



WEEKLY REVIEW

Weekly Events Review

One of the most important news of the week was the decision of the Sixth Administrative Court of Appeal to cancel the special permit of Ukrnaftoburinnia for the Sakhalin field. The court process lasted for years, but only now the State Geology and Subsoil Service of Ukraine managed to cancel its own order to issue a special permit and annul it through the court. Ukrnaftoburinnia is obliged to stop production at the Sakhalin field, but it can file a cassation appeal to the Supreme Court. According to ExPro estimates, Ukrnaftoburinnia produces about 45 mcm of natural gas per month and is among the top 3 private producers in Ukraine. Stopping production can be a complex process that will lead to the loss of

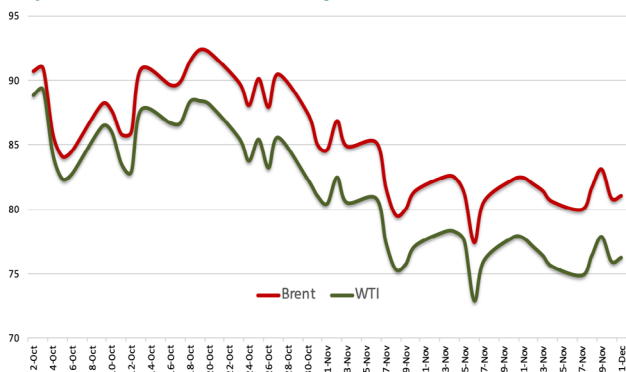
significant amounts of resources and man-made disaster.

Among the news of other private companies, it can be noted that Igor Kolomoisky's share in the British JKC Oil&Gas Limited was transferred to the management of the Crown. Since the beginning of the year, Ukgazvydobuvannya has drilled more than 300 thousand m, more than in previous years. It is 40% more than for the whole of last year. Thus, in November, Ukgazvydobuvannya drilled three high-throughput wells, thanks to which it was possible to increase the volume of natural gas production by 400 tcm per day. In total, UGV plans to drill more than 90 wells in 2023, which will be the largest indicator in the last 20 years.

Ukrnafta also overhauled a well at a depth of more than 4 kilometers and received more than 60 tcm of natural gas per day at one of the fields in eastern Ukraine.

The re-export of natural gas from the "customs warehouse" of Ukrainian UGS increased to 31.9 mcm at the beginning of December, the highest value in history. A total of 281.5 mcm of gas was re-exported from the "customs warehouse" in November, the most in the last two years. Since the beginning of November, companies began to export gas more actively from Ukrainian UGS to Europe against the background of growing gas consumption on the continent, as well as relatively high prices for natural gas.

Dynamics of Brent crude quotes (ICE Index), \$/bbl



Natural gas price Day Ahead (Open), NCG, €/MWh



Natural Gas Prices in Ukraine, UAH/tcm



UKRAINIAN NATURAL GAS MARKET OVERVIEW

Trade

In the last week of November, natural gas trading activity on the Ukrainian market gradually declined. By the end of the week, most buyers had already purchased the required volumes for December or the first half of the month. Also, production companies have sold their planned volumes of the December-booked resource.

Natural gas prices showed a slight increase at the beginning of the week, but then stabilized. During the week, there were slight fluctuations in domestic prices, but no significant changes.

Starting on Tuesday, sellers gradually raised prices for their own resource, which also contributed to a decline in trading activity, as buyers were not ready to buy gas at higher prices. On some days, Naftogaz Trading also did not buy natural gas on the exchange, as it could not find sellers at acceptable prices.

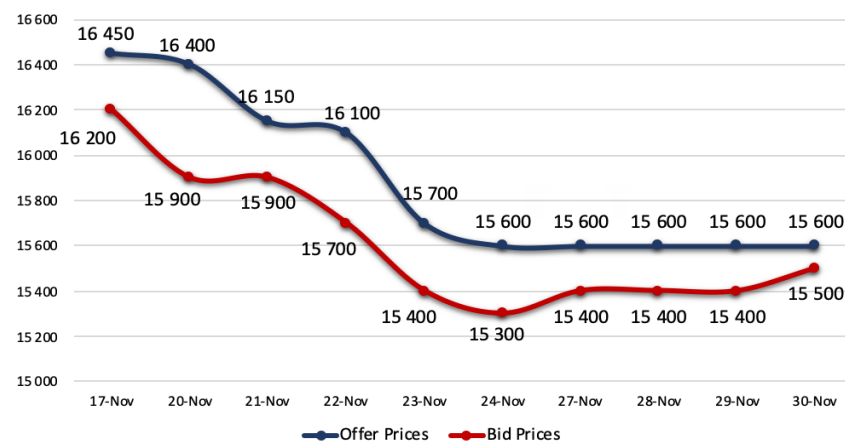
On Monday, the **November-booked resource** was traded at 15,400-15,700 UAH/tcm, during the week prices remained relatively stable and on the last day of trading amounted to 15,500-15,600 UAH/tcm. The November-booked resource trading volumes were at a minimum in the last days of the month.

At the beginning of the week, prices of the **UGS-booked resource** ranged from 15,380 to 15,570 UAH/tcm, and by the end of the week they had risen by about 50 UAH to 15,400-15,650 UAH/tcm. During the week, there were also proposals to exchange the UGS-booked resource for the December-booked resources, but there were almost no successful exchange deals. This is due to the greater demand for the December-booked storage than for the UGS-booked resource.

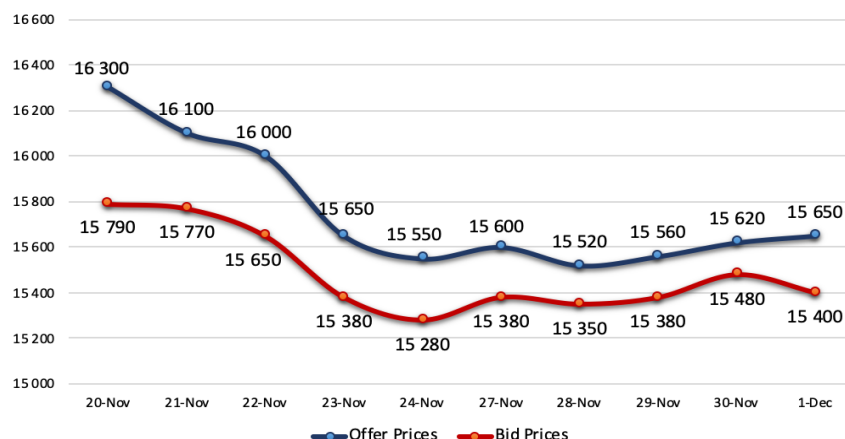
On Monday, the **December-booked resource** was traded at prices of 15,400-15,600 UAH/tcm, by the end of the week the price range for the December-booked resource expanded to 15,400-15,700 UAH/tcm on Friday. Market participants note that the offers of the December-booked resources on the market is quite limited. "We are looking for the December-booked resources, but sellers mostly offer the UGS-booked resource," said one trader.

Natural Gas Prices in Ukraine, UAH/tcm (with VAT)

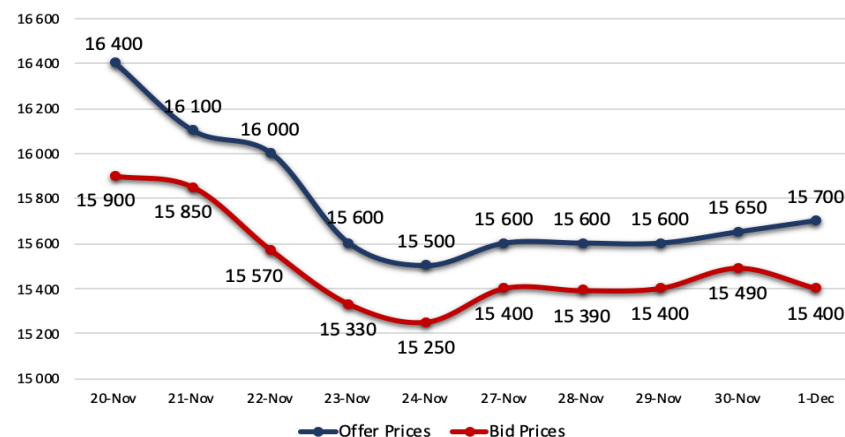
November booked resource



UGS booked resource



December booked resource



It is expected that in early December the Ukrainian gas market will be quiet again, and trading activity will be minimal. Natural gas prices may rise in the coming days amid the onset of winter and under the influence of sellers' behavior. As noted earlier, the behavior of sellers will be the key factor affecting prices on the domestic market by the end of the year.

Trades in natural gas on the Ukrainian Energy Commodities Exchanges

Natural gas exchange trading on the Ukrainian market during the reporting week remained active. During the week, 24.632 mcm of natural gas were sold on the Ukrainian Energy Exchange. All gas was sold at buyers' auctions.

The lion's share of gas was purchased by Gas Supply Company Naftogaz Trading LLC - 24.2 mcm. The company bought 13.8 mcm of the UGS-booked resource at a weighted average price of 12,882 UAH/tcm (without VAT) and 10.4 mcm of the December-booked resource at 12,831 UAH/tcm (without VAT).

