

I/24559/2022

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

Subject: Monthly Market Monitoring Report for the month of June, 2022-reg.

In the month of June, 2022 a total of 133,263 MU of electricity was transacted in the country out of which 52,383 MU was transacted through ISTS, and the remaining through state controlled generating stations.

A total of 19,012 MU was transacted under Short Term Market, out of which 8,529 MU was transacted through Power Exchanges and remaining happened as bilateral transactions & deviations. Thus, the total short term trade in June, 2022 was 14.27 % of total volume of electricity traded in June, 2022 and 6.40 % was through Power Exchanges.

If we compare these transactions with respect to the electricity supplied through ISTS, the short term transactions constitutes about 36.29 % of ISTS transactions, out of which transaction through the power exchanges constitutes 16.28 %.

The monthly market monitoring report for the month of June, 2022 giving details of electricity transaction happened in the power exchanges and other short term markets is annexed below for reference.

Pardeep Jindal**Chief Engineer (RA)****To****All Stake holders**

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जून, 2022 मासिक मार्केट मॉनिटरिंग रिपोर्ट

Monthly Market Monitoring Report**June, 2022**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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MARKET MONITORING REPORT
FOR THE MONTH OF JUNE, 2022

SUMMARY

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SUMMARY FOR MONTH: JUNE, 2022

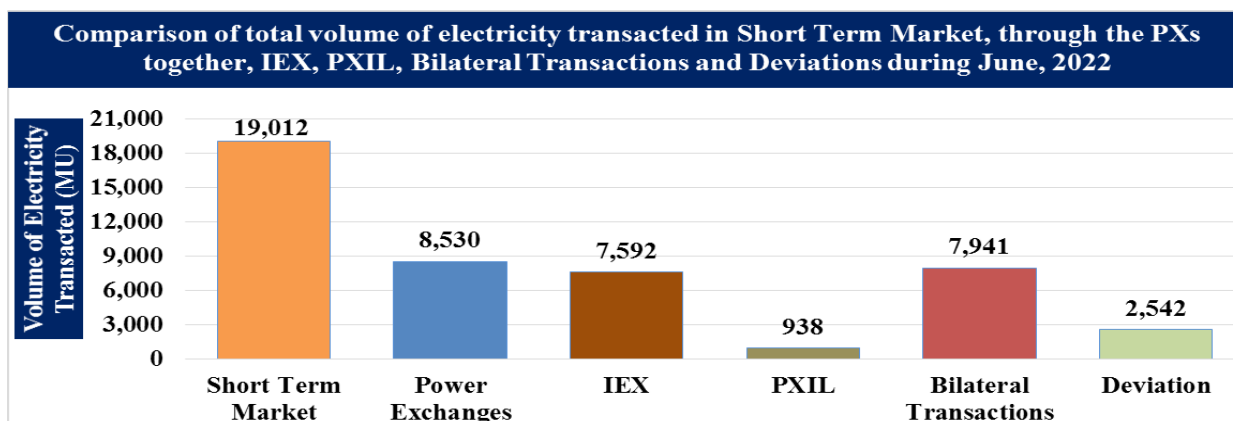
SUMMARY OF ELECTRICITY TRANSACTIONS ON POWER EXCHANGES IN INDIA

- A total volume of **8,529 MU** electricity was transacted in both the power exchanges i.e. IEX & PXIL, during the month of June, 2022. 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 PXs (IEX and PXIL combined)			
	FSV (MU)	Average MCP (Rs/kWh)	Congestion (MU)	Real Time Curtailment (MU)
DAM	4,201	6.55	0.00	0.00
GDAM	362	7.60	0.00	0.00
RTM	2,215	7.53	0.98	0.00
TAM	1,519	7.65	0.29	4.34
GTAM	232	6.31	0.00	0.00
Total in PXs	8,529	7.04*	1.27	4.34

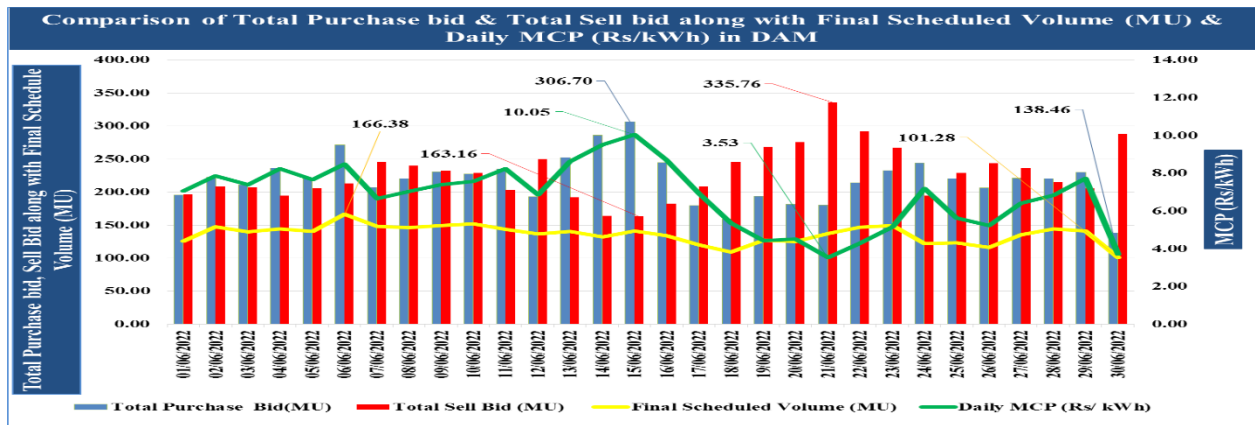
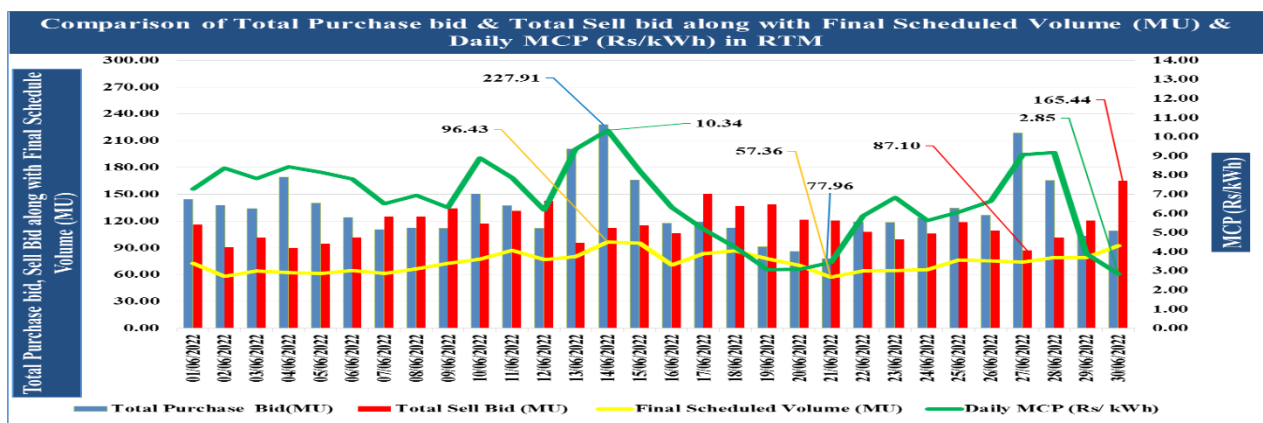
* The total average is weighted average of all market segments.

- Under the Bilateral trade a total of **7,941 MU** of electricity was transacted and **2,542 MU** was transferred as deviation. Thus a total of **19,012 MU** of electricity was transacted as short term trade. In the month of June, 2022 a total of **133,263 MU** of electricity was supplied in the country, thus the share of short term market in the total volume of electricity traded in June, 2022 was **14.27%**.

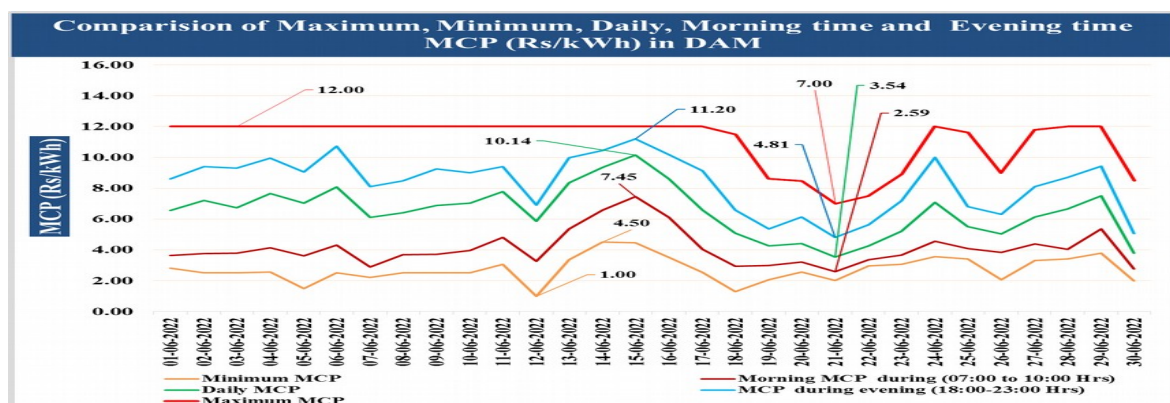


- The total volume of congestion that happened during the month of June, 2022 was **1.27 MU** which is only 0.015 % of the total volume of electricity transacted in the power exchanges and 0.001 % of total energy supplied during the month of June, 2022. There was no congestion observed in DAM and GDAM in June, 2022, whereas there was congestion in RTM for 24 time blocks, in 4 days i.e. 26th, 27th, 29th and 30th of June, 2022) and in TAM on 2 days (02.06.2022 & 28.06.2022). The total volume of real time curtailment reported in the month of June, 2022 was only **4.34 MU**. The total volume of electricity scheduled at ISTS during the month of June, 2022 was **52,383MU**. **The total volume of electricity transacted in the short term market was 36.29 % of total volume schedule at ISTS in the month of June, 2022.**
- The variation of Purchase and Sell bids, Final Scheduled Volume and Daily MCP in DAM and RTM during the month of June, 2022 are shown in following figures:

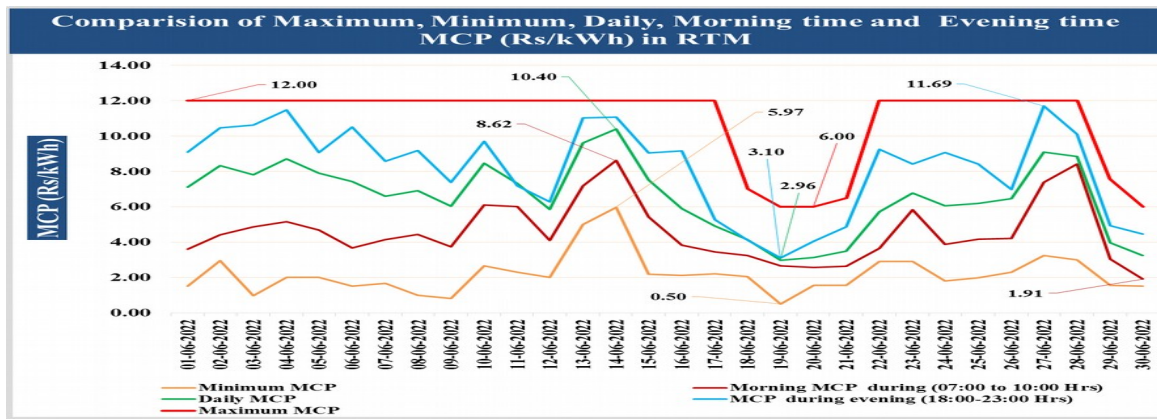
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DAM Volume**RTM Volume**

- The variation of Maximum, Minimum, Daily, Morning and Evening time MCPs in DAM and RTM during the month of June, 2022 are shown in following figures:

DAM Prices**RTM Prices**

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MARKET MONITORING REPORT

DETAILS

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ELECTRICITY TRANSACTIONS ON POWER EXCHANGES IN INDIA**1. DAY AHEAD MARKET (DAM)**

- 1.1. The total volume of electricity transacted on both the power exchanges, viz., IEX and PXIL in the Day Ahead Market (DAM) in the month of June, 2022 was **4,201.19 MU**. The total energy supplied in the country during the month of June, 2022 was 133,263 MU. Thus, the volume of electricity transacted on both the power exchanges in DAM during June, 2022 was 3.15 % of the total energy supplied in the country. Comparing with the total volume of electricity transacted in DAM during the past month .i.e. May, 2022, it was **3,185.52 MU** which was 2.36 % of the total energy supplied [135,156 MU] in the country during May, 2022. Similarly, the total volume of electricity transacted in DAM during previous year .i.e. June, 2021, it was **4,336.08 MU** which was 3.79 % of the total energy supplied [114,483 MU] in the country during June, 2021.
- 1.2. The volume of electricity transacted on on IEX and PXIL during June, 2022 were **4,084.99 MU** and **116.20 MU**, respectively, which means that the total volume transacted on IEX was **97.23 %** of the total volume on power exchanges. The volume of electricity transacted on IEX and PXIL during May, 2022 were **3,172.50 MU** and **13.02 MU**, respectively, which means that the total volume transacted on IEX was **99.59 %** of the total volume on power exchanges. Also, the volume of electricity transacted on IEX and PXIL during June, 2021, were **4,314.17 MU** and **21.91 MU** respectively.
- 1.3. There DAM volume for June, 2022 in IEX is inclusive of Cross Border Transactions of Electricity happened with Nepal [details given at **Annexure XII**].
- 1.4. The Average Market Clearing Price (MCP) on IEX during the month of June, 2022 was **Rs 6.49/kWh**, which shows a decrease of 4.00 % & an increase of 112.09 % when compared with average MCP's for the month of May, 2022 and June, 2021, which were **Rs 6.76/kWh** and **Rs 3.06/kWh**, respectively. On PXIL, the average MCP during the month of June, 2022 was **Rs 6.61/kWh**, which shows an increase of 53.72 % and 97.31 % when compared with average MCP's for the month May, 2022 and June, 2021, which were **Rs 4.30/kWh** and **Rs 3.35/kWh** respectively.

2. DAM MARKET CLEARING PRICE, AREA CLEARING PRICE AND FINAL SCHEDULED VOLUME OF DAM IN THE POWER EXCHANGES

- 2.1. **A comparison of the Minimum, Maximum and Average of Daily MCP during the month of June, 2022 with that of May, 2022 and June, 2021 is given in Table- 1A & 1B:**

(a) June, 2022 vis- a -vis May, 2022

Daily MCP (Rs/kWh)	IEX			PXIL		
	June, 2022	May, 2022	% Change	June, 2022	May, 2022	% Change
Minimum	3.54	2.89	22.49	3.66	1.56	134.62
Maximum	10.14	12.00	-15.50	10.20	8.00	27.50
Average	6.49	6.76	-3.99	6.61	4.30	53.72

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Table: 1A

(b) June, 2022 vis- a –vis June, 2021

Daily MCP (Rs/kWh)	IEX			PXIL		
	June, 2022	June, 2021	% Change	June, 2022	June, 2021	% Change
Minimum	3.54	2.04	73.53	3.66	2.36	55.08
Maximum	10.14	4.65	118.06	10.20	4.77	113.84
Average	6.49	3.06	112.09	6.61	3.35	97.31

Table: 1B

2.2. The maximum Area Clearing Price (ACP) of Rs 12.00/kWh in IEX was observed in all 13 regions during 488 time blocks on 1st to 17th, 24th, 28th & 29th June, 2022. As there was no congestion in transmission system, the MCP for these time blocks was also Rs 12.00/kWh. Whereas, in PXIL, the maximum ACP of Rs 12.00/kWh was observed in all 13 regions during 490 multiple time blocks on 3rd to 17th, 20th, 23rd to 25th & 28th to 30th June, 2022. As there was no congestion in transmission system, the MCP for these time blocks was also Rs 12.00/kWh.

