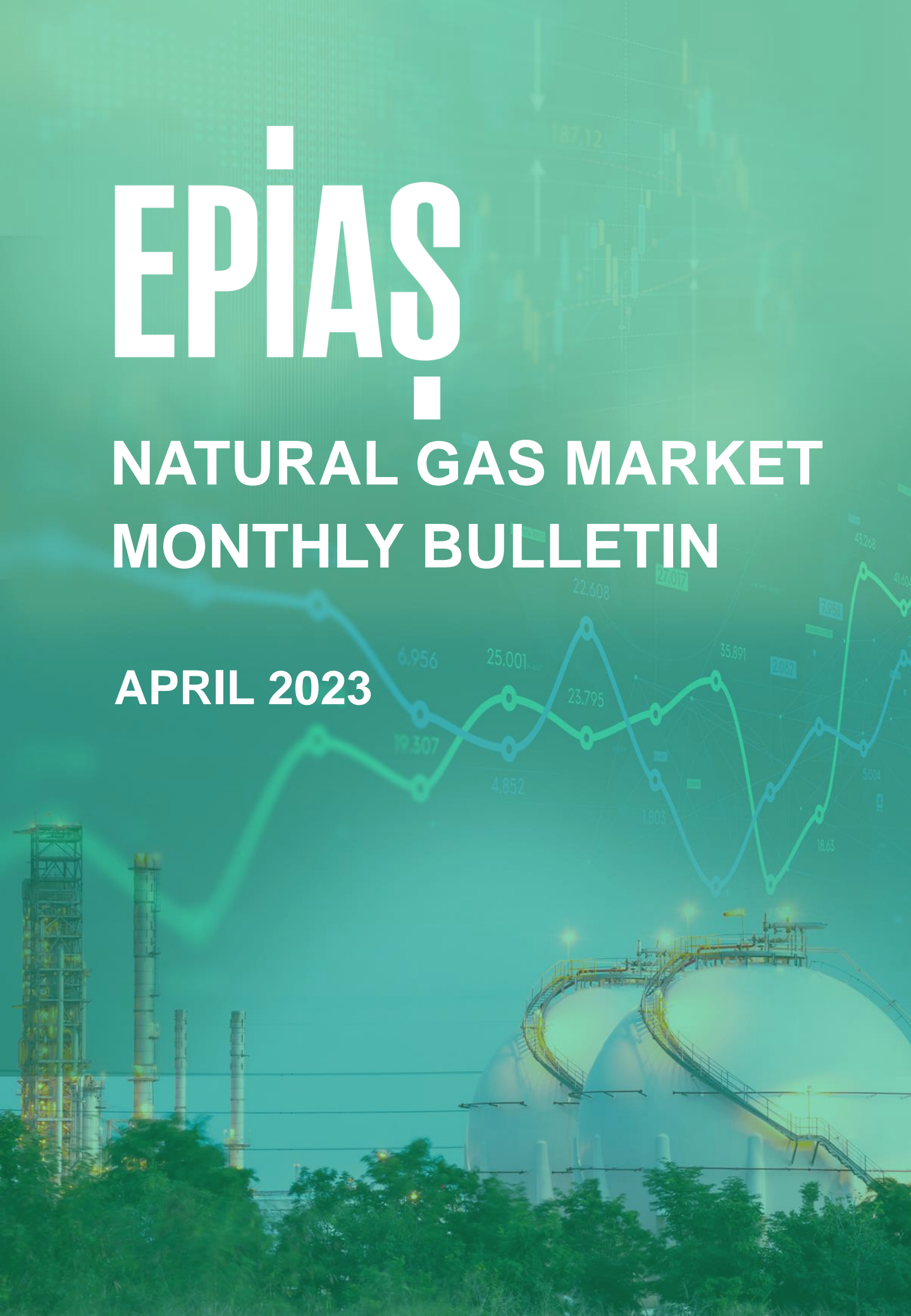


EPIAS

NATURAL GAS MARKET MONTHLY BULLETIN

APRIL 2023



SUMMARY DATA (1/2)

Arithmetic Means

| | April 2023 | March 2023 | Monthly Change | April 2022 | Annual Change |
|---|-------------------|------------|----------------|------------|---------------|
| Number of Ordered Participants | 10 | 9 | 13.7% | 10 | -3.0% |
| Number of Trades | 10 | 9 | 3.7% | 8 | 24.9% |
| Number of Orders | 27 | 20 | 30.8% | 22 | 18.3% |
| BGSP (TL/'000 Sm ³) | 8.641 | 8.900 | -2.9% | 11.507 | -24.9% |
| DRP (TL/'000 Sm ³) | 9.096 | 9.368 | -2.9% | 11.863 | -23.3% |
| BGPP (TL/'000 Sm ³) | 9.550 | 9.837 | -2.9% | 12.219 | -21.8% |
| Traded Volume (mio.Sm ³) | 3,07 | 3,46 | -11.2% | 7,21 | -57.4% |
| Transaction Volume (TL) | 27.907.253 | 32.510.596 | -14.2% | 85.519.923 | -67.4% |
| Gas Entry Volume (mio.Sm ³) | 138,49 | 164,70 | -15.9% | 138,12 | 0.3% |
| Gas Exit Volume (mio.Sm ³) | 138,23 | 164,65 | -16.0% | 139,50 | -0.9% |
| WRP (TL/'000 Sm ³) | - | - | - | - | - |

Maximum / Minimum Levels

| | April 2023 | | March 2023 | | April 2022 | |
|---|-------------------|------------------|------------|-----------|-------------|-----------|
| | Max | Min | Max | Min | Max | Min |
| Number of Trades | 17 | 4 | 17 | 5 | 23 | 2 |
| Number of Ordered Participants | 11 | 8 | 9 | 7 | 16 | 7 |
| Number of Orders | 40 | 18 | 32 | 11 | 56 | 11 |
| BGSP (TL/'000 Sm ³) | 8.925 | 8.332 | 9.606 | 8.147 | 11.629 | 11.325 |
| DRP (TL/'000 Sm ³) | 9.395 | 8.771 | 10.112 | 8.575 | 11.989 | 11.675 |
| BGPP (TL/'000 Sm ³) | 9.864 | 9.210 | 10.618 | 9.004 | 12.349 | 12.025 |
| Traded Volume (mio.Sm ³) | 7,30 | 0,33 | 8,71 | 0,41 | 26,14 | 0,11 |
| Transaction Volume (TL) | 68.131.145 | 2.942.230 | 87.135.590 | 3.580.428 | 309.033.795 | 1.238.500 |
| Gas Exit Volume (mio.Sm ³) | 186,52 | 93,23 | 205,10 | 123,74 | 171,95 | 106,78 |
| Gas Entry Volume (mio.Sm ³) | 183,58 | 101,95 | 201,55 | 123,85 | 170,53 | 103,14 |
| WRP (TL/'000 Sm ³) | 0 | 0 | 0 | 0 | 0 | 0 |

