



**भारत सरकार/ Government of India**  
**विद्युत मंत्रालय/ Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority**  
**आर. ए. प्रभाग/ Regulatory Affairs Division**

सेवा में /To

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

**विषय: दिसंबर, 2023 माह की मार्केट मॉनिटरिंग रिपोर्ट**

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

महोदय/ Sir,

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

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

- (i) दिसंबर, 2023 माह में देश में कुल 122,500 MU विद्युत का कारोबार किया गया, जिसमें से 60,405 MU का कारोबार अंतरराज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतरराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया। In the month of December, 2023 a total of 122,500 MU of electricity was transacted in the country out of which 60,405 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.
- (ii) अल्पावधि मार्केट के अंतर्गत कुल 14,498 MU का कारोबार किया गया था, जिसमें से 8,982 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ। इस प्रकार अल्पावधि कारोबार, दिसंबर, 2023 माह में ट्रेड की गई विद्युत की कुल मात्रा का 12.08 % था

I/33354/2024

और 7.33 % पावर एक्सचेंजों के माध्यम से रहा। A total of 14,498 MU was transacted under Short Term Market, out of which 8,982 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in December, 2023 was 12.08 % of total volume of electricity traded in December, 2023 and 7.33 % was through Power Exchanges.

- (iii) यदि हम अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से आपूर्ति की गई विद्युत के संबंध में इन कारोबारों की तुलना करते हैं, तो अल्पावधि कारोबार अंतर्राज्यीय पारेषण प्रणाली (ISTS) कारोबार का लगभग 24.50 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 14.87 % रहा। If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 24.50 % of ISTS transactions, out of which transaction through the power exchanges constitutes 14.87 %.

भवदीय/ Yours faithfully,

Signed by Vikram Singh

Date: 30-01-2024 11:28:24

Reason: Approved

( विक्रम सिंह / Vikram Singh )

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

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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.
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 - दिसंबर, 2023

**Monthly Market Monitoring Report**

**December, 2023**



भारत सरकार/ Government of India  
विद्युत मंत्रालय/ Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण/ Central Electricity Authority  
आर. ए. प्रभाग/ Regulatory Affairs Division



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**दिसंबर, 2023 की मासिक मार्केट  
मॉनिटरिंग रिपोर्ट का सारांश**

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





**दिसंबर, 2023 माह के लिए सारांश**  
**Summary for Month: December, 2023**

**भारत में विद्युत एक्सचेंजों पर विद्युत के व्यापार का सारांश**

**Summary of Electricity Transactions on Power Exchanges in India**

- दिसंबर, 2023 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल 8,982 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 **8,982 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of December, 2023. This volume of electricity is on delivery date basis and includes transactions through DAM, GDAM, HP-DAM, RTM, TAM, HP-TAM, DAC & ID, HP-DAC & ID, GTAM and G-DAC & ID market segments.

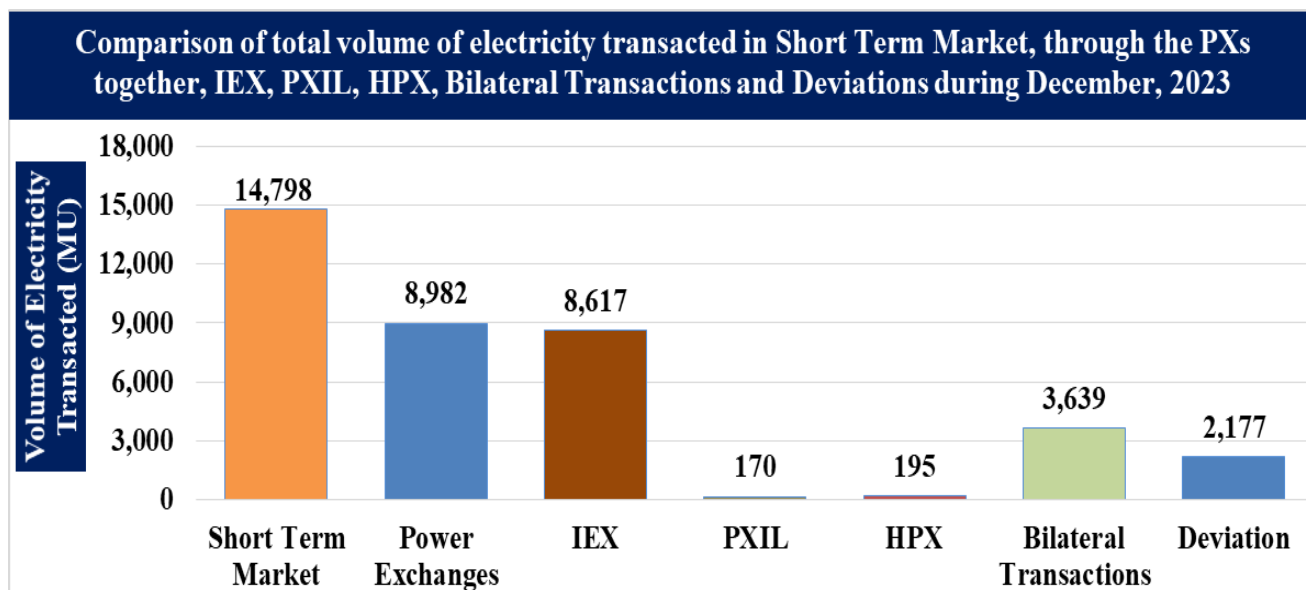
| Segment             | Transactions happened in the PXs (IEX, PXIL & HPX combined) |                     |                 |                            |
|---------------------|---|---------------------|-----------------|----------------------------|
|                     | FSV (MU)  | Average MCP (₹/kWh) | Congestion (MU) | Real Time Curtailment (MU) |
| DAM                 | 4772  | 4.71                | 0.00            | 0.00                       |
| GDAM                | 219   | 4.86                | 0.00            | 0.00                       |
| HP-DAM              | 0   | -                   | 0.00            | 0.00                       |
| RTM                 | 2406  | 4.61                | 0.00            | 0.00                       |
| TAM                 | 1199  | 6.02                | 0.00            | 20.86                      |
| HP-TAM              | 0   | -                   | 0.00            | 0.00                       |
| DAC & ID            | 365   | 7.40                | 0.00            | 2.48                       |
| HP-DAC & ID         | 0   | -                   | 0.00            | 0.00                       |
| GTAM                | 18  | 6.19                | 0.00            | 0.00                       |
| G-DAC & ID          | 3   | 5.57                | 0.00            | 0.00                       |
| <b>Total in PXs</b> | <b>8,982</b>  | <b>4.97*</b>        | <b>0.00</b>     | <b>23.34</b>               |

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

- द्विपक्षीय व्यापार के तहत कुल 3,639 MU विद्युत का कारोबार किया गया और 2,177 MU को विचलन के रूप में लेनदेन किया गया। इस प्रकार कुल 14,798 MU विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। दिसंबर, 2023 के महीने में देश में कुल 122,500 MU विद्युत की आपूर्ति की गई थी, इस प्रकार दिसंबर, 2023 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा 12.08 % था।

Under the Bilateral trade, a total of **3,639 MU** of electricity was transacted and **2,177 MU** was transacted as deviation. Thus, a total of **14,798 MU** of electricity was transacted as short term trade.

In December, 2023, a total of **122,500 MU** of electricity was supplied in the country, thus, the share of short term market in the total volume of electricity supplied in December, 2023 was **12.08 %**.



- दिसंबर, 2023 के दौरान कोई संचरण जाम नहीं था।

There was **no** transmission congestion during the month of December, 2023.

दिसंबर, 2023 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **23.34 MU** थी।

The total volume of real time curtailment reported in December, 2023 was only **23.34 MU**.

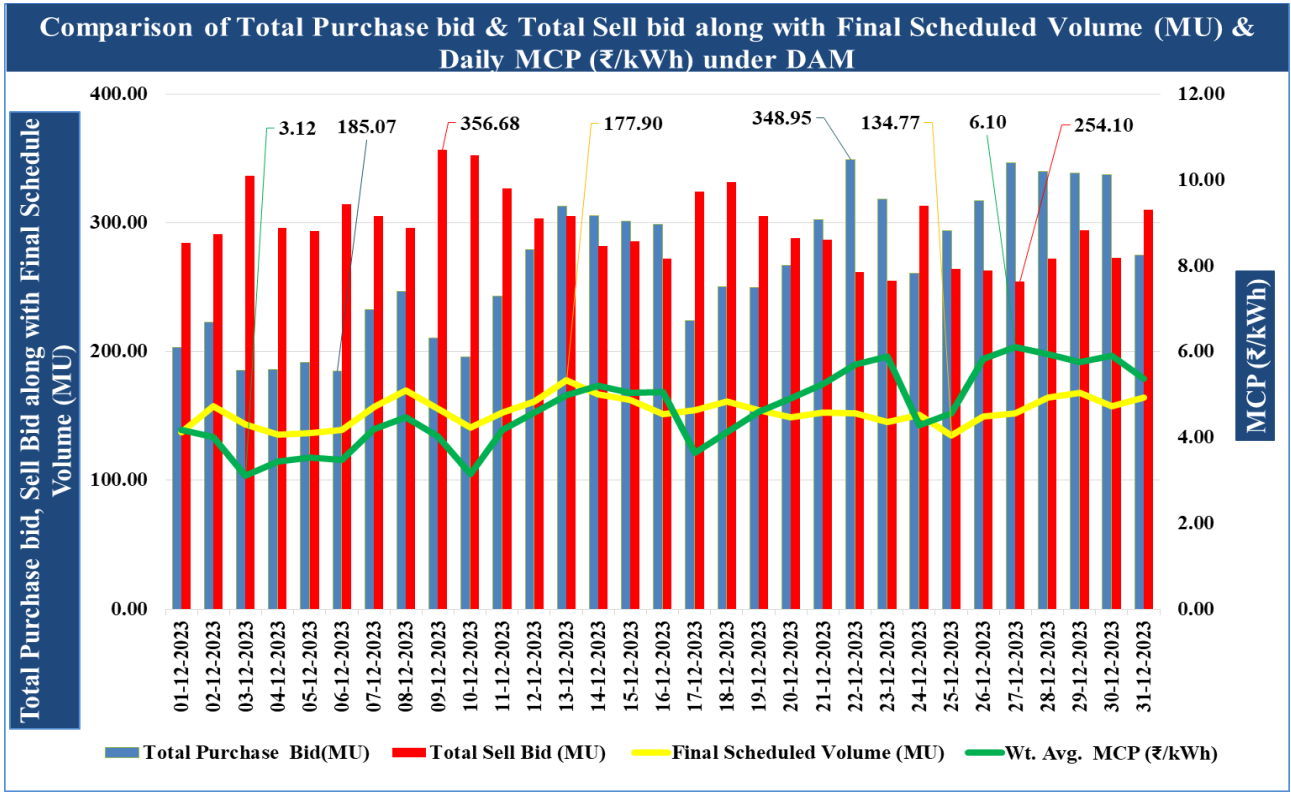
- दिसंबर, 2023 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (ISTS) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **60,405 MU** थी। दिसंबर, 2023 के महीने में अल्पावधि बाजार में विद्युत का लेन-देन अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से अनुसूचित की गई कुल विद्युत की मात्रा का **24.50 %** रहा।

The total volume of electricity scheduled at ISTS during the month of December, 2023 was **60,405 MU**. The total volume of electricity transacted in the short term market was **24.50 %** of total volume schedule at ISTS in December, 2023.

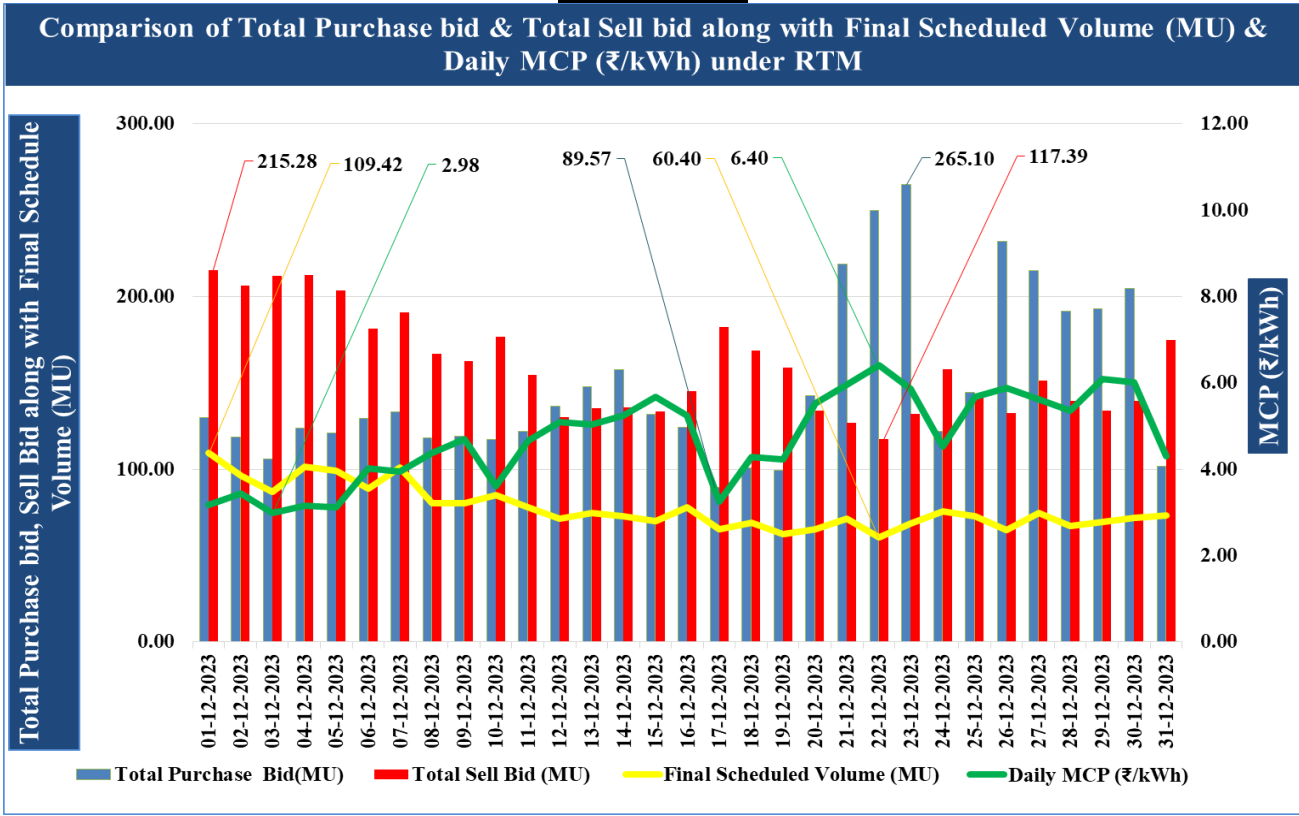
- दिसंबर, 2023 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:

The variation of Purchase and Sell bids, Final Scheduled Volume and Daily Avg. MCP under DAM and RTM during the month of December, 2023 are shown in following figures:

### DAM Volume



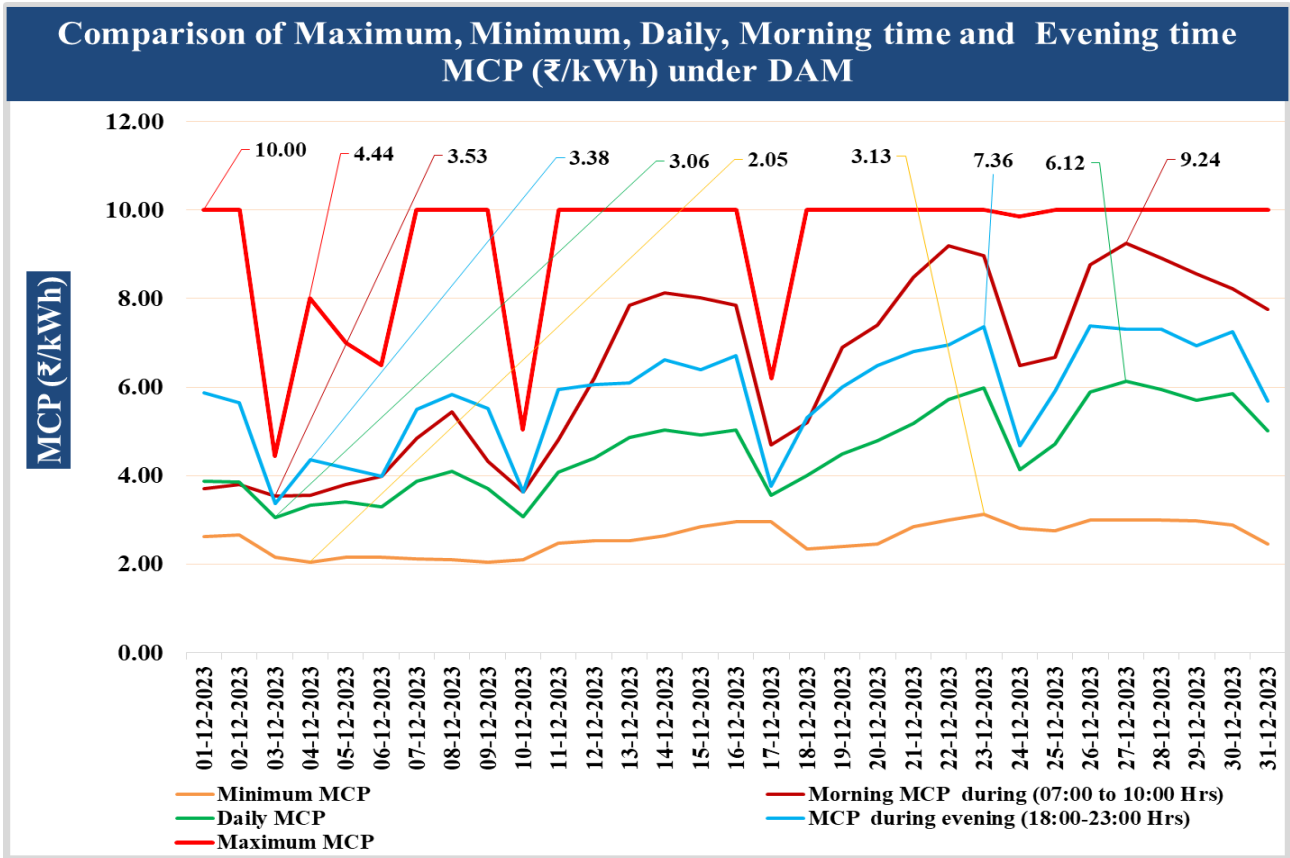
### RTM Volume



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

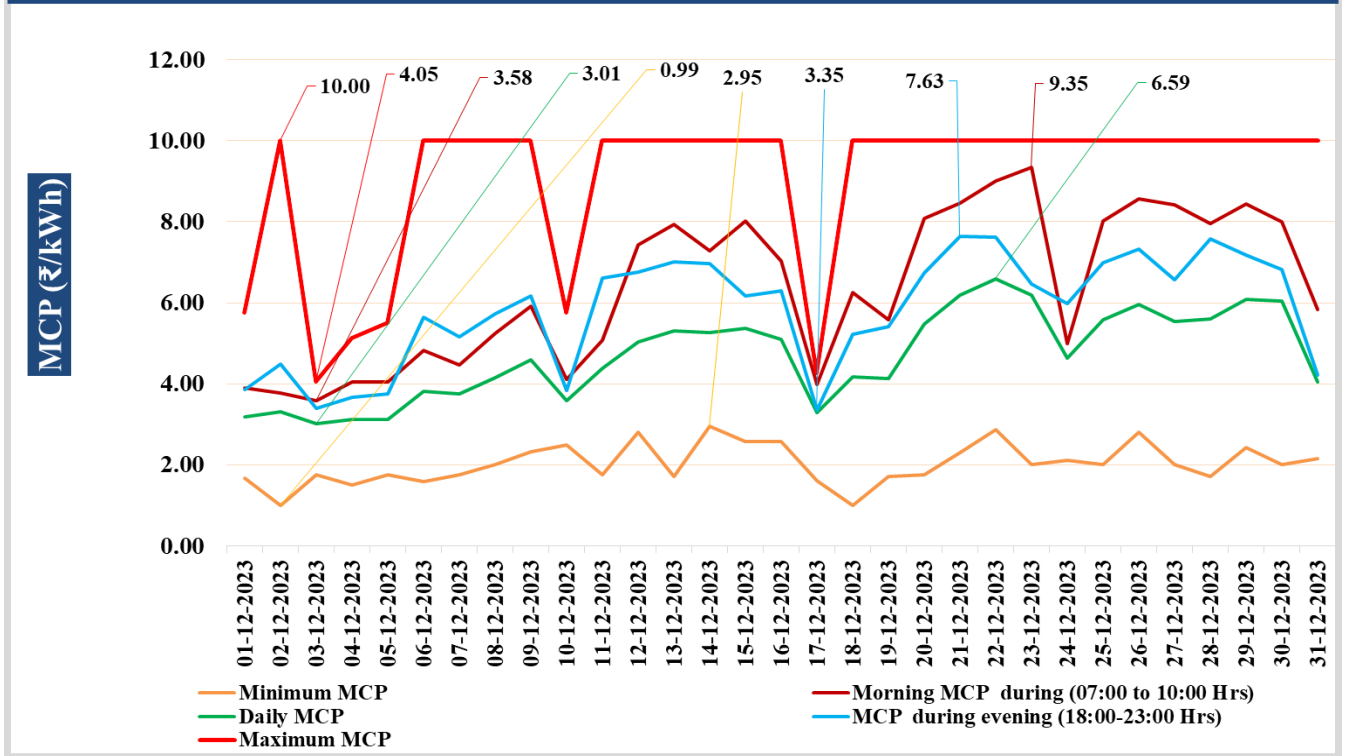
The variation of Maximum, Minimum, Daily, Morning and Evening time MCPs under DAM and RTM during the month of December, 2023 are shown in following figures:

## DAM Prices



## RTM Prices

## Comparison of Maximum, Minimum, Daily, Morning time and Evening time MCP (₹/kWh) under RTM



# MARKET MONITORING REPORT DETAILS



## Electricity Transactions on Power Exchanges in India

### **1. Day Ahead Market (DAM)**

- 1.1.** The total volume of electricity transacted on the power exchanges, viz., IEX, PXIL and HPX in the Day Ahead Market (DAM) in December, 2023 was **4,771.80 MU**. The total energy supplied in the country during the month of December, 2023 was 122,500 MU. Thus, the volume of electricity transacted on the power exchanges under DAM during December, 2023 was 3.90 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted under DAM during last month November, 2023 i.e. **5,201.43 MU** which was 4.36 % of the total energy supplied (119,308 MU) in the country during November, 2023. Similarly, the total volume of electricity transacted under DAM during previous year i.e. December, 2022, was **4,977.44 MU** which was 4.08 % of the total energy supplied (121,913 MU) in the country during December, 2022.
- 1.2.** The volume of electricity transacted on IEX, PXIL and HPX during December, 2023 were **4757.55 MU, 3.30 MU and 10.95 MU**, respectively. The volume of electricity transacted on IEX, PXIL and HPX during November, 2023 were **5196.16 MU, 3.12 MU and 2.15 MU**, respectively. The volume of electricity transacted on IEX during December, 2022 was **4977.44 MU** and no transaction of electricity took place in PXIL & HPX during December, 2022.
- 1.3.** The DAM volume for December, 2023 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **337.17 MU** (i.e. 79.14 MU bought by Nepal, 8.16 MU sold by Nepal, 249.87 MU bought by Bhutan).
- 1.4.** The Average Market Clearing Price (MCP) on IEX during the month of December, 2023 was ₹ **4.69/kWh**, which shows an increase of 12.74 % & a decrease 15.80 % when compared with average MCP's for the month of November, 2023 and December, 2022, which were ₹ **4.16/kWh** and ₹ **5.57/kWh**, respectively. On PXIL, the average MCP during the month of December, 2023 was ₹ **9.54/kWh**, which shows an increase of 1.92 % when compared with average MCP's for the month of November, 2023, which was ₹ **9.36/kWh** and no transaction of electricity took place in PXIL during December, 2022. On HPX, the average MCP during the month of December, 2023 was ₹ **10.00/kWh**, which shows no change when compared with average MCP's for the month of November, 2023, which was ₹ **10.00/kWh** and no transaction of electricity took place in HPX during December, 2022.
- 1.5.** The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 409 time blocks on 1<sup>st</sup>, 2<sup>nd</sup>, 7<sup>th</sup> to 9<sup>th</sup>, 11<sup>th</sup> to 16<sup>th</sup>, 18<sup>th</sup> to 23<sup>rd</sup> & 25<sup>th</sup> to 31<sup>st</sup> December, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Whereas, in PXIL, the maximum ACP of ₹ 10.00/kWh was observed in all 13 regions during 97 time blocks on 1<sup>st</sup>, 2<sup>nd</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 13<sup>th</sup> to 15<sup>th</sup>, 19<sup>th</sup> to 20<sup>th</sup>, 24<sup>th</sup> & 25<sup>th</sup> December, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh. Further, in HPX, the maximum ACP of ₹ 10.00/kWh was observed in all 13 regions during 165 time blocks on 1<sup>st</sup>, 11<sup>th</sup> to 16<sup>th</sup>, 18<sup>th</sup> to 23<sup>rd</sup> & 26<sup>th</sup> December, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh.



