

Weekly Alert

**Russian War Against
Ukraine: Energy Dimension**

This analytical product is made possible by the support of the American People through the United States Agency for International Development (USAID) within the framework of the Energy Sector Transparency project implemented by NGO DiXi Group. The contents are the sole responsibility of DiXi Group and do not necessarily reflect the views of USAID or the United States Government.

Russian War Against Ukraine: Energy Dimension
DiXi Group weekly review

(May 8 - 14)

#StopRussianAggression
#StandWithUkraine**Summary**

- According to Energoatom, as part of the possible evacuation that the occupiers are preparing for, Russia plans to withdraw about 3,100 people from the Zaporizhzhia NPP. Further reductions in the number of employees could have a negative impact on nuclear safety - the IAEA.
- Massive Russian attacks did not damage the main energy infrastructure. However, due to the terror of the front-line territories, some consumers in 6 regions remained without power supply.
- The lack of electricity produced by NPPs under maintenance will be compensated by the operation of TPPs, increased production from RES and imports. Probably, due to the maintenance campaign, Energoatom-Trading did not initiate trades on the bilateral contracts market for the second week in a row. Meanwhile, the Ministry of Energy and Ukrenergo denied reports about the alleged introduction of electricity supply restrictions for household consumers in May.

- The Regulator expanded the rights of prosumers to sell electricity - they can sell electricity produced to any supplier at a contractual price, in volumes that exceed the monthly self-consumption.
- Central executive authorities (with the exception of the Ministry of Defense) shall buy fuel and electricity through the State Institution "Professional Procurement" - government decision. Meanwhile, the NEURC decided to limit the publication of information regarding the setting of tariffs, the formation of transmission and distribution systems development plans, etc. during the martial law.
- Draft Procedure for Using the Fund for Decarbonization and Energy-Efficient Transformation of Ukraine developed - so the Head of the State Agency on Energy Efficiency Hanna Zamazeyeva. The Agency is also developing programs to support households in implementing energy efficiency measures, installing solid fuel boilers, heat pumps, and solar collectors; incentives for domestic production of biomass boilers, modular boiler houses; support of municipalities, critical infrastructure facilities, and businesses in the transition to alternative energy sources; cheaper loans for ESCO companies etc.
- As the Ministry of Energy reported, the government has approved the draft law, which establishes the procedure for the corporate reform of GTSOU and the transition to the single operator model, with 100% of the authorized capital owned by the government.
- The government banned the imports of fuel and oil products of unknown origin. In that way, it blocked the possibility of importing oil products originating from Russia.
- The Japan International Cooperation Agency will provide Ukrenergo with equipment for substations worth about 40 million USD under the Emergency Recovery Program.
- The Cabinet of Ministers has extended the 5-7-9% concessional lending programme to owners of TPPs and CHPs affected by the actions of the Russian occupation forces.
- On May 10, the YeVidnovlennia (eRestoration) programme was launched, under which Ukrainians will be able to receive up to 200,000 UAH to repair housing damaged by the war.
- The Security Service and the Economic Security Bureau handed suspicions to businessman Dmytro Firtash and 8 top managers of affiliated companies, and also began searches of the managers of gas DSOs. According to law enforcement, structures controlled by Firtash purchased gas from affiliated company, but actually received 30% of the volumes. The deficit was covered by gas withdrawals from the transmission system, with payments being partial. As reported, over seven years, such a scheme caused 18 billion UAH in losses.
- The President signed a decree imposing sanctions, including those against the nominal and actual owners of VS Energy.