2.3. The minimum ACP of Rs 1.00/kWh in IEX was observed in all 13 regions during the time blocks 10:00-10:15 Hrs & 11:00-11:15 Hrs on 12th June, 2022. As there was no congestion in transmission system, the MCP for these time-block were also Rs 1.00/kWh. However, the Daily MCP in IEX on pan India basis on 12th June, 2022 was Rs 6.86/kWh. Whereas, in PXIL, the minimum ACP of Rs 1.99/kWh was observed in all 13 regions during the time blocks 08:00-08:15 Hrs on 28th June, 2022 and 09:00-09:15 to 14:15-14:30 Hrs, 14:45-15:00 to 15:00-15:15 Hrs & 15:30-15:45 to 17:15-17:30 on 29th June, 2022. As there was no congestion in transmission system, the MCP for these time blocks were also Rs 1.99 kWh. However, the Daily MCP in PXIL on pan India basis on 28th & 29th June, 2022 were Rs 6.41/kWh and Rs 6.13/kWh, respectively.

2.4. A comparison of the Minimum and Maximum Area Clearing Price (ACP) during the months of June, 2022 with that of May, 2022 and June, 2021 is given in Table-2A&2B:

(a) June, 2022 vis- a -vis May, 2022

ACP (Rs/kWh)	IEX			PXIL		
	June, 2022	May, 2022	% Change	June, 2022	May, 2022	% Change
Minimum	1.00	1.00	0.00	1.99	3.36	-40.77
Maximum	12.00	12.00	0.00	12.00	12.00	0.00

Table: 2A

(b) June, 2022 vis- a- vis June, 2021

ACP (Rs/kWh)	IEX			PXIL		
	June, 2022	June, 2021	% Change	June, 2022	June, 2021	% Change
Minimum	1.00	0.60	66.67	1.99	2.00	-0.50
Maximum	12.00	9.67	24.10	12.00	6.99	71.67

Table: 2B

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2.5. A comparison of the Minimum, Maximum and Average of Final Scheduled Volume (FSV) of electricity transactions happened on IEX and PXIL for a day during the months of June, 2022 with that of May, 2022 and June, 2021 is given in Table-2C & 2D:

(a) June, 2022 vis- a- vis May, 2022

Final Scheduled Volume (MU)	IEX			PXIL		
	June, 2022	May, 2022	% Change	June, 2022	May, 2022	% Change
Minimum	101.28	70.12	44.44	1.39	0.25	456.00
Maximum	166.38	140.29	18.60	8.88	6.13	44.86
Average	136.17	102.34	33.06	3.87	2.60	48.85

Table: 2C

(b) June, 2022 vis- a- vis June, 2021

Final Scheduled Volume (MU)	IEX			PXIL		
	June, 2022	June, 2021	% Change	June, 2022	June, 2021	% Change
Minimum	101.28	111.91	-9.50	1.39	0.11	1163.64
Maximum	166.38	172.97	-3.81	8.88	2.07	328.99
Average	136.17	143.81	-5.31	3.87	0.78	396.15

Table: 2D

3. REAL TIME MARKET (RTM)

The total volume of electricity transacted on both the power exchanges in Real Time Market in June, 2022 was **2,215.27 MU**, out of which, **2,214.24 MU** (99.95 %) was transacted in IEX and **1.03 MU** (0.05 %) was transacted in in PXIL. The Final Scheduled Volume (FSV), Daily Market Clearing Prices (MCP) and Area Clearing Prices (ACP) in Real Time Market during the month of June, 2022 as compared with May, 2022 and June, 2021 are as given in table 3A, 3B & 3C:

(i) **Final Scheduled Volume:**

Exchange	Period	Final Scheduled Volume (MU)			
		Total	Minimum	Maximum	Average
IEX	June, 2022	2,214.24	57.36	96.43	73.81
	May, 2022	2,318.75	42.02	104.40	74.80
	Change % (Month over Month)	-4.51	36.51	-7.63	-1.32
	June, 2021	1,725.70	44.84	79.96	57.52
	Change % (Year over Year)	28.31	27.92	20.60	28.32
PXIL	June, 2022	1.03	0.08	0.45	0.26
	May, 2022	-	-	-	-
	Change % (Month over Month)	NA	NA	NA	NA
	June, 2021	-	-	-	-

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	Change % (Year over Year)	NA	NA	NA	NA
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-: No transaction happened

NA: Not Applicable

Table-3A

(ii) Daily Market Clearing Price (MCP):

Exchange	Period	Daily MCP (Rs/kWh)		
		Minimum	Maximum	Average
IEX	June, 2022	2.96	10.40	6.56
	May, 2022	2.56	8.92	5.88
	Change % (Month over Month)	15.63	16.59	11.56
	June, 2021	1.60	5.85	3.02
	Change % (Year over Year)	85.00	77.78	117.22
PXIL	June, 2022	4.92	12.00	8.49
	May, 2022	-	-	-
	Change % (Month over Month)	NA	NA	NA
	June, 2021	-	-	-
	Change % (Year over Year)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-3B

(iii) Area Clearing Price (ACP):

Exchange	Period	ACP (Rs/kWh)	
		Minimum	Maximum
IEX	June, 2022	0.50	12.00
	May, 2022	0.20	12.00
	Change % (Month over Month)	150.00	0.00
	June, 2021	0.49	13.00
	Change % (Year over Year)	2.04	-7.69
PXIL	June, 2022	2.82	12.00
	May, 2022	7.00	12.00
	Change % (Month over Month)	-59.71	0.00
	June, 2021	-	-
	Change % (Year over Year)	NA	NA

-: No transaction happened

NA: Not Applicable

Table -3C

4. GREEN DAY AHEAD MARKET (GDAM):

The transaction of electricity in Green Day Ahead Market (GDAM) has been started in IEX from 27th October, 2021 with the approval of the CERC. The total volume of electricity transacted in GDAM in the month of June, 2022 was **362.24 MU** at an average price MCP of **Rs 7.60/kWh**. The Final Scheduled Volume (FSV), Daily 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 June, 2022 are given below:

i) Final Scheduled Volume in IEX:

Segment	Period	Final Scheduled Volume (MU)			
		Total	Minimum	Maximum	Average
Solar	June, 2022	240.78	4.42	17.27	8.03
	May, 2022	276.46	1.19	21.25	8.92

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	% Change (Month over Month)	-12.91	271.43	-18.73	-9.98
Non Solar	June, 2022	121.46	0.82	8.74	4.05
	May, 2022	216.71	1.48	24.50	6.99
	% Change (Month over Month)	-43.95	-44.59	-64.33	-42.06
Hydro	June, 2022	-	-	-	-
	May, 2022	-	-	-	-

-: No transaction happened

NA: Not Applicable

Table-4A

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

Exchange	Period	Prices (Rs/kWh)				
		Daily MCP (Rs/kWh)			ACP (Rs/kWh)	
		Minimum	Maximum	Average	Minimum	Maximum
Solar and Non Solar	June, 2022	5.04	12.00	7.60	2.97	12.00
	May, 2022	4.13	12.00	7.17	3.00	12.00
	% Change (Month over Month)	22.03	0.00	6.00	-1.00	0.00

-: No transaction happened

NA: Not Applicable

Table-4B

- 4.1. In the month of June, 2022, there was **no** transmission congestion in IEX in Green Day Ahead Market during the month of June, 2022 and May, 2022, respectively.
- 4.2. There was **no** real time curtailment in IEX in Green Day Ahead Market during the month of June, 2022 and May, 2022, respectively.
- 4.3. The **top 10 sellers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of June, 2022 were **Adani Hybrid Energy Jaisalmer Four Limited (Solar), Andhra Pradesh, Madhya Pradesh, Adani Hybrid Energy Jaisalmer Two Limited (Solar), Adani Hybrid Energy Jaisalmer Three Limited (Solar), Karnataka, Telangana, Adani Wind Energy Kutch Five Limited, J&K and Adani Green Energy Nineteen Limited**, which constituted **92.18 %** of the market volume.
- 4.4. The **top 10 purchasers** on the power exchanges in **Green Day Ahead Market (GDAM)** in the month of June, 2022 were **Punjab, DVC, Gujarat, Daman & Diu - Dadra & Nagar Haveli, Maharashtra, Assam, Karnataka, Delhi, Jharkhand and Uttar Pradesh**, which constituted **90.23 %** of the market volume.

5. **TERM AHEAD MARKET (TAM)****Term Ahead Market (TAM) (on Trade Date Basis)**

- 5.1. The total volume of electricity transacted on both the power exchanges in Term Ahead Market in June, 2022 on trade date basis was **1,450.58 MU**, out of which, **722.69 MU** (49.82 %) was transacted on IEX and **727.89 MU** (50.18 %) was transacted on PXIL.

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- 5.2. The total volume of electricity transacted on both the power exchanges in Term Ahead Market in May, 2022 on trade date basis was **1,639.84 MU**, out of which, **901.76 MU** (54.99 %) was transacted on IEX and **738.08 MU** (45.01 %) was transacted on PXIL.
- 5.3. Similarly, total volume of electricity transacted on both the power exchanges in Term Ahead Market in June, 2021 on trade date basis was **981.16 MU**, out of which, **622.42 MU** (63.44 %) was transacted on IEX and **358.74 MU** (36.56 %) was transacted on PXIL.
- 5.4. With respect to the total energy supplied during month of June, 2022 in the country, the volume of electricity traded on power exchanges in TAM on trade date basis represents **1.09 %** of the total energy supplied. The same was **1.21 %** in May, 2022 and **0.86 %** in June, 2021.
- 5.5. In the month of June, 2022, there was transmission congestion of **0.29 MU** in TAM, Out of which **0.29 MU** happened in IEX under Day Ahead Contingency contract and no congestion happened in PXIL.
- 5.6. The comparison of total volume of electricity transacted and Average MCP on both the power exchanges in Term Ahead Market (TAM) during June, 2022 with May, 2022 and June, 2021 is given in Table- 5A & 5B:

Exchange	Period	Final Scheduled Volume (MU)				
		Intra Day	Day Ahead Contingency	Daily or Any Day	Weekly	Total
IEX	June, 2022	3.67	620.37	98.65	-	722.69
	May, 2022	6.95	455.81	438.99	-	901.75
	%Change (Month over Month)	-47.19	36.10	-77.53	NA	-19.86
	June, 2021	16.00	325.92	280.50	-	622.42
	%Change Year over Year)	-77.06	90.34	-64.83	NA	16.11
PXIL	June, 2022	3.78	724.11	-	-	727.89
	May, 2022	13.26	343.49	381.34	-	738.09
	%Change (Month over Month)	-71.49	110.81	NA	NA	-1.38
	June, 2021	80.00	-	278.74	-	358.74
	%Change (Year over Year)	-95.28	NA	NA	NA	102.90

(a) June, 2022 vis- a- vis May, 2022 and June, 2021 (on trade Date Basis)

- : No Transaction happened

NA: Not Applicable

Table: 5A

(b) Average MCP, June, 2022 vis- a- vis May, 2022 and June, 2021 (on trade Date Basis)

Exchange	Period	Average MCP (Rs/kWh)			
		Intra Day	Day Ahead Contingency	Daily or Any Day	Weekly
IEX	June, 2022	10.59	6.21	5.40	-
	May, 2022	11.44	8.66	8.10	-
	%Change (Month over Month)	-7.43	-28.29	-33.33	NA

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PXIL	June, 2021	4.57	3.10	2.84	-
	%Change (Year over Year)	131.73	100.32	90.14	NA
	June, 2022	11.14	6.82	-	-
	May, 2022	10.53	7.06	8.58	-
	%Change (Month over Month)	5.79	-3.40	NA	NA
	June, 2021	3.24	-	3.01	-
	%Change (Year over Year)	243.83	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table: 5B

Term Ahead Market (TAM) (on delivery Date Basis)

- 5.7. The total volume of electricity transacted on both the power exchanges in Term Ahead Market in June, 2022 on delivery date basis was **1,518.61 MU**, out of which, **759.03 MU** (49.98 %) was transacted on IEX and **759.58 MU** (50.02%) was transacted on PXIL.
- 5.8. The total volume of electricity transacted on both the power exchanges in Term Ahead Market in May, 2022 on delivery date basis was **2,346.37 MU**, out of which, **1188.60 MU** (50.66 %) was transacted on IEX and **1157.77 MU** (49.34%) was transacted on PXIL.
- 5.9. Similarly, The total volume of electricity transacted on both the power exchanges in Term Ahead Market in June, 2021 on delivery date basis was **953.57 MU**, out of which, **640.91 MU** (67.21%) was transacted on IEX and **312.66 MU** (32.79%) was transacted on PXIL.
- 5.10. With respect to the total energy supplied during the month of June, 2022 in the country, the volume of electricity traded on the power exchanges in TAM on delivery date basis represents **1.14 %** of the total energy supplied. The same was **1.74 %** in May, 2022 and **0.83 %** in June, 2021.
- 5.11. In the month of June, 2022, there was real time curtailment of **4.34 MU** in TAM, Out of which **1.01 MU** happened in IEX under Day Ahead Contingency contract and **3.33 MU** happened in PXIL under Day Ahead Contingency contract.
- 5.12. The comparison of total volume of electricity transacted and Average MCP in both the power exchanges in Term Ahead Market (TAM) on delivery date basis during June, 2022 with May, 2022 and June, 2021 is given in Table – 5D, 5E & 5F:
- (a) June, 2022 vis- a- vis May, 2022 (on Delivery Date Basis)

Exchange	Period	Final Scheduled Volume (MU)				
		Intra Day	Day Ahead Contingency	Daily or Any Day	Weekly	Total
IEX	June, 2022	3.67	624.11	131.25	-	759.03
	May, 2022	6.95	449.53	713.69	18.43	1188.60
	%Change (Month over Month)	-47.19	38.84	-81.61	NA	-36.14
	June, 2021	16.00	316.43	308.48	-	640.91
	%Change (Year over Year)	-77.06	97.23	-57.45	NA	18.43
PXIL	June, 2022	3.78	724.60	31.20	-	759.58

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	May, 2022	13.26	334.56	809.95	-	1157.77
	%Change (Month over Month)	-71.49	116.58	-96.15	NA	-34.39
	June, 2021	72.03	-	240.63	-	312.66
	%Change (Year over Year)	-94.75	NA	-87.03	NA	142.94

- : No transaction happened

NA: Not Applicable

Table: 5D**(b) Average MCP, June, 2022 vis- a- vis May, 2022 and June, 2021 (on Delivery Date Basis)**

Exchange	Period	Average MCP (Rs/kWh)			
		Intra Day	Day Ahead Contingency	Daily or Any Day	Weekly
IEX	June, 2022	10.59	6.31	5.10	-
	May, 2022	11.44	8.92	9.12	14.63
	%Change (Month over Month)	-7.43	-29.26	-44.08	NA
	June, 2021	4.57	3.10	3.02	-
	%Change (Year over Year)	131.73	103.55	68.87	NA
PXIL	June, 2022	11.14	6.90	5.87	-
	May, 2022	10.53	7.31	9.20	-
	%Change (Month over Month)	5.79	-5.61	-36.20	NA
	June, 2021	3.27	-	2.99	-
	%Change (Year over Year)	240.67	NA	96.32	NA

-: No transaction happened

NA: Not Applicable

Table: 5F**6. GREEN TERM AHEAD MARKET (GTAM):**

The total volume of electricity transacted in both the power exchanges in GTAM on trade date basis was **238.40 MU** (**46.43 MU** in Solar, **146.40 MU** in Non Solar and **45.57 MU** in Hydro), whereas, the same on delivery date basis was **231.89 MU** (**38.40 MU** in Solar, **148.22 MU** in Non Solar and **45.27 MU** in Hydro), respectively. The total volume of electricity transacted in in GTAM in Day Ahead Contingency, Intraday, Daily/ Anyday and Weekly contracts during June, 2022 on trade date basis and delivery date basis has basis been shown in Tables 6A to 6L.

