RENEWABLE ENERGY HOLDING FOUR LIMITED, Himachal Pradesh, RENEW SURYA OJAS PRIVATE LIMITED-Wind, Adani Green Energy Twenty Five B Limited_infirm, Karnataka, ADANI RENEWABLE ENERGY FORTY ONE LIMITED_infirm, Andhra Pradesh, Singoli Bhagwati, Maharashtra and ADANI WIND ENERGY KUTCHH FOUR Ltd. Nakhatrana**, which constituted **58.63 %** of the market volume.

3.5. The **top 10 buyers** on the power exchanges under Green Day Ahead Market (GDAM) in September, 2024 were **ArcelorMittal Nippon steel (ESIL), Maharashtra, DVC, Jharkhand, Odisha, Gujarat, Tamil Nadu, Chhattisgarh, Haryana and Punjab**, which constituted **82.29 %** of the market volume.

4. Term Ahead Market (TAM)

The volume of electricity transacted under TAM was 1,711.70 MU at a Wt. Avg. Price of ₹ 6.75/kWh in September, 2024.

4.1. The total volume of electricity transacted on the power exchanges on delivery date basis under Term Ahead Market in September, 2024, August, 2024 and September, 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)
September, 2024	1,711.70	966.43 (56.46 %)	339.17 (19.81 %)	406.10 (23.72 %)
August, 2024	1,229.83	646.40 (52.56 %)	463.63 (37.70 %)	119.80 (9.74 %)
September, 2023	2,664.96	1131.71 (42.47 %)	1017.15 (38.17 %)	516.10 (19.37 %)

4.2. In the month of September, 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 September, 2024 in the country, the volume of electricity traded on the power exchanges under TAM on delivery date basis represents **1.22 %** of the total energy supplied. The same was **0.85 %** in August, 2024 and **1.89 %** in September, 2023.

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

4.5. There was real time curtailment of **68.67 MU** under TAM, out of which 59.30 MU in IEX, 6.52 MU in PXIL and 2.85 MU in HPX.

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 September, 2024 with August, 2024 and September, 2023 are shown in Table – 1A & 1B:

(i) Final Scheduled Volume (MU), September, 2024 vis- a- vis August, 2024 and September, 2023

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
IEX	September, 2024	263.28	-	120.97	582.18	966.43
	August, 2024	403.72	0.36	73.96	168.36	646.40
	%Change (Month over Month)	-34.79	NA	63.56	245.79	49.51
	September, 2023	534.89	-	-	596.82	1131.71
	%Change (Year over Year)	-50.78	NA	NA	-2.45	-14.60
PXIL	September, 2024	103.21	-	-	235.96	339.17
	August, 2024	260.37	8.90	74.11	120.25	463.63
	%Change (Month over Month)	-60.36	NA	NA	96.22	-26.84
	September, 2023	433.45	135.95	-	447.75	1017.15
	%Change (Year over Year)	-76.19	NA	NA	-47.30	-66.65

Exchange	Period	Final Scheduled Volume (MU)				
		Daily or Any Day	Weekly	Monthly	Anyday Single Side	Total
HPX	September, 2024	99.48	-	70.44	236.18	406.10
	August, 2024	95.65	-	-	24.15	119.80
	%Change (Month over Month)	4.00	NA	NA	877.97	238.98
	September, 2023	94.00	-	-	422.1	516.10
	%Change (Year over Year)	5.83	NA	NA	-44.05	-21.31

- : No transaction took place

NA: Not Applicable

Table: 1A

(ii) Wt. Avg. MCP, September, 2024 vis- a- vis August, 2024 and September, 2023

Exchange	Period	Wt. Average MCP (₹/kWh)			
		Daily or Any Day	Weekly	Monthly	Anyday Single Side
IEX	September, 2024	6.77	-	5.94	6.25
	August, 2024	6.48	5.70	5.90	6.93
	%Change (Month over Month)	4.48	NA	0.68	-9.81
	September, 2023	8.26	-	-	8.82
	%Change Year over Year)	-18.04	NA	NA	-29.14
PXIL	September, 2024	8.03	-	-	6.60
	August, 2024	7.18	5.70	5.90	7.03
	%Change (Month over Month)	11.84	NA	NA	-6.12
	September, 2023	8.69	8.85	-	9.13
	%Change (Year over Year)	-7.59	NA	NA	-27.71
HPX	September, 2024	10.00	-	5.40	6.99
	August, 2024	9.28	-	-	8.05
	%Change (Month over Month)	7.76	NA	NA	-13.17
	September, 2023	9.14	-	-	8.33
	%Change Year over Year)	9.41	NA	NA	-16.09

-: 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 610.57 MU at a Wt. Avg. Price of ₹ 7.56/kWh in September, 2024.

- 5.1. The volume of electricity transacted on IEX, PXIL and HPX under DAC & ID on delivery date basis during September, 2024 were **119.74 MU, 356.06 MU and 134.77 MU**, respectively.
- 5.2. In the month of September, 2024, the transaction of electricity in PXIL in **High Price Day Ahead Contingency & Intra Day (HP- DAC & ID)** under ID contract was **0.90 MU** at an average MCP of ₹ **14.62/kWh**, whereas no transaction took place in IEX and HPX under HP- DAC & ID.
- 5.3. In September, 2024, there was no transmission congestion under TAM in IEX, PXIL & HPX.
- 5.4. In September, 2024, there was real time curtailment of **4.27 MU** under DAC & ID. Out of which **1.73 MU** in PXIL and **2.54 MU** in HPX. Whereas, no real time curtailment in IEX under TAM.
- 5.5. The total volume of electricity transacted under DAC & ID under Day Ahead Contingency & Intra Day contracts during September, 2024 and its comparison with August, 2024 and September, 2023 on delivery date basis are shown in Tables- 2A & 2B:

(i) Final Scheduled Volume (MU), September, 2024 vis- a- vis August, 2024 and September, 2023

Exchange	Period	Final Scheduled Volume (MU)		
		Day Ahead Contingency	Intra Day	Total
IEX	September, 2024	110.80	8.94	119.74
	August, 2024	229.74	9.70	239.44
	%Change (Month over Month)	-51.77	-7.84	-49.99
	September, 2023	758.79	4.92	763.71
	%Change (Year over Year)	-85.40	81.71	-84.32
PXIL	September, 2024	319.81	36.25	356.06
	August, 2024	286.68	25.92	312.60
	%Change (Month over Month)	11.56	39.85	13.90
	September, 2023	524.93	10.99	535.92
	%Change (Year over Year)	-39.08	229.85	-33.56
HPX	September, 2024	134.77	-	134.77
	August, 2024	224.24	7.70	231.94
	%Change (Month over Month)	-39.90	NA	-41.89
	September, 2023	571.04	4.70	575.74
	%Change (Year over Year)	-76.40	NA	-76.59

- : No transaction took place

NA: Not Applicable

Table: 2A

(ii) Wt. Avg. MCP, September, 2024 vis- a- vis August, 2024 and September, 2023

Exchange	Period	Wt. Average MCP (₹/kWh)	
		Day Ahead Contingency	Intra Day
IEX	September, 2024	7.25	9.36
	August, 2024	7.27	9.57
	%Change (Month over Month)	-0.28	-2.19
	September, 2023	6.94	9.29
	%Change Year over Year)	4.47	0.75
PXIL	September, 2024	7.43	9.46
	August, 2024	7.25	9.71
	%Change (Month over Month)	2.48	-2.57
	September, 2023	7.89	9.59
	%Change (Year over Year)	-5.83	-1.36
HPX	September, 2024	7.49	-
	August, 2024	8.52	9.95
	%Change (Month over Month)	-12.09	NA
	September, 2023	6.81	9.57
	%Change Year over Year)	9.99	NA

- : No transaction took place

NA: Not Applicable

Table: 2B

6. Green Term Ahead Market (GTAM)

The volume of electricity transacted under GTAM was 32.63 MU at a Wt. Avg. Price of ₹ 5.41/kWh in September, 2024.

The total volume of electricity transacted in the PXs under GTAM on delivery date basis was **32.63 MU** (**0.44 MU** in Solar and **32.19 MU** in Non-Solar). The Comparison of Final Scheduled Volume (FSV) and Wt. Avg. Price of IEX, PXIL and HPX under GTAM for September, 2024 is shown below as **Figure-6, Figure-7 and Figure-8:**