IMPACT OF THE WAR

Attacks

The enemy continues to destroy energy infrastructure in an attempt to disrupt preparations for the next winter. On [Май 8](#), the occupiers shelled a power generation facility in the **Kherson region**. On the same day, during the inspection at one of GTSOU enterprises, a fragment of an explosive object was [found](#) in the non-operating area, no equipment was damaged. On [May 9](#), artillery shelling damaged one of DSO's buildings in the **Kharkiv region**. On [May 11](#), the enemy shelled

the **city of Kherson** with heavy artillery, MLRS, drones and aircraft, hitting the territory and buildings of two critical infrastructure enterprises. On the same day, a coal mine in the **Donetsk region** was **cut off** from power supply due to enemy shelling. On [May 13](#), the enemy attacked a critical infrastructure facility in **Khmelnyskyi**. Another shelling of the **city of Kherson** **damaged** an energy infrastructure facility in the Beryslav district. On the same day, a critical infrastructure facility in **Ochakiv**, Mykolaiv region, was **damaged**. On [May 14](#), a massive Russian attack damaged one of the main power transmission lines in the southwestern part of Ukraine, and one of the main lines in the east was also damaged. Distribution networks in the **Zaporizhzhia, Sumy and Chernihiv regions** are also suffering permanent damage.

Hostile attacks continue on the information front as well, with the media spreading false information about the alleged introduction of electricity supply restriction schedules for household consumers in May. Both [the Ministry of Energy](#) and [Ukrenergo](#) denied this information.

Nuclear and Radiation Safety

[During the week](#), the IAEA team of experts at the Zaporizhzhia NPP heard the sounds of artillery shelling near the site. All ZNPP units have been shut down, and the plant continues to be powered by a single external line. The IAEA Director General Rafael Grossi [said](#) that the ZNPP still has enough staff to keep the plant running, but further reductions in the number of employees could have a negative impact on nuclear safety. In addition, the established maintenance programme has not been implemented for many months, and a large number of spare parts and external contractors are missing.

[According to](#) Energoatom, as part of the possible evacuation that the occupiers are preparing for, Russia plans to withdraw about 3,100 people from the ZNPP. First of all, it is about the 'evacuation' of 2,700 employees who signed a contract with the fake operator. Instead, employees who have not signed a contract with Energoatom have been banned from leaving Energodar since the beginning of the occupation of the site and the city. The Ukrainian company believes that such an 'evacuation' will exacerbate the extremely urgent issue of understaffing.

Countermeasures

The Cabinet of Ministers [has extended](#) the 5-7-9% concessional lending programme to owners of TPPs and CHPs affected by the actions of the Russian occupation forces. The day before, the CEO of DTEK Dmytro Sakharuk [said](#) there may be problems with the start of the new heating season, which Ukraine will enter with significantly less available capacity. According to him, DTEK needs to repair 9 units of thermal power plants with a total capacity of 1.5 GW, almost 12,000 km of power lines, and about 4,000 distribution substations. He stressed it is necessary to significantly speed up the repairs and increase funding.

[According to](#) the Ministry of Communities, Territories and Infrastructure Development, an interagency working group has compiled a list of projects with preliminary prioritisation for the allocation of funds for recovery from the Fund for the Elimination of Armed Aggression Consequences. In total, the group reviewed 377 projects for 17.9 billion UAH submitted by local governments and central executive authorities through the Sectoral Infrastructure Recovery Management System, which is part of the DREAM digital ecosystem.

The Prime Minister Denys Shmyhal [announced](#) the government's intention to create positions of deputy minister or deputy head for recovery in a number of ministries and 11 regional executive authorities. "This will speed up the process of preparing the projects and make these projects of better quality", so Shmyhal. The Minister of the Cabinet of Ministers Oleh Nemchinov [noted](#) that the 11 regions under constant Russian attacks, where military operations are taking place or have taken place, and the ministries dealing with recovery issues are the first to be affected.

On May 10, the YeVidnovlennia (eRestoration) programme was [launched](#), under which Ukrainians will be able to receive up to 200,000 UAH to repair housing damaged by the war. The funds can be spent on construction materials or services of contractors participating in the

eRestoration programme. In the first day of the programme's operation, Ukrainians submitted 3,194 [applications](#) for assistance.