6.1. Solar Energy Segment in GTAM (On Trade date basis)

The Final Scheduled Volume and the Price of electricity transacted in GTAM in IEX & PXIL during June, 2022 and its comparison with May, 2022 and June, 2021 has been shown in Table 6A & 6B below.

(i) Final Scheduled Volume:

Exchange	Solar Energy	Period	Final Scheduled Volume (MU)
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Contract			Total	Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	10.93	0.02	2.35	0.73
		May, 2022	27.30	0.16	4.48	1.82
		%Change (Month over Month)	-59.96	-87.50	-47.54	-59.89
		June, 2021	138.39	1.33	10.41	4.61
		%Change (Year over Year)	-92.10	-98.50	-77.43	-84.16
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	1.87	0.05	0.25	0.07
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/ Anyday	June, 2022	2.40	2.40	2.40	2.40
		May, 2022	6.00	2.40	3.60	3.00
		%Change (Month over Month)	-60.00	0.00	-33.33	-20.00
		June, 2021	8.80	0.45	5.00	1.47
		%Change (Year over Year)	-72.73	433.33	-52.00	63.27
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	8.67	0.28	3.57	1.73
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	22.40	0.32	3.51	2.49
		May, 2022	87.50	0.64	7.12	2.92
		%Change (Month over Month)	-74.40	-50.00	-50.70	-14.73
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	1.86	0.84	1.02	0.93
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/ Anyday	June, 2022	-	-	-	-
		May, 2022	15.48	1.38	12.00	5.16
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	10.70	0.42	1.53	0.97
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

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		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6A

(ii) Daily Market Clearing Price (MCP):

Exchange	Solar Energy Contract	Period	Prices(Rs/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	3.20	4.60	3.66
		May, 2022	3.50	12.66	6.04
		%Change (Month over Month)	-8.57	-63.67	-39.40
		June, 2021	3.04	3.89	3.24
		%Change (Year over Year)	5.26	18.25	12.96
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.00	3.09	3.01
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	4.60	4.60	4.60
		May, 2022	4.85	12.00	8.43
		%Change (Month over Month)	-5.15	-61.67	-45.43
		June, 2021	3.20	4.10	3.50
		%Change (Year over Year)	43.75	12.20	31.43
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.30	3.80	3.43
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	3.99	5.62	4.87
		May, 2022	1.79	13.61	5.67
		%Change (Month over Month)	122.91	-58.71	-14.11
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.10	3.10	3.10
		%Change (Year over Year)	NA	NA	NA
	Daily/ Anyday	June, 2022	-	-	-
		May, 2022	4.70	12.08	9.59

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		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.09	3.30	3.14
		%Change (Year over Year)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6B

6.2. Solar Energy Segment in GTAM (On Delivery date basis)

The Final Scheduled Volume and the Price of electricity transacted in GTAM in IEX & PXIL during June, 2022 and its comparison with May, 2022 and June, 2021 has been shown in Table 6C & 6D below.

(i) Final Scheduled Volume:

Exchange	Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	10.93	0.02	2.35	0.73
		May, 2022	28.11	0.16	4.48	1.76
		%Change (Month over Month)	-61.12	-87.50	-47.54	-58.52
		June, 2021	141.42	1.33	10.41	4.71
		%Change (Year over Year)	-92.27	-98.50	-77.43	-84.50
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	1.87	0.05	0.25	0.07
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	2.40	0.24	0.24	0.24
		May, 2022	6.00	0.40	0.60	0.50
		%Change (Month over Month)	-60.00	-40.00	-60.00	-52.00
		June, 2021	2.59	0.08	0.45	0.18
		%Change (Year over Year)	-7.34	200.00	-46.67	33.33
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	13.42	0.04	0.99	0.45
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	25.07	0.32	3.51	2.51
		May, 2022	92.37	0.64	7.54	3.08
		%Change	-72.86	-50.00	-53.45	-18.51

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		(Month over Month)				
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	1.86	0.84	1.02	0.93
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-	-
		May, 2022	15.98	0.35	1.73	0.94
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	10.70	0.42	1.53	0.97
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6C

(ii) Daily Market Clearing Price (MCP):

Exchange	Solar Energy Contract	Period	Prices(Rs/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	3.20	4.60	3.66
		May, 2022	3.50	12.66	6.41
		%Change (Month over Month)	-8.57	-63.67	-42.90
		June, 2021	3.04	3.89	3.24
		%Change (Year over Year)	5.26	18.25	12.96
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.00	3.09	3.01
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	4.60	4.60	4.60
		May, 2022	4.85	12.00	8.43
		%Change (Month over Month)	-5.15	-61.67	-45.43
		June, 2021	3.20	3.50	3.38
		%Change (Year over Year)	43.75	31.43	36.09
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change	NA	NA	NA

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PXIL		(Month over Month)			
		June, 2021	3.24	3.80	3.37
		%Change (Year over Year)	NA	NA	NA
	Day Ahead Contingency	June, 2022	3.99	5.62	4.89
		May, 2022	1.79	13.61	5.90
		%Change (Month over Month)	122.91	-58.71	-17.12
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.10	3.10	3.10
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	4.70	12.85	7.79
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.09	3.30	3.14
		%Change (Year over Year)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6D

- In June, 2022, there was no transmission congestion in GTAM (Solar) in both IEX and PXIL.
- In June, 2022, there was no real time curtailment in GTAM (Solar) in both IEX & PXIL.

6.3. Non-Solar Energy Segment in GTAM (On Trade date basis)

The total volume of electricity transacted on both the power exchanges in non-Solar Energy Segment in GTAM in Day Ahead Contingency, Intraday, Daily/ Anyday and Weekly contracts during June, 2022 on trade date basis and delivery date basis has been shown in Tables 6E to 6H.

The Final Scheduled Volume and the Price of electricity transacted in Non-Solar GTAM in IEX & PXIL during June, 2022 on trade date basis and its comparison with May, 2022 and June, 2021 has been shown in Table 6E & 6F below.

(i) Final Scheduled Volume:

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum	Maximum	Average

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IEX	Day Ahead Contingency	June, 2022	112.39	0.18	9.98	4.16
		May, 2022	58.76	0.08	5.78	1.90
		%Change (Month over Month)	91.27	125.00	72.66	118.95
		June, 2021	231.37	2.55	19.84	7.71
		%Change (Year over Year)	-51.42	-92.94	-49.70	-46.04
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	8.30	0.14	3.95	0.92
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/ Anyday	June, 2022	-	-	-	-
		May, 2022	52.12	0.38	33.84	5.79
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	5.59	0.55	3.36	1.86
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	8.85	1.40	6.05	2.95
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	34.01	0.03	8.30	1.17
		May, 2022	162.71	0.31	10.84	5.25
		%Change (Month over Month)	-79.10	-90.32	-23.43	-77.71
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Intraday	June, 2022	-	-	-	-
		May, 2022	1.35	1.35	1.35	1.35
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	0.40	0.40	0.40	0.40
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/ Anyday	June, 2022	-	-	-	-
		May, 2022	114.03	1.20	38.72	11.40
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	15.43	0.14	0.89	0.53
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	-	-	-	-
		%Change	NA	NA	NA	NA

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		(Year over Year)				
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-: No transaction happened

NA: Not Applicable

Table-6E

(ii) Daily Market Clearing Price (MCP):

Exchange	Non- Solar Energy Contract	Period	Prices(Rs/kWh)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	4.04	10.95	7.47
		May, 2022	4.24	13.11	7.99
		%Change (Month over Month)	-4.72	-16.48	-6.51
		June, 2021	3.45	6.26	4.17
		%Change (Year over Year)	17.10	74.92	79.14
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.60	6.00	4.64
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	5.75	12.75	8.14
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.80	4.10	3.90
		%Change (Year over Year)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.80	4.50	4.22
		%Change (Year over Year)	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	5.15	12.00	8.48
		May, 2022	3.65	14.70	7.63
		% Change (Month over Month)	41.10	-18.37	11.14
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intraday	June, 2022	-	-	-
		May, 2022	6.41	6.41	6.41
		% Change (Month over Month)	NA	NA	NA
		June, 2021	4.32	4.32	4.32
		%Change (Year over Year)	NA	NA	NA
	Daily/ Anyday	June, 2022	-	-	-
		May, 2022	6.30	13.97	9.79
		% Change (Month over Month)	NA	NA	NA
		June, 2021	NA	NA	NA
		%Change	-	-	-

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	Weekly	(Year over Year)			
		June, 2022	-	-	-
		May, 2022	NA	NA	NA
		%Change (Month over Month)	NA	NA	NA
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6F

6.4. Non-Solar Energy Segment in GTAM (On Delivery date basis)

The Final Scheduled Volume and the Price of electricity transacted in GTAM in IEX & PXIL during June, 2022 and its comparison with May, 2022 has been shown in Table 6G & 6H below.

(i) Final Scheduled Volume:

Exchange	Non- Solar Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	112.56	0.18	9.98	4.17
		May, 2022	60.24	0.08	5.78	1.94
		%Change (Month over Month)	86.85	125.00	72.66	114.95
		June, 2021	227.99	2.55	19.84	7.60
		%Change (Year over Year)	-50.63	-92.94	-49.70	-45.13
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	8.30	0.14	3.95	0.92
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-	-
		May, 2022	54.80	0.08	4.06	1.96
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	9.36	0.12	0.58	0.39
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	8.85	0.20	0.86	0.42
		%Change (Year over Year)	NA	NA	NA	NA
PXIL	Day Ahead Contingency	June, 2022	35.66	0.03	8.30	1.23
		May, 2022	163.26	0.31	10.84	5.27
		%Change (Month over Month)	-78.16	-90.32	-23.43	-76.66
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

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	Intraday	June, 2022	-	-	-	-
		May, 2022	1.35	1.35	1.35	1.35
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	0.40	0.40	0.40	0.40
		%Change (Year over Year)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-	-
		May, 2022	114.03	1.20	8.21	3.80
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
		June, 2021	-	-	-	-
		%Change (Year over Year)	NA	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6G

(ii) Daily Market Clearing Price (MCP):

Exchange	Non- Solar Energy Contract	Period	Prices(Rs/kW)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	4.04	10.95	7.65
		May, 2022	4.24	14.84	8.17
		%Change (Month over Month)	-4.72	-26.21	-6.36
		June, 2021	3.45	6.26	4.17
		%Change (Year over Year)	17.10	74.92	83.45
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.60	6.00	4.64
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	5.88	12.67	8.35
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.70	4.10	3.84
		%Change (Year over Year)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.80	4.50	4.22
		%Change (Year over Year)	NA	NA	NA

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PXIL	Day Ahead Contingency	June, 2022	5.21	12.00	8.56
		May, 2022	3.65	14.70	7.83
		%Change (Month over Month)	42.74	-18.37	9.32
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA
	Intraday	June, 2022	-	-	-
		May, 2022	6.41	6.41	6.41
		%Change (Month over Month)	NA	NA	NA
		June, 2021	4.32	4.32	4.32
		%Change (Year over Year)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	6.36	13.94	9.44
		%Change (Month over Month)	NA	NA	NA
		June, 2021	3.40	4.20	3.75
		%Change (Year over Year)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
		June, 2021	-	-	-
		%Change (Year over Year)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table-6H

- In June, 2022, there was no transmission congestion in GTAM (Non Solar) in both IEX and PXIL.
- In June, 2022, there was no real time curtailment in GTAM (Non Solar) in both IEX & PXIL.

6.5. Hydro Energy Segment in GTAM- In the Hydro Energy Segment in GTAM, in Day Ahead Contingency, Intraday, Daily/ Anyday and Weekly contracts during June, 2022 on trade date basis and delivery date has basis been shown in Tables 6I, 6J, 6K & 6L.

Hydro Energy Contract in GTAM (On Trade Date Basis)

(i) Final Scheduled Volume (On Trade date basis):

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	47.57	0.10	3.21	1.59
		May, 2022	3.90	0.19	0.36	0.28
		%Change (Month over Month)	1119.74	-47.37	791.67	467.86
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-	-

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		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table: 6I

(ii) Daily Market Clearing Price (MCP) (On Trade date basis):

Exchange	Hydro Energy Contract	Period	Prices(Rs/kW)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	3.63	11.26	7.28
		May, 2022	4.37	9.77	7.39
		%Change (Month over Month)	-16.93	15.25	-1.49
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table - 6J

Hydro Energy Contract in GTAM (On Delivery Date Basis)

(i) Final Scheduled Volume (On Trade date basis):

Exchange	Hydro Energy Contract	Period	Final Scheduled Volume (MU)			
			Total	Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	45.27	0.10	3.21	1.51
		May, 2022	3.54	0.19	0.33	0.27
		%Change (Month over Month)	1178.81	-47.37	872.73	459.26
	Intraday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA
	Weekly	June, 2022	-	-	-	-
		May, 2022	-	-	-	-
		%Change (Month over Month)	NA	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table: 6K

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(ii) Daily Market Clearing Price (MCP) (On Trade date basis):

Exchange	Hydro Energy Contract	Period	Prices(Rs/kW)		
			Minimum	Maximum	Average
IEX	Day Ahead Contingency	June, 2022	3.63	11.26	7.45
		May, 2022	4.37	9.77	7.27
		%Change (Month over Month)	-16.93	15.25	2.48
	Intraday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Daily/Anyday	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA
	Weekly	June, 2022	-	-	-
		May, 2022	-	-	-
		%Change (Month over Month)	NA	NA	NA

-: No transaction happened

NA: Not Applicable

Table – 6L

- In June, 2022, there was no transmission congestion in GTAM (Hydro) in IEX.
- In June, 2022, there was no real time curtailment in GTAM (Hydro) in IEX.

