



**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: मई, 2023 माह की मार्केट मॉनिटरिंग रिपोर्ट**

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

महोदय/ Sir,

मई, 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 May, 2023 is enclosed herewith for kind information and perusal.

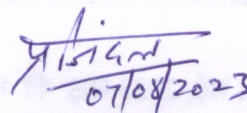
मई, 2023 माह के दौरान मार्केट के संचालन की मुख्य विशेषताएं इस प्रकार रही। Key highlights of the market operation during May, 2023 are as under:

- (i) मई, 2023 माह में देश में कुल 136,379 MU विद्युत का कारोबार किया गया, जिसमें से 61,252 MU का कारोबार अंतर्राज्यीय पारेषण प्रणाली (Inter State Transmission System) के माध्यम से किया गया था और शेष राज्य नियंत्रित उत्पादन स्टेशनों से अंतरराज्यीय पारेषण प्रणाली (Intra State Transmissions System) के माध्यम से किया गया। In the month of May, 2023 a total of 136,379 MU of electricity was transacted in the country out of which 61,252 MU was transacted through ISTS, and the remaining through state controlled generating stations through Intra State Transmissions System.
- (ii) अल्पावधि मार्केट के अंतर्गत कुल 19,786 MU का कारोबार किया गया था, जिसमें से 9,176 MU पावर एक्सचेंजों के माध्यम से कारोबार किया गया और शेष द्विपक्षीय कारोबार और विचलन (deviations) के रूप में हुआ। इस प्रकार अल्पावधि कारोबार, मई, 2023 माह में ट्रेड की गई विद्युत की कुल मात्रा का 14.51 % था और 6.73 % पावर एक्सचेंजों के माध्यम से रहा। A total of 19,786 MU was transacted under Short Term

Market, out of which 8,884 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in May, 2023 was 14.51 % of total volume of electricity traded in May, 2023 and 6.73 % 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 32.30 % रहा, जिसमें से पावर एक्सचेंजों के माध्यम से कारोबार 14.98 % रहा। If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 32.30 % of ISTS transactions, out of which transaction through the power exchanges constitutes 14.98 %.

भवदीय/ Yours faithfully,

  
07/08/2023

( प्रदीप जिंदल/ Pardeep Jindal )

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

प्रतिलिपि/ Copy for information, through email, to:

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

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



सत्यमेव जयते

मासिक मार्केट मॉनिटरिंग रिपोर्ट - मई, 2023

## Monthly Market Monitoring Report May, 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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**मई, 2023 की मासिक मार्केट  
मॉनिटरिंग रिपोर्ट का सारांश**

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



## मई, 2023 माह के लिए सारांश Summary for Month: May, 2023

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

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

➤ मई, 2023 के दौरान विद्युत एक्सचेंजों (यानी आईईएक्स, पीएक्सआईएल और एचपीएक्स) के माध्यम से कुल **9,176 MU** विद्युत का कारोबार किया गया। विद्युत की यह मात्रा डिलीवरी की तारीख के आधार पर है और इसमें DAM, GDAM, RTM, TAM और GTAM मार्केट खंडों के माध्यम से कारोबार शामिल हैं।

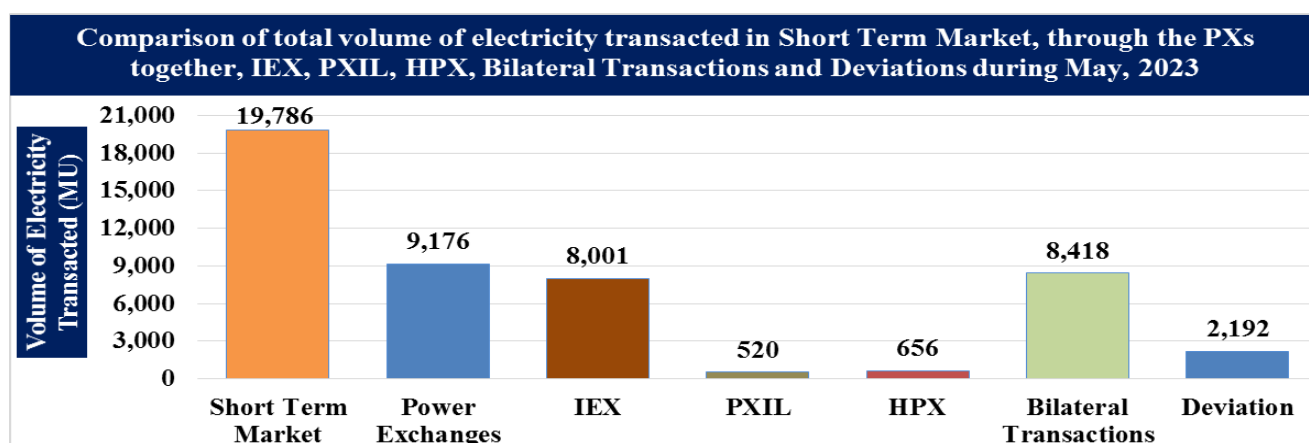
A total volume of **9,176 MU** electricity was transacted through power exchanges i.e. IEX, PXIL & HPX, during the month of May, 2023. This volume of electricity is on delivery date basis and includes transactions through DAM, GDAM, RTM, TAM and GTAM market segments.

| Segment             | Transactions happened in the PXs (IEX, PXIL & HPX combined) |                     |                 |                            |
|---------------------|-------------------------------------------------------------|---------------------|-----------------|----------------------------|
|                     | FSV (MU)                                                    | Average MCP (₹/kWh) | Congestion (MU) | Real Time Curtailment (MU) |
| DAM                 | 4,001                                                       | 4.77                | 0.41            | 1.55                       |
| GDAM                | 198                                                         | 4.66                | 0.00            | 0.00                       |
| RTM                 | 2,426                                                       | 5.05                | 4.95            | 0.00                       |
| TAM                 | 940                                                         | 8.38                | 0.00            | 17.04                      |
| DAC & ID            | 1,377                                                       | 6.41                | 3.88            | 8.33                       |
| GTAM                | 96                                                          | 7.06                | 0.52            | 13.39                      |
| GDAC & GID          | 138                                                         | 4.67                | 0.00            | 0.18                       |
| <b>Total in PXs</b> | <b>9,176</b>                                                | <b>5.70</b>         | <b>9.76</b>     | <b>40.49</b>               |

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

➤ द्विपक्षीय व्यापार के तहत कुल **8,418 MU** विद्युत का कारोबार किया गया और **2,192 MU** को विचलन के रूप में स्थानांतरित किया गया। इस प्रकार कुल **19,786 MU** विद्युत का कारोबार अल्पावधि व्यापार के रूप में किया गया था। मई, 2023 के महीने में देश में कुल **136,379 MU** विद्युत की आपूर्ति की गई थी, इस प्रकार मई, 2023 माह में कारोबार की गई विद्युत की कुल मात्रा में अल्पावधि बाजार का हिस्सा **14.51 %** था।

Under the Bilateral trade a total of **8,418 MU** of electricity was transacted and **2,192 MU** was transferred as deviation. Thus a total of **19,786 MU** of electricity was transacted as short term trade. In the month of May, 2023 a total of **136,379 MU** of electricity was supplied in the country, thus the share of short term market in the total volume of electricity traded in May, 2023 was **14.51 %**.



- मई, 2023 के दौरान संचरण जाम की कुल मात्रा **9.76 MU** थी, जो की विद्युत एक्सचेंजों में कारोबार की गई विद्युत की कुल मात्रा का केवल 0.11 % है और मई, 2023 के महीने के दौरान आपूर्ति की गई कुल ऊर्जा का 0.007 % है।

The total volume of transmission congestion that happened during the month of May, 2023 was 9.76 MU which is only 0.11 % of the total volume of electricity transacted in the power exchanges and 0.007 % of total energy supplied during the month of May, 2023.

DAM में 2 दिन अर्थात् दिनांक 23 व 30 मई, 2023, TAM में 7 दिन अर्थात् दिनांक 8, 24 से 26 एवं 29 से 31 मई, 2023, DAC & ID में 11 दिन अर्थात् दिनांक 3, 17, 19, 20, 22 से 24, 27 एवं 29 से 31 मई, 2023, GTAM में 31 दिन अर्थात् दिनांक 1 से 31 मई, 2023 और G-DAC & ID में 2 दिन अर्थात् दिनांक 7 एवं 27 मई, 2023 को संचरण जाम देखा गया। जबकि GDAM और RTM में कोई संचरण जाम नहीं देखा गया। मई, 2023 माह के महीने में रिपोर्ट की गई वास्तविक समय में विद्युत कटौती की कुल मात्रा केवल **40.49 MU** थी।

Transmission congestion observed in DAM on 2 days i.e. 23<sup>rd</sup> & 30<sup>th</sup> May, 2023, in TAM on 7 days i.e. 8<sup>th</sup>, 24<sup>th</sup> to 26<sup>th</sup> & 29<sup>th</sup> to 31<sup>st</sup> May, 2023, in DAC & ID on 11 days i.e. 3<sup>rd</sup>, 17<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 22<sup>nd</sup> to 24<sup>th</sup>, 27<sup>th</sup> & 29<sup>th</sup> to 31<sup>st</sup>, May, 2023, in GTAM on 31 days i.e. 1<sup>st</sup> to 31<sup>st</sup> May, 2023 and in G-DAC & ID on 2 days i.e. 7<sup>th</sup> & 27<sup>th</sup> May, 2023. Whereas, there was no transmission congestion happened in GDAM & RTM. The total volume of real time curtailment reported in the month of May, 2023 was only **40.49 MU**.

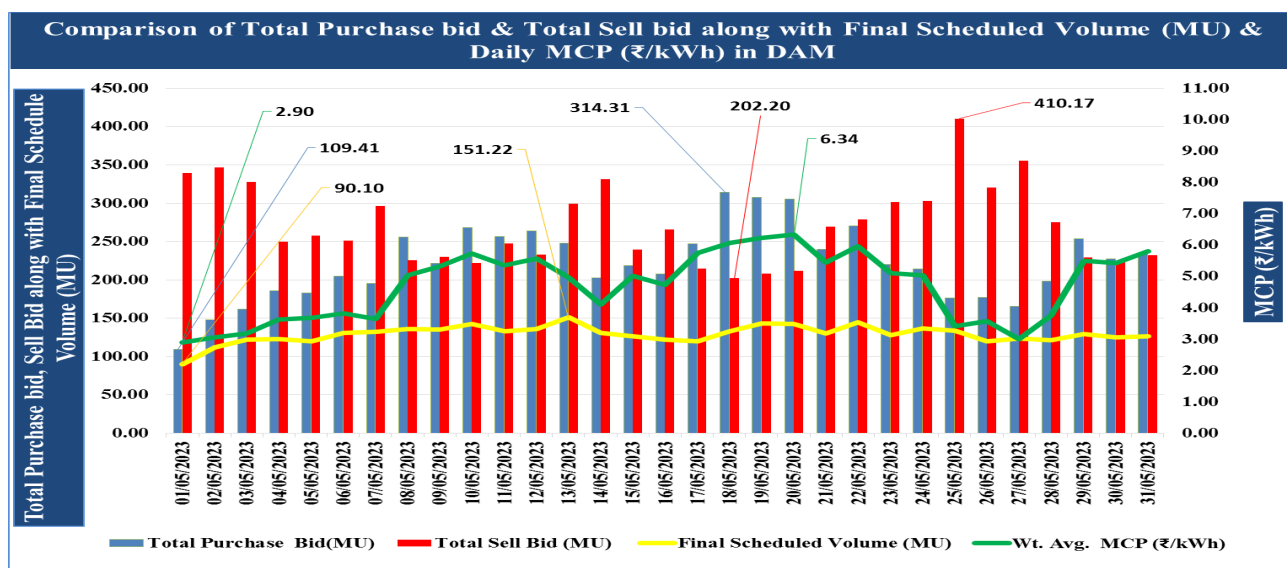
- मई, 2023 माह के दौरान अंतर्राज्यीय पारेषण प्रणाली (ISTS) में निर्धारित अनुसूचित विद्युत की कुल मात्रा **61,252 MU** थी। मई, 2023 के महीने में अल्पावधि बाजार में विद्युत का लेन-देन अंतर्राज्यीय पारेषण प्रणाली (ISTS) के माध्यम से अनुसूचित की गई कुल विद्युत की मात्रा का 32.30 % रहा।

The total volume of electricity scheduled at ISTS during the month of May, 2023 was **61,252 MU**. The total volume of electricity transacted in the short term market was **32.30 %** of total volume schedule at ISTS in the month of May, 2023.

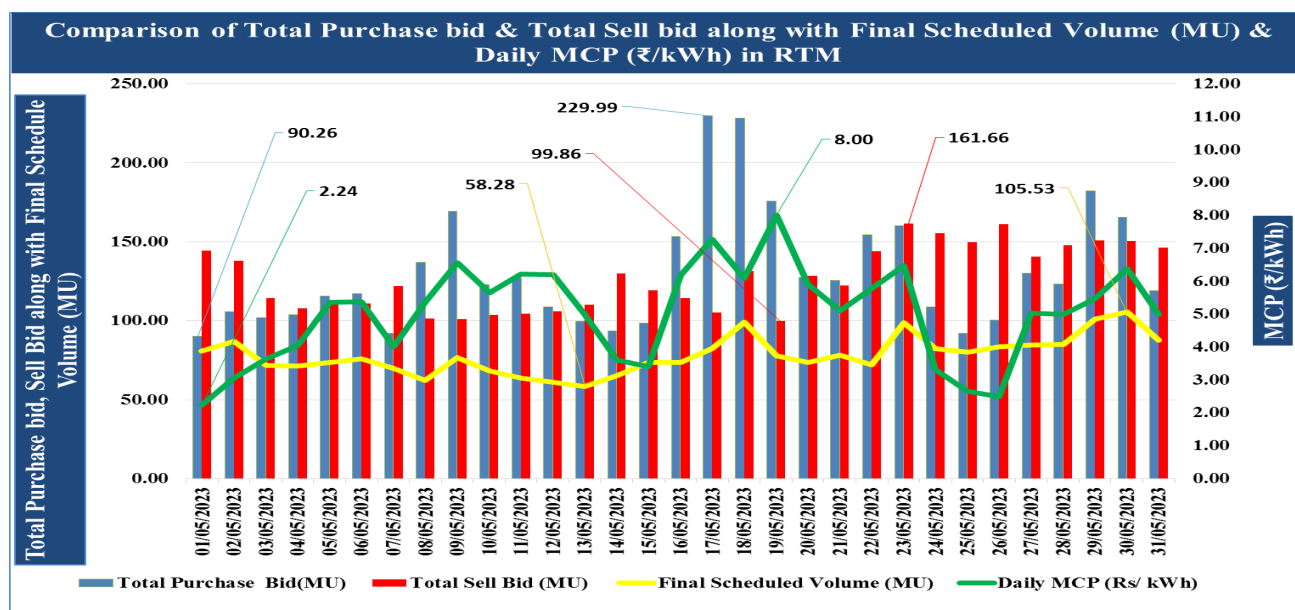
- मई, 2023 माह के दौरान DAM और RTM में विद्युत की खरीद और बिक्री बोलियों, अंतिम अनुसूचित मात्रा और दैनिक औसत MCP की भिन्नता निम्नलिखित चित्रों में दर्शाई गई है:

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

### DAM Volume



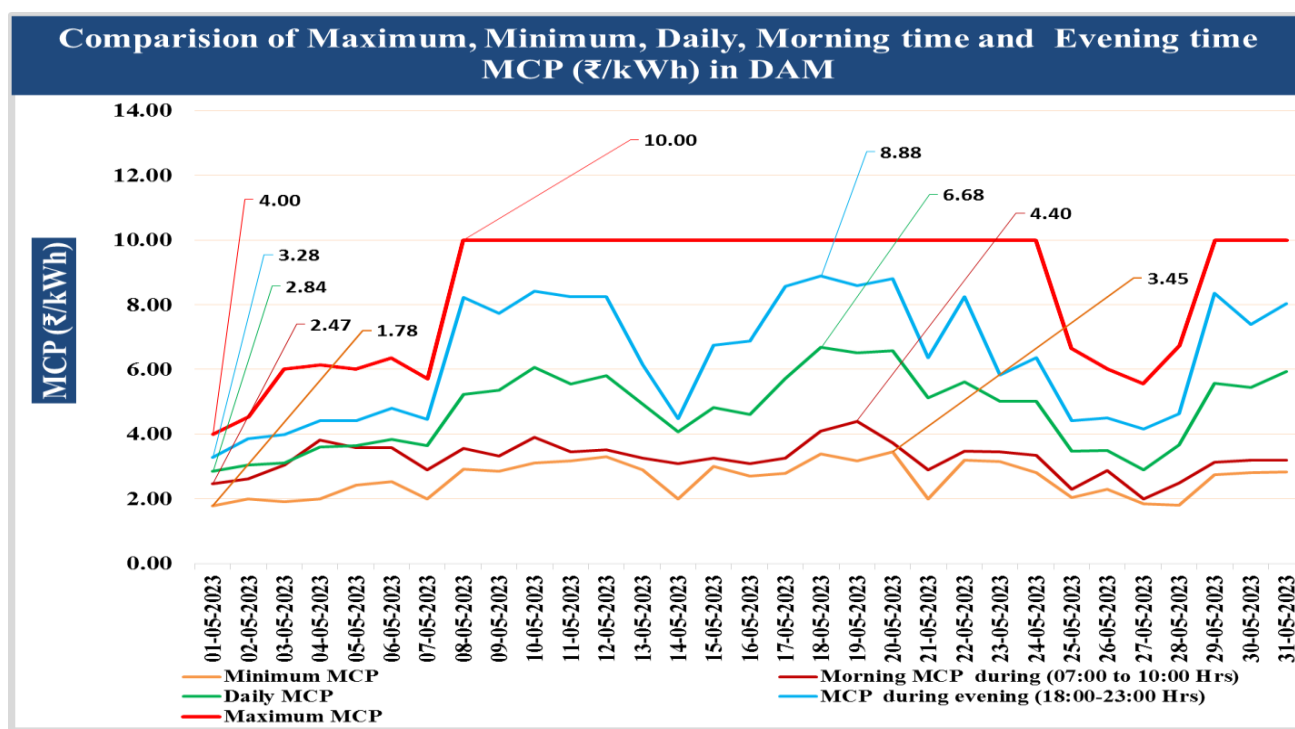
## RTM Volume



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

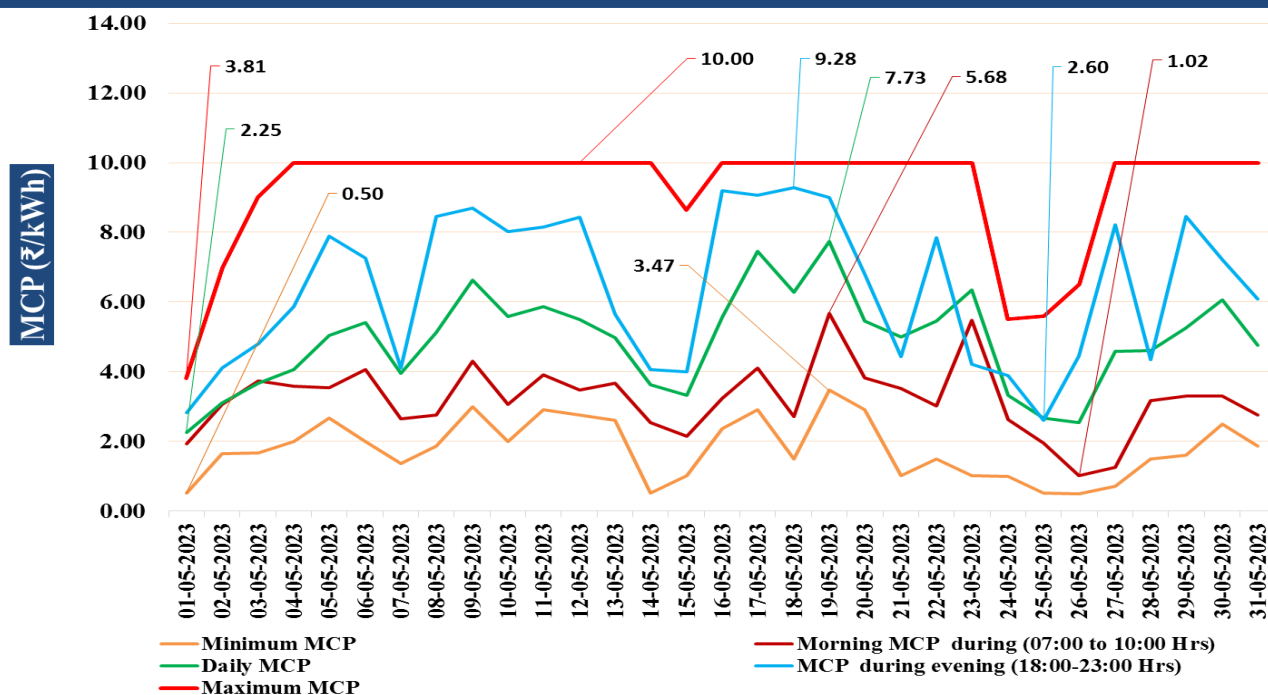
The variation of Maximum, Minimum, Daily, Morning and Evening time MCPs in DAM and RTM during the month of May, 2023 are shown in following figures:

## DAM Prices



## RTM Prices

### Comparison of Maximum, Minimum, Daily, Morning time and Evening time MCP (₹/kWh) in 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 and PXIL in the Day Ahead Market (DAM) in the month of May, 2023 was **4,001.32 MU**. The total energy supplied in the country during the month of May, 2023 was 136,379 MU. Thus, the volume of electricity transacted on the power exchanges in DAM during May, 2023 was 2.93 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted in DAM during the past month i.e. April, 2023, it was **4,408.93 MU** which was 3.33 % of the total energy supplied (132,151 MU) in the country during April, 2023. Similarly, the total volume of electricity transacted in DAM during previous year i.e. May, 2022, was **3,185.52 MU** which was 2.36 % of the total energy supplied (135,156 MU) in the country during May, 2022.
- 1.2.** The volume of electricity transacted on IEX and PXIL during May, 2023 was **3,999.76 MU** and **1.56 MU**, no transaction of electricity took place in HPX. The volume of electricity transacted on IEX during April, 2023 was **4,408.93 MU**. No transaction of electricity took place in PXIL and HPX. The volume of electricity transacted on IEX and PXIL during May, 2022, were **3,172.50 MU** and **13.02 MU**, respectively.
- 1.3.** The DAM volume for May, 2023 in IEX is inclusive of Cross Border Transactions of Electricity with Nepal and Bhutan (details given at **Annexure XII**), which was **159.20 MU** (i.e. 158.60 MU sell by Nepal and 0.60 MU buy by Bhutan).
- 1.4.** The Average Market Clearing Price (MCP) on IEX during the month of May, 2023 was ₹ **4.77/kWh**, which shows a decrease of 6.10 % & 30.13 % when compared with average MCP's for the month of April, 2023 and May, 2022, which were ₹ **5.08/kWh** and ₹ **6.76/kWh**, respectively. On PXIL, the average MCP during the month of May, 2023 was ₹ 6.94/kWh, which shows an increase of 61.40 % when compared with average MCP for the May, 2022, which was ₹ 4.30/kWh and no transaction of electricity took place in April, 2023 in PXIL. No transaction of electricity took place in HPX during May, 2023 and April, 2023.
- 1.5. DAM Market Clearing Price, Area Clearing Price and Final Scheduled Volume Of DAM in the Power Exchanges**

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

**(a) Final Scheduled Volume:**

| Exchange | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
| IEX      | May, 2023*                 | 3999.76                     | 90.10              | 151.22             | 129.02            |
|          | April, 2023*               | 4408.93                     | 105.13             | 190.84             | 146.96            |
|          | %Change (Month over Month) | -9.28                       | -14.30             | -20.76             | -12.21            |
|          | May, 2022*                 | 3172.50                     | 70.12              | 140.29             | 102.34            |
|          | %Change (Year over Year)   | 26.08                       | 28.49              | 7.79               | 26.07             |
| PXIL     | May, 2023                  | 1.56                        | 0.45               | 1.11               | 0.78              |
|          | April, 2023                | -                           | -                  | -                  | -                 |
|          | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | May, 2022                  | 13.02                       | 0.25               | 6.13               | 2.60              |
|          | %Change (Year over Year)   | -88.02                      | 80.00              | -81.89             | -70.00            |
| HPX      | May, 2023                  | -                           | -                  | -                  | -                 |
|          | April, 2023                | -                           | -                  | -                  | -                 |
|          | %Change (Month over Month) | 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**

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

| Exchange | Period                     | Prices            |         |             |         |                          |
|----------|----------------------------|-------------------|---------|-------------|---------|--------------------------|
|          |                            | Daily MCP (₹/kWh) |         | ACP (₹/kWh) |         | Monthly Avg. MCP (₹/kWh) |
|          |                            | Minimum           | Maximum | Minimum     | Maximum |                          |
| IEX      | May, 2023                  | 2.90              | 6.34    | 1.78        | 10.00   | 4.77                     |
|          | April, 2023                | 3.00              | 7.03    | 1.42        | 10.00   | 5.08                     |
|          | Change% (Month over Month) | -3.33             | -9.82   | 25.35       | 0.00    | -6.10                    |
|          | May, 2022                  | 2.89              | 12.00   | 1.00        | 12.00   | 6.76                     |
|          | %Change (Year over Year)   | 0.35              | -47.17  | 78.00       | -16.67  | -30.33                   |
| PXIL     | May, 2023                  | 3.89              | 10.00   | 3.89        | 10.00   | 6.94                     |
|          | April, 2023                | -                 | -       | -           | -       | -                        |
|          | %Change Month over Month)  | NA                | NA      | NA          | NA      | NA                       |
|          | May, 2022                  | 1.56              | 8.00    | 3.36        | 12.00   | 4.30                     |
|          | %Change (Year over Year)   | 149.36            | 25.00   | 15.77       | -16.67  | 61.40                    |
| HPX      | May, 2023                  | -                 | -       | -           | -       | -                        |
|          | April, 2023                | -                 | -       | -           | -       | -                        |
|          | %Change Month over Month)  | NA                | NA      | NA          | NA      | NA                       |

-: No transaction took place

NA: Not Applicable

**Table: 1B**

- 1.6.** The maximum Area Clearing Price (ACP) of ₹ 10.00/kWh in IEX was observed in all 13 regions during 364 time blocks on 8<sup>th</sup> to 22<sup>nd</sup>, 29<sup>th</sup> to 31<sup>st</sup> May, 2023. As there was no congestion in transmission system, the MCP for these time blocks was also ₹ 10.00/kWh.
- 1.7.** The minimum ACP of ₹ 1.78/kWh in IEX was observed in all 13 regions during the time block 13:15 - 13:30 Hrs on 1<sup>st</sup> May, 2023. As there was no congestion in transmission system, the MCP for this time-block was also ₹ 2.90/kWh.

## 2. Real Time Market (RTM)

The total volume of electricity transacted on the power exchanges in Real Time Market in May, 2023 was **2,425.98 MU**, out of which **2,424.26 MU** (99.93 %) was transacted in IEX, **1.72 MU** (0.07 %) was transacted in HPX and no transaction took place in PXIL. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP) and Area Clearing Prices (ACP) in Real Time Market during the month of May, 2023 as compared with April, 2023 and May, 2022 are as given 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      | May, 2023                   | 2424.26                     | 58.28              | 105.53             | 78.20             |
|          | April, 2023                 | 2152.50                     | 60.97              | 84.95              | 71.75             |
|          | % Change (Month over Month) | 12.63                       | -4.41              | 24.23              | 8.99              |
|          | May, 2022                   | 2318.75                     | 42.02              | 104.40             | 74.80             |
|          | % Change (Year over Year)   | 4.55                        | 38.70              | 1.08               | 4.55              |
| PXIL     | May, 2023                   | -                           | -                  | -                  | -                 |
|          | April, 2023                 | -                           | -                  | -                  | -                 |
|          | % Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | May, 2022                   | -                           | -                  | -                  | -                 |
|          | % Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | May, 2023                   | 1.72                        | 0.22               | 1.50               | 0.86              |
|          | April, 2023                 | 0.11                        | 0.11               | 0.11               | 0.11              |
|          | % Change (Month over Month) | 1468.18                     | 100                | 1263.63            | 681.81            |

-: No transaction took place

NA: Not Applicable

**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      | May, 2023                   | 2.24              | 8.00    | 0.48        | 10.00   | 5.03                     |
|          | April, 2023                 | 2.69              | 7.64    | 0.20        | 10.00   | 4.95                     |
|          | % Change (Month over Month) | -16.73            | 4.71    | 140.00      | 0.00    | 1.62                     |
|          | May, 2022                   | 2.56              | 8.92    | 0.20        | 12.00   | 5.88                     |
|          | % Change (Year over Year)   | -12.50            | -10.31  | 140.00      | -16.67  | -14.46                   |
| PXIL     | May, 2023                   | -                 | -       | -           | -       | -                        |

| Exchange | Period                      | Prices (₹/kWh)    |         |             |         |                          |
|----------|-----------------------------|-------------------|---------|-------------|---------|--------------------------|
|          |                             | Daily MCP (₹/kWh) |         | ACP (₹/kWh) |         | Monthly Avg. MCP (₹/kWh) |
|          |                             | Minimum           | Maximum | Minimum     | Maximum | Average                  |
|          | April, 2023                 | -                 | -       | -           | -       | -                        |
|          | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |
|          | May, 2022                   | -                 | -       | -           | -       | -                        |
|          | % Change (Year over Year)   | NA                | NA      | NA          | NA      | NA                       |
| HPX      | May, 2023                   | 10.00             | 10.00   | 10.00       | 10.00   | 10.00                    |
|          | April, 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                     |

-: No transaction took place

NA: Not Applicable

**Table-2B**

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

The volume of electricity transacted in GDAM **198.13 MU** (i.e. **198.13 MU** in IEX) at an average MCP of **Rs 4.66/kWh** and no transaction took place in PXIL & HPX in GDAM. The Final Scheduled Volume (FSV), Daily Avg. Market Clearing Prices (MCP), Area Clearing Prices (ACP), Real Time Curtailment and details of Transmission Congestion under these 3 segments in Green Day Ahead Market during the month of May, 2023 and its comparison with April, 2023 and May, 2022 are as given in Table 3A and 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                      | May, 2023                   | 69.73                       | 1.19               | 6.03               | 2.25              |
|          |                            | April, 2023                 | 42.06                       | 0.58               | 3.24               | 1.40              |
|          |                            | % Change (Month over Month) | 65.79                       | 105.17             | 86.11              | 60.71             |
|          |                            | May, 2022                   | 276.46                      | 1.19               | 21.25              | 8.92              |
|          |                            | % Change (Year over Year)   | -74.78                      | 0.00               | -71.62             | -74.78            |
|          | Non Solar                  | May, 2023                   | 115.41                      | 1.99               | 6.37               | 3.72              |
|          |                            | April, 2023                 | 111.81                      | 2.43               | 6.00               | 3.73              |
|          |                            | % Change (Month over Month) | 3.22                        | -18.11             | 6.17               | -0.27             |
|          |                            | May, 2022                   | 216.71                      | 1.48               | 24.50              | 6.99              |
|          |                            | % Change (Year over Year)   | -46.74                      | 34.46              | -74.00             | -46.78            |
|          | Hydro                      | May, 2023                   | 12.99                       | 0.04               | 0.74               | 0.42              |
|          |                            | April, 2023                 | 3.67                        | 0.02               | 0.36               | 0.12              |
|          |                            | % Change (Month over Month) | 253.95                      | 100.00             | 105.56             | 250.00            |
|          |                            | May, 2022                   | -                           | -                  | -                  | -                 |
|          |                            | % Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Solar, Non Solar and Hydro | May, 2023                   | -                           | -                  | -                  | -                 |
|          |                            | April, 2023                 | -                           | -                  | -                  | -                 |
|          |                            | % Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
| HPX      | Solar, Non Solar and Hydro | May, 2023                   | -                           | -                  | -                  | -                 |
|          |                            | April, 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 | May, 2023                   | 3.39              | 6.15    | 2.00        | 10.00   | 4.70                     |
|          |                            | April, 2023                 | 4.27              | 7.86    | 1.89        | 10.00   | 5.72                     |
|          |                            | % Change (Month over Month) | -20.61            | -21.76  | 5.82        | 0.00    | -17.83                   |
|          |                            | May, 2022                   | 4.13              | 12      | 3           | 12      | 7.17                     |
|          |                            | % Change (Year over Year)   | -17.92            | -48.75  | -33.33      | -16.67  | -34.45                   |
| PXIL     | Solar, Non Solar and Hydro | May, 2023                   | -                 | -       | -           | -       | -                        |
|          |                            | April, 2023                 | -                 | -       | -           | -       | -                        |
|          |                            | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |
| HPX      | Solar, Non Solar and Hydro | May, 2023                   | -                 | -       | -           | -       | -                        |
|          |                            | April, 2023                 | -                 | -       | -           | -       | -                        |
|          |                            | % Change (Month over Month) | NA                | NA      | NA          | NA      | NA                       |

-: No transaction took place

NA: Not Applicable

**Table-3B**

- 3.1** There was no transmission congestion in the power exchanges in Green Day Ahead Market during the month of May, 2023 and May, 2022. In April, 2023 there was congestion of **1.16 MU** in GDAM.
- 3.2** There was no real time curtailment in the power exchanges in Green Day Ahead Market during the month of May, 2023, April, 2023 and May, 2022.
- 3.3** The **top 10 sellers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of May, 2023 were **Telangana, ADANI WIND ENERGY KUTCHH FOUR Ltd. Nakhatrana, Karnataka, WIND FIVE RENERGY LIMITED, Singoli Bhagwati, Renew Surya Ravi Private Limited (solar), Andhra Pradesh, Ostro Kannada Power Private Limited, Ramagundam Floating Solar PV Station and J&K**, which constituted **79.77 %** of the market volume.
- 3.4** The **top 10 buyers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of May, 2023 were **Maharashtra, Tamil Nadu, ArcelorMittal Nippon steel (ESIL) , DVC, Karnataka, BHARAT ALUMINIUM COMPANY LTD (Bulk Consumer), Delhi, Gujarat, Kerala and Daman & Diu - Dadra & Nagar Haveli**, which constituted **88.48 %** of the market volume.

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

- 4.1.** The total volume of electricity transacted on the power exchanges in Term Ahead Market in May, 2023 on delivery date basis was **940.27 MU**, out of which **607.72 MU** (64.65 %) was transacted on IEX, **133.80 MU** (14.23 %) was transacted on PXIL and **198.75 MU** (21.12 %) was transacted on HPX.
- 4.2.** The total volume of electricity transacted on the power exchanges in Term Ahead Market in April, 2023 on delivery date basis was **751.04 MU**, out of which **317.91 MU** (42.33%) was transacted on IEX, **111.30 MU** (14.82 %) was transacted on PXIL and **321.83 MU** (42.85%) was transacted on HPX.
- 4.3.** Similarly, the total volume of electricity transacted on the power exchanges in Term Ahead Market in May, 2022 on delivery date basis was **1,542.07 MU**, out of which, **732.12 MU** (47.48 %) was transacted on IEX and **809.95 MU** (52.52 %) was transacted on PXIL.
- 4.4.** With respect to the total energy supplied during the month of May, 2023 in the country, the volume of electricity traded on the power exchanges in TAM on delivery date basis represents **0.69 %** of the total energy supplied. The same was **0.57 %** in April, 2023 and **1.14 %** in May, 2022.
- 4.5.** In the month of May, 2023, there was real time curtailment of **17.04 MU** in TAM.
- 4.6.** In the month of May, 2023, there was no transmission congestion in TAM.
- 4.7. The comparison of total volume of electricity transacted and Average MCP in the power exchanges in Term Ahead Market (TAM) on delivery date basis during May, 2023 with April, 2023 and May, 2022 is given in Table – 4A & 4B:**

**(a) Final Scheduled Volume (MU), May, 2023 vis- a- vis April, 2023 and May, 2022**

| Exchange | Period                     | Final Scheduled Volume (MU) |        |         |                    |        |
|----------|----------------------------|-----------------------------|--------|---------|--------------------|--------|
|          |                            | Daily or Any Day            | Weekly | Monthly | Anyday Single Side | Total  |
| IEX      | May, 2023                  | 283.05                      | 90.65  | 89.28   | 144.74             | 607.72 |
|          | April, 2023                | 76.44                       | 73.50  | 119.04  | 48.93              | 317.91 |
|          | %Change (Month over Month) | 270.29                      | 23.33  | -25.00  | 195.81             | 91.16  |
|          | May, 2022                  | 713.69                      | 18.43  | -       | -                  | 732.12 |
|          | %Change (Year over Year)   | -60.34                      | 391.86 | NA      | NA                 | -16.99 |
| PXIL     | May, 2023                  | 59.40                       | -      | -       | 74.40              | 133.80 |
|          | April, 2023                | 51.60                       | 25.20  | -       | 34.50              | 111.30 |
|          | %Change (Month over Month) | 15.12                       | NA     | NA      | 115.65             | 20.22  |
|          | May, 2022                  | 809.95                      | -      | -       | -                  | 809.95 |
|          | %Change (Year over Year)   | -92.67                      | NA     | NA      | NA                 | -83.48 |
| HPX      | May, 2023                  | 141.54                      | 42.00  | -       | 15.21              | 198.75 |

|                                       |         |        |        |       |        |
|---------------------------------------|---------|--------|--------|-------|--------|
| <b>April, 2023</b>                    | 22.61   | 42.00  | 192.24 | 64.98 | 321.83 |
| <b>%Change<br/>(Month over Month)</b> | 2122.82 | 300.00 | NA     | -3.31 | 127.89 |

- : No transaction took place

NA: Not Applicable

**Table: 4A**

**(b) Average MCP, May, 2023 vis- a- vis April, 2023 and May, 2022**

| Exchange | Period                     | Average MCP (₹/kWh) |        |         |                    |
|----------|----------------------------|---------------------|--------|---------|--------------------|
|          |                            | Daily or Any Day    | Weekly | Monthly | Anyday Single Side |
| IEX      | May, 2023                  | 8.70                | 9.05   | 6.80    | 7.91               |
|          | April, 2023                | 8.59                | 8.38   | 11.20   | 11.19              |
|          | %Change (Month over Month) | 1.28                | 8.00   | -39.29  | -29.31             |
|          | May, 2022                  | 9.12                | 14.63  | 9.12    | 14.63              |
|          | %Change Year over Year)    | -4.61               | -38.14 | -25.44  | -45.93             |
| PXIL     | May, 2023                  | 8.30                | -      | -       | 7.95               |
|          | April, 2023                | 9.19                | 8.10   | -       | 11.40              |
|          | %Change (Month over Month) | -9.68               | NA     | NA      | -30.26             |
|          | May, 2022                  | 9.20                | -      | 9.20    | -                  |
|          | %Change (Year over Year)   | -9.78               | NA     | NA      | NA                 |
| HPX      | May, 2023                  | 9.07                | 6.40   | -       | 9.74               |
|          | April, 2023                | -                   | -      | -       | -                  |
|          | %Change (Month over Month) | NA                  | NA     | NA      | NA                 |

-: No transaction took place

NA: Not Applicable

**Table: 4B**

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

The total volume of electricity transacted in the IEX, PXIL & HPX in DAC & ID on delivery date basis was **1502.62 MU**.

The total volume of electricity transacted in DAC & ID in Day Ahead Contingency & Intra Day contracts during May, 2023 and its comparison with April, 2023 and May, 2022 on delivery date basis have been shown in Tables 5A to 5B.