MARKETS PULSE

Electricity Sector

Power system operation

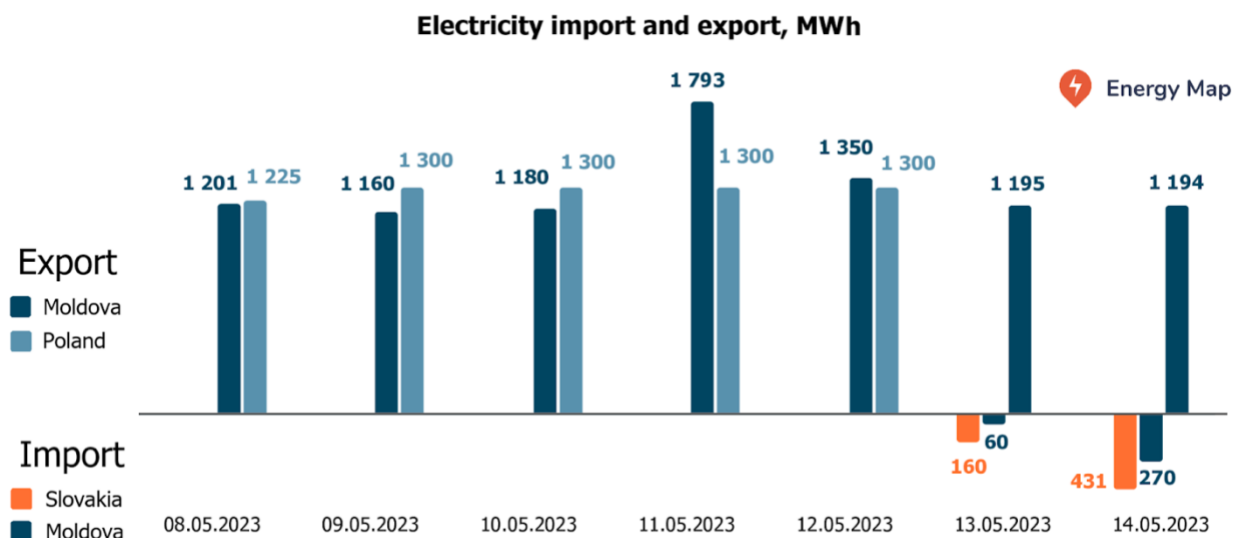
According to [Ukrenergo](#) and the [Ministry of Energy of Ukraine](#), the power system operated stably, and electricity production fully covered the needs of all categories of consumers. The second wave of the freshet continues, so hydroelectric power plants continue to perform strongly around the clock. Solar and wind farms have also increased production due to favorable weather conditions, which allows to compensate for the capacities of nuclear and thermal power plants, which are offline for maintenance.

Massive attacks by missiles and drones did not damage the main energy infrastructure. However, due to the terror of the front-line territories, some consumers in the Donetsk, Zaporizhzhia, Sumy, Kharkiv, Kherson, and Chernihiv regions remained without power supply. Restoration works continue at both distribution and main network facilities despite the difficult security situation. Ukrenergo crews restored part of the damaged equipment at one of the substations in the eastern region. Also, during the week, specialists restored electricity supply for at least 115,000 consumers.

Energoatom [announced](#) plans to reload NPPs' units with fresh nuclear fuel and carry out planned maintenance. This will ensure efficient operation in the 2023/2024 autumn-winter period. So that consumers do not feel the impact of the maintenance campaign, Energoatom, the Ministry of Energy and other generating companies have drawn up and synchronised the schedule of repairs. The lack of electricity produced by nuclear will be compensated by the operation of TPPs, increased production from RES and imports.

According to the [NEURC](#) and [ENTSO-E](#) data, on May 11, 13 and 14, Ukraine performed commercial imports of electricity from Slovakia during daytime hours with a [total volume](#) of 0.59 GWh (-65% as compared to the previous week), the capacity ranged from 1 to 98 MW. Imports from Moldova were performed on May 13-14 and amounted to 0.33 GWh (-3% as compared to the previous week), only during daytime hours and in the range of 10-65 MW.

The volume of exports amounted to 15.5 GWh, 58.5% of which (9.1 GWh) went to Moldova, 41.5% (6.4 GWh) to Poland. As compared to the previous week, exports to Moldova decreased by 26%, the capacity ranged from 0 to 200 MW. Exports to Poland were performed on May 8-12 in the amount of 50 MW or 75 MW depending on the time of day, the total volume increased 129 times as compared to the previous week.