7. BILATRAL TRANSACTIONS:

The total volume of electricity transacted through **Bilateral transactions** in the month of June, 2022 was **7,940.75 MU**. The total buy volume of electricity transacted in bilateral market through direct transactions and traders in the month of June, 2022 were **2,530.69 MU** and **5,410.06 MU** respectively. The details of Bilateral transactions of Electricity happened during June, 2022 have been shown in Table Below:

June, 2022	Direct	Traders	Total Bilateral Transaction (MU)
Total	2,530.69	5,410.06	7940.75
Minimum	0.03	0.38	-
Maximum	628.28	1,051.55	-

Table -7A

The region-wise maximum/ minimum volume of electricity transaction happened bilaterally during June, 2022 are given in table below:

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

Region-wise Volume (MU)	ER		WR		NR		SR		NER	
	Direct	Trader	Direct	Trader	Direct	Trader	Direct	Trader	Direct	Trader
Total	326.38	884.13	687.26	1882.29	1494.26	2450.14	22.79	192.47	-	1.04
Minimum	0.94	3.63	5.48	7.71	7.48	2.76	0.03	0.38	-	1.04
Maximum	208.18	542.06	252.63	1051.55	628.28	905.78	18.06	88.53	-	1.04

Table-7B

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7.1. The **top 5 buyers** on bilateral transaction through direct transactions in the month of June, 2022 were **Punjab, Uttar Pradesh, Haryana, Delhi and Maharashtra**, which constituted **67.80 %** of the market volume. Whereas **top 5 buyers** on bilateral transaction through traders in the month of June, 2022 were **Gujarat, Delhi, Punjab, Odisha and Maharashtra**, which constituted **68.08 %** of the market volume. [Annexure III]

7.2. The **top 5 sellers** on bilateral transaction through direct transactions in the month of June, 2022 were **Madhya Pradesh, Telangana, DVC, TEESTA-III TUL and Rajasthan**, which constituted **52.66 %** of the market volume. Whereas **top 5 sellers** on bilateral transaction through traders in the month of June, 2022 were **Himachal, Karnataka, TEESTA III TUL, JPNIGRIE_JNSTPP and RPREL**, which constituted **39.00 %** of the market volume. [Annexure III]

7.3. **Deviation Volume** - The volume of Deviation observed in the month of June, 2022 in import and export were **2,553.19 MU** and **2,531.05 MU** respectively. The total volume of Deviation observed in the month of June, 2022 can be taken as **2,542.12 MU**.

7.4. A comparison of volume of electricity transacted through both the Power Exchanges together in DAM, TAM, RTM, GTAM, GDAM (on delivery date basis) with Bilateral transactions and Deviation in the month of June, 2022 is shown in **Figure 1**:

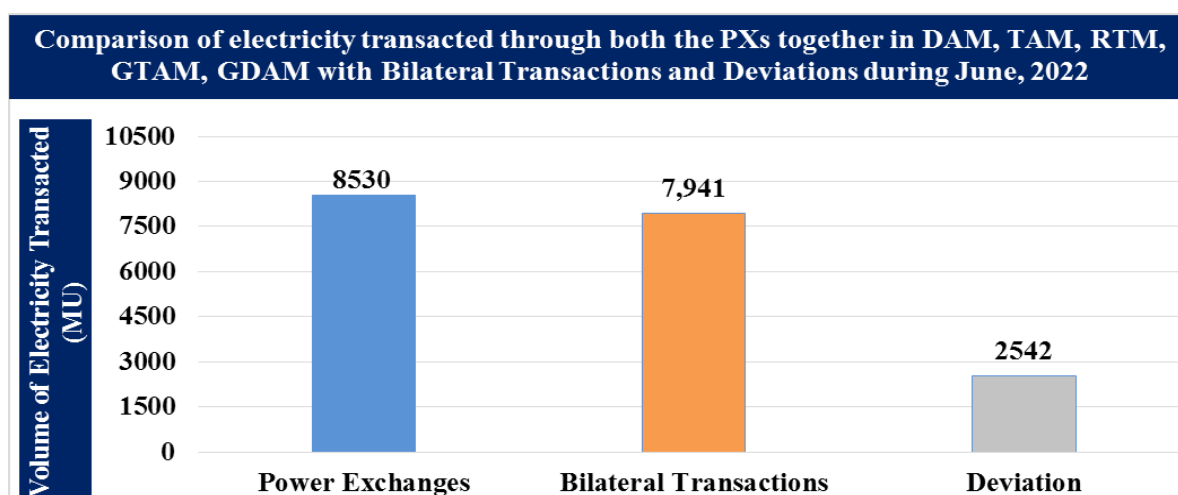


Figure -1

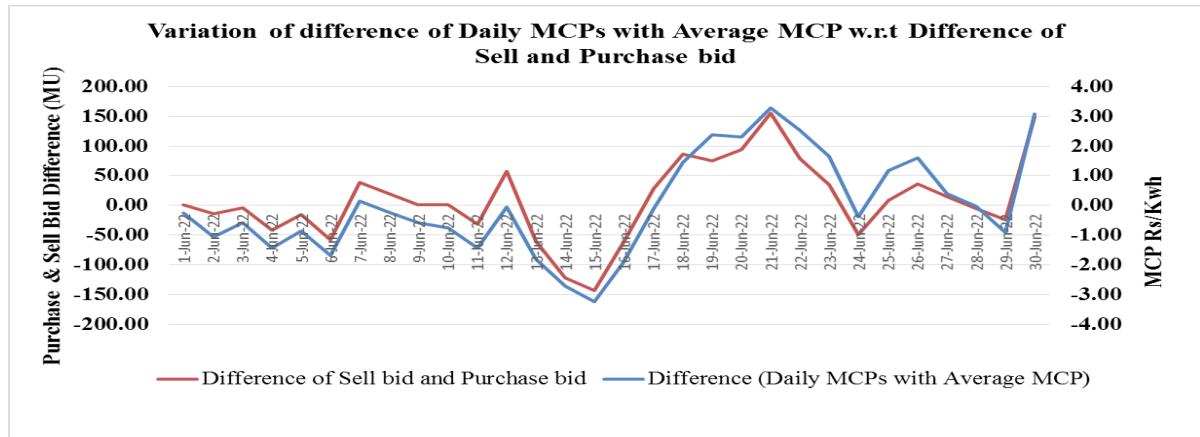
8. ANALYSIS OF MOVEMENT OF PRICES OBSERVED IN DAM DURING JUNE, 2022

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 June, 2022 month. The observations made are as under:

8.1. In order to find out the determinants which are responsible for the Daily MCP, a regression analysis has been carried out where the Daily 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.

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- 8.2. A double log function was used so that elasticity of Daily MCP could be read off from the coefficients of independent variables. The regression analysis revealed that the only significant variable were the total sell bid and solar Generation, whereas all the other variables were found to be insignificant. Further, the regression analysis revealed that the elasticity of the Daily MCP with respect to total sell bid was **-0.82**, which signifies that there is high multicollinearity among the predictor variables/ independent variables used in regression analysis.
- 8.3. The variation of difference of Daily MCPs with Average MCP w.r.t Difference of Sell and Purchase bid is Shown below:



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

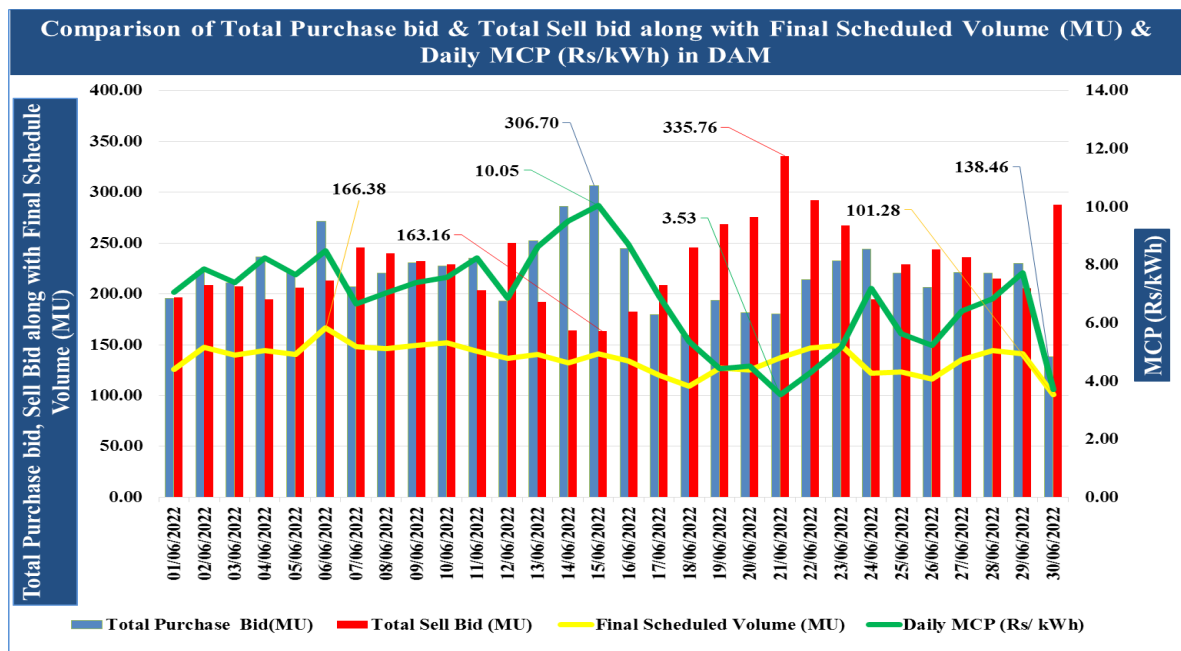


Figure -2

- 8.5. Invariably, the Final Scheduled Volume (MU) and the Daily MCP (Rs/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.
- 8.6. A comparison of maximum, minimum, daily, evening time MCP is shown in **Figure -3**. The same are also tabulated in **Annexure-IV**.

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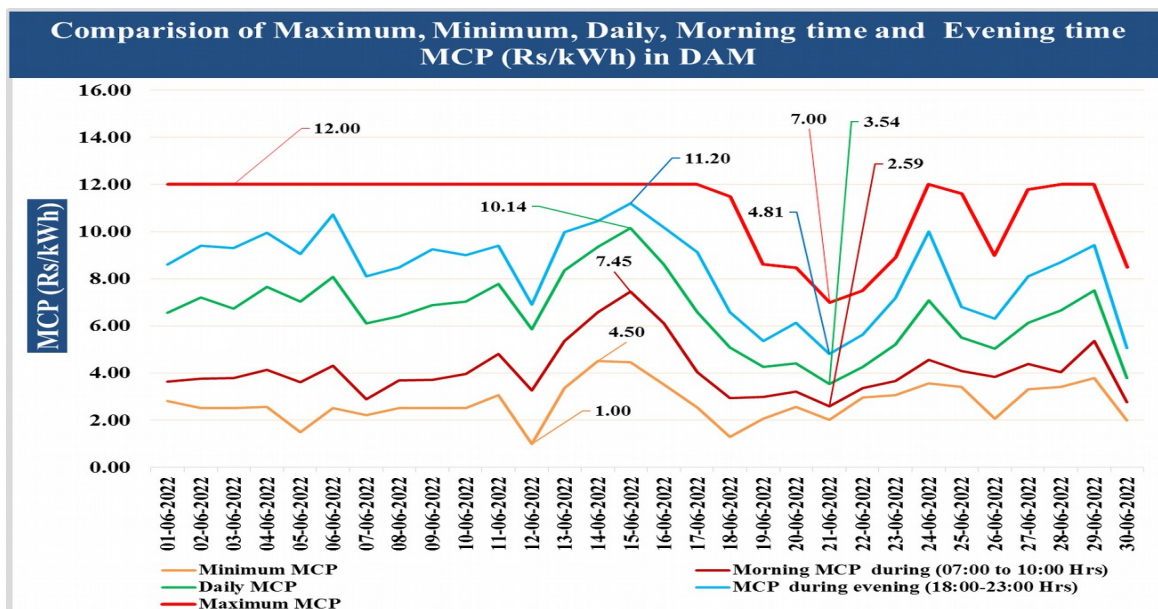


Figure -3

- 8.7. The Market Clearing Price duration curves for time block wise MCP for the month of June, 2022 is shown in **Figure 4**, whereas the time block wise MCP duration curve for the period 1st April, 2022 to 30th June, 2022 is shown in **Figure 5**.