SUMMARY DATA (2/2)

Totals

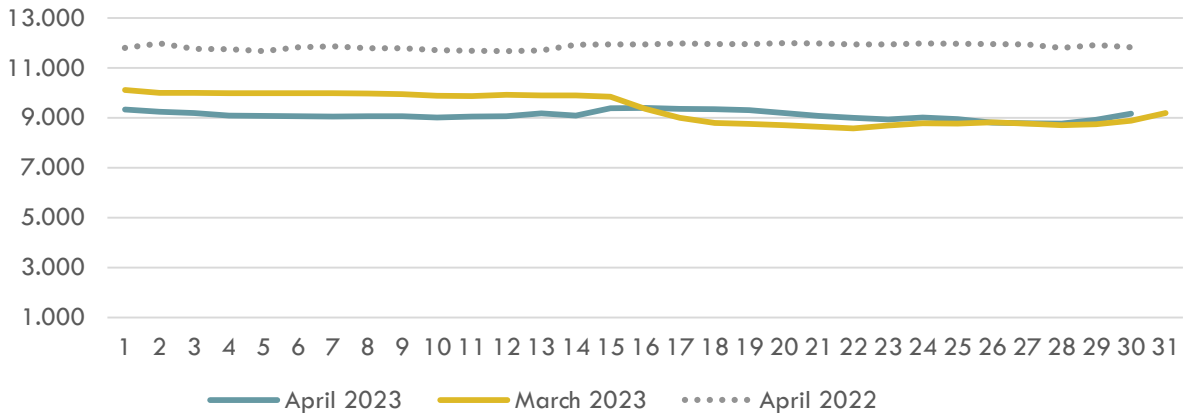
| | April 2023 | March 2023 | Monthly Change | April 2022 | Annual Change |
|---|-------------|---------------|----------------|---------------|---------------|
| Ratio of Natural Gas Based Generation to Total Electricity Generation (%) | 15 | 19 | -23.2% | 17 | -13.6% |
| Total Production of Natural Gas Based Power Plants (MWh) | 3.216.260 | 4.588.987 | -29.9% | 4.053.345 | -20.7% |
| Total Electricity Generation (MWh) | 22.119.278 | 24.225.271 | -8.7% | 24.092.170 | -8.2% |
| Number of Trades | 291 | 290 | 0.3% | 233 | 24.9% |
| Number of Orders | 796 | 629 | 26.6% | 673 | 18.3% |
| Traded Volume (mio.Sm ³) | 92,20 | 107,25 | -14.0% | 216,42 | -57.4% |
| Transaction Volume (TL) | 837.217.599 | 1.007.828.484 | -16.9% | 2.565.597.680 | -67.4% |
| Gas Entry Volume (mio.Sm ³) | 4.154,74 | 5.105,70 | -18.6% | 4.143,70 | 0.3% |
| Gas Exit Volume (mio.Sm ³) | 4.146,75 | 5.104,07 | -18.8% | 4.184,93 | -0.9% |

Brent Oil and TTF Prices

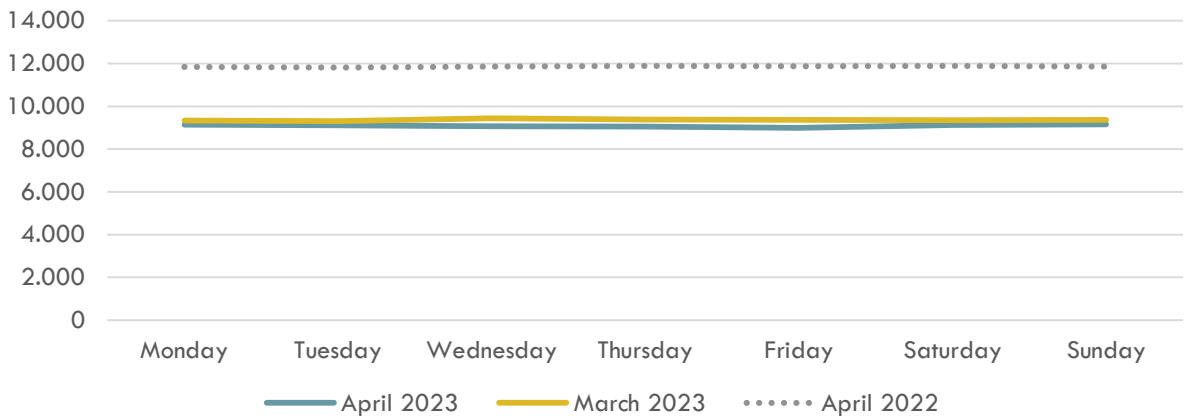
| | April 2023 | March 2023 | Monthly Change | April 2022 | Annual Change |
|------------------|------------|------------|----------------|------------|---------------|
| Brent Oil(\$/bl) | 83,37 | 79,21 | 5,25% | 105,92 | -21,29% |
| TTF (€/MWh) | 42,39 | 44,86 | -5,51% | 99,04 | -57,20% |

PRICES (1/2)

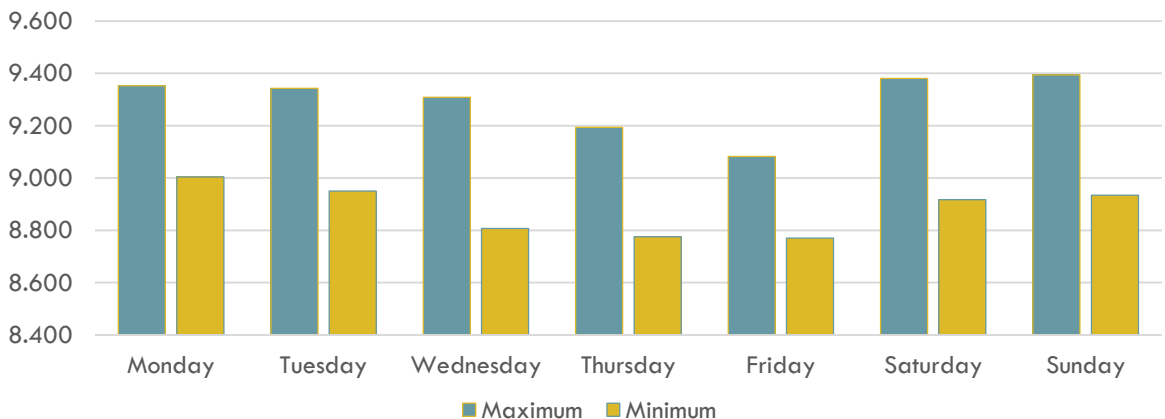
Natural Gas Market DRP (TL/'000 Sm³)