Source: [Energy Map](#)

4-6 companies [booked access](#) to the capacity for imports in the Slovakia-Ukraine direction at daily auctions; the main players: DE Trading, ERU Trading, LE Trading and TEP. In the Moldova-Ukraine direction, on May 8-13, capacity was booked by DE Trading, on May 14 - also by Cub Energy and CPG Energy. The marginal price in both directions was "zero".

During the week, DTEK Zakhidenergo booked export capacity in the Ukraine-Poland direction, the marginal price was 0.00 UAH/MWh. 7-9 companies booked export capacity in the Ukraine-Moldova direction, among them the largest volumes were distributed to Artlex-Energy, D.Trading and EES. The marginal price for some hours (01:00-05:00 and 24:00) varied from 20 to 400.12 UAH/MWh, the total revenue of Ukrenergo from the auctions amounted to 1.57 million UAH.

On May 10, another meeting [was held](#) with the participation of the NEURC, the Energy Community Secretariat and transmission system operators (TSOs) of Ukraine and Slovakia regarding the resumption of electricity exports to Slovakia. The results of the meeting were not reported; however, apparently, the problem remains unresolved. According to the [NEURC](#), as of May 11, Ukrenergo did not submit for the Regulator's approval the agreement on sharing the revenues from capacity allocation agreed with the Slovak TSO.

Electricity market performance

Bilateral contracts market (BCM): Compared to the previous week, the intensity of trading on the Ukrainian Energy Exchange (UEEX) has increased significantly. On May 8-14, [19 auctions](#) for the purchase/sale of electricity were held at UEEX (7 in commercial sections, 12 in specialized ones). Ukrhydroenergo, Centrenergo, companies of DTEK group, Guaranteed Buyer, universal service providers, distribution system operators, etc. were among those who initiated trades. To note, Energoatom-Trading did not initiate trades for the second week in a row, which is [probably related](#) to the start of NPPs maintenance campaign. The total of 1,242.9 GWh were sold at the UEEX with delivery in May (5.1 times more as compared to the previous week). The monthly Base index for May remained at 2,702.7 UAH/MWh.

In particular, Guaranteed Buyer sold 93.4 GWh in block positions (daytime hours) at 2,500-2,607.6 UAH/MWh. Ukrhydroenergo sold 0.33 GWh in block positions of maximum load at the average price of 3,680 UAH/MWh and 11.4 GWh in block positions of minimum load at 1,830.6 UAH/MWh. Centrenergo succeeded in selling 7.7 GWh in block positions (24:00-07:00) at 1,871.4-1,911 UAH/MWh. DTEK Kurakhivska TPP, DTEK Dniproenergo and DTEK Zakhidenergo sold, in total, 1,086.6 GWh at prices in the range 1,555.2-2,960 UAH/MWh. In the commercial sections, companies mainly purchased electricity by the load of an individual profile.

Day-ahead market (DAM): According to the [Energy Map](#) service, on May 8-14, hourly prices were relatively [stable](#), due to the effect of price caps, however, with a certain decreasing trend. Deviation from the price caps for day and night hours (4,000 and 2,000 UAH/MWh, respectively), ranged from 0% to 33% and averaged at 13.4%. The number of hours with prices being close (with a deviation of less than 1%) or directly at the level of price caps continued to increase - from 26.8% to 28%. The average price for the week increased slightly to 2,816.7 UAH/MWh (+3.3% as compared to the previous period). The weighted average daily price [ranged](#) in the narrow corridor of 2,730.1-2,933.7 UAH/MWh. The spread between the EU and Ukrainian markets stabilized at a level close to the one in the previous week. In particular, the Base DAM indices in the countries of Eastern Europe (Poland, Hungary, Romania and Slovakia) [exceeded](#) the similar index of Ukraine 1.04-1.76 times.

The total volume of electricity sales at DAM of Ukraine [decreased](#) to 388.3 GWh (-8.4% as compared to the previous week). In particular, the daily volume of trading steadily decreased from 62 to 47.2 GWh. In general, the market remained in surplus - the ratio between the total volume of sale and purchase bids was 1.34-1.66. At the same time, the deficit in the market was observed in 2.4% of hours (as compared to 6% in the previous week). The purchasing structure was [dominated by suppliers](#) (87.7-91.7%), the share of system operators was 8.2-12.2%, the rest (up to 0.2%) belonged to producers and traders.