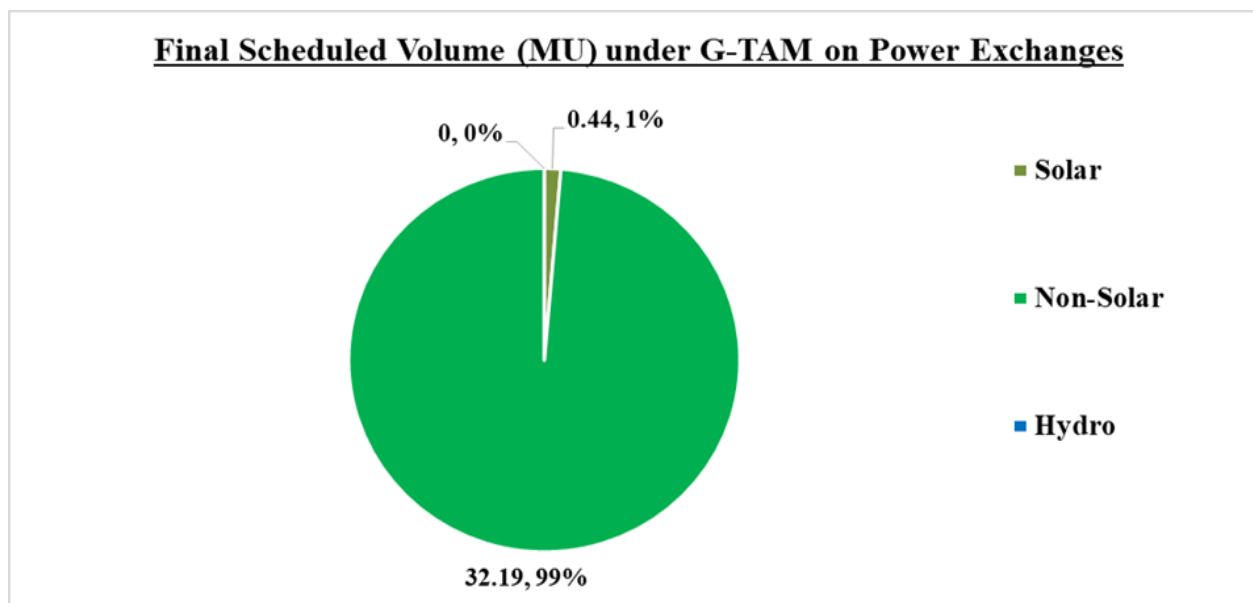


Figure-6

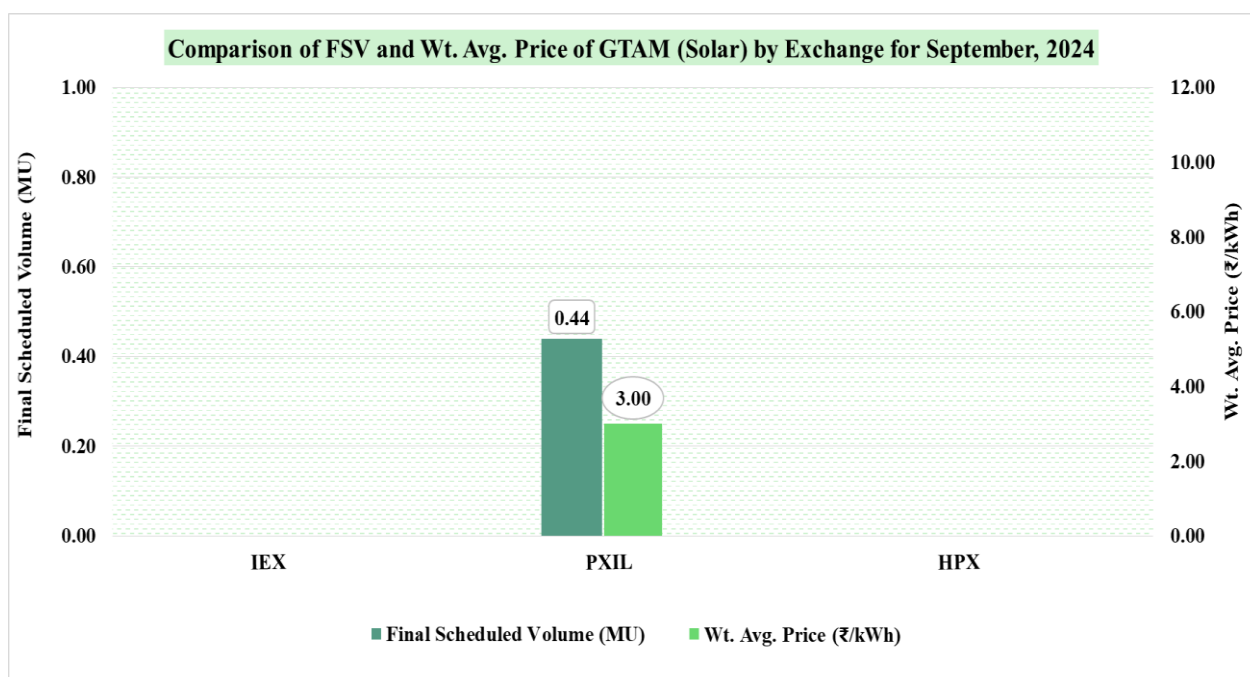


Figure-7

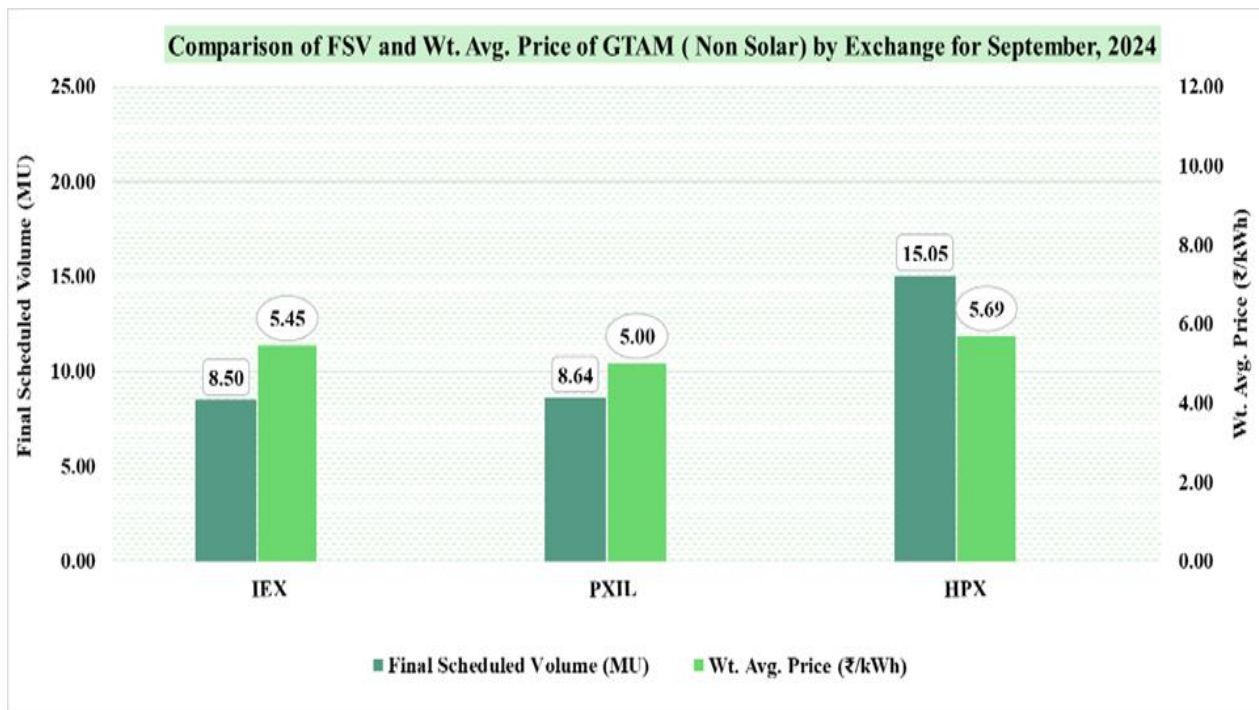


Figure-8

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

The volume of electricity transacted under G-DAC & ID was 40.71MU at a Wt. Avg. Price of ₹ 4.62/kWh in Sep 2024.

The total volume of electricity transacted in the IEX, PXIL & HPX under G-DAC & ID on delivery date basis was **40.71 MU (13.49 MU in Non-Solar and 27.22 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 September, 2024 is shown below as **Figure-9, Figure-10, Figure-11 and Figure-12:**

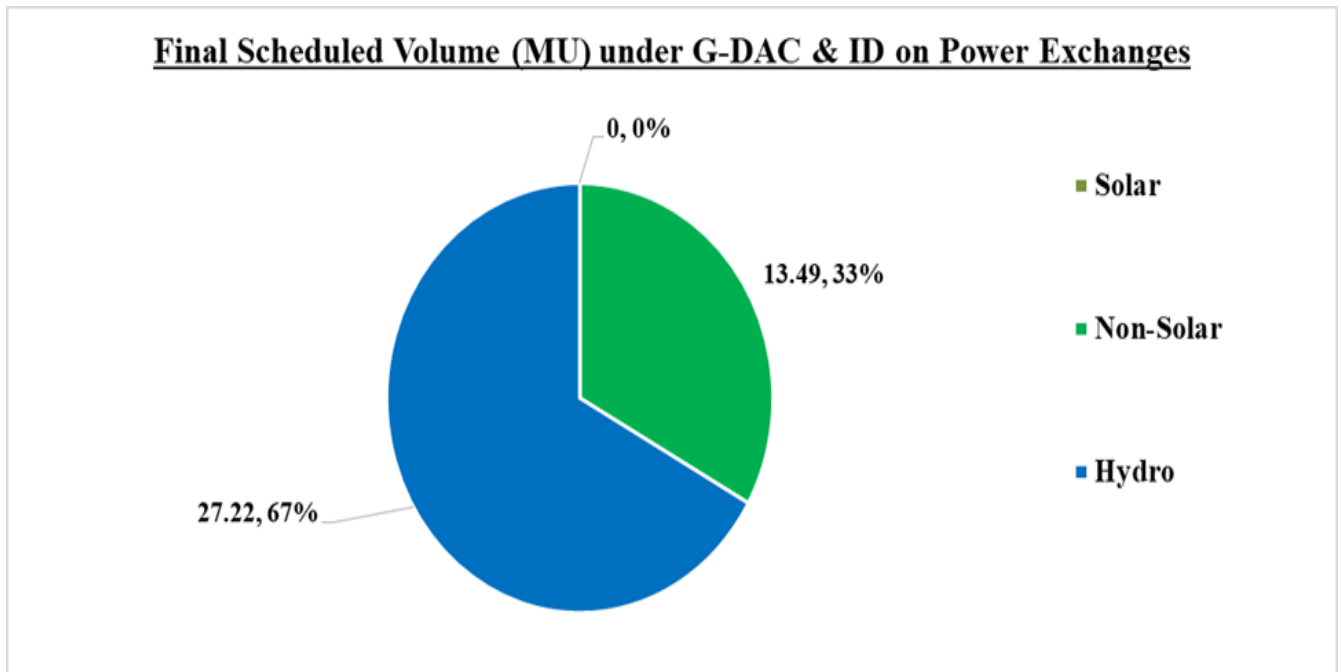


Figure-9

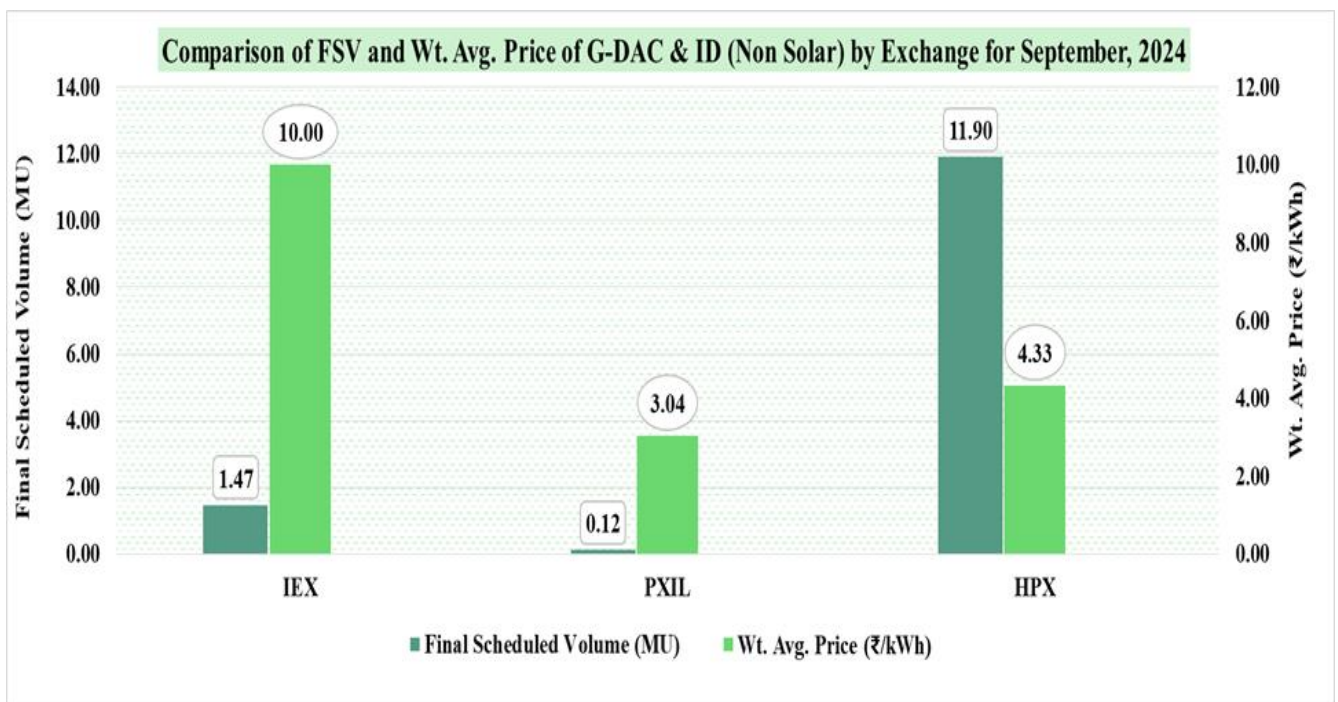


Figure-10

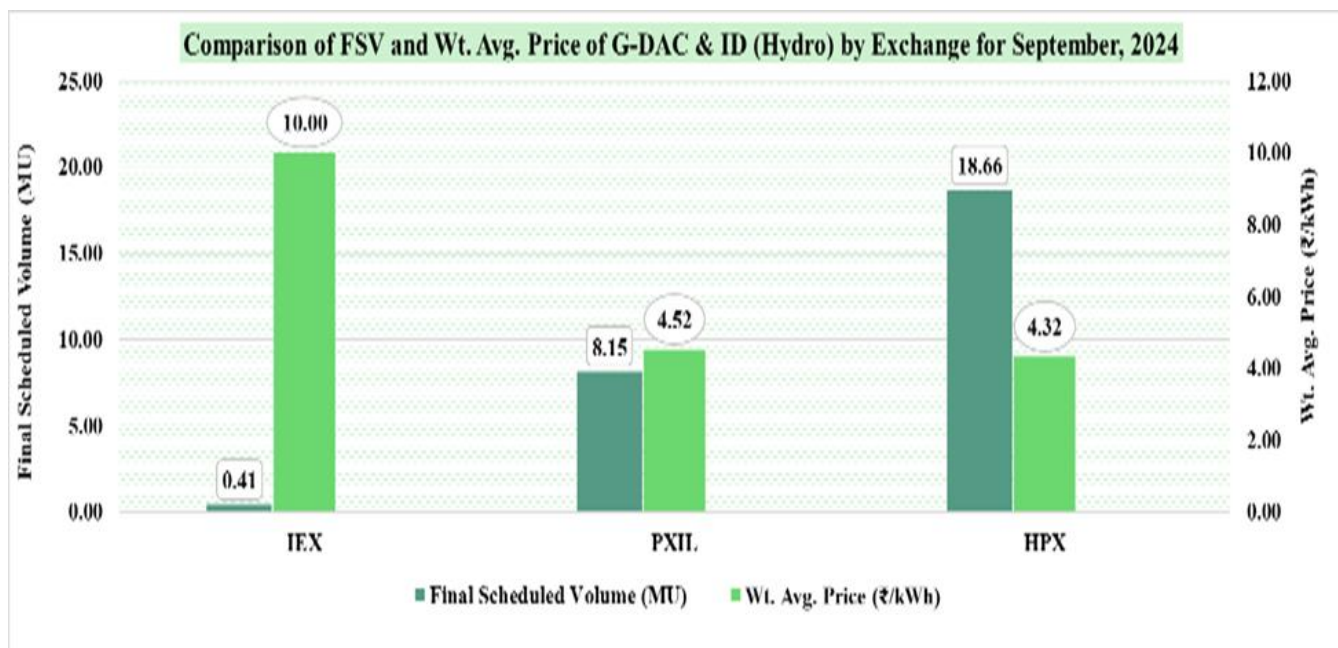


Figure-11

8. **Bilateral Transactions:**

The total volume of electricity transacted through **bilateral transactions** in September, 2024 was **7,722.76 MU**. The total buy volume of electricity transacted in bilateral market through direct and trader transactions in September, 2024 were **2,838.23MU** and **4,884.53 MU** respectively. The details of bilateral transactions of Electricity during September, 2024 are shown in table below:

September, 2024	Direct	Traders	Total Bilateral Transaction (MU)
Total	2,838.23	4,884.53	7,722.76
Minimum	0.07	0.15	-
Maximum	828.53	928.80	-

Table -3A

The region-wise maximum/ minimum volume of electricity transacted bilaterally during September, 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	764.56	1351.6	37.89	534.06	2002.14	2490.13	33.65	398.67	-	110.07
Minimum	0.07	9.75	9.02	0.15	3.36	0.73	8.40	1.24	-	2.07
Maximum	582.81	888.24	17.14	244.48	828.53	928.80	14.57	292.05	-	108.00

Table-3B

8.1. The top 5 buyers on bilateral transaction through direct transactions in September, 2024 were **Uttar Pradesh, Bihar, Haryana, Punjab** and **Delhi**, which constituted **89.18 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in September, 2024 were **Haryana, West Bengal, Punjab, Delhi** and **Bihar**, which constituted **71.06 %** of the market volume. [Annexure III]

8.2. The top 5 sellers on bilateral transaction through direct transactions in September, 2024 were **Rajasthan, Madhya Pradesh, Karnataka, IGSTPS JHAJJAR** and **Tamil Nadu**, which constituted **57.29%** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in September, 2024 were **Adani Power Limited-Raipur TPP, IL&FS TAMIL NADU POWER COMPANY LIMITED, Gujarat, Kerala** and **Himachal Pradesh**, which constituted **35.24 %** of the market volume. [Annexure III]

8.3. Deviation Volume -The volume of Deviation observed in September, 2024 in import and export were **4,649.13 MU** and **4,355.97 MU** respectively. The total volume of Deviation observed in September, 2024 can be taken as **4,502.55 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 September, 2024 is shown in **Figure 12:**