Natural Gas Market By Days DRP (TL/'000 Sm³)

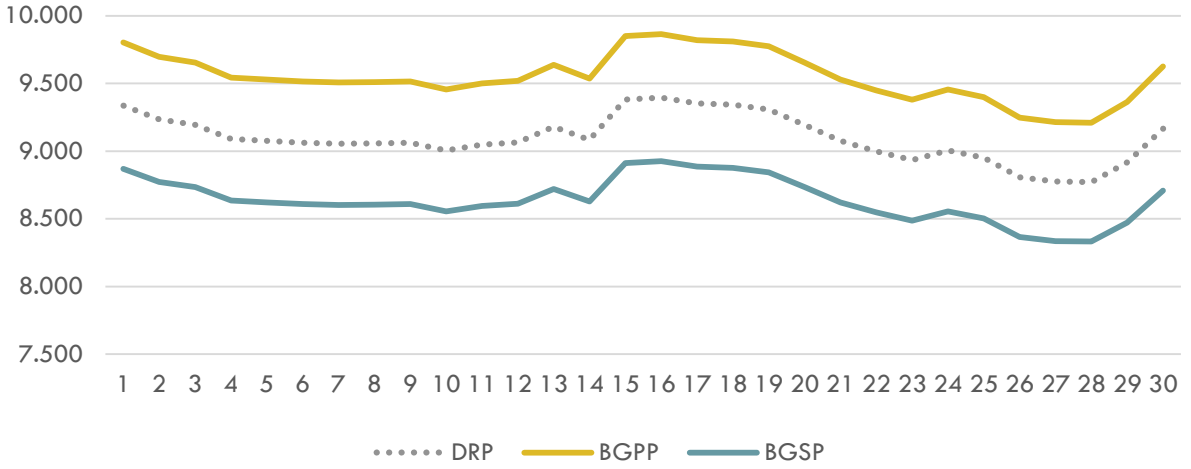


April 2023 Natural Gas Market By Days Max / Min DRP (TL/'000 Sm³)



PRICES (2/2)

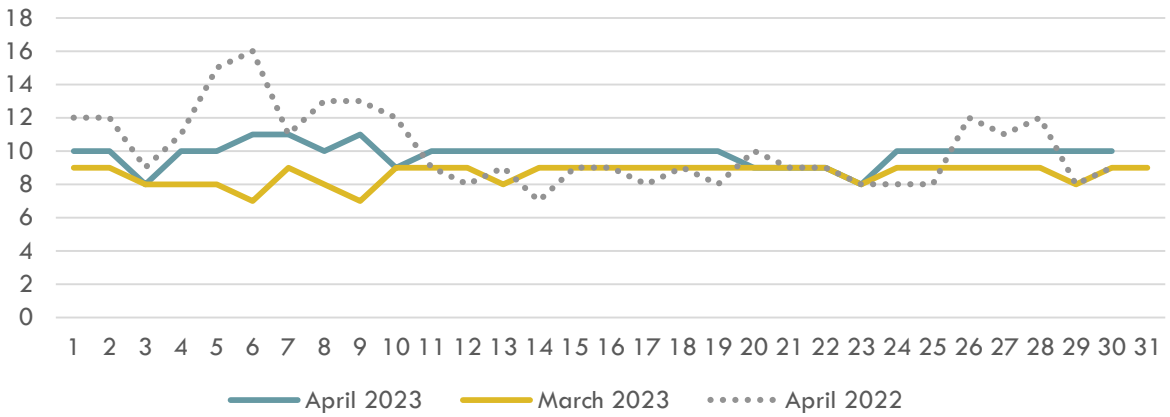
April 2023 DRP - BGPP - BGSP (TL/'000 Sm³)



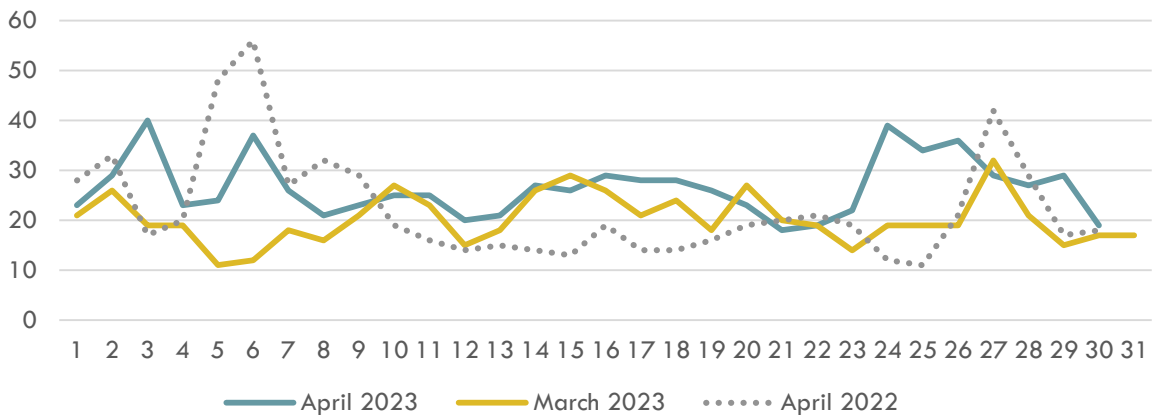
- ✓ The maximum DRP was 9.395 TL on 16 April 2023 Sun; the minimum DRP was realized at the level of 8.771 TL on 28 April 2023 Fri.
- ✓ The Maximum BGPP was 9.864 on 16 April 2023 Sun; the minimum BGPP was realized at the level of 9.210 TL on 28 April 2023 Fri.
- ✓ The maximum BGSP was 8.925 on 16 April 2023 Sun; the minimum BGSP was realized at the level of 8.332 TL on 28 April 2023 Fri.