1.6. The minimum ACP of ₹ 2.05/kWh in IEX was observed in all 13 regions during the time block 03:45 - 04:00 Hrs on 9<sup>th</sup> December, 2023. As there was no congestion in transmission system, the MCP for this time-block was also ₹ 2.05/kWh. Whereas, in PXIL, the minimum ACP of ₹ 4.35/kWh was observed in all 13 regions during the time blocks 19:00-19:15 & 19:15-19:30 Hrs on 6<sup>th</sup> December, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 1.00/kWh. Further, in HPX, the minimum ACP of ₹ 10.00/kWh was observed in all 13 regions during 165 time blocks on 1<sup>st</sup>, 11<sup>th</sup> to 16<sup>th</sup>, 18<sup>th</sup> to 23<sup>rd</sup> & 26<sup>th</sup> December, 2023.

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

(i) Final Scheduled Volume:

| Exchange | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | December, 2023*            | 4757.55                     | 134.77             | 177.90             | 153.47            |
|          | November, 2023*            | 5196.16                     | 118.45             | 208.74             | 173.21            |
|          | %Change (Month over Month) | -8.44                       | 13.78              | -14.77             | -11.40            |
|          | December, 2022*            | 4977.44                     | 130.07             | 182.43             | 160.56            |
|          | %Change (Year over Year)   | -4.42                       | 3.61               | -2.48              | -4.42             |
| PXIL     | December, 2023             | 3.30                        | 0.04               | 1.06               | 0.25              |
|          | November, 2023             | 3.12                        | 0.09               | 0.80               | 0.39              |
|          | %Change (Month over Month) | 5.77                        | -55.56             | 32.50              | -35.90            |
|          | December, 2022             | -                           | -                  | -                  | -                 |
|          | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | December, 2023             | 10.95                       | 0.05               | 1.90               | 0.78              |
|          | November, 2023             | 2.15                        | 0.09               | 0.28               | 0.17              |
|          | %Change (Month over Month) | 409.30                      | -44.44             | 578.57             | 358.82            |
|          | December, 2022             | -                           | -                  | -                  | -                 |
|          | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |

∴ No transaction took place

NA: Not Applicable

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

Table: 1A

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

| Exchange | Period                     | Prices (₹/kWh)    |         |             |         |                          |
|----------|----------------------------|-------------------|---------|-------------|---------|--------------------------|
|          |                            | Daily MCP (₹/kWh) |         | ACP (₹/kWh) |         | Monthly Avg. MCP (₹/kWh) |
|          |                            | Minimum           | Maximum | Minimum     | Maximum | Average                  |
| IEX      | December, 2023             | 3.12              | 6.10    | 2.05        | 10.00   | 4.69                     |
|          | November, 2023             | 2.75              | 5.13    | 2.00        | 10.00   | 4.16                     |
|          | %Change (Month over Month) | 13.45             | 18.91   | 2.50        | 0.00    | 12.74                    |
|          | December, 2022             | 3.80              | 7.28    | 2.00        | 12.00   | 5.57                     |
|          | %Change (Year over Year)   | -17.89            | -16.21  | 2.50        | -16.67  | -15.80                   |
| PXIL     | December, 2023             | 6.21              | 10.00   | 4.35        | 10.00   | 9.54                     |
|          | November, 2023             | 3.18              | 10.00   | 1.00        | 10.00   | 9.36                     |
|          | %Change (Month over Month) | 95.28             | 0.00    | 335.00      | 0.00    | 1.92                     |
|          | December, 2022             | -                 | -       | -           | -       | -                        |
|          | %Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |
| HPX      | December, 2023             | 10.00             | 10.00   | 10.00       | 10.00   | 10.00                    |
|          | November, 2023             | 10.00             | 10.00   | 10.00       | 10.00   | 10.00                    |
|          | %Change (Month over Month) | 0.00              | 0.00    | 0.00        | 0.00    | 0.00                     |
|          | December, 2022             | -                 | -       | -           | -       | -                        |
|          | %Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |

-: No transaction took place

NA: Not Applicable

**Table: 1B**

## 2. Real Time Market (RTM)

- 2.1. The total volume of electricity transacted on the power exchanges under Real Time Market in December, 2023 was **2,406.02 MU**, out of which **2,404.59 MU** (99.94 %) was transacted in IEX, **0.68 MU** (0.03 %) was transacted in HPX and **0.75 MU** (0.03 %) was transacted in HPX.
- 2.2. The RTM volume for December, 2023 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XIII**), which was **16.40 MU** (i.e. 7.00 MU bought by Nepal, 4.45 MU sold by Nepal, 4.95 MU bought by Bhutan).
- 2.3. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP) and Area Clearing Prices (ACP) under Real Time Market during the month of December, 2023 as compared with November, 2023 and December, 2022 are shown in Table- 2A & 2B:

### (i) Final Scheduled Volume:

| Exchange | Period                      | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|-----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                             | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | December, 2023*             | 2404.59                     | 60.40              | 109.42             | 77.57             |
|          | November, 2023              | 2359.07                     | 57.68              | 113.71             | 78.64             |
|          | % Change (Month over Month) | 1.93                        | 4.72               | -3.77              | -1.36             |
|          | December, 2022              | 1763.05                     | 44.02              | 73.78              | 56.87             |
|          | % Change (Year over Year)   | 36.39                       | 37.21              | 48.31              | 36.40             |
| PXIL     | December, 2023              | 0.68                        | 0.09               | 0.16               | 0.11              |
|          | November, 2023              | -                           | -                  | -                  | -                 |
|          | % Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | December, 2022              | -                           | -                  | -                  | -                 |
|          | % Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | December, 2023              | 0.75                        | 0.15               | 0.24               | 0.19              |
|          | November, 2023              | 0.10                        | 0.10               | 0.10               | 0.10              |
|          | % Change (Month over Month) | 650.00                      | 50.00              | 140.00             | 90.00             |
|          | December, 2022              | -                           | -                  | -                  | -                 |
|          | % Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |

-: No transaction took place

NA: Not Applicable

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

Table-2A

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

| Exchange | Period                      | Prices (₹/kWh)    |         |             |         |                          |
|----------|-----------------------------|-------------------|---------|-------------|---------|--------------------------|
|          |                             | Daily MCP (₹/kWh) |         | ACP (₹/kWh) |         | Monthly Avg. MCP (₹/kWh) |
|          |                             | Minimum           | Maximum | Minimum     | Maximum | Average                  |
| IEX      | December, 2023              | 2.98              | 6.40    | 0.99        | 10.00   | 4.61                     |
|          | November, 2023              | 2.43              | 5.75    | 0.70        | 10.00   | 3.93                     |
|          | % Change (Month over Month) | 22.63             | 11.30   | 41.43       | 0.00    | 17.30                    |
|          | December, 2022              | 3.38              | 7.08    | 0.50        | 12.00   | 5.41                     |
|          | % Change (Year over Year)   | -11.83            | -9.60   | 98.00       | -16.67  | -14.79                   |
| PXIL     | December, 2023              | 10.00             | 10.00   | 10.00       | 10.00   | 10.00                    |
|          | November, 2023              | -                 | -       | -           | -       | -                        |
|          | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |
|          | December, 2022              | -                 | -       | -           | -       | -                        |
|          | % Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |
| HPX      | December, 2023              | 7.00              | 10.00   | 7.00        | 10.00   | 9.05                     |
|          | November, 2023              | 10.00             | 10.00   | 10.00       | 10.00   | 10.00                    |
|          | % Change (Month over Month) | -30.00            | 0.00    | -30.00      | 0.00    | -9.50                    |
|          | December, 2022              | -                 | -       | -           | -       | -                        |
|          | % Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |

-: No transaction took place

NA: Not Applicable

**Table-2B**

### 3. Green Day Ahead Market (GDAM):

- 3.1. The volume of electricity transacted under GDAM in December, 2023 was **218.76 MU (53.32 MU in Solar, 157.71 MU in Non-Solar and 7.73 MU in Hydro)** in IEX at an average MCP of ₹ **4.86/kWh** and no transaction took place in PXIL & HPX under GDAM.
- 3.2. There was no real time curtailment in the power exchanges under Green Day Ahead Market during the month of December, 2023, November, 2023 and December, 2022.
- 3.3. The **top 10 sellers** on the power exchanges under Green Day Ahead Market (GDAM) in December, 2023 were **ADANI WIND ENERGY KUTCHH FOUR Ltd. Nakhatrana, RENEW SURYA ROSHNI PRIVATE LIMITED Koppal PS, Ostro Kannada Power Private Limited, Madhya Pradesh, Uttar Pradesh, Continuum Power Trading (TN) Private Limited, Andhra Pradesh, ADANI SOLAR ENERGY JAISALMER TWO PRIVATE LIMITED (Project-2), J&K and Renew Surya Ravi Private Limited (solar)**, which constituted **71.65 %** of the market volume.
- 3.4. The **top 10 buyers** on the power exchanges under Green Day Ahead Market (GDAM) in December, 2023 were **Arcelor Mittal Nippon steel (ESIL), Delhi, Tamil Nadu, DVC, BHARAT ALUMINIUM COMPANY LTD (Bulk Consumer), Uttar Pradesh, Karnataka, Maharashtra, Rajasthan and Madhya Pradesh**, which constituted **89.88 %** of the market volume.
- 3.5. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP), Area Clearing Prices (ACP), Real Time Curtailment and details of Transmission Congestion under three segments (i.e. Solar, Non Solar and Hydro) under Green Day Ahead Market during the month of December, 2023 and its comparison with November, 2023 and December, 2022 are shown in Table- 3A & 3B:

#### (i) Final Scheduled Volume :

| Exchange | Segment   | Period                      | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|-----------|-----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |           |                             | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | Solar     | December, 2023              | 53.32                       | 1.09               | 3.39               | 1.72              |
|          |           | November, 2023              | 58.62                       | 0.98               | 3.86               | 1.95              |
|          |           | % Change (Month over Month) | -9.04                       | 11.22              | -12.18             | -11.79            |
|          |           | December, 2022              | 28.92                       | 0.43               | 3.45               | 0.93              |
|          |           | %Change (Year over Year)    | 84.37                       | 153.49             | -1.74              | 84.95             |
|          |           |                             |                             |                    |                    |                   |
|          | Non Solar | December, 2023              | 157.71                      | 3.49               | 8.12               | 5.09              |
|          |           | November, 2023              | 104.54                      | 1.42               | 6.00               | 3.48              |
|          |           | % Change (Month over Month) | 50.86                       | 145.77             | 35.33              | 46.26             |
|          |           | December, 2022              | 209.06                      | 5.21               | 10.27              | 6.74              |
|          |           | %Change (Year over Year)    | -24.56                      | -33.01             | -20.93             | -24.48            |
|          | Hydro     | December, 2023              | 7.73                        | 0.02               | 0.78               | 0.25              |
|          |           | November, 2023              | 17.11                       | 0.33               | 0.95               | 0.57              |

| Exchange | Segment                    | Period                      | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|-----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            |                             | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
|          |                            | % Change (Month over Month) | -54.82                      | -93.94             | -17.89             | -56.14            |
|          |                            | December, 2022              | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)    | NA                          | NA                 | NA                 | NA                |
| PXIL     | Solar, Non Solar and Hydro | December, 2023              | -                           | -                  | -                  | -                 |
|          |                            | November, 2023              | -                           | -                  | -                  | -                 |
|          |                            | % Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022              | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)    | NA                          | NA                 | NA                 | NA                |
| HPX      | Solar, Non Solar and Hydro | December, 2023              | -                           | -                  | -                  | -                 |
|          |                            | November, 2023              | -                           | -                  | -                  | -                 |
|          |                            | % Change (Month over Month) | NA                          | NA                 | NA                 | NA                |

∴ No transaction took place

NA: Not Applicable

**Table-3A**

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

| Exchange | Segment                    | Period                      | Prices (₹/kWh)    |         |             |         |                          |
|----------|----------------------------|-----------------------------|-------------------|---------|-------------|---------|--------------------------|
|          |                            |                             | Daily MCP (₹/kWh) |         | ACP (₹/kWh) |         | Monthly Avg. MCP (₹/kWh) |
|          |                            |                             | Minimum           | Maximum | Minimum     | Maximum | Average                  |
| IEX      | Solar, Non Solar and Hydro | December, 2023              | 4.11              | 6.58    | 2.85        | 10.00   | 4.86                     |
|          |                            | November, 2023              | 4.04              | 5.74    | 3.25        | 10.00   | 4.69                     |
|          |                            | % Change (Month over Month) | 1.73              | 14.63   | -12.31      | 0.00    | 3.62                     |
|          |                            | December, 2022              | 4.08              | 6.94    | 2.90        | 12.00   | 5.32                     |
|          |                            | % Change (Year over Year)   | 0.74              | -5.19   | -1.72       | -16.67  | -8.65                    |
| PXIL     | Solar, Non Solar and Hydro | December, 2023              | -                 | -       | -           | -       | -                        |
|          |                            | November, 2023              | -                 | -       | -           | -       | -                        |
|          |                            | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |
|          |                            | December, 2022              | -                 | -       | -           | -       | -                        |
|          |                            | % Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |
| HPX      | Solar, Non Solar and Hydro | December, 2023              | -                 | -       | -           | -       | -                        |
|          |                            | November, 2023              | -                 | -       | -           | -       | -                        |
|          |                            | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |

∴ No transaction took place

NA: Not Applicable

**Table-3B**

#### 4. Term Ahead Market (TAM)

- 4.1. The total volume of electricity transacted on the power exchanges under Term Ahead Market in December, 2023 on delivery date basis was **1198.99 MU**, out of which **1071.93 MU** (89.40 %) was transacted on IEX, **23.42 MU** (1.95 %) was transacted on PXIL and **103.64 MU** (8.64 %) was transacted on HPX.
- 4.2. The total volume of electricity transacted on the power exchanges under Term Ahead Market in November, 2023 on delivery date basis was on the power exchanges under Term Ahead Market in December, 2023 on delivery date basis was **915.37 MU**, out of which **642.96 MU** (70.24 %) was transacted on IEX, **153.00 MU** (16.71 %) was transacted on PXIL and **119.41 MU** (13.04 %) was transacted on HPX.
- 4.3. Similarly, the total volume of electricity transacted on the power exchanges under Term Ahead Market in December, 2022 on delivery date basis was **461.22 MU**, out of which **287.48 MU** (62.33 %) was transacted on IEX and **173.74 MU** (37.67 %) was transacted on PXIL. No transaction of electricity took place in HPX.
- 4.4. With respect to the total energy supplied during the month of December, 2023 in the country, the volume of electricity traded on the power exchanges under TAM on delivery date basis represents **0.98 %** of the total energy supplied. The same was **0.77 %** in November, 2023 and **0.38 %** in December, 2022.
- 4.5. In December, 2023, there was no transmission congestion in IEX, PXIL & HPX under TAM.
- 4.6. In December, 2023, there was real time curtailment of **20.86 MU** under TAM, Out of which **2.17 MU** was under Daily-Anyday contract, **1.99 MU** was under Weekly contract, **8.06 MU** was under Weekly contract and **6.74 MU** was under Anyday Single Sided contract in IEX. Whereas, in PXIL, there was real time curtailment of **0.76 MU** under Daily-Anyday contract. Whereas, in HPX, there was real time curtailment of **0.35 MU** under Daily-Anyday contract and **0.79 MU** under Anyday Single Sided contract under TAM.
- 4.7. The comparison of total volume of electricity transacted and Average MCP in the power exchanges under Term Ahead Market (TAM) on delivery date basis during December, 2023 with November, 2023 and December, 2022 are shown in Table – 4A & 4B:

**(i) Final Scheduled Volume (MU), December, 2023 vis- a- vis November, 2023 and December, 2022**

| Exchange | Period                     | Final Scheduled Volume (MU) |        |         |                    |         |
|----------|----------------------------|-----------------------------|--------|---------|--------------------|---------|
|          |                            | Daily or Any Day            | Weekly | Monthly | Anyday Single Side | Total   |
| IEX      | December, 2023             | 501.63                      | 65.21  | 140.74  | 364.35             | 1071.93 |
|          | November, 2023             | 290.58                      | 45.86  | -       | 306.52             | 642.96  |
|          | %Change (Month over Month) | 72.63                       | 42.19  | NA      | 18.87              | 66.72   |
|          | December, 2022             | 92.38                       | 100.80 | -       | 94.30              | 287.48  |
|          | %Change (Year over Year)   | 443.01                      | -35.31 | NA      | 286.37             | 272.87  |

| Exchange | Period                     | Final Scheduled Volume (MU) |        |         |                    |        |
|----------|----------------------------|-----------------------------|--------|---------|--------------------|--------|
|          |                            | Daily or Any Day            | Weekly | Monthly | Anyday Single Side | Total  |
| PXIL     | December, 2023             | 20.17                       | -      | 3.25    | -                  | 23.42  |
|          | November, 2023             | 75.97                       | -      | 60.08   | 16.95              | 153.00 |
|          | %Change (Month over Month) | -73.45                      | NA     | -94.59  | NA                 | -84.69 |
|          | December, 2022             | -                           | -      | -       | 173.74             | 173.74 |
|          | %Change (Year over Year)   | NA                          | NA     | NA      | NA                 | -86.52 |
| HPX      | December, 2023             | 20.60                       | -      | -       | 83.04              | 103.64 |
|          | November, 2023             | 42.10                       | -      | -       | 77.31              | 119.41 |
|          | %Change (Month over Month) | -51.07                      | NA     | NA      | 7.41               | -13.21 |
|          | December, 2022             | -                           | -      | -       | -                  | -      |
|          | %Change (Year over Year)   | NA                          | NA     | NA      | NA                 | NA     |

- : No transaction took place

NA: Not Applicable

**Table: 4A**

**(ii) Average MCP, December, 2023 vis- a- vis November, 2023 and December, 2022**

| Exchange | Period                     | Average MCP (₹/kWh) |        |         |                    |
|----------|----------------------------|---------------------|--------|---------|--------------------|
|          |                            | Daily or Any Day    | Weekly | Monthly | Anyday Single Side |
| IEX      | December, 2023             | 5.45                | 6.15   | 5.90    | 6.32               |
|          | November, 2023             | 5.94                | 5.75   | -       | 7.99               |
|          | %Change (Month over Month) | -8.25               | 6.96   | NA      | -20.90             |
|          | December, 2022             | 4.65                | 4.61   | -       | 4.87               |
|          | %Change Year over Year)    | 17.20               | 33.41  | NA      | 29.77              |
| PXIL     | December, 2023             | 8.79                | -      | 9.50    | -                  |
|          | November, 2023             | 8.22                | -      | 9.43    | 8.40               |
|          | %Change (Month over Month) | 6.93                | NA     | 0.74    | NA                 |
|          | December, 2022             | -                   | -      | -       | 4.69               |
|          | %Change (Year over Year)   | NA                  | NA     | NA      | NA                 |
| HPX      | December, 2023             | 5.65                | -      | -       | 7.46               |
|          | November, 2023             | 5.63                | -      | -       | 9.49               |
|          | %Change (Month over Month) | 0.36                | NA     | NA      | -21.39             |
|          | December, 2022             | -                   | -      | -       | -                  |
|          | %Change Year over Year)    | NA                  | NA     | NA      | NA                 |

-: No transaction took place

NA: Not Applicable

**Table: 4B**



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

- 5.1. The total volume of electricity transacted in the IEX, PXIL & HPX under DAC & ID on delivery date basis during December, 2023 was **365.27 MU**.
- 5.2. In December, 2023, there was no transmission congestion in IEX, PXIL and HPX under DAC & ID.
- 5.3. In December, 2023, there was real time curtailment of **2.48 MU** under Day Ahead Contingency contract in HPX under DAC & ID.
- 5.4. The total volume of electricity transacted under DAC & ID under Day Ahead Contingency & Intra Day contracts during December, 2023 and its comparison with November, 2023 and December, 2022 on delivery date basis are shown in Tables- 5A & 5B:

### (i) Final Scheduled Volume (MU), December, 2023 vis- a- vis November, 2023 and December, 2022

| Exchange | Period                     | Final Scheduled Volume (MU) |           |        |
|----------|----------------------------|-----------------------------|-----------|--------|
|          |                            | Day Ahead Contingency       | Intra Day | Total  |
| IEX      | December, 2023             | 147.43                      | 0.94      | 148.37 |
|          | November, 2023             | 36.07                       | 0.10      | 36.17  |
|          | %Change (Month over Month) | 308.73                      | 840.00    | 310.20 |
|          | December, 2022             | 530.80                      | 0.10      | 530.90 |
|          | %Change (Year over Year)   | -72.22                      | 840.00    | -72.05 |
| PXIL     | December, 2023             | 127.82                      | 13.46     | 141.28 |
|          | November, 2023             | 72.98                       | 0.70      | 73.68  |
|          | %Change (Month over Month) | 75.14                       | 1822.86   | 91.75  |
|          | December, 2022             | 263.32                      | 0.73      | 264.05 |
|          | %Change (Year over Year)   | -51.46                      | 1743.84   | -46.49 |
| HPX      | December, 2023             | 72.20                       | 3.42      | 75.62  |
|          | November, 2023             | 8.55                        | 1.53      | 10.08  |
|          | %Change (Month over Month) | 744.44                      | 123.53    | 650.20 |
|          | December, 2022             | 232.96                      | -         | 232.96 |
|          | %Change (Year over Year)   | -69.01                      | NA        | -67.54 |

- : No transaction took place

NA: Not Applicable

**Table: 5A**

(ii) Average MCP, December, 2023 vis- a- vis November, 2023 and December, 2022

| Exchange | Period                     | Average MCP (₹/kWh)   |           |
|----------|----------------------------|-----------------------|-----------|
|          |                            | Day Ahead Contingency | Intra Day |
| IEX      | December, 2023             | 6.36                  | 9.42      |
|          | November, 2023             | 5.17                  | 10.00     |
|          | %Change (Month over Month) | 23.02                 | -5.80     |
|          | December, 2022             | 6.06                  | 5.51      |
|          | %Change Year over Year)    | 4.95                  | 70.96     |
| PXIL     | December, 2023             | 7.62                  | 9.22      |
|          | November, 2023             | 8.28                  | 10.00     |
|          | %Change (Month over Month) | -7.97                 | -7.80     |
|          | December, 2022             | 6.27                  | 7.93      |
|          | %Change (Year over Year)   | 21.53                 | 16.27     |
| HPX      | December, 2023             | 8.65                  | 9.77      |
|          | November, 2023             | 9.37                  | 10.00     |
|          | %Change (Month over Month) | -7.68                 | -2.30     |
|          | December, 2022             | 5.60                  | -         |
|          | %Change Year over Year)    | 54.46                 | NA        |

- : No transaction took place

NA: Not Applicable

**Table: 5B**

## 6. Green Term Ahead Market (GTAM):

The total volume of electricity transacted in the IEX & PXIL under GTAM on delivery date basis during December, 2023 was **17.76 MU** in Non-Solar only. Whereas, no transactions took place in HPX under GTAM.