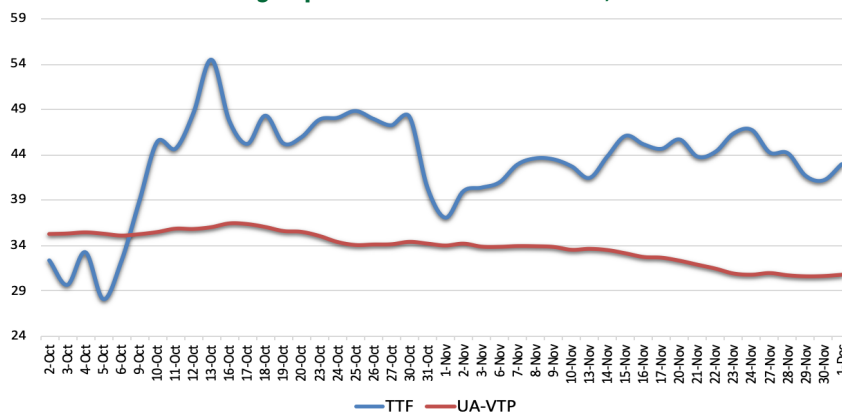
Gas trading activity at Naftogaz Trading auctions decreased compared to last week. On certain days, the company did not buy the resource. In total, over two weeks of trading, Naftogaz Trading purchased 149.9 mcm of natural gas on the exchange. One may remember that Naftogaz of Ukraine purchased 718.1 mcm of gas on the exchange in April-July.

Also, Kyivvodokanal JSC purchased 432 tcm of the December-booked resource with delivery to a commercial accounting node at 13,470 UAH/tcm (without VAT) on terms of post-payment until February 15, 2024.

Tenders on Prozorro e-procurement portal

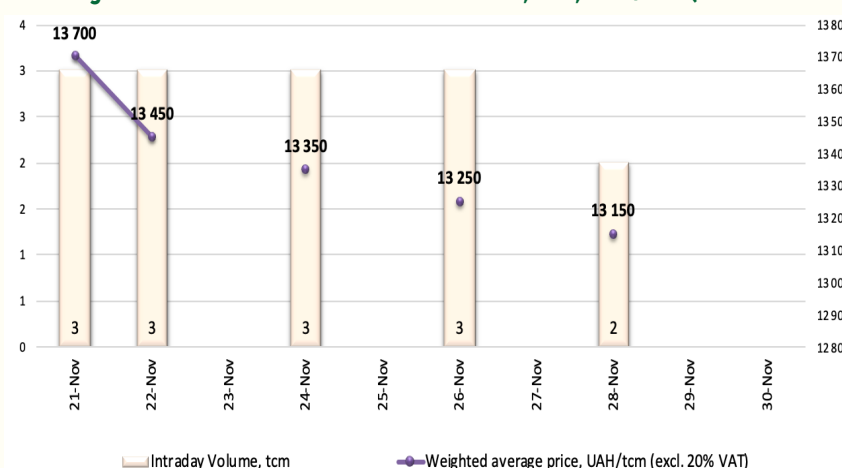
During the week at the Prozorro e-procurement portal were published 115 new tenders each of which is more than UAH 1 million for the purchase of 22.2 mcm of natural gas for the thresholded UAH 363 million (incl. 20% VAT). Expected prices fluctuated within 14,938 – 38,625 UAH/tcm, and the average price at about 16,309 UAH/tcm.

Natural gas prices in Ukraine and TTF, €/MWh



* For calculations, the price of gas on TTF Day Ahead (EEX data) is taken, and the price of gas in Ukraine is calculated as the average price for UA-VTP according to the Expro Natural gas Quotations data. The official UAH to € exchange rate from the NBU and a coefficient of 10.595 are used for the translation. This chart does not take into account the cost of delivering natural gas to the border of Ukraine, as well as the supplier's margin.

Natural gas trade on the UEEX short-term market, tcm, UAH/tcm (excl. 20% VAT)



Natural gas trade on the UEEX intraday market, tcm, UAH/tcm (excl. 20% VAT)



Auctions Held on Ukrainian Energy Exchange (UEEX) over the past week

Nº	Seller/buyer	Propo- sition	Gas	Auction date	Volume, tcm	Initial price, UAH/ tcm VAT excl.	Terms of payment	Realized volume, tcm	Purchase price, UAH/ tcm VAT excl.	Average price, UAH/ tcm VAT excl.
1	Nexttrade	selling	UGS (November)	27-Nov	100	13 340	Prepayment	-	-	-
2	Electro-gaz	selling	UGS (November)	27-Nov	10	15 000	Prepayment	-	-	-
3	PPC	selling	UGS (November)	27-Nov	500	15 167	Prepayment	-	-	-
4	Ukrnafta	selling	UGS (November)	27-Nov	258	15 000	Prepayment	-	-	-
5	Ukrnafta	selling	UGS (November)	27-Nov	22	15 000	Prepayment	-	-	-
6	Naftogaz Trading	purchase	December	27-Nov	4 000	12 852	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	400	12 828 - 12 840	12 837
7	Naftogaz Trading	purchase	December	27-Nov	4 000	12 852	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	1 500	12 840 - 12 852	12 844
8	Naftogaz Trading	purchase	UGS (December)	27-Nov	1 000	12 852	Postpayments up to 5 days	200	12 840 - 12 852	12 846
9	PPC	selling	UGS (December)	28-Nov	500	15 167	Prepayment	-	-	-
10	Electro-gaz	selling	UGS (November)	28-Nov	50	15 000	Prepayment	-	-	-
11	Ukrnafta	selling	UGS (November)	28-Nov	258	15 000	Prepayment	-	-	-
12	Ukrnafta	selling	UGS (November)	28-Nov	22	15 000	Prepayment	-	-	-
13	Craft Energy	selling	December	28-Nov	1 000	13 583	Prepayment	-	-	-
14	Craft Energy	selling	UGS (November)	28-Nov	1 000	13 583	Prepayment	-	-	-
15	Craft Energy	selling	January	28-Nov	1 000	13 400	Prepayment	-	-	-
16	Naftogaz Trading	purchase	December	28-Nov	2 500	12 828	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	2 500	12 828	12 828
17	Naftogaz Trading	purchase	December	28-Nov	2 500	12 828	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	6 000	12 828	12 828
18	Naftogaz Trading	purchase	UGS (December)	28-Nov	2 500	12 828	Postpayments up to 5 days	2 500	12 828	12 828
19	Naftogaz Trading	purchase	UGS (December)	28-Nov	2 500	12 828	Postpayments up to 5 days	300	12 804	12 804
20	Energo Zbut Trans	purchase	UGS (December)	28-Nov	560	12 500	Prepayment	-	-	-
21	Ukrnafta	selling	UGS (December)	29-Nov	258	15 000	Prepayment	-	-	-
22	Ukrnafta	selling	UGS (December)	29-Nov	22	15 000	Prepayment	-	-	-
23	PPC	selling	December	29-Nov	500	15 167	Prepayment	-	-	-
24	Kyivvodokanal	purchase	December	29-Nov	432	17 250	Postpayment from Dec 1, 2023 to Feb 15, 2024	432	13 470	13 470
25	Naftogaz Trading	purchase	December	29-Nov	5 000	12 746	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	-	-	-
26	Naftogaz Trading	purchase	December	29-Nov	5 000	12 746	Decade payment	-	-	-
27	Naftogaz Trading	purchase	UGS (December)	29-Nov	5 000	12 846	Postpayments up to 5 days	-	-	-
28	Naftogaz Trading	purchase	UGS (December)	29-Nov	5 000	12 846	Postpayments up to 5 days	-	-	-
29	Energo Zbut Trans	purchase	UGS (December)	29-Nov	560	12 500	Prepayment	-	-	-
30	National Resources of Ukraine	selling	UGS (December)	30-Nov	100	15 000	Prepayment	-	-	-
31	Electro-gaz	selling	UGS (December)	30-Nov	50	15 000	Prepayment	-	-	-
32	Ukrnafta	selling	UGS (December)	30-Nov	258	15 000	Prepayment	-	-	-
33	Ukrnafta	selling	UGS (December)	30-Nov	22	15 000	Prepayment	-	-	-
34	National Resources of Ukraine	selling	UGS (December)	30-Nov	100	15 000	Prepayment	-	-	-
35	PPC	selling	UGS (December)	30-Nov	500	15 167	Prepayment	-	-	-
36	Naftogaz Trading	purchase	December	30-Nov	5 000	12 746	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	-	-	-
37	Naftogaz Trading	purchase	December	30-Nov	5 000	12 746	Decade payment	-	-	-
38	Naftogaz Trading	purchase	UGS (December)	30-Nov	5 000	12 846	Postpayments up to 5 days	-	-	-