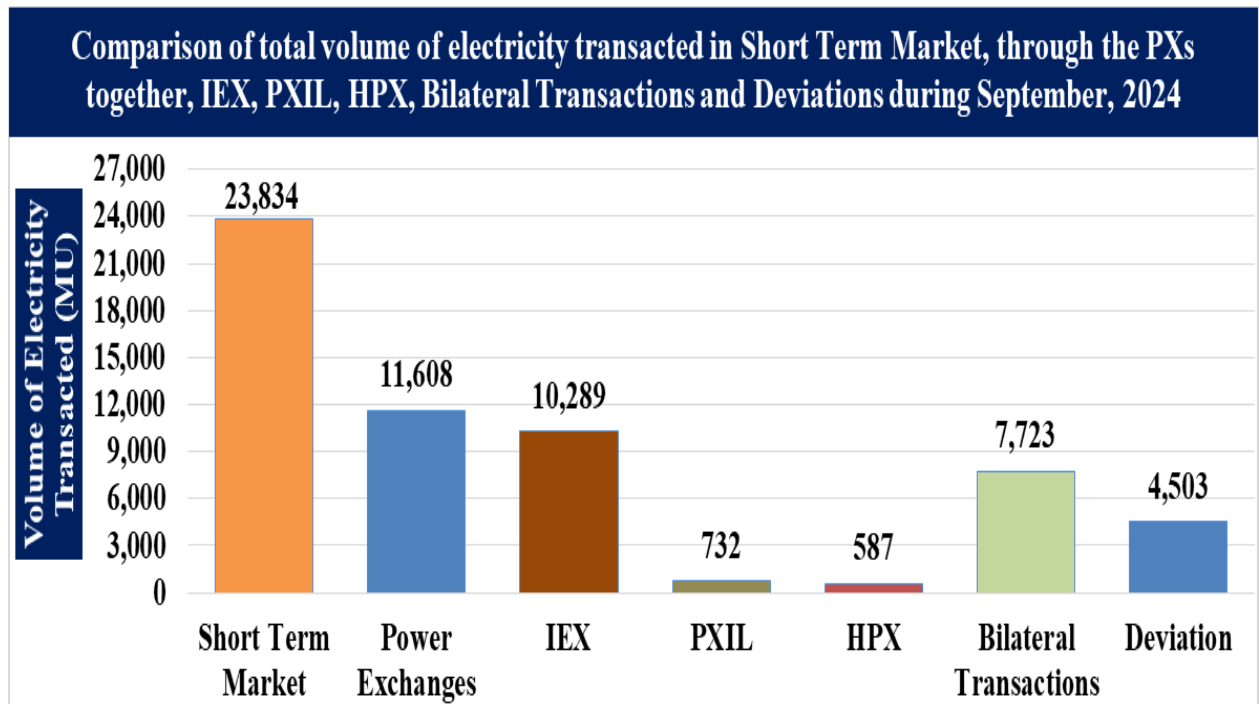
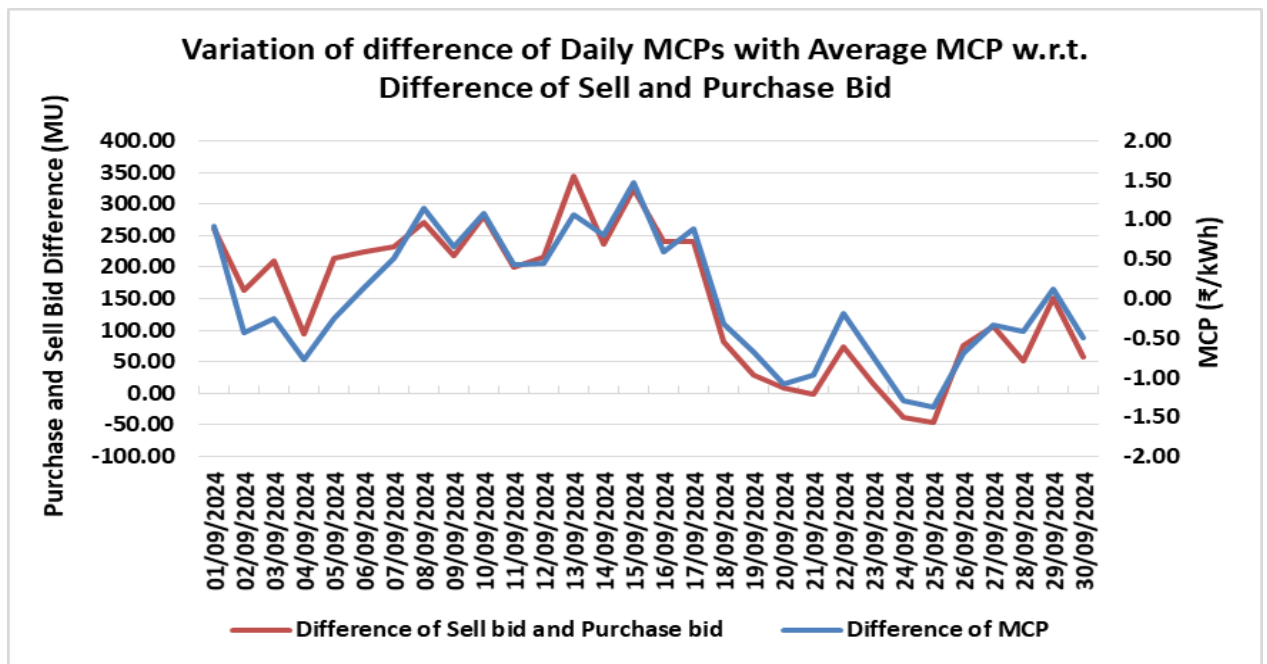


Figure -12

9. Analysis of movement of prices observed under DAM during September, 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 September, 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 **3.26** in September, 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 – 13**:

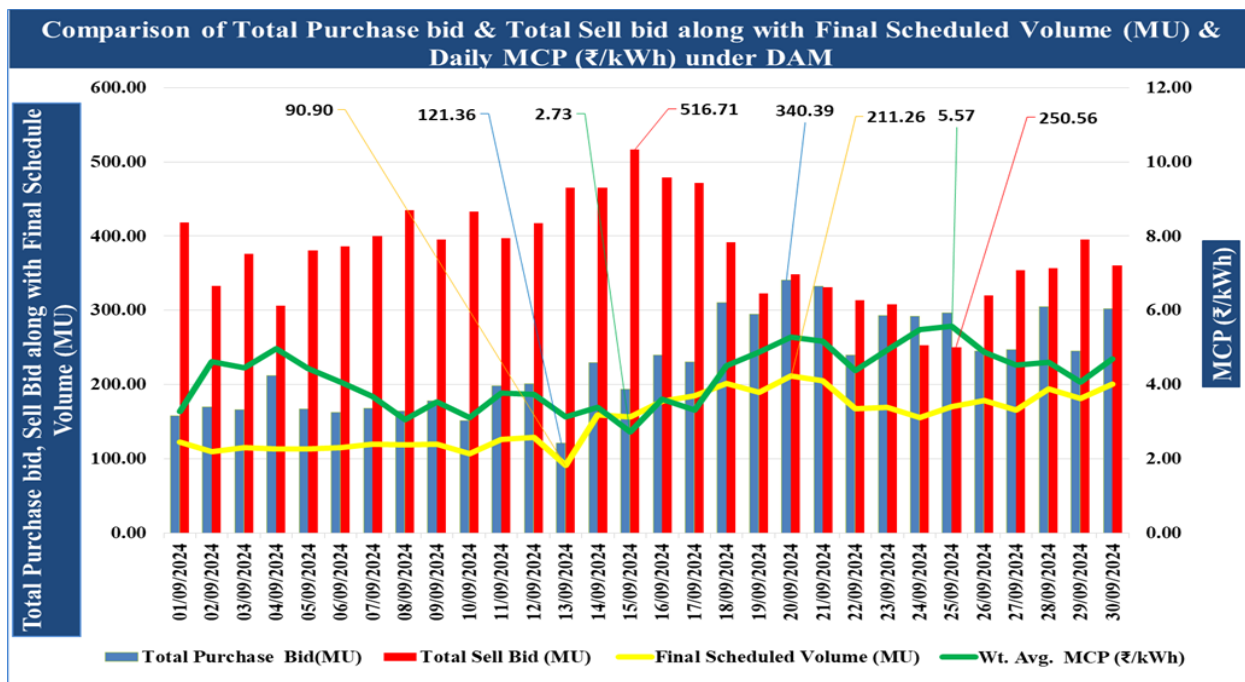


Figure – 13

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 September, 2024, it is observed that on first Monday (2nd September, 2024), FSV showed decreasing trend in comparison to first Sunday (1st September, 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-14**. The same are also tabulated in **Annexure-I**.

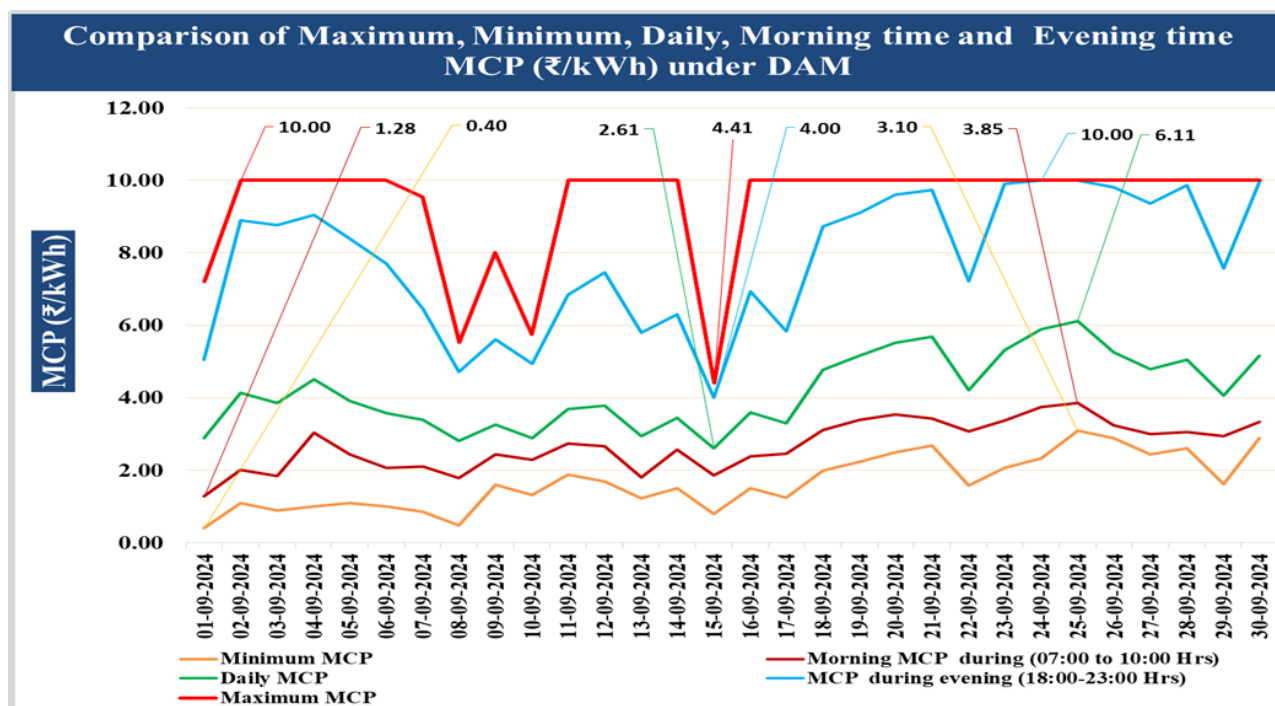


Figure-14

9.7. The Market Clearing Price duration curves for time block wise MCP for the month of September, 2024 is shown in **Figure-15**, whereas the day wise MCP duration curve for the period 1st April, 2024 to 30th September, 2024 is shown in **Figure-16**.