Policy and regulation

The Regulator adopted [amendments](#) to the Rules of Retail Electricity Market: the rights of consumers to sell electricity produced by own generation or storage facilities have been expanded. In particular, provision is made for granting all consumers (household and non-household) the right to sell electricity they produce to any supplier at a contractual price, in volumes that exceed the monthly consumption of such a consumer. In turn, household consumers will have the right to suspend contracts for the supply of electricity by the universal service provider and for the purchase and sale of electricity under feed-in tariff. As reported, such a decision will contribute to the development of distributed generation and the expansion of competition in the retail market.

Also, the [NEURC adopted](#) a decision to limit the publication of information regarding the setting of tariffs, the formation of transmission and distribution systems development plans, etc. during the period of martial law. In particular, the Regulator decided not to conduct open discussions and public consultations regarding the tariffs for electricity transmission, distribution, dispatching (operational and technological), universal services, approval of electricity transmission and distribution network development plans and investment programs, changes to them, as well as the relevant NEURC draft decisions. All relevant documents must be submitted to the Regulator together with the approval by military administrations. Also, the NEURC approved the schedule for submission of draft 2024 investment programs in power transmission and distribution.

The government has [made changes](#) to the procedure for conducting public auctions by central procurement organizations. In particular, the central executive authorities (with the exception of the Ministry of Defense) will buy fuel and electricity through the State Institution "Professional Procurement". Also, if a central procurement organization is unable to conduct a successful procurement, customers will be able to request the prices of offers at Prozorro Market. As expected, the unification of the needs of different central executive authorities and specialization by categories will allow the State Institution "Professional Procurement" to get a better price than in the case of separate tenders.

[According](#) to the Head of the State Agency on Energy Efficiency Hanna Zamazeyeva, the Agency developed the draft Procedure for Using the Fund for Decarbonization and Energy-Efficient Transformation of Ukraine and expected its adoption soon. At the same time, the Agency is developing a number of tools that will help communities, households, and businesses to get quick access to financing and the implementation of modern energy-efficient technologies: programs to support households in implementing energy efficiency measures, installing solid fuel boilers, heat pumps, and solar collectors; incentives for domestic production of biomass boilers, modular boiler houses; support of municipalities, critical infrastructure facilities, and businesses in the transition to alternative energy sources; cheaper loans for ESCO companies in order to accelerate the reconstruction of social facilities; transition to electric transport, etc. The Agency is also working on the launch of a national leasing platform – a financial instrument to ensure communities' access to energy-efficient equipment from leading manufacturers.