### a) Final Scheduled Volume (MU), May, 2023 vis- a- vis April, 2023 and May, 2022

| Exchange | Period                     | Final Scheduled Volume (MU) |           |        |
|----------|----------------------------|-----------------------------|-----------|--------|
|          |                            | Day Ahead Contingency       | Intra Day | Total  |
| IEX      | May, 2023                  | 531.97                      | 6.28      | 538.25 |
|          | April, 2023                | 515.67                      | 7.80      | 523.47 |
|          | %Change (Month over Month) | 3.16                        | -19.49    | 2.82   |
|          | May, 2022                  | 449.53                      | 6.95      | -      |
|          | %Change (Year over Year)   | 18.34                       | -9.64     | NA     |
| PXIL     | May, 2023                  | 362.62                      | 21.23     | 383.85 |
|          | April, 2023                | 456.23                      | 8.08      | 464.31 |
|          | %Change (Month over Month) | -20.52                      | 162.75    | -17.33 |
|          | May, 2022                  | 122.90                      | 2.65      | 125.55 |
|          | %Change (Year over Year)   | 195.05                      | 701.13    | 205.73 |
| HPX      | May, 2023                  | 448.80                      | 6.40      | 455.20 |
|          | April, 2023                | 514.84                      | -         | -      |
|          | %Change (Month over Month) | -12.83                      | NA        | NA     |

- : No transaction took place

NA: Not Applicable

**Table: 5A**

### b) Average MCP, May, 2023 vis- a- vis April, 2023 and May, 2022

| Exchange | Period                     | Average MCP (₹/kWh)   |           |
|----------|----------------------------|-----------------------|-----------|
|          |                            | Day Ahead Contingency | Intra Day |
| IEX      | May, 2023                  | 5.08                  | 9.90      |
|          | April, 2023                | 6.10                  | 9.92      |
|          | %Change (Month over Month) | -16.72                | -0.20     |
|          | May, 2022                  | 8.92                  | 11.44     |
|          | %Change Year over Year)    | -43.05                | -13.46    |
| PXIL     | May, 2023                  | 5.00                  | 9.01      |
|          | April, 2023                | 5.98                  | 9.16      |
|          | %Change (Month over Month) | -16.39                | -1.64     |
|          | May, 2022                  | 7.31                  | 10.53     |

| Exchange | Period                     | Average MCP (₹/kWh)   |           |
|----------|----------------------------|-----------------------|-----------|
|          |                            | Day Ahead Contingency | Intra Day |
|          | %Change (Year over Year)   | -31.60                | -14.43    |
| HPX      | May, 2023                  | 7.03                  | 9.83      |
|          | April, 2023                | 6.17                  | -         |
|          | %Change (Month over Month) | 13.94                 | 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 & HPX in GTAM on delivery date basis was **96.09 MU** (**12.79 MU** in Solar and **83.30 MU** in Non Solar), respectively.

The total volume of electricity transacted in GTAM in Day Ahead Contingency, Intraday, Daily/Anyday and Weekly contracts during May, 2023 and its comparison with April, 2023 and May, 2022 on delivery date basis have been shown in Tables 5A to 5F.

### 6.1 Solar Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Table 6A & 6B below.

#### (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          | May, 2023                  | 5.25                        | 0.06               | 0.48               | 0.44              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change Month over Month)  | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | 6.00                        | 0.40               | 0.60               | 0.50              |
|          |                       | %Change (Year over Year)   | -12.50                      | -85.00             | -20.00             | -12.00            |
|          | Weekly                | May, 2023                  | 6.30                        | 0.45               | 0.45               | 0.45              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Daily/Anyday          | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |

| Exchange | Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|-----------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                       |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | 15.98                       | 0.35               | 1.73               | 0.94              |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Weekly                | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          |                       |                            |                             |                    |                    |                   |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | 1.24                        | 0.04               | 0.04               | 0.04              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Daily/Anyday          | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Weekly                | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 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          | May, 2023                  | 4.30          | 4.30    | 4.30    |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | 4.85          | 12.00   | 8.43    |
|          |                       | %Change (Year over Year)   | -11.34        | -64.17  | -48.99  |
|          | Weekly                | May, 2023                  | 4.30          | 4.30    | 4.30    |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Monthly               | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Anyday Single Side    | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Daily/Anyday          | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | 4.70          | 12.85   | 7.79    |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Weekly                | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Monthly               | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Anyday Single Side    | May, 2023                  | 6.25          | 6.25    | 6.25    |
|          |                       | April, 2023                | -             | -       | -       |

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

-: No transaction took place

NA: Not Applicable

**Table-6B**

- In May, 2023, there was no congestion in GTAM (Solar) in IEX, PXIL & HPX.

## 6.2 Non-Solar Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM (Non-Solar) in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Tables 6C & 6D below.

### (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               | May, 2023                  | 0.72                        | 0.07               | 0.07               | 0.07              |
|          |                            | April, 2023                | 27.58                       | 0.48               | 1.51               | 0.92              |
|          |                            | %Change (Month over Month) | -97.39                      | -85.42             | -95.36             | -92.39            |
|          |                            | May, 2022                  | 54.80                       | 0.08               | 4.06               | 1.96              |
|          |                            | %Change (Year over Year)   | -98.69                      | -12.50             | -98.28             | -96.43            |
|          | Weekly                     | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                            | April, 2023                | 12.10                       | 0.43               | 0.43               | 0.43              |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Monthly                    | May, 2023                  | 3.72                        | 0.12               | 0.12               | 0.12              |
|          |                            | April, 2023                | 21.60                       | 0.72               | 0.72               | 0.72              |
|          |                            | %Change                    | -82.78                      | -83.33             | -83.33             | -83.33            |

| Exchange | Non- Solar<br>Energy Contract | Period                        | Final Scheduled Volume (MU) |                       |                       |                      |
|----------|-------------------------------|-------------------------------|-----------------------------|-----------------------|-----------------------|----------------------|
|          |                               |                               | Total                       | Minimum<br>(on a day) | Maximum<br>(on a day) | Average<br>(per day) |
|          |                               | (Month over Month)            |                             |                       |                       |                      |
|          |                               | May, 2022                     | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          | Anyday Single<br>Side         | May, 2023                     | 78.86                       | 2.54                  | 2.54                  | 2.54                 |
|          |                               | April, 2023                   | 2.55                        | 0.13                  | 0.13                  | 0.13                 |
|          |                               | %Change<br>(Month over Month) | 2992.55                     | 1853.85               | 1853.85               | 1853.85              |
|          |                               | May, 2022                     | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          |                               |                               |                             |                       |                       |                      |
| PXIL     | Daily/Anyday                  | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          |                               | May, 2022                     | 114.03                      | 1.20                  | 8.21                  | 3.80                 |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          |                               |                               |                             |                       |                       |                      |
|          | Weekly                        | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          |                               | May, 2022                     | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          |                               |                               |                             |                       |                       |                      |
|          | Monthly                       | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          |                               | May, 2022                     | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          |                               |                               |                             |                       |                       |                      |
|          | Anyday Single<br>Side         | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          |                               | May, 2022                     | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Year over Year)   | NA                          | NA                    | NA                    | NA                   |
|          |                               |                               |                             |                       |                       |                      |
| HPX      | Daily/Anyday                  | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | 8.64                        | 0.24                  | 0.72                  | 0.29                 |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          | Weekly                        | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          | Monthly                       | May, 2023                     | -                           | -                     | -                     | -                    |
|          |                               | April, 2023                   | -                           | -                     | -                     | -                    |
|          |                               | %Change<br>(Month over Month) | NA                          | NA                    | NA                    | NA                   |
|          | Anyday Single                 | May, 2023                     | -                           | -                     | -                     | -                    |

| Exchange | Non- Solar Energy Contract | Period                     | Final Scheduled Volume (MU) |                    |                    |                   |
|----------|----------------------------|----------------------------|-----------------------------|--------------------|--------------------|-------------------|
|          |                            |                            | Total                       | Minimum (on a day) | Maximum (on a day) | Average (per day) |
|          | Side                       | April, 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               | May, 2023                  | 6.50          | 6.50    | 6.50    |
|          |                            | April, 2023                | 7.19          | 7.28    | 7.23    |
|          |                            | %Change (Month over Month) | -9.60         | -10.71  | -10.10  |
|          |                            | May, 2022                  | 5.88          | 12.67   | 8.35    |
|          |                            | %Change (Year over Year)   | 10.54         | -48.70  | -22.16  |
|          |                            |                            |               |         |         |
|          | Weekly                     | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | 7.50          | 7.50    | 7.50    |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          |                            |                            |               |         |         |
|          | Monthly                    | May, 2023                  | 6.80          | 6.80    | 6.80    |
|          |                            | April, 2023                | 7.35          | 7.35    | 7.35    |
|          |                            | %Change (Month over Month) | -7.48         | -7.48   | -7.48   |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          |                            |                            |               |         |         |
|          | Anyday Single Side         | May, 2023                  | 7.49          | 7.49    | 7.49    |
|          |                            | April, 2023                | 10.00         | 10.00   | 10.00   |
|          |                            | %Change (Month over Month) | -25.10        | -25.10  | -25.10  |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          |                            |                            |               |         |         |
| PXIL     | Daily/Anyday               | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | 6.36          | 13.94   | 9.44    |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          |                            |                            |               |         |         |
|          | Weekly                     | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |

| Exchange | Non- Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|----------------------------|----------------------------|---------------|---------|---------|
|          |                            |                            | Minimum       | Maximum | Average |
|          | Monthly                    | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
|          | Anyday Single Side         | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Daily/Anyday               | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | 7.45          | 7.75    | 7.49    |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          | Weekly                     | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          | Monthly                    | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          | Anyday Single Side         | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |

-: No transaction took place

NA: Not Applicable

**Table - 6D**

- In May, 2023, there was transmission congestion of 0.52 MU in GTAM (Non Solar) in IEX under Daily and Weekly contracts. Whereas, in PXIL and HPX, there was no transmission congestion.
- In May, 2023, there was real time curtailment of **13.39 MU** in GTAM (Non Solar) in IEX under Anyday Single Sided contract. Whereas, in PXIL and HPX, there was no real time curtailment in GTAM (Non Solar) during the month of May, 2023.

### 6.3 Hydro Energy Segment in GTAM

The Final Scheduled Volume and the Price of electricity transacted in GTAM (Hydro) in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Tables 6E & 6F below.

## Hydro Energy Contract in GTAM

### (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          | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Weekly                | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
| PXIL     | Daily/Anyday          | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Weekly                | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
| HPX      | Daily/Anyday          | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Weekly                | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Monthly               | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          | Anyday Single Side    | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |

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

|  |                               |                                       |    |    |    |
|--|-------------------------------|---------------------------------------|----|----|----|
|  |                               | <b>April, 2023</b>                    | -  | -  | -  |
|  |                               | <b>%Change<br/>(Month over Month)</b> | NA | NA | NA |
|  | <b>Anyday Single<br/>Side</b> | <b>May, 2023</b>                      | -  | -  | -  |
|  |                               | <b>April, 2023</b>                    | -  | -  | -  |
|  |                               | <b>%Change<br/>(Month over Month)</b> | NA | NA | NA |
|  |                               |                                       |    |    |    |

-: No transaction took place

NA: Not Applicable

**Table – 6F**

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

The total volume of electricity transacted in the IEX, PXIL & HPX in G-DAC & ID on delivery date basis was **195.58 MU** (73.47 MU in Solar 98.55 MU in Non-Solar and 23.56 MU in Hydro), respectively.

The total volume of electricity transacted in G-DAC & ID in Day Ahead Contingency and Intra Day contracts during May, 2023 and its comparison with April, 2023 and May, 2022 on delivery date basis have been shown in Tables 7A to 7F.

### 7.1 Solar Energy Segment in G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Solar) in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Table 7A & 7B below.

#### (iii) 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 | May, 2023                  | 4.39                        | 0.22               | 1.08               | 0.44              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | 28.11                       | 0.16               | 4.48               | 1.76              |
|          |                       | %Change (Year over Year)   | -84.38                      | 37.50              | -75.89             | -75.00            |
|          | Intra Day             | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency | May, 2023                  | 14.44                       | 0.24               | 2.17               | 0.96              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | 92.37                       | 0.64               | 7.54               | 3.08              |
|          |                       | %Change (Year over Year)   | -84.37                      | -62.50             | -71.22             | -68.83            |
|          | Intra Day             | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency | May, 2023                  | 13.70                       | 0.03               | 2.21               | 0.72              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |

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

-: No transaction took place

NA: Not Applicable

**Table-7A**

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

| Exchange | Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|-----------------------|----------------------------|---------------|---------|---------|
|          |                       |                            | Minimum       | Maximum | Average |
| IEX      | Day Ahead Contingency | May, 2023                  | 2.67          | 4.25    | 3.43    |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | 3.50          | 12.66   | 6.41    |
|          |                       | %Change (Year over Year)   | -23.71        | -66.43  | -46.49  |
|          | Intra Day             | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Day Ahead Contingency | May, 2023                  | 3.09          | 4.60    | 3.90    |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | 1.79          | 13.61   | 5.90    |
|          |                       | %Change (Year over Year)   | 72.63         | -66.20  | -33.90  |
|          | Intra Day             | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2022                  | -             | -       | -       |
|          |                       | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Day Ahead Contingency | May, 2023                  | 2.55          | 4.79    | 3.79    |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          | Intra Day             | May, 2023                  | -             | -       | -       |
|          |                       | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       |                            |               |         |         |

-: No transaction took place

NA: Not Applicable

**Table-7B**

- In May, 2023, there was no transmission congestion in G-DAC & ID (Solar) in IEX, PXIL & HPX.
- In May, 2023, there was real time curtailment of **0.18 MU** in G-DAC & ID (Solar) in IEX. Whereas, in PXIL and HPX, there was no real time curtailment in G-DAC & ID (Solar) during the month of May, 2023.

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

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Non-Solar) in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Tables 7C & 7D below.

### (iii) 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      | May, 2023                  | 54.75                       | 0.49               | 4.49               | 1.77              |
|          |                            | April, 2023                | 51.67                       | 1.00               | 2.96               | 1.72              |
|          |                            | %Change (Month over Month) | 5.96                        | -51.00             | 51.69              | 2.91              |
|          |                            | May, 2022                  | 60.24                       | 0.08               | 5.78               | 1.94              |
|          |                            | %Change (Year over Year)   | -9.11                       | 512.50             | -22.32             | -8.76             |
|          | Intra Day                  | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                            | April, 2023                | 0.05                        | 0.05               | 0.05               | 0.05              |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency      | May, 2023                  | 27.06                       | 0.13               | 7.20               | 1.42              |
|          |                            | April, 2023                | 16.55                       | 0.04               | 1.40               | 0.55              |
|          |                            | %Change (Month over Month) | 63.50                       | 225.00             | 414.29             | 158.18            |
|          |                            | May, 2022                  | 163.26                      | 0.31               | 10.84              | 5.27              |
|          |                            | %Change (Year over Year)   | -83.43                      | -58.06             | -33.58             | -73.06            |
|          | Intra Day                  | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                            | April, 2023                | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                            | May, 2022                  | 1.35                        | 1.35               | 1.35               | 1.35              |
|          |                            | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency      | May, 2023                  | 4.38                        | 0.07               | 2.21               | 0.35              |
|          |                            | April, 2023                | 3.83                        | 0.05               | 0.61               | 0.32              |
|          |                            | %Change (Month over Month) | 14.36                       | 40.00              | 262.95             | 9.37              |
|          | Intra Day                  | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                            | April, 2023                | -                           | -                  | -                  | -                 |
|          |                            | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |

-: No transaction took place

NA: Not Applicable

Table - 7C

## (iv) Daily Avg. Market Clearing Price (MCP):

| Exchange | Non- Solar Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|----------------------------|----------------------------|---------------|---------|---------|
|          |                            |                            | Minimum       | Maximum | Average |
| IEX      | Day Ahead Contingency      | May, 2023                  | 3.14          | 7.67    | 5.17    |
|          |                            | April, 2023                | 4.11          | 8.98    | 6.17    |
|          |                            | %Change (Month over Month) | -23.60        | -14.59  | -16.21  |
|          |                            | May, 2022                  | 4.24          | 14.84   | 8.17    |
|          |                            | %Change (Year over Year)   | -25.94        | -48.32  | -36.72  |
|          | Intra Day                  | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | 10.00         | 10.00   | 10.00   |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | -             | -       | -       |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
| PXIL     | Day Ahead Contingency      | May, 2023                  | 3.72          | 7.80    | 5.53    |
|          |                            | April, 2023                | 4.16          | 8.81    | 6.02    |
|          |                            | %Change (Month over Month) | -10.58        | -11.46  | -8.14   |
|          |                            | May, 2022                  | 3.65          | 14.70   | 7.83    |
|          |                            | %Change (Year over Year)   | 1.92          | -46.94  | -29.37  |
|          | Intra Day                  | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |
|          |                            | May, 2022                  | 6.41          | 6.41    | 6.41    |
|          |                            | %Change (Year over Year)   | NA            | NA      | NA      |
| HPX      | Day Ahead Contingency      | May, 2023                  | 3.46          | 7.29    | 5.33    |
|          |                            | April, 2023                | 3.05          | 9.96    | 6.59    |
|          |                            | %Change (Month over Month) | 13.44         | -26.81  | -19.12  |
|          | Intra Day                  | May, 2023                  | -             | -       | -       |
|          |                            | April, 2023                | -             | -       | -       |
|          |                            | %Change (Month over Month) | NA            | NA      | NA      |

-: No transaction took place

NA: Not Applicable

Table - 7D

- In May, 2023, there was no transmission congestion in G-DAC & ID (Non Solar) in IEX, PXIL & HPX.
- In May, 2023, there was no real time curtailment in G-DAC & ID (Non Solar) in IEX, PXIL & HPX.

### 7.3 Hydro Energy Segment in G-DAC & ID

The Final Scheduled Volume and the Price of electricity transacted in G-DAC & ID (Hydro) in Power Exchanges during May, 2023 and its comparison with April, 2023 and May, 2022 have been shown in Tables 7E & 7F below.

#### (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 | May, 2023                  | 17.89                       | 0.26               | 1.18               | 0.69              |
|          |                       | April, 2023                | 5.67                        | 0.39               | 0.54               | 0.47              |
|          |                       | %Change (Month over Month) | 215.52                      | -33.33             | 118.52             | 46.81             |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| PXIL     | Day Ahead Contingency | May, 2023                  | 0.16                        | 0.16               | 0.16               | 0.16              |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
|          | Intra Day             | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 2023                | -                           | -                  | -                  | -                 |
|          |                       | %Change (Month over Month) | NA                          | NA                 | NA                 | NA                |
|          |                       | May, 2022                  | -                           | -                  | -                  | -                 |
|          |                       | %Change (Year over Year)   | NA                          | NA                 | NA                 | NA                |
| HPX      | Day Ahead Contingency | May, 2023                  | 5.51                        | 1.43               | 2.34               | 1.84              |
|          |                       | April, 2023                | 3.82                        | 0.29               | 0.54               | 0.38              |
|          |                       | %Change (Month over Month) | 44.24                       | 393.10             | 333.33             | 384.21            |
|          | Intra Day             | May, 2023                  | -                           | -                  | -                  | -                 |
|          |                       | April, 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      | Daily/Anyday          | May, 2023 | 3.13          | 6.76    | 5.13    |

| Exchange | Hydro Energy Contract | Period                     | Prices(₹/kWh) |         |         |
|----------|-----------------------|----------------------------|---------------|---------|---------|
|          |                       |                            | Minimum       | Maximum | Average |
|          |                       | April, 2023                | 3.73          | 7.28    | 5.83    |
|          |                       | %Change (Month over Month) | -16.09        | -7.14   | -12.01  |
|          |                       | May, 2023                  | -             | -       | -       |
|          | Weekly                | April, 2023                | NA            | NA      | NA      |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | -             | -       | -       |
|          | Monthly               | April, 2023                | NA            | NA      | NA      |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | -             | -       | -       |
|          | Anyday Single Side    | April, 2023                | 8.37          | 8.37    | 8.37    |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | NA            | NA      | NA      |
| PXIL     | Daily/Anyday          | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2023                  | NA            | NA      | NA      |
|          | Weekly                | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2023                  | -             | -       | -       |
|          | Monthly               | April, 2023                | NA            | NA      | NA      |
|          |                       | %Change (Month over Month) | 3.14          | 4.12    | 3.76    |
|          |                       | May, 2023                  | 3.91          | 6.02    | 4.72    |
|          | Anyday Single Side    | April, 2023                | -19.69        | -31.56  | -20.34  |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | -             | -       | -       |
| HPX      | Daily/Anyday          | April, 2023                | NA            | NA      | NA      |
|          |                       | %Change (Month over Month) | 3.13          | 6.76    | 5.13    |
|          |                       | May, 2023                  | 3.73          | 7.28    | 5.83    |
|          | Weekly                | April, 2023                | -16.09        | -7.14   | -12.01  |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | NA            | NA      | NA      |
|          | Monthly               | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | -             | -       | -       |
|          |                       | May, 2023                  | NA            | NA      | NA      |
|          | Anyday Single Side    | April, 2023                | -             | -       | -       |
|          |                       | %Change (Month over Month) | NA            | NA      | NA      |
|          |                       | May, 2023                  | NA            | NA      | NA      |

-: No transaction took place

NA: Not Applicable

**Table – 7F**

- In May, 2023, there was no transmission congestion in GTAM (Hydro) in IEX, PXIL and HPX.
- In May, 2023, there was no real time curtailment in GTAM (Hydro) in IEX, PXIL and HPX.