ORDERS, TRADES, VOLUMES (1/3)

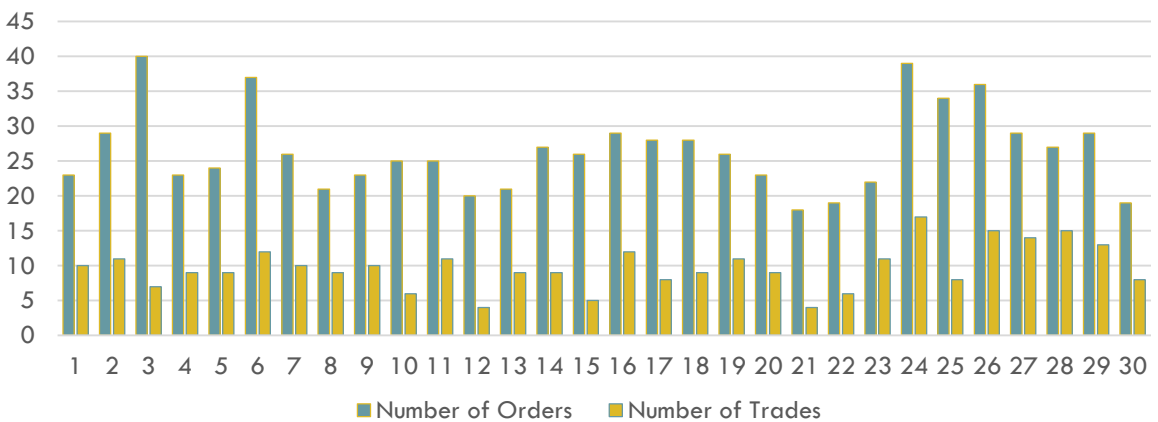
Natural Gas Market Number of Ordered Participants



Natural Gas Market Number of Orders

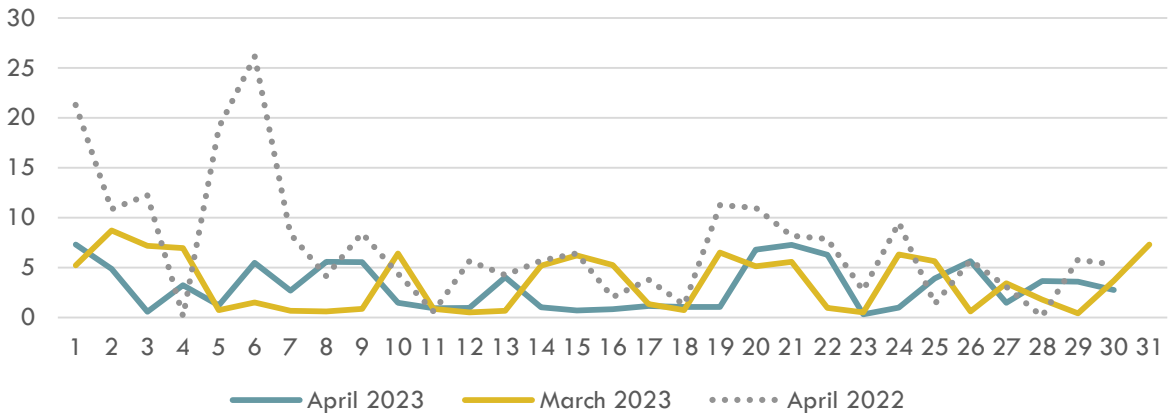


April 2023 Natural Gas Market Number of Orders and Trades

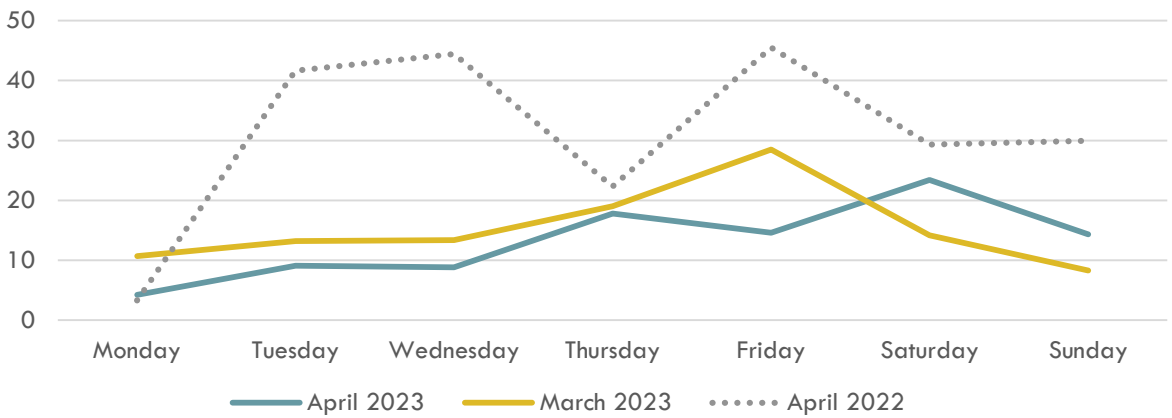


ORDERS, TRADES, VOLUMES (2/3)

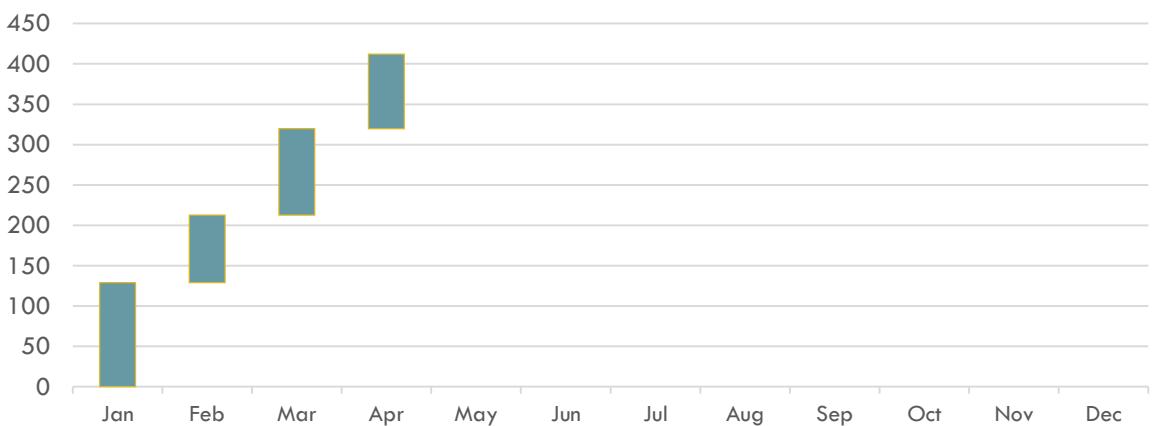
Natural Gas Market Trade Volume (mio.Sm³)