Auctions Held on Ukrainian Energy Exchange (UEEX) over the past week

Nº	Seller/buyer	Propo- sition	Gas	Auction date	Volume, tcm	Initial price, UAH/ tcm VAT excl.	Terms of payment	Realized volume, tcm	Purchase price, UAH/ tcm VAT excl.	Average price, UAH/ tcm VAT excl.
39	Naftogaz Trading	purchase	UGS (December)	30-Nov	5 000	12 846	Postpayments up to 5 days	-	-	-
40	Craft Energy	selling	December	1-Dec	1 000	13 333	Prepayment	-	-	-
41	Craft Energy	selling	January	1-Dec	1 000	13 500	Prepayment	-	-	-
42	Craft Energy	selling	UGS (December)	1-Dec	1 000	13 100	Prepayment	-	-	-
43	Ukrnafta	selling	UGS (December)	1-Dec	258	15 000	Prepayment	-	-	-
44	Ukrnafta	selling	UGS (December)	1-Dec	22	15 000	Prepayment	-	-	-
45	PPC	selling	UGS (December)	1-Dec	500	15 167	Prepayment	-	-	-
46	Electro-gaz	selling	UGS (December)	1-Dec	50	15 000	Prepayment	-	-	-
47	Naftogaz Trading	purchase	December	1-Dec	5 000	12 814	Decade payment	-	-	-
48	Naftogaz Trading	purchase	December	1-Dec	5 000	12 814	25% - Dec 6, 50% - Dec 31, 25% - until Jan 15	-	-	-
49	Naftogaz Trading	purchase	UGS (December)	1-Dec	5 000	12 914	Postpayments up to 5 days	8 000	12 890 - 12 914	12 900
50	Naftogaz Trading	purchase	UGS (December)	1-Dec	5 000	12 914	Postpayments up to 5 days	2 400	12 890 - 12 914	12 902

The largest tender was announced by the Ostersk residential and operational part district for the purchase of 4 mcm of gas until April 15, 2024, at the price of 14,939 UAH/tcm, and a total threshold purchase value of UAH 59.7 million. The deadline for submitting tender proposals December 6 and the start of the auction December 7, 2023.

Also, the Prozorro e-procurement portal published results of 99 tenders for the procurement of 7.2 mcm of gas for UAH 115 million. Actual sale prices of those tenders ranged from 11,570 – 38,711 UAH/tcm, and the average price was at 15,984 UAH/tcm.

The largest volume of gas will be supplied by Naftogaz Trading LLC for the Lviv apartment-operating department – 1.78 mcm of gas at the price of 16,554 UAH/tcm. The purchase price is UAH 29.4 million. Gas supply is scheduled during April 15, 2024.

The lowest price of gas during last week on the Prozorro e-procurement portal by Naftogaz Trading LLC – 11,570 UAH/tcm. The highest price of gas by Naftogaz Ukraine LLC – 38,711 UAH/tcm.

The Naftogaz Trading LLC won the largest number of tenders. The company won 86 tenders for the supply of 5.3 mcm of gas at the price for the amount of UAH 86 million.

Customs clearance of natural gas

During October, 4 companies exported 10.9 mcm of natural gas from the "customs warehouse" of the Ukrainian UGS to Europe. EDF Trading exported the lion's share of gas to Slovakia – 10.625 mcm.

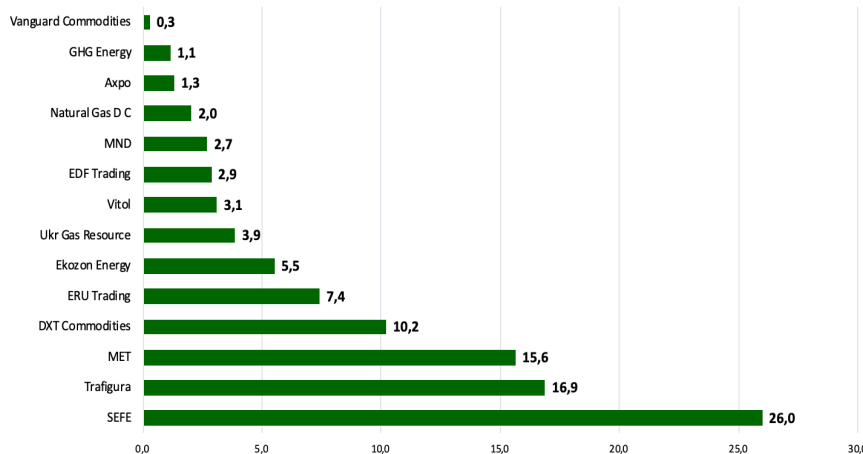
Also, Moldovan Energocom exported 188 tcm to Moldova in October, and Tradexpo-service exported 74 tcm to Moldova. In addition, EP Commodities exported 8 tcm of gas to Hungary.

Companies are actively declaring their intentions to export natural gas, which was injected into the "customs warehouse" of

the Ukrainian UGS in previous months. Thus, from December 2023 to March 2024, more than 30 companies plan to export natural gas from Ukrainian storages to Europe. The total volume exceeds 1.4 bcm of natural gas.

The volume of gas exports from the "customs warehouse" of the Ukrainian UGS is gradually increasing. In November, more than 280 mcm of natural gas have already been exported. Currently, it is not known which of these companies is exporting natural gas, but most companies plan to export gas by the end of this year.

Natural gas importers to Ukraine in October 2023, mcm



NATURAL GAS BALANCE

Natural gas import

Natural gas imports to Ukraine from Europe are almost non-existent. Only on Thursday, November 30, an import supply from Hungary with a volume of over 132 tcm was recorded. The gas is delivered directly to the Ukrainian gas transportation system, but there are no deliveries to the "customs warehouse" of the Ukrainian UGS.

In general, in November, Ukraine imported about 50.4 mcm of natural gas, 7 times less than in October. The main part of gas came from Hungary – 29.4 mcm or 58% of all deliveries, Poland – 10.6 mcm (21%) and Slovakia - 10.4 mcm (21%).

As predicted, gas imports remain at a minimal or non-existent level. Foreign companies have started re-exporting gas from the "customs warehouse" of Ukrainian UGS, so imports have stopped. Since the beginning of December, gas imports have also been absent. By the end of the year, no significant increase in import volumes is expected.

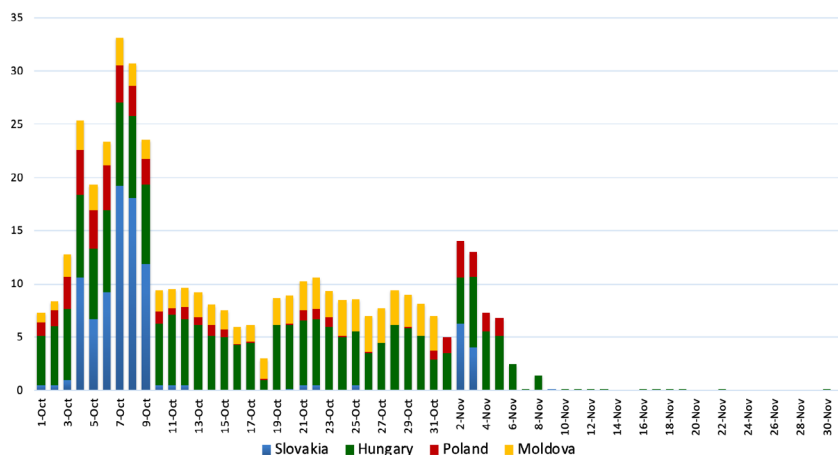
Natural gas export

Natural gas exports from the "customs warehouse" of Ukrainian UGS, unlike imports, continue to grow - up to 31.9 mcm on December 1, which became the highest level in the entire history of supplies.

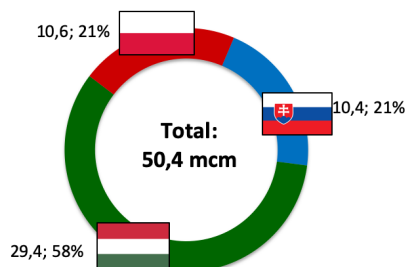
The volume of natural gas exports from the "customs warehouse" of Ukrainian UGS in November 2023 amounted to 281.5 mcm, according to ExPro calculations. Compared to October, export volumes increased 26 times. It is also the highest export level in the last two years - since December 2021. The main part of gas in November was exported to Poland - 142.5 mcm or 51% of all supplies, to Moldova - 85.8 mcm or 30%, to Slovakia - 51.6 mcm or 18.4% and to Hungary - 1.7 mcm or 0.6%.

As predicted, with the beginning of the second half of November, export volumes increased significantly. It is expected that in December, the volume of re-export of gas from the "customs warehouse" of the Ukrainian UGS may increase even more.