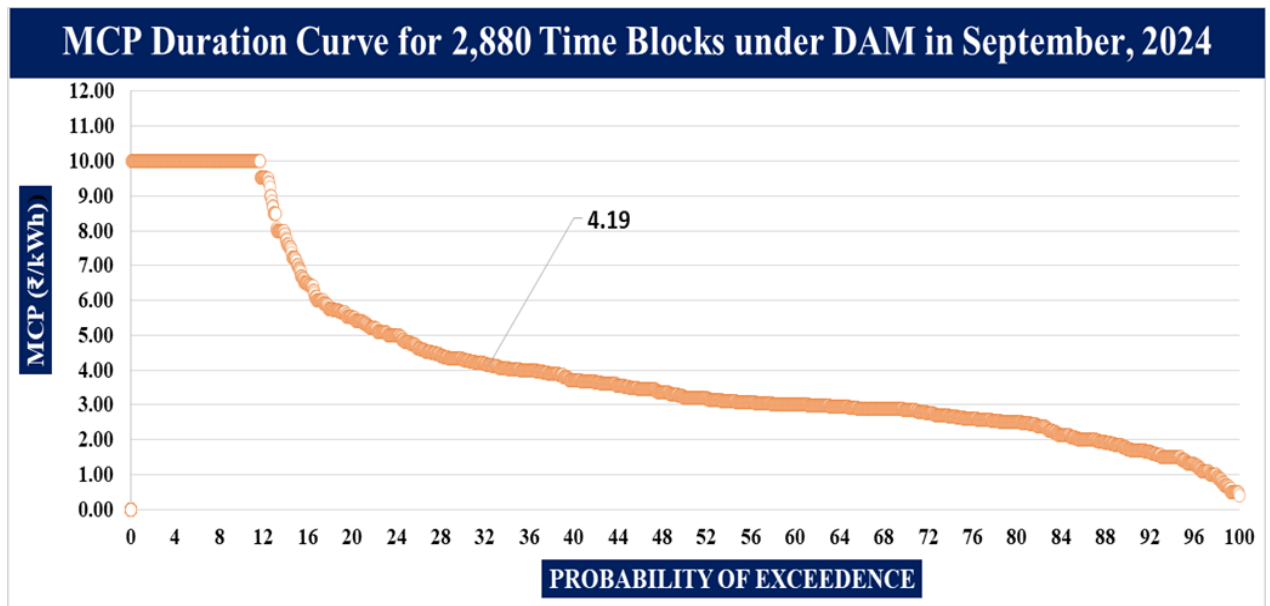


Figure – 15

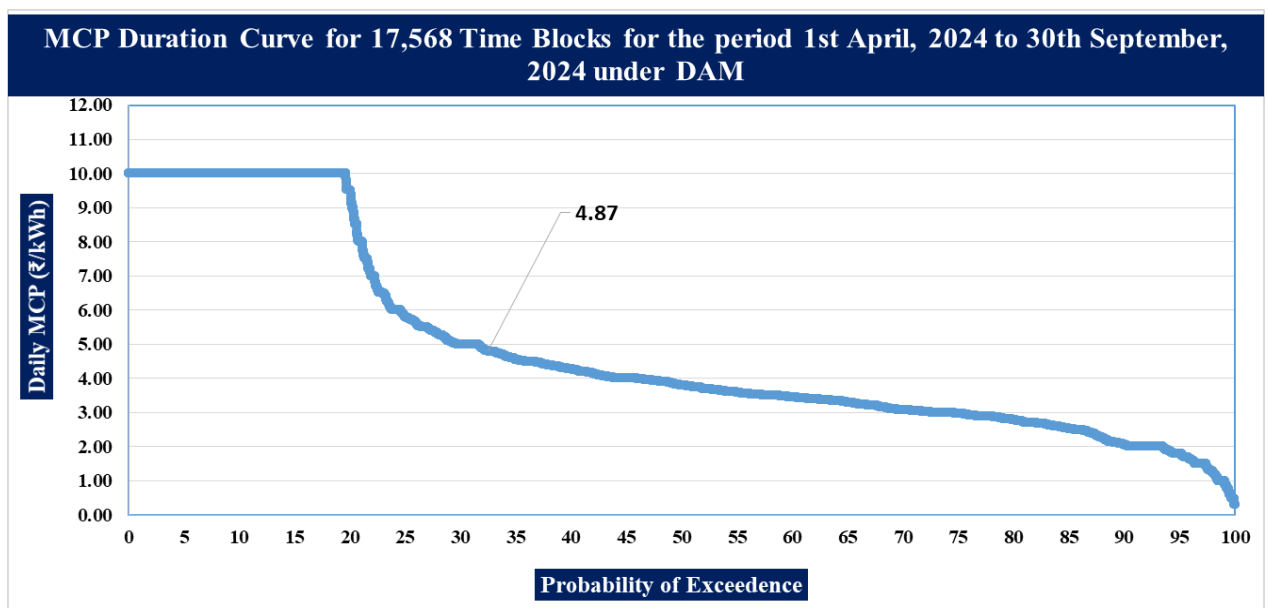


Figure – 16

9.8. It can be seen in figure 15 above that in the MCP duration curve of September, 2024, for 31.00 % of the time MCP was above Wt. Avg. MCP of the month (i.e. ₹ 4.19/kWh) and almost 69.00 % 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 September, 2024 (figure-16), that for 32.00 % of the time the MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 4.87/kWh) and for 68.00 % 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 September, 2024, the maximum FSV occurred mostly during **the time period 06-08 Hrs** (on 17 no. of days). Whereas, the maximum MCP occurred mostly during **the time period 19-20 Hrs** (on 19 no. of days). Similarly, the minimum FSV occurred mostly during **the time period 19-22 Hrs** (on 10 no. of days). Whereas, the minimum MCP occurred mostly during **the time period 13-14 Hrs** (on 19 no. of days). **[Annexure VI]**
- 9.11.** In September, 2024, there was congestion of **17.72 MU** in IEX, no congestion in HPX and no transaction of electricity took place in PXIL. Further, in August, 2024, there was congestion of **19.34 MU** in IEX and no transaction of electricity took place in PXIL & HPX. Further, in September, 2023, there was no congestion in IEX, PXIL & HPX.
- 9.12.** In September, 2024, there was **no** real time curtailment in IEX & HPX and no transaction of electricity took place in PXIL. Further, in August, 2024, there was **no** real time curtailment in IEX and no transaction of electricity took place in PXIL & HPX. Further in September, 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 September, 2024 were **Uttar Pradesh, NVVN (SNA) - NEA, Odisha, Haryana, JITPL, Jindal Power Ltd. Stg-II, Madhya Pradesh, West Bengal, ADANI Power Limited-Raipur TPP and Delhi**, which constituted **45.99 %** of the market volume. **[Annexure VII]**
- 9.14.** The **top 10 buyers** on the power exchanges under Day Ahead Market (**DAM**) in September, 2024 were **Gujarat, Telangana, Rajasthan, Daman & Diu-Dadra & Nagar Haveli, West Bengal, Maharashtra, Karnataka, Uttar Pradesh, Andhra Pradesh and Tamil Nadu**, which constituted **84.37 %** of the market volume. **[Annexure VII]**
- 9.15.** The total volume of electricity purchased by Discoms/Licensees under DAM in September, 2024 was **4,396.72 MU**, which constituted **96.37 %** 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 September, 2024 was **1,909.90 MU**, which constituted **41.86 %** of total volume of electricity sold on the power exchanges.

10. Analysis of movement of prices observed under Real Time Market (RTM) transactions in September, 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 **5.98** in September, 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-17** below:

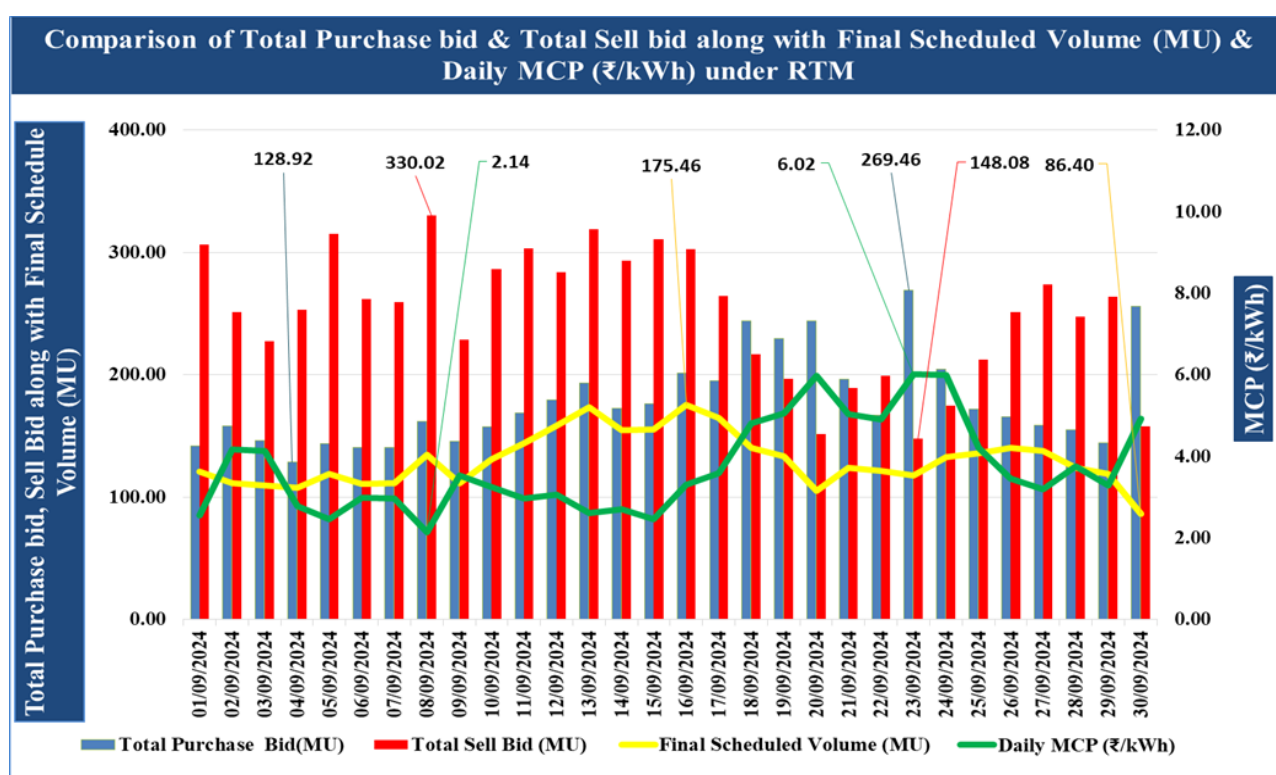


Figure-17

- 10.4. A comparison of maximum, minimum, daily, evening time MCP is shown in **Figure-18**. The same are also tabulated in **Annexure-VIII**.

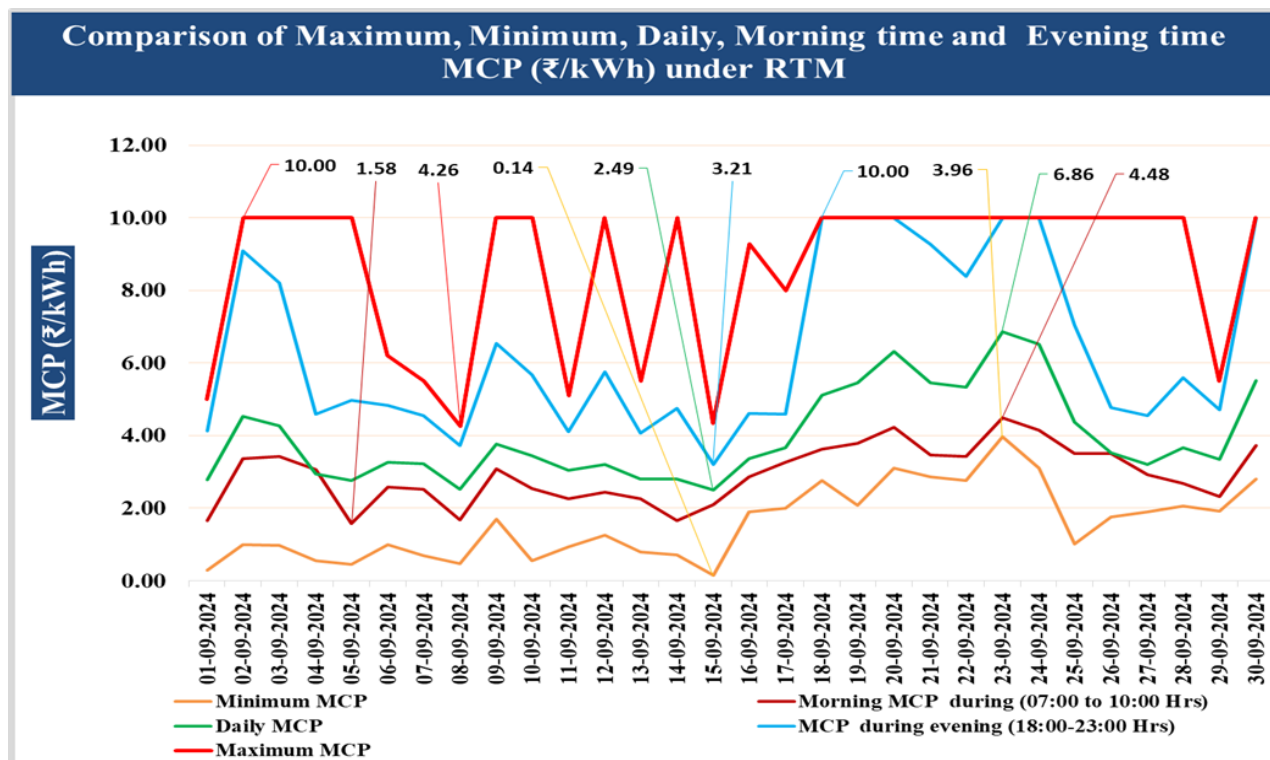


Figure-18

10.5. The Market Clearing Price duration curves for time block wise MCP for the month of September, 2024 is shown in **Figure-19**, whereas the day wise MCP duration curve for the period 1st April, 2024 to 30th September, 2024 is shown in **Figure-20**.