Natural Gas Market By Days Trade Volume (mio.Sm³)

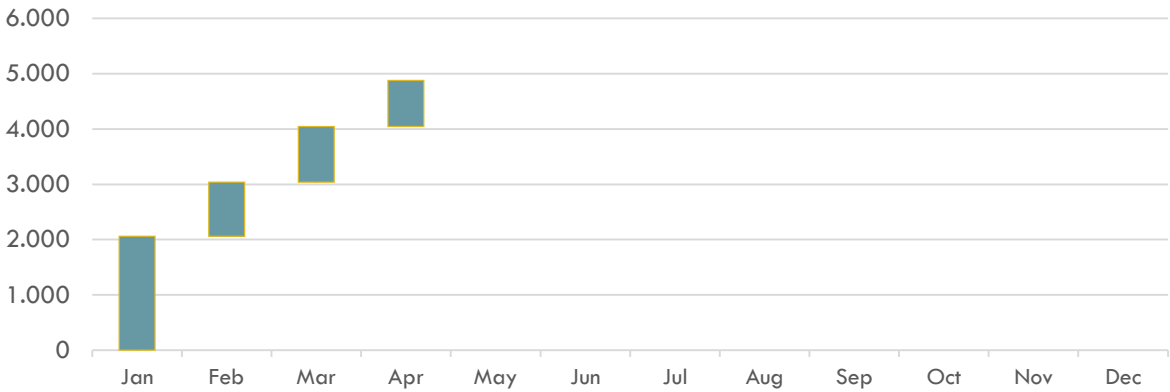


Natural Gas Market Annual Accumulated Trade Volume for 2023 (mio.Sm³)

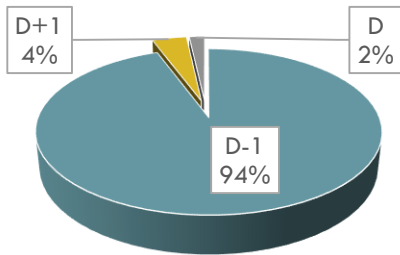


ORDERS, TRADES, VOLUMES (3/3)

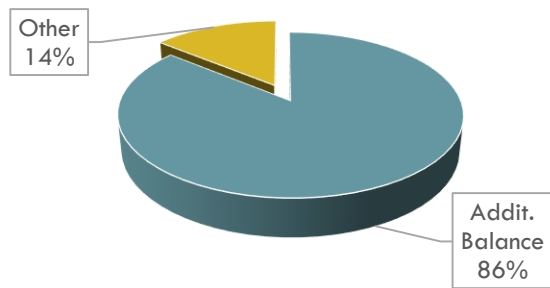
Natural Gas Market Annual Accumulated Transaction Volume for 2023 (Million TL)



Traded Volume of Daily Contracts for April 2023 Period by Sessions



Additional Balancing Traded Volume for April 2023 Period



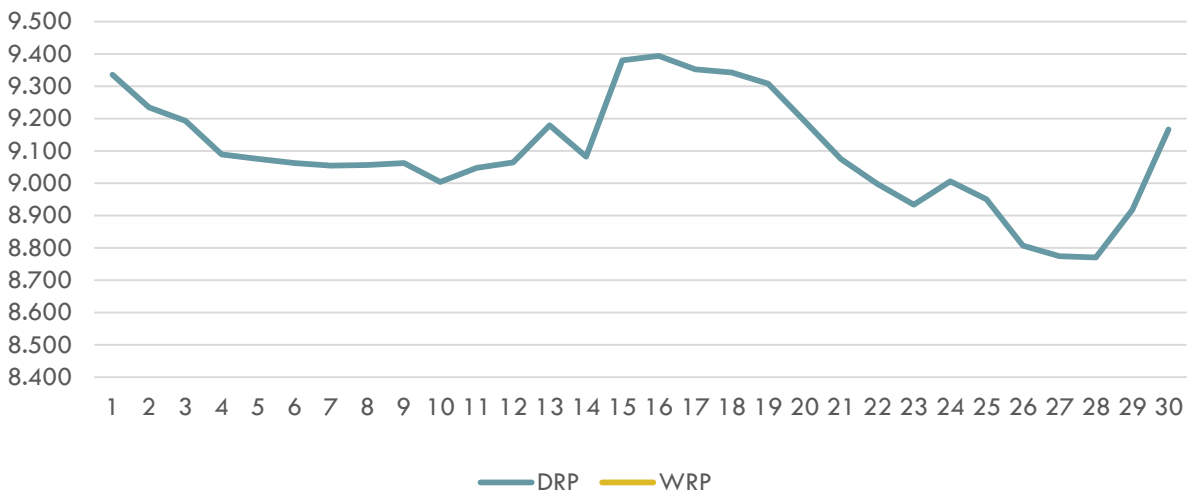
- ✓ The maximum total traded volume was 7.298 sm³ on 01 April 2023 Sat; the minimum total traded volume was realized at the level of 325 sm³ on 23 April 2023 Sun.
- ✓ The maximum total transaction volume was 68.131.145 TL on 01 April 2023 Sat; the minimum total transaction volume was realized at the level of 2.942.230 TL on 23 April 2023 Sun.
- ✓ The maximum d-1 traded volume was 7.274.000 sm³ on 21 April 2023 Fri; the minimum d-1 traded amount was realized at the level of 1.000 sm³ on 23 April 2023 Sun.
- ✓ The maximum d-1 traded volume was 66.610.790 TL on 01 April 2023 Sat; the minimum d-1 traded amount was realized at the level of 9.400 TL on 23 April 2023 Sun.
- ✓ The maximum d traded volume was 387.000 sm³ on 24 April 2023 Mon; the minimum d traded amount was realized at the level of 0 sm³ on 01 April 2023 Sat.
- ✓ The maximum d traded volume was 3.488.807 TL on 24 April 2023 Mon; the minimum d traded amount was realized at the level of 0 TL on 01 April 2023 Sat.
- ✓ The maximum d+1 traded volume was 460.000 sm³ on 30 April 2023 Sun; the minimum d+1 traded amount was realized at the level of 0 sm³ on 21 April 2023 Fri.
- ✓ The maximum d+1 traded volume was 4.215.759 TL on 30 April 2023 Sun; the minimum d+1 traded amount was realized at the level of 0 TL on 21 April 2023 Fri.
- ✓ The ratio of sgm compared to total consumption was realized at the level of 2,2% in April 2023.
- ✓ Sgm share in virtual trade was realized at 27,1% in April 2023.