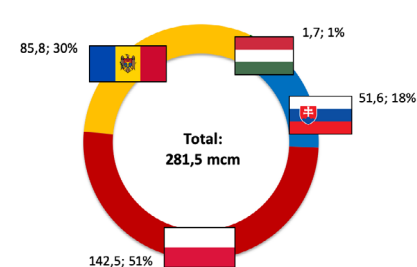
Natural Gas Import from EU to Ukraine, mcm



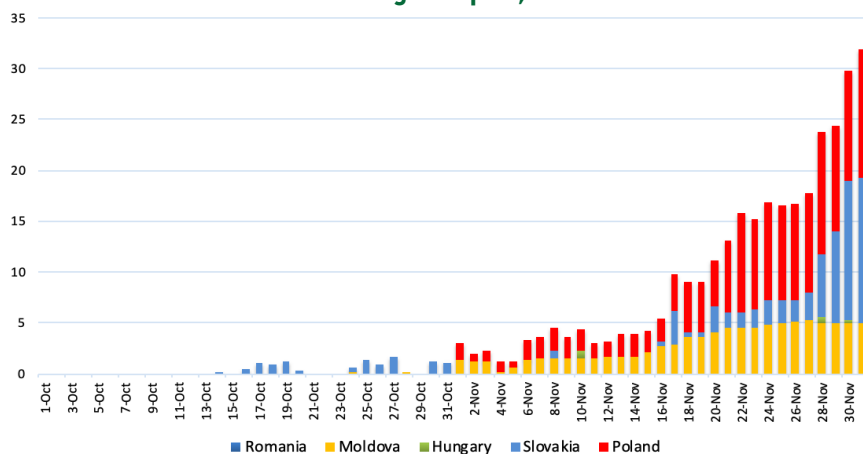
Natural gas import to Ukraine in November 2023, mcm, %



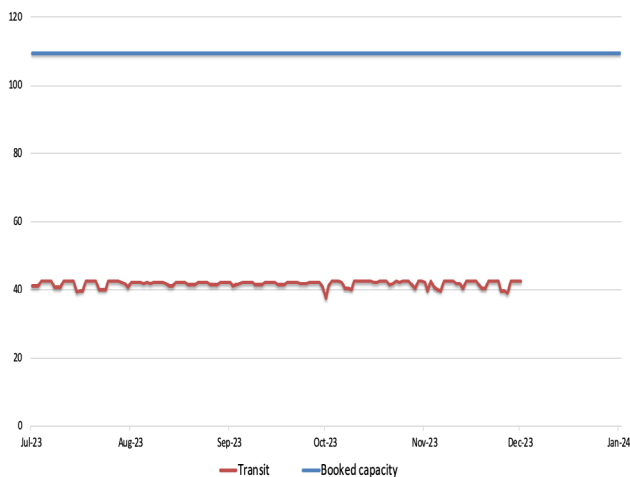
Natural gas exports from Customs warehouse of Ukrainian UGS in November 2023, mcm, %



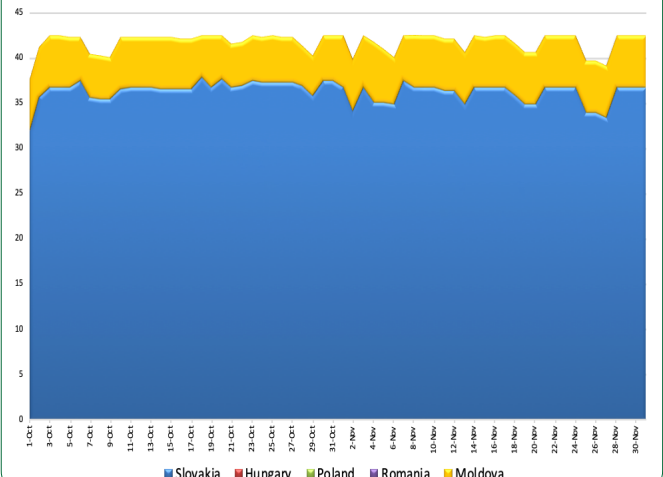
Natural gas export, mcm



Russian gas supplies through Ukraine, mcm



Transit of Natural Gas from Russia through Ukraine, mcm



Natural gas consumption

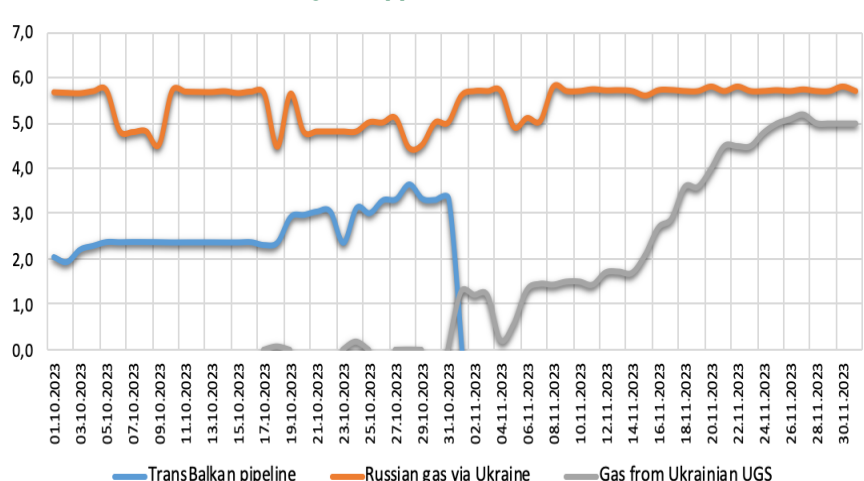
Natural gas consumption in Ukraine continues to grow - above 110 mcm in the last days of November, which is the highest level since February, according to ExPro calculations. The increase in the volume of gas consumption relates to the cooling in the territory of Ukraine. According to preliminary estimates by ExPro, gas consumption in November amounted to almost 2.5 bcm, 5% more than in November last year. For 11 months of 2023, gas consumption in Ukraine amounted to 17.85 bcm, 0.2% less than last year.

Ukrainian underground natural gas storages (UGS)

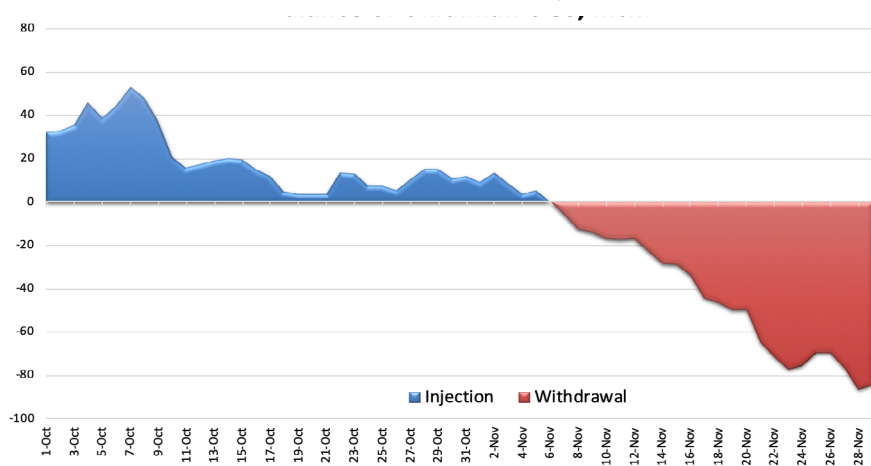
Natural gas reserves in Ukrainian underground gas storages fell below 15.61 bcm on November 29, according to ExPro calculations. Storages are 50.4% full. Compared to last year, 12% or 1.69 bcm more gas is stored in storage facilities.

This volume includes all gas in storage, including volumes of buffer gas, which at the end of last year was transferred from the category of active long-term storage gas to buffer gas - 554 mcm. However, the figures of Naftogaz and the Ministry of Energy do not include this volume. According to their data, as of November 29, about 15.05 bcm of gas were stored in Ukrainian gas storage facilities. Ukraine continues to withdraw gas from underground storages, which increased to 87 mcm on certain days (November 29). In general, since the beginning of the gas withdrawal season (November 7), about 1.065 bcm of natural gas have been withdrawn from UGS.

Natural gas supplies to Moldova, mcm



Balance of Ukrainian UGS, mcm



Part of the gas goes to cover domestic consumption, and part of it goes to re-export from the "customs warehouse". Re-export volumes are gradually increasing - up to 31.9 mcm on December 1, which is the highest level in history.

As of December 1, more than 3.02 bcm of natural gas are stored in the "customs warehouse" of the Ukrainian UGS. A significant part of the resource in the "customs warehouse" belongs to Naftogaz of Ukraine NJSC - almost 750 mcm, which the company imported in the period of August-October. It is expected that the volumes of gas withdrawal will continue to grow along with the growth of gas consumption and export volumes to Europe.