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

### 6.1. Solar Energy Segment under GTAM

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

#### (i) Final Scheduled Volume:

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

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

-: No transaction took place

NA: Not Applicable

**Table-6A**

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

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

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

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

∴ No transaction took place

NA: Not Applicable

**Table-6B**

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

## **6.2. Non-Solar Energy Segment under GTAM**

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

### **(i) Final Scheduled Volume:**

| Exchange | Non- Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | Daily/Anyday               | December, 2023             | 9.58                        | 0.29               | 0.31               | 0.31              |
|          |                            | November, 2023             | 6.77                        | 0.19               | 0.24               | 0.23              |
|          |                            | %Change (Month over Month) | 41.51                       | 52.63              | 29.17              | 34.78             |
|          |                            | December, 2022             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2023             | -                           | -                  | -                  | -                 |
|          | Weekly                     | November, 2023             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2023             | -                           | -                  | -                  | -                 |
|          | Monthly                    | November, 2023             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2023             | 5.90                        | 0.49               | 0.49               | 0.49              |

| Exchange           | Non- Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|--------------------|----------------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|                    |                            |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| PXIL               | Anyday Single Side         | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|                    |                            | December, 2022             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|                    | Daily/Anyday               | December, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|                    |                            | December, 2022             | -                           | -                  | -                  | -                 |
|                    | Weekly                     | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|                    |                            | December, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
| Monthly            | December, 2022             | -                          | -                           | -                  | -                  |                   |
|                    | %Change (Year over Year)   | NA                         | NA                          | NA                 | NA                 |                   |
|                    | December, 2023             | -                          | -                           | -                  | -                  |                   |
|                    | November, 2023             | -                          | -                           | -                  | -                  |                   |
| Anyday Single Side | %Change (Month over Month) | NA                         | NA                          | NA                 | NA                 |                   |
|                    | December, 2022             | -                          | -                           | -                  | -                  |                   |
|                    | %Change (Year over Year)   | NA                         | NA                          | NA                 | NA                 |                   |
|                    | December, 2023             | -                          | -                           | -                  | -                  |                   |
| HPX                | Daily/Anyday               | December, 2023             | 2.28                        | 0.22               | 0.31               | 0.25              |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|                    | Weekly                     | December, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|                    | Monthly                    | December, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|                    | Anyday Single Side         | December, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | November, 2023             | -                           | -                  | -                  | -                 |
|                    |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |

∴ No transaction took place

NA: Not Applicable

Table - 6C

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

| Exchange                 | Non- Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|--------------------------|----------------------------|----------------------------|---------------|---------|---------|
|                          |                            |                            | Minimum       | Maximum | Average |
| IEX                      | Daily/Anyday               | December, 2023             | 6.03          | 6.10    | 6.04    |
|                          |                            | November, 2023             | 6.40          | 6.40    | 6.40    |
|                          |                            | %Change (Month over Month) | -5.78         | -4.69   | -5.63   |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                          | Weekly                     | December, 2023             | -             | -       | -       |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                          | Monthly                    | December, 2023             | -             | -       | -       |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                          | Anyday Single Side         | December, 2023             | 6.69          | 6.69    | 6.69    |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
| December, 2022           |                            | -                          | -             | -       |         |
| %Change (Year over Year) |                            | NA                         | NA            | NA      |         |
| PXIL                     | Daily/Anyday               | December, 2023             | -             | -       | -       |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                          | Weekly                     | December, 2023             | -             | -       | -       |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                          | Monthly                    | December, 2023             | -             | -       | -       |
|                          |                            | November, 2023             | -             | -       | -       |
|                          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                          |                            | December, 2022             | -             | -       | -       |
|                          |                            | %Change (Year over Year)   | NA            | NA      | NA      |



| Exchange                   | Non- Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------------------------|----------------------------|----------------------------|---------------|---------|---------|
|                            |                            |                            | Minimum       | Maximum | Average |
| HPX                        | Anyday Single Side         | December, 2023             | -             | -       | -       |
|                            |                            | November, 2023             | -             | -       | -       |
|                            |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                            |                            | December, 2022             | -             | -       | -       |
|                            |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|                            | Daily/Anyday               | December, 2023             | 5.50          | 5.50    | 5.50    |
|                            |                            | November, 2023             | -             | -       | -       |
|                            |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                            | Weekly                     | December, 2023             | -             | -       | -       |
|                            |                            | November, 2023             | -             | -       | -       |
|                            |                            | %Change (Month over Month) | NA            | NA      | NA      |
|                            | Monthly                    | December, 2023             | -             | -       | -       |
| November, 2023             |                            | -                          | -             | -       |         |
| %Change (Month over Month) |                            | NA                         | NA            | NA      |         |
| Anyday Single Side         | December, 2023             | -                          | -             | -       |         |
|                            | November, 2023             | -                          | -             | -       |         |
|                            | %Change (Month over Month) | NA                         | NA            | NA      |         |

-: No transaction took place

NA: Not Applicable

**Table - 6D**

**6.2.1.** In December, 2023, there was no transmission congestion in IEX & HPX. There was no transaction in HPX under GTAM (Non Solar).

**6.2.2.** In December, 2023, there was no real time curtailment in IEX & HPX. There was no transaction in HPX under GTAM (Non Solar).

### **6.3 Hydro Energy Segment under GTAM**

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

#### **(i) Final Scheduled Volume:**

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

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

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

-: No transaction took place

NA: Not Applicable

Table: 6E

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

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

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

∴ No transaction took place

NA: Not Applicable

**Table – 6F**

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

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

The total volume of electricity transacted in the PXIL & HPX under G-DAC & ID on delivery date basis during December, 2023 was **3.17 MU (0.67 MU in Solar, 2.50 MU in Non-Solar)**, respectively. There was no transaction under G-DAC & ID in IEX in December, 2023

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

### 7.1. Solar Energy Segment under G-DAC & ID

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

#### (i) Final Scheduled Volume:

| Exchange | Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|-----------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                       |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | Day Ahead Contingency | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | 6.67                        | 2.09               | 2.30               | 2.22              |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | 0.20                        | 0.20               | 0.20               | 0.20              |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency | December, 2023             | 0.67                        | 0.01               | 0.04               | 0.03              |
|          |                       | November, 2023             | 3.10                        | 0.01               | 1.47               | 0.12              |
|          |                       | %Change (Month over Month) | -78.39                      | 0.00               | -97.28             | -75.00            |

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

-: No transaction took place

NA: Not Applicable

Table-7A

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

| Exchange | Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|-----------------------|----------------------------|---------------|---------|---------|
|          |                       |                            | Minimum       | Maximum | Average |
| IEX      | Day Ahead Contingency | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | 5.02          | 5.33    | 5.14    |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Day Ahead Contingency | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | 5.87          | 5.87    | 5.87    |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Day Ahead Contingency | December, 2023             | 3.79          | 7.09    | 4.92    |
|          |                       | November, 2023             | 3.96          | 6.01    | 4.40    |
|          |                       | %Change (Month over Month) | -4.29         | 17.97   | 11.82   |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |

-: No transaction took place

NA: Not Applicable

Table-7B

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

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

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

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

### (i) Final Scheduled Volume:

| Exchange | Non- Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | Day Ahead Contingency      | December, 2023             | -                           | -                  | -                  | -                 |
|          |                            | November, 2023             | 0.37                        | 0.37               | 0.37               | 0.37              |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | 104.30                      | 1.68               | 4.23               | 3.36              |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day                  | December, 2023             | -                           | -                  | -                  | -                 |
|          |                            | November, 2023             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency      | December, 2023             | 1.64                        | 0.01               | 0.11               | 0.08              |
|          |                            | November, 2023             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | 66.94                       | 0.43               | 3.25               | 2.16              |
|          |                            | %Change (Year over Year)   | -97.55                      | -97.67             | -96.62             | -96.30            |
|          | Intra Day                  | December, 2023             | -                           | -                  | -                  | -                 |
|          |                            | November, 2023             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | December, 2022             | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency      | December, 2023             | 0.86                        | 0.004              | 0.11               | 0.04              |
|          |                            | November, 2023             | 3.04                        | 0.01               | 2.47               | 0.15              |
|          |                            | %Change (Month over Month) | -71.71                      | -100.00            | -95.55             | -73.33            |
|          | Intra Day                  | December, 2023             | 16.69                       | 0.18               | 1.46               | 1.19              |
|          |                            | November, 2023             | -94.85                      | -100.00            | -92.47             | -96.64            |
|          |                            | %Change (Month over Month) | -                           | -                  | -                  | -                 |

-: No transaction took place

NA: Not Applicable

Table - 7C

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

| Exchange | Non- Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|----------------------------|----------------------------|---------------|---------|---------|
|          |                            |                            | Minimum       | Maximum | Average |
| IEX      | Day Ahead Contingency      | December, 2023             | -             | -       | -       |
|          |                            | November, 2023             | 6.27          | 6.27    | 6.27    |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | December, 2022             | 4.61          | 7.30    | 5.72    |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Intra Day                  | December, 2023             | -             | -       | -       |
|          |                            | November, 2023             | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | December, 2022             | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Day Ahead Contingency      | December, 2023             | 4.22          | 8.14    | 5.90    |
|          |                            | November, 2023             | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | December, 2022             | 3.86          | 6.64    | 5.22    |
|          |                            | %Change (Year over Year)   | 9.33          | 22.59   | 13.03   |
|          | Intra Day                  | December, 2023             | -             | -       | -       |
|          |                            | November, 2023             | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | December, 2022             | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Day Ahead Contingency      | December, 2023             | 4.47          | 8.91    | 5.46    |
|          |                            | November, 2023             | 4.24          | 6.69    | 6.00    |
|          |                            | %Change (Month over Month) | 5.42          | 33.18   | -9.00   |
|          |                            | December, 2022             | 3.85          | 5.43    | 4.83    |
|          |                            | %Change (Year over Year)   | 16.10         | 64.09   | 13.04   |
|          | Intra Day                  | December, 2023             | -             | -       | -       |
|          |                            | November, 2023             | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |

-: No transaction took place

NA: Not Applicable

**Table - 7D**

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

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



### 7.3. Hydro Energy Segment under G-DAC & ID

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

#### (i) Final Scheduled Volume:

| Exchange | Hydro Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|-----------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                       |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | Day Ahead Contingency | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | 25.60                       | 0.70               | 0.98               | 0.83              |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | December, 2022             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | 1.38                        | 0.04               | 0.52               | 0.13              |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | December, 2023             | -                           | -                  | -                  | -                 |
|          |                       | November, 2023             | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |

-: No transaction took place

NA: Not Applicable

**Table: 7E**

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

| Exchange | Hydro Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|-----------------------|----------------------------|---------------|---------|---------|
|          |                       |                            | Minimum       | Maximum | Average |
| IEX      | Day Ahead Contingency | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | 3.93          | 7.72    | 5.97    |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Day Ahead Contingency | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | December, 2022             | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Day Ahead Contingency | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | 4.49          | 7.49    | 6.10    |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          | Intra Day             | December, 2023             | -             | -       | -       |
|          |                       | November, 2023             | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |

∴ No transaction took place

NA: Not Applicable

**Table – 7F**

**7.3.1.** In December, 2023, there was no transaction in IEX, PXIL and HPX under G-DAC & ID (Hydro).

**7.3.2.** In December, 2023, there was no transaction in IEX, PXIL and HPX under G-DAC & ID (Hydro).

## 8. Bilateral Transactions:

The total volume of electricity transacted through **bilateral transactions** in December, 2023 was **3,638.69 MU**. The total buy volume of electricity transacted in bilateral market through direct and trader transactions in December, 2023 were **1,006.52 MU** and **2,632.17 MU** respectively. The details of bilateral transactions of Electricity during December, 2023 are shown in table below:

| December, 2023 | Direct   | Traders  | Total Bilateral Transaction (MU) |
|----------------|----------|----------|----------------------------------|
| <b>Total</b>   | 1,006.52 | 2,632.17 | 3,638.69                         |
| <b>Minimum</b> | 0.15     | 0.05     | -                                |
| <b>Maximum</b> | 428.25   | 696.26   | -                                |

**Table -8A**

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

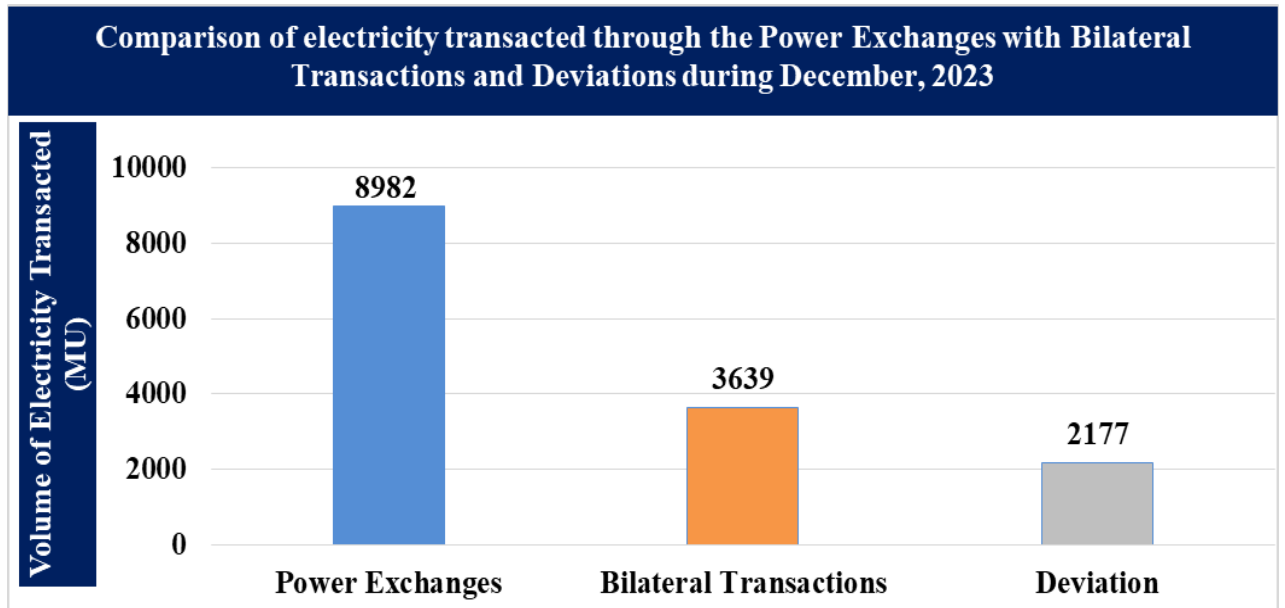
### (i) **Region-wise Volume:**

| Region-wise Volume (MU) | ER     |        | WR     |         | NR     |         | SR     |        | NER    |        |
|-------------------------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|
|                         | Direct | Trader | Direct | Trader  | Direct | Trader  | Direct | Trader | Direct | Trader |
| <b>Total</b>            | 200.86 | 15.69  | 226.53 | 1116.55 | 136.18 | 1068.00 | 442.94 | 397.37 | -      | 34.57  |
| <b>Minimum</b>          | 0.15   | 0.49   | 3.72   | 0.05    | 0.31   | 2.88    | 14.70  | 0.80   | -      | 5.15   |
| <b>Maximum</b>          | 140.50 | 13.03  | 153.41 | 696.26  | 108.50 | 368.37  | 428.25 | 230.24 | -      | 14.88  |

**Table-8B**

- 8.1. The top 5 buyers** on bilateral transaction through direct transactions in December, 2023 were **Karnataka, Gujarat, Jharkhand, Rajasthan and Odisha**, which constituted **87.59 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in December, 2023 were **Maharashtra, Gujarat, Rajasthan, Himachal Pradesh and Jammu Kashmir**, which constituted **77.97 %** of the market volume. [Annexure III]
- 8.2. The top 5 sellers** on bilateral transaction through direct transactions in December, 2023 were **Jindal Power Limited, Stage-1, Punjab, ADHUNIK POWER & NATURAL RESOURCES LIMITED, Tamil Nadu and NTPC Talcher Super Thermal Power Station Stage II**, which constituted **62.62 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in December, 2023 were **Maharashtra, Rajasthan, Gujarat, Himachal Pradesh and Jindal Power Limited, Stage-2**, which constituted **67.62 %** of the market volume. [Annexure III]
- 8.3. Deviation Volume** -The volume of Deviation observed in December, 2023 in import and export were **2,034.53 MU** and **2,319.73 MU** respectively. The total volume of Deviation observed in December, 2023 can be taken as **2,177.13 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 December, 2023 is shown in **Figure 1**:

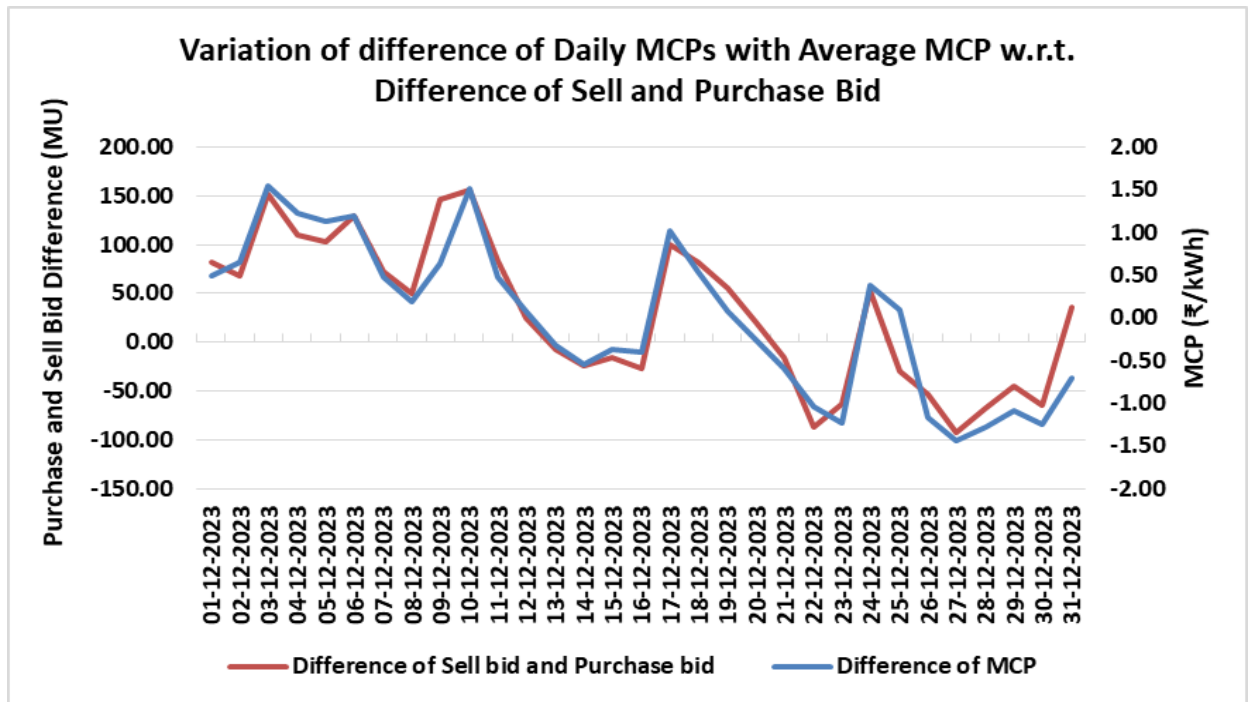


**Figure -1**

## 9. Analysis of movement of prices observed under DAM during December, 2023

A regression analysis has been carried out on the Day Ahead Market data taken from IEX website. Also, data was plotted in various graphs to observe patterns for each day of the December, 2023 month. The observations made are as under:

- 9.1. In order to find out the determinants which are responsible for the Daily Avg. MCP, a regression analysis has been carried out where the Daily Avg. MCP is the dependent variable and the independent variables are peak demand, total purchase bid, total sell bid, coal generation, hydro generation, wind generation and solar generation.
- 9.2. A double log function was used so that elasticity of Daily Avg. MCP could be read off from the coefficients of independent variables. The regression analysis revealed that the most significant variable was the Coal Generation. Further, the regression analysis revealed that the elasticity of the Daily Avg. MCP with respect to Coal Generation was **3.12** in December, 2023.
- 9.3. The variation of difference of Daily Avg. MCPs with Average MCP w.r.t Difference of Sell and Purchase bid is Shown below:



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

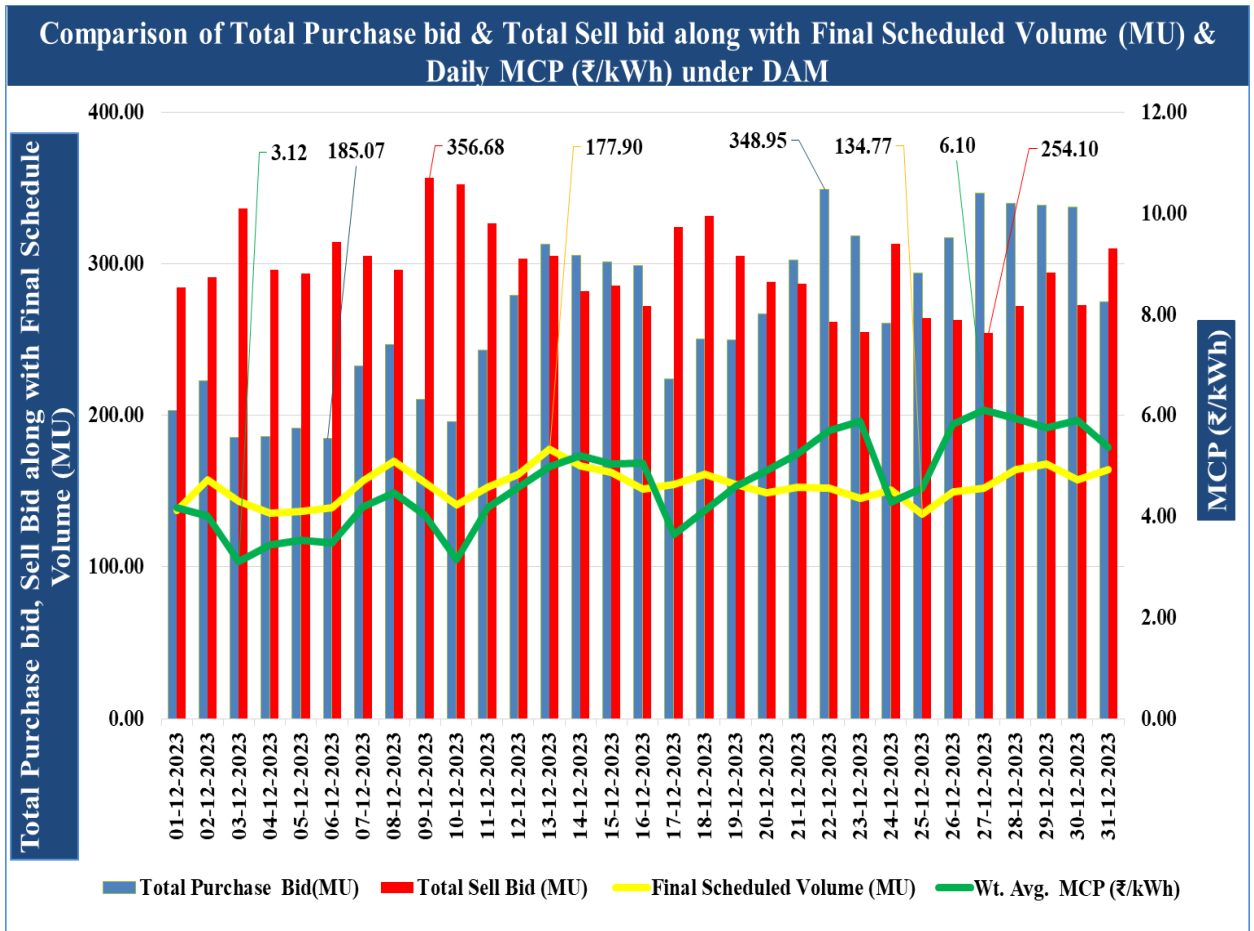
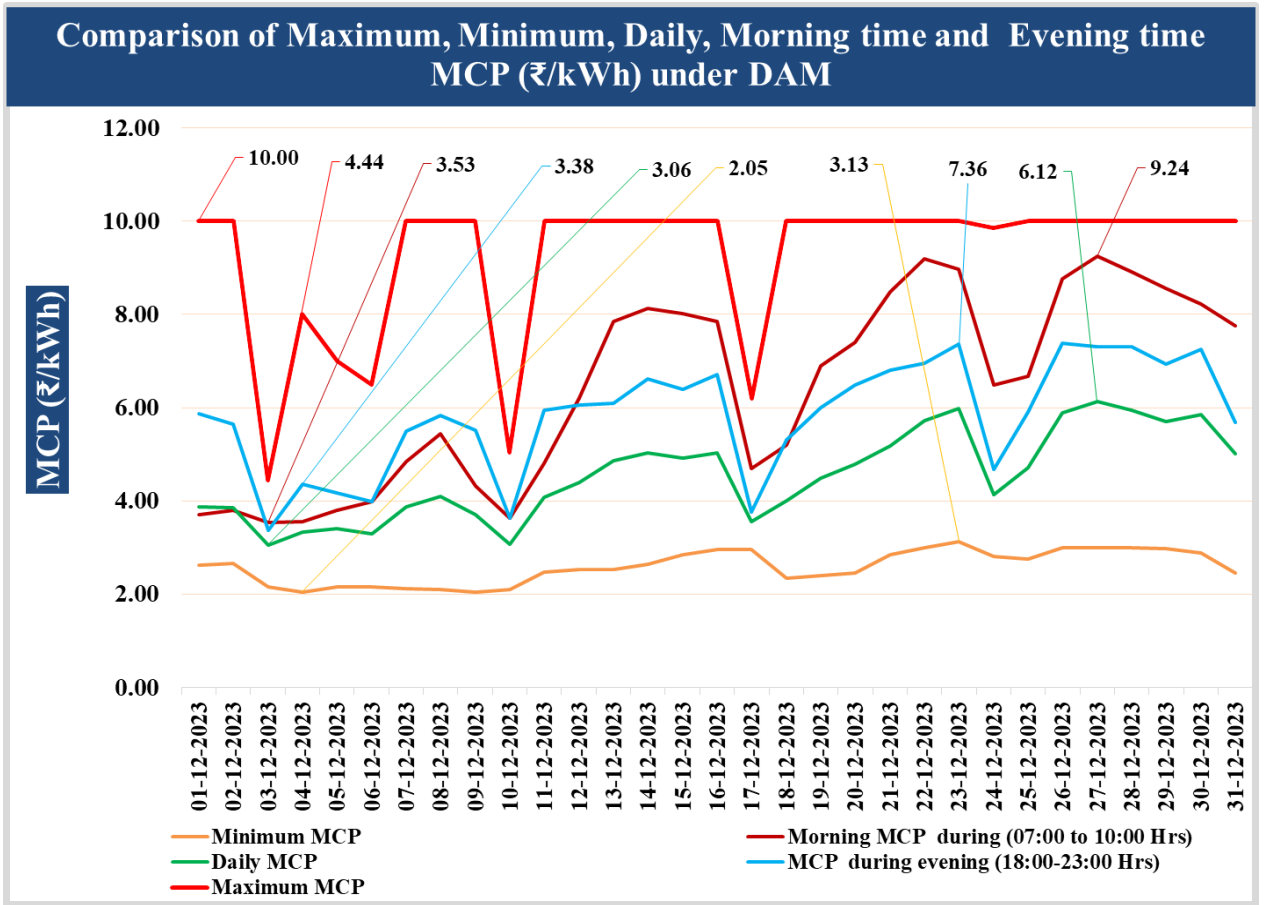


Figure – 2

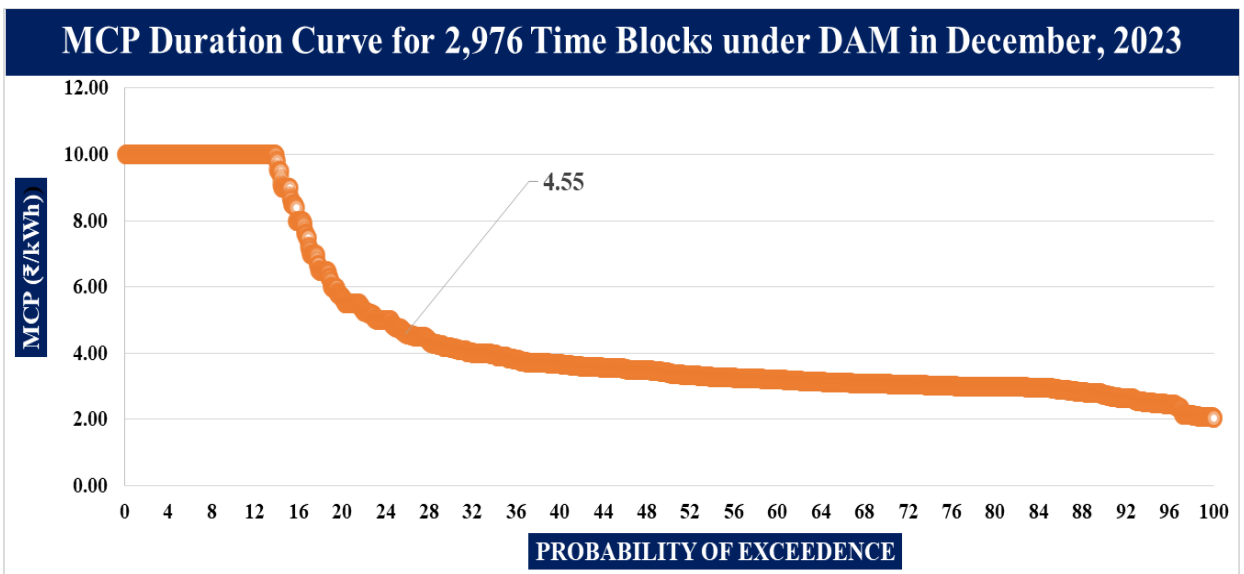
9.5. Invariably, the Final Scheduled Volume (MU) and the Daily Avg. MCP (₹/kWh) showed decreasing trend on Sundays and increasing trend on Mondays as the demand of electricity in the country was less on Sundays as compared to other days of week. However, during the month of December, 2023, it is observed that on first Monday (4<sup>th</sup> December, 2023), FSV showed decreasing trend in comparison to first Sunday (3<sup>rd</sup> December, 2023), on third Sunday (17<sup>th</sup> December, 2023), FSV showed increasing trend in comparison to third Saturday (16<sup>th</sup> December, 2023), on fourth Monday (25<sup>th</sup> December, 2023), FSV showed decreasing trend in comparison to fourth Sunday (24<sup>th</sup> December, 2023), on fifth Sunday (31<sup>st</sup> December, 2023), FSV showed increasing trend in comparison to fifth Saturday (30<sup>th</sup> December, 2023). The detailed analysis on this is given at **Appendix-I**.

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

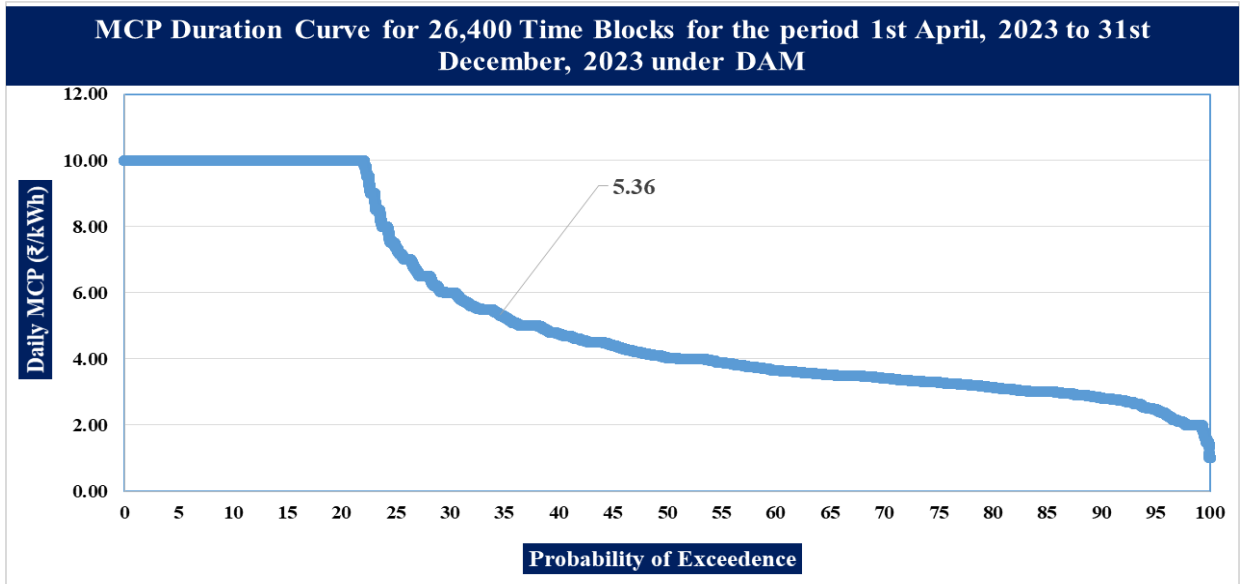


**Figure-3**

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



**Figure – 4**



**Figure-5**

- 9.8.** It can be seen in figure 4 above that in the MCP duration curve of December, 2023, for 25.00 % of the time MCP was above average MCP of the month (i.e. ₹ 4.55/kWh) and almost 75.00 % of the time MCP was below the average MCP of the month. Similarly, it can be seen in the MCP duration curve from 1<sup>st</sup> April, 2023 to 31<sup>st</sup> December, 2023 (figure-5), that for 35.00 % of the time the MCP was above the average MCP for the period (i.e. ₹ 5.36/kWh) and for 65.00 % of the time the Daily Avg. MCP was below the average MCP for the period.
- 9.9.** The Purchase Bids and the MCP discovered in each of the 15-minute time block during the month almost followed the same trend [Annexure V]. This is also corroborated with the outcome of regression analysis mentioned at para 9.1 and 9.2 above.
- 9.10.** In December, 2023, the maximum FSV occurred mostly during the **time period 07-08 Hrs** (on 21 no. of days). Whereas, the maximum MCP occurred mostly during the **time period 17-18 Hrs** (on 15 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 17-18 Hrs** (on 13 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 03-04 Hrs** (on 16 no. of days). [Annexure VI]
- 9.11.** In December, 2023, there was no congestion in IEX, PXIL & HPX. Further, in November, 2023, there was no congestion in IEX, PXIL & HPX. Further, in December, 2022, there was no congestion in IEX and no transaction of electricity took place in PXIL & HPX.
- 9.12.** In December, 2023, there was **no** real time curtailment in IEX, PXIL & HPX. Further, in November, 2023, there was **no** real time curtailment in IEX, PXIL & HPX. Further in December, 2022, there was **no** real time curtailment in IEX and no transaction of electricity took place in PXIL & HPX.



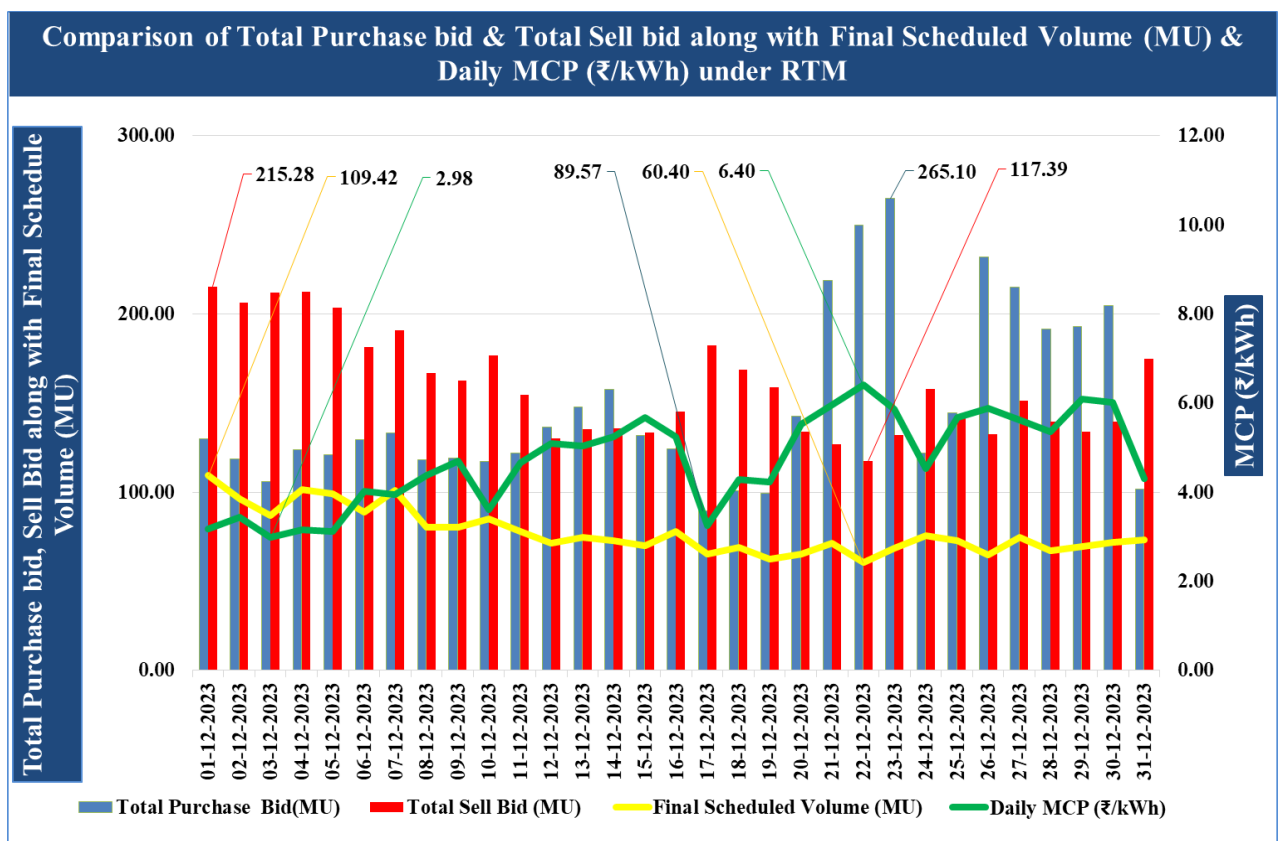
- 9.13.** The **top 10 sellers** on the power exchanges under Day Ahead Market (**DAM**) in December, 2023 were **Chhattisgarh, Uttar Pradesh, Mahan Energy Limited, Madhya Pradesh, JITPL, Adani Power Limited - Raigarh TPP, Odisha, DB Power, Bihar and Adani Power Limited-Raipur TPP**, which constituted 66.24 % of the market volume. [**Annexure VII**].
- 9.14.** The **top 10 purchasers** on the power exchanges under Day Ahead Market (**DAM**) in December, 2023 were **Telangana, Gujarat, Maharashtra, Andhra Pradesh, Punjab, Uttar Pradesh, Tamil Nadu, Druk Green Power Corporation Limited (DGPCL-Bhutan), J&K and Uttarakhand**, which constituted **79.24 %** of the market volume. [**Annexure VII**]
- 9.15.** The total volume of electricity purchased by Discoms/Licensees under DAM in December, 2023 was **4,265.41 MU**, which constituted **89.39 %** 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 December, 2023 was **2,651.42 MU**, which constituted **55.56 %** of total volume of electricity sold on the power exchanges.

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

**10.1.** Similar to the regression analysis carried out for Day Ahead Market, the regression analysis for Real Time Market was also done. The regression analysis revealed that the significant variable was the Coal Generation. Further, the regression analysis revealed that the elasticity of the Daily Avg. MCP with respect to Coal Generation was **3.70** in December, 2023.

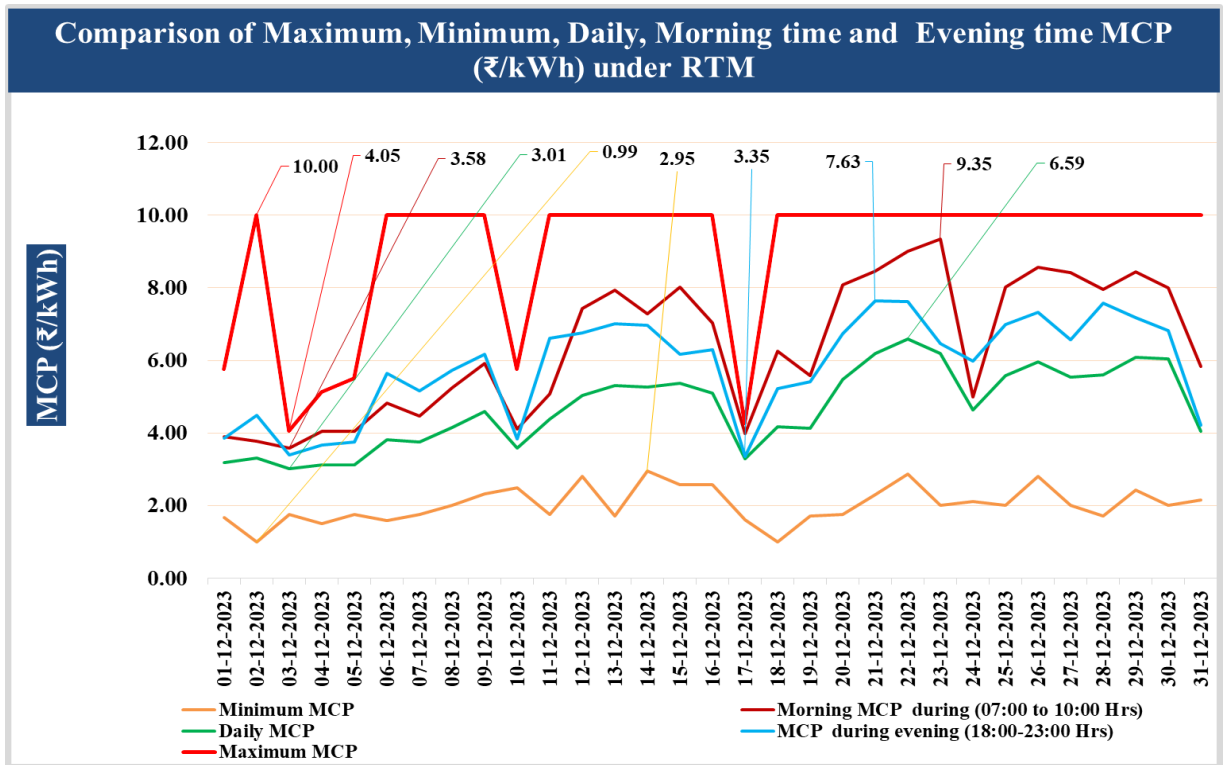
**10.2.** The Purchase Bids and the MCP discovered in each of the 15-minute time block during the month almost followed the same trend [**Annexure IX**]. This is also corroborated with the outcome of regression analysis mentioned at **para 10.1** above.