WEEKLY PRODUCTS (1/2)

April 2023 WRP - WD - WE - WW (TL/'000 Sm³)

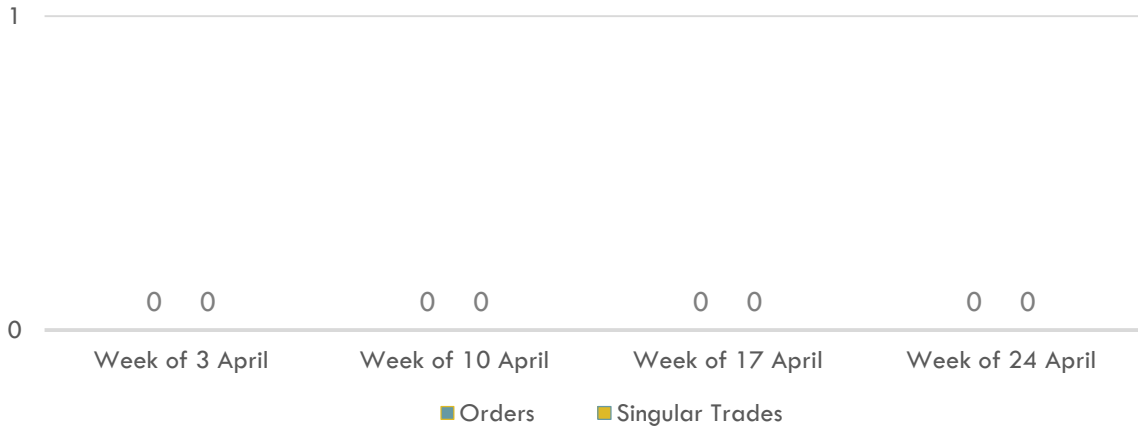


April 2023 DRP - WRP (TL/'000 Sm³)

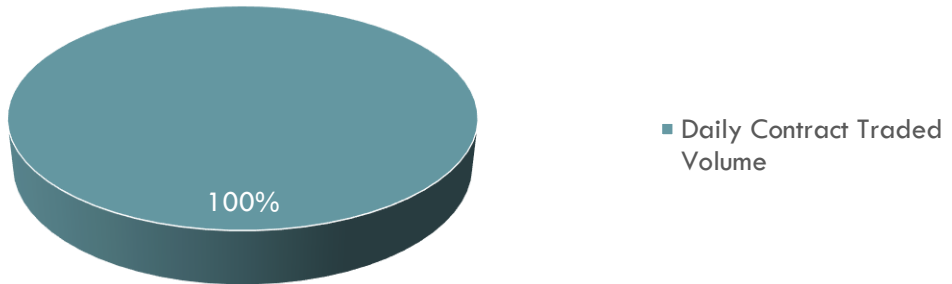


WEEKLY PRODUCTS (2/2)

April 2023 Weekly Products Number of Orders and Trades



April 2023 Traded Volume Distribution by Contract Type



SGM

Last 1 Year Trades

| Period | Traded Volume (mio.Sm ³) | Traded Amount (TL) |
|----------|--------------------------------------|--------------------|
| Apr 2022 | 216,42 | 1.565.597.680 |
| May 2022 | 144,42 | 1.116.289.688 |
| Jun 2022 | 136,23 | 1.412.791.812 |
| Jul 2022 | 114,06 | 1.161.807.407 |
| Aug 2022 | 137,21 | 1.642.536.310 |
| Sep 2022 | 61,47 | 812.459.966 |
| Oct 2022 | 136,33 | 1.370.215.904 |
| Nov 2022 | 80,68 | 840.078.378 |
| Dec 2022 | 29,45 | 570.471.982 |
| Jan 2023 | 128,85 | 1.259.193.549 |
| Feb 2023 | 83,64 | 976.852.724 |
| Mar 2023 | 107,25 | 1.007.828.484 |
| Apr 2023 | 92,20 | 837.217.599 |

SGM's share in Total Cons. and Virtual Trade

| Period | Total Consumption (%) | Virtual Trade (%) |
|----------|-----------------------|-------------------|
| Apr 2022 | 5,1% | 40,5% |
| May 2022 | 3,9% | 29,9% |
| Jun 2022 | 3,7% | 28,2% |
| Jul 2022 | 3,4% | 22,0% |
| Aug 2022 | 3,4% | 29,6% |
| Sep 2022 | 1,9% | 19,7% |
| Oct 2022 | 4,2% | 27,9% |
| Nov 2022 | 1,9% | 20,9% |
| Dec 2022 | 0,5% | 5,1% |
| Jan 2023 | 2,0% | 16,8% |
| Feb 2023 | 1,3% | 11,3% |
| Mar 2023 | 2,0% | 30,3% |
| Apr 2023 | 2,2% | 27,1% |

GAS FUTURES MARKET (1/1)

Daily Indicator Price For Contracts (TL)

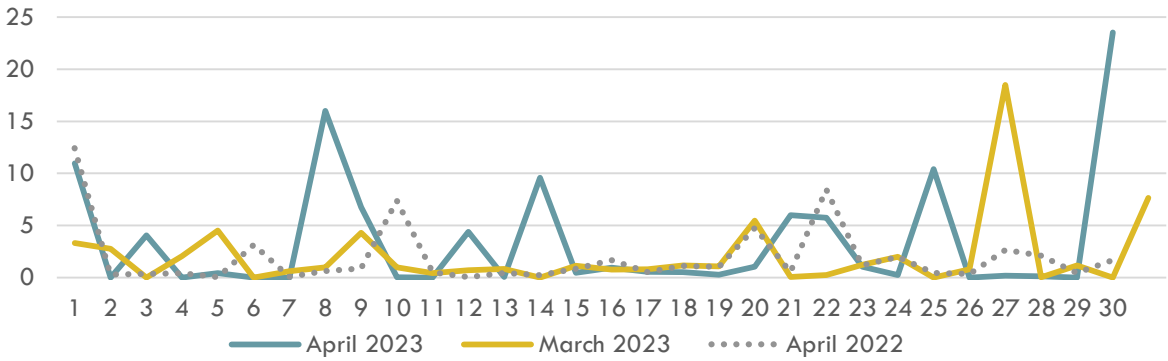
| Contract Name | Average Daily Indicator Price (TL) | Minimum Daily Indicator Price (TL) | Maximum Daily Indicator Price (TL) |
|---------------|------------------------------------|------------------------------------|------------------------------------|
| GM2305 | 20.090 | 20.090 | 20.090 |
| GM2306 | 20.625 | 20.625 | 20.625 |
| GM2307 | 19.015 | 19.015 | 19.015 |
| GM2308 | 19.257 | 19.257 | 19.257 |
| GM2309 | 20.225 | 20.225 | 20.225 |
| GM2310 | 20.371 | 20.371 | 20.371 |
| GM2311 | 26.069 | 26.069 | 26.069 |
| GM2312 | 16.429 | 16.429 | 16.429 |
| GM2401 | 21.094 | 21.094 | 21.094 |
| GM2402 | 19.244 | 19.244 | 19.244 |
| GM2403 | 23.432 | 23.432 | 23.432 |
| GM2404 | 13.823 | 13.823 | 13.823 |
| GM2405 | 12.804 | 12.804 | 12.804 |
| GQ2303 | 19.491 | 19.491 | 19.491 |
| GQ2304 | 20.901 | 20.901 | 20.901 |
| GQ2401 | 21.301 | 21.301 | 21.301 |
| GQ2402 | 14.137 | 14.137 | 14.137 |
| GY24 | 22.591 | 22.591 | 22.591 |