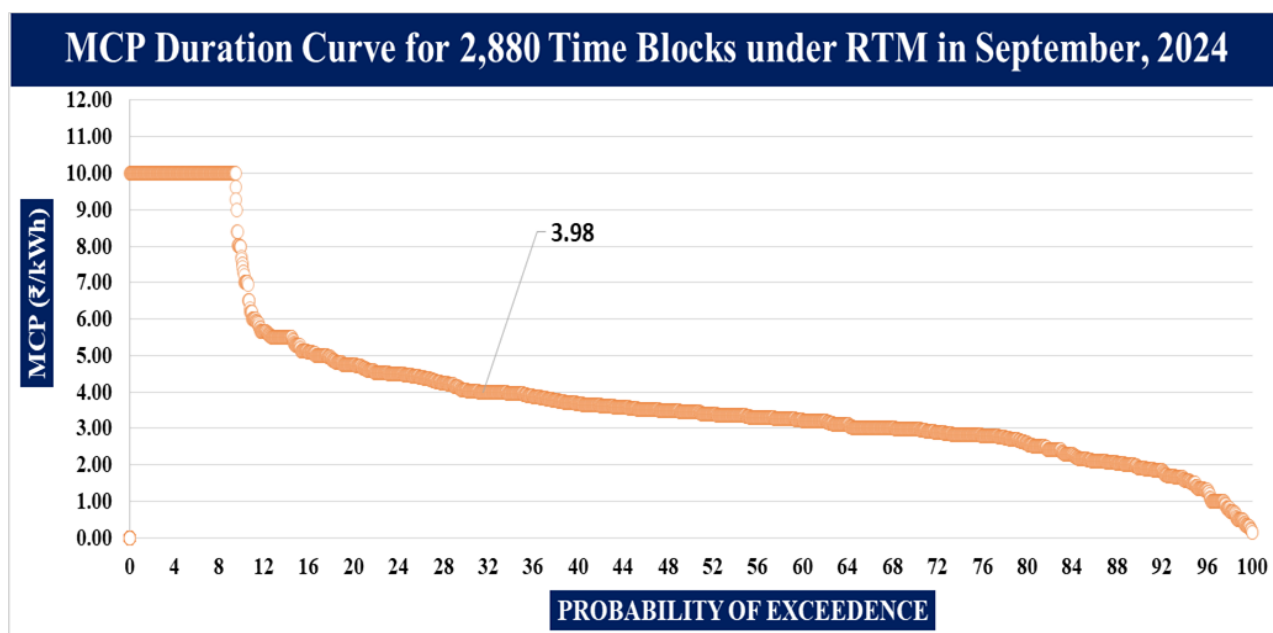


Figure-19

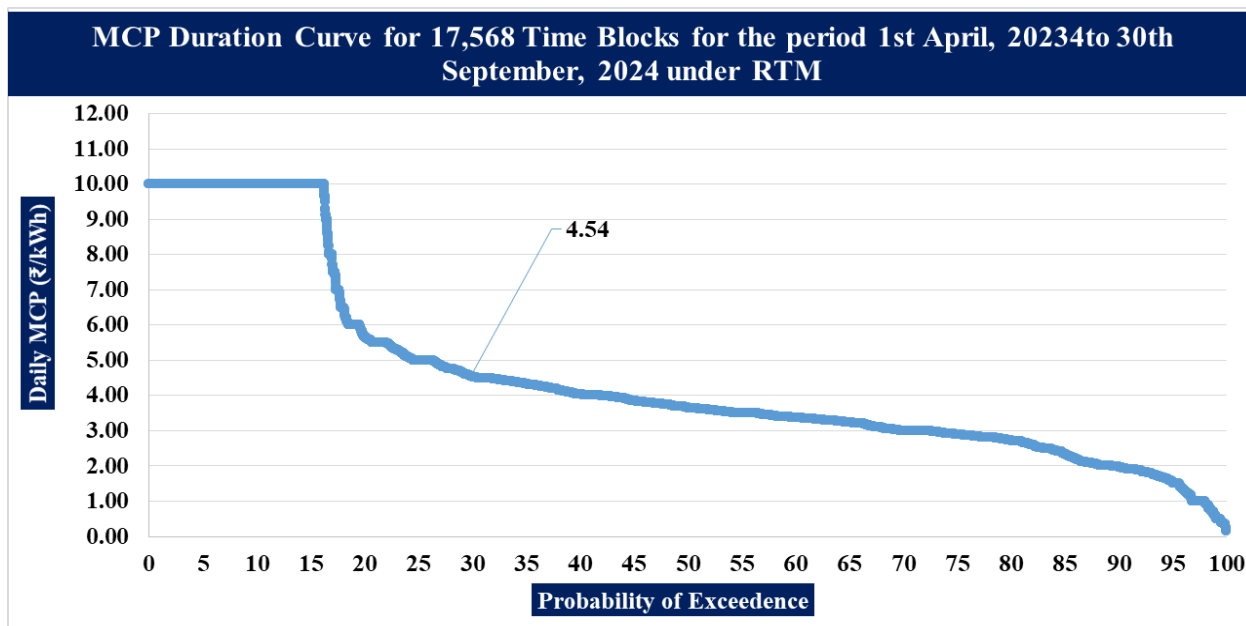


Figure-20

- 10.6.** It can be seen in figure 19 above that in the MCP duration curve of September, 2024, for 30.00 % of the time the MCP was above the Wt. Avg. MCP of the month (i.e. ₹ 3.98/kWh) and for 70.00 % 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 September, 2024 (figure 20) that, for 28.00 % of the time the Daily Wt. Avg. MCP was above the Wt. Avg. MCP for the period (i.e. ₹ 4.54/kWh) and for 72.00 % of the time the Daily Wt. Avg. MCP was below the Wt. Avg. MCP for the period.
- 10.7.** In September, 2024, the maximum FSV occurred mostly during the **time period 14-16 Hrs** (on 12 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 19-18 Hrs** (on 15 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 19-18 Hrs** (on 11 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 13-14 Hrs** (on 21 no. of days).[Annexure X]
- 10.8.** There was real time curtailment of **0.12 MU** in PXIL, **no** real time curtailment in IEX and no transaction of electricity took place in HPX under Real Time Market (RTM) during September, 2024. Further, in August, 2024 **no** real time curtailment in IEX, PXIL & HPX. Similarly, in September, 2023, there was **no** real time curtailment in IEX, PXIL & HPX.
- 10.9.** In September, 2024, there was congestion of **7.03 MU** in IEX & **0.36 MU** in HPX and no congestion in PXIL. Further, in August, 2024, there was congestion of **7.03 MU** in IEX & **0.36 MU** in HPX and no congestion in PXIL. Similarly, in September, 2023, there was congestion **2.26 MU** in IEX and no congestion in PXIL & HPX.
- 10.10.** The **top 10 sellers** on the power exchanges under Real Time Market (RTM) in September, 2024 were **Madhya Pradesh, Bihar, Haryana, Tamil Nadu, Uttar Pradesh, Odisha, West Bengal, Andhra Pradesh, Himachal Pradesh and J&K**, which constituted **58.47 %** of the market volume. [Annexure XI]

10.11. The **top 10 buyers** on the power exchanges under Real Time Market (**RTM**) in September, 2024 were **Punjab, Telangana, Rajasthan, West Bengal, Kerala, Uttar Pradesh, Maharashtra, Karnataka, Gujarat and Assam**, which constituted **78.08%** of the market volume. [**Annexure XI**]

10.12. The total volume of electricity purchased by Discoms/Licensees under RTM in September, 2024 was **3,827.81 MU**, which constituted **97.36 %** 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 September, 2024 was **2,986.61 MU**, which constituted **75.96 %** 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
Total April, 2024 – March, 2025		27,627.95	3.85	0.18	4.55	10.00	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
Total April, 2024 – March, 2025		5,059.22	4,145.62	2,962.60	12,167.44

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

(i) Top five Buyers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
Uttar Pradesh	828.53	29.19%	Haryana	928.80	19.02%
Bihar	582.81	20.53%	West Bengal	888.24	18.18%
Haryana	533.54	18.80%	Punjab	744.34	15.24%
Punjab	416.23	14.67%	Delhi	513.74	10.52%
Delhi	170.07	5.99%	Bihar	396.00	8.11%
Total Volume	2,531.18	89.18%	Total Volume	3,471.11	71.06%
Total Volume in Bilateral	2,838.23		Total Volume in Bilateral	4,884.53	

(ii) Top five Sellers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percent
Rajasthan	549.09	21.91%	Adani Power Limited-Raipur TPP	420.87	8.69%
Madhya Pradesh	274.07	10.94%	IL&FS TAMIL NADU POWER COMPANY	391.31	8.08%
Karnataka	272.75	10.89%	Gujarat	309.58	6.39%
IGSTPS JHAJJAR	171.60	6.85%	Kerala	292.36	6.04%
Tamil Nadu	167.88	6.70%	Himachal Pradesh	292.22	6.03%
Total Volume	1,435.39	57.29%	Total Volume	1,706.34	35.24%
Total Volume in Bilateral	2,838.23		Total Volume in Bilateral	4,884.53	

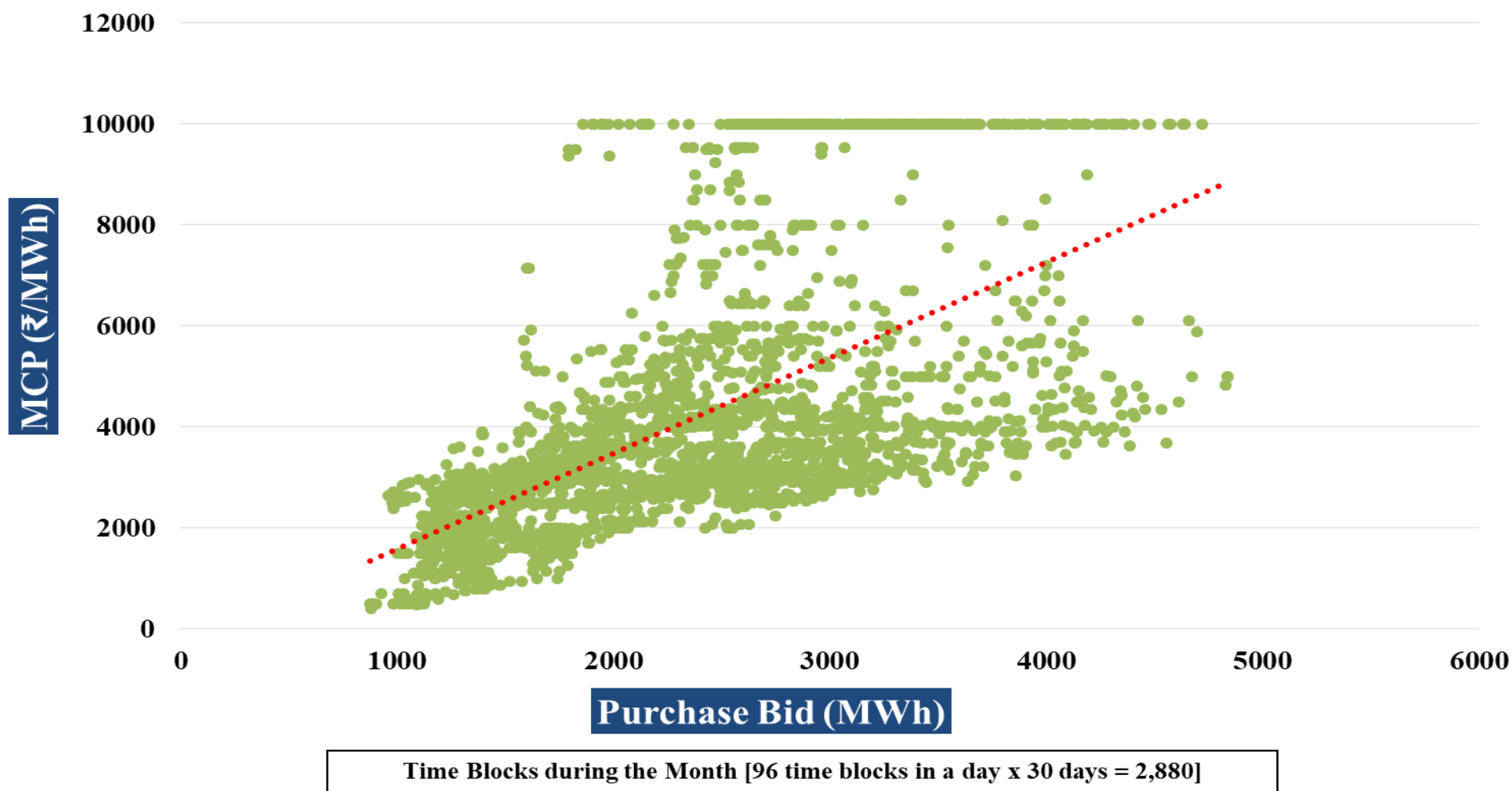
Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under DAM

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)
01-09-2024	1.28	1.03	5.05	3.86	7.20	0.40	2.89	122.72
02-09-2024	2.00	2.20	8.89	3.72	10.00	1.10	4.13	109.00
03-09-2024	1.84	1.91	8.77	3.27	10.00	0.90	3.85	115.11
04-09-2024	3.04	2.40	9.05	4.11	10.00	1.00	4.50	112.99
05-09-2024	2.44	2.11	8.38	3.22	10.00	1.10	3.91	113.36
06-09-2024	2.06	2.12	7.70	2.79	10.00	1.00	3.58	114.57
07-09-2024	2.11	1.76	6.44	3.47	9.53	0.86	3.40	119.51
08-09-2024	1.79	1.26	4.72	3.41	5.53	0.47	2.82	118.27
09-09-2024	2.45	2.09	5.61	3.19	8.00	1.60	3.27	119.57
10-09-2024	2.30	1.78	4.93	2.80	5.75	1.33	2.89	106.88
11-09-2024	2.73	2.42	6.85	3.26	10.00	1.89	3.69	126.32
12-09-2024	2.66	2.15	7.45	3.42	10.00	1.70	3.79	128.67
13-09-2024	1.81	1.67	5.80	2.78	10.00	1.22	2.95	90.90
14-09-2024	2.57	2.07	6.30	3.25	10.00	1.50	3.45	159.29
15-09-2024	1.86	1.26	4.00	3.21	4.41	0.79	2.61	156.00
16-09-2024	2.38	2.04	6.94	3.43	10.00	1.50	3.60	177.06
17-09-2024	2.46	1.79	5.83	3.31	10.00	1.25	3.30	184.43
18-09-2024	3.11	2.54	8.72	5.07	10.00	2.00	4.78	201.01
19-09-2024	3.39	3.00	9.10	5.30	10.00	2.23	5.16	189.73
20-09-2024	3.53	3.07	9.61	5.82	10.00	2.50	5.51	211.26
21-09-2024	3.43	3.28	9.74	5.79	10.00	2.68	5.68	205.13
22-09-2024	3.07	2.49	7.22	4.17	10.00	1.58	4.20	167.01
23-09-2024	3.38	3.19	9.90	4.97	10.00	2.06	5.30	169.50
24-09-2024	3.75	3.49	10.00	5.69	10.00	2.34	5.89	155.01
25-09-2024	3.85	3.73	10.00	6.02	10.00	3.10	6.11	169.81
26-09-2024	3.23	3.28	9.80	4.93	10.00	2.89	5.26	178.69
27-09-2024	3.01	2.81	9.37	4.46	10.00	2.45	4.79	165.16
28-09-2024	3.05	2.99	9.86	4.68	10.00	2.60	5.05	193.62
29-09-2024	2.93	2.36	7.58	3.79	10.00	1.61	4.07	180.78
30-09-2024	3.33	3.40	9.95	4.30	10.00	2.89	5.17	200.75
Maximum	3.85	3.73	10.00	6.02	10.00	3.10	6.11	211.26
Minimum	1.28	1.03	4.00	2.78	4.41	0.40	2.61	90.90
Average	2.70	2.39	7.78	4.05	9.35	1.68	4.19	152.07