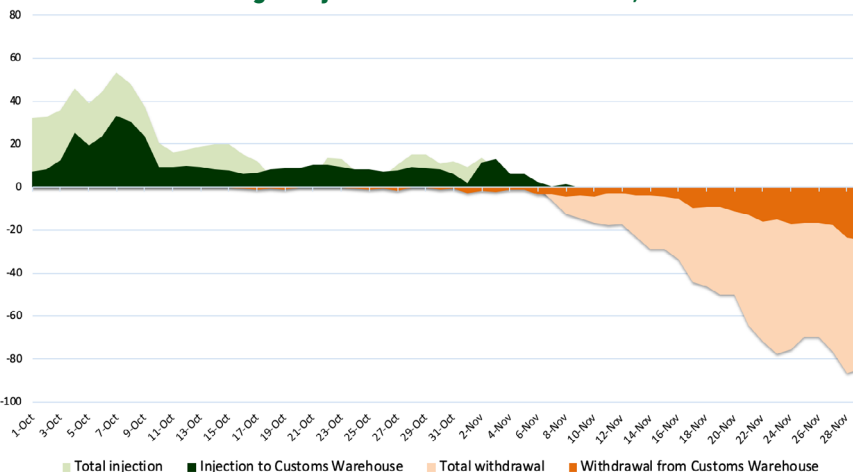
Russian gas transit

The transit of Russian gas through the Ukrainian GTS remains at 42.4 mcm per day. Russia transports gas through Ukraine to two countries: Slovakia and Moldova. In general, during November, Russia transported almost 1.25 bcm of natural gas through Ukraine, of which the main part went to Slovakia – almost 1.08 bcm, the rest to Moldova – more than 170 mcm.

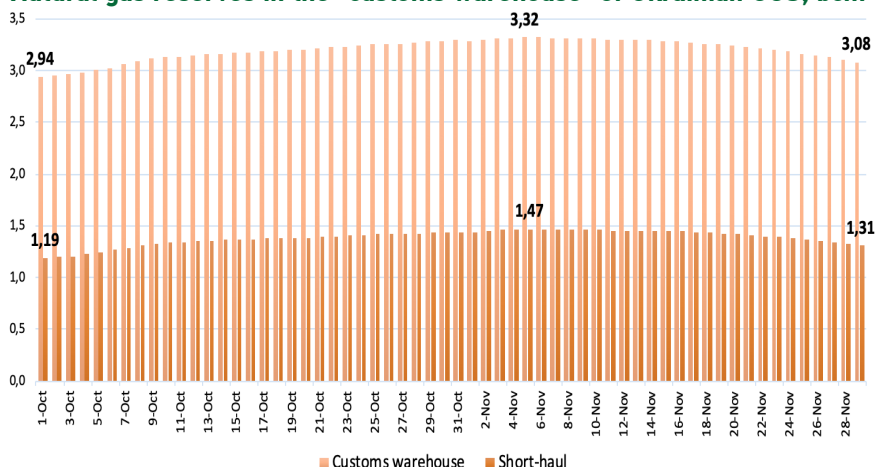
Natural gas supplies to Moldova

In November, Moldova has continued to receive resources from Russia through the Ukrainian gas transmission system and has also started importing gas from Ukrainian UGS. In November, Moldova imported more than 257 mcm of natural gas, of which 171 mcm came from Russia via Ukraine, and 86 mcm came from Ukrainian UGS.

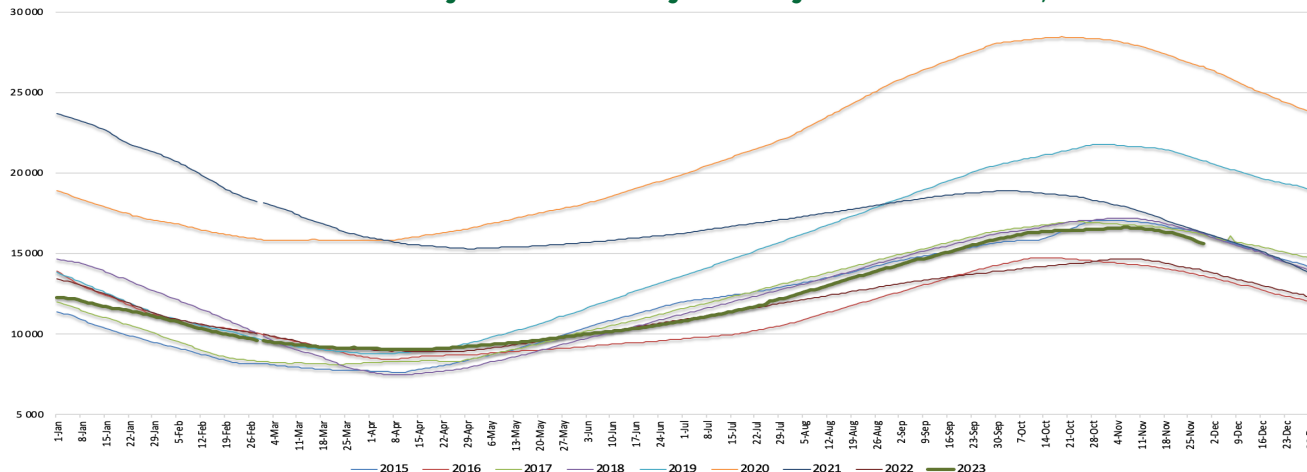
Natural gas injection into Ukrainian UGS, mcm



Natural gas reserves in the "customs warehouse" of Ukrainian UGS, bcm

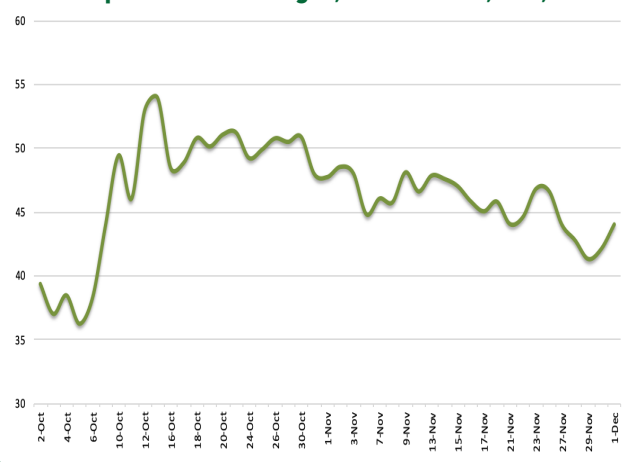


Inventories of natural gas in Ukrainian underground storage facilities in 2015-2023, mcm



WORLD GAS MARKET

Natural gas price Day Ahead (Open), TTF, €/MWh

Futures prices of natural gas, Front Month, TTF, €/MWh


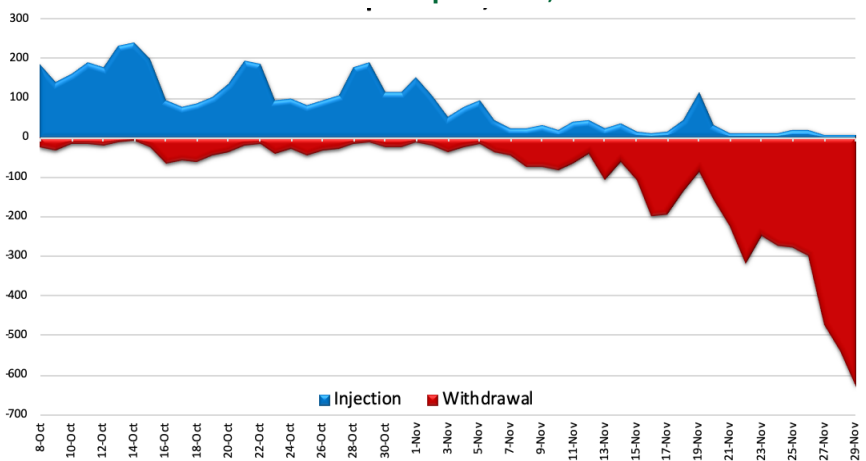
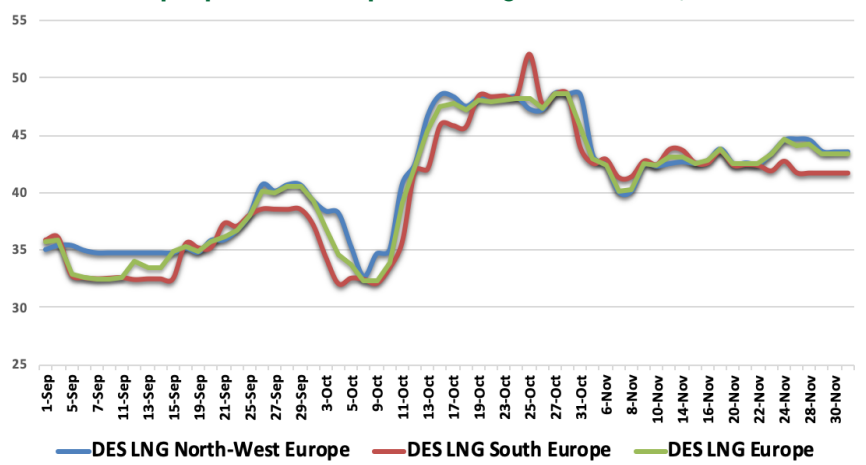
Europe

Natural gas prices in Europe gradually declined throughout the week but rose slightly at the end.

Prices fell earlier in the week amid over-supply and lower-than-expected gas withdrawals from storage, despite cooler weather at the start of this heating season. In addition, due to the congestion in the Panama Canal, more and more cargoes with LNG were diverted to Europe, since it is profitable for traders to sell the gas faster. At the same time, demand in Asia remained quite low for this period of the year, which deprived the LNG market of increased competition.