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



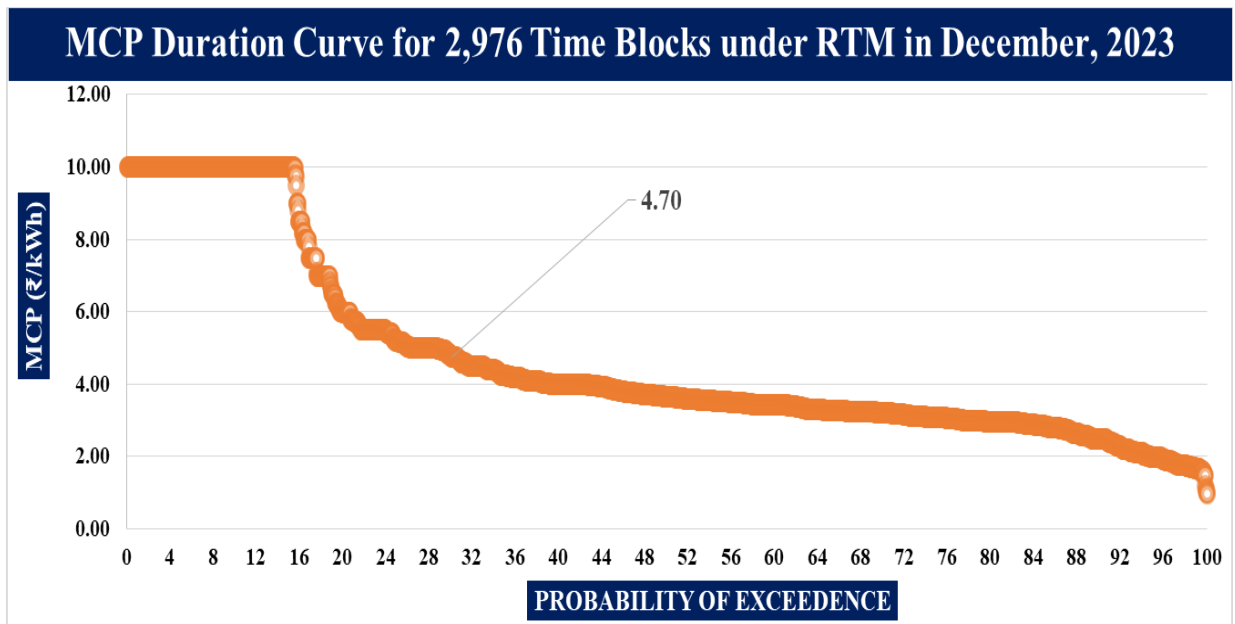
**Figure-6**

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

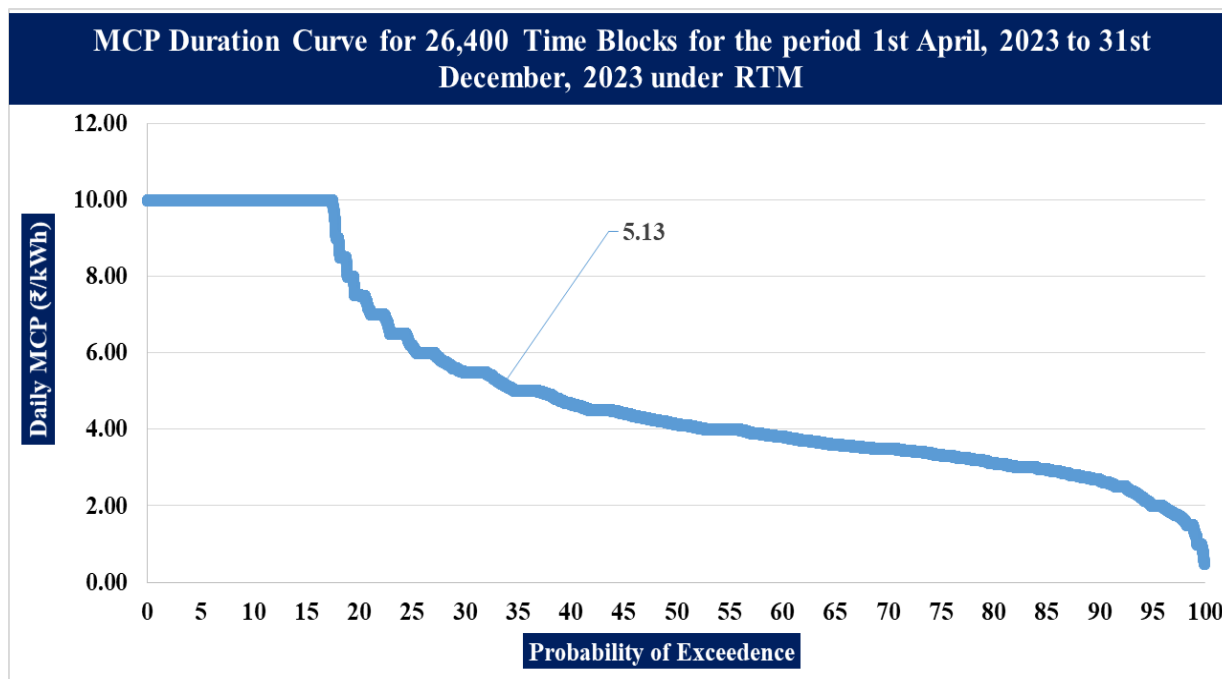


**Figure-7**

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



**Figure-8**



**Figure-9**

**10.6.** It can be seen in figure 8 above that in the MCP duration curve of December, 2023, for 30.00 % of the time the MCP was above the average MCP of the month (i.e. ₹ 4.70/kWh) and for 70.00 % of the time the MCP was below the average MCP of the month. Similarly, it can be seen in the cumulative MCP duration curve from 1<sup>st</sup> April, 2023 to 31<sup>st</sup> December, 2023 (figure 9) that, for 36.00 % of the time the Daily Avg. MCP was above the average MCP for the period (i.e. ₹ 5.13/kWh) and for 64.00 % of the time the Daily Avg. MCP was below the average MCP for the period.

**10.7.** In December, 2023, the maximum FSV occurred mostly during the **time period 16-19 Hrs** (on 13 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 07-08 Hrs** (on 14 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 17-19 Hrs** (on 11 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 02-03 Hrs** (on 13 no. of days).[Annexure X]

**10.8.** There was **no** real time curtailment in IEX, PXIL and HPX under Real Time Market (RTM) during December, 2023. Further, in November, 2023 **no** real time curtailment occurred IEX & HPX and no transaction took place in PXIL. Similarly, in December, 2022, there was **no** real time curtailment in IEX and no transaction took place in PXIL & HPX.

**10.9.** In December, 2023 there was **no** congestion in IEX, PXIL & HPX. Further, in November, 2023, there was **no** congestion in IEX & HPX and no transaction took place in PXIL. Similarly, in December, 2022, there was congestion of **0.01 MU** in the transmission system in IEX and no transaction took place in PXIL & HPX.

**10.10.** The **top 10 sellers** on the power exchanges under Real Time Market (RTM) in December, 2023 were **Madhya Pradesh, Bihar, Rajasthan, Uttar Pradesh, Odisha, Chhattisgarh, Assam, West Bengal, Maharashtra and Sembcorp Gayatri**, which constituted **66.62 %** of the market volume. [Annexure XI]

**10.11.** The **top 10 buyers** on the power exchanges under Real Time Market (RTM) in December, 2023 were **Telangana, Kerala, Punjab, Uttar Pradesh, Andhra Pradesh, Maharashtra, Odisha, J&K, DVC and Tamil Nadu**, which constituted **77.56 %** of the market volume. [Annexure XI]

**10.12.** The total volume of electricity purchased by Discoms/Licensees under RTM in December, 2023 was **2,310.24 MU**, which constituted **96.02 %** 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 December, 2023 was **1,918.71 MU**, which constituted **79.75 %** of total volume of electricity sold on the power exchanges.

\*\*\*\*\*

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

**Annexure-I****Final Scheduled Volume, Average MCP and Real-Time Curtailment under Day Ahead Market (DAM) for the months of April, 2023 to December, 2023 of IEX, PXIL and HPX.**

| Quarter                                   | Months                          | Final Scheduled Volume (MU) |              |              | Market Clearing Price (₹/kWh) |             |              | Real Time Curtailment (MU) |             |             |
|---|---------------------------------|-----------------------------|--------------|--------------|-------------------------------|-------------|--------------|----------------------------|-------------|-------------|
|   |                                 | IEX                         | PXIL         | HPX          | IEX                           | PXIL        | HPX          | IEX                        | PXIL        | HPX         |
| Quarter -I                                | April, 2023                     | 4,408.93                    | 0            | 0            | 5.08                          | 0           | 0            | 0                          | 0           | 0           |
|   | May, 2023                       | 3,999.76                    | 1.56         | 0            | 4.77                          | 6.94        | 0            | 0                          | 1.55        | 0           |
|   | June, 2023                      | 4,123.34                    | 0.03         | 0            | 5.16                          | 10.00       | 0            | 0                          | 0           | 0           |
| <b>Total Quarter -I</b>                   | <b>April - June, 2023</b>       | <b>12,532.03</b>            | <b>1.59</b>  | <b>0</b>     | <b>5.01</b>                   | <b>7.00</b> | <b>0</b>     | <b>0</b>                   | <b>1.55</b> | <b>0</b>    |
| Quarter -II                               | July, 2023                      | 3,966.20                    | 0            | 0            | 4.52                          | 0           | 0            | 0                          | 0           | 0           |
|   | August, 2023                    | 3,881.41                    | 16.34        | 0.27         | 6.43                          | 9.33        | 10.00        | 0                          | 0           | 0           |
|   | September, 2023                 | 3,405.42                    | 11.67        | 18.51        | 5.87                          | 10.00       | 10.00        | 0                          | 0           | 0           |
| <b>Total Quarter -II</b>                  | <b>July - September, 2023</b>   | <b>11,253.03</b>            | <b>28.01</b> | <b>18.78</b> | <b>5.59</b>                   | <b>9.61</b> | <b>10.00</b> | <b>0.00</b>                | <b>0.00</b> | <b>0.00</b> |
| Quarter -III                              | October, 2023                   | 4,688.35                    | 21.60        | 36.83        | 6.36                          | 10.00       | 10.00        | 0                          | 0           | 0           |
|   | November, 2023                  | 5,196.16                    | 3.12         | 2.15         | 4.16                          | 9.36        | 10.00        | 0                          | 0           | 0           |
|   | December, 2023                  | 4,757.55                    | 3.30         | 10.95        | 4.69                          | 9.54        | 10.00        | 0                          | 0           | 0           |
| <b>Total Quarter -III</b>                 | <b>October - December, 2023</b> | <b>14,642.06</b>            | <b>28.02</b> | <b>49.93</b> | <b>5.04</b>                   | <b>9.87</b> | <b>10.00</b> | <b>0.00</b>                | <b>0.00</b> | <b>0.00</b> |
| <b>Total April, 2023 – December, 2023</b> |                                 | <b>38,427.12</b>            | <b>57.62</b> | <b>68.71</b> | <b>5.19</b>                   | <b>9.66</b> | <b>10.00</b> | <b>0.00</b>                | <b>1.55</b> | <b>0.00</b> |

**Annexure-II**

| <b>Final Scheduled Volume under Term Ahead Market (TAM) for the months of April, 2023 to December, 2023 of IEX, PXIL and HPX (Delivery date basis)</b> |                                  |                                    |                 |                 |                  |
|--|----------------------------------|------------------------------------|-----------------|-----------------|------------------|
| <b>Quarter</b>   | <b>Months</b>                    | <b>Final Scheduled Volume (MU)</b> |                 |                 |                  |
|  |                                  | <b>IEX</b>                         | <b>PXIL</b>     | <b>HPX</b>      | <b>Total</b>     |
| <b>Quarter -I</b>  | April, 2023                      | 317.91                             | 111.30          | 321.83          | 751.04           |
|  | May, 2023                        | 607.72                             | 133.80          | 198.75          | 940.27           |
|  | June, 2023                       | 322.49                             | 172.80          | 95.24           | 590.53           |
| <b>Total Quarter – I</b>   | <b>April - June, 2023</b>        | <b>1,248.12</b>                    | <b>417.90</b>   | <b>615.82</b>   | <b>2,281.84</b>  |
| <b>Quarter -II</b>   | July, 2023                       | 287.60                             | 20.40           | 154.02          | 462.02           |
|  | August, 2023                     | 768.73                             | 287.36          | 355.21          | 1,411.30         |
|  | September, 2023                  | 1,131.71                           | 1,017.15        | 516.10          | 2,664.96         |
| <b>Total Quarter – II</b>  | <b>July - September, 2023</b>    | <b>2,188.04</b>                    | <b>1,324.91</b> | <b>1,025.33</b> | <b>4,538.28</b>  |
| <b>Quarter -III</b>  | October, 2023                    | 1,677.00                           | 611.28          | 842.29          | 3,130.57         |
|  | November, 2023                   | 642.96                             | 153.00          | 119.41          | 915.37           |
|  | December, 2023                   | 1071.93                            | 23.42           | 103.64          | 1198.99          |
| <b>Total Quarter – III</b>   | <b>October - December , 2023</b> | <b>3,391.89</b>                    | <b>787.70</b>   | <b>1,065.34</b> | <b>5,244.93</b>  |
| <b>Total April, 2023 – December, 2023</b>  |                                  | <b>6,828.05</b>                    | <b>2,530.51</b> | <b>2,706.49</b> | <b>12,065.05</b> |

## Top Five Entities (Buyers and Sellers) in Bilateral transactions in December, 2023

### (i) Top five Buyers in Bilateral transactions

| Entity Name                      | Direct          |               | Entity Name                      | Through Traders |               |
|----------------------------------|-----------------|---------------|----------------------------------|-----------------|---------------|
|                                  | (MU)            | Percent       |                                  | (MU)            | Percent       |
| Karnataka                        | 428.25          | 42.55%        | Maharashtra                      | 696.26          | 26.45%        |
| Gujarat                          | 153.41          | 15.24%        | Gujarat                          | 375.85          | 14.28%        |
| Jharkhand                        | 140.50          | 13.96%        | Rajasthan                        | 368.37          | 13.99%        |
| Rajasthan                        | 108.50          | 10.78%        | Himachal Pradesh                 | 314.95          | 11.97%        |
| Odisha                           | 50.96           | 5.06%         | Jammu Kashmir                    | 296.86          | 11.28%        |
| <b>Total Volume</b>              | <b>881.61</b>   | <b>87.59%</b> | <b>Total Volume</b>              | <b>2,052.29</b> | <b>77.97%</b> |
| <b>Total Volume in Bilateral</b> | <b>1,006.52</b> |               | <b>Total Volume in Bilateral</b> | <b>2,632.17</b> |               |

### (ii) Top five Sellers in Bilateral transactions

| Entity Name                                       | Direct          |               | Entity Name                      | Through Traders |               |
|---|-----------------|---------------|----------------------------------|-----------------|---------------|
|   | (MU)            | Percent       |                                  | (MU)            | Percent       |
| Jindal Power Limited, Stage-1                     | 153.41          | 15.24%        | Maharashtra                      | 519.86          | 19.75%        |
| Punjab  | 148.80          | 14.78%        | Rajasthan                        | 368.37          | 13.99%        |
| ADHUNIK POWER & NATURAL RESOURCES LIMITED         | 140.50          | 13.96%        | Gujarat                          | 340.74          | 12.95%        |
| Tamil Nadu  | 108.50          | 10.78%        | Himachal Pradesh                 | 315.60          | 11.99%        |
| NTPC Talcher Super Thermal Power Station Stage II | 79.05           | 7.85%         | Jindal Power Limited, Stage-2    | 235.20          | 8.94%         |
| <b>Total Volume</b>                               | <b>630.26</b>   | <b>62.62%</b> | <b>Total Volume</b>              | <b>1,779.77</b> | <b>67.62%</b> |
| <b>Total Volume in Bilateral</b>                  | <b>1,006.52</b> |               | <b>Total Volume in Bilateral</b> | <b>2,632.17</b> |               |



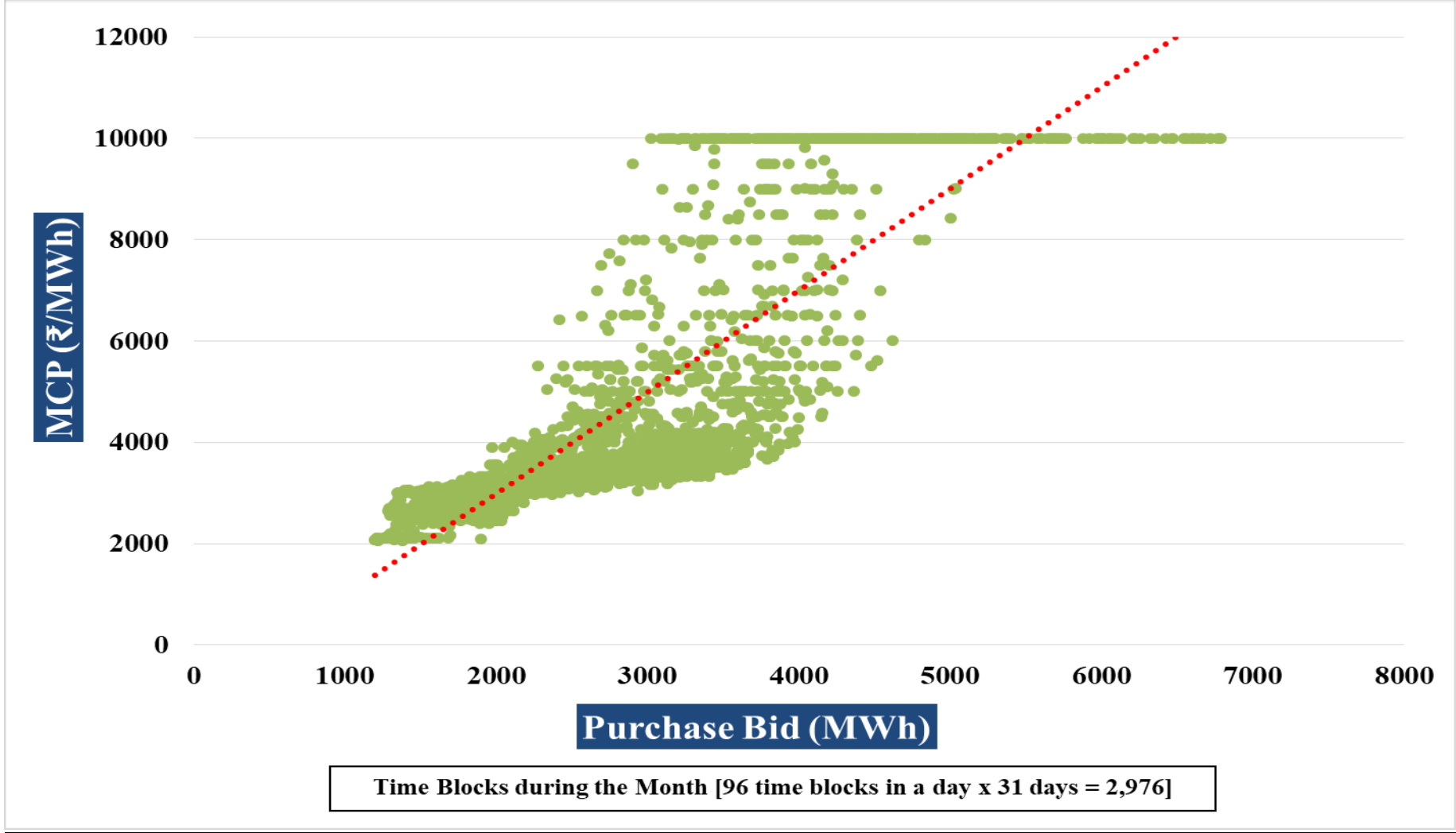
**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) under DAM**