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 September, 2024 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
01-09-2024	19:45 - 20:00	1.91	19:45 - 20:00	7.20	09:00 - 09:15	0.75	08:45 - 09:00	0.40
02-09-2024	18:15 - 18:30	1.62	19:00 - 19:15	10.00	04:30 - 04:45	0.75	08:30 - 08:45	1.10
03-09-2024	22:15 - 22:30	1.87	19:15 - 19:30	10.00	04:30 - 04:45	0.81	13:15 - 13:30	0.90
04-09-2024	23:30 - 23:45	1.71	19:00 - 19:15	10.00	05:00 - 05:15	0.80	13:00 - 13:15	1.00
05-09-2024	19:00 - 19:15	1.92	19:00 - 19:15	10.00	04:45 - 05:00	0.85	13:00 - 13:15	1.10
06-09-2024	18:30 - 18:45	1.96	19:45 - 20:00	10.00	09:15 - 09:30	0.82	13:00 - 13:15	1.00
07-09-2024	19:45 - 20:00	1.70	19:45 - 20:00	9.53	09:15 - 09:30	0.80	09:15 - 09:30	0.86
08-09-2024	22:15 - 22:30	1.65	21:15 - 21:30	5.53	08:30 - 08:45	0.93	13:00 - 13:15	0.47
09-09-2024	20:45 - 21:00	1.84	19:45 - 20:00	8.00	04:15 - 04:30	0.93	13:00 - 13:15	1.60
10-09-2024	18:45 - 19:00	1.91	19:15 - 19:30	5.75	01:30 - 01:45	0.84	13:15 - 13:30	1.33
11-09-2024	18:30 - 18:45	1.92	19:00 - 19:15	10.00	05:00 - 05:15	0.97	11:00 - 11:15	1.89
12-09-2024	17:00 - 17:15	1.89	19:00 - 19:15	10.00	14:15 - 14:30	1.09	13:15 - 13:30	1.70
13-09-2024	18:45 - 19:00	1.43	19:15 - 19:30	10.00	08:30 - 08:45	0.74	13:00 - 13:15	1.22
14-09-2024	07:00 - 07:15	2.26	19:00 - 19:15	10.00	11:15 - 11:30	1.24	12:30 - 12:45	1.50
15-09-2024	06:30 - 06:45	2.28	19:00 - 19:15	4.41	14:00 - 14:15	1.14	12:15 - 12:30	0.79
16-09-2024	06:45 - 07:00	2.75	19:00 - 19:15	10.00	14:00 - 14:15	1.27	13:15 - 13:30	1.50
17-09-2024	06:45 - 07:00	3.22	19:00 - 19:15	10.00	14:30 - 14:45	1.42	13:30 - 13:45	1.25
18-09-2024	07:00 - 07:15	3.17	19:00 - 19:15	10.00	20:15 - 20:30	1.46	13:15 - 13:30	2.00
19-09-2024	06:45 - 07:00	2.99	18:45 - 19:00	10.00	21:15 - 21:30	1.39	13:15 - 13:30	2.23
20-09-2024	07:15 - 07:30	3.23	18:30 - 18:45	10.00	21:30 - 21:45	1.46	11:45 - 12:00	2.50
21-09-2024	07:00 - 07:15	3.23	00:00 - 00:15	10.00	21:00 - 21:15	1.18	10:00 - 10:15	2.68
22-09-2024	06:45 - 07:00	2.52	19:00 - 19:15	10.00	12:00 - 12:15	1.23	11:45 - 12:00	1.58
23-09-2024	07:15 - 07:30	2.74	18:15 - 18:30	10.00	21:15 - 21:30	1.12	13:00 - 13:15	2.06
24-09-2024	07:00 - 07:15	2.70	00:00 - 00:15	10.00	23:45 - 24:00	0.91	13:00 - 13:15	2.34
25-09-2024	07:15 - 07:30	3.07	00:00 - 00:15	10.00	19:15 - 19:30	0.93	11:15 - 11:30	3.10
26-09-2024	16:45 - 17:00	3.02	18:15 - 18:30	10.00	19:15 - 19:30	1.26	13:00 - 13:15	2.89
27-09-2024	07:00 - 07:15	2.64	18:45 - 19:00	10.00	19:15 - 19:30	1.17	13:00 - 13:15	2.45
28-09-2024	07:15 - 07:30	3.27	18:15 - 18:30	10.00	20:30 - 20:45	1.08	13:15 - 13:30	2.60
29-09-2024	07:00 - 07:15	2.82	19:00 - 19:15	10.00	12:30 - 12:45	1.40	12:30 - 12:45	1.61
30-09-2024	06:45 - 07:00	3.45	18:15 - 18:30	10.00	19:00 - 19:15	0.98	13:00 - 13:15	2.89

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

Sellers and Buyers under Day Ahead Market (DAM) in September, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Uttar Pradesh	409.81	8.98%	Gujarat	894.55	19.61%
2	NVVN (SNA) - NEA	264.80	5.80%	Telangana	798.06	17.49%
3	Orissa	241.25	5.29%	Rajasthan	483.72	10.60%
4	Haryana	212.08	4.65%	Daman & Diu - Dadra &	317.20	6.95%
5	JITPL	201.94	4.43%	West Bengal	258.63	5.67%
6	Jindal Power Ltd. Stg-	195.69	4.29%	Maharashtra	244.38	5.36%
7	Madhya Pradesh	193.57	4.24%	Karnataka	244.02	5.35%
8	West Bengal	130.21	2.85%	Uttar Pradesh	231.44	5.07%
9	Adani Power Limited-	126.76	2.78%	Andhra Pradesh	199.07	4.36%
10	Delhi	122.24	2.68%	Tamilnadu	178.26	3.91%
11	Adani Power Limited	105.59	2.31%	BHARAT ALUMINIUM	114.19	2.50%
12	MAHAN ENERGEN	104.09	2.28%	Chhattisgarh	105.60	2.31%
13	Jindal Steel	96.36	2.11%	Kerala	100.10	2.19%
14	Karnataka	95.07	2.08%	Haryana	70.77	1.55%
15	Jindal Power	94.73	2.08%	Uttarakhand	58.81	1.29%
16	DB Power	87.46	1.92%	Delhi	48.33	1.06%
17	Karcham Wangtoo	81.04	1.78%	Punjab	36.86	0.81%
18	Assam	67.99	1.49%	Orissa	35.53	0.78%
19	ADANI	61.76	1.35%	J&K	32.61	0.71%
20	MAHAN ENERGEN	57.71	1.26%	Madhya Pradesh	27.44	0.60%
21	AD Hydro	56.87	1.25%	Railways	22.15	0.49%
22	Telangana	53.88	1.18%	ArcelorMittal Nippon steel	19.71	0.43%
23	Andhra Pradesh	48.50	1.06%	MB Power	9.42	0.21%
24	Shree Cement	47.95	1.05%	Bihar	8.24	0.18%
25	Sembcorp Energy	44.82	0.98%	Chandigarh	5.36	0.12%
26	Adani Green Energy	44.25	0.97%	DVC	3.51	0.08%
27	ACBIL	43.70	0.96%	Sikkim	3.33	0.07%
28	RENEW SURYA	40.69	0.89%	Goa WR	3.27	0.07%
29	Jaypee Nigrie	37.87	0.83%	Jharkhand	3.17	0.07%
30	Bihar	35.82	0.79%	Himachal Pradesh	2.63	0.06%
31	NEA-NR	33.65	0.74%	Goa SR	0.97	0.02%
32	Gujarat	33.01	0.72%	Meghalaya	0.82	0.02%
33	Chhattisgarh	31.68	0.69%	Pondicherry	0.05	0.001%
34	Renew Surya Ravi	31.54	0.69%			
35	Basochhu	31.25	0.68%			
36	Nabinagar Power	31.12	0.68%			
37	Sainj HEP	30.30	0.66%			
38	Himachal Pradesh	28.74	0.63%			
39	Chandigarh	27.57	0.60%			
40	Maharashtra	27.31	0.60%			
41	Adept Renewable	26.82	0.59%			
42	Tamilnadu	25.75	0.56%			
43	Punjab	24.78	0.54%			
44	Simhapuri Energy	23.98	0.53%			
45	Amp Energy Green	23.35	0.51%			
46	Farakka	22.67	0.50%			
47	NTPC North	22.41	0.49%			
48	Government of	22.22	0.49%			
49	Government of	21.57	0.47%			
50	KBUNL(MTPS-II)	21.55	0.47%			
51	DVC	21.00	0.46%			
52	Mizoram	20.80	0.46%			
53	RENEW SURYA	20.79	0.46%			

54	IND BARATH	20.23	0.44%			
55	Government of	18.41	0.40%			
56	ADANI SOLAR	17.95	0.39%			
57	ADANI SOLAR	17.78	0.39%			
58	Nikachhu Hydropower	17.45	0.38%			
59	Talcher Stg-2	17.20	0.38%			
60	DGEN Mega Power	16.48	0.36%			
61	ADANI WIND	16.17	0.35%			
62	Uttarakhand	16.01	0.35%			
63	Singoli Bhagwati	15.76	0.35%			
64	ADANI	15.19	0.33%			
65	Government of	14.61	0.32%			
66	Palatana	14.48	0.32%			
67	Rajasthan	14.18	0.31%			
68	Government of	13.45	0.29%			
69	Maruti Clean Coal	13.44	0.29%			
70	Government of	12.28	0.27%			
71	ADANI GREEN	12.00	0.26%			
72	ADANI	10.33	0.23%			
73	Barh Stg-2	10.31	0.23%			
74	IGSTPS JHAJJAR	10.20	0.22%			
75	Adani Green Energy	10.16	0.22%			
76	Government of	10.01	0.22%			
77	SKS Power	9.89	0.22%			
78	Sikkim	8.68	0.19%			
79	Jhabua Power	8.35	0.18%			
80	Sembcorp Gayatri	7.99	0.18%			
81	Adani Green Energy	7.94	0.17%			
82	GMR Warora	7.55	0.17%			
83	Talcher	6.65	0.15%			
84	Adani Green Energy	6.29	0.14%			
85	Unchahar-IV	6.23	0.14%			
86	J&K	6.11	0.13%			
87	Onevolt Energy	5.87	0.13%			
88	Government of	5.72	0.13%			
89	Bongaigaon	5.67	0.12%			
90	Barh STPS Stg - I	5.51	0.12%			
91	Ostro Kannada Power	5.03	0.11%			
92	NTPP BRBCL	4.97	0.11%			
93	Farakka Stg 3	4.76	0.10%			
94	Unchahar-I	4.71	0.10%			
95	Lanco Budhil	4.42	0.10%			
96	IL&FS	4.23	0.09%			
97	Dadri Stg-2	4.18	0.09%			
98	Unchahar-II	4.08	0.09%			
99	Simhadri Stg-2	3.80	0.08%			
100	Dadri TPS	3.58	0.08%			
101	JUNIPER GREEN	3.50	0.08%			
102	Goa WR	3.40	0.07%			
103	RKM Power	3.34	0.07%			
104	WIND FIVE	3.33	0.07%			
105	Tripura	3.32	0.07%			
106	NTPC Lara	3.29	0.07%			
107	VENA ENERGY	3.18	0.07%			
108	Kahalgaoon	2.84	0.06%			
109	Kerala	2.55	0.06%			
110	Sipat Stg-1	2.54	0.06%			
111	Nagaland	2.49	0.05%			
112	Transition Energy	2.41	0.05%			

113	MB Power	2.37	0.05%			
114	Korba	2.35	0.05%			
115	NTPC Telangana	2.15	0.05%			
116	TPSL 200MW	2.10	0.05%			
117	NTPC Gadawara	2.02	0.04%			
118	NTPC Sholapur	1.97	0.04%			
119	Kahalgau-II	1.91	0.04%			
120	Tanda Stg-2	1.84	0.04%			
121	ADANI WIND	1.83	0.04%			
122	GMR Kamalanga	1.71	0.04%			
123	Singrauli	1.58	0.03%			
124	ADANI SOLAR	1.45	0.03%			
125	Ramagundam Floating	1.44	0.03%			
126	Meghalaya	1.30	0.03%			
127	NTPC Kudgi	1.29	0.03%			
128	Korba Stg 3	1.20	0.03%			
129	DHARIWAL STU	1.11	0.02%			
130	RENEW SURYA	1.07	0.02%			
131	Sipat Stg-2	1.04	0.02%			
132	Pondicherry	0.80	0.02%			
133	Rihand-II	0.74	0.02%			
134	BALCO 2	0.67	0.01%			
135	Dhariwal ISTS	0.66	0.01%			
136	Ramagundam Stg-1	0.59	0.01%			
137	Rihand-I	0.56	0.01%			
138	Khargone STPP	0.55	0.01%			
139	Rihand-III	0.51	0.01%			
140	Costal Energen	0.49	0.01%			
141	Ramagundam Stg-3	0.44	0.01%			
142	NTPL	0.42	0.01%			
143	TPSL Banderwala	0.38	0.01%			
144	Simhadri FSP 15 MW	0.35	0.01%			
145	Darlipalli	0.32	0.01%			
146	Unchahar-III	0.27	0.01%			
147	Neyveli New Thermal	0.26	0.01%			
148	NTPC Simhadri 25	0.21	0.005%			
149	ADANI GREEN	0.20	0.004%			
150	Mouda Stg-1	0.20	0.004%			
151	Vindhyachal stg-1	0.19	0.004%			
152	NLC	0.18	0.004%			
153	Mouda Stg-2	0.17	0.004%			
154	Serentica Renewables	0.12	0.003%			
155	NLC TPS-II Stg-2	0.06	0.001%			
156	Grian Energy Private	0.05	0.001%			
157	Nani Virani Wind	0.03	0.001%			
158	Vindhyachal stg-4	0.03	0.001%			
159	NLC TPS-II Expn	0.03	0.001%			
160	Amplus Ages Private	0.02	0.001%			
161	NLC TPS-II	0.02	0.0005%			
162	Vindhyachal stg-2	0.02	0.0005%			
163	Vindhyachal stg-5	0.02	0.0003%			
164	Vindhyachal stg-3	0.01	0.0002%			
Total Volume of top 10		2,098.35	45.99%	Total Volume of top 10	3,849.33	84.37%
Total Volume in PXs		4,562.18		Total Volume in PXs	4,562.18	