Traded Volumes (mio.Sm3) and Traded Amounts (TL) For Contracts

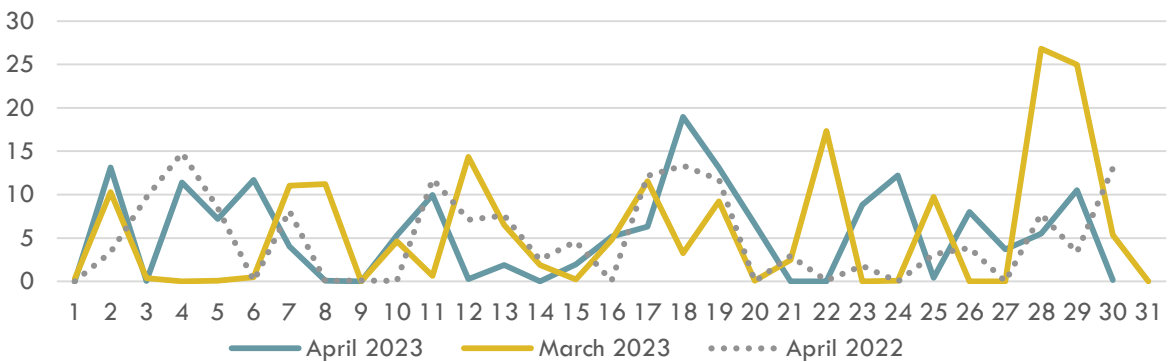
| Contract Name | Traded Volume (mio.Sm3) | Traded Amount (TL) | Average Price (TL) |
|---------------|-------------------------|--------------------|--------------------|
| - | - | - | - |

TRANSMISSION SYSTEM DATA (1/2)

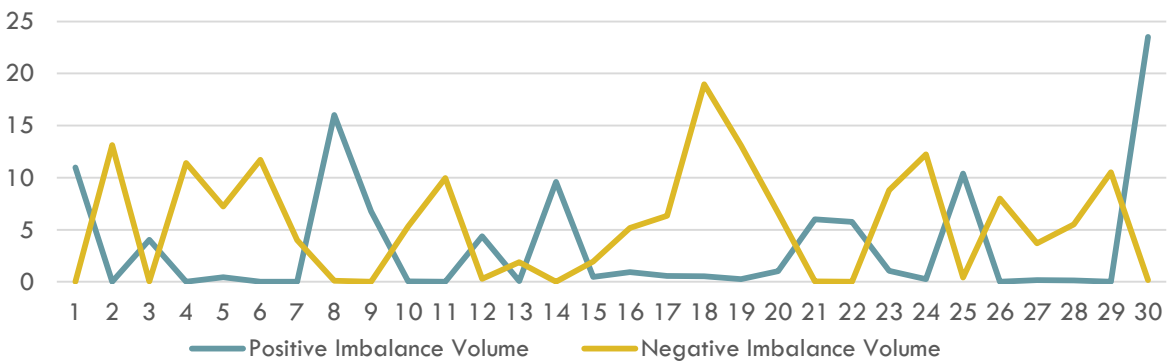
Natural Gas Market Positive Imbalance Volume (mio.Sm³)



Natural Gas Market Negative Imbalance Volume (mio.Sm³)



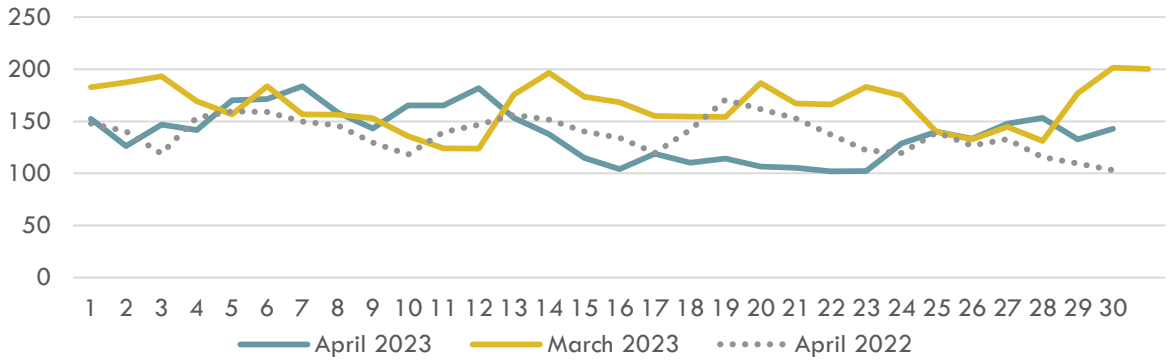
April 2023 Period Negative and Positive Imbalance Volume (mio.Sm³)