## 8. **Bilateral Transactions:**

The total volume of electricity transacted through **Bilateral transactions** in the month of May, 2023 was **8,418.06 MU**. The total buy volume of electricity transacted in bilateral market through direct transactions and trader in the month of May, 2023 were **2,697.71 MU** and **5,720.35 MU** respectively. The details of Bilateral transactions of Electricity during May, 2023 is shown in Table Below:

| May, 2023      | Direct   | Traders  | Total Bilateral Transaction (MU) |
|----------------|----------|----------|----------------------------------|
| <b>Total</b>   | 2,697.71 | 5,720.35 | 8,418.06                         |
| <b>Minimum</b> | 3.23     | 0.33     |                                  |
| <b>Maximum</b> | 458.40   | 1,230.01 |                                  |

**Table - 8A**

The region-wise maximum/ minimum volume of electricity transacted bilaterally during May, 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>            | 246.9  | 621.3  | 703.22 | 1844.55 | 1151.2 | 1477.8 | 596.3  | 1774.0 | 0.00   | 2.62   |
| <b>Minimum</b>          | 54.25  | 11.14  | 17.90  | 5.16    | 3.23   | 11.23  | 24.26  | 0.33   | 0.00   | 2.62   |
| <b>Maximum</b>          | 125.0  | 402.1  | 434.66 | 939.75  | 458.40 | 623.19 | 355.7  | 1230.0 | 0.00   | 2.62   |

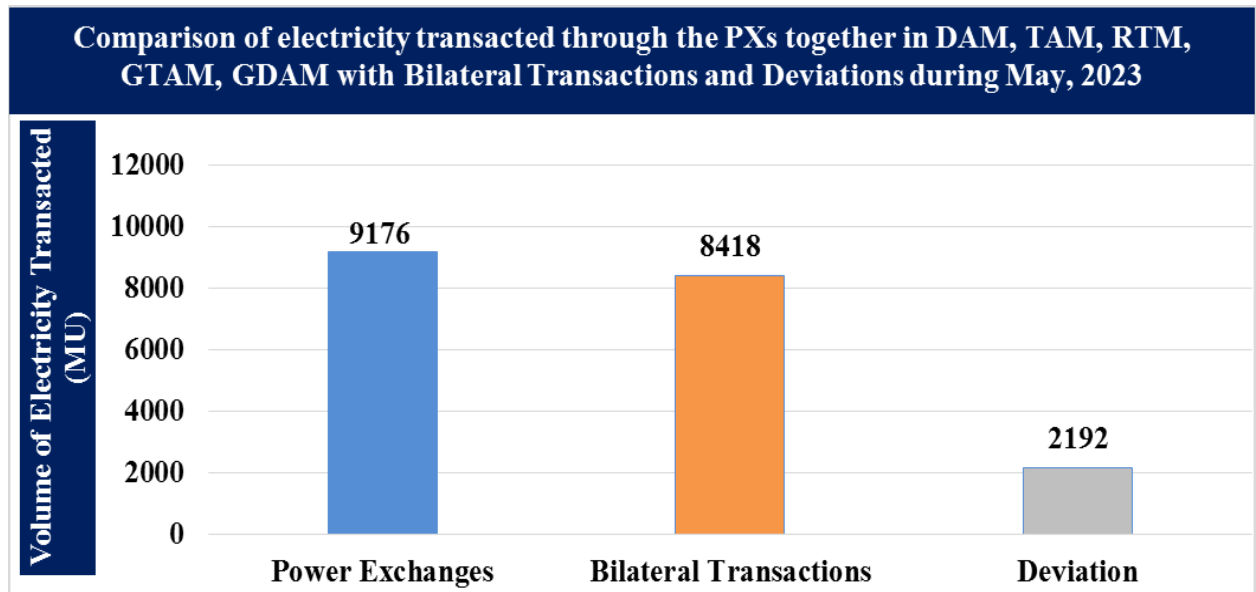
**Table-8B**

**8.1. The top 5 buyers** on bilateral transaction through direct transactions in the month of May, 2023 were **Uttar Pradesh, Maharashtra, Haryana, Andhra Pradesh** and **Telangana**, which constituted **69.12 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in the month of May, 2023 were **Tamil Nadu, Maharashtra, Delhi, Uttar Pradesh** and Gujarat, which constituted **65.49 %** of the market volume. [Annexure III]

**8.2. The top 5 sellers** on bilateral transaction through direct transactions in the month of May, 2023 were **SEMCORP, Rajasthan, J&K, AHEJ4LAHS** and **Madhya Pradesh**, and which constituted **49.23 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in the month of May, 2023 were **RPREL, ESSAR POWER, JINDAL STAGE-II, ILF&S** and **RKM Power**, which constituted **29.47 %** of the market volume. [Annexure III]

**8.3. Deviation Volume** -The volume of Deviation observed in the month of May, 2023 in import and export were **2,003.46 MU** and **2,379.63 MU** respectively. The total volume of Deviation observed in the month of May, 2023 can be taken as **2,191.54 MU**.

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

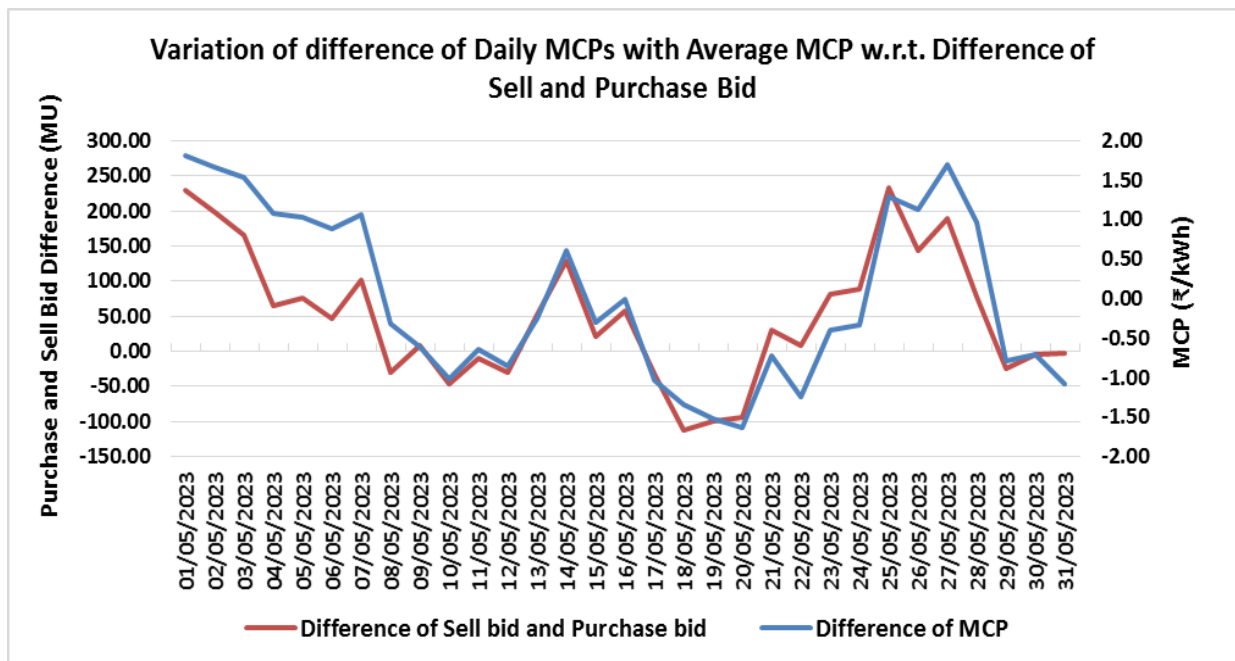


**Figure -1**

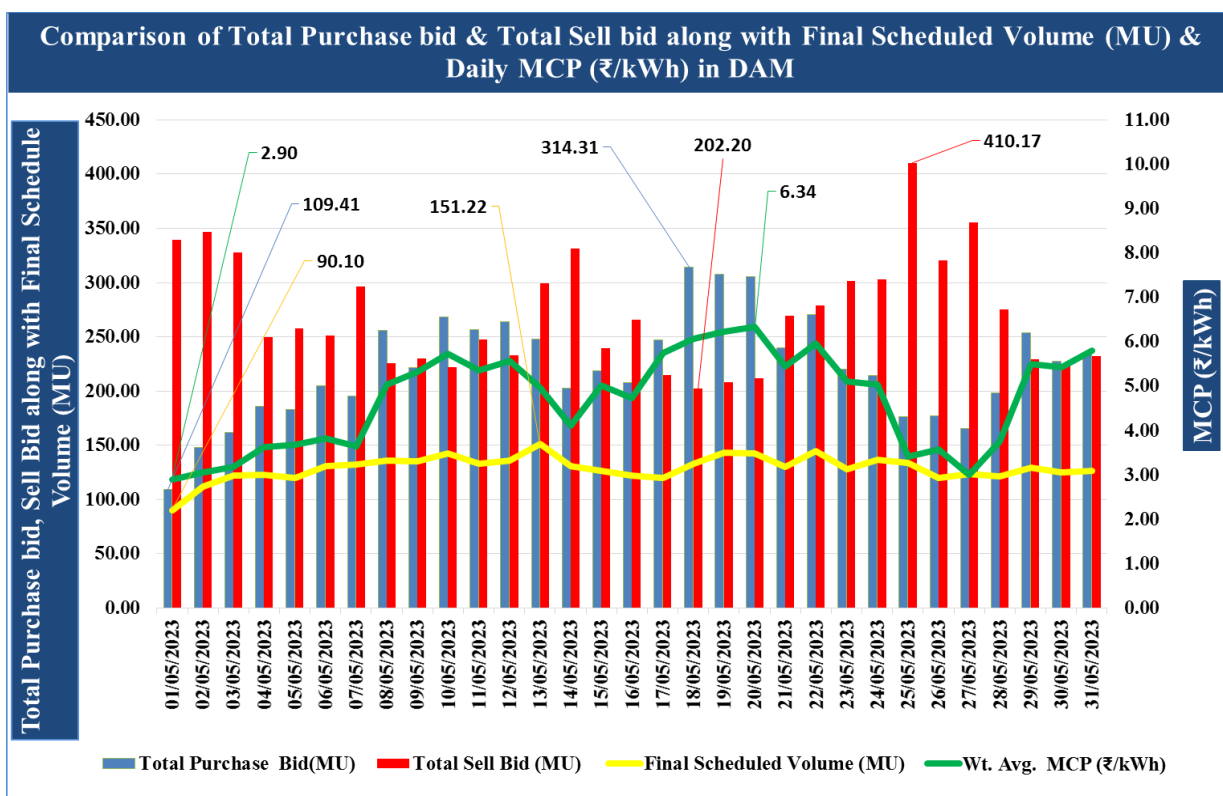
## 9. Analysis of movement of prices observed in DAM during May, 2023

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 May, 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 **2.96** in the month of May, 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:

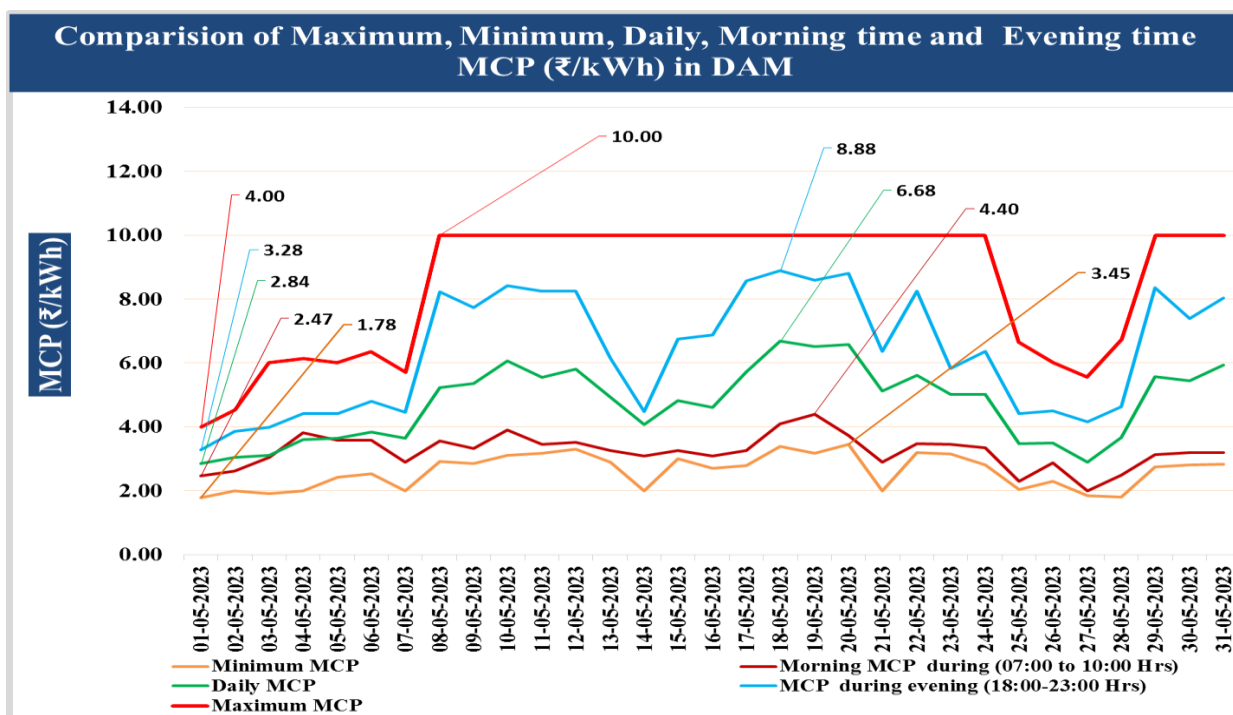


- 9.4. The same relationship is visible from the analysis carried out from the plot in **Figure - 2**



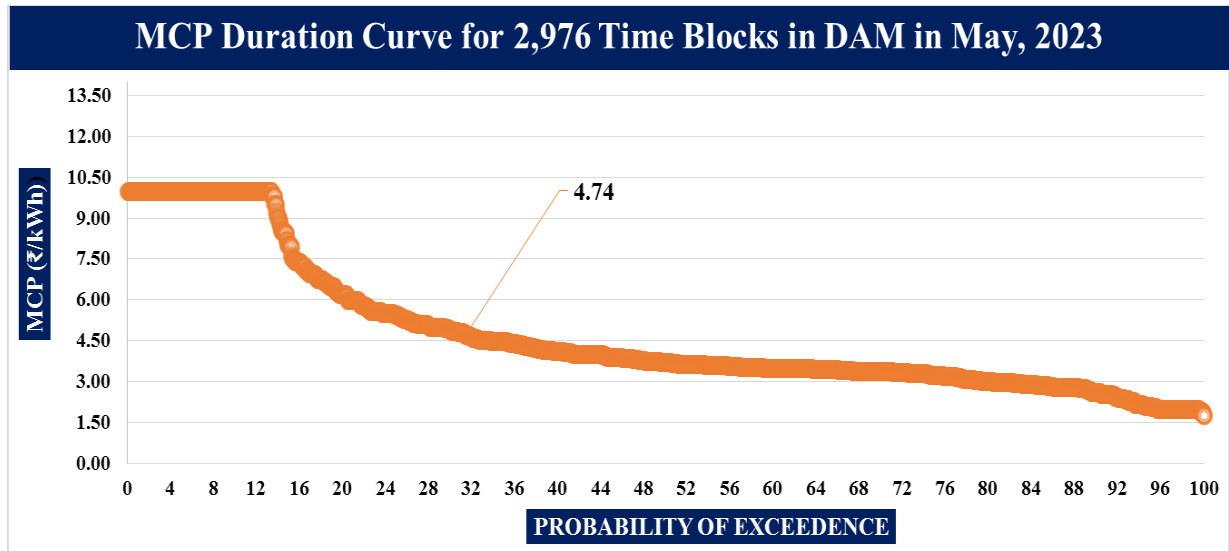
**Figure - 2**

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

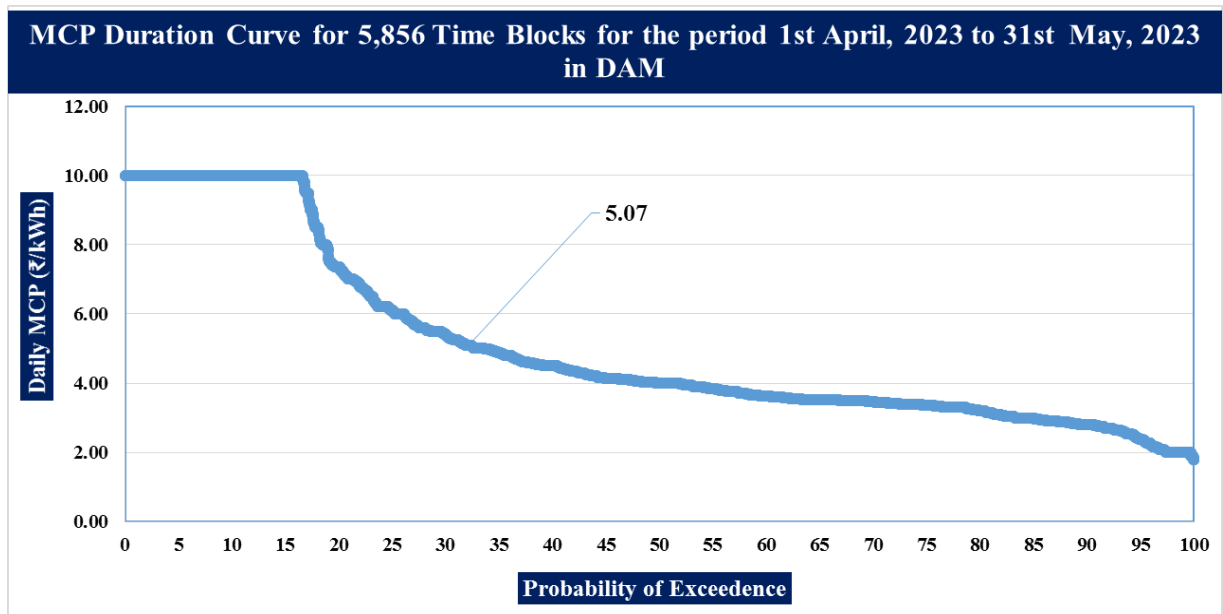


**Figure-3**

9.7. The Market Clearing Price duration curves for time block wise MCP for the month of May, 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> May, 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 May, 2023, for 31.00 % of the time MCP was above average MCP of the month (i.e. ₹ 4.74/kWh) and almost 69.00 % 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> May, 2023 (figure-5), that for 32.00 % of the time the MCP was above the average MCP for the period (i.e. ₹ 5.07kWh) and for 68.00 % 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 7.1 and 7.2 above.