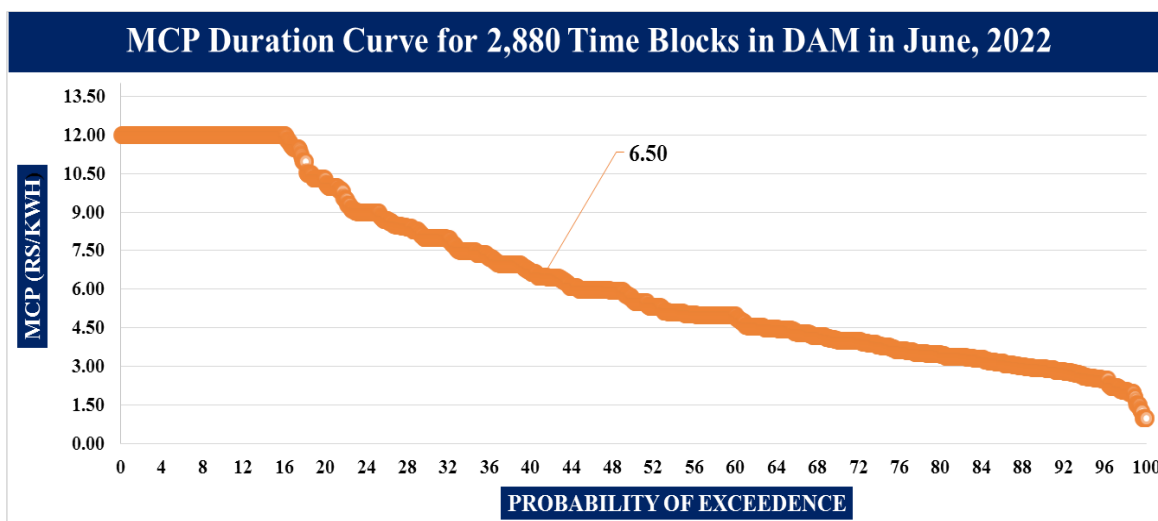


Figure-4

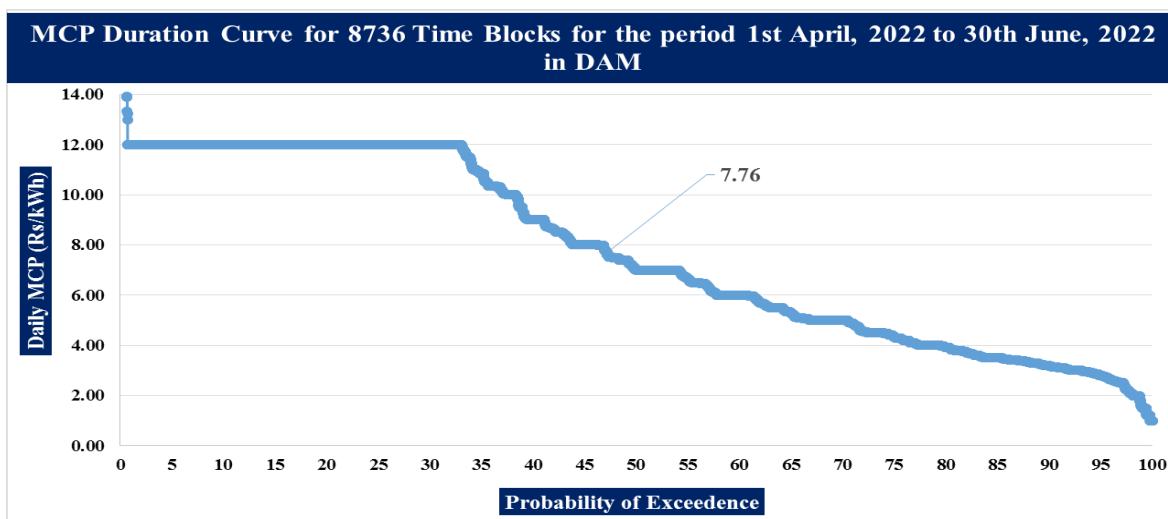


Figure-5

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- 8.8. It can be seen in figure 4 above that in the MCP duration curve of June, 2022, for 41.56 % of the time MCP was above average MCP of the month (i.e. **Rs. 6.50/kWh**) and almost 58.44 % of the time MCP was below the average MCP of the month. Similarly, it can be seen in the MCP duration curve from 1st April, 2022 to 30th June, 2022 (figure-5), that for 47.00 % of the time the MCP was above the average MCP for the period (i.e. **Rs. 7.76/kWh**) and for 53.00 % of the time the daily MCP was below the average MCP for the period.
- 8.9. 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 8.1 and 8.2 above**.
- 8.10. In June, 2022, the maximum FSV occurred mostly during the **time period 6-8 Hrs and 21-22 Hrs** (on 26 no. of days). Whereas, the maximum MCP occurred mostly during the **time period 0-1 Hrs** (on 24 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 9-11 Hrs and 17-18 Hrs** (on 12 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 8-10 Hrs** (on 26 no. of days). [Annexure VI]
- 8.11. In the month of June, 2022, there was **no** congestion in the transmission system in IEX and PXIL, respectively. Further, in the month of May, 2022 also, there was no congestion in transmission system in IEX and PXIL, respectively. In the month of June, 2021, there was no transmission congestion in IEX and PXIL, respectively.
- 8.12. In the month of June, 2022, there was **no** real time curtailment in IEX and PXIL, respectively. Further, in the month of May, 2022 also, there was no real time curtailment both IEX and PXIL. In the month of June, 2021, there was real time curtailment of **2.35 MU** on two days (25th to 26th June, 2021) in IEX, whereas, in PXIL, there was no real time curtailment in June, 2021.
- 8.13. The **top 10 sellers** on the power exchanges in **Day Ahead Market (DAM)** in the month of June, 2022 were, **Madhya Pradesh, Karnataka, Delhi, Raipur Energen, Jindal Power Ltd. Stg-II, NVVN (SNA) – NEA, Sembcorp Gayatri, Bihar, Teesta-3 and DB Power**, which constituted **50.72 %** of the market volume. [Annexure VII].
- 8.14. The **top 10 purchasers** on the power exchanges in **Day Ahead Market (DAM)** in the month of June, 2022 were **Andhra Pradesh, Uttar Pradesh, Gujarat, Haryana, West Bengal, Maharashtra, Punjab, Odisha and Rajasthan**, which constituted **79.85 %** of the market volume. [Annexure VII]
- 8.15. The total volume of electricity purchased by Discoms/Licensees in DAM in the month of June, 2022 was **3,972.89 MU**, which constituted **94.57 %** of total volume of electricity purchased on both the power exchanges.
- 8.16. Similarly, the total volume of electricity sold by Discoms/Licensees in DAM in the month of June, 2022 was **2,117.55 MU**, which constituted **50.40%** of total volume of electricity sold on both the power exchanges.
9. **ANALYSIS OF MOVEMENT OF PRICES OBSERVED IN REAL TIME MARKET (RTM) TRANSACTIONS IN JUNE, 2022**

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- 9.1. 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 variables was the total purchase bid, whereas all the other variables were found to be insignificant. Further, the regression analysis revealed that the elasticity of the Daily MCP with respect to total Purchase Bid was **0.51**, which signifies that there is high multicollinearity among the predictor variables/ independent variables used in regression analysis.
- 9.2. 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 9.1 above**.
- 9.3. The Total Purchase Bid, Total Sell Bid, Daily MCP and FSV are shown in Figure-6 below:

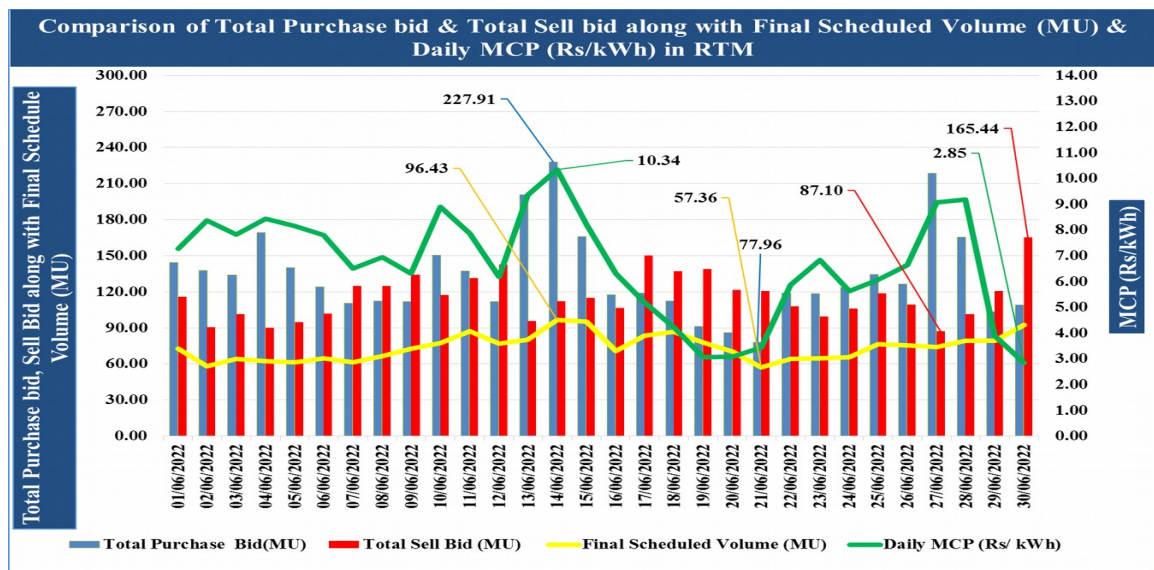


Figure-6

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

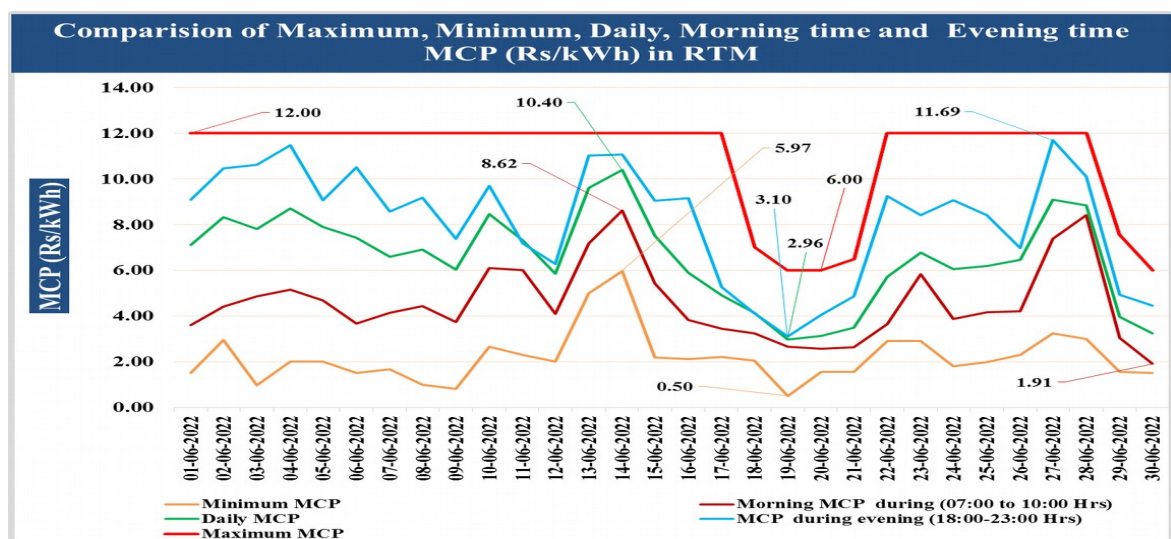


Figure-7

- 9.5. The Market Clearing Price duration curves for time block wise MCP for the month of June, 2022 is shown in Figure 8, whereas the day wise MCP duration curve for the period 1st June, 2022 to 30th June, 2022 is shown in Figure 9.

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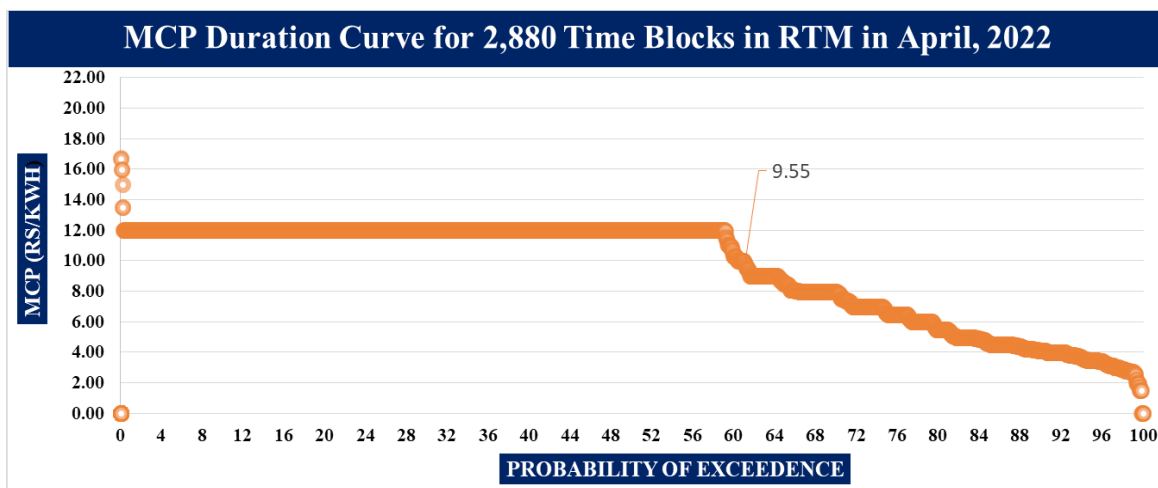


Figure-8

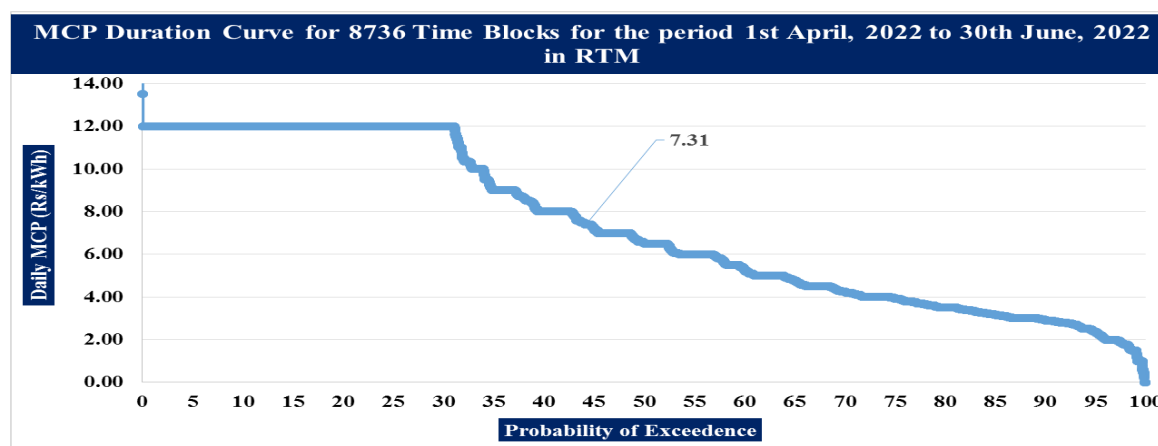


Figure-9

- 9.6. It can be seen in figure 8 above that in the MCP duration curve of June, 2022, for 61.56 % of the time the MCP was above the average MCP of the month (i.e. **Rs. 9.55/kWh**) and for 38.44 % 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 1st April, 2022 to 30th June, 2022 (figure 9) that, for 44.83 % of the time the daily MCP was above the average MCP for the period (i.e. **Rs. 7.31/kWh**) and for 55.17 % of the time the daily MCP was below the average MCP for the period.
- 9.7. In June, 2022, the maximum FSV occurred mostly during the **time period 0-2 Hrs** (on 7 no. of days). Whereas, the maximum MCP also occurred mostly during the **time period 0-1 Hrs** (on 23 no. of days). Similarly, the minimum FSV occurred mostly during the **time period 7-9 Hrs** (on 8 no. of days). Whereas, the minimum MCP occurred mostly during the **time period 8-10 Hrs** (on 10 no. of days). [Annexure X]
- 9.8. There was **no** real time curtailment in IEX in Real Time Market (RTM) during June, 2022 and May, 2022, whereas, **no** real time curtailment in PXIL during June, 2022 and no transaction of electricity happened in PXIL during May, 2022. Similarly, in June, 2021, there was no real time curtailment in IEX, whereas, no transaction of electricity happened in PXIL during June, 2021 in Real Time Market (RTM).