On Wednesday, prices fell to €40.6/MWh, which was the lowest value in the last 7 weeks. This drop was primarily due to weather forecasts that indicated the end of the cold weather and an increase in temperatures starting next week.

Already on Thursday, the prices increased slightly and rose to €42/MWh, which was associated with an increase in demand against the background of cooling in Northern Europe. Gas withdrawals from storages rose above 600 mcm as of November 29. Prices rose above €43.5/MWh on Friday on what analysts said was a temporary boost in gas demand in Europe, but it was still 8.3% lower than last week's close.

Balance of European UGS, mcm

LNG spot prices in Europe according to ACER data, €/MWh


Gas supplies to the European market increased by approximately 10 mcm per day to 840 mcm. Gas supplies to the system from regasification terminals increased by more than 15 mcm to 400 mcm per day. Gas supplies from Norway decreased from 227 to 214 mcm per day. Supplies from Algeria and Libya increased by 10 mcm per day and amounted to 105 mcm per day. Gas supply from Azerbaijan decreased to 33 mcm per day. Gas supplies from Russia increased by 3.5 mcm to 87 mcm. Transit supplies through Ukraine decreased to 41.2 mcm. The volume of supplies through Turkish Stream increased from 41.6 to 45.8 mcm. m per day on average.

As of November 29, gas reserves in UGS of Europe amounted to 103.2 bcm or 95.9% of the total capacity. During the week, almost 2.7 bcm of gas were withdrawn from storage facilities. Due to the cold weather, gas withdrawals increased in the middle of the week.

Poland

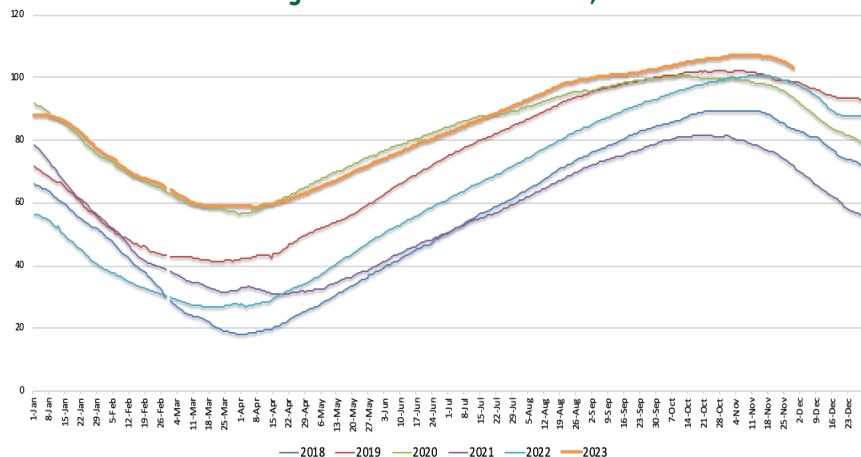
Gas prices in Poland gradually decreased this week. According to the data of the Polish energy exchange TGE, since the end of last week, prices have decreased from €51.4/MWh to €46.6/MWh.

The total supply of gas to Poland increased by 6.3 mcm - 65.4 mcm per day. The volume of gas regasification from LNG into the system was slightly below 18 mcm.

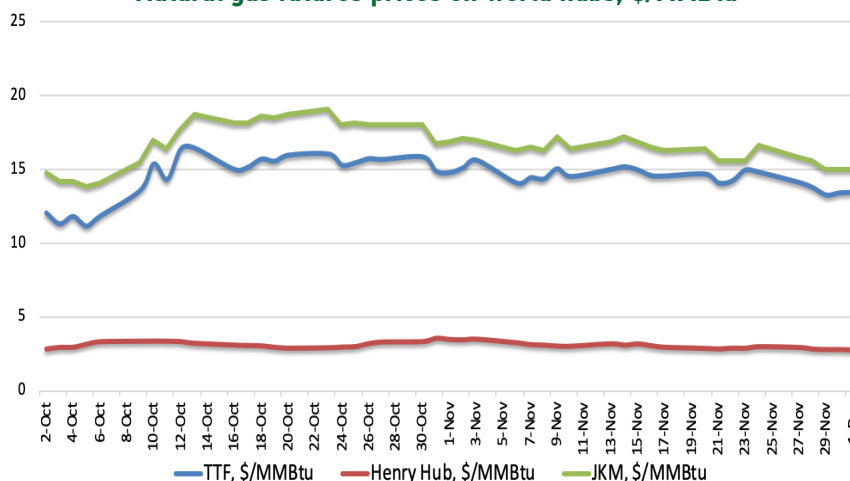
The supply of gas through the Baltic Pipe was at the level of 23.5 mcm per day, which is approximately 0.5 mcm less than last week. Gas receipts from Ukraine increased from 6 to 10 mcm per day on average. Gas supply from Lithuania more than doubled to 7.3 mcm per day. Supplies from other directions remained stable.

According to MarineTraffic, at least two LNG tankers are already expected to arrive in December. One of them carries cargo from the USA, and the other from Qatar. The total volume of gas after regasification will be more than 220 mcm.

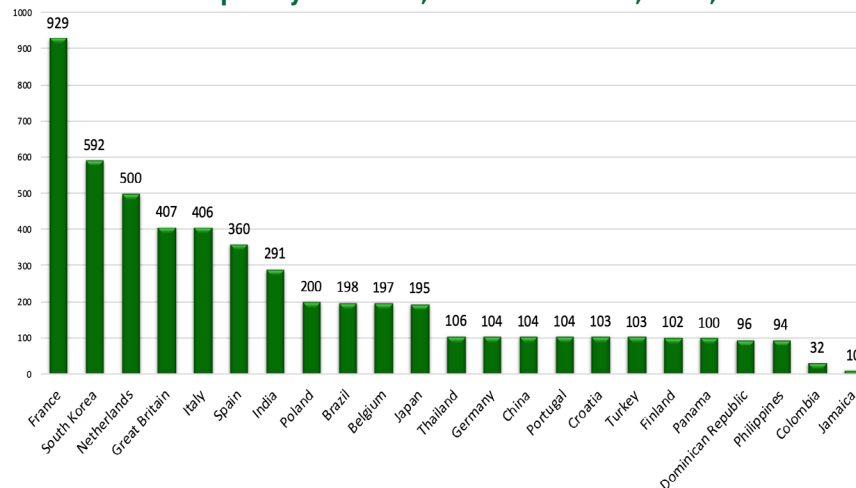
Inventories of natural gas in European underground storage facilities in 2017-2023, bcm



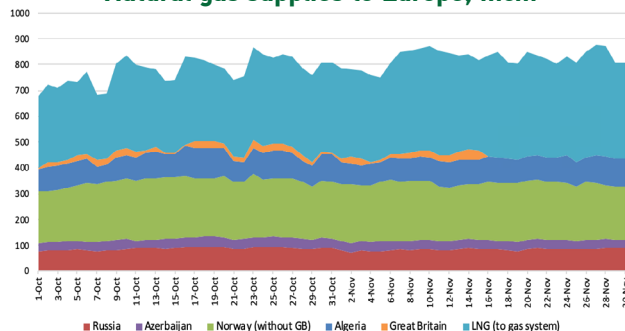
Natural gas futures prices on world hubs, \$/MMBtu



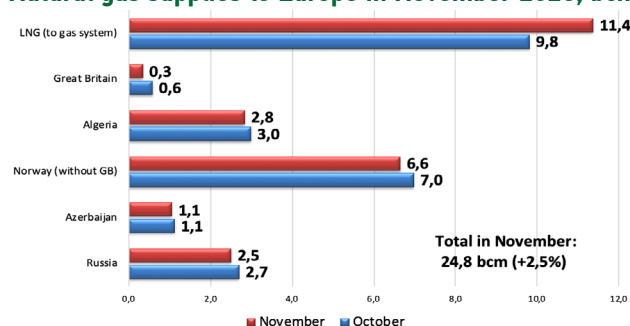
US LNG export by countries, November 15-30, 2023, mcm



Natural gas supplies to Europe, mcm



Natural gas supplies to Europe in November 2023, bcm



USA

U.S. gas futures averaged \$2.9/MMBtu to \$2.8/MMBtu this week. The drop in prices is linked to forecasts for a warmer start to December. In addition, gas reserves in UGS unexpectedly increased.

Gas production rose by almost 10 mcm and amounted to almost 2.99 bcm per day. Total supply, including imports from Canada, was 3.17 bcm.

The total gas consumption in the country increased by 21% - to more than 2.8 bcm per day. Consumption increased the most in the residential and commercial sector - by 51% - up to 1.16 bcm. Growth in the industrial and energy sectors was 5.5% and 6.7%, respectively.