- 9.10.** In May, 2023, the maximum FSV occurred mostly during the **time period 18-19 Hrs** (on 6 no. of days). Whereas, the maximum MCP occurred mostly during the **time period 00-01 Hrs** (on 18 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 03-05 Hrs** (on 21 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 08-10 Hrs** (on 16 no. of days). **[Annexure VI]**
- 9.11.** In the month of May, 2023, there was congestion of **0.41 MU** in IEX, no congestion took place in PXIL and no transaction of electricity took place in HPX during May, 2023. Further, In the month of April, 2023, there was congestion of 56.64 MU in IEX and no transaction of electricity took place in PXIL & HPX during April, 2023. In May, 2022, there was no congestion in DAM.
- 9.12.** In the month of May, 2023, there was **no** real time curtailment in IEX, 1.55 MU took place in PXIL and no transaction of electricity took place in HPX during May, 2023. Further, in the month of April, 2023, there was no real time curtailment in IEX and no transaction of electricity took place in PXIL & HPX during April, 2023. In May, 2022, there was no real time curtailment in DAM.
- 9.13.** The **top 10 sellers** on the power exchanges in **Day Ahead Market (DAM)** in the month of May, 2023 were **Chhattisgarh, Uttar Pradesh, Bihar, Telangana, Jindal Power Ltd. Stg-II, Jaypee Nigrie, Delhi, Raipur Energen, Jindal Power** and **MB Power**, which constituted **59.61 %** of the market volume. **[Annexure VII]**.
- 9.14.** The **top 10 purchasers** on the power exchanges in **Day Ahead Market (DAM)** in the month of May, 2023 were **Gujarat, West Bengal, Andhra Pradesh, Rajasthan, Maharashtra, J&K, Uttar Pradesh, Tamil Nadu, Punjab** and **Telangana**, which constituted **76.65 %** of the market volume. **[Annexure VII]**
- 9.15.** The total volume of electricity purchased by Discoms/Licensees in DAM in the month of May, 2023 was **3,805.19 MU**, which constituted **95.09 %** of total volume of electricity purchased on the power exchanges.
- 9.16.** Similarly, the total volume of electricity sold by Discoms/Licensees in DAM in the month of May, 2023 was **2,476.72 MU**, which constituted **61.89 %** of total volume of electricity sold on the power exchanges.

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

10.1. Similar to the regression analysis carried out for Day Ahead Market, the regression analysis for Real Time Market was also done. The regression analysis revealed that the significant variable was the Peak Demand. Further, the regression analysis revealed that the elasticity of the Daily Avg. MCP with respect to Coal generation was **3.24** in the month of May, 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:

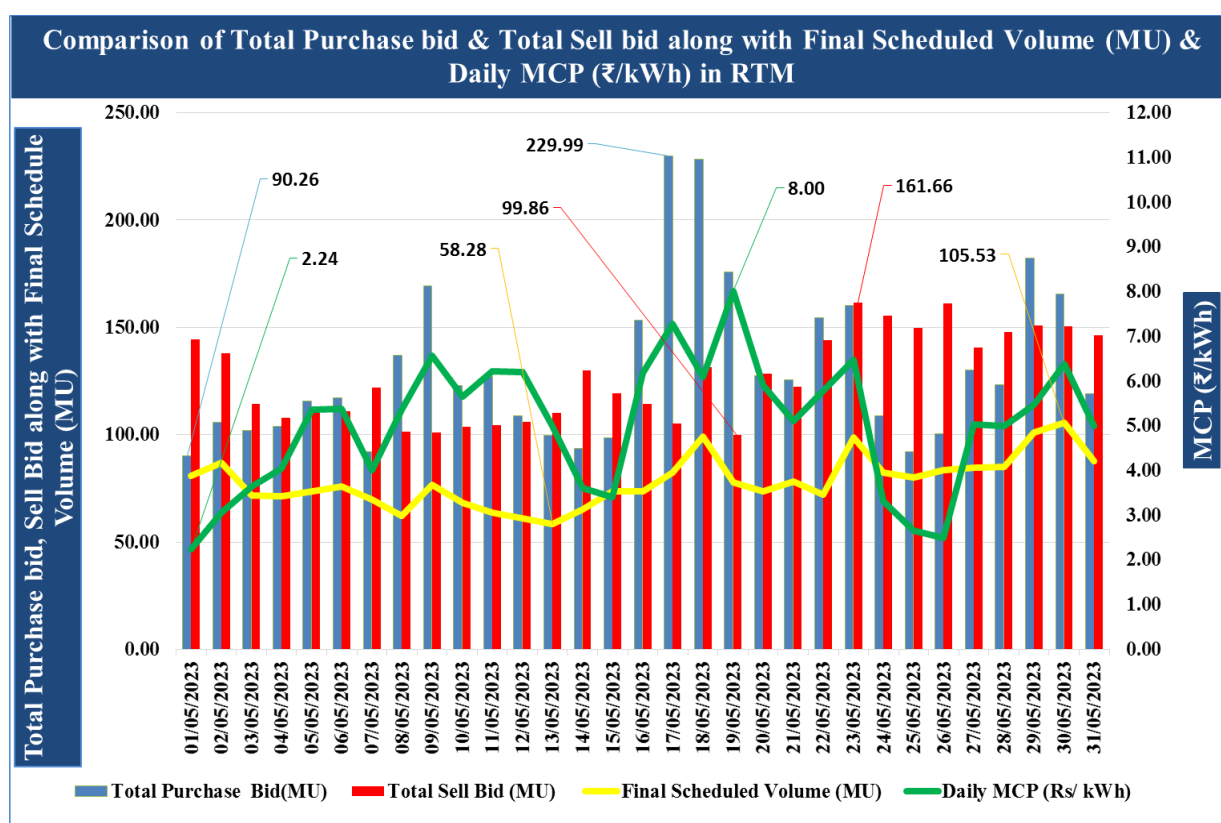
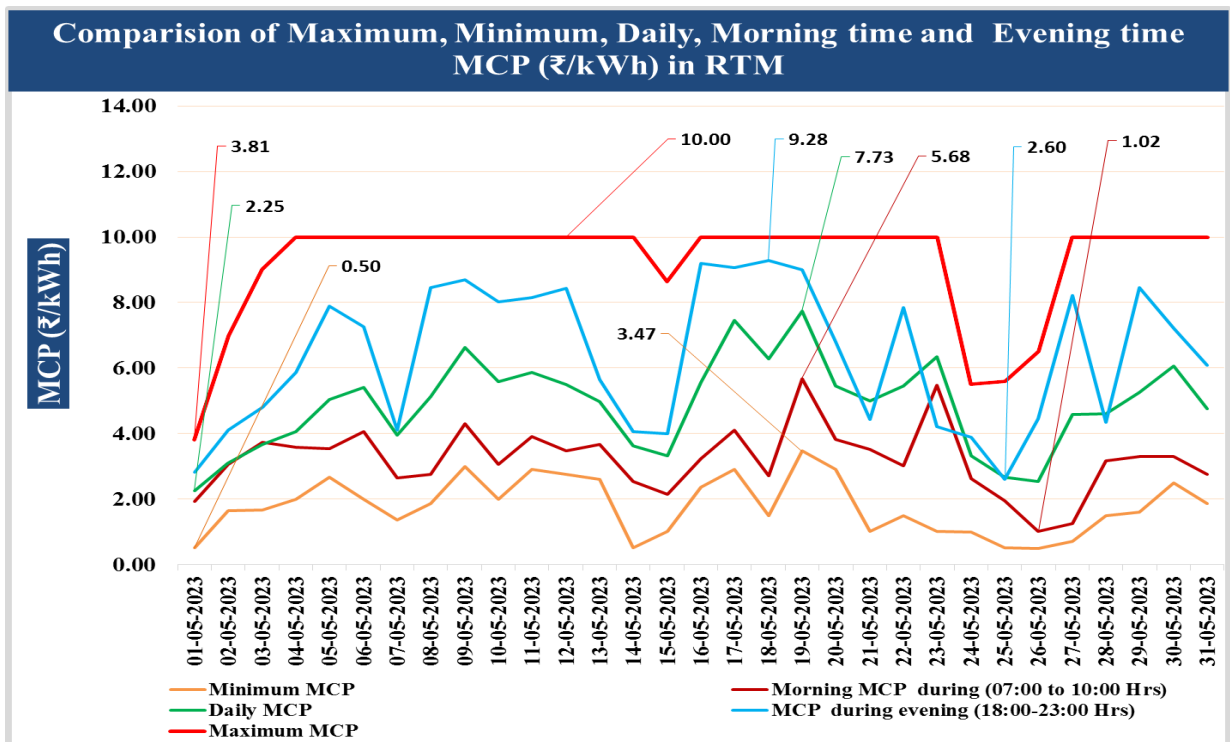


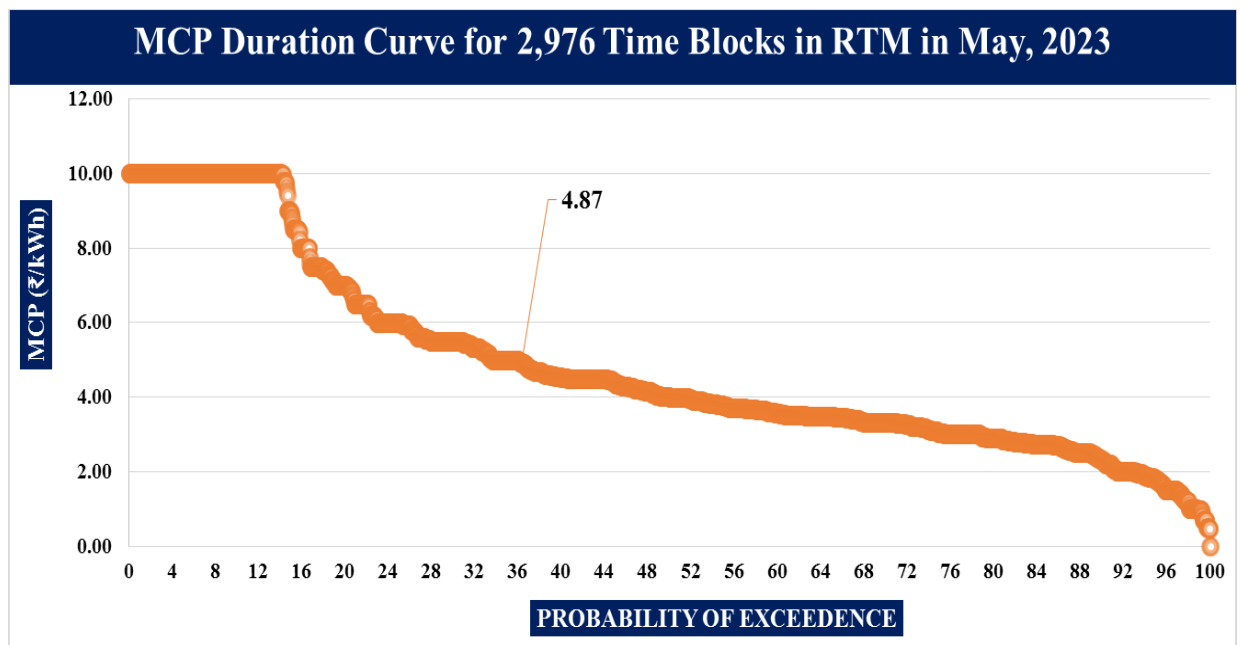
Figure-6

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

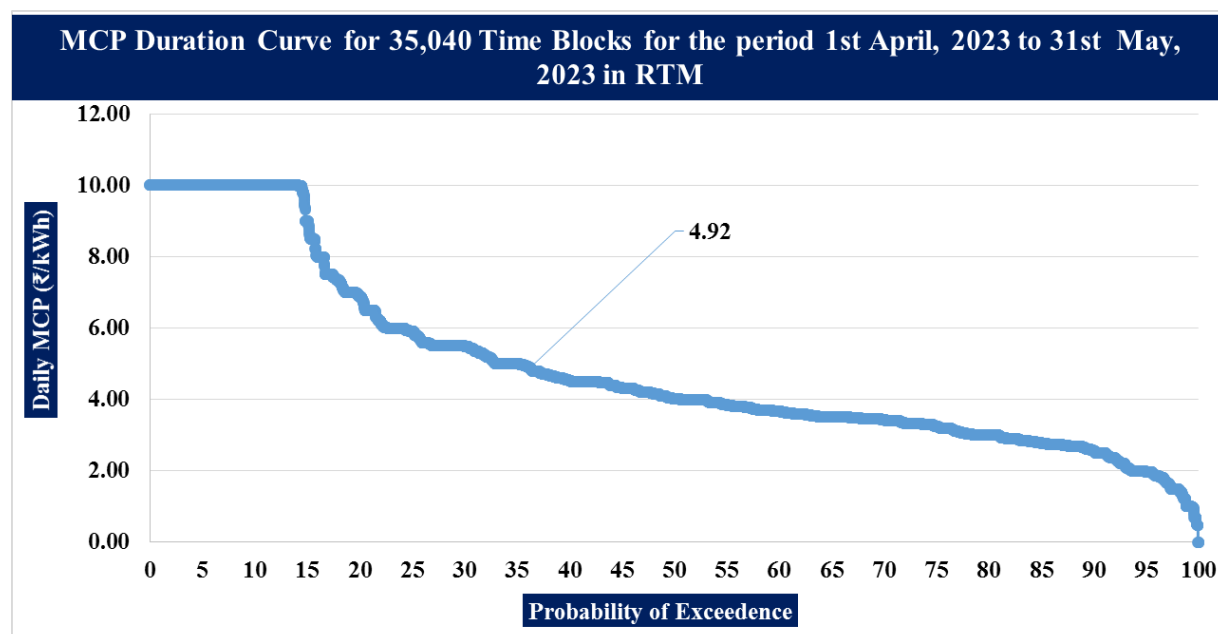


**Figure-7**

**10.5.** The Market Clearing Price duration curves for time block wise MCP for the month of May, 2023 is shown in **Figure 8**, whereas the day wise MCP duration curve for the period 1<sup>st</sup> April, 2023 to 28<sup>th</sup> May, 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 May, 2023, for 37.00 % of the time the MCP was above the average MCP of the month (i.e. ₹ 4.87/kWh) and for 63.00 % of the time the MCP was below the average MCP of the month. Similarly, it can be seen in the cumulative MCP duration curve from 1<sup>st</sup> April, 2023 to 31<sup>st</sup> May, 2023 (figure 9) that, for 36.00 % of the time the Daily Avg. MCP was above the average MCP for the period (i.e. ₹ 4.92/kWh) and for 64.00 % of the time the Daily Avg. MCP was below the average MCP for the period.
- 10.7.** In May, 2023, the maximum FSV occurred mostly during the **time period 21-24 Hrs** (on 11 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 00-01 Hrs** (on 17 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 07-09 Hrs** (on 08 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 07-09 Hrs** (on 13 no. of days).[Annexure X]
- 10.8.** There was **no** real time curtailment in IEX and HPX in Real Time Market (RTM) during May, 2023 and no transaction happened in PXIL. Further, in April, 2023 **no** real time curtailment occurred in IEX and HPX, whereas, no transaction happened in PXIL. Similarly, in May, 2022, there was no real time curtailment in IEX & no transaction happened in PXIL.
- 10.9.** In the month of May, 2023 there was congestion in IEX of 4.95 MU, no congestion happened in HPX and no transaction happened in PXIL. Further, in the month of April, 2023, there was congestion of 4.62 MU in IEX and no transaction happened in PXIL & HPX. In the month of May, 2022, there was congestion of 1.29 MU in the transmission system in IEX and no transaction happened in PXIL.

**10.10.** The **top 10 sellers** on the power exchanges in **Real Time Market (RTM)** in the month of May, 2023 were **Madhya Pradesh, Bihar, Rajasthan, Delhi, NPCIL KAKRAPAR ATOMIC POWER STATION UNITS 3 & 4, Telangana, Chhattisgarh, Himachal Pradesh, West Bengal, Odisha and Punjab**, which constituted **65.24 %** of the market volume. **[Annexure XI]**

**10.11.** The **top 10 buyers** on the power exchanges in **West Bengal, Rajasthan, Maharashtra, Telangana, Andhra Pradesh, J&K, Uttar Pradesh, Tamil Nadu, Odisha and Gujarat**, which constituted **73.60 %** of the market volume. **[Annexure XI]**

**10.12.** The total volume of electricity purchased by Discoms/Licensees in RTM in the month of May, 2023 was **2,378.38 MU**, which constituted **98.03 %** of total volume of electricity purchased on the power exchanges.

**10.13.** Similarly, the total volume of electricity sold by Discoms/Licensees in RTM in the month of May, 2023 was **1,918.92 MU**, which constituted **79.10 %** of total volume of electricity sold on the power exchanges.

\*\*\*\*\*

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

**Final Scheduled Volume, Average MCP and Real-Time Curtailment in Day Ahead Market (DAM) for the months of April, 2023 to May, 2023 of IEX and PXIL**

| Quarter                 | Months                    | Final Scheduled Volume (MU) |             | Market Clearing Price (₹/kWh) |      | Real Time Curtailment (MU) |          |
|-------------------------|---------------------------|-----------------------------|-------------|-------------------------------|------|----------------------------|----------|
|                         |                           | IEX                         | PXIL        | IEX                           | PXIL | IEX                        | PXIL     |
| Quarter -I              | April, 2023               | 4,408.93                    | 0           | 5.08                          | 0    | 0                          | 0        |
|                         | May, 2023                 | 3,999.76                    | 1.56        | 4.77                          | 6.94 | 1.55                       | 0        |
|                         | June, 2023                |                             |             |                               |      |                            |          |
| <b>Total Quarter -I</b> | <b>April - June, 2023</b> | <b>8,408.69</b>             | <b>1.56</b> |                               |      | <b>1.55</b>                | <b>0</b> |

**Annexure-II**

| Final Scheduled Volume in Term Ahead Market (TAM) for the months of April, 2023 to May, 2023 of IEX, PXIL and HPX (Delivery date basis) |                    |                             |        |        |          |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------|--------|--------|----------|
| Quarter                                                                                                                                 | Months             | Final Scheduled Volume (MU) |        |        |          |
|                                                                                                                                         |                    | IEX                         | PXIL   | HPX    | Total    |
| Quarter -I                                                                                                                              | April, 2023        | 317.91                      | 111.30 | 321.83 | 751.04   |
|                                                                                                                                         | May, 2023          | 607.72                      | 133.80 | 198.75 | 940.27   |
|                                                                                                                                         | June, 2023         |                             |        |        |          |
| Total Quarter – I                                                                                                                       | April - June, 2023 | 925.63                      | 245.1  | 520.58 | 1,691.31 |

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

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

| Entity Name               | Direct   |         | Entity Name               | Through Traders |         |
|---------------------------|----------|---------|---------------------------|-----------------|---------|
|                           | (MU)     | Percent |                           | (MU)            | Percent |
| Uttar Pradesh             | 458.4    | 16.99%  | Tamil Nadu                | 1230.0          | 21.50%  |
| Maharashtra               | 434.7    | 16.11%  | Maharashtra               | 939.8           | 16.43%  |
| Haryana                   | 399.4    | 14.81%  | Delhi                     | 623.2           | 10.89%  |
| Andhra Pradesh            | 355.7    | 13.19%  | Uttar Pradesh             | 521.3           | 9.11%   |
| Telangana                 | 216.4    | 8.02%   | Gujarat                   | 431.8           | 7.55%   |
| Total Volume              | 1,864.54 | 69.12%  | Total Volume              | 3,745.99        | 65.49%  |
| Total Volume in Bilateral | 2,697.71 |         | Total Volume in Bilateral | 5,720.35        |         |

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

| Entity Name               | Direct   |         | Entity Name               | Through Traders |         |
|---------------------------|----------|---------|---------------------------|-----------------|---------|
|                           | (MU)     | Percent |                           | (MU)            | Percent |
| SEMCORP                   | 373.6    | 13.85%  | RPREL                     | 401.2           | 7.01%   |
| J & K                     | 270.6    | 10.03%  | JINDAL STAGE-II           | 313.8           | 5.49%   |
| AHEJ4LAHS                 | 183.4    | 6.80%   | ILF&S                     | 304.3           | 5.32%   |
| Madhya Pradesh            | 146.2    | 5.42%   | RKM POWER                 | 289.3           | 5.06%   |
| SEMCORP                   | 373.6    | 13.85%  | RPREL                     | 401.2           | 7.01%   |
| Total Volume              | 1,328.17 | 49.23%  | Total Volume              | 1,685.79        | 29.47%  |
| Total Volume in Bilateral | 2,697.71 |         | Total Volume in Bilateral | 5,720.35        |         |