Gas

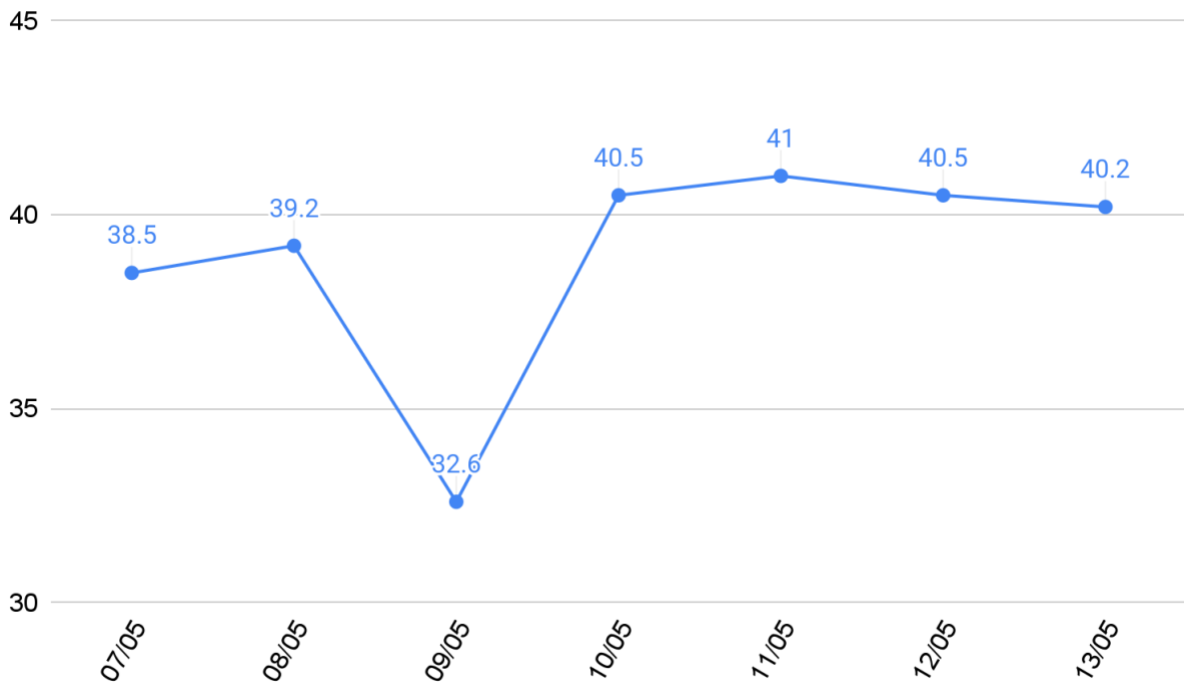
Gas system performance

On May 7-13, the volume of gas transit through the territory of Ukraine amounted to 32.6-41 mcm per day, i.e. only 30-38% of the capacity contracted by Gazprom (109 mcm per day). In the reporting week, the average daily transit was at 38.9 mcm. There were no transit flows via the Sokhranivka interconnection point.

Physical imports from the EU countries amounted to 4.3 mcm in the reporting week (on average, 0.6 mcm per day), which is 42% less than in the previous week. The physical imports performed via the Beregdaroc interconnection point (VIP Bereg) at 1.5 mcm, via the Hermanowice interconnection point (VIP Ukraine-Poland) at 1.1 mcm, and via the Căușeni interconnection point (Ukraine-Moldova) at 1.7 mcm. There were no physical imports performed via the Budince

interconnection point during the week. On May 7-13, no gas was transmitted on Ukraine's gas system exit, except for transit flows.