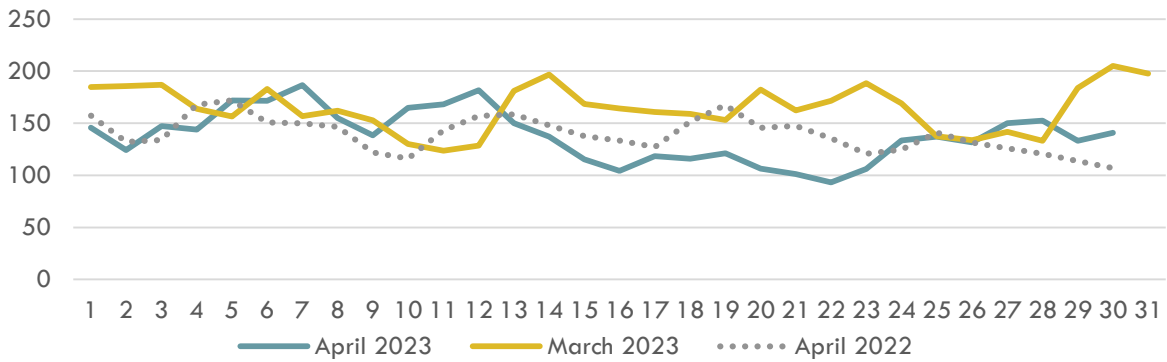
- ✓ The maximum positive imbalance volume was 23.528.448 sm³ on 30 April 2023 Sun; the minimum positive imbalance volume was realized at the level of 182 sm³ on 29 April 2023 Sat.
- ✓ The maximum negative imbalance volume was 18.976.884 sm³ on 18 April 2023 Tue; the minimum negative imbalance volume was realized at the level of 71 sm³ on 01 April 2023 Sat.

TRANSMISSION SYSTEM DATA (2/2)

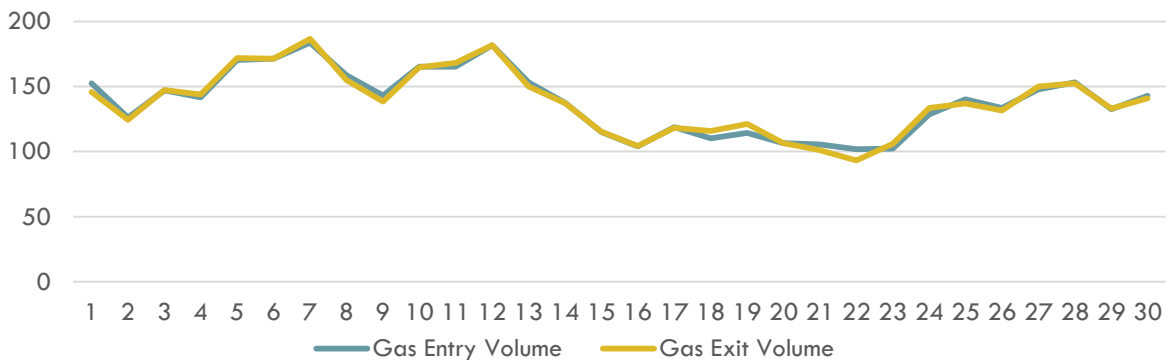
Natural Gas Market Gas Entry Volume (mio.Sm³)



Natural Gas Market Gas Exit Volume (mio.Sm³)



February 2021 Gas Entry and Exit Volume (mio.Sm³)



- ✓ Maximum gas entry volume realized on 07 April 2023 Fri was 183.575.716 sm³; minimum gas entry volume on 22 April 2023 Sat was 101.949.985 sm³ levels.
- ✓ Maximum gas exit volume realized on 07 April 2023 Fri was 186.522.996 sm³; minimum gas exit volume 22 April 2023 Sat was 93.234.067 sm³ levels.
- ✓ Maximum gas volume in stocks realized on 22 April 2023 Sat was 419.781.257 sm³; minimum stok gas volume 19 April 2023 Wed was 406.748.962 sm³ levels.

ADDITIONAL BALANCING TRANSACTIONS

Transactions with 1 Code

| Contract Day | Transaction Volume ('000 Sm ³) | WAP (TL/'000 Sm ³) | Direction |
|--------------|--|--------------------------------|-----------|
| 01.04.2023 | 7.030 | 9.336 | Purchase |
| 02.04.2023 | 4.636 | 9.236 | Purchase |
| 03.04.2023 | 321 | 9.195 | Purchase |
| 04.04.2023 | 2.838 | 9.090 | Purchase |
| 05.04.2023 | 607 | 9.060 | Purchase |
| 06.04.2023 | 5.077 | 9.061 | Purchase |
| 07.04.2023 | 2.267 | 9.056 | Purchase |
| 08.04.2023 | 5.144 | 9.056 | Purchase |
| 09.04.2023 | 5.214 | 9.062 | Purchase |
| 10.04.2023 | 1.370 | 9.004 | Purchase |
| 11.04.2023 | 523 | 9.015 | Purchase |
| 12.04.2023 | 713 | 9.045 | Purchase |
| 13.04.2023 | 3.579 | 9.177 | Purchase |
| 14.04.2023 | 681 | 9.080 | Purchase |
| 15.04.2023 | 309 | 9.349 | Purchase |
| 16.04.2023 | 353 | 9.400 | Purchase |
| 17.04.2023 | 724 | 9.348 | Purchase |
| 18.04.2023 | 532 | 9.335 | Purchase |
| 19.04.2023 | 203 | 9.325 | Purchase |
| 20.04.2023 | 6.171 | 9.194 | Purchase |
| 21.04.2023 | 7.080 | 9.075 | Purchase |
| 22.04.2023 | 6.083 | 8.996 | Purchase |
| 24.04.2023 | 219 | 8.990 | Purchase |
| 25.04.2023 | 3.763 | 8.947 | Purchase |
| 26.04.2023 | 4.957 | 8.800 | Purchase |
| 27.04.2023 | 688 | 8.745 | Purchase |
| 28.04.2023 | 3.015 | 8.734 | Purchase |
| 29.04.2023 | 2.928 | 8.904 | Purchase |
| 30.04.2023 | 2.178 | 9.163 | Purchase |

Transactions with 2 Code

| Contract Day | Transaction Volume ('000 Sm ³) | WAP (TL/'000 Sm ³) | Direction |
|--------------|--|--------------------------------|-----------|
| - | - | - | - |

Transactions with 3 Code

| Contract Day | Transaction Volume ('000 Sm ³) | WAP (TL/'000 Sm ³) | Direction |
|--------------|--|--------------------------------|-----------|
| - | - | - | - |

Transactions with 4 Code

| Contract Day | Transaction Volume ('000 Sm ³) | WAP (TL/'000 Sm ³) | Direction |
|--------------|--|--------------------------------|-----------|
| - | - | - | - |

- ✓ Additional balancing transactions with a maximum code of 1 were 7.080.000 sm³ on 21 April 2023 Fri; additional balancing transactions with a minimum code of 1 were realized at the level of 203.000 sm³ on 19 April 2023 Wed.
- ✓ In April, no additional balancing transaction code of 2 was realized.
- ✓ In April, no additional balancing transaction code of 3 was realized.
- ✓ In April, no additional balancing transaction code of 4 was realized.