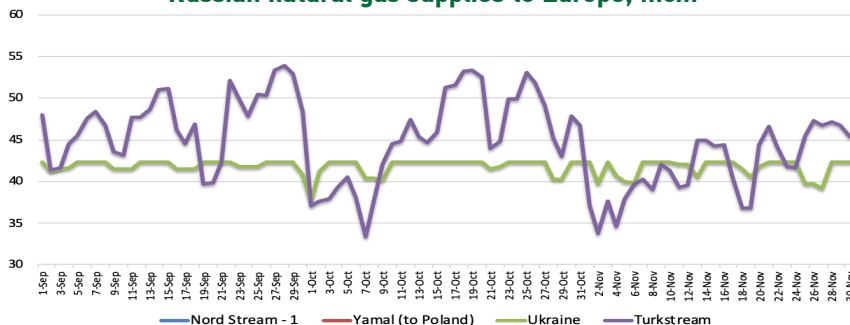
According to the EIA, in the previous week, gas reserves unexpectedly increased by 280 mcm and amounted to more than 108.6 bcm. Last year, 1.2 bcm were withdrawn during the same period.

Asia

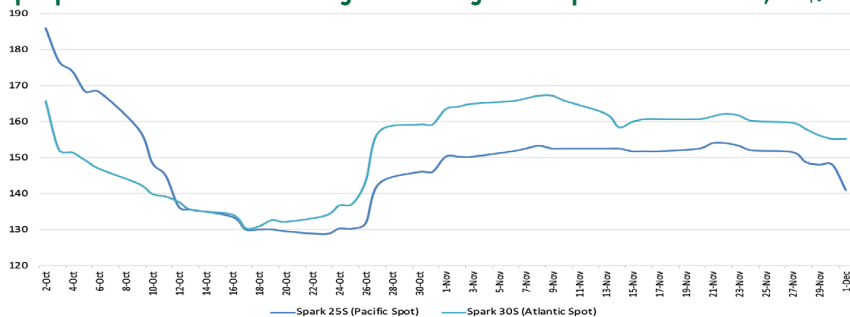
Gas futures prices in Asia continued to decline and fell to \$15/MMBtu by the end of the week. Demand remained muted and global LNG supplies recovered. Maintenance work has been completed at the Qatargas plant and the Australian Prelude LNG plant. This comes in addition to Egypt's announced plans to resume LNG exports.

In addition, geopolitical tensions in the Middle East decreased, which reduced market participants' worries about the threat to gas supplies.

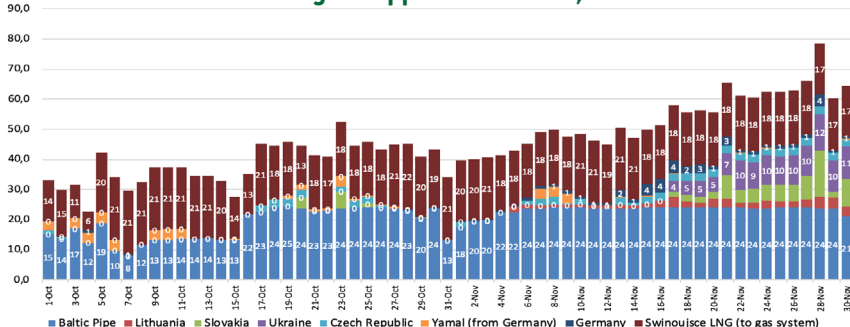
Russian natural gas supplies to Europe, mcm



Spot prices for LNG tankers freight according to the Spark Commodities, th \$/day



Natural gas supplies to Poland, mcm



Expected LNG deliveries to Poland

Arrival date	Ship name	Port of arrival	Country	Volume, mcm	Departure date	Country of departure	Port of departure
23-Dec-23	BW Pavilion Aranthra	Swinoujscie	Польша	99,9	30-Nov-23	USA	Ingleside
9-Dec-23	Al Orai	Swinoujscie	Польша	120,5	13-Nov-23	Qatar	Ras Laffan

STATE-OWNED COMPANIES

Three more regional gas companies joined the Naftogaz Group

Three more regional gas companies came under the control of the Naftogaz Group. These are Rivnegaz JSC, Zaporizhzhazh JSC, and Chernivtsigaz JSC. The Naftogaz press service reported this.

Thus, the total number of gas distribution companies integrated into the Naftogaz Group increased to 22.

According to Naftogaz, together these three enterprises serve almost one million customers.

Personal accounts, tariffs, and payment details for consumers from Rivne, Zaporizhzhia, and Chernivtsi regions remain unchanged.

Naftogaz demands UAH 650 million debt from Centrenergy for gas consumed

The gas supply company Naftogaz of Ukraine appealed to the court with a claim against the state-owned Centrenergy for the collection of UAH 650 million in debt for gas consumed. The Commercial Court opened proceedings in the case, ExPro Electricity Daily reported.

In substantiation of the claims, Naftogaz refers to Centrenergy's improper performance of its obligations regarding the settlement of the received natural gas in the amount of 16.122 mcm in the period from May to December 2022. The preliminary court session is scheduled for January 23, 2024.

Ukrnafta received over 60 tcm of gas in the East of Ukraine thanks to the overhaul

Ukrnafta PJSC overhauled the well at a depth of more than 4 kilometers and received more than 60 tcm of natural gas per day. This was announced by the head of the company, Serhii Koretskyi.

The work was carried out at the deposit located in the East of Ukraine. The purpose of the capital repair was to explore the deposit.

According to Koretskyi, in the process, the company's specialists performed a set of geophysical works necessary to clarify the current saturation of reservoir reservoirs. Af-

ter the research, the oilmen conducted perforation works at a depth of 4,393 - 4,396 m to connect the well with the production horizon. Koretskyi also noted that the development of the well has already been completed, the result of which is more than 60 tcm of natural gas and 40 tons of condensate per day.

The well is currently in exploratory production to obtain additional data on the deposit, which contains previously explored reserves. In the future, these reserves can be transferred to the industrial category.

GTSOU presented a project of reverse flow of the Trans-Balkan gas pipeline

Dmytro Lyppa, General Director of the GTS Operator of Ukraine, proposed to create a guaranteed capacity along the entire Trans-Balkan route for the operation of the gas pipeline in reverse mode.

He presented a respective project during a high-level meeting with the general directors of Bulgarian, Greek, Slovakian, Romanian, and Hungarian GTS operators that was held in Sofia (Bulgaria) within the framework of the "Vertical Corridor" initiative.

GTSOU expressed its readiness to join the Memorandum on the Vertical Corridor, as well as joint working groups. During the seminar, representatives of Ukraine's Operator emphasized the need to expand the capacities of the Bulgarian and Romanian gas transmission systems, given that the carrying capacity of the Bulgarian GTS is critical for ensuring additional flow.

"The market demand assessment that was jointly conducted by the operators of Ukrainian, Romanian, and Moldovan gas transmission systems indicated a 20 mcm-worth demand for transportation via the Trans-Balkan route to Ukraine's underground gas storage facilities. The Trans-Balkan route can meet the demand of customers who plan on transporting gas from the Balkan direction to consumers in Eastern and Central Europe and provide a possibility to store gas in Ukraine's gas storage facilities," the head of GTSOU said.

Thanks to the existing infrastructure, the Trans-Balkan gas pipeline is already in part operating in reverse mode: in 2023, more than 0.5 bcm of natural gas have been pumped via this route.

Ukrkazvydobuvannya has drilled more than 300 thousand m since the beginning of the year

Ukrkazvydobuvannya JSC (UGV), which is part of the Naftogaz Group, has drilled more than 300 thousand m since the beginning of the year as of November 28, according to ExPro data. This is 40% more than for the whole of last year (215 thousand m), and also more than for the previous three years.

In general, almost 220 thousand m was operational drilling and almost 82 thousand m was exploratory drilling. By the end of the year, the company expects that the volume of drilling will amount to about 330 thousand m. As reported, in 2023 Ukrkazvydobuvannya plans to drill a record number of wells over the past 20 years – more than 90.

The planned output of commercial gas from drilling in 2023 will be a record since independence – more than 1.1 bcm. Ukrkazvydobuvannya will be able to obtain this volume at the end of the year at the expense of drilled wells.

Ukrkazvydobuvannya commissioned 3 high-output wells in November

Ukrkazvydobuvannya JSC (UGV), part of the Naftogaz Group, commissioned three high-output wells in November. This was announced by the head of Naftogaz Oleksiy Chernyshov.

Two wells are new, which are the result of the implementation of a large-scale program of 3D seismic research.

The third well is a restored one, which was in the liquidation fund for 35 years. Specialists of Ukrkazvydobuvannya carried out an overhaul and put it into operation.

According to Chernyshov, in total, in November, it was possible to obtain more than 400 tcm of natural gas per day.

PRIVATE COMPANIES

The court annulled the special permit of Ukrnaftoburinnia for the Sakhalin field

At the request of the Ukrainian Geological Survey, the Sixth Administrative Court of Appeal canceled the current special permit for the use of the subsoil of the Sakhalin oil and gas condensate field of Ukrnaftoburinnia PC PrJSC. This is reported by Telegraf with reference to the court decision, which confirms the ExPro information published in ExPro Daily Gas.

According to Telegraf, the legal dispute regarding the license lasted for many years and Ukrnaftoburinnia was victorious in all disputes. However, with the arrival of a new manager, the company lost the case.