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- 9.9. In the month of June, 2022, there was congestion of **0.98 MU** in the transmission system in IEX on 4 days (26th, 27th, 29th & 30th June, 2022), whereas, in PXIL, there was no congestion in June, 2022. Further, In the month of May, 2022, there was congestion of **1.29 MU** in the transmission system in IEX on 2 days (3rd & 27th May, 2022), whereas, in PXIL, no transaction of electricity happened in May, 2022. In the month of June, 2021, there was congestion of **3.97 MU** in transmission system in IEX in Real Time Market for 9 days (11th, 15th, 17th to 19th, 23rd to 25th and 30th June 2021), whereas, in PXIL, no transaction of electricity happened in June, 2021 in Real Time Market.
- 9.10. The **top 10 sellers** on the power exchanges in **Real Time Market (RTM)** in the month of June, 2022 were **Bihar, Madhya Pradesh, Karnataka, Delhi, Kameng HEP, West Bengal, Assam, Andhra Pradesh, Maharashtra and J&K**, which constituted **63.07 %** of the market volume. [Annexure XI]
- 9.11. The **top 10 buyers** on the power exchanges in **Real Time Market (RTM)** in the month of June, 2022 were **Rajasthan, Uttar Pradesh, Telangana, Maharashtra, Punjab, Andhra Pradesh, West Bengal, Himachal Pradesh, Tamil Nadu and Haryana**, which constituted **80.39%** of the market volume. [Annexure XI]
- 9.12. The total volume of electricity purchased by Discoms/Licensees in RTM in the month of June, 2022 was **2,081.31 MU**, which constituted **98.11 %** of total volume of electricity purchased on both the power exchanges.
- 9.13. Similarly, the total volume of electricity sold by Discoms/Licensees in RTM in the month of June, 2022 was **1,724.53 MU**, which constituted **81.29 %** of total volume of electricity sold on both the power exchanges.

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

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Annexure-I

Final Scheduled Volume, Average MCP and Real-Time Curtailment in Day Ahead Market (DAM) for the months of April, 2022 to March, 2023 of IEX and PXIL

Quarter	Months	Final Scheduled Volume (MU)		Market Clearing Price (Rs/kWh)		Real Time Curtailment (MU)	
		IEX	PXIL	IEX	PXIL	IEX	PXIL
Quarter -I	April, 2022	4,113.65	0	10.06	0	8.86	0
	May, 2022	3,172.50	13.02	6.80	4.30	0	0
	June, 2022	4,084.99	116.20	6.49	6.61	0	0
Total Quarter -I	April - June, 2022	11,371.14	0	7.78	5.45	8.86	0
Total April, 2022 - June, 2022		11,371.14	0			8.86	0

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Annexure-II**2023 of IEX and PXIL (Trade and Delivery date basis)**

Quarter	Months	Final Scheduled Volume (MU) on Trade Date Basis		
		IEX	PXIL	Total
Quarter -I	April, 2022	1,166.81	2,067.94	3,234.75
	May, 2022	901.76	738.08	1,639.84
	June, 2022	722.69	727.89	1,450.58
Total Quarter -I	April - June, 2022	2,791.26	3,533.91	6,325.17
Total April, 2022 - June, 2022		2,791.26	3,533.91	6,325.17
Quarter	Months	Final Scheduled Volume (MU) on Delivery Date Basis		
		IEX	PXIL	Total
Quarter -I	April, 2022	1,171.50	1,746.85	2,918.35
	May, 2022	1,188.60	1,157.77	2,346.37
	June, 2022	759.03	759.58	1,518.61
Total Quarter -I	April - June, 2022	3,119.13	3,664.20	6,783.33
Total April, 2022 - June, 2022		3,119.13	3,664.20	6,783.33

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Annexure-III

Top Five Entities (Buyers and Sellers) in Bilateral transactions in the month of June, 2022

(i) Top five Buyers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percen		(MU)	Percen
PUNJAB_STATE	628.28	24.83	Gujarat	1051.55	41.55
UTTARPRADESH_STAT	308.77	12.20	DELHI_UT	905.78	35.79
HARYANA_STATE	264.35	10.45	PUNJAB_STATE	719.01	28.41
DELHI_UT	261.78	10.34	Odisha	542.062	21.42
MAHARASHTRA	252.63	9.98%	MAHARASHTRA	464.849	18.37
Total Volume	1,715.81	67.80%	Total Volume	3,683.25	68.08%
Total Volume in Bilateral	2,530.59		Total Volume in Bilateral	5,410.16	

(ii) Top five Sellers in Bilateral transactions

Entity Name	Direct		Entity Name	Through Traders	
	(MU)	Percent		(MU)	Percen
MP	602.13	24.30%	HIMACHAL_STATE	705.23	28.46%
TELANGANA	227.43	9.18%	KARNATAKA_STAT	404.230	16.31%
DVC	207.08	8.36%	TEESTA III TUL	356.483	14.39%
TEESTA III TUL	138.59	5.59%	JPNIGRIE_JNSTPP	353.433	14.26%
RAJASTHAN_STAT	129.61	5.23%	RPREL	310.662	12.54%
Total Volume	1,304.84	52.66%	Total Volume	2,130.04	39.00%
Total Volume in Bilateral	2,477.98		Total Volume in Bilateral	5,462.03	

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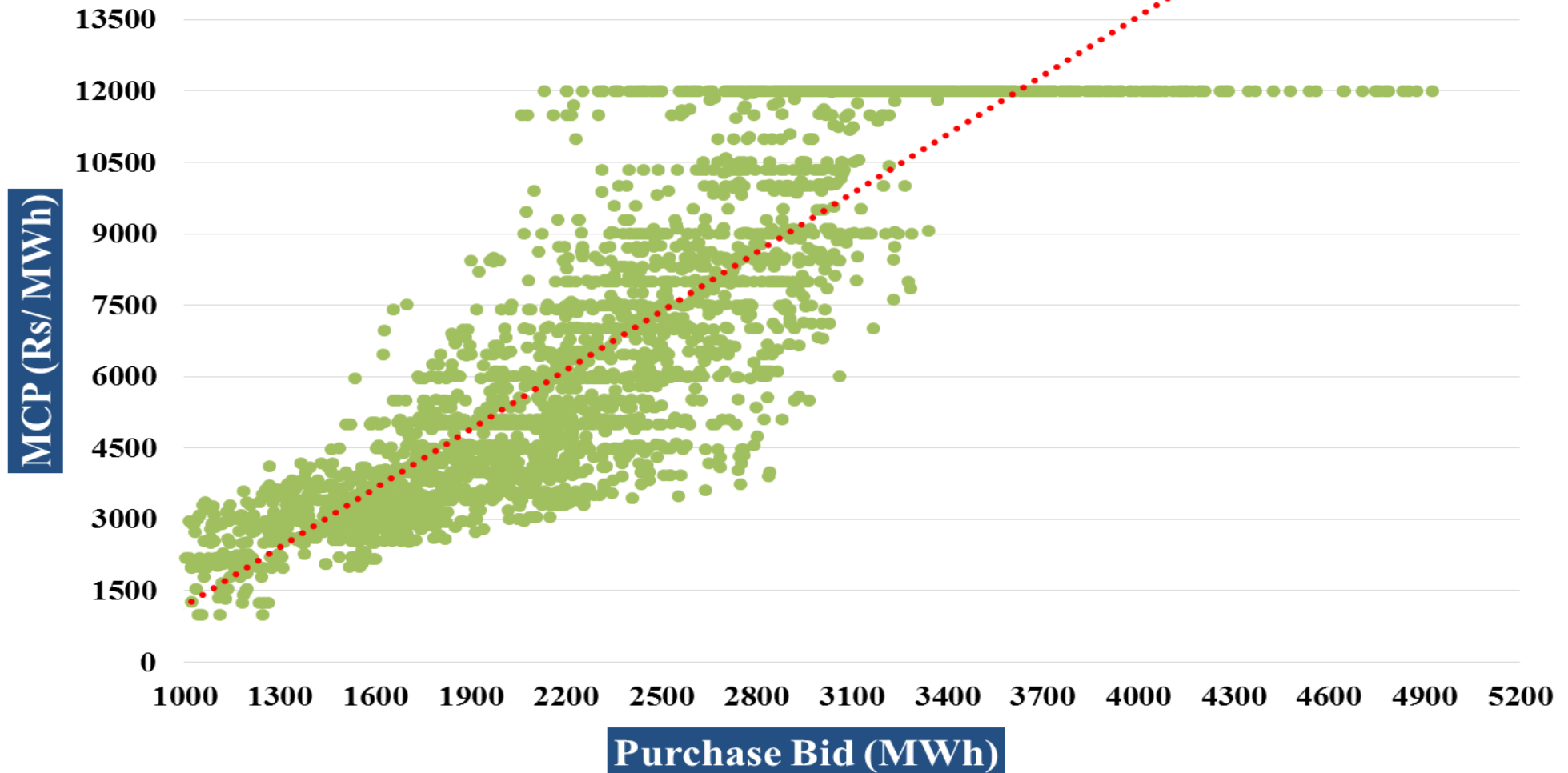
Annexure-IV**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (Rs/kWh) and Final Scheduled Volume (MU) in DAM**

Date	Morning MCP (07:00-10:00)	Day MCP (11:00-17:00)	Evening MCP (18:00- 23:00)	Night MCP (01:00- 06:00, 23:00-24:00)	Maximum MCP	Minimum MCP	Average MCP	Final Scheduled Volume (MU)
01-06-2022	3.62	5.50	8.59	7.58	12.00	2.80	6.57	125.69
02-06-2022	3.77	5.95	9.40	8.55	12.00	2.50	7.21	147.28
03-06-2022	3.77	5.27	9.32	7.69	12.00	2.50	6.74	139.84
04-06-2022	4.14	5.94	9.95	9.40	12.00	2.55	7.65	144.04
05-06-2022	3.61	4.07	9.06	10.24	12.00	1.50	7.04	140.27
06-06-2022	4.32	5.71	10.72	10.30	12.00	2.50	8.07	166.38
07-06-2022	2.89	4.17	8.10	8.14	12.00	2.20	6.10	147.83
08-06-2022	3.68	4.60	8.48	7.95	12.00	2.50	6.40	146.11
09-06-2022	3.71	4.70	9.25	8.83	12.00	2.50	6.88	149.25
10-06-2022	3.95	4.89	9.00	9.24	12.00	2.50	7.03	151.79
11-06-2022	4.80	5.37	9.41	10.45	12.00	3.05	7.77	143.55
12-06-2022	3.26	2.02	6.90	10.26	12.00	1.00	5.85	136.71
13-06-2022	5.36	6.07	9.98	10.96	12.00	3.36	8.35	140.27
14-06-2022	6.58	7.56	10.45	11.77	12.00	4.50	9.35	132.02
15-06-2022	7.45	8.92	11.20	12.00	12.00	4.47	10.14	140.86
16-06-2022	6.11	5.54	10.16	11.76	12.00	3.50	8.60	134.35
17-06-2022	4.03	3.94	9.13	8.46	12.00	2.53	6.57	120.19
18-06-2022	2.95	3.15	6.58	6.92	11.50	1.28	5.08	109.30
19-06-2022	2.99	2.62	5.36	5.68	8.62	2.06	4.26	127.00
20-06-2022	3.22	2.96	6.13	5.08	8.47	2.57	4.41	125.42
21-06-2022	2.59	2.77	4.81	3.78	7.00	2.00	3.54	137.12
22-06-2022	3.36	3.20	5.64	4.65	7.50	2.95	4.26	147.16
23-06-2022	3.67	3.58	7.19	6.05	8.90	3.05	5.22	149.49
24-06-2022	4.57	4.32	10.00	8.80	12.00	3.56	7.09	121.78
25-06-2022	4.07	3.70	6.80	7.03	11.62	3.40	5.51	123.53
26-06-2022	3.83	3.09	6.30	6.58	9.00	2.06	5.03	116.22
27-06-2022	4.38	3.83	8.11	7.72	11.78	3.30	6.13	135.33
28-06-2022	4.04	4.21	8.71	8.85	12.00	3.40	6.66	144.03
29-06-2022	5.37	4.85	9.42	9.75	12.00	3.79	7.51	140.90
30-06-2022	2.75	2.27	5.06	4.81	8.50	1.99	3.79	101.28
Maximum	7.45	8.92	11.20	12.00	12.00	4.50	10.14	166.38
Minimum	2.59	2.02	4.81	3.78	7.00	1.00	3.54	101.28
Average	4.09	4.49	8.31	8.31	11.10	2.73	6.49	136.17

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,880 Time Blocks during the month of June, 2022 in DAM



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

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

Date	Max. FSV (MU)		Max. MCP (Rs/kWh)		Min FSV (MU)		Min. MCP (Rs/kWh)	
	Time Block	Value	Time Block	Value	Time Block	Value	Time Block	Value
01-06-2022	21:45 - 22:00	1.80	00:00 - 00:15	12.00	09:30 - 09:45	0.76	09:00 - 09:15	2.80
02-06-2022	21:45 - 22:00	2.04	00:00 - 00:15	12.00	09:15 - 09:30	0.67	08:45 - 09:00	2.50
03-06-2022	21:45 - 22:00	2.05	00:00 - 00:15	12.00	09:15 - 09:30	0.71	08:45 - 09:00	2.50
04-06-2022	21:00 - 21:15	2.09	00:00 - 00:15	12.00	09:00 - 09:15	0.78	08:45 - 09:00	2.55
05-06-2022	21:15 - 21:30	2.00	00:00 - 00:15	12.00	10:00 - 10:15	0.82	10:00 - 10:15	1.50
06-06-2022	20:30 - 20:45	2.18	00:00 - 00:15	12.00	16:30 - 16:45	1.16	08:45 - 09:00	2.50
07-06-2022	21:45 - 22:00	2.06	00:00 - 00:15	12.00	08:15 - 08:30	0.97	08:15 - 08:30	2.20
08-06-2022	00:15 - 00:30	2.16	00:00 - 00:15	12.00	08:30 - 08:45	1.01	08:45 - 09:00	2.50
09-06-2022	21:00 - 21:15	1.97	00:00 - 00:15	12.00	08:45 - 09:00	1.06	08:45 - 09:00	2.50
10-06-2022	21:45 - 22:00	2.15	00:00 - 00:15	12.00	17:45 - 18:00	1.14	08:45 - 09:00	2.50
11-06-2022	20:30 - 20:45	2.07	00:00 - 00:15	12.00	10:45 - 11:00	1.12	08:45 - 09:00	3.05
12-06-2022	21:30 - 21:45	1.97	00:00 - 00:15	12.00	11:00 - 11:15	0.81	10:00 - 10:15	1.00
13-06-2022	06:45 - 07:00	1.86	00:00 - 00:15	12.00	10:00 - 10:15	1.02	09:00 - 09:15	3.36
14-06-2022	06:00 - 06:15	1.75	00:00 - 00:15	12.00	10:00 - 10:15	1.06	09:00 - 09:15	4.50
15-06-2022	06:00 - 06:15	1.81	00:00 - 00:15	12.00	00:00 - 00:15	1.19	09:00 - 09:15	4.47
16-06-2022	07:00 - 07:15	1.98	00:00 - 00:15	12.00	18:00 - 18:15	1.10	09:15 - 09:30	3.50
17-06-2022	06:15 - 06:30	1.77	00:00 - 00:15	12.00	14:00 - 14:15	0.91	09:30 - 09:45	2.53
18-06-2022	07:00 - 07:15	1.71	00:00 - 00:15	11.50	13:00 - 13:15	0.86	09:00 - 09:15	1.28
19-06-2022	06:30 - 06:45	1.88	00:00 - 00:15	8.62	17:00 - 17:15	0.98	09:00 - 09:15	2.06
20-06-2022	06:30 - 06:45	1.77	21:45 - 22:00	8.47	17:45 - 18:00	0.99	09:00 - 09:15	2.57
21-06-2022	06:15 - 06:30	1.92	22:45 - 23:00	7.00	17:15 - 17:30	1.21	09:00 - 09:15	2.00
22-06-2022	06:30 - 06:45	2.32	22:30 - 22:45	7.50	13:45 - 14:00	1.11	13:00 - 13:15	2.95
23-06-2022	06:30 - 06:45	2.14	19:45 - 20:00	8.90	16:30 - 16:45	1.30	13:00 - 13:15	3.05
24-06-2022	07:00 - 07:15	1.54	00:00 - 00:15	12.00	15:00 - 15:15	1.05	09:00 - 09:15	3.56
25-06-2022	07:15 - 07:30	1.63	00:00 - 00:15	11.62	03:15 - 03:30	0.87	09:45 - 10:00	3.40
26-06-2022	06:30 - 06:45	1.83	00:00 - 00:15	9.00	15:15 - 15:30	0.90	13:00 - 13:15	2.06
27-06-2022	07:00 - 07:15	1.97	22:45 - 23:00	11.78	03:45 - 04:00	1.02	13:00 - 13:15	3.30
28-06-2022	21:00 - 21:15	1.83	00:00 - 00:15	12.00	18:00 - 18:15	1.17	09:30 - 09:45	3.40
29-06-2022	22:00 - 22:15	1.70	00:00 - 00:15	12.00	18:00 - 18:15	1.05	09:45 - 10:00	3.79
30-06-2022	07:00 - 07:15	1.75	22:15 - 22:30	8.50	02:30 - 02:45	0.78	08:30 - 08:45	1.99