| Date           | Morning MCP<br>(07:00-10:00) | Day MCP<br>(11:00-17:00) | Evening MCP<br>(18:00- 23:00) | Night MCP (01:00-<br>06:00, 23:00-24:00) | Maximum<br>MCP | Minimum<br>MCP | Average<br>MCP | Final Scheduled<br>Volume (MU) |
|----------------|------------------------------|--------------------------|-------------------------------|--|----------------|----------------|----------------|--------------------------------|
| 01-12-2023     | 3.70                         | 3.22                     | 5.87                          | 2.94                                     | 10.00          | 2.63           | 3.88           | 137.51                         |
| 02-12-2023     | 3.80                         | 3.21                     | 5.64                          | 3.01                                     | 10.00          | 2.66           | 3.86           | 157.59                         |
| 03-12-2023     | 3.53                         | 2.79                     | 3.38                          | 2.79                                     | 4.44           | 2.15           | 3.06           | 143.44                         |
| 04-12-2023     | 3.55                         | 3.17                     | 4.36                          | 2.51                                     | 8.00           | 2.05           | 3.34           | 135.43                         |
| 05-12-2023     | 3.80                         | 3.30                     | 4.17                          | 2.63                                     | 7.00           | 2.15           | 3.40           | 136.83                         |
| 06-12-2023     | 3.99                         | 3.22                     | 3.99                          | 2.40                                     | 6.50           | 2.15           | 3.30           | 139.12                         |
| 07-12-2023     | 4.85                         | 3.35                     | 5.50                          | 2.41                                     | 10.00          | 2.12           | 3.86           | 156.89                         |
| 08-12-2023     | 5.44                         | 3.57                     | 5.83                          | 2.39                                     | 10.00          | 2.10           | 4.10           | 170.06                         |
| 09-12-2023     | 4.32                         | 3.19                     | 5.52                          | 2.30                                     | 10.00          | 2.05           | 3.70           | 155.89                         |
| 10-12-2023     | 3.63                         | 2.83                     | 3.63                          | 2.51                                     | 5.04           | 2.10           | 3.07           | 140.89                         |
| 11-12-2023     | 4.81                         | 3.41                     | 5.95                          | 2.70                                     | 10.00          | 2.47           | 4.07           | 152.89                         |
| 12-12-2023     | 6.21                         | 3.48                     | 6.05                          | 2.85                                     | 10.00          | 2.53           | 4.39           | 161.22                         |
| 13-12-2023     | 7.85                         | 3.91                     | 6.10                          | 3.04                                     | 10.00          | 2.53           | 4.86           | 177.90                         |
| 14-12-2023     | 8.12                         | 3.94                     | 6.61                          | 3.01                                     | 10.00          | 2.65           | 5.03           | 166.84                         |
| 15-12-2023     | 8.01                         | 3.73                     | 6.39                          | 3.06                                     | 10.00          | 2.85           | 4.92           | 162.37                         |
| 16-12-2023     | 7.84                         | 3.94                     | 6.71                          | 3.06                                     | 10.00          | 2.96           | 5.03           | 151.36                         |
| 17-12-2023     | 4.70                         | 3.28                     | 3.75                          | 3.02                                     | 6.19           | 2.96           | 3.56           | 154.64                         |
| 18-12-2023     | 5.20                         | 3.47                     | 5.31                          | 2.76                                     | 10.00          | 2.34           | 4.01           | 161.14                         |
| 19-12-2023     | 6.90                         | 3.55                     | 6.00                          | 2.78                                     | 10.00          | 2.40           | 4.49           | 154.51                         |
| 20-12-2023     | 7.40                         | 3.91                     | 6.48                          | 2.72                                     | 10.00          | 2.45           | 4.79           | 149.17                         |
| 21-12-2023     | 8.49                         | 4.08                     | 6.80                          | 3.00                                     | 10.00          | 2.85           | 5.18           | 152.87                         |
| 22-12-2023     | 9.19                         | 5.29                     | 6.95                          | 3.13                                     | 10.00          | 3.00           | 5.72           | 151.94                         |
| 23-12-2023     | 8.96                         | 5.84                     | 7.36                          | 3.22                                     | 10.00          | 3.13           | 5.98           | 145.35                         |
| 24-12-2023     | 6.49                         | 3.51                     | 4.68                          | 2.97                                     | 9.85           | 2.81           | 4.14           | 151.08                         |
| 25-12-2023     | 6.68                         | 4.26                     | 5.90                          | 3.00                                     | 10.00          | 2.75           | 4.70           | 134.77                         |
| 26-12-2023     | 8.75                         | 5.77                     | 7.37                          | 3.09                                     | 10.00          | 3.00           | 5.89           | 149.64                         |
| 27-12-2023     | 9.24                         | 6.37                     | 7.30                          | 3.09                                     | 10.00          | 3.00           | 6.12           | 152.25                         |
| 28-12-2023     | 8.91                         | 5.92                     | 7.31                          | 3.07                                     | 10.00          | 3.00           | 5.93           | 164.04                         |
| 29-12-2023     | 8.55                         | 5.66                     | 6.93                          | 3.04                                     | 10.00          | 2.99           | 5.69           | 167.86                         |
| 30-12-2023     | 8.23                         | 6.12                     | 7.26                          | 3.02                                     | 10.00          | 2.88           | 5.85           | 157.73                         |
| 31-12-2023     | 7.76                         | 5.03                     | 5.68                          | 2.85                                     | 10.00          | 2.45           | 5.01           | 164.32                         |
| <b>Maximum</b> | <b>9.24</b>                  | <b>6.37</b>              | <b>7.37</b>                   | <b>3.22</b>                              | <b>10.00</b>   | <b>3.13</b>    | <b>6.12</b>    | <b>177.90</b>                  |
| <b>Minimum</b> | <b>3.53</b>                  | <b>2.79</b>              | <b>3.38</b>                   | <b>2.30</b>                              | <b>4.44</b>    | <b>2.05</b>    | <b>3.06</b>    | <b>134.77</b>                  |
| <b>Average</b> | <b>6.42</b>                  | <b>4.07</b>              | <b>5.83</b>                   | <b>2.85</b>                              | <b>9.26</b>    | <b>2.59</b>    | <b>4.55</b>    | <b>153.47</b>                  |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

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



**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 |
| 01-12-2023 | 07:30 - 07:45 | 2.36  | 17:15 - 17:30    | 10.00 | 02:00 - 02:15 | 0.97  | 03:15 - 03:30    | 2.63  |
| 02-12-2023 | 07:15 - 07:30 | 2.78  | 17:15 - 17:30    | 10.00 | 23:00 - 23:15 | 1.07  | 03:45 - 04:00    | 2.66  |
| 03-12-2023 | 07:30 - 07:45 | 2.40  | 17:45 - 18:00    | 4.44  | 22:45 - 23:00 | 1.14  | 13:15 - 13:30    | 2.15  |
| 04-12-2023 | 07:45 - 08:00 | 2.14  | 17:45 - 18:00    | 8.00  | 23:00 - 23:15 | 0.93  | 04:00 - 04:15    | 2.05  |
| 05-12-2023 | 08:15 - 08:30 | 2.26  | 17:45 - 18:00    | 7.00  | 23:15 - 23:30 | 0.87  | 03:30 - 03:45    | 2.15  |
| 06-12-2023 | 07:30 - 07:45 | 2.29  | 17:45 - 18:00    | 6.50  | 04:45 - 05:00 | 0.97  | 03:45 - 04:00    | 2.15  |
| 07-12-2023 | 07:15 - 07:30 | 2.70  | 17:30 - 17:45    | 10.00 | 23:45 - 24:00 | 1.02  | 03:30 - 03:45    | 2.12  |
| 08-12-2023 | 07:00 - 07:15 | 2.85  | 17:00 - 17:15    | 10.00 | 00:45 - 01:00 | 1.11  | 03:30 - 03:45    | 2.10  |
| 09-12-2023 | 07:00 - 07:15 | 2.70  | 17:15 - 17:30    | 10.00 | 03:15 - 03:30 | 1.03  | 03:45 - 04:00    | 2.05  |
| 10-12-2023 | 07:15 - 07:30 | 2.39  | 17:45 - 18:00    | 5.04  | 21:45 - 22:00 | 1.02  | 13:15 - 13:30    | 2.10  |
| 11-12-2023 | 07:15 - 07:30 | 2.53  | 17:15 - 17:30    | 10.00 | 23:15 - 23:30 | 1.05  | 04:00 - 04:15    | 2.47  |
| 12-12-2023 | 07:15 - 07:30 | 2.61  | 17:00 - 17:15    | 10.00 | 23:15 - 23:30 | 1.02  | 03:15 - 03:30    | 2.53  |
| 13-12-2023 | 06:45 - 07:00 | 2.48  | 07:00 - 07:15    | 10.00 | 17:30 - 17:45 | 1.27  | 03:30 - 03:45    | 2.53  |
| 14-12-2023 | 07:00 - 07:15 | 2.47  | 07:00 - 07:15    | 10.00 | 17:30 - 17:45 | 1.28  | 03:45 - 04:00    | 2.65  |
| 15-12-2023 | 07:15 - 07:30 | 2.53  | 07:00 - 07:15    | 10.00 | 17:45 - 18:00 | 1.19  | 02:45 - 03:00    | 2.85  |
| 16-12-2023 | 06:45 - 07:00 | 2.40  | 07:15 - 07:30    | 10.00 | 17:30 - 17:45 | 0.94  | 03:15 - 03:30    | 2.96  |
| 17-12-2023 | 07:30 - 07:45 | 2.63  | 08:15 - 08:30    | 6.19  | 23:00 - 23:15 | 1.18  | 04:00 - 04:15    | 2.96  |
| 18-12-2023 | 07:30 - 07:45 | 2.48  | 17:30 - 17:45    | 10.00 | 23:00 - 23:15 | 1.10  | 04:00 - 04:15    | 2.34  |
| 19-12-2023 | 06:45 - 07:00 | 2.38  | 07:45 - 08:00    | 10.00 | 23:00 - 23:15 | 1.14  | 02:30 - 02:45    | 2.40  |
| 20-12-2023 | 06:45 - 07:00 | 2.43  | 07:45 - 08:00    | 10.00 | 23:15 - 23:30 | 1.12  | 03:45 - 04:00    | 2.45  |
| 21-12-2023 | 06:30 - 06:45 | 2.37  | 07:00 - 07:15    | 10.00 | 17:30 - 17:45 | 1.10  | 03:45 - 04:00    | 2.85  |
| 22-12-2023 | 15:30 - 15:45 | 2.48  | 06:45 - 07:00    | 10.00 | 17:15 - 17:30 | 0.95  | 04:00 - 04:15    | 3.00  |
| 23-12-2023 | 16:00 - 16:15 | 2.36  | 06:45 - 07:00    | 10.00 | 17:00 - 17:15 | 0.92  | 04:00 - 04:15    | 3.13  |
| 24-12-2023 | 07:15 - 07:30 | 2.37  | 17:30 - 17:45    | 9.85  | 22:45 - 23:00 | 1.17  | 03:45 - 04:00    | 2.81  |
| 25-12-2023 | 07:00 - 07:15 | 1.96  | 17:15 - 17:30    | 10.00 | 17:00 - 17:15 | 0.88  | 02:45 - 03:00    | 2.75  |
| 26-12-2023 | 15:45 - 16:00 | 2.36  | 07:00 - 07:15    | 10.00 | 17:15 - 17:30 | 0.84  | 03:15 - 03:30    | 3.00  |
| 27-12-2023 | 15:45 - 16:00 | 2.27  | 06:45 - 07:00    | 10.00 | 17:15 - 17:30 | 0.87  | 02:00 - 02:15    | 3.00  |
| 28-12-2023 | 07:00 - 07:15 | 2.60  | 07:00 - 07:15    | 10.00 | 17:30 - 17:45 | 0.84  | 02:45 - 03:00    | 3.00  |
| 29-12-2023 | 07:15 - 07:30 | 2.71  | 07:00 - 07:15    | 10.00 | 17:30 - 17:45 | 0.91  | 04:00 - 04:15    | 2.99  |
| 30-12-2023 | 07:15 - 07:30 | 2.75  | 07:15 - 07:30    | 10.00 | 17:30 - 17:45 | 0.89  | 02:45 - 03:00    | 2.88  |
| 31-12-2023 | 07:30 - 07:45 | 3.13  | 07:30 - 07:45    | 10.00 | 23:00 - 23:15 | 1.17  | 03:45 - 04:00    | 2.45  |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

**Annexure-VII**

| Sellers and Buyers under Day Ahead Market (DAM) in December, 2023 |                    |        |             |                       |          |             |
|---|--------------------|--------|-------------|-----------------------|----------|-------------|
| S. No.  | Entity Name        | Sell   |             | Entity Name           | Purchase |             |
|   |                    | (MU)   | Percent (%) |                       | (MU)     | Percent (%) |
| 1   | Chhattisgarh       | 610.42 | 12.79%      | Telangana             | 986.25   | 20.67%      |
| 2   | Uttar Pradesh      | 565.30 | 11.85%      | Gujarat               | 642.62   | 13.47%      |
| 3   | Mahan Energy       | 444.39 | 9.31%       | Maharashtra           | 391.04   | 8.19%       |
| 4   | Madhya Pradesh     | 349.95 | 7.33%       | Andhra Pradesh        | 343.55   | 7.20%       |
| 5   | JITPL              | 288.41 | 6.04%       | Punjab                | 288.23   | 6.04%       |
| 6   | Adani Power        | 241.40 | 5.06%       | Uttar Pradesh         | 275.35   | 5.77%       |
| 7   | Odisha             | 214.71 | 4.50%       | Tamil Nadu            | 250.26   | 5.24%       |
| 8   | DB Power           | 199.84 | 4.19%       | Druk Green Power      | 249.87   | 5.24%       |
| 9   | Bihar              | 125.58 | 2.63%       | J&K                   | 198.24   | 4.15%       |
| 10  | Adani Power        | 120.77 | 2.53%       | Uttarakhand           | 155.59   | 3.26%       |
| 11  | Gujarat            | 119.71 | 2.51%       | West Bengal           | 110.24   | 2.31%       |
| 12  | Jindal Power Ltd.  | 106.35 | 2.23%       | Haryana               | 96.22    | 2.02%       |
| 13  | Rajasthan          | 105.52 | 2.21%       | ArcelorMittal Nippon  | 79.29    | 1.66%       |
| 14  | Maharashtra        | 99.84  | 2.09%       | Odisha                | 72.89    | 1.53%       |
| 15  | ACBIL              | 97.81  | 2.05%       | Daman & Diu - Dadra & | 70.21    | 1.47%       |
| 16  | Jindal Power       | 92.48  | 1.94%       | Rajasthan             | 67.70    | 1.42%       |
| 17  | Jaypee Nigrie      | 85.05  | 1.78%       | NVVN (SNA) - NEA      | 67.40    | 1.41%       |
| 18  | Himachal Pradesh   | 71.99  | 1.51%       | Karnataka             | 65.35    | 1.37%       |
| 19  | Sembcorp Gayatri   | 71.24  | 1.49%       | Madhya Pradesh        | 63.26    | 1.33%       |
| 20  | West Bengal        | 67.05  | 1.41%       | Delhi                 | 52.32    | 1.10%       |
| 21  | Haryana            | 63.79  | 1.34%       | Kerala                | 45.92    | 0.96%       |
| 22  | Jindal Steel       | 59.97  | 1.26%       | Meghalaya             | 26.17    | 0.55%       |
| 23  | Delhi              | 59.11  | 1.24%       | Railways              | 25.45    | 0.53%       |
| 24  | Pondicherry        | 52.92  | 1.11%       | DVC                   | 21.64    | 0.45%       |
| 25  | Telangana          | 32.35  | 0.68%       | MB Power              | 17.49    | 0.37%       |
| 26  | Tamil Nadu         | 32.12  | 0.67%       | Goa WR                | 11.61    | 0.24%       |
| 27  | Barh Stg-2         | 28.31  | 0.59%       | NEA-NR                | 11.06    | 0.23%       |
| 28  | Andhra Pradesh     | 22.54  | 0.47%       | Jharkhand             | 6.14     | 0.13%       |
| 29  | Renew Surya Ravi   | 22.44  | 0.47%       | Himachal Pradesh      | 5.87     | 0.12%       |
| 30  | DVC                | 20.66  | 0.43%       | Assam                 | 4.74     | 0.10%       |
| 31  | Karcham Wangtoo    | 19.21  | 0.40%       | Sikkim                | 4.34     | 0.09%       |
| 32  | SKS Power          | 18.36  | 0.38%       | Chhattisgarh          | 3.63     | 0.08%       |
| 33  | Jhabua Power       | 17.67  | 0.37%       | Goa SR                | 1.85     | 0.04%       |
| 34  | AD Hydro           | 15.52  | 0.33%       | Chandigarh            | 1.77     | 0.04%       |
| 35  | ADANI WIND         | 14.23  | 0.30%       | BHARAT ALUMINIUM      | 1.11     | 0.02%       |
| 36  | Chandigarh         | 12.97  | 0.27%       | Nagaland              | 0.95     | 0.02%       |
| 37  | Maruti Clean Coal  | 10.64  | 0.22%       | Arunachal Pradesh     | 0.78     | 0.02%       |
| 38  | GMR Warora         | 10.63  | 0.22%       | Bihar                 | 0.43     | 0.01%       |
| 39  | Shree Cement       | 9.16   | 0.19%       | Manipur               | 0.22     | 0.005%      |
| 40  | MB Power           | 9.04   | 0.19%       | Tripura               | 0.04     | 0.001%      |
| 41  | RKM Power          | 7.83   | 0.16%       |                       |          |             |
| 42  | Farakka            | 7.14   | 0.15%       |                       |          |             |
| 43  | Darlipalli         | 6.72   | 0.14%       |                       |          |             |
| 44  | Sainj HEP          | 6.49   | 0.14%       |                       |          |             |
| 45  | Sorang HEP,        | 6.18   | 0.13%       |                       |          |             |
| 46  | IL&FS              | 6.13   | 0.13%       |                       |          |             |
| 47  | NVVN (SNA) -       | 5.90   | 0.12%       |                       |          |             |
| 48  | Meghalaya          | 5.35   | 0.11%       |                       |          |             |
| 49  | ADANI SOLAR        | 5.30   | 0.11%       |                       |          |             |
| 50  | Adani Green Energy | 4.04   | 0.08%       |                       |          |             |
| 51  | Farakka Stg 3      | 3.67   | 0.08%       |                       |          |             |
| 52  | Adhunik Power      | 3.43   | 0.07%       |                       |          |             |
| 53  | BALCO 2            | 3.42   | 0.07%       |                       |          |             |

|                               |                      |                 |               |                               |                 |               |
|-------------------------------|----------------------|-----------------|---------------|-------------------------------|-----------------|---------------|
| 54                            | RENEW SURYA          | 3.38            | 0.07%         |                               |                 |               |
| 55                            | Nagaland             | 3.19            | 0.07%         |                               |                 |               |
| 56                            | Ostro Kannada        | 2.97            | 0.06%         |                               |                 |               |
| 57                            | Amp Energy Green     | 2.87            | 0.06%         |                               |                 |               |
| 58                            | J&K                  | 2.82            | 0.06%         |                               |                 |               |
| 59                            | Palatana             | 2.80            | 0.06%         |                               |                 |               |
| 60                            | Singoli Bhagwati     | 2.69            | 0.06%         |                               |                 |               |
| 61                            | Uttarakhand          | 2.45            | 0.05%         |                               |                 |               |
| 62                            | Nabinagar Power      | 2.33            | 0.05%         |                               |                 |               |
| 63                            | NEA-NR               | 2.26            | 0.05%         |                               |                 |               |
| 64                            | Kerala               | 2.20            | 0.05%         |                               |                 |               |
| 65                            | Barh STPS Stg - I    | 2.12            | 0.04%         |                               |                 |               |
| 66                            | Mizoram              | 2.09            | 0.04%         |                               |                 |               |
| 67                            | Sikkim               | 2.09            | 0.04%         |                               |                 |               |
| 68                            | Manipur              | 1.92            | 0.04%         |                               |                 |               |
| 69                            | Bongaigaon           | 1.74            | 0.04%         |                               |                 |               |
| 70                            | Goa WR               | 1.55            | 0.03%         |                               |                 |               |
| 71                            | Dhariwal ISTS        | 1.40            | 0.03%         |                               |                 |               |
| 72                            | Kameng HEP           | 1.37            | 0.03%         |                               |                 |               |
| 73                            | Talcher Stg-2        | 1.15            | 0.02%         |                               |                 |               |
| 74                            | Punjab               | 0.96            | 0.02%         |                               |                 |               |
| 75                            | Ramagundam           | 0.88            | 0.02%         |                               |                 |               |
| 76                            | Kahalgaon            | 0.83            | 0.02%         |                               |                 |               |
| 77                            | Korba                | 0.72            | 0.02%         |                               |                 |               |
| 78                            | Sipat Stg-1          | 0.72            | 0.02%         |                               |                 |               |
| 79                            | Rihand-III           | 0.66            | 0.01%         |                               |                 |               |
| 80                            | Lanco Budhil         | 0.58            | 0.01%         |                               |                 |               |
| 81                            | NTPC Kudgi           | 0.53            | 0.01%         |                               |                 |               |
| 82                            | NTPC Sholapur        | 0.52            | 0.01%         |                               |                 |               |
| 83                            | Kopili Power Station | 0.52            | 0.01%         |                               |                 |               |
| 84                            | Unchahar-IV          | 0.51            | 0.01%         |                               |                 |               |
| 85                            | NTPC Lara            | 0.48            | 0.01%         |                               |                 |               |
| 86                            | KBUNL(MTPS-II)       | 0.44            | 0.01%         |                               |                 |               |
| 87                            | Unchahar-II          | 0.33            | 0.01%         |                               |                 |               |
| 88                            | Simhadri FSP 15      | 0.32            | 0.01%         |                               |                 |               |
| 89                            | Kahalgaon-II         | 0.32            | 0.01%         |                               |                 |               |
| 90                            | Simhadri Stg-2       | 0.24            | 0.005%        |                               |                 |               |
| 91                            | NTPC Simhadri 25     | 0.22            | 0.005%        |                               |                 |               |
| 92                            | Tripura              | 0.19            | 0.004%        |                               |                 |               |
| 93                            | Simhapuri Energy     | 0.19            | 0.004%        |                               |                 |               |
| 94                            | Talcher              | 0.18            | 0.004%        |                               |                 |               |
| 95                            | WIND FIVE            | 0.17            | 0.004%        |                               |                 |               |
| 96                            | Dadri Stg-2          | 0.17            | 0.004%        |                               |                 |               |
| 97                            | Singrauli            | 0.14            | 0.003%        |                               |                 |               |
| 98                            | Unchahar-III         | 0.13            | 0.003%        |                               |                 |               |
| 99                            | Arunachal Pradesh    | 0.07            | 0.001%        |                               |                 |               |
| 100                           | NTPC Gadarwara       | 0.06            | 0.001%        |                               |                 |               |
| 101                           | Rihand-II            | 0.06            | 0.001%        |                               |                 |               |
| 102                           | Khargone STPP        | 0.05            | 0.001%        |                               |                 |               |
| 103                           | Ramagundam Stg-1     | 0.04            | 0.001%        |                               |                 |               |
| 104                           | GMR Kamalanga        | 0.03            | 0.001%        |                               |                 |               |
| 105                           | NTPC Telangana       | 0.02            | 0.0005%       |                               |                 |               |
| 106                           | Unchahar-I           | 0.02            | 0.0004%       |                               |                 |               |
| 107                           | NTPC North           | 0.02            | 0.0003%       |                               |                 |               |
| 108                           | Korba Stg 3          | 0.01            | 0.0001%       |                               |                 |               |
| <b>Total Volume of top 10</b> |                      | <b>3,160.76</b> | <b>66.24%</b> | <b>Total Volume of top 10</b> | <b>3,781.01</b> | <b>79.24%</b> |
| <b>Total Volume in PXs</b>    |                      | <b>4,771.81</b> |               | <b>Total Volume in PXs</b>    | <b>4,771.81</b> |               |