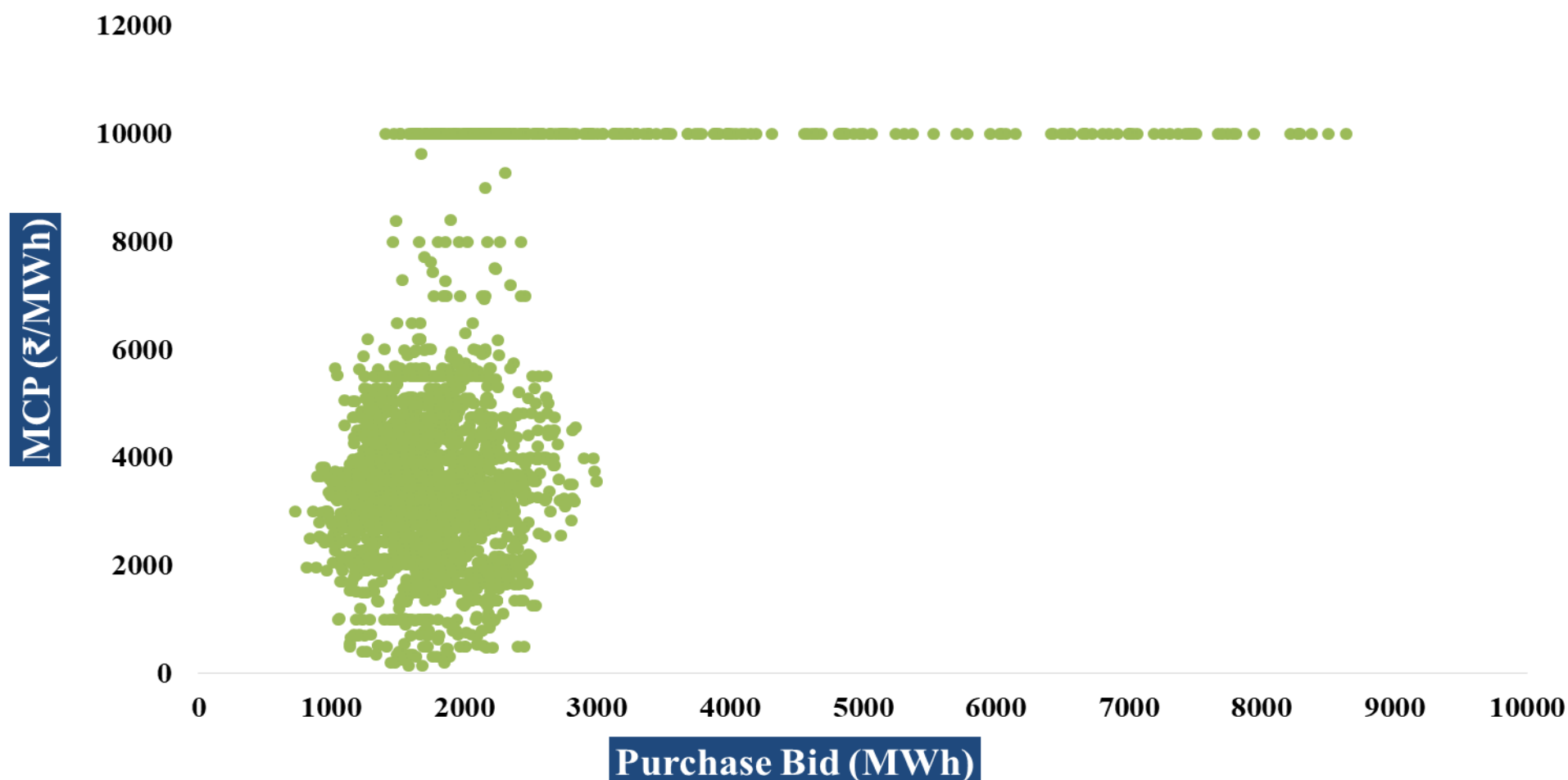
Annexure-VIII**Evening, Day, Night, Morning, Maximum, Minimum, Wt. Avg. MCP (₹/kWh) and Final Scheduled Volume (MU) under RTM**

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)
01-09-2024	1.65	1.54	4.14	3.47	5.00	0.30	2.79	120.60
02-09-2024	3.37	2.72	9.09	3.57	10.00	1.00	4.53	111.63
03-09-2024	3.43	2.52	8.20	3.65	10.00	0.98	4.27	109.53
04-09-2024	3.07	1.74	4.59	2.73	10.00	0.55	2.94	107.86
05-09-2024	1.58	1.54	4.97	2.84	10.00	0.45	2.76	119.08
06-09-2024	2.59	2.17	4.84	3.47	6.20	1.00	3.26	110.89
07-09-2024	2.51	2.02	4.56	3.57	5.50	0.70	3.23	111.22
08-09-2024	1.67	1.20	3.74	3.21	4.26	0.48	2.52	134.87
09-09-2024	3.09	2.83	6.54	3.10	10.00	1.70	3.76	111.45
10-09-2024	2.55	2.05	5.67	3.61	10.00	0.54	3.44	130.91
11-09-2024	2.26	2.24	4.11	3.31	5.10	0.93	3.05	143.94
12-09-2024	2.43	2.24	5.76	2.74	10.00	1.25	3.20	158.71
13-09-2024	2.27	1.82	4.07	2.94	5.50	0.80	2.81	173.42
14-09-2024	1.66	1.84	4.75	2.77	10.00	0.72	2.80	154.83
15-09-2024	2.10	1.00	3.21	3.18	4.34	0.14	2.49	155.67
16-09-2024	2.86	2.58	4.62	3.23	9.28	1.89	3.37	175.46
17-09-2024	3.27	3.00	4.59	3.70	8.00	2.00	3.66	164.62
18-09-2024	3.62	3.66	10.00	3.74	10.00	2.77	5.11	140.19
19-09-2024	3.80	3.69	10.00	4.39	10.00	2.08	5.46	133.61
20-09-2024	4.22	4.28	10.00	5.58	10.00	3.09	6.32	104.98
21-09-2024	3.46	3.73	9.27	5.16	10.00	2.86	5.45	123.96
22-09-2024	3.42	3.71	8.38	5.52	10.00	2.77	5.34	121.64
23-09-2024	4.48	5.73	10.00	6.21	10.00	3.96	6.86	117.58
24-09-2024	4.15	4.65	10.00	6.30	10.00	3.09	6.52	132.69
25-09-2024	3.50	2.57	7.04	4.39	10.00	1.01	4.36	136.18
26-09-2024	3.50	2.44	4.76	3.46	10.00	1.76	3.52	140.37
27-09-2024	2.93	2.37	4.55	3.22	10.00	1.89	3.21	137.56
28-09-2024	2.68	2.84	5.59	3.39	10.00	2.06	3.66	123.74
29-09-2024	2.33	2.50	4.71	3.54	5.50	1.91	3.34	119.22
30-09-2024	3.72	3.67	10.00	4.76	10.00	2.80	5.52	86.40
Maximum	4.48	5.73	10.00	6.30	10.00	3.96	6.86	175.46
Minimum	1.58	1.00	3.21	2.73	4.26	0.14	2.49	86.40
Average	2.94	2.70	6.39	3.83	8.62	1.58	3.98	130.43

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 September, 2024 under RTM



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

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
01-09-2024	13:45 - 14:00	2.08	22:30 - 22:45	5.00	01:45 - 02:00	0.73	12:00 - 12:15	0.30
02-09-2024	14:00 - 14:15	1.93	19:00 - 19:15	10.00	19:15 - 19:30	0.54	13:00 - 13:15	1.00
03-09-2024	11:30 - 11:45	1.84	18:45 - 19:00	10.00	01:15 - 01:30	0.76	13:00 - 13:15	0.98
04-09-2024	16:15 - 16:30	1.71	19:15 - 19:30	10.00	00:15 - 00:30	0.50	13:30 - 13:45	0.55
05-09-2024	12:15 - 12:30	1.93	19:15 - 19:30	10.00	19:15 - 19:30	0.69	13:15 - 13:30	0.45
06-09-2024	14:30 - 14:45	2.05	19:30 - 19:45	6.20	22:00 - 22:15	0.63	13:00 - 13:15	1.00
07-09-2024	13:45 - 14:00	1.77	19:15 - 19:30	5.50	05:45 - 06:00	0.81	13:00 - 13:15	0.70
08-09-2024	11:15 - 11:30	2.42	22:15 - 22:30	4.26	00:45 - 01:00	0.71	10:45 - 11:00	0.48
09-09-2024	12:30 - 12:45	1.81	19:00 - 19:15	10.00	19:15 - 19:30	0.68	11:00 - 11:15	1.70
10-09-2024	15:00 - 15:15	2.16	19:30 - 19:45	10.00	05:15 - 05:30	0.75	10:00 - 10:15	0.54
11-09-2024	14:30 - 14:45	2.42	19:15 - 19:30	5.10	07:30 - 07:45	0.82	11:00 - 11:15	0.93
12-09-2024	12:00 - 12:15	2.25	19:00 - 19:15	10.00	19:30 - 19:45	1.20	13:00 - 13:15	1.25
13-09-2024	16:15 - 16:30	2.49	19:15 - 19:30	5.50	19:30 - 19:45	0.93	13:00 - 13:15	0.80
14-09-2024	13:45 - 14:00	2.43	19:15 - 19:30	10.00	08:15 - 08:30	1.05	08:30 - 08:45	0.72
15-09-2024	16:30 - 16:45	2.38	06:15 - 06:30	4.34	05:00 - 05:15	1.06	13:30 - 13:45	0.14
16-09-2024	15:30 - 15:45	2.61	19:15 - 19:30	9.28	03:15 - 03:30	1.25	13:00 - 13:15	1.89
17-09-2024	15:15 - 15:30	2.58	19:15 - 19:30	8.00	05:45 - 06:00	1.16	13:00 - 13:15	2.00
18-09-2024	14:45 - 15:00	2.24	18:00 - 18:15	10.00	19:00 - 19:15	0.74	13:00 - 13:15	2.77
19-09-2024	14:45 - 15:00	2.14	17:30 - 17:45	10.00	20:00 - 20:15	0.77	13:00 - 13:15	2.08
20-09-2024	15:00 - 15:15	1.75	00:00 - 00:15	10.00	20:45 - 21:00	0.46	13:00 - 13:15	3.09
21-09-2024	16:00 - 16:15	2.21	17:45 - 18:00	10.00	19:30 - 19:45	0.55	13:15 - 13:30	2.86
22-09-2024	09:15 - 09:30	2.09	00:00 - 00:15	10.00	19:15 - 19:30	0.60	11:45 - 12:00	2.77
23-09-2024	12:00 - 12:15	2.13	00:00 - 00:15	10.00	20:00 - 20:15	0.37	10:15 - 10:30	3.96
24-09-2024	14:45 - 15:00	2.13	00:00 - 00:15	10.00	19:30 - 19:45	0.53	13:00 - 13:15	3.09
25-09-2024	16:15 - 16:30	1.91	18:15 - 18:30	10.00	19:15 - 19:30	0.90	13:00 - 13:15	1.01
26-09-2024	15:15 - 15:30	1.97	19:00 - 19:15	10.00	05:00 - 05:15	0.99	13:00 - 13:15	1.76
27-09-2024	11:45 - 12:00	1.88	19:00 - 19:15	10.00	05:00 - 05:15	0.87	13:00 - 13:15	1.89
28-09-2024	19:45 - 20:00	1.82	18:45 - 19:00	10.00	07:45 - 08:00	0.92	13:15 - 13:30	2.06
29-09-2024	12:45 - 13:00	1.56	23:15 - 23:30	5.50	00:45 - 01:00	0.86	11:00 - 11:15	1.91
30-09-2024	14:45 - 15:00	1.54	17:30 - 17:45	10.00	19:15 - 19:30	0.37	13:00 - 13:15	2.80

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

Sellers and Buyers under Real Time Market (RTM) in September, 2024						
S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1	Madhya Pradesh	425.76	10.83%	Punjab	804.34	20.46%
2	Bihar	366.72	9.33%	Telangana	520.67	13.24%
3	Haryana	319.02	8.11%	Rajasthan	334.73	8.51%
4	Tamilnadu	298.19	7.58%	West Bengal	274.88	6.99%
5	Uttar Pradesh	245.46	6.24%	Kerala	270.89	6.89%
6	Orissa	190.98	4.86%	Uttar Pradesh	219.29	5.58%
7	West Bengal	121.86	3.10%	Maharashtra	181.76	4.62%
8	Andhra Pradesh	119.18	3.03%	Karnataka	181.32	4.61%
9	Himachal Pradesh	112.70	2.87%	Gujarat	149.91	3.81%
10	J&K	98.91	2.52%	Assam	132.09	3.36%
11	Delhi	88.62	2.25%	Tamilnadu	117.64	2.99%
12	Karnataka	81.57	2.07%	Andhra Pradesh	98.69	2.51%
13	Telangana	73.67	1.87%	Delhi	91.52	2.33%
14	Rajasthan	72.96	1.86%	Orissa	70.67	1.80%
15	Jharkhand	71.72	1.82%	J&K	60.00	1.53%
16	Chhattisgarh	63.98	1.63%	Bihar	55.08	1.40%
17	Punjab	52.46	1.33%	DVC	45.36	1.15%
18	Nabinagar Power	33.56	0.85%	Chhattisgarh	40.31	1.03%
19	Assam	33.01	0.84%	Uttarakhand	36.63	0.93%
20	Uttarakhand	31.27	0.80%	Daman & Diu - Dadra &	27.61	0.70%
21	Singrauli	31.12	0.79%	Madhya Pradesh	19.03	0.48%
22	Sembcorp Energy	28.77	0.73%	Tripura	18.96	0.48%
23	MEENAKSHI	27.68	0.70%	Jharkhand	18.61	0.47%
24	Farakka	26.94	0.69%	ArcelorMittal Nippon steel	16.54	0.42%
25	Sasan UMPP	26.74	0.68%	Himachal Pradesh	16.18	0.41%
26	TRN Energy	25.40	0.65%	BHARAT ALUMINIUM	16.16	0.41%
27	Maharashtra	24.67	0.63%	Jindal Power Ltd. Stg-II	15.45	0.39%
28	NTPL	24.51	0.62%	Haryana	14.33	0.36%
29	RENEW SURYA	24.47	0.62%	Manipur	12.60	0.32%
30	Adani Power	23.12	0.59%	SKS Power	8.98	0.23%
31	Karcham Wangtoo	19.74	0.50%	Meghalaya	8.20	0.21%
32	Gujarat	19.47	0.50%	The Tata Power Co Ltd	8.09	0.21%
33	Arunachal Pradesh	19.22	0.49%	Government of Himachal	6.73	0.17%
34	ADANI	18.44	0.47%	MB Power	5.37	0.14%
35	Jindal Power Ltd.	18.40	0.47%	Government of Himachal	4.68	0.12%
36	Tanda Stg-2	17.06	0.43%	Adani Power Limited -	3.59	0.09%
37	DVC	16.79	0.43%	Railways	3.53	0.09%
38	Rihand-III	16.55	0.42%	Goa WR	2.01	0.05%
39	DB Power	15.32	0.39%	Government of Himachal	1.90	0.05%
40	Rihand-II	15.15	0.39%	Goa SR	1.68	0.04%
41	Kahalgaoon-II	13.78	0.35%	Government of Himachal	1.57	0.04%
42	ADANI	13.64	0.35%	Government of Himachal	1.35	0.03%
43	MAHAN	13.43	0.34%	Government of Himachal	1.32	0.03%
44	NVVN (SNA) -	13.30	0.34%	Government of Himachal	1.26	0.03%
45	Jhabua Power	13.03	0.33%	Simhapuri Energy Limited	1.18	0.03%
46	Sipat Stg-1	12.70	0.32%	Chandigarh	1.18	0.03%
47	Jindal Steel	12.56	0.32%	ACBIL	1.01	0.03%