Transit of Russian gas through the territory of Ukraine, mcm

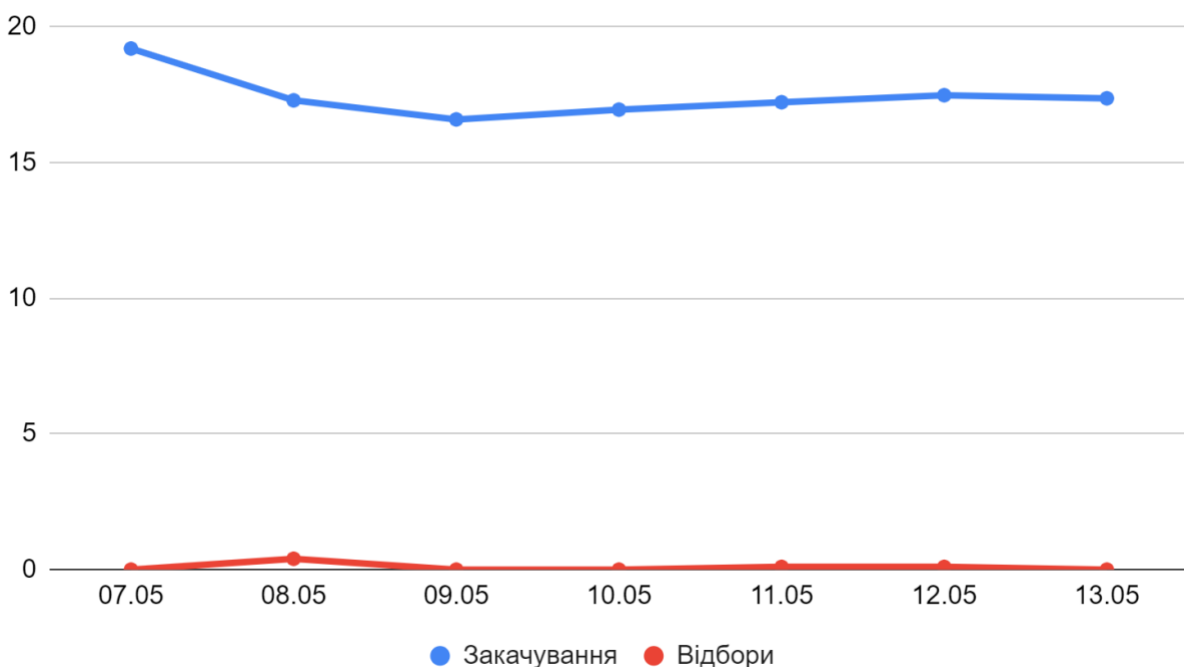


Source: [Gas Transmission System Operator of Ukraine LLC](#)

Underground storage facilities

According to the AGSI platform, as of May 13, 4.93 bcm of gas was stored in the Ukrainian storages (16.34% of the total working capacity). Withdrawals on May 7-13 were not performed, and injections were at 122.1 mcm (+1.7 mcm as compared to the previous week).

Natural gas withdrawals and injections into Ukrainian storages, mcm



Source: [AGSI](#) (all indicators calculated by dividing the primary indicators in MWh by the conversion factor of 10.595 kWh/cm)

Functioning of the natural gas market

In the [trading sessions](#) of May 8-12, 11 companies (4 sellers and 7 buyers) submitted bids for purchase and sale of natural gas at the Ukrainian Energy Exchange (UEEX). In the reporting period, UEEX received purchase and sale bids for 387.8 mcm of gas with a total starting price of 4.4 billion UAH. The weighted average starting price of all bids was 11.3 UAH/cm, excluding VAT, which almost corresponds to the indicator of the previous week.

A total of 17 mcm was sold (-43% as compared to the previous week). Five purchase bids were successful - all from the state-owned Naftogaz, and no successful bids for sale in the reporting week. The weighted average cost of the purchased and sold resource is 10,827 UAH/tcm without VAT (+18 UAH/tcm more than the previous week).

Policy and regulation

As the Ministry of Energy [reported](#), the government has approved the draft law, which establishes the procedure for the corporate reform of GTSOU and the transition to the single operator model, with 100% of the authorized capital owned by the government (the Ministry of Energy as authorized body). The document was developed to ensure the implementation of the Memorandum of Understanding concluded on January 16, 2023, between Ukraine and the European Union.

Previously, the draft law [No. 8068](#), which regulates similar issues, has already been registered at the parliament. Earlier, the ex-General Director of GTSOU Serhii Makohon stated that the transition to the single operator model [does not require](#) the adoption of laws, but changes in the TSO's charter.

Other

The Security Service of Ukraine, together with the Economic Security Bureau of Ukraine, [handed suspicions](#) to businessman Dmytro Firtash and 8 top managers of affiliated companies, and also began searches of the managers of gas DSOs. Law enforcement officers uncovered a scheme under which structures controlled by Firtash purchased gas from affiliated company, but actually received 30% of the volumes. The deficit was covered by gas withdrawals from the transmission system, with payments being partial (30% on average). As reported, over seven years, such a scheme caused 18 billion UAH in losses to the country's budget.

[According to](#) the CEO of Naftogaz Oleksii Chernyshov, from the beginning of 2023, the subsidiary - JSC Ukrkazvydobuvannia - has put into operation 7 new wells with a debit of over 100 tcm/day.

Motor Fuels

By the Resolution [No. 459](#) of May 9, 2023, the Cabinet of Ministers prohibited the imports of fuel and oil products of unknown origin into the territory of Ukraine as part of amendments to the Resolution No. 1147, which prohibits the import of goods originating from the Russian Federation. [According to](#) the Deputy Minister of Energy Mykola Kolisnyk, the ban applies to the following types of goods:

- crude oil and petroleum products obtained from bituminous rocks (minerals);
- oil and petroleum products obtained from bituminous rocks (minerals), except crude;
- products with a content of 70 wt% of oil or petroleum products obtained from bituminous rocks (minerals);
- spent petroleum products;

- gases, petroleum and other hydrocarbons in a gaseous form;
- alternative motor fuels;
- biodiesel and its mixtures, which do not contain or contain less than 70 wt% of oil or petroleum products obtained from bituminous rocks.