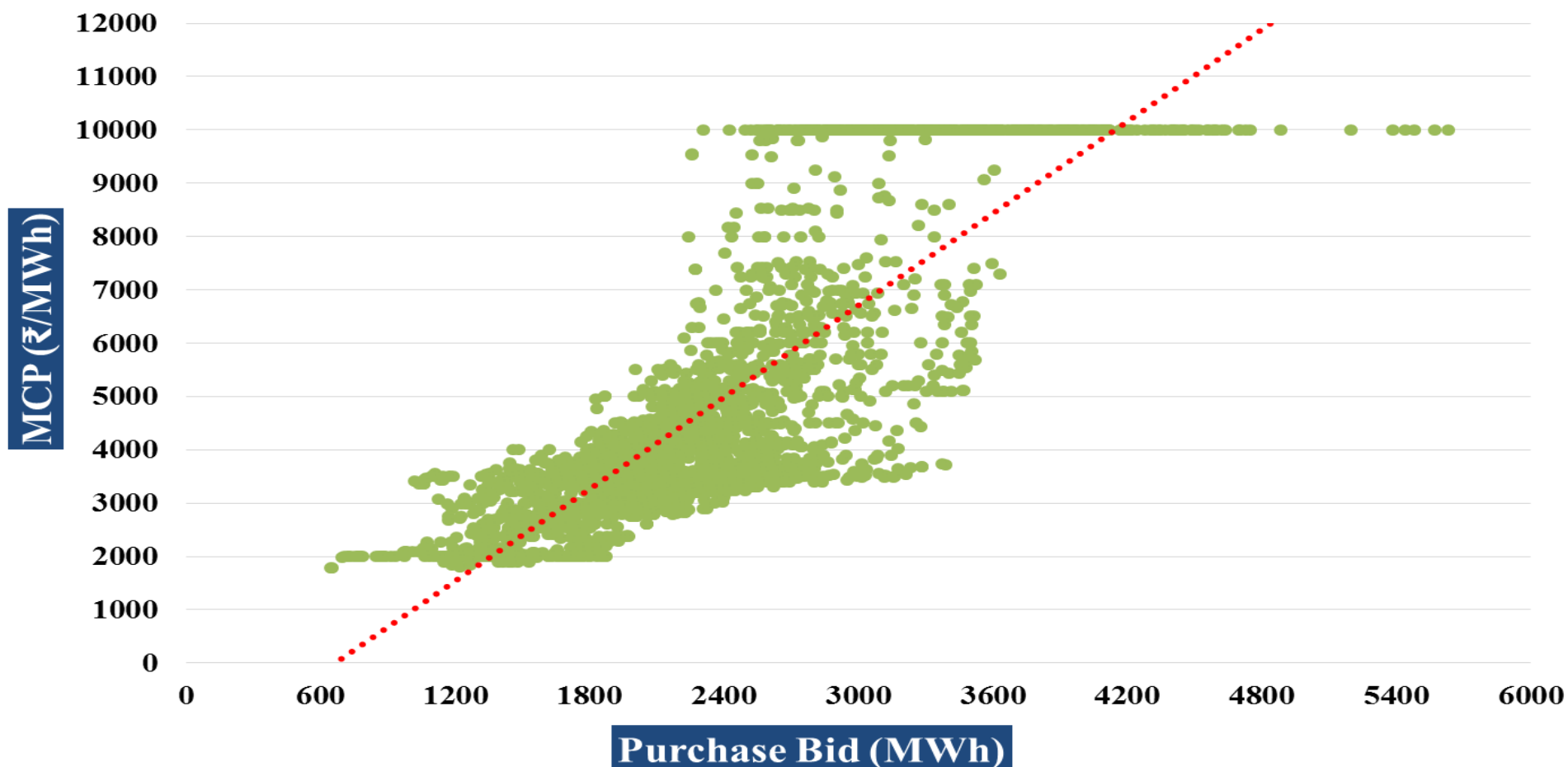
**Annexure-IV****Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) in DAM**

| 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) |
|------------|------------------------------|--------------------------|-------------------------------|------------------------------------------|----------------|----------------|----------------|--------------------------------|
| 01-05-2023 | 2.47                         | 2.00                     | 3.28                          | 3.51                                     | 4.00           | 1.78           | 2.84           | 90.10                          |
| 02-05-2023 | 2.62                         | 2.18                     | 3.86                          | 3.45                                     | 4.53           | 2.00           | 3.04           | 112.09                         |
| 03-05-2023 | 3.03                         | 2.14                     | 3.99                          | 3.38                                     | 6.00           | 1.90           | 3.11           | 122.35                         |
| 04-05-2023 | 3.82                         | 2.65                     | 4.42                          | 3.76                                     | 6.13           | 2.00           | 3.61           | 122.99                         |
| 05-05-2023 | 3.58                         | 2.89                     | 4.42                          | 3.76                                     | 6.00           | 2.42           | 3.64           | 119.95                         |
| 06-05-2023 | 3.59                         | 2.97                     | 4.80                          | 4.00                                     | 6.36           | 2.53           | 3.83           | 131.15                         |
| 07-05-2023 | 2.89                         | 2.56                     | 4.45                          | 4.43                                     | 5.70           | 2.00           | 3.64           | 132.03                         |
| 08-05-2023 | 3.55                         | 3.29                     | 8.22                          | 5.58                                     | 10.00          | 2.91           | 5.24           | 135.76                         |
| 09-05-2023 | 3.32                         | 3.15                     | 7.73                          | 6.69                                     | 10.00          | 2.86           | 5.35           | 135.20                         |
| 10-05-2023 | 3.89                         | 3.50                     | 8.41                          | 7.85                                     | 10.00          | 3.10           | 6.06           | 142.35                         |
| 11-05-2023 | 3.44                         | 3.51                     | 8.25                          | 6.46                                     | 10.00          | 3.18           | 5.54           | 133.00                         |
| 12-05-2023 | 3.51                         | 3.66                     | 8.25                          | 7.15                                     | 10.00          | 3.30           | 5.80           | 135.64                         |
| 13-05-2023 | 3.26                         | 3.36                     | 6.14                          | 6.41                                     | 10.00          | 2.90           | 4.93           | 151.22                         |
| 14-05-2023 | 3.10                         | 2.87                     | 4.48                          | 5.45                                     | 10.00          | 2.00           | 4.06           | 131.19                         |
| 15-05-2023 | 3.26                         | 3.69                     | 6.75                          | 5.19                                     | 10.00          | 3.00           | 4.82           | 126.39                         |
| 16-05-2023 | 3.10                         | 3.19                     | 6.89                          | 4.93                                     | 10.00          | 2.70           | 4.60           | 121.91                         |
| 17-05-2023 | 3.25                         | 3.94                     | 8.57                          | 6.44                                     | 10.00          | 2.79           | 5.71           | 119.54                         |
| 18-05-2023 | 4.09                         | 4.45                     | 8.88                          | 8.50                                     | 10.00          | 3.38           | 6.68           | 133.33                         |
| 19-05-2023 | 4.40                         | 4.24                     | 8.60                          | 8.25                                     | 10.00          | 3.18           | 6.52           | 142.89                         |
| 20-05-2023 | 3.73                         | 4.39                     | 8.81                          | 8.46                                     | 10.00          | 3.45           | 6.57           | 142.30                         |
| 21-05-2023 | 2.89                         | 2.62                     | 6.36                          | 7.82                                     | 10.00          | 2.00           | 5.12           | 130.09                         |
| 22-05-2023 | 3.47                         | 4.11                     | 8.24                          | 6.11                                     | 10.00          | 3.20           | 5.62           | 144.74                         |
| 23-05-2023 | 3.46                         | 3.58                     | 5.83                          | 6.66                                     | 10.00          | 3.15           | 5.02           | 127.60                         |
| 24-05-2023 | 3.34                         | 3.72                     | 6.36                          | 6.14                                     | 10.00          | 2.80           | 5.02           | 136.57                         |
| 25-05-2023 | 2.30                         | 2.77                     | 4.41                          | 4.03                                     | 6.66           | 2.04           | 3.47           | 133.43                         |
| 26-05-2023 | 2.88                         | 3.34                     | 4.49                          | 3.18                                     | 6.01           | 2.30           | 3.50           | 119.61                         |
| 27-05-2023 | 2.00                         | 2.50                     | 4.16                          | 2.73                                     | 5.57           | 1.84           | 2.90           | 123.62                         |
| 28-05-2023 | 2.49                         | 2.20                     | 4.64                          | 4.93                                     | 6.73           | 1.80           | 3.66           | 121.52                         |
| 29-05-2023 | 3.12                         | 3.62                     | 8.35                          | 6.56                                     | 10.00          | 2.75           | 5.58           | 129.75                         |
| 30-05-2023 | 3.20                         | 3.58                     | 7.39                          | 6.89                                     | 10.00          | 2.81           | 5.44           | 125.36                         |
| 31-05-2023 | 3.19                         | 3.77                     | 8.04                          | 7.89                                     | 10.00          | 2.83           | 5.94           | 126.13                         |
| Maximum    | 4.40                         | 4.45                     | 8.88                          | 8.50                                     | 10.00          | 3.45           | 6.68           | 151.22                         |
| Minimum    | 2.00                         | 2.00                     | 3.28                          | 2.73                                     | 4.00           | 1.78           | 2.84           | 90.10                          |
| Average    | 3.23                         | 3.24                     | 6.37                          | 5.70                                     | 8.51           | 2.61           | 4.74           | 129.02                         |

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 May, 2023 in DAM



Time Blocks during the Month [96 time blocks in a day x 31 days = 2,976]

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

| Date       | Max. FSV (MU) |       | Max. MCP (₹/kWh) |       | Min FSV (MU)  |       | Min. MCP (₹/kWh) |       |
|------------|---------------|-------|------------------|-------|---------------|-------|------------------|-------|
|            | Time Block    | Value | Time Block       | Value | Time Block    | Value | Time Block       | Value |
| 01-05-2023 | 20:45 - 21:00 | 1.33  | 19:15 - 19:30    | 4.00  | 03:45 - 04:00 | 0.61  | 13:15 - 13:30    | 1.78  |
| 02-05-2023 | 18:45 - 19:00 | 1.45  | 21:15 - 21:30    | 4.53  | 03:15 - 03:30 | 0.76  | 13:15 - 13:30    | 2.00  |
| 03-05-2023 | 06:45 - 07:00 | 1.75  | 19:15 - 19:30    | 6.00  | 03:45 - 04:00 | 0.91  | 13:15 - 13:30    | 1.90  |
| 04-05-2023 | 09:45 - 10:00 | 1.56  | 19:15 - 19:30    | 6.13  | 04:00 - 04:15 | 0.94  | 13:15 - 13:30    | 2.00  |
| 05-05-2023 | 07:00 - 07:15 | 1.63  | 19:15 - 19:30    | 6.00  | 03:45 - 04:00 | 0.86  | 13:15 - 13:30    | 2.42  |
| 06-05-2023 | 07:00 - 07:15 | 1.77  | 19:30 - 19:45    | 6.36  | 03:45 - 04:00 | 1.05  | 13:15 - 13:30    | 2.53  |
| 07-05-2023 | 18:45 - 19:00 | 1.63  | 00:00 - 00:15    | 5.70  | 05:00 - 05:15 | 1.06  | 13:15 - 13:30    | 2.00  |
| 08-05-2023 | 09:30 - 09:45 | 1.80  | 19:00 - 19:15    | 10.00 | 04:30 - 04:45 | 0.91  | 13:15 - 13:30    | 2.91  |
| 09-05-2023 | 18:00 - 18:15 | 1.75  | 00:00 - 00:15    | 10.00 | 04:00 - 04:15 | 0.90  | 13:15 - 13:30    | 2.86  |
| 10-05-2023 | 08:45 - 09:00 | 1.87  | 00:00 - 00:15    | 10.00 | 04:45 - 05:00 | 1.08  | 13:15 - 13:30    | 3.10  |
| 11-05-2023 | 15:00 - 15:15 | 1.77  | 00:00 - 00:15    | 10.00 | 03:45 - 04:00 | 0.92  | 09:00 - 09:15    | 3.18  |
| 12-05-2023 | 09:45 - 10:00 | 1.80  | 00:00 - 00:15    | 10.00 | 05:00 - 05:15 | 0.95  | 08:15 - 08:30    | 3.30  |
| 13-05-2023 | 09:45 - 10:00 | 2.00  | 00:00 - 00:15    | 10.00 | 04:30 - 04:45 | 1.06  | 08:15 - 08:30    | 2.90  |
| 14-05-2023 | 00:15 - 00:30 | 1.78  | 00:00 - 00:15    | 10.00 | 04:30 - 04:45 | 1.00  | 13:00 - 13:15    | 2.00  |
| 15-05-2023 | 18:45 - 19:00 | 1.67  | 00:00 - 00:15    | 10.00 | 04:00 - 04:15 | 0.68  | 08:00 - 08:15    | 3.00  |
| 16-05-2023 | 16:30 - 16:45 | 1.69  | 21:30 - 21:45    | 10.00 | 03:45 - 04:00 | 0.76  | 13:00 - 13:15    | 2.70  |
| 17-05-2023 | 17:30 - 17:45 | 1.65  | 00:00 - 00:15    | 10.00 | 03:15 - 03:30 | 0.83  | 09:00 - 09:15    | 2.79  |
| 18-05-2023 | 15:00 - 15:15 | 2.11  | 00:00 - 00:15    | 10.00 | 23:15 - 23:30 | 0.83  | 09:00 - 09:15    | 3.38  |
| 19-05-2023 | 14:45 - 15:00 | 1.90  | 00:00 - 00:15    | 10.00 | 21:45 - 22:00 | 1.04  | 09:00 - 09:15    | 3.18  |
| 20-05-2023 | 16:30 - 16:45 | 1.83  | 00:00 - 00:15    | 10.00 | 22:45 - 23:00 | 1.09  | 08:00 - 08:15    | 3.45  |
| 21-05-2023 | 21:00 - 21:15 | 1.93  | 00:00 - 00:15    | 10.00 | 16:45 - 17:00 | 1.06  | 10:00 - 10:15    | 2.00  |
| 22-05-2023 | 20:30 - 20:45 | 2.12  | 00:00 - 00:15    | 10.00 | 03:45 - 04:00 | 1.09  | 09:00 - 09:15    | 3.20  |
| 23-05-2023 | 00:00 - 00:15 | 2.01  | 00:00 - 00:15    | 10.00 | 04:30 - 04:45 | 0.77  | 09:00 - 09:15    | 3.15  |
| 24-05-2023 | 00:00 - 00:15 | 1.89  | 22:45 - 23:00    | 10.00 | 04:30 - 04:45 | 0.98  | 08:45 - 09:00    | 2.80  |
| 25-05-2023 | 15:15 - 15:30 | 2.08  | 23:00 - 23:15    | 6.66  | 04:15 - 04:30 | 0.84  | 09:00 - 09:15    | 2.04  |
| 26-05-2023 | 15:00 - 15:15 | 1.71  | 22:45 - 23:00    | 6.01  | 05:45 - 06:00 | 0.74  | 05:00 - 05:15    | 2.30  |
| 27-05-2023 | 18:45 - 19:00 | 1.62  | 22:30 - 22:45    | 5.57  | 04:30 - 04:45 | 0.93  | 05:00 - 05:15    | 1.84  |
| 28-05-2023 | 23:45 - 24:00 | 1.67  | 23:00 - 23:15    | 6.73  | 04:30 - 04:45 | 0.99  | 09:45 - 10:00    | 1.80  |
| 29-05-2023 | 08:45 - 09:00 | 1.65  | 00:00 - 00:15    | 10.00 | 11:45 - 12:00 | 1.09  | 09:15 - 09:30    | 2.75  |
| 30-05-2023 | 06:15 - 06:30 | 1.59  | 00:00 - 00:15    | 10.00 | 03:00 - 03:15 | 1.10  | 09:00 - 09:15    | 2.81  |
| 31-05-2023 | 18:15 - 18:30 | 1.59  | 00:00 - 00:15    | 10.00 | 00:15 - 00:30 | 0.88  | 08:00 - 08:15    | 2.83  |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

**Annexure-VII**

| Sellers and Buyers in Day Ahead Market (DAM) in the month of May, 2023 |                     |        |             |                      |          |             |
|------------------------------------------------------------------------|---------------------|--------|-------------|----------------------|----------|-------------|
| S. No.                                                                 | Entity Name         | Sell   |             | Entity Name          | Purchase |             |
|                                                                        |                     | (MU)   | Percent (%) |                      | (MU)     | Percent (%) |
| 1                                                                      | Chhattisgarh        | 648.40 | 16.20%      | Gujarat              | 692.53   | 17.31%      |
| 2                                                                      | Uttar Pradesh       | 402.17 | 10.05%      | West Bengal          | 498.92   | 12.47%      |
| 3                                                                      | Bihar               | 214.64 | 5.36%       | Andhra Pradesh       | 317.41   | 7.93%       |
| 4                                                                      | Telangana           | 184.56 | 4.61%       | Rajasthan            | 314.96   | 7.87%       |
| 5                                                                      | Jindal Power Ltd.   | 183.80 | 4.59%       | Maharashtra          | 259.29   | 6.48%       |
| 6                                                                      | Jaypee Nigrie       | 180.52 | 4.51%       | J&K                  | 254.09   | 6.35%       |
| 7                                                                      | Delhi               | 179.47 | 4.49%       | Uttar Pradesh        | 236.71   | 5.92%       |
| 8                                                                      | Raipur Energen      | 138.20 | 3.45%       | Tamilnadu            | 190.54   | 4.76%       |
| 9                                                                      | Jindal Power        | 128.12 | 3.20%       | Punjab               | 160.71   | 4.02%       |
| 10                                                                     | MB Power            | 125.17 | 3.13%       | Telangana            | 141.83   | 3.54%       |
| 11                                                                     | Mahan Energy        | 98.11  | 2.45%       | NVVN (SNA) - NEA     | 139.20   | 3.48%       |
| 12                                                                     | DB Power            | 94.77  | 2.37%       | Daman & Diu - Dadra  | 121.12   | 3.03%       |
| 13                                                                     | Teesta -3           | 87.57  | 2.19%       | Assam                | 93.28    | 2.33%       |
| 14                                                                     | Himachal Pradesh    | 85.64  | 2.14%       | Jharkhand            | 91.87    | 2.30%       |
| 15                                                                     | Haryana             | 77.55  | 1.94%       | Haryana              | 83.18    | 2.08%       |
| 16                                                                     | Punjab              | 73.50  | 1.84%       | Uttarakhand          | 65.49    | 1.64%       |
| 17                                                                     | Uttarakhand         | 65.16  | 1.63%       | Himachal Pradesh     | 62.93    | 1.57%       |
| 18                                                                     | Madhya Pradesh      | 64.02  | 1.60%       | Kerala               | 62.72    | 1.57%       |
| 19                                                                     | Rajasthan           | 60.98  | 1.52%       | Madhya Pradesh       | 35.84    | 0.90%       |
| 20                                                                     | SKS Power           | 57.76  | 1.44%       | Karnataka            | 28.61    | 0.72%       |
| 21                                                                     | Jindal Steel        | 52.32  | 1.31%       | Meghalaya            | 25.42    | 0.64%       |
| 22                                                                     | Maharashtra         | 49.59  | 1.24%       | ArcelorMittal Nippon | 22.56    | 0.56%       |
| 23                                                                     | Tamilnadu           | 46.51  | 1.16%       | Orissa               | 21.99    | 0.55%       |
| 24                                                                     | JITPL               | 45.52  | 1.14%       | NEA-NR               | 19.41    | 0.49%       |
| 25                                                                     | Gujarat             | 42.43  | 1.06%       | Goa SR               | 17.04    | 0.43%       |
| 26                                                                     | Orissa              | 40.67  | 1.02%       | Railways             | 14.28    | 0.36%       |
| 27                                                                     | Chandigarh          | 39.75  | 0.99%       | Goa WR               | 9.65     | 0.24%       |
| 28                                                                     | Karnataka           | 38.85  | 0.97%       | Tripura              | 7.55     | 0.19%       |
| 29                                                                     | Goa WR              | 34.46  | 0.86%       | Delhi                | 5.15     | 0.13%       |
| 30                                                                     | ACBIL               | 33.84  | 0.85%       | Bihar                | 2.47     | 0.06%       |
| 31                                                                     | Pondicherry         | 28.09  | 0.70%       | DVC                  | 1.53     | 0.04%       |
| 32                                                                     | Assam               | 26.86  | 0.67%       | Arunachal Pradesh    | 1.52     | 0.04%       |
| 33                                                                     | Sembcorp Gayatri    | 25.61  | 0.64%       | Chandigarh           | 0.85     | 0.02%       |
| 34                                                                     | Andhra Pradesh      | 23.80  | 0.59%       | BHARAT               | 0.56     | 0.01%       |
| 35                                                                     | AD Hydro            | 21.04  | 0.53%       | Gujarat              | 692.53   | 17.31%      |
| 36                                                                     | DVC                 | 18.02  | 0.45%       | West Bengal          | 498.92   | 12.47%      |
| 37                                                                     | Renew Surya Ravi    | 17.81  | 0.45%       | Andhra Pradesh       | 317.41   | 7.93%       |
| 38                                                                     | Karcham Wangtoo     | 17.32  | 0.43%       | Rajasthan            | 314.96   | 7.87%       |
| 39                                                                     | Costal Energen      | 16.99  | 0.42%       | Maharashtra          | 259.29   | 6.48%       |
| 40                                                                     | IL&FS               | 15.71  | 0.39%       | J&K                  | 254.09   | 6.35%       |
| 41                                                                     | Sainj HEP           | 15.02  | 0.38%       | Uttar Pradesh        | 236.71   | 5.92%       |
| 42                                                                     | Sembcorp Energy     | 13.53  | 0.34%       | Tamilnadu            | 190.54   | 4.76%       |
| 43                                                                     | Raigarh Energy Ltd. | 12.96  | 0.32%       | Punjab               | 160.71   | 4.02%       |
| 44                                                                     | RKM Power           | 11.76  | 0.29%       | Telangana            | 141.83   | 3.54%       |