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

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Annexure-VII**Sellers and Buyers in Day Ahead Market (DAM) in the month of June, 2022**

S. No.	Entity Name	Sell		Entity Name	Purchase	
		(MU)	Percent (%)		(MU)	Percent (%)
1.	Madhya Pradesh	353.25	8.41%	Andhra Pradesh	687.57	16.37
2.	Karnataka	345.59	8.23%	Uttar Pradesh	583.24	13.88
3.	Delhi	269.62	6.42%	Gujarat	424.86	10.11
4.	Raipur Energen	209.81	4.99%	Haryana	393.71	9.37%
5.	Jindal Power Ltd. Stg-II	192.12	4.57%	West Bengal	356.93	8.50%
6.	NVVN (SNA) - NEA	179.16	4.26%	Tamil Nadu	230.72	5.49%
7.	Sembcorp Gayatri	157.64	3.75%	Maharashtra	211.96	5.05%
8.	Bihar	149.00	3.55%	Punjab	207.31	4.93%
9.	Teesta -3	144.53	3.44%	Orissa	138.49	3.30%
10.	DB Power	130.02	3.09%	Rajasthan	119.74	2.85%
11.	Chhattisgarh	128.21	3.05%	Telangana	112.26	2.67%
12.	MB Power	121.23	2.89%	Assam	82.17	1.96%
13.	Essar Power MP Ltd	115.62	2.75%	ArcelorMittal	77.69	1.85%
14.	JITPL	115.15	2.74%	Madhya Pradesh	76.06	1.81%
15.	Maharashtra	110.61	2.63%	Uttarakhand	74.61	1.78%
16.	Kameng HEP	104.59	2.49%	Himachal Pradesh	51.06	1.22%
17.	Assam	93.43	2.22%	Daman & Diu -	43.69	1.04%
18.	Rajasthan	82.30	1.96%	Jharkhand	39.80	0.95%
19.	Tamilnadu	78.51	1.87%	Delhi	37.36	0.89%
20.	ACBIL	72.58	1.73%	NEA-NR	36.06	0.86%
21.	Uttar Pradesh	72.07	1.72%	Jorethang	35.88	0.85%
22.	Adani Power STG3	69.93	1.66%	Kerala	23.76	0.57%
23.	Raigarh Energy Ltd.	68.31	1.63%	Karnataka	22.68	0.54%
24.	West Bengal	61.72	1.47%	Chhattisgarh	20.74	0.49%
25.	Jaypee Nigrie	53.94	1.28%	JITPL	17.36	0.41%
26.	Telangana	46.96	1.12%	Railways	14.35	0.34%
27.	Arunachal Pradesh	41.22	0.98%	Chandigarh	10.60	0.25%
28.	Himachal Pradesh	39.81	0.95%	Unchahar-IV	8.85	0.21%
29.	Kerala	32.71	0.78%	Private Limited	8.66	0.21%
30.	Maruti Clean Coal Power	31.81	0.76%	Tripura	7.54	0.18%
31.	Andhra Pradesh	29.61	0.70%	Renew Solar Urja	6.97	0.17%
32.	Goa WR	28.99	0.69%	Bihar	6.95	0.17%
33.	Jindal Power	28.62	0.68%	Sainj HEP	5.48	0.13%
34.	Adhunik Power	28.48	0.68%	NTPL	3.08	0.07%
35.	RKM Power	28.40	0.68%	Talcher Stg-2	2.98	0.07%
36.	Karcham Wangtoo	28.24	0.67%	Kawas	2.75	0.07%
37.	Jharkhand	26.39	0.63%	Goa WR	2.66	0.06%
38.	NLC TPS-II	23.99	0.57%	Tehri	2.55	0.06%
39.	Sikkim	23.97	0.57%	Dadra & Nagar	2.15	0.05%
40.	NLC TPS-II Stg-2	20.00	0.48%	NLC	1.75	0.04%
41.	GMR Warora	17.27	0.41%	Goa SR	1.59	0.04%
42.	Saini HEP	17.19	0.41%	Rihand-III	1.52	0.04%
43.	DVC	17.01	0.40%	Daman & Diu	1.28	0.03%
44.	Gujarat	14.39	0.34%	BALCO 2	1.17	0.03%
45.	J&K	12.87	0.31%	Meghalaya	1.13	0.03%

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46.	Neyveli New Thermal	11.91	0.28%	Unchahar-II	0.53	0.01%
47.	Orissa	11.73	0.28%	NVVN (SNA) - NEA	0.52	0.01%
48.	Palatana	10.27	0.24%	Manipur	0.30	0.01%
49.	Chandigarh	9.05	0.22%	Adhunik Power	0.16	0.00%
50.	Coastal Gujrat Power	8.81	0.21%			
51.	Haryana	8.48	0.20%			
52.	Chuzachen	8.29	0.20%			
53.	AD Hydro	8.16	0.19%			
54.	Rihand-III	8.07	0.19%			
55.	GMR Kamalanga	6.98	0.17%			
56.	Mizoram	6.96	0.17%			
57.	NTPC Koldam HEP	6.85	0.16%			
58.	Vindhyachal stg-4	6.57	0.16%			
59.	Nagaland	5.38	0.13%			
60.	Shree Cement	5.06	0.12%			
61.	Singrauli	4.79	0.11%			
62.	KSK Mahanadi	4.77	0.11%			
63.	Lanco Budhil	3.78	0.09%			
64.	Uttarakhand	3.49	0.08%			
65.	Dikchu	3.21	0.08%			
66.	Singoli Bhagwati	3.18	0.08%			
67.	Costal Energen	3.14	0.07%			
68.	Koteshwar HEP	3.02	0.07%			
69.	IL&FS	2.84	0.07%			
70.	Sembcorp Energy India	2.65	0.06%			
71.	Adani Hybrid Energy	2.02	0.05%			
72.	Renew Surya Ravi Private	1.73	0.04%			
73.	Simhadri Stg-2	1.73	0.04%			
74.	Kahalgao	1.70	0.04%			
75.	Sorang HEP, (Himachal	1.51	0.04%			
76.	Meghalaya	1.48	0.04%			
77.	TRN Energy	1.43	0.03%			
78.	Adani Hybrid Energy	1.38	0.03%			
79.	NTPL	1.27	0.03%			
80.	Goa SR	1.27	0.03%			
81.	Adani Wind Energy Kutchh Five Limited	1.14	0.03%			
82.	Adani Hybrid Energy	0.87	0.02%			
83.	Ostro Energy Private Limited (OEPL)	0.86	0.02%			
84.	NTPC Simhadri 25 MW Solar Project	0.78	0.02%			
85.	Dhariwal	0.77	0.02%			
86.	Sasan UMPP	0.75	0.02%			
87.	Punjab	0.64	0.02%			
88.	Adani Green Energy Nineteen Limited	0.61	0.01%			
89.	Manipur	0.58	0.01%			
90.	Ramagundam Floating	0.49	0.01%			
91.	Torrent Power	0.44	0.01%			
Total Volume of top 10		2,130.7	50.72	Total Volume of top	3,354.5	79.85
Total Volume in PXs		4,201.1		Total Volume in PXs	4,201.1	

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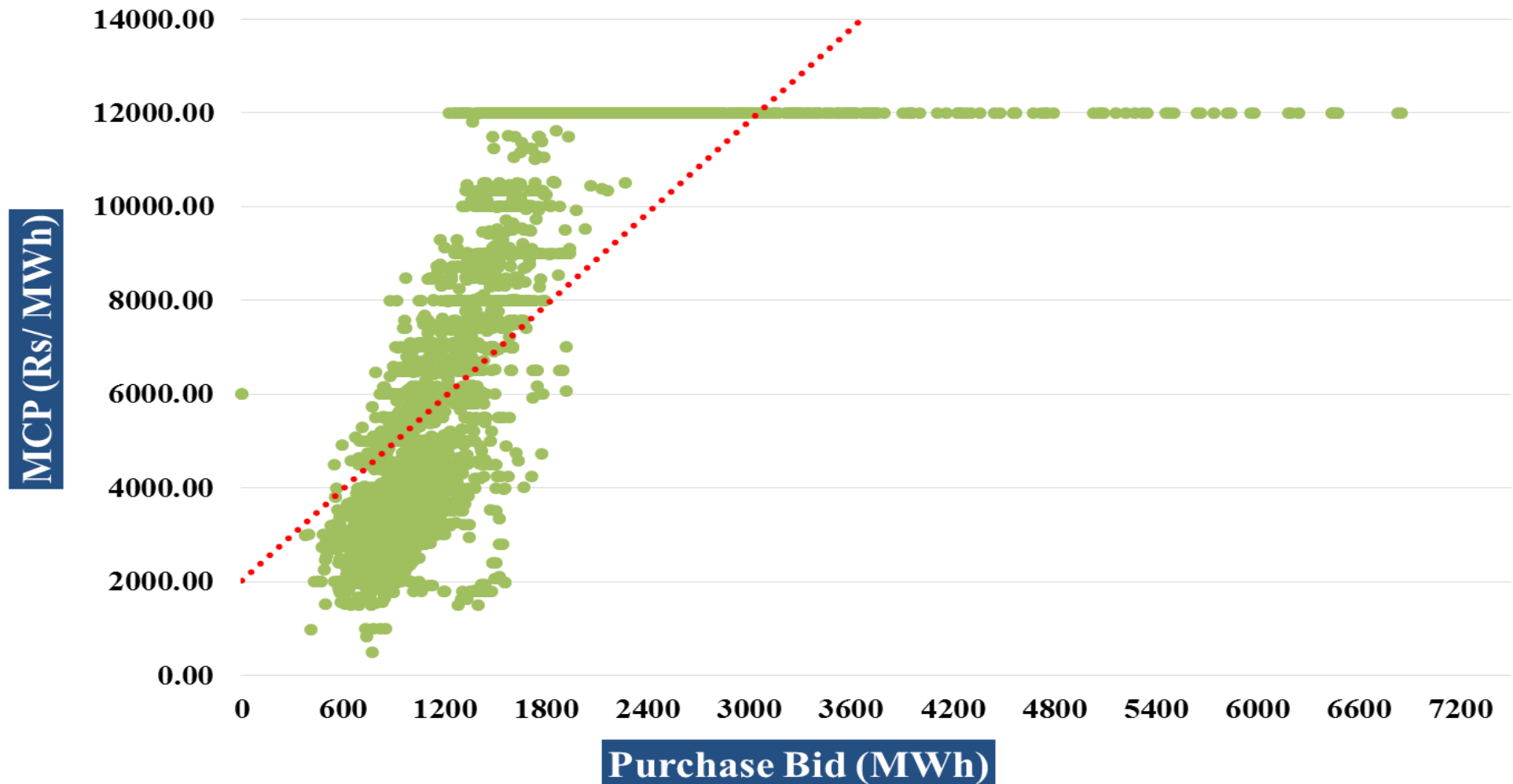
Annexure-VIII**Evening, Day, Night, Morning, Maximum, Minimum, Average MCP (Rs/kWh) and Final Scheduled Volume (MU) in RTM**

Date	Morning MCP (07:00-10:00)	Day MCP (11:00- 17:00)	Evening MCP (18:00- 23:00)	Night MCP (01:00- 06:00, 23:00-24:00)	Maximum MCP	Minimum MCP	Average MCP	Final Scheduled Volume (MU)
01-06-2022	3.60	4.92	9.08	9.62	12.00	1.51	7.11	72.87
02-06-2022	4.40	7.68	10.46	9.41	12.00	2.94	8.33	58.20
03-06-2022	4.86	6.13	10.62	8.76	12.00	0.98	7.81	64.22
04-06-2022	5.16	6.42	11.48	11.06	12.00	2.00	8.70	62.26
05-06-2022	4.67	4.75	9.08	11.92	12.00	2.00	7.91	61.17
06-06-2022	3.67	4.93	10.51	9.46	12.00	1.51	7.44	64.57
07-06-2022	4.14	4.36	8.58	8.56	12.00	1.67	6.60	61.38
08-06-2022	4.43	4.33	9.18	8.92	12.00	1.00	6.90	66.50
09-06-2022	3.74	4.69	7.38	7.52	12.00	0.82	6.03	72.53
10-06-2022	6.09	6.40	9.69	10.79	12.00	2.67	8.45	77.58
11-06-2022	6.01	5.82	7.17	9.68	12.00	2.30	7.32	87.05
12-06-2022	4.09	3.52	6.28	8.85	12.00	2.00	5.86	77.03
13-06-2022	7.18	9.88	11.02	9.49	12.00	5.00	9.60	79.95
14-06-2022	8.62	9.41	11.06	11.85	12.00	5.97	10.40	96.43
15-06-2022	5.42	4.02	9.05	10.92	12.00	2.19	7.52	95.33
16-06-2022	3.82	3.67	9.16	6.54	12.00	2.12	5.90	70.78
17-06-2022	3.45	3.17	5.28	7.17	12.00	2.20	4.91	83.38
18-06-2022	3.25	3.47	4.13	5.30	7.00	2.05	4.13	86.73
19-06-2022	2.66	2.26	3.10	3.73	6.00	0.50	2.96	77.88
20-06-2022	2.57	2.72	4.06	3.05	6.00	1.56	3.13	70.09
21-06-2022	2.64	3.14	4.86	3.16	6.50	1.56	3.49	57.36
22-06-2022	3.64	3.93	9.24	5.65	12.00	2.90	5.71	64.26
23-06-2022	5.84	4.24	8.41	8.48	12.00	2.91	6.78	64.82
24-06-2022	3.87	2.90	9.06	7.91	12.00	1.80	6.06	65.56
25-06-2022	4.17	3.24	8.41	8.41	12.00	1.97	6.20	76.31
26-06-2022	4.21	3.61	6.97	10.15	12.00	2.29	6.46	75.31
27-06-2022	7.39	6.93	11.69	9.96	12.00	3.24	9.08	73.97
28-06-2022	8.41	5.82	10.09	10.99	12.00	3.00	8.83	79.27
29-06-2022	3.04	3.59	4.94	4.06	7.57	1.55	3.97	79.24
30-06-2022	1.91	1.87	4.46	4.29	6.00	1.50	3.23	92.23
Maximum	8.62	9.88	11.69	11.92	12.00	5.97	10.40	96.43
Minimum	1.91	1.87	3.10	3.05	6.00	0.50	2.96	57.36
Average	4.57	4.73	8.15	8.19	10.90	2.19	6.56	73.81