The ban does not apply to the transit of oil and petroleum products through the territory of Ukraine by pipeline.

The largest oil producer, the state owned Ukrnafta, for the first time in its history, [has prepared](#) a financial plan that has already been approved by the Supervisory Board. The document envisages 11.96 billion UAH in annual net profit. Since this indicator exceeds 50 million UAH, such a financial plan is subject to approval by the Cabinet of Ministers. [According to](#) media reports, the financial plan provides that Ukrnafta is going to increase capital investments from 9.2 billion UAH in 2023 to 18.6 billion UAH in 2024 and 35 billion UAH in 2025. Payments to the government in 2023 will amount to 6.9 billion UAH, including 344 million UAH as dividends.

International Cooperation

At a joint briefing with the European Commission President Ursula von der Leyen in Kyiv, the President Volodymyr Zelenskyi [stated](#) he expects the European Union to adopt the 11th sanctions package, which will include restrictions on Russia's nuclear industry. Zelenskyi also [expects](#) in June the presentation of the European Commission interim assessment of Ukraine's progress on the path to European integration and a positive decision to open negotiations on Ukraine's EU accession.

The President also signed a [decree](#) imposing sanctions, including those against the nominal and actual owners of VS Energy. According to the Ukrainian law enforcement agencies, VS Energy is actually controlled by the Russian citizens Alexander Babakov, Yevgeny Giner, and Mikhail Voevodin. However, formally, the group's companies are registered in the names of EU citizens, including the German citizen Marina Yaroslavskaya, who is called Giner's common-law wife, and the Latvian citizen Valts Vigants, who was Babakov's trustee. On May 12, sanctions were introduced on Babakovs, Giner, Yaroslavskaya, Vigants, as well as Oleg Sizerman, Vilis Dambiņš, and Arthurs Altbergs, who are also nominal owners of the group.

The Japan International Cooperation Agency will [provide](#) Ukrenergo with equipment for substations worth 5.135 billion JPY (about 40 million USD) under the Emergency Recovery Program. According to the procurement plan, deliveries of equipment are scheduled to begin in the second half of 2023 and will last until 2025, depending on the timing of manufacturing.

The Ministry of Economy has [signed](#) an agreement with BlackRock Financial Market Advisory to provide support services to the Development Fund of Ukraine. As reported, the main purpose of the Fund is to attract private and public capital for the implementation of large-scale business projects in Ukraine.

The United States made the first decision to transfer assets confiscated from a Russian oligarch to Ukraine. The U.S. Attorney General Merrick Garland has [approved](#) the transfer of millions of dollars of assets belonging to Konstantin Malofeev, a businessman close to the Russian government, to Ukraine. Last year, the U.S. Department of Justice accused Malofeev of violating sanctions imposed on Russia in response to its invasion of Ukraine. According to the U.S. Department of Justice, Malofeev financed Russian agents who incited separatist sentiment in Crimea.

Kyivteploenergo has [charged](#) Euro-Reconstruction LLC (the operator of Darnytsia CHP in Kyiv) 1.5 billion UAH in debt for the use of its networks. As noted, Euro-Reconstruction LLC has not been paying for the use of municipal heating networks for the past three years, and Kyivteploenergo has sent an open appeal to the Regulator and law enforcement agencies to resolve the situation.

For subscriptions, comments and other questions, please email to:
author@dixigroup.org

SUPPORT UKRAINIAN ENERGY SECTOR



Ukraine urgently needs emergency energy equipment to restore energy supply in the regions affected by war. More than 12,000 items are on the list of requested emergency energy equipment. If your company, association or country is ready to help, please [contact the Energy Community Secretariat's Ukraine Support Task Force](#).

[Energy Community Homepage \(energy-community.org\)](http://energy-community.org)

SUPPORT UKRAINIAN ARMY

To financially support the Armed Forces of Ukraine, please follow the [link](#) (the National Bank of Ukraine special account).