|                        |                    |          |        |                        |          |        |
|------------------------|--------------------|----------|--------|------------------------|----------|--------|
| 45                     | Adani Green Energy | 11.69    | 0.29%  | NVVN (SNA) - NEA       | 139.20   | 3.48%  |
| 46                     | Palatana           | 10.90    | 0.27%  | Daman & Diu - Dadra    | 121.12   | 3.03%  |
| 47                     | J&K                | 10.17    | 0.25%  | Assam                  | 93.28    | 2.33%  |
| 48                     | Jharkhand          | 9.74     | 0.24%  | Jharkhand              | 91.87    | 2.30%  |
| 49                     | Maruti Clean Coal  | 8.85     | 0.22%  | Haryana                | 83.18    | 2.08%  |
| 50                     | Sikkim             | 8.72     | 0.22%  | Uttarakhand            | 65.49    | 1.64%  |
| 51                     | Jhabua Power       | 7.77     | 0.19%  | Himachal Pradesh       | 62.93    | 1.57%  |
| 52                     | Mizoram            | 7.69     | 0.19%  | Kerala                 | 62.72    | 1.57%  |
| 53                     | Ratnagiri Gas and  | 6.06     | 0.15%  | Madhya Pradesh         | 35.84    | 0.90%  |
| 54                     | Arunachal Pradesh  | 5.95     | 0.15%  | Karnataka              | 28.61    | 0.72%  |
| 55                     | Chuzachen          | 5.72     | 0.14%  | Meghalaya              | 25.42    | 0.64%  |
| 56                     | Dikchu             | 5.66     | 0.14%  | ArcelorMittal Nippon   | 22.56    | 0.56%  |
| 57                     | BALCO 2            | 5.41     | 0.14%  | Orissa                 | 21.99    | 0.55%  |
| 58                     | GMR Warora         | 5.36     | 0.13%  | NEA-NR                 | 19.41    | 0.49%  |
| 59                     | DGEN Mega Power    | 5.28     | 0.13%  | Goa SR                 | 17.04    | 0.43%  |
| 60                     | Singoli Bhagwati   | 4.20     | 0.11%  | Railways               | 14.28    | 0.36%  |
| 61                     | Ostro Kannada      | 3.87     | 0.10%  | Goa WR                 | 9.65     | 0.24%  |
| 62                     | Simhapuri Energy   | 3.67     | 0.09%  | Tripura                | 7.55     | 0.19%  |
| 63                     | West Bengal        | 3.29     | 0.08%  | Delhi                  | 5.15     | 0.13%  |
| 64                     | Kerala             | 3.25     | 0.08%  | Bihar                  | 2.47     | 0.06%  |
| 65                     | Shree Cement       | 2.97     | 0.07%  | DVC                    | 1.53     | 0.04%  |
| 66                     | Lanco Budhil       | 2.71     | 0.07%  | Arunachal Pradesh      | 1.52     | 0.04%  |
| 67                     | NTPC DADRI GPS     | 2.64     | 0.07%  | Chandigarh             | 0.85     | 0.02%  |
| 68                     | NTPC Kawas GPS     | 2.50     | 0.06%  | BHARAT                 | 0.56     | 0.01%  |
| 69                     | Dhariwal ISTS      | 2.39     | 0.06%  |                        |          |        |
| 70                     | NTPC               | 2.22     | 0.06%  |                        |          |        |
| 71                     | NTPC AURAIYA       | 1.98     | 0.05%  |                        |          |        |
| 72                     | ADANI WIND         | 1.90     | 0.05%  |                        |          |        |
| 73                     | DHARIWAL STU       | 1.85     | 0.05%  |                        |          |        |
| 74                     | WIND FIVE          | 1.55     | 0.04%  |                        |          |        |
| 75                     | NTPC ANTA GPS      | 1.36     | 0.03%  |                        |          |        |
| 76                     | Adhunik Power      | 1.09     | 0.03%  |                        |          |        |
| 77                     | Kameng HEP         | 1.06     | 0.03%  |                        |          |        |
| 78                     | Sorang HEP,        | 0.98     | 0.02%  |                        |          |        |
| 79                     | NVVN (SNA) - NEA   | 0.60     | 0.01%  |                        |          |        |
| Total Volume of top 10 |                    | 2,385.07 | 58.86% | Total Volume of top 10 | 3,066.99 | 76.65% |
| Total Volume in PXs    |                    | 4,001.31 |        | Total Volume in PXs    | 4,001.31 |        |

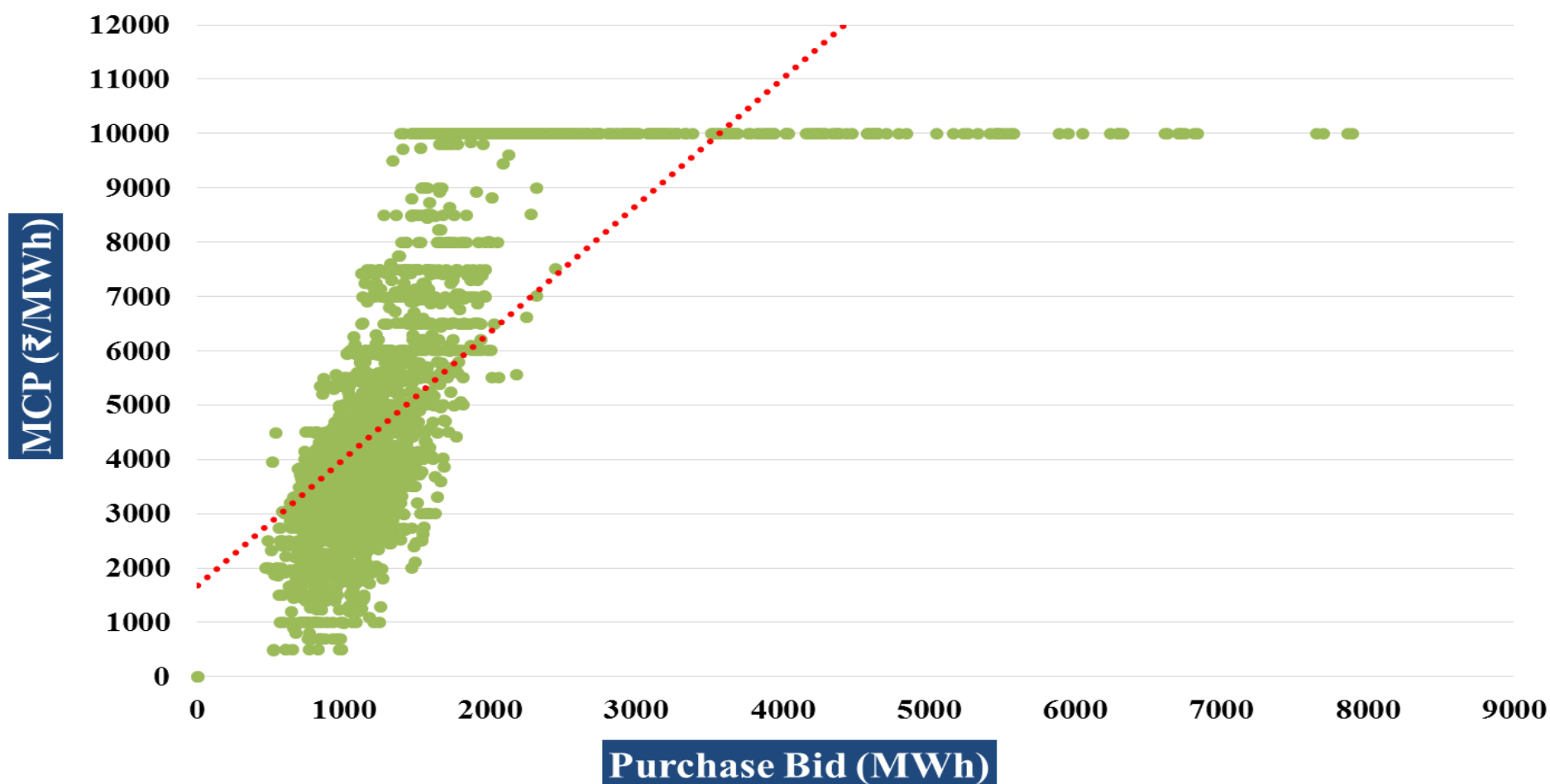
**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (₹/kWh) and Final Scheduled Volume (MU) in RTM**

| 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) |
|------------|------------------------------|--------------------------|-------------------------------|------------------------------------------|----------------|----------------|----------------|--------------------------------|
| 01-05-2023 | 1.91                         | 1.47                     | 2.81                          | 2.76                                     | 3.81           | 0.50           | 2.25           | 80.73                          |
| 02-05-2023 | 3.05                         | 2.19                     | 4.11                          | 3.16                                     | 6.99           | 1.65           | 3.10           | 86.81                          |
| 03-05-2023 | 3.74                         | 2.49                     | 4.80                          | 3.85                                     | 9.00           | 1.66           | 3.67           | 71.78                          |
| 04-05-2023 | 3.57                         | 2.97                     | 5.86                          | 3.91                                     | 10.00          | 2.00           | 4.06           | 71.40                          |
| 05-05-2023 | 3.53                         | 3.70                     | 7.89                          | 4.78                                     | 10.00          | 2.66           | 5.04           | 73.47                          |
| 06-05-2023 | 4.06                         | 3.46                     | 7.25                          | 6.52                                     | 10.00          | 2.00           | 5.40           | 76.01                          |
| 07-05-2023 | 2.64                         | 2.63                     | 4.10                          | 5.92                                     | 10.00          | 1.37           | 3.96           | 69.68                          |
| 08-05-2023 | 2.76                         | 3.60                     | 8.46                          | 5.18                                     | 10.00          | 1.86           | 5.14           | 62.15                          |
| 09-05-2023 | 4.31                         | 4.45                     | 8.69                          | 8.35                                     | 10.00          | 3.00           | 6.62           | 76.51                          |
| 10-05-2023 | 3.06                         | 3.44                     | 8.03                          | 7.05                                     | 10.00          | 2.00           | 5.58           | 68.22                          |
| 11-05-2023 | 3.91                         | 4.13                     | 8.14                          | 6.76                                     | 10.00          | 2.90           | 5.87           | 63.79                          |
| 12-05-2023 | 3.48                         | 3.82                     | 8.44                          | 5.76                                     | 10.00          | 2.75           | 5.48           | 61.12                          |
| 13-05-2023 | 3.66                         | 4.19                     | 5.64                          | 5.90                                     | 10.00          | 2.60           | 4.96           | 58.28                          |
| 14-05-2023 | 2.54                         | 2.69                     | 4.05                          | 4.82                                     | 10.00          | 0.50           | 3.63           | 65.21                          |
| 15-05-2023 | 2.14                         | 3.34                     | 3.98                          | 3.20                                     | 8.64           | 1.00           | 3.32           | 73.55                          |
| 16-05-2023 | 3.22                         | 5.01                     | 9.19                          | 4.36                                     | 10.00          | 2.37           | 5.57           | 73.73                          |
| 17-05-2023 | 4.10                         | 6.66                     | 9.07                          | 8.76                                     | 10.00          | 2.90           | 7.45           | 82.30                          |
| 18-05-2023 | 2.70                         | 5.86                     | 9.28                          | 6.20                                     | 10.00          | 1.50           | 6.29           | 99.14                          |
| 19-05-2023 | 5.68                         | 6.37                     | 8.99                          | 9.19                                     | 10.00          | 3.47           | 7.73           | 77.89                          |
| 20-05-2023 | 3.81                         | 4.29                     | 6.80                          | 6.36                                     | 10.00          | 2.90           | 5.44           | 73.65                          |
| 21-05-2023 | 3.52                         | 3.58                     | 4.42                          | 7.76                                     | 10.00          | 1.00           | 5.00           | 78.10                          |
| 22-05-2023 | 3.00                         | 5.05                     | 7.84                          | 5.23                                     | 10.00          | 1.50           | 5.46           | 72.26                          |
| 23-05-2023 | 5.47                         | 5.57                     | 4.21                          | 9.45                                     | 10.00          | 1.00           | 6.34           | 98.70                          |
| 24-05-2023 | 2.62                         | 3.19                     | 3.89                          | 3.32                                     | 5.50           | 1.00           | 3.31           | 82.42                          |
| 25-05-2023 | 1.94                         | 2.59                     | 2.60                          | 3.19                                     | 5.60           | 0.50           | 2.66           | 80.02                          |
| 26-05-2023 | 1.02                         | 1.98                     | 4.44                          | 2.30                                     | 6.50           | 0.48           | 2.53           | 83.36                          |
| 27-05-2023 | 1.25                         | 3.18                     | 8.22                          | 4.76                                     | 10.00          | 0.70           | 4.58           | 84.55                          |
| 28-05-2023 | 3.17                         | 3.43                     | 4.34                          | 6.82                                     | 10.00          | 1.50           | 4.60           | 85.12                          |
| 29-05-2023 | 3.29                         | 4.59                     | 8.46                          | 4.30                                     | 10.00          | 1.59           | 5.26           | 101.09                         |
| 30-05-2023 | 3.30                         | 4.72                     | 7.21                          | 7.97                                     | 10.00          | 2.50           | 6.05           | 105.53                         |
| 31-05-2023 | 2.75                         | 3.27                     | 6.08                          | 6.22                                     | 10.00          | 1.85           | 4.74           | 87.67                          |
| Maximum    | 5.68                         | 6.66                     | 9.28                          | 9.45                                     | 10.00          | 3.47           | 7.73           | 105.53                         |
| Minimum    | 1.02                         | 1.47                     | 2.60                          | 2.30                                     | 3.81           | 0.48           | 2.25           | 58.28                          |
| Average    | 3.20                         | 3.80                     | 6.36                          | 5.62                                     | 9.23           | 1.78           | 4.87           | 78.20                          |

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 May, 2023 in RTM



Time Blocks during the Month [96 time blocks in a day x 31 days = 2,976]

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

| Date       | Max. FSV (MU) |         | Max. MCP (₹/kWh) |          | Min FSV (MU)  |         | Min. MCP (₹/kWh) |         |
|------------|---------------|---------|------------------|----------|---------------|---------|------------------|---------|
|            | Time Block    | Value   | Time Block       | Value    | Time Block    | Value   | Time Block       | Value   |
| 01-05-2023 | 00:00 - 00:15 | 4630.30 | 19:00 - 19:15    | 3805.62  | 08:15 - 08:30 | 2500.40 | 11:30 - 11:45    | 499.52  |
| 02-05-2023 | 15:30 - 15:45 | 4738.57 | 19:00 - 19:15    | 6989.55  | 08:45 - 09:00 | 2194.75 | 13:00 - 13:15    | 1651.75 |
| 03-05-2023 | 12:00 - 12:15 | 4318.77 | 19:15 - 19:30    | 9000.01  | 05:45 - 06:00 | 1960.40 | 13:15 - 13:30    | 1659.02 |
| 04-05-2023 | 11:45 - 12:00 | 4208.49 | 19:30 - 19:45    | 10000.00 | 07:45 - 08:00 | 1547.80 | 13:00 - 13:15    | 1996.87 |
| 05-05-2023 | 12:00 - 12:15 | 4552.30 | 19:00 - 19:15    | 10000.00 | 04:00 - 04:15 | 1583.10 | 13:15 - 13:30    | 2657.63 |
| 06-05-2023 | 13:45 - 14:00 | 4944.40 | 19:00 - 19:15    | 10000.00 | 07:15 - 07:30 | 1571.80 | 13:15 - 13:30    | 1999.45 |
| 07-05-2023 | 12:45 - 13:00 | 4005.70 | 00:00 - 00:15    | 10000.00 | 05:45 - 06:00 | 1737.52 | 13:00 - 13:15    | 1367.49 |
| 08-05-2023 | 22:45 - 23:00 | 3406.90 | 00:00 - 00:15    | 10000.00 | 06:45 - 07:00 | 1774.20 | 07:45 - 08:00    | 1859.84 |
| 09-05-2023 | 15:15 - 15:30 | 4055.45 | 00:00 - 00:15    | 10000.00 | 04:00 - 04:15 | 2297.40 | 08:00 - 08:15    | 3000.82 |
| 10-05-2023 | 12:45 - 13:00 | 4555.20 | 00:00 - 00:15    | 10000.00 | 03:15 - 03:30 | 1757.06 | 08:00 - 08:15    | 1998.98 |
| 11-05-2023 | 21:30 - 21:45 | 4389.70 | 00:00 - 00:15    | 10000.00 | 07:15 - 07:30 | 1625.00 | 09:00 - 09:15    | 2899.48 |
| 12-05-2023 | 22:30 - 22:45 | 4738.50 | 00:00 - 00:15    | 10000.00 | 02:45 - 03:00 | 1228.60 | 08:15 - 08:30    | 2750.54 |
| 13-05-2023 | 11:15 - 11:30 | 3815.40 | 23:00 - 23:15    | 10000.00 | 05:15 - 05:30 | 1245.10 | 11:30 - 11:45    | 2601.00 |
| 14-05-2023 | 10:30 - 10:45 | 4304.02 | 00:00 - 00:15    | 10000.00 | 02:30 - 02:45 | 1535.70 | 11:00 - 11:15    | 499.99  |
| 15-05-2023 | 20:45 - 21:00 | 4932.50 | 23:15 - 23:30    | 8640.36  | 02:30 - 02:45 | 1941.00 | 08:00 - 08:15    | 999.91  |
| 16-05-2023 | 21:00 - 21:15 | 4708.20 | 16:30 - 16:45    | 10000.00 | 11:15 - 11:30 | 1578.26 | 07:45 - 08:00    | 2369.33 |
| 17-05-2023 | 14:45 - 15:00 | 6194.28 | 00:00 - 00:15    | 10000.00 | 21:45 - 22:00 | 1365.10 | 09:30 - 09:45    | 2900.34 |
| 18-05-2023 | 17:15 - 17:30 | 6380.40 | 00:00 - 00:15    | 10000.00 | 23:45 - 24:00 | 1850.30 | 07:15 - 07:30    | 1499.95 |
| 19-05-2023 | 21:00 - 21:15 | 5332.90 | 00:00 - 00:15    | 10000.00 | 13:30 - 13:45 | 2087.10 | 08:00 - 08:15    | 3465.97 |
| 20-05-2023 | 23:30 - 23:45 | 6023.91 | 00:00 - 00:15    | 10000.00 | 13:30 - 13:45 | 1891.65 | 12:30 - 12:45    | 2899.73 |
| 21-05-2023 | 21:45 - 22:00 | 4635.20 | 00:00 - 00:15    | 10000.00 | 12:30 - 12:45 | 2375.30 | 09:30 - 09:45    | 999.94  |
| 22-05-2023 | 21:00 - 21:15 | 4427.30 | 00:00 - 00:15    | 10000.00 | 05:30 - 05:45 | 1199.00 | 07:45 - 08:00    | 1497.59 |
| 23-05-2023 | 01:15 - 01:30 | 6273.40 | 00:00 - 00:15    | 10000.00 | 18:00 - 18:15 | 2933.49 | 18:30 - 18:45    | 999.62  |
| 24-05-2023 | 00:00 - 00:15 | 5365.20 | 21:00 - 21:15    | 5499.27  | 08:45 - 09:00 | 1822.48 | 09:00 - 09:15    | 997.21  |
| 25-05-2023 | 23:30 - 23:45 | 4677.40 | 23:15 - 23:30    | 5600.73  | 17:45 - 18:00 | 1763.29 | 20:15 - 20:30    | 499.61  |
| 26-05-2023 | 05:30 - 05:45 | 4679.20 | 22:30 - 22:45    | 6499.04  | 08:30 - 08:45 | 2066.43 | 08:30 - 08:45    | 483.35  |
| 27-05-2023 | 20:15 - 20:30 | 5924.10 | 19:00 - 19:15    | 10000.00 | 02:45 - 03:00 | 1919.17 | 08:15 - 08:30    | 699.52  |
| 28-05-2023 | 00:00 - 00:15 | 5962.30 | 00:00 - 00:15    | 10000.00 | 19:15 - 19:30 | 1920.40 | 18:00 - 18:15    | 1499.30 |
| 29-05-2023 | 22:00 - 22:15 | 5787.60 | 19:00 - 19:15    | 10000.00 | 09:00 - 09:15 | 2360.30 | 08:00 - 08:15    | 1589.21 |
| 30-05-2023 | 01:45 - 02:00 | 7296.90 | 00:00 - 00:15    | 10000.00 | 10:30 - 10:45 | 2588.90 | 07:00 - 07:15    | 2499.61 |
| 31-05-2023 | 23:00 - 23:15 | 5582.20 | 00:00 - 00:15    | 10000.00 | 08:00 - 08:15 | 2197.37 | 09:00 - 09:15    | 1849.46 |