**Annexure-VIII**

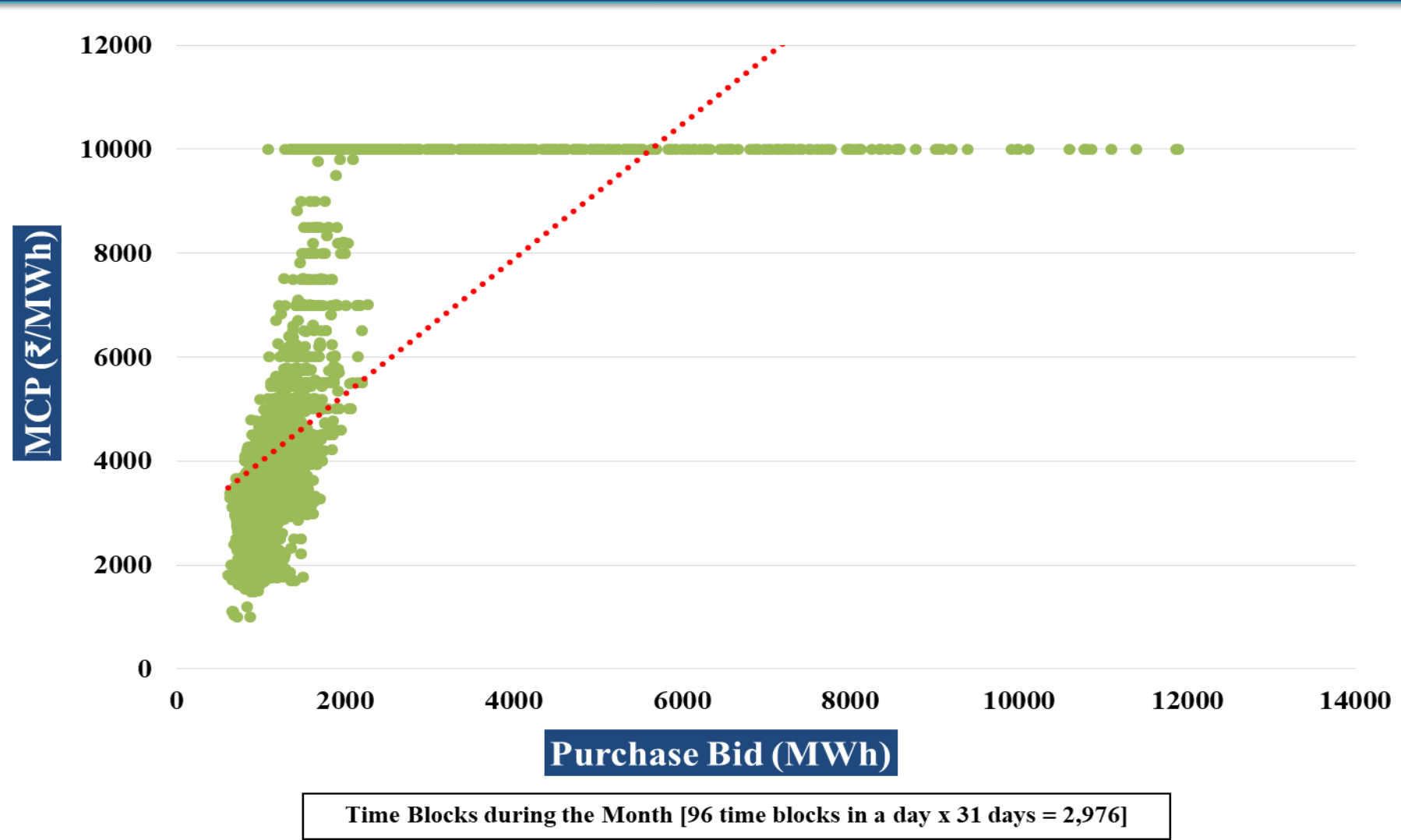
**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) under RTM**

| Date           | Morning MCP<br>(07:00-10:00) | Day MCP<br>(11:00-17:00) | Evening MCP<br>(18:00- 23:00) | Night MCP (01:00-<br>06:00, 23:00-24:00) | Maximum<br>MCP | Minimum<br>MCP | Average<br>MCP | Final Scheduled<br>Volume (MU) |
|----------------|------------------------------|--------------------------|-------------------------------|--|----------------|----------------|----------------|--------------------------------|
| 01-12-2023     | 3.90                         | 2.91                     | 3.86                          | 2.48                                     | 5.75           | 1.68           | 3.19           | 109.42                         |
| 02-12-2023     | 3.77                         | 2.93                     | 4.48                          | 2.45                                     | 10.00          | 0.99           | 3.32           | 96.07                          |
| 03-12-2023     | 3.58                         | 2.86                     | 3.41                          | 2.51                                     | 4.05           | 1.76           | 3.01           | 86.78                          |
| 04-12-2023     | 4.04                         | 3.12                     | 3.66                          | 2.13                                     | 5.12           | 1.50           | 3.12           | 101.50                         |
| 05-12-2023     | 4.05                         | 3.08                     | 3.76                          | 2.12                                     | 5.50           | 1.76           | 3.13           | 99.09                          |
| 06-12-2023     | 4.82                         | 3.41                     | 5.64                          | 2.11                                     | 10.00          | 1.58           | 3.82           | 88.76                          |
| 07-12-2023     | 4.46                         | 3.51                     | 5.15                          | 2.39                                     | 10.00          | 1.76           | 3.75           | 101.08                         |
| 08-12-2023     | 5.24                         | 3.52                     | 5.72                          | 2.79                                     | 10.00          | 2.00           | 4.14           | 80.11                          |
| 09-12-2023     | 5.93                         | 3.88                     | 6.18                          | 3.19                                     | 10.00          | 2.31           | 4.59           | 80.35                          |
| 10-12-2023     | 4.12                         | 3.32                     | 3.85                          | 3.31                                     | 5.77           | 2.50           | 3.58           | 85.16                          |
| 11-12-2023     | 5.07                         | 3.88                     | 6.61                          | 2.61                                     | 10.00          | 1.75           | 4.39           | 78.09                          |
| 12-12-2023     | 7.43                         | 3.98                     | 6.76                          | 3.24                                     | 10.00          | 2.81           | 5.03           | 71.41                          |
| 13-12-2023     | 7.94                         | 4.67                     | 7.02                          | 2.95                                     | 10.00          | 1.71           | 5.30           | 74.54                          |
| 14-12-2023     | 7.28                         | 4.68                     | 6.96                          | 3.22                                     | 10.00          | 2.95           | 5.26           | 72.91                          |
| 15-12-2023     | 8.02                         | 5.38                     | 6.17                          | 3.13                                     | 10.00          | 2.58           | 5.36           | 70.15                          |
| 16-12-2023     | 7.03                         | 5.02                     | 6.30                          | 3.05                                     | 10.00          | 2.58           | 5.10           | 77.74                          |
| 17-12-2023     | 3.98                         | 3.42                     | 3.35                          | 2.72                                     | 4.27           | 1.60           | 3.29           | 65.28                          |
| 18-12-2023     | 6.26                         | 4.42                     | 5.23                          | 1.82                                     | 10.00          | 1.00           | 4.17           | 69.21                          |
| 19-12-2023     | 5.58                         | 3.82                     | 5.41                          | 2.49                                     | 10.00          | 1.71           | 4.12           | 62.61                          |
| 20-12-2023     | 8.08                         | 5.44                     | 6.74                          | 2.96                                     | 10.00          | 1.75           | 5.48           | 65.47                          |
| 21-12-2023     | 8.46                         | 6.72                     | 7.63                          | 3.14                                     | 10.00          | 2.30           | 6.19           | 71.15                          |
| 22-12-2023     | 9.00                         | 7.73                     | 7.63                          | 3.19                                     | 10.00          | 2.86           | 6.59           | 60.40                          |
| 23-12-2023     | 9.35                         | 7.15                     | 6.46                          | 3.22                                     | 10.00          | 2.00           | 6.20           | 68.46                          |
| 24-12-2023     | 5.00                         | 5.11                     | 5.98                          | 2.83                                     | 10.00          | 2.11           | 4.64           | 75.45                          |
| 25-12-2023     | 8.02                         | 5.64                     | 7.00                          | 2.91                                     | 10.00          | 2.00           | 5.58           | 72.81                          |
| 26-12-2023     | 8.56                         | 6.12                     | 7.32                          | 3.15                                     | 10.00          | 2.81           | 5.96           | 64.63                          |
| 27-12-2023     | 8.43                         | 5.64                     | 6.56                          | 2.92                                     | 10.00          | 2.00           | 5.54           | 74.52                          |
| 28-12-2023     | 7.96                         | 5.55                     | 7.57                          | 2.62                                     | 10.00          | 1.71           | 5.60           | 67.09                          |
| 29-12-2023     | 8.44                         | 6.79                     | 7.19                          | 3.09                                     | 10.00          | 2.42           | 6.09           | 69.49                          |
| 30-12-2023     | 8.00                         | 7.50                     | 6.82                          | 2.79                                     | 10.00          | 2.00           | 6.04           | 71.65                          |
| 31-12-2023     | 5.83                         | 4.04                     | 4.21                          | 2.91                                     | 10.00          | 2.15           | 4.05           | 73.20                          |
| <b>Maximum</b> | <b>9.35</b>                  | <b>7.73</b>              | <b>7.63</b>                   | <b>3.31</b>                              | <b>10.00</b>   | <b>2.95</b>    | <b>6.59</b>    | <b>109.42</b>                  |
| <b>Minimum</b> | <b>3.58</b>                  | <b>2.86</b>              | <b>3.35</b>                   | <b>1.82</b>                              | <b>4.05</b>    | <b>0.99</b>    | <b>3.01</b>    | <b>60.40</b>                   |
| <b>Average</b> | <b>6.37</b>                  | <b>4.69</b>              | <b>5.83</b>                   | <b>2.79</b>                              | <b>9.05</b>    | <b>2.02</b>    | <b>4.70</b>    | <b>77.57</b>                   |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

### Comparison of MCP w.r.t. Purchase Bid for 2,976 Time Blocks during the month of December, 2023 under 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 |
| 01-12-2023 | 14:45 - 15:00 | 1.54  | 18:00 - 18:15    | 5.75  | 00:30 - 00:45 | 0.74  | 01:00 - 01:15    | 1.68  |
| 02-12-2023 | 18:45 - 19:00 | 1.54  | 17:30 - 17:45    | 10.00 | 08:00 - 08:15 | 0.69  | 13:30 - 13:45    | 0.99  |
| 03-12-2023 | 17:00 - 17:15 | 1.23  | 08:15 - 08:30    | 4.05  | 08:00 - 08:15 | 0.59  | 02:00 - 02:15    | 1.76  |
| 04-12-2023 | 18:15 - 18:30 | 1.43  | 08:15 - 08:30    | 5.12  | 23:30 - 23:45 | 0.77  | 01:15 - 01:30    | 1.50  |
| 05-12-2023 | 18:30 - 18:45 | 1.33  | 17:30 - 17:45    | 5.50  | 23:45 - 24:00 | 0.71  | 03:30 - 03:45    | 1.76  |
| 06-12-2023 | 16:45 - 17:00 | 1.49  | 17:15 - 17:30    | 10.00 | 23:00 - 23:15 | 0.66  | 02:15 - 02:30    | 1.58  |
| 07-12-2023 | 18:15 - 18:30 | 1.58  | 17:15 - 17:30    | 10.00 | 13:00 - 13:15 | 0.74  | 02:15 - 02:30    | 1.76  |
| 08-12-2023 | 18:30 - 18:45 | 1.29  | 17:15 - 17:30    | 10.00 | 06:45 - 07:00 | 0.55  | 03:00 - 03:15    | 2.00  |
| 09-12-2023 | 16:30 - 16:45 | 1.29  | 17:00 - 17:15    | 10.00 | 10:15 - 10:30 | 0.58  | 03:00 - 03:15    | 2.31  |
| 10-12-2023 | 17:00 - 17:15 | 1.26  | 07:45 - 08:00    | 5.77  | 10:15 - 10:30 | 0.61  | 13:15 - 13:30    | 2.50  |
| 11-12-2023 | 16:30 - 16:45 | 1.22  | 17:00 - 17:15    | 10.00 | 12:45 - 13:00 | 0.47  | 02:45 - 03:00    | 1.75  |
| 12-12-2023 | 19:45 - 20:00 | 1.32  | 07:30 - 07:45    | 10.00 | 08:00 - 08:15 | 0.45  | 03:15 - 03:30    | 2.81  |
| 13-12-2023 | 10:45 - 11:00 | 1.01  | 07:15 - 07:30    | 10.00 | 08:00 - 08:15 | 0.48  | 01:30 - 01:45    | 1.71  |
| 14-12-2023 | 19:45 - 20:00 | 1.03  | 07:00 - 07:15    | 10.00 | 18:00 - 18:15 | 0.41  | 04:00 - 04:15    | 2.95  |
| 15-12-2023 | 07:30 - 07:45 | 1.13  | 08:00 - 08:15    | 10.00 | 22:45 - 23:00 | 0.46  | 03:15 - 03:30    | 2.58  |
| 16-12-2023 | 11:00 - 11:15 | 1.12  | 07:30 - 07:45    | 10.00 | 20:30 - 20:45 | 0.52  | 02:30 - 02:45    | 2.58  |
| 17-12-2023 | 17:00 - 17:15 | 0.96  | 07:15 - 07:30    | 4.27  | 07:15 - 07:30 | 0.51  | 23:45 - 24:00    | 1.60  |
| 18-12-2023 | 10:15 - 10:30 | 0.97  | 09:00 - 09:15    | 10.00 | 22:15 - 22:30 | 0.45  | 02:30 - 02:45    | 1.00  |
| 19-12-2023 | 18:15 - 18:30 | 0.96  | 17:15 - 17:30    | 10.00 | 15:15 - 15:30 | 0.42  | 01:45 - 02:00    | 1.71  |
| 20-12-2023 | 14:30 - 14:45 | 1.17  | 07:30 - 07:45    | 10.00 | 17:30 - 17:45 | 0.33  | 02:30 - 02:45    | 1.75  |
| 21-12-2023 | 12:00 - 12:15 | 1.25  | 07:15 - 07:30    | 10.00 | 17:15 - 17:30 | 0.32  | 02:45 - 03:00    | 2.30  |
| 22-12-2023 | 14:00 - 14:15 | 0.93  | 06:45 - 07:00    | 10.00 | 17:15 - 17:30 | 0.23  | 02:15 - 02:30    | 2.86  |
| 23-12-2023 | 19:30 - 19:45 | 1.01  | 06:30 - 06:45    | 10.00 | 17:15 - 17:30 | 0.34  | 21:45 - 22:00    | 2.00  |
| 24-12-2023 | 06:00 - 06:15 | 1.15  | 16:30 - 16:45    | 10.00 | 17:30 - 17:45 | 0.54  | 02:30 - 02:45    | 2.11  |
| 25-12-2023 | 16:00 - 16:15 | 1.28  | 07:45 - 08:00    | 10.00 | 17:30 - 17:45 | 0.41  | 02:15 - 02:30    | 2.00  |
| 26-12-2023 | 20:00 - 20:15 | 1.12  | 07:15 - 07:30    | 10.00 | 17:30 - 17:45 | 0.32  | 23:45 - 24:00    | 2.81  |
| 27-12-2023 | 11:30 - 11:45 | 1.33  | 07:15 - 07:30    | 10.00 | 17:30 - 17:45 | 0.42  | 23:45 - 24:00    | 2.00  |
| 28-12-2023 | 11:30 - 11:45 | 1.00  | 07:30 - 07:45    | 10.00 | 17:30 - 17:45 | 0.38  | 02:15 - 02:30    | 1.71  |
| 29-12-2023 | 20:00 - 20:15 | 1.07  | 07:15 - 07:30    | 10.00 | 18:15 - 18:30 | 0.47  | 03:00 - 03:15    | 2.42  |
| 30-12-2023 | 19:30 - 19:45 | 1.15  | 07:30 - 07:45    | 10.00 | 23:00 - 23:15 | 0.49  | 03:00 - 03:15    | 2.00  |
| 31-12-2023 | 09:45 - 10:00 | 1.30  | 09:00 - 09:15    | 10.00 | 00:00 - 00:15 | 0.49  | 02:45 - 03:00    | 2.15  |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)



| Sellers and Buyers under Real Time Market (RTM) in December, 2023 |                   |        |             |                          |          |             |
|---|-------------------|--------|-------------|--------------------------|----------|-------------|
| S. No.  | Entity Name       | Sell   |             | Entity Name              | Purchase |             |
|   |                   | (MU)   | Percent (%) |                          | (MU)     | Percent (%) |
| 1   | Madhya Pradesh    | 406.83 | 16.91%      | Telangana                | 398.88   | 16.58%      |
| 2   | Bihar             | 314.25 | 13.06%      | Kerala                   | 331.59   | 13.78%      |
| 3   | Rajasthan         | 210.37 | 8.74%       | Punjab                   | 232.88   | 9.68%       |
| 4   | Uttar Pradesh     | 147.55 | 6.13%       | Uttar Pradesh            | 169.98   | 7.06%       |
| 5   | Odisha            | 109.74 | 4.56%       | Andhra Pradesh           | 137.20   | 5.70%       |
| 6   | Chhattisgarh      | 109.73 | 4.56%       | Maharashtra              | 131.16   | 5.45%       |
| 7   | Assam             | 101.19 | 4.21%       | Odisha                   | 128.53   | 5.34%       |
| 8   | West Bengal       | 96.31  | 4.00%       | J&K                      | 126.16   | 5.24%       |
| 9   | Maharashtra       | 56.24  | 2.34%       | DVC                      | 109.78   | 4.56%       |
| 10  | Sembcorp Gayatri  | 50.79  | 2.11%       | Tamil Nadu               | 99.98    | 4.16%       |
| 11  | Jharkhand         | 48.43  | 2.01%       | Gujarat                  | 95.81    | 3.98%       |
| 12  | Delhi             | 41.54  | 1.73%       | West Bengal              | 74.07    | 3.08%       |
| 13  | Tripura           | 33.41  | 1.39%       | Rajasthan                | 50.04    | 2.08%       |
| 14  | Tamil Nadu        | 30.68  | 1.28%       | Karnataka                | 45.60    | 1.90%       |
| 15  | Andhra Pradesh    | 27.73  | 1.15%       | Delhi                    | 38.15    | 1.59%       |
| 16  | SKS Power         | 23.91  | 0.99%       | Simhapuri Energy         | 29.13    | 1.21%       |
| 17  | Telangana         | 23.66  | 0.98%       | Himachal Pradesh         | 26.35    | 1.10%       |
| 18  | Haryana           | 21.47  | 0.89%       | ArcelorMittal Nippon     | 25.51    | 1.06%       |
| 19  | DVC               | 19.80  | 0.82%       | Haryana                  | 21.45    | 0.89%       |
| 20  | J&K               | 19.04  | 0.79%       | Jharkhand                | 19.28    | 0.80%       |
| 21  | Jhabua Power      | 18.89  | 0.79%       | Uttarakhand              | 19.04    | 0.79%       |
| 22  | Gujarat           | 17.93  | 0.75%       | Daman & Diu - Dadra &    | 18.39    | 0.76%       |
| 23  | Rihand-I          | 16.74  | 0.70%       | Meghalaya                | 11.20    | 0.47%       |
| 24  | Himachal Pradesh  | 16.71  | 0.69%       | MB Power                 | 9.34     | 0.39%       |
| 25  | Nabinagar Power   | 16.69  | 0.69%       | Madhya Pradesh           | 8.03     | 0.33%       |
| 26  | Uttarakhand       | 16.41  | 0.68%       | NVVN (SNA) - NEA         | 6.72     | 0.28%       |
| 27  | Pondicherry       | 16.35  | 0.68%       | Jindal Steel             | 5.63     | 0.23%       |
| 28  | Rihand-III        | 14.55  | 0.60%       | Arunachal Pradesh        | 5.06     | 0.21%       |
| 29  | Barh Stg-2        | 14.47  | 0.60%       | Druk Green Power         | 4.95     | 0.21%       |
| 30  | Mahan Energy      | 13.47  | 0.56%       | Chhattisgarh             | 3.72     | 0.15%       |
| 31  | Rihand-II         | 12.11  | 0.50%       | Manipur                  | 3.70     | 0.15%       |
| 32  | NTPL              | 11.60  | 0.48%       | BHARAT                   | 3.07     | 0.13%       |
| 33  | Kahalgaoon-II     | 10.45  | 0.43%       | Railways                 | 2.64     | 0.11%       |
| 34  | Simhapuri Energy  | 10.38  | 0.43%       | Mahan Energy Limited     | 2.13     | 0.09%       |
| 35  | TRN Energy        | 10.18  | 0.42%       | Assam                    | 1.57     | 0.07%       |
| 36  | Kahalgaoon        | 9.35   | 0.39%       | Jindal Power Ltd. Stg-II | 1.50     | 0.06%       |
| 37  | Sikkim            | 9.21   | 0.38%       | Jaypee Nigrie            | 1.22     | 0.05%       |
| 38  | Kameng HEP        | 8.76   | 0.36%       | Goa WR                   | 1.18     | 0.05%       |
| 39  | BALCO 2           | 8.68   | 0.36%       | Gandhar                  | 1.02     | 0.04%       |
| 40  | Singrauli         | 7.84   | 0.33%       | Ratnagiri Gas & Power    | 0.77     | 0.03%       |
| 41  | ACBIL             | 7.70   | 0.32%       | Kawas                    | 0.69     | 0.03%       |
| 42  | The Tata Power Co | 7.49   | 0.31%       | Adani Power Limited-     | 0.63     | 0.03%       |
| 43  | Kerala            | 7.11   | 0.30%       | Bihar                    | 0.54     | 0.02%       |
| 44  | NTPC Gadarwara    | 6.84   | 0.28%       | Tripura                  | 0.36     | 0.01%       |
| 45  | Dadri TPS         | 6.71   | 0.28%       | Chandigarh               | 0.31     | 0.01%       |
| 46  | Arunachal Pradesh | 6.43   | 0.27%       | NEA-NR                   | 0.28     | 0.01%       |