We will remind you that in July 2023, the

Cabinet of Ministers, on the proposal of ARMA, transferred the corporate rights of Ukrnaftoburinnia to the management of Ukrnafta PJSC.

According to ExPro, Ukrnaftoburinnia produces about 45 mcm of natural gas per month and is one of the top 3 private production companies in Ukraine. Stopping the company's gas production can be a complex process and lead to negative man-made consequences for the environment.

Kolomoisky's share in the oil and gas company JKC became the property of Great Britain

The British oil and gas company JKC Oil & Gas Limited reported that the company

Eclairs Group Limited (EGL) was excluded from the register of shareholders on November 1, 2022. The registrar of corporate rights of the British Virgin Islands, where EGL is registered, also announced the liquidation of the company.

Before the liquidation, EGL was the main shareholder of the company with a stake of 32.66% in the issued share capital of JKC. The JKC shares previously owned by EGL are now owned by the Crown, it said. The EGL company was associated with Kolomoisky, whose share in JKC became the property of the Crown.

The main asset of the JKC company in Ukraine is the production company Poltava Petroleum Company JV.

INFRASTRUCTURE AND TECHNOLOGIES

Natural gas re-export from the "customs warehouse" of Ukrainian UGS reached a historical maximum

The daily volume of natural gas re-export, stored in the "customs warehouse" of Ukrainian UGS, reached 31.9 mcm on December 1, according to ExPro calculations. This is the highest daily export level in the entire history of observations.

The main part of gas is exported to Slovakia - 14.3 mcm, to Poland - 12.6 mcm, and to Moldova - 5 mcm.

The volume of natural gas exports from the "customs warehouse" of Ukrainian UGS in November 2023 amounted to 281.5 mcm, according to ExPro calculations. Compared to October, export volumes increased 26 times. It is also the highest export level in the last two years - since December 2021.

The main part of gas in November was exported to Poland - 142.5 mcm or 51% of all supplies, to Moldova - 85.8 mcm or 30%, to Slovakia - 51.6 mcm or 18.4% and to Hungary - 1.7 mcm or 0.6%.

The increase in the volume of gas exports from the "customs warehouse" is connected with the beginning of the heating season both in Ukraine and in Europe. The companies that injected gas into Ukraine in the previous months already exported it back

to Europe in November. High gas prices, which remained on the European market in November, also contributed to the growth of export volumes.

As of November 30, 3.107 bcm of natural gas were stored in the "customs warehouse" of the Ukrainian UGS, which is almost twice as much as last year. It is expected that the volume of gas re-exports will remain at a high level in December.

NACP added the Belgian gas company Fluxys to the list of international sponsors of the war

The National Agency on Corruption Prevention of Ukraine (NACP) has included the Belgian independent operator of the Fluxys gas system in the list of international war sponsors. The company facilitates the export of Russian LNG, which provides financing for Russia's invasion of Ukraine.

The International Institute for Energy Economics and Financial Analysis (IEEFA) revealed in 2022 that Fluxys and its shareholders were profiting by facilitating the export of Russian LNG to markets in Asia, South America, and the Middle East, especially in the winter months of 2021-2022, exacerbating the European energy crisis and increased profits for Novatek.

Fluxys continues to cooperate with Yamal LNG in 2023. According to international experts, Russia expects to receive up to €800 million in export tax revenues, which is possible thanks to the transshipment of LNG at the Zeebrugge LNG terminal in 2023. At the same time, only 7% of this gas goes to EU markets.

Centrica has begun withdrawals from Rough storage

Centrica subsidiary British Gas has taken stored gas from its largest storage facility into the national grid for the first time to meet heating demand and keep prices down. The disused Rough field off England's east coast stopped storing gas in 2017, but was reopened by Centrica last October and now provides half of the UK's total gas storage capacity.

Centrica, which filled Rough with the equivalent of 18 LNG tankers this year, said the storage provides enough energy to heat more than 3 million homes every day during the winter.

The UK has some of the lowest levels of gas reserves in Europe - 12 days on average or 7.5 peak days in winter. In Germany, on average, gas is stored to cover consumption for 89 days, in France for 103 days, and in the Netherlands for 123 days.

LNG MARKET NEWS

The Lithuanian LNG terminal in Klaipeda is fully booked until 2033

Lithuania's Klaipėdos Nafta (KN) has completed the commissioning of 9 TWh (850 mcm) of long-term regasification capacity for the LNG terminal in Klaipėda, ensuring the terminal's full capacity by 2033.

Commercial consumers will use 9 TWh of the 33 TWh (over 3.1 bcm) of annual terminal capacity in 2025-2032, which is evenly distributed between Achema, Eesti Gaas, and Equinor. 24 TWh (2.3 bcm) of capacity was booked earlier. The terminal operator said the proceedings showed high demand for the LNG terminal's services, with potential customers expressing their intention to purchase more than double the terminal capacity offered by KN.

Shell's Prelude LNG plant could resume exports next month

Shell has almost completed major maintenance at its Prelude LNG plant off Australia and plans to resume exports next month.

The timing of the facility's reopening coincides with peak consumption and increased demand in major markets including Asia and Europe, although high gas inventories in the regions could limit purchases this year.

As previously reported, one of the signs that the service is nearing completion is the booking of a slot for the LNG tanker Symphonic Breeze, which is expected to arrive at the floating facility on December 6.

Delfin signed a long-term LNG supply agreement with Gunvor

Delfin Midstream said it has entered into a long-term LNG supply agreement with global trader Gunvor.

Under the agreement, Delfin will supply Gunvor with 500,000 to 1 million tons of LNG (0.7-1.4 bcm) per year from its Delfin Deepwater Port facility for at least 15 years.

Delfin is developing the Delfin LNG Deepwater Port project, which supports up to four FLNG units with a combined export capacity of 13.3 million tonnes of LNG (18.3 bcm) per year.

The company has entered into commercial agreements for the supply of LNG, liquefaction services and is in the final stages of making a final investment decision on the first three FLNG.

LNG supply from one of the projects in Australia has stopped

LNG deliveries from the Australia Pacific (AP) project have been interrupted due to a tanker breakdown. Operator ConocoPhillips and co-owner Origin Energy said supplies had stopped after a loaded tanker that was at the site lost power.

Two LNG cargoes have already been detained and Origin has warned that more cargoes are expected to be delayed as the stricken vessel blocked other tankers from entering the facility. APLNG, which has a capacity of 9 million tons of LNG (12.4 bcm) per year, can only accept one vessel at a time and on average loads one tanker every three days.

The main customers of the plant are the Chinese Sinopec and the Japanese Kansai Electric. The ship Cesi Qingdao, on which the engine failure occurred, was supposed to go to China.

Japan's JERA provided three cargoes of road accidents for the Strategic Buffer until February 2024

Japan's JERA said it has secured three LNG cargoes between December 2023 and February 2024 for the country's Strategic Buffer LNG (SBL), after the company was approved as the first supplier.

The company also commented on LNG winter purchases. JERA sees no problem in LNG procurement for the winter demand season, said company president and CEO Hisahide Okuda.

It is not known whether JERA purchased additional LNG or used part of JERA Global Markets' own supply portfolio for SBL.

The SBL facility is the first of its kind for Japan, as the country previously had only commercial LNG reserves, as opposed to government and private sector reserves of crude oil and petroleum products.

JERA is Japan's largest generating company, processing about 40 million tons of LNG per

year (about 55.2 bcm) and controlling a fleet of 20 LNG tankers owned by JERAGM, a joint venture between JERA with a 67 share and France's EDF Trading with 33%.

OMV and Cheniere signed a long-term LNG supply agreement

OMV announced the signing of a long-term purchase and sale agreement with American Cheniere Energy. Under the terms of the agreement, Cheniere will supply 850,000 tons (1.2 bcm) per year, starting in 2029.

The American company will supply OMV with up to 12 LNG cargoes per year, which will be received and regasified through the Gate LNG terminal in Rotterdam, where OMV has long-term regasification capacity. The price is tied to the TTF1 index (Front Month resource).

A new FSRU in Greece will soon receive its first cargo

The new FSRU in Greece will receive its first LNG cargo in January and will be 75% commercially operational later in February.

The 5.5 bcm/year FSRU Alexandroupolis left Singapore this week and will arrive in Greece on 17 December. The vessel will be located in the Aegean Sea and will be able to supply gas to Bulgaria and other Central European countries. Gastrade has already tendered the first cargo for commissioning. Bulgartransgaz owns 20% of the shares of the Alexandropol FSRU and has reserved 1 bcm of capacity at the terminal.

Egypt plans to start exporting LNG in January

Egypt plans to export about 1 bcf (28 mcm) of LNG per day from January 2024, Al Arabiya Business reported, citing an official representative of the Ministry of Petroleum and Mineral Resources.

The country's current LNG production ranges from 5.9 to 6.1 bcf (167-172 mcm) per day, with domestic consumption reaching 7 bcf (198 mcm) per day in the summer.

The rest of the necessary volumes of gas, which amount to 850-900 mcf (24-25 mcm) per day, the country imports from Israel.

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