48	Maithon Power	11.32	0.29%	Government of Himachal	0.82	0.02%
49	RENEW SURYA	10.61	0.27%	Ratnagiri Gas & Power	0.81	0.02%
50	MB Power	9.76	0.25%	Sainj HEP	0.80	0.02%
51	Barh Stg-2	9.63	0.25%	Shree Cement	0.70	0.02%
52	AD Hydro	9.56	0.24%	Nagaland	0.66	0.02%
53	NTPC North	9.52	0.24%	Kawas	0.65	0.02%
54	Jindal Power	9.30	0.24%	Gandhar	0.61	0.02%
55	Talcher Stg-2	9.20	0.23%	Singoli Bhagwati	0.34	0.01%
56	Sikkim	9.02	0.23%	Arunachal Pradesh	0.33	0.01%
57	Adani Power	8.79	0.22%	Sikkim	0.30	0.01%
58	Pondicherry	8.37	0.21%	Karcham Wangtoo	0.30	0.01%
59	NTPC Telangana	8.18	0.21%	Pondicherry	0.26	0.01%
60	Korba	8.01	0.20%	JUNIPER GREEN	0.18	0.005%
61	Darlipalli	7.84	0.20%	Mizoram	0.09	0.002%
62	Kahalgao	7.68	0.20%	Lanco Budhil	0.02	0.0004%
63	Neyveli New	7.63	0.19%	AD Hydro	0.02	0.0004%
64	Vindhyachal stg-4	7.54	0.19%			
65	NTPC Gadawara	7.38	0.19%			
66	NEA-NR	7.31	0.19%			
67	NREL-Dayapar	6.91	0.18%			
68	Rihand-I	6.88	0.17%			
69	Sorang HEP,	6.79	0.17%			
70	Sipat Stg-2	6.75	0.17%			
71	MAHAN	6.56	0.17%			
72	Farakka Stg 3	6.31	0.16%			
73	Government of	5.87	0.15%			
74	Vindhyachal stg-1	5.81	0.15%			
75	NTPC Lara	5.81	0.15%			
76	Vindhyachal stg-3	5.41	0.14%			
77	Vindhyachal stg-2	5.40	0.14%			
78	ADANI WIND	5.40	0.14%			
79	Renew Surya Ravi	5.37	0.14%			
80	Transition Green	5.33	0.14%			
81	Manipur	5.32	0.14%			
82	NTPC Kudgi	5.32	0.14%			
83	Ramagundam Stg-1	5.32	0.14%			
84	Simhapuri Energy	5.31	0.14%			
85	Kameng HEP	5.29	0.13%			
86	BALCO 2	5.25	0.13%			
87	Government of	5.18	0.13%			
88	Government of	5.16	0.13%			
89	Government of	5.15	0.13%			
90	Khargone STPP	5.03	0.13%			
91	Adani Green Energy	4.97	0.13%			
92	Chandigarh	4.79	0.12%			
93	Unchahar-IV	4.76	0.12%			
94	NLC TPS-II Stg-2	4.73	0.12%			
95	IGSTPS JHAJJAR	4.59	0.12%			
96	Simhadri Stg-2	4.47	0.11%			
97	Grian Energy Private	4.40	0.11%			
98	JUNIPER GREEN	4.39	0.11%			
99	Kerala	4.31	0.11%			

100	Bongaigaon	4.21	0.11%			
101	SKS Power	4.08	0.10%			
102	NLC TPS-II	4.01	0.10%			
103	Vindhyachal stg-5	3.91	0.10%			
104	Government of	3.86	0.10%			
105	Amplus Ages	3.78	0.10%			
106	NLC	3.77	0.10%			
107	VENA ENERGY	3.71	0.09%			
108	RENEW SURYA	3.71	0.09%			
109	Palatana	3.70	0.09%			
110	Onevolt Energy	3.65	0.09%			
111	Transition Energy	3.64	0.09%			
112	ACBIL	3.49	0.09%			
113	ADHUNIK POWER	3.47	0.09%			
114	Government of	3.38	0.09%			
115	Sainj HEP	3.36	0.09%			
116	Sembcorp Gayatri	3.34	0.08%			
117	Barh STPS Stg - I	3.18	0.08%			
118	Ostro Kannada	2.95	0.08%			
119	IND BARATH	2.91	0.07%			
120	NTPP BRBCL	2.88	0.07%			
121	Government of	2.76	0.07%			
122	Unchahar-I	2.74	0.07%			
123	Korba Stg 3	2.71	0.07%			
124	Unchahar-II	2.71	0.07%			
125	GMR Warora	2.63	0.07%			
126	Mouda Stg-1	2.61	0.07%			
127	Serentica	2.45	0.06%			
128	Dadri Stg-2	2.40	0.06%			
129	Tripura	2.36	0.06%			
130	RKM Power	2.34	0.06%			
131	Shree Cement	2.31	0.06%			
132	Dadri TPS	2.22	0.06%			
133	NTECL Vallur	2.19	0.06%			
134	Serentica	2.12	0.05%			
135	ADANI GREEN	2.10	0.05%			
136	NTPC Sholapur	2.05	0.05%			
137	AGBPP	1.88	0.05%			
138	Meghalaya	1.81	0.05%			
139	KBUNL(MTPS-II)	1.78	0.05%			
140	Lanco Budhil	1.76	0.04%			
141	Simhadri Stg-1	1.76	0.04%			
142	Government of	1.67	0.04%			
143	ADANI SOLAR	1.57	0.04%			
144	Nagaland	1.54	0.04%			
145	Ramagundam Stg-3	1.45	0.04%			
146	Amp Energy Green	1.43	0.04%			
147	Nikachhu	1.33	0.03%			
148	Mouda Stg-2	1.29	0.03%			
149	NLC TPS-II Expn	1.24	0.03%			
150	Basochhu	1.20	0.03%			
151	RENEW SURYA	1.12	0.03%			

152	Tashiding HEP	1.12	0.03%			
153	TPSL Banderwala	1.12	0.03%			
154	Jorethang	1.07	0.03%			
155	Adept Renewable	1.07	0.03%			
156	Singoli Bhagwati	1.02	0.03%			
157	SEMBCORP	0.94	0.02%			
158	IL&FS	0.82	0.02%			
159	DGEN Mega Power	0.77	0.02%			
160	Maruti Clean Coal	0.76	0.02%			
161	The Tata Power Co	0.72	0.02%			
162	Jaypee Nigrie	0.63	0.02%			
163	Goa WR	0.61	0.02%			
164	ADANI SOLAR	0.58	0.01%			
165	Talcher	0.57	0.01%			
166	AGTPP	0.47	0.01%			
167	Ayana Renewable	0.44	0.01%			
168	VENA ENERGY	0.37	0.01%			
169	JITPL	0.36	0.01%			
170	WIND FIVE	0.33	0.01%			
171	GMR Kamalanga	0.32	0.01%			
172	Unchahar-III	0.30	0.01%			
173	RENEW SURYA	0.30	0.01%			
174	Adani Green Energy	0.27	0.01%			
175	Costal Energen	0.26	0.01%			
176	Daman & Diu -	0.25	0.01%			
177	ADANI	0.25	0.01%			
178	Serentica	0.14	0.004%			
179	DHARIWAL STU	0.12	0.003%			
180	Continuum Power	0.12	0.003%			
181	NSPCL Bhilai	0.12	0.003%			
182	Nani Virani Wind	0.09	0.002%			
183	TPSL 200MW	0.07	0.002%			
184	Adani Green Energy	0.05	0.001%			
185	Chuzachen	0.04	0.001%			
186	Dhariwal ISTS	0.04	0.001%			
187	Adani Green Energy	0.03	0.001%			
188	Goa SR	0.02	0.001%			
189	NTPC SOLAPUR	0.01	0.0004%			
190	ADANI SOLAR	0.01	0.0002%			
Total Volume of top 10		2,298.79	58.47%	Total Volume of top 10	3,069.88	78.08%
Total Volume in PXs		3,931.77		Total Volume in PXs	3,931.77	

Cross Border Electricity Transactions under Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of September, 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	01-09-2024	-	11.35	-	1.14
2	02-09-2024	-	12.14	-	1.62
3	03-09-2024	-	12.43	-	1.42
4	04-09-2024	-	12.19	-	1.56
5	05-09-2024	-	11.46	-	1.61
6	06-09-2024	-	12.56	-	1.75
7	07-09-2024	-	13.22	-	1.70
8	08-09-2024	-	12.38	-	1.53
9	09-09-2024	-	11.73	-	1.64
10	10-09-2024	-	11.63	-	1.56
11	11-09-2024	-	10.95	-	1.87
12	12-09-2024	-	10.99	-	1.72
13	13-09-2024	-	10.40	-	0.78
14	14-09-2024	-	8.46	-	1.57
15	15-09-2024	-	9.02	-	1.39
16	16-09-2024	-	9.73	-	1.54
17	17-09-2024	-	13.21	-	1.62
18	18-09-2024	-	11.31	-	1.77
19	19-09-2024	-	11.36	-	2.15
20	20-09-2024	-	11.26	-	1.65
21	21-09-2024	-	11.41	-	1.56
22	22-09-2024	-	5.27	-	1.30
23	23-09-2024	-	8.75	-	1.49
24	24-09-2024	-	5.70	-	1.44
25	25-09-2024	-	7.58	-	1.49
26	26-09-2024	-	7.58	-	1.56
27	27-09-2024	-	9.57	-	2.16
28	28-09-2024	-	14.08	-	2.22
29	29-09-2024	-	0.37	-	1.67
30	30-09-2024	-	0.37	-	2.23
Total		-	298.46	-	48.70
Grand Total		347.16			

-: No transaction took place

Note: Cross Border Transactions of Electricity of **347.16 MU (i.e. 298.46 MU sold by Nepal, 48.70 MU sold by Bhutan)** happened during September, 2024 in IEX, which is included under DAM Volume of September, 2024 in IEX. No Cross Border drawal Transactions of Electricity happened with **Nepal & Bhutan** for the month of September, 2024 in IEX under DAM.

Cross Border Electricity Transactions under Real Time Market (RTM) in IEX with Nepal and Bhutan during the month of September, 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	01-09-2024	-	-	-	0.24
2	02-09-2024	-	-	-	0.03
3	03-09-2024	-	-	-	0.16
4	04-09-2024	-	-	-	0.14
5	05-09-2024	-	-	-	0.07
6	06-09-2024	-	-	-	-
7	07-09-2024	-	-	-	-
8	08-09-2024	-	-	-	-
9	09-09-2024	-	-	-	-
10	10-09-2024	-	-	-	-
11	11-09-2024	-	-	-	0.04
12	12-09-2024	-	-	-	0.11
13	13-09-2024	-	-	-	0.03
14	14-09-2024	-	1.13	-	0.09
15	15-09-2024	-	0.22	-	0.07
16	16-09-2024	-	0.51	-	0.02
17	17-09-2024	-	0.10	-	-
18	18-09-2024	-	-	-	-
19	19-09-2024	-	-	-	-
20	20-09-2024	-	-	-	0.06
21	21-09-2024	-	0.30	-	0.14
22	22-09-2024	-	-	-	-
23	23-09-2024	-	-	-	0.04
24	24-09-2024	-	2.73	-	0.13
25	25-09-2024	-	3.77	-	0.45
26	26-09-2024	-	5.23	-	0.46
27	27-09-2024	-	3.53	-	0.13
28	28-09-2024	-	-	-	0.07
29	29-09-2024	-	1.73	-	-
30	30-09-2024	-	1.36	-	0.07
Total		-	20.61	-	2.53
Grand Total		23.14			

-: No transaction took place

Note: Cross Border Transactions of Electricity of 23.14 MU (i.e. 20.61 MU sold by Nepal, 2.53 MU sold by Bhutan) happened during September, 2024 in IEX, which is included under RTM Volume of September, 2024 in IEX. No Cross Border drawal Transactions of Electricity happened with Nepal & Bhutan for the month of September, 2024 in IEX under RTM.

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

- (i) On first Monday (2nd September, 2024), although there was increase in purchase on power exchange by some of the States in comparison to first Sunday (1st September, 2024) by **8.97 MU** [i.e. Maharashtra (1.88 MU), Kerala (1.50 MU), Uttarakhand (1.47 MU), Delhi (1.12 MU) and West Bengal (0.87 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **22.69 MU** [i.e. Telangana (6.76 MU), Haryana (4.01 MU), Uttar Pradesh (3.38 MU), Punjab (2.34 MU) and Madhya Pradesh (2.02 MU), etc.]. This resulted in an overall decrease in FSV by **13.72 MU** on Monday (2nd September, 2024) as compared to Sunday (1st September, 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).