|    |                   |      |       |                   |      |        |
|----|-------------------|------|-------|-------------------|------|--------|
| 47 | Sasan UMPP        | 6.25 | 0.26% | ACBIL             | 0.26 | 0.01%  |
| 48 | NTPC North        | 6.10 | 0.25% | Maruti Clean Coal | 0.25 | 0.01%  |
| 49 | Vindhyachal stg-4 | 5.68 | 0.24% | Sikkim            | 0.13 | 0.01%  |
| 50 | Mouda Stg-2       | 5.67 | 0.24% | Goa SR            | 0.12 | 0.01%  |
| 51 | Punjab            | 5.63 | 0.23% | Sainj HEP         | 0.02 | 0.001% |
| 52 | NREL-Dayapar      | 5.61 | 0.23% | NTECL Vallur      | 0.01 | 0.001% |
| 53 | Adani Power       | 5.56 | 0.23% | Dhariwal ISTS     | 0.01 | 0.0005 |
| 54 | Khargone STPP     | 5.46 | 0.23% |                   |      |        |
| 55 | Vindhyachal stg-1 | 5.40 | 0.22% |                   |      |        |
| 56 | Vindhyachal stg-2 | 5.33 | 0.22% |                   |      |        |
| 57 | Palatana          | 5.16 | 0.21% |                   |      |        |
| 58 | Adani Power       | 5.12 | 0.21% |                   |      |        |
| 59 | Jindal Steel      | 5.06 | 0.21% |                   |      |        |
| 60 | Ramagundam Stg-   | 4.88 | 0.20% |                   |      |        |
| 61 | Vindhyachal stg-3 | 4.78 | 0.20% |                   |      |        |
| 62 | NTPC Sholapur     | 4.72 | 0.20% |                   |      |        |
| 63 | Vindhyachal stg-5 | 4.58 | 0.19% |                   |      |        |
| 64 | Bongaigaon        | 4.58 | 0.19% |                   |      |        |
| 65 | Farakka Stg 3     | 4.50 | 0.19% |                   |      |        |
| 66 | NVVN (SNA) -      | 4.45 | 0.18% |                   |      |        |
| 67 | Barh STPS Stg - I | 3.97 | 0.16% |                   |      |        |
| 68 | RKM Power         | 3.96 | 0.16% |                   |      |        |
| 69 | Mouda Stg-1       | 3.80 | 0.16% |                   |      |        |
| 70 | Tanda Stg-2       | 3.78 | 0.16% |                   |      |        |
| 71 | MB Power          | 3.70 | 0.15% |                   |      |        |
| 72 | ADANI WIND        | 3.64 | 0.15% |                   |      |        |
| 73 | GMR Warora        | 3.59 | 0.15% |                   |      |        |
| 74 | Sipat Stg-1       | 3.55 | 0.15% |                   |      |        |
| 75 | DB Power          | 3.34 | 0.14% |                   |      |        |
| 76 | NTECL Vallur      | 3.15 | 0.13% |                   |      |        |
| 77 | NTPC Kudgi        | 3.12 | 0.13% |                   |      |        |
| 78 | Sipat Stg-2       | 2.95 | 0.12% |                   |      |        |
| 79 | Shree Cement      | 2.74 | 0.11% |                   |      |        |
| 80 | NLC TPS-II        | 2.67 | 0.11% |                   |      |        |
| 81 | Farakka           | 2.58 | 0.11% |                   |      |        |
| 82 | Dadri Stg-2       | 2.56 | 0.11% |                   |      |        |
| 83 | NLC TPS-II Stg-2  | 2.49 | 0.10% |                   |      |        |
| 84 | JITPL             | 2.47 | 0.10% |                   |      |        |
| 85 | Amp Energy Green  | 2.46 | 0.10% |                   |      |        |
| 86 | Simhadri Stg-2    | 2.28 | 0.09% |                   |      |        |
| 87 | RENEW SURYA       | 2.27 | 0.09% |                   |      |        |
| 88 | IGSTPS JHAJAR     | 2.07 | 0.09% |                   |      |        |
| 89 | Goa WR            | 2.02 | 0.08% |                   |      |        |
| 90 | Talcher Stg-2     | 1.96 | 0.08% |                   |      |        |
| 91 | Maruti Clean Coal | 1.92 | 0.08% |                   |      |        |
| 92 | IL&FS             | 1.90 | 0.08% |                   |      |        |
| 93 | Unchahar-IV       | 1.88 | 0.08% |                   |      |        |
| 94 | Ramagundam Stg-   | 1.87 | 0.08% |                   |      |        |
| 95 | NLC TPS-II Expn   | 1.86 | 0.08% |                   |      |        |
| 96 | Jindal Power Ltd. | 1.67 | 0.07% |                   |      |        |
| 97 | AGBPP             | 1.61 | 0.07% |                   |      |        |

|                               |                  |                 |               |                               |                 |               |
|-------------------------------|------------------|-----------------|---------------|-------------------------------|-----------------|---------------|
| 98                            | Unchahar-II      | 1.52            | 0.06%         |                               |                 |               |
| 99                            | Adhunik Power    | 1.33            | 0.06%         |                               |                 |               |
| 100                           | Neyveli New      | 1.32            | 0.05%         |                               |                 |               |
| 101                           | Jaypee Nigrie    | 1.27            | 0.05%         |                               |                 |               |
| 102                           | Daman & Diu -    | 1.24            | 0.05%         |                               |                 |               |
| 103                           | Singoli Bhagwati | 1.01            | 0.04%         |                               |                 |               |
| 104                           | ALTRA XERGI      | 1.01            | 0.04%         |                               |                 |               |
| 105                           | Ostro Kannada    | 1.00            | 0.04%         |                               |                 |               |
| 106                           | Darlipalli       | 0.97            | 0.04%         |                               |                 |               |
| 107                           | KBUNL(MTPS-II)   | 0.96            | 0.04%         |                               |                 |               |
| 108                           | Nagaland         | 0.95            | 0.04%         |                               |                 |               |
| 109                           | Jindal Power     | 0.89            | 0.04%         |                               |                 |               |
| 110                           | Renew Surya Ravi | 0.81            | 0.03%         |                               |                 |               |
| 111                           | NTPC Lara        | 0.79            | 0.03%         |                               |                 |               |
| 112                           | Jorethang        | 0.76            | 0.03%         |                               |                 |               |
| 113                           | NTPC Telangana   | 0.75            | 0.03%         |                               |                 |               |
| 114                           | Talcher          | 0.69            | 0.03%         |                               |                 |               |
| 115                           | NLC              | 0.64            | 0.03%         |                               |                 |               |
| 116                           | Ayana Renewable  | 0.55            | 0.02%         |                               |                 |               |
| 117                           | Sorang HEP,      | 0.34            | 0.01%         |                               |                 |               |
| 118                           | Korba            | 0.33            | 0.01%         |                               |                 |               |
| 119                           | Manipur          | 0.33            | 0.01%         |                               |                 |               |
| 120                           | Unchahar-III     | 0.28            | 0.01%         |                               |                 |               |
| 121                           | Doyang HPS,      | 0.26            | 0.01%         |                               |                 |               |
| 122                           | Tashiding HEP    | 0.26            | 0.01%         |                               |                 |               |
| 123                           | Simhadri Stg-1   | 0.24            | 0.01%         |                               |                 |               |
| 124                           | WIND FIVE        | 0.23            | 0.01%         |                               |                 |               |
| 125                           | Karnataka        | 0.23            | 0.01%         |                               |                 |               |
| 126                           | Korba Stg 3      | 0.22            | 0.01%         |                               |                 |               |
| 127                           | Meghalaya        | 0.17            | 0.01%         |                               |                 |               |
| 128                           | Sainj HEP        | 0.10            | 0.004%        |                               |                 |               |
| 129                           | AD Hydro         | 0.10            | 0.004%        |                               |                 |               |
| 130                           | Dhariwal ISTS    | 0.09            | 0.004%        |                               |                 |               |
| 131                           | Pare Hydro Power | 0.08            | 0.003%        |                               |                 |               |
| 132                           | Karcham Wangtoo  | 0.07            | 0.003%        |                               |                 |               |
| 133                           | Lanco Budhil     | 0.07            | 0.003%        |                               |                 |               |
| 134                           | NTPC North       | 0.07            | 0.003%        |                               |                 |               |
| 135                           | NSPCL Bhilai     | 0.05            | 0.002%        |                               |                 |               |
| 136                           | Unchahar-I       | 0.01            | 0.001%        |                               |                 |               |
| 137                           | ADANI SOLAR      | 0.01            | 0.0003%       |                               |                 |               |
| <b>Total Volume of top 10</b> |                  | <b>1,603.01</b> | <b>66.62%</b> | <b>Total Volume of top 10</b> | <b>1,866.16</b> | <b>77.56%</b> |
| <b>Total Volume in PXs</b>    |                  | <b>2,406.02</b> |               | <b>Total Volume in PXs</b>    | <b>2,406.02</b> |               |

| Cross Border Electricity Transactions under Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of December, 2023 |               |                          |                           |                           |
|--|---------------|--------------------------|---------------------------|---------------------------|
| S. No  | Delivery Date | Buy Volume By Nepal (MU) | Sell Volume by Nepal (MU) | Buy Volume By Bhutan (MU) |
| 1  | 01-12-2023    | 0.00                     | 1.84                      | 6.35                      |
| 2  | 02-12-2023    | 0.00                     | 1.64                      | 6.02                      |
| 3  | 03-12-2023    | 0.00                     | 1.11                      | 5.63                      |
| 4  | 04-12-2023    | 0.00                     | 1.23                      | 6.20                      |
| 5  | 05-12-2023    | 0.00                     | 0.72                      | 7.92                      |
| 6  | 06-12-2023    | 0.60                     | 0.10                      | 7.05                      |
| 7  | 07-12-2023    | 0.60                     | 0.10                      | 7.80                      |
| 8  | 08-12-2023    | 0.66                     | 0.22                      | 7.04                      |
| 9  | 09-12-2023    | 0.91                     | 0.13                      | 6.77                      |
| 10   | 10-12-2023    | 1.88                     | 0.14                      | 6.38                      |
| 11   | 11-12-2023    | 2.04                     | 0.17                      | 5.75                      |
| 12   | 12-12-2023    | 1.79                     | 0.28                      | 7.07                      |
| 13   | 13-12-2023    | 1.80                     | 0.23                      | 7.20                      |
| 14   | 14-12-2023    | 2.51                     | 0.12                      | 9.08                      |
| 15   | 15-12-2023    | 2.80                     | 0.07                      | 9.11                      |
| 16   | 16-12-2023    | 3.01                     | 0.05                      | 7.44                      |
| 17   | 17-12-2023    | 3.54                     | 0.00                      | 5.19                      |
| 18   | 18-12-2023    | 3.58                     | 0.03                      | 7.46                      |
| 19   | 19-12-2023    | 4.09                     | 0.00                      | 7.42                      |
| 20   | 20-12-2023    | 4.29                     | 0.00                      | 9.10                      |
| 21   | 21-12-2023    | 4.63                     | 0.00                      | 9.37                      |
| 22   | 22-12-2023    | 4.41                     | 0.00                      | 8.89                      |
| 23   | 23-12-2023    | 4.09                     | 0.00                      | 8.85                      |
| 24   | 24-12-2023    | 4.57                     | 0.00                      | 10.24                     |
| 25   | 25-12-2023    | 4.90                     | 0.00                      | 9.83                      |
| 26   | 26-12-2023    | 4.51                     | 0.00                      | 9.17                      |
| 27   | 27-12-2023    | 3.53                     | 0.00                      | 9.85                      |
| 28   | 28-12-2023    | 3.73                     | 0.00                      | 10.54                     |
| 29   | 29-12-2023    | 3.95                     | 0.00                      | 10.18                     |
| 30   | 30-12-2023    | 3.25                     | 0.00                      | 10.23                     |
| 31   | 31-12-2023    | 3.46                     | 0.00                      | 10.74                     |
| <b>Total</b>   |               | <b>79.14</b>             | <b>8.16</b>               | <b>249.87</b>             |
| <b>Grand Total</b>   |               | <b>337.17</b>            |                           |                           |

∴ No transaction took place

**Note:** Cross Border Transactions of Electricity of 337.17 MU (i.e. 79.14 MU bought by Nepal, 8.16 MU sold by Nepal, 249.87 MU bought by Bhutan) happened during December, 2023 in IEX, which is included under DAM Volume of December, 2023 in IEX. No Cross Border Import Transactions of Electricity happened with **Bhutan** for the month of December, 2023 in IEX under DAM.

| Cross Border Electricity Transactions under Real Time Market (RTM) in IEX with Nepal and Bhutan during the month of December, 2023 |               |                          |                           |                           |
|--|---------------|--------------------------|---------------------------|---------------------------|
| S. No  | Delivery Date | Buy Volume By Nepal (MU) | Sell Volume by Nepal (MU) | Buy Volume By Bhutan (MU) |
| 1  | 01-12-2023    | 0.00                     | 0.00                      | 0.00                      |
| 2  | 02-12-2023    | 0.00                     | 0.19                      | 0.00                      |
| 3  | 03-12-2023    | 0.00                     | 0.17                      | 0.00                      |
| 4  | 04-12-2023    | 0.55                     | 0.00                      | 0.00                      |
| 5  | 05-12-2023    | 0.28                     | 0.00                      | 0.17                      |
| 6  | 06-12-2023    | 0.00                     | 0.00                      | 0.00                      |
| 7  | 07-12-2023    | 1.02                     | 0.00                      | 0.00                      |
| 8  | 08-12-2023    | 1.15                     | 0.00                      | 0.00                      |
| 9  | 09-12-2023    | 0.00                     | 0.00                      | 0.00                      |
| 10   | 10-12-2023    | 0.00                     | 0.30                      | 0.00                      |
| 11   | 11-12-2023    | 0.00                     | 0.21                      | 0.34                      |
| 12   | 12-12-2023    | 0.08                     | 0.00                      | 0.70                      |
| 13   | 13-12-2023    | 1.27                     | 0.00                      | 1.27                      |
| 14   | 14-12-2023    | 0.65                     | 0.00                      | 0.00                      |
| 15   | 15-12-2023    | 0.69                     | 0.18                      | 0.00                      |
| 16   | 16-12-2023    | 0.00                     | 0.28                      | 0.00                      |
| 17   | 17-12-2023    | 0.00                     | 0.50                      | 0.00                      |
| 18   | 18-12-2023    | 0.09                     | 0.00                      | 0.00                      |
| 19   | 19-12-2023    | 0.20                     | 0.00                      | 0.31                      |
| 20   | 20-12-2023    | 0.23                     | 0.00                      | 0.00                      |
| 21   | 21-12-2023    | 0.13                     | 0.00                      | 0.00                      |
| 22   | 22-12-2023    | 0.21                     | 0.00                      | 0.00                      |
| 23   | 23-12-2023    | 0.00                     | 0.33                      | 0.40                      |
| 24   | 24-12-2023    | 0.00                     | 0.64                      | 0.05                      |
| 25   | 25-12-2023    | 0.00                     | 0.47                      | 0.07                      |
| 26   | 26-12-2023    | 0.00                     | 0.82                      | 0.79                      |
| 27   | 27-12-2023    | 0.00                     | 0.25                      | 0.27                      |
| 28   | 28-12-2023    | 0.30                     | 0.04                      | 0.04                      |
| 29   | 29-12-2023    | 0.06                     | 0.00                      | 0.00                      |
| 30   | 30-12-2023    | 0.00                     | 0.00                      | 0.13                      |
| 31   | 31-12-2023    | 0.11                     | 0.11                      | 0.40                      |
| <b>Total</b>   |               | <b>7.00</b>              | <b>4.45</b>               | <b>4.95</b>               |
| <b>Grand Total</b>   |               | <b>16.40</b>             |                           |                           |

-: No transaction took place

**Note:** Cross Border Transactions of Electricity of 16.40 MU (i.e. 7.00 MU bought by Nepal, 4.45 MU sold by Nepal, 4.95 MU bought by Bhutan) happened during December, 2023 in IEX, which is included under RTM Volume of December, 2023 in IEX. No Cross Border Import Transactions of Electricity happened with Bhutan for the month of December, 2023 in IEX under RTM.

**Analysis for change in trend of Final Scheduled Volume in DAM on 1<sup>st</sup> Monday, 3<sup>rd</sup> Sunday, 4<sup>th</sup> Monday & 5<sup>th</sup> Sunday of December, 2023 (i.e. 4<sup>th</sup>, 17<sup>th</sup>, 25<sup>th</sup> & 31<sup>st</sup> December, 2023)**

Final Scheduled Volume (MU) and the Daily Avg. MCP (₹/kWh) invariably shows decreasing trend on Sundays and increasing trend on Mondays as the demand of electricity in the country is less on Sundays as compared to other days of week. However, during the month of December, 2023, it is observed that on first Monday (4<sup>th</sup> December, 2023), FSV showed decreasing trend in comparison to first Sunday (3<sup>rd</sup> December, 2023), on third Sunday (17<sup>th</sup> December, 2023), FSV showed increasing trend in comparison to third Saturday (16<sup>th</sup> December, 2023), on fourth Monday (25<sup>th</sup> December, 2023), FSV showed decreasing trend in comparison to fourth Sunday (24<sup>th</sup> December, 2023), on fifth Sunday (31<sup>st</sup> December, 2023), FSV showed increasing trend in comparison to fifth Saturday (30<sup>th</sup> December, 2023).

- (i) On first Monday (4<sup>th</sup> December, 2023), although there was increase in purchase on power exchange by some of the States in comparison to first Sunday (3<sup>rd</sup> December, 2023) by **19.66 MU** [i.e. Maharashtra (5.28 MU), Haryana (2.91 MU), Uttarakhand (2.59 MU), Gujarat (2.36 MU) and West Bengal (2.00 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **27.67 MU** [i.e. Andhra Pradesh (17.10 MU), Telangana (4.86 MU), Punjab (3.45 MU), ArcelorMittal Nippon steel (ESIL) (0.85 MU) and Tamil Nadu (0.66 MU), etc.]. This resulted in an overall decrease in FSV by **8.01 MU** on Monday (4<sup>th</sup> December, 2023) as compared to Sunday (3<sup>rd</sup> December, 2023).
- (ii) On third Sunday (17<sup>th</sup> December, 2023), although there was decrease in purchase on power exchange by some of the States in comparison to third Saturday (16<sup>th</sup> December, 2023) by **21.38 MU** [i.e. Gujarat (6.18 MU), Uttarakhand (3.38 MU), Kerala (2.77 MU), Druk Green Power Corporation Limited (DGPCL-Bhutan) (2.25 MU) and Andhra Pradesh (1.45 MU), etc.], there was also increase in purchase on power exchange by some of the States by **24.27 MU** [i.e. Telangana (15.20 MU), Tamil Nadu (3.01 MU), Maharashtra (1.23 MU), Punjab (1.18 MU) and Uttar Pradesh (1.18 MU), etc.]. This resulted in an overall increase in FSV by **2.89 MU** on Sunday (17<sup>th</sup> December, 2023) as compared to Saturday (16<sup>th</sup> December, 2023).
- (iii) On fourth Monday (25<sup>th</sup> December, 2023), although there was increase in purchase on power exchange by some of the States in comparison to fourth Sunday (24<sup>th</sup> December, 2023) by **17.83 MU** [i.e. Telangana (7.00 MU), J&K (2.60 MU), Haryana (2.47 MU), Rajasthan (1.59 MU) and NEA-NR (1.08 MU), etc.], there was also decrease in purchase on power exchange by some of the States by **33.33 MU** [i.e. Gujarat (15.04 MU), Andhra Pradesh (8.15 MU), ArcelorMittal Nippon steel (ESIL) (4.63 MU), Uttar Pradesh (1.42 MU) and Punjab (1.03 MU), etc.]. This resulted in an overall decrease in FSV by **15.50 MU** on Monday (25<sup>th</sup> December, 2023) as compared to Sunday (24<sup>th</sup> December, 2023).

- (iv) On fifth Sunday (31<sup>st</sup> December, 2023), although there was decrease in purchase on power exchange by some of the States in comparison to fifth Saturday (30<sup>th</sup> December, 2023) by **21.26 MU** [i.e. Gujarat (4.14 MU), Uttarakhand (4.11 MU), Kerala (3.45 MU), Tamil Nadu (2.19 MU) and Andhra Pradesh (2.07 MU), etc.], there was also increase in purchase on power exchange by some of the States by **27.85 MU** [i.e. Telangana (10.62 MU), Punjab (3.94 MU), Uttar Pradesh (3.81 MU), DVC (2.42 MU) and Maharashtra (1.78 MU), etc.]. This resulted in an overall increase in FSV by **6.59 MU** on Sunday (31<sup>st</sup> December, 2023) as compared to Saturday (30<sup>th</sup> December, 2023).



## Definitions/ Terminologies used in the Report

- 1. Area Clearing Price (ACP)** is price discovered in each time block of concerned bid area. The country has been divided into 13 bid areas for the purpose of calculating prices in Power Exchanges.  
**The 13 Bid areas are as under:**  
**N1:** Jammu and Kashmir, Himachal Pradesh, Chandigarh, Haryana; **N2:** Uttar Pradesh, Uttaranchal, Rajasthan, Delhi; **N3:** Punjab; **E1:** West Bengal, Sikkim, Bihar, Jharkhand; **E2:** Odisha; **W1:** Madhya Pradesh; **W2:** Maharashtra, Gujarat, Daman and Diu, Dadar and Nagar Haveli, North Goa; **W3:** Chhattisgarh; **S1:** Andhra Pradesh, Telangana, Karnataka, Pondicherry (Yanam), South Goa; **S2:** Tamil Nadu, Pondicherry (Puducherry), Pondicherry (Karaikal), Pondicherry (Mahe); **S3:** Kerala; **A1:** Tripura, Manipur, Mizoram, Nagaland; **A2:** Assam, Arunachal Pradesh, Meghalaya.
- 2. Average MCP** is the average of Daily Avg. MCP of the days during the month on which transaction happened.
- 3. Bilateral Transaction** means a transaction for exchange of electrical energy (MWh) between a specified buyer and a specified seller, from a specified point of injection to a specified point of drawal for a fixed or varying quantum of power (MW) for any time block during a month.
- 4. Daily Average MCP** is the average of MCP of all 96 Time Blocks of the day during which transaction happened.
- 5. Day-Ahead Market (DAM)** means a market where Day Ahead Contracts are transacted on the Power Exchanges, wherein Collective Transactions occur on day (T) and delivery of electricity is on the next day (T+1).
- 6. Elasticity** is percentage of change in MCP with respect to change in independent variable viz. peak demand, average purchase bid, average sell bid, generation from coal based plants, generation from hydro based plants, generation from wind based plants and generation from solar plants.
- 7. Energy Supplied** is the total energy (MU) available at the States' periphery.
- 8. Final Scheduled Volume** is the total of scheduled volume of all 96 time blocks in a day during the month in which transaction happened.
- 9. Green Term Ahead Market (GTAM)** is based on the principles of current Term Ahead Market (TAM) and will offer trade for Solar, Non-Solar and Hydro Renewable Energy (RE) generation.



- 10. Green Day Ahead Market (GDAM)** is based on the principles of current Day Ahead Market (DAM), where market participants purchase and sell electricity generated from renewable sources.
- 11. Long Duration Contracts** on the power exchanges is a product segment under which the participants are allowed to trade for delivery of power upto 90 Days (Delivery Starting from T+2 to T+90 Days).
- 12. MCP** is the price discovered in each of the 15 Minute Time Block. The day is divided in 96-time blocks of 15 minutes each.
- 13. Real Time Market (RTM)** means a market where Real-Time Contracts are transacted on the Power Exchange(s), i.e. a contract other than Day Ahead Contract or Intraday Contract or Contingency Contract. 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).