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

Comparison of MCP w.r.t. Purchase Bid for 2,880 Time Blocks during the month of June, 2022 in RTM



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

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

Date	Max. FSV (MU)		Max. MCP (Rs/kWh)		Min FSV (MU)		Min. MCP (Rs/kWh)	
	Time Block	Value	Time Block	Value	Time Block	Value	Time Block	Value
01-06-2022	02:30 - 02:45	1.23	00:00 - 00:15	12.00	18:45 - 19:00	0.42	18:00 - 18:15	1.51
02-06-2022	13:30 - 13:45	0.93	00:00 - 00:15	12.00	19:30 - 19:45	0.24	08:45 - 09:00	2.94
03-06-2022	01:15 - 01:30	1.12	00:00 - 00:15	12.00	07:15 - 07:30	0.36	08:15 - 08:30	0.98
04-06-2022	05:00 - 05:15	1.03	00:00 - 00:15	12.00	20:30 - 20:45	0.24	08:45 - 09:00	2.00
05-06-2022	04:00 - 04:15	0.98	00:00 - 00:15	12.00	00:15 - 00:30	0.27	08:30 - 08:45	2.00
06-06-2022	03:15 - 03:30	1.00	00:00 - 00:15	12.00	09:30 - 09:45	0.42	08:15 - 08:30	1.51
07-06-2022	01:15 - 01:30	0.87	00:00 - 00:15	12.00	00:00 - 00:15	0.43	09:30 - 09:45	1.67
08-06-2022	06:00 - 06:15	0.90	00:00 - 00:15	12.00	17:15 - 17:30	0.40	08:45 - 09:00	1.00
09-06-2022	22:45 - 23:00	1.07	00:00 - 00:15	12.00	18:45 - 19:00	0.34	07:45 - 08:00	0.82
10-06-2022	06:30 - 06:45	1.12	00:00 - 00:15	12.00	07:45 - 08:00	0.42	08:45 - 09:00	2.67
11-06-2022	04:30 - 04:45	1.37	00:00 - 00:15	12.00	12:15 - 12:30	0.47	09:45 - 10:00	2.30
12-06-2022	00:45 - 01:00	1.14	22:15 - 22:30	12.00	08:45 - 09:00	0.51	18:00 - 18:15	2.00
13-06-2022	10:30 - 10:45	1.18	00:00 - 00:15	12.00	22:15 - 22:30	0.31	05:00 - 05:15	5.00
14-06-2022	17:00 - 17:15	1.48	00:00 - 00:15	12.00	00:15 - 00:30	0.46	09:00 - 09:15	5.97
15-06-2022	23:45 - 24:00	1.71	00:00 - 00:15	12.00	07:45 - 08:00	0.58	10:45 - 11:00	2.19
16-06-2022	00:15 - 00:30	1.51	00:00 - 00:15	12.00	16:45 - 17:00	0.48	11:30 - 11:45	2.12
17-06-2022	01:30 - 01:45	1.50	00:00 - 00:15	12.00	04:15 - 04:30	0.59	10:00 - 10:15	2.20
18-06-2022	22:30 - 22:45	1.40	23:15 - 23:30	7.00	07:15 - 07:30	0.61	18:15 - 18:30	2.05
19-06-2022	00:00 - 00:15	1.27	00:15 - 00:30	6.00	09:15 - 09:30	0.57	17:30 - 17:45	0.50
20-06-2022	14:45 - 15:00	1.02	19:15 - 19:30	6.00	05:45 - 06:00	0.35	04:30 - 04:45	1.56
21-06-2022	12:45 - 13:00	0.78	22:45 - 23:00	6.50	01:00 - 01:15	0.38	03:45 - 04:00	1.56
22-06-2022	18:15 - 18:30	1.09	19:45 - 20:00	12.00	02:15 - 02:30	0.38	07:45 - 08:00	2.90
23-06-2022	01:15 - 01:30	0.98	00:00 - 00:15	12.00	08:30 - 08:45	0.40	16:30 - 16:45	2.91
24-06-2022	15:00 - 15:15	0.97	00:00 - 00:15	12.00	03:15 - 03:30	0.43	12:45 - 13:00	1.80
25-06-2022	16:00 - 16:15	1.28	00:00 - 00:15	12.00	08:30 - 08:45	0.30	13:30 - 13:45	1.97
26-06-2022	02:45 - 03:00	1.13	00:00 - 00:15	12.00	00:00 - 00:15	0.51	11:15 - 11:30	2.29
27-06-2022	18:00 - 18:15	1.22	00:00 - 00:15	12.00	08:15 - 08:30	0.28	12:00 - 12:15	3.24
28-06-2022	19:00 - 19:15	1.25	00:00 - 00:15	12.00	10:15 - 10:30	0.48	13:00 - 13:15	3.00
29-06-2022	14:00 - 14:15	1.10	20:45 - 21:00	7.57	02:45 - 03:00	0.55	03:30 - 03:45	1.55
30-06-2022	15:45 - 16:00	1.52	21:15 - 21:30	6.00	04:15 - 04:30	0.49	13:00 - 13:15	1.50

MCP: Market Clearing Price (Rs/kWh)

FSV: Final Scheduled Volume (MU)

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Annexure-XI

Sellers and Buyers in Real Time Market (RTM) in the month of June, 2022						
	Entity Name	(MWh)	Percent (%)	Entity Name	(MWh)	Percent (%)
1.	Bihar	302.95	14.28%	Rajasthan	255.05	12.02%
2.	Madhya Pradesh	253.74	11.96%	Uttar Pradesh	230.60	10.87%
3.	Karnataka	182.96	8.62%	Telangana	219.44	10.34%
4.	Delhi	116.01	5.47%	Maharashtra	183.55	8.65%
5.	Kameng HEP	93.91	4.43%	Punjab	166.08	7.83%
6.	West Bengal	93.66	4.42%	Andhra Pradesh	165.61	7.81%
7.	Assam	82.15	3.87%	West Bengal	145.71	6.87%
8.	Andhra Pradesh	72.35	3.41%	Himachal Pradesh	128.45	6.05%
9.	Maharashtra	71.33	3.36%	Tamilnadu	106.19	5.01%
10.	J&K	68.85	3.25%	Haryana	104.63	4.93%
11.	Chhattisgarh	68.35	3.22%	Orissa	91.38	4.31%
12.	Tamilnadu	64.98	3.06%	Gujarat	71.60	3.38%
13.	Orissa	55.66	2.62%	Delhi	47.62	2.24%
14.	Telangana	44.20	2.08%	Assam	22.82	1.08%
15.	MB Power	40.45	1.91%	Kerala	22.48	1.06%
16.	Kerala	40.26	1.90%	Chhattisgarh	21.97	1.04%
17.	Coastal Gujrat Power	38.24	1.80%	ArcelorMittal Nippon	21.26	1.00%
18.	Punjab	33.86	1.60%	Bihar	18.00	0.85%
19.	Himachal Pradesh	32.91	1.55%	Madhya Pradesh	15.88	0.75%
20.	Rajasthan	32.67	1.54%	DVC	13.64	0.64%
21.	Teesta -3	27.25	1.28%	Daman & Diu - Dadra &	13.28	0.63%
22.	Jindal Power Ltd. Stg-II	22.00	1.04%	BALCO 2	12.85	0.61%
23.	Raipur Energen	20.86	0.98%	Manipur	9.10	0.43%
24.	Jharkhand	18.62	0.88%	Karnataka	6.13	0.29%
25.	RKM Power	14.62	0.69%	Tripura	5.85	0.28%
26.	Sembcorp Gayatri	14.39	0.68%	Meghalaya	5.30	0.25%
27.	Tripura	14.23	0.67%	Railways	5.02	0.24%
28.	Adani Power STG3	13.41	0.63%	Uttarakhand	4.07	0.19%
29.	Essar Power MP Ltd	12.07	0.57%	Jharkhand	2.80	0.13%
30.	Sikkim	11.48	0.54%	Chandigarh	1.27	0.06%
31.	Gujarat	8.47	0.40%	Arunachal Pradesh	1.18	0.06%
32.	Sasan UMPP	8.05	0.38%	Goa WR	1.06	0.05%
33.	DVC	7.98	0.38%	Sikkim	0.56	0.03%
34.	Goa WR	7.48	0.35%	Raipur Energen	0.54	0.03%
35.	Haryana	7.17	0.34%	ACBIL	0.24	0.01%
36.	Jindal Power	6.97	0.33%	Jindal Power Ltd. Stg-II	0.20	0.01%
37.	Sainj HEP	6.47	0.31%	Goa SR	0.04	0.00%
38.	Nagaland	6.23	0.29%			
39.	Arunachal Pradesh	6.04	0.28%			
40.	GMR Warora	6.03	0.28%			
41.	Singoli Bhagwati	5.97	0.28%			
42.	Uttar Pradesh	5.95	0.28%			
43.	Neyveli New Thermal	5.70	0.27%			

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44.	DB Power	5.13	0.24%			
45.	Karcham Wangtoo	4.84	0.23%			
46.	Meghalaya	4.67	0.22%			
47.	Sorang HEP, (Himachal	4.38	0.21%			
48.	JITPL	3.88	0.18%			
49.	AD Hydro	3.56	0.17%			
50.	NLC	3.36	0.16%			
51.	Raigarh Energy Ltd.	3.23	0.15%			
52.	Manipur	3.23	0.15%			
53.	Jorethang	3.03	0.14%			
54.	Tashiding HEP	2.56	0.12%			
55.	Adhunik Power	2.32	0.11%			
56.	Dikchu	2.21	0.10%			
57.	NLC TPS-II Stg-2	2.15	0.10%			
58.	Palatana	2.12	0.10%			
59.	Rihand-II	2.04	0.10%			
60.	NLC TPS-II Expn	1.86	0.09%			
61.	Ostro Energy Private	1.65	0.08%			
62.	Rihand-I	1.61	0.08%			
63.	NLC TPS-II	1.59	0.07%			
64.	Rihand-III	1.50	0.07%			
65.	ACBIL	1.35	0.06%			
66.	Daman & Diu - Dadra	1.28	0.06%			
67.	Shree Cement	1.27	0.06%			
68.	Uttarakhand	1.25	0.06%			
69.	Chandigarh	1.11	0.05%			
70.	Chuzachen	1.00	0.05%			
71.	IL&FS	0.94	0.04%			
72.	GMR Kamalanga	0.53	0.02%			
73.	Kahalgaon-II	0.52	0.02%			
74.	Sembcorp Energy India	0.52	0.02%			
75.	Maruti Clean Coal	0.38	0.02%			
76.	Lanco Budhil	0.38	0.02%			
77.	Unchahar-IV	0.28	0.01%			
78.	Mizoram	0.27	0.01%			
79.	Adani Hybrid Energy	0.25	0.01%			
80.	Tanda Stg-2	0.24	0.01%			
81.	Singrauli	0.21	0.01%			
82.	Dhariwal	0.19	0.01%			
83.	Sipat Stg-1	0.13	0.01%			
84.	Vindhyachal stg-4	0.12	0.01%			
85.	Korba	0.11	0.01%			
Total Volume of top 10		1,337.91	63.07%		1,705.30	80.39%
Total Volume in PXs		2,215.27		Total Volume in PXs	2,215.27	

Annexure-XII

Cross Border Electricity Transactions in Day Ahead Market (DAM) in IEX with Nepal and Bhutan during the month of June, 2022

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S. No	Delivery Date	Buy Volume By Nepal (MU)	Sell Volume by Bhutan (MU)
1	01-06-2022	1.38	0.00
2	02-06-2022	0.67	0.90
3	03-06-2022	0.74	0.90
4	04-06-2022	0.48	0.90
5	05-06-2022	0.67	4.26
6	06-06-2022	0.76	4.23
7	07-06-2022	0.80	4.50
8	08-06-2022	0.80	5.66
9	09-06-2022	0.82	6.83
10	10-06-2022	0.82	7.69
11	11-06-2022	0.74	8.64
12	12-06-2022	1.17	5.83
13	13-06-2022	1.04	7.75
14	14-06-2022	0.99	7.81
15	15-06-2022	0.91	5.68
16	16-06-2022	0.99	6.44
17	17-06-2022	1.05	6.44
18	18-06-2022	0.85	8.53
19	19--2022	1.31	6.67
20	20-06-2022	1.25	6.62
21	21-06-2022	1.23	6.55
22	22-06-2022	1.10	7.02
23	23-06-2022	1.16	7.06
24	24-06-2022	1.14	7.06
25	25-06-2022	0.99	8.41
26	26-06-2022	1.12	5.93
27	27-06-2022	1.12	7.09
28	28-06-2022	1.10	6.67
29	29-06-2022	0.87	7.65
30	30-06-2022	0.43	8.44
Total		28.49	178.19
		206.68	

∴ No transaction happened.

Note: *Cross Border Transactions of Electricity of 206.68 MU with Nepal happened during June, 2022 in IEX, which is included in DAM Volume of June, 2022 in IEX*

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.
13 Bid area 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 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 MCP** is the average of MCP of all 96 Time Blocks of the day during which transaction happened.
5. **Day-Ahead Market (DAM)** on the power exchanges are market for electricity where market participants purchase and sell electricity at financially binding day-ahead prices for the following day.
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 through Intra-Day Contracts, Day ahead contingency Contracts, Daily Contracts and Weekly Contracts for both solar and non-Solar Renewable Energy (RE) generation. GTAM is a market-based mechanism, where RE surplus and RE deficit States can trade RE Power and balance their RPO targets.
10. **Green Day Ahead Market (GDAM)** is based on the principles of current Term Ahead Market (TAM), where market participants purchase and sell electricity generated from renewable sources at financially binding day-ahead prices for the following day.

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11. **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.
12. **Real Time Market (RTM)** on the power exchanges is the market for electricity where market participants buy/ sell electricity on a half-hourly market and would commence with the end of the right to revision of schedule or declared capability and would end with gate closure. The auction sessions would be conducted every half an hour for the delivery of power for the duration of 30 minutes in two time blocks of 15 minutes each to commence from one hour after the closure of the RTM trading session.
13. **Term Ahead Market (TAM)** on the power exchanges is the market for electricity where market participants buy/sell electricity on a term basis ranging from 3 hours before actual despatch (i.e. intra-day) and up to 11 days in advance. There are 4 types of contracts in TAM, namely; Intra-day, Day Ahead Contingency, Daily and Weekly.