MCP: Market Clearing Price (₹/kWh)

FSV: Final Scheduled Volume (MU)

| Sellers and Buyers in Real Time Market (RTM) in the month of May, 2023 |                   |        |             |                      |          |             |
|------------------------------------------------------------------------|-------------------|--------|-------------|----------------------|----------|-------------|
| S. No.                                                                 | Entity Name       | Sell   |             | Entity Name          | Purchase |             |
|                                                                        |                   | (MU)   | Percent (%) |                      | (MU)     | Percent (%) |
| 1                                                                      | Madhya Pradesh    | 365.97 | 15.09%      | West Bengal          | 274.02   | 11.30%      |
| 2                                                                      | Bihar             | 231.65 | 9.55%       | Rajasthan            | 265.81   | 10.96%      |
| 3                                                                      | Rajasthan         | 161.39 | 6.65%       | Maharashtra          | 204.09   | 8.41%       |
| 4                                                                      | Delhi             | 144.46 | 5.95%       | Telangana            | 198.58   | 8.19%       |
| 5                                                                      | NPCIL             | 140.34 | 5.79%       | Andhra Pradesh       | 176.83   | 7.29%       |
| 6                                                                      | Telangana         | 125.20 | 5.16%       | J&K                  | 160.93   | 6.63%       |
| 7                                                                      | Chhattisgarh      | 118.84 | 4.90%       | Uttar Pradesh        | 153.73   | 6.34%       |
| 8                                                                      | Himachal          | 115.97 | 4.78%       | Tamilnadu            | 144.73   | 5.97%       |
| 9                                                                      | West Bengal       | 106.22 | 4.38%       | Orissa               | 105.65   | 4.36%       |
| 10                                                                     | Orissa            | 72.58  | 2.99%       | Gujarat              | 101.08   | 4.17%       |
| 11                                                                     | Punjab            | 63.14  | 2.60%       | Karnataka            | 100.77   | 4.15%       |
| 12                                                                     | Uttar Pradesh     | 58.68  | 2.42%       | Assam                | 89.47    | 3.69%       |
| 13                                                                     | Haryana           | 51.53  | 2.12%       | Punjab               | 79.94    | 3.30%       |
| 14                                                                     | Maharashtra       | 48.94  | 2.02%       | Haryana              | 60.39    | 2.49%       |
| 15                                                                     | Uttarakhand       | 46.68  | 1.92%       | Jharkhand            | 42.05    | 1.73%       |
| 16                                                                     | Karnataka         | 46.11  | 1.90%       | Kerala               | 32.01    | 1.32%       |
| 17                                                                     | RKM Power         | 44.62  | 1.84%       | Delhi                | 30.91    | 1.27%       |
| 18                                                                     | Teesta -3         | 34.66  | 1.43%       | Tripura              | 30.03    | 1.24%       |
| 19                                                                     | TRN Energy        | 30.95  | 1.28%       | Daman & Diu - Dadra  | 24.93    | 1.03%       |
| 20                                                                     | NTPC BARH1        | 26.03  | 1.07%       | Himachal Pradesh     | 19.87    | 0.82%       |
| 21                                                                     | Andhra Pradesh    | 24.96  | 1.03%       | DVC                  | 19.82    | 0.82%       |
| 22                                                                     | J&K               | 23.02  | 0.95%       | ArcelorMittal Nippon | 18.84    | 0.78%       |
| 23                                                                     | SKS Power         | 20.92  | 0.86%       | Meghalaya            | 14.56    | 0.60%       |
| 24                                                                     | Gujarat           | 18.94  | 0.78%       | BHARAT               | 12.19    | 0.50%       |
| 25                                                                     | Jharkhand         | 18.37  | 0.76%       | Uttarakhand          | 10.48    | 0.43%       |
| 26                                                                     | Assam             | 17.55  | 0.72%       | Madhya Pradesh       | 10.08    | 0.42%       |
| 27                                                                     | Kameng HEP        | 17.09  | 0.70%       | Bihar                | 9.23     | 0.38%       |
| 28                                                                     | Sasan UMPP        | 16.97  | 0.70%       | Manipur              | 6.66     | 0.27%       |
| 29                                                                     | MB Power          | 16.23  | 0.67%       | Sikkim               | 5.33     | 0.22%       |
| 30                                                                     | Kerala            | 14.18  | 0.58%       | Railways             | 3.08     | 0.13%       |
| 31                                                                     | Palatana          | 12.00  | 0.49%       | Jindal Power Ltd.    | 3.01     | 0.12%       |
| 32                                                                     | Pondicherry       | 11.33  | 0.47%       | Jindal Steel         | 2.64     | 0.11%       |
| 33                                                                     | Tamilnadu         | 11.21  | 0.46%       | Chhattisgarh         | 2.37     | 0.10%       |
| 34                                                                     | Mahan Energy      | 11.10  | 0.46%       | SKS Power            | 2.15     | 0.09%       |
| 35                                                                     | Jindal Power Ltd. | 9.92   | 0.41%       | Goa WR               | 1.36     | 0.06%       |
| 36                                                                     | Dikchu            | 9.03   | 0.37%       | Goa SR               | 1.30     | 0.05%       |
| 37                                                                     | Sainj HEP         | 8.76   | 0.36%       | Maruti Clean Coal    | 0.92     | 0.04%       |
| 38                                                                     | Raipur Energen    | 8.21   | 0.34%       | Gandhar              | 0.82     | 0.03%       |
| 39                                                                     | Sembcorp          | 7.48   | 0.31%       | ACBIL                | 0.76     | 0.03%       |
| 40                                                                     | Sembcorp Energy   | 6.04   | 0.25%       | Ratnagiri Gas &      | 0.73     | 0.03%       |
| 41                                                                     | Jindal Steel      | 5.94   | 0.24%       | Arunachal Pradesh    | 0.71     | 0.03%       |
| 42                                                                     | BALCO 2           | 5.71   | 0.24%       | Jindal Power         | 0.68     | 0.03%       |
| 43                                                                     | Jhabua Power      | 5.56   | 0.23%       | Chandigarh           | 0.58     | 0.02%       |
| 44                                                                     | ACBIL             | 5.11   | 0.21%       | Shree Cement         | 0.51     | 0.02%       |
| 45                                                                     | NTPL              | 4.97   | 0.20%       | Kawas                | 0.35     | 0.01%       |

|                        |                  |          |        |                        |          |        |
|------------------------|------------------|----------|--------|------------------------|----------|--------|
| 46                     | Sikkim           | 4.77     | 0.20%  | Singoli Bhagwati       | 0.32     | 0.01%  |
| 47                     | GMR Warora       | 4.57     | 0.19%  | Sainj HEP              | 0.30     | 0.01%  |
| 48                     | Jindal Power     | 4.42     | 0.18%  | Simhapuri Energy       | 0.26     | 0.01%  |
| 49                     | Manipur          | 4.41     | 0.18%  |                        |          |        |
| 50                     | Daman & Diu -    | 4.13     | 0.17%  |                        |          |        |
| 51                     | Singoli Bhagwati | 3.43     | 0.14%  |                        |          |        |
| 52                     | Simhapuri        | 3.41     | 0.14%  |                        |          |        |
| 53                     | IL&FS            | 3.32     | 0.14%  |                        |          |        |
| 54                     | DVC              | 3.26     | 0.13%  |                        |          |        |
| 55                     | Maruti Clean     | 3.15     | 0.13%  |                        |          |        |
| 56                     | Tripura          | 3.11     | 0.13%  |                        |          |        |
| 57                     | NTPC DADRI       | 2.93     | 0.12%  |                        |          |        |
| 58                     | AD Hydro         | 2.85     | 0.12%  |                        |          |        |
| 59                     | JITPL            | 2.83     | 0.12%  |                        |          |        |
| 60                     | NTPC Kawas       | 2.79     | 0.11%  |                        |          |        |
| 61                     | Sorang HEP,      | 2.62     | 0.11%  |                        |          |        |
| 62                     | Ratnagiri Gas    | 2.49     | 0.10%  |                        |          |        |
| 63                     | DGEN Mega        | 2.37     | 0.10%  |                        |          |        |
| 64                     | NTPC             | 2.27     | 0.09%  |                        |          |        |
| 65                     | Karcham          | 2.06     | 0.08%  |                        |          |        |
| 66                     | NTPC AURAIYA     | 1.91     | 0.08%  |                        |          |        |
| 67                     | Arunachal        | 1.41     | 0.06%  |                        |          |        |
| 68                     | Coastal Gujrat   | 1.35     | 0.06%  |                        |          |        |
| 69                     | Continuum        | 1.30     | 0.05%  |                        |          |        |
| 70                     | Ostro Kannada    | 1.22     | 0.05%  |                        |          |        |
| 71                     | Adhunik Power    | 1.08     | 0.04%  |                        |          |        |
| 72                     | Shree Cement     | 0.99     | 0.04%  |                        |          |        |
| 73                     | Raigarh Energy   | 0.80     | 0.03%  |                        |          |        |
| 74                     | Chuzachen        | 0.75     | 0.03%  |                        |          |        |
| 75                     | Lanco Budhil     | 0.62     | 0.03%  |                        |          |        |
| 76                     | Jorethang        | 0.60     | 0.02%  |                        |          |        |
| 77                     | Renew Surya      | 0.59     | 0.02%  |                        |          |        |
| 78                     | Jaypee Nigrie    | 0.57     | 0.02%  |                        |          |        |
| 79                     | ADANI WIND       | 0.53     | 0.02%  |                        |          |        |
| 80                     | Nagaland         | 0.34     | 0.01%  |                        |          |        |
| 81                     | INOX GREEN       | 0.33     | 0.01%  |                        |          |        |
| 82                     | DB Power         | 0.32     | 0.01%  |                        |          |        |
| 83                     | NTPC ANTA        | 0.30     | 0.01%  |                        |          |        |
| 84                     | AGBPP            | 0.27     | 0.01%  |                        |          |        |
| 85                     | Chandigarh       | 0.21     | 0.01%  |                        |          |        |
| 86                     | Goa WR           | 0.19     | 0.01%  |                        |          |        |
| 87                     | Meghalaya        | 0.19     | 0.01%  |                        |          |        |
| Total Volume of top 10 |                  | 1,582.62 | 65.24% | Total Volume of top 10 | 1,785.46 | 73.60% |
| Total Volume in PXs    |                  | 2425.98  |        | Total Volume in PXs    | 2425.98  |        |

### Cross Border Electricity Transactions in Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of May, 2023

| S. No              | Delivery Date | Buy Volume By Nepal (MU) | Sell Volume by Nepal (MU) | Buy Volume By Bhutan(MU) |
|--------------------|---------------|--------------------------|---------------------------|--------------------------|
| 1                  | 01-05-2023    | 0.00                     | 1.92                      | 0.00                     |
| 2                  | 02-05-2023    | 0.00                     | 7.37                      | 0.00                     |
| 3                  | 03-05-2023    | 0.00                     | 6.75                      | 0.00                     |
| 4                  | 04-05-2023    | 0.00                     | 6.10                      | 0.00                     |
| 5                  | 05-05-2023    | 0.00                     | 5.45                      | 0.00                     |
| 6                  | 06-05-2023    | 0.00                     | 8.31                      | 0.00                     |
| 7                  | 07-05-2023    | 0.00                     | 9.82                      | 0.00                     |
| 8                  | 08-05-2023    | 0.00                     | 6.89                      | 0.00                     |
| 9                  | 09-05-2023    | 0.00                     | 7.28                      | 0.00                     |
| 10                 | 10-05-2023    | 0.00                     | 6.48                      | 0.00                     |
| 11                 | 11-05-2023    | 0.00                     | 6.71                      | 0.00                     |
| 12                 | 12-05-2023    | 0.00                     | 6.88                      | 0.00                     |
| 13                 | 13-05-2023    | 0.00                     | 7.86                      | 0.00                     |
| 14                 | 14-05-2023    | 0.00                     | 8.10                      | 0.00                     |
| 15                 | 15-05-2023    | 0.00                     | 8.09                      | 0.00                     |
| 16                 | 16-05-2023    | 0.00                     | 6.31                      | 0.00                     |
| 17                 | 17-05-2023    | 0.00                     | 5.58                      | 0.00                     |
| 18                 | 18-05-2023    | 0.00                     | 3.47                      | 0.00                     |
| 19                 | 19-05-2023    | 0.00                     | 3.49                      | 0.00                     |
| 20                 | 20-05-2023    | 0.00                     | 0.60                      | 0.00                     |
| 21                 | 21-05-2023    | 0.00                     | 4.13                      | 0.00                     |
| 22                 | 22-05-2023    | 0.00                     | 4.10                      | 0.00                     |
| 23                 | 23-05-2023    | 0.00                     | 4.40                      | 0.00                     |
| 24                 | 24-05-2023    | 0.00                     | 4.38                      | 0.00                     |
| 25                 | 25-05-2023    | 0.00                     | 3.92                      | 0.00                     |
| 26                 | 26-05-2023    | 0.00                     | 4.76                      | 0.00                     |
| 27                 | 27-05-2023    | 0.00                     | 0.00                      | 0.60                     |
| 28                 | 28-05-2023    | 0.00                     | 0.00                      | 0.00                     |
| 29                 | 29-05-2023    | 0.00                     | 1.44                      | 0.00                     |
| 30                 | 30-05-2023    | 0.00                     | 3.82                      | 0.00                     |
| 31                 | 31-05-2023    | 0.00                     | 4.20                      | 0.00                     |
| <b>Total</b>       |               | 0.00                     | 158.60                    | 0.60                     |
| <b>Grand Total</b> |               | <b>159.20</b>            |                           |                          |

-: No transaction took place

**Note: Cross Border Transactions of Electricity of 159.20 MU (i.e.158.60 MU sell by Nepal and 0.60 MU buy by Bhutan) with Nepal and Bhutan took place during May, 2023 in IEX, which is included in DAM Volume of May, 2023 in IEX.**

### Details of Time Blocks in which Maximum ACP occurred in IEX during May, 2023

In IEX, during the month of May, 2023 the maximum ACP of ₹10.00/kWh were observed on many days during several time blocks. The details of time blocks are shown below:

| ACP                        | Date       | Time Blocks                                                                                      | Daily MCP (₹/kWh) |
|----------------------------|------------|--------------------------------------------------------------------------------------------------|-------------------|
| Maximum ACP ( ₹ 10.00/kWh) | 08.05.2023 | 19:00-19:15 to 20:30-20:45 & 21:00-21:15 to 23:15-23:30                                          | 5.04              |
|                            | 09.05.2023 | 00:00-00:15 to 01:00-01:15, 19:00-9:15 to 19:45-20:00 & 21:00-21:15-23:45-24:00                  | 5.32              |
|                            | 10.05.2023 | 00:00-00:15 to 01:45-02:00 & 18:45-19:00 to 23:45-24:00 Hrs                                      | 5.72              |
|                            | 11.05.2023 | 00:00-00:15 to 01:00-01:15 & 19:00-19:15 to 23:45-24:00 Hrs                                      | 5.35              |
|                            | 12.05.2023 | 00:00-00:15 to 01:15-01:30 & 19:00-19:15 to 23:45-24:00 Hrs                                      | 5.57              |
|                            | 13.05.2023 | 00:00-00:15 to 00:01-01:15 & 21:45-22:00 to 23:45-24:00 Hrs                                      | 4.96              |
|                            | 14.05.2023 | 00:00-00:15 to 00:30-00:45 Hrs                                                                   | 4.11              |
|                            | 15.05.2023 | 00:00 - 00:15 & 22:30-22:45 to 23:45-24:00 Hrs                                                   | 5.02              |
|                            | 16.05.2023 | 21:30-21:45 to 23:45-24:00 Hrs                                                                   | 4.73              |
|                            | 17.05.2023 | 00:00 - 00:15 to 00:15-00:30 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 5.75              |
|                            | 18.05.2023 | 00:00 - 00:15 to 01:45-02:00 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 6.06              |
|                            | 19.05.2023 | 00:00 - 00:15 to 01:45-02:00 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 6.23              |
|                            | 20.05.2023 | 00:00 - 00:15 to 01:45-02:00 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 6.34              |
|                            | 21.05.2023 | 00:00 - 00:15 to 05:45 - 06:00, 06:30 - 06:45, 06:45 - 07:00, 16:15 - 16:30 to 23:45 - 24:00 Hrs | 5.44              |
|                            | 22.05.2023 | 00:00-00:15 to 00:45-01:00 & 20:30-20:45 to 23:45-24:00 Hrs                                      | 5.96              |
|                            | 29.05.2023 | 00:00 - 00:15 to 00:15-00:30 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 3.75              |
|                            | 30-05-2023 | 00:00 - 00:15 to 01:00-01:15 & 21:15-21:30 to 23:45-24:00 Hrs                                    | 5.50              |
|                            | 31-05-2023 | 00:00 - 00:15 to 02:15-02:30 & 19:00-19:15 to 23:45-24:00 Hrs                                    | 5.42              |

## Definitions/ Terminologies used in the Report

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

- 10. Green Day Ahead Market (GDAM)** is based on the principles of current Day Ahead Market (DAM), where market participants purchase and sell electricity generated from renewable sources.
- 11. Long Duration Contracts** on the power exchanges is a product segment under which the participants are allowed to trade for delivery of power upto 90 Days (Delivery Starting from T+2 to T+90 Days).
- 12. MCP** is the price discovered in each of the 15 Minute Time Block. The day is divided in 96-time blocks of 15 minutes each.
- 13. Real Time Market (RTM)** means a market where Real-Time Contracts are transacted on the Power Exchange(s), i.e. a contract other than Day Ahead Contract or Intraday Contract or Contingency Contract. In RTM collective transactions occur on day (T) or day (T-1) and delivery of electricity is on day (T) for a specified delivery period.
- 14. Term Ahead Market (TAM)** means a market where Term Ahead Contracts are transacted on the Power Exchange(s), i.e. a contract wherein transactions occur on day (T) and physical delivery of electricity is on a day more than one day ahead (T + 2 or more).