

Weekly Alert

**Russian War Against
Ukraine: Energy Dimension**

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Russian War Against Ukraine: Energy Dimension
DiXi Group weekly review

(April 8 – 14)

#StopRussianAggression
#StandWithUkraine**Summary**

- The Russian Federation continued massive attacks on Ukrainian energy infrastructure. In particular, one of the biggest thermal generation facilities (Trypilska TPP) was completely destroyed by a missile strike. Given previous attacks by Russia, Centrenergo PJSC lost 100% of its generation capacities. Two DTEK Energo TPPs were also damaged.
- Russia has changed its tactics in striking energy infrastructure, using precision-guided missiles to destroy power plants in less protected regions. Some of the facilities will not be fully restored until next winter. Also, Russia continued to attack electrical substations and gas infrastructure facilities, particularly underground storages.
- Despite Russian attacks, the Ukrainian power system is balanced and operates steadily - Ukraine. Hourly power outages were applied in the Kharkiv region, and consumption limits were imposed on industrial consumers in the Dnipropetrovsk region on certain days. Also, emergency support from Poland, Romania, and Slovakia was requested several times.
- According to the IAEA, the safety situation at the Zaporizhzhia NPP site and in the surrounding area continues to deteriorate. All 6 units of Zaporizhzhia NPP have been put into a cold shutdown mode.

- russians are preparing another provocation at the Zaporizhzhia nuclear power plant - the General Staff of the Armed Forces of Ukraine.
- Preparations are underway at Khmelnytsky NPP to start construction of KhNPP-5 and KhNPP-6 units using Westinghouse AR1000 technology. Preparatory work for the construction of cooling towers has begun at the plant site.
- The Ukrainian government defined key objectives to minimize risks to the energy sector by next winter: repairs and attracting assistance from partners, decentralization of generation, and strengthening the air defense.
- During two years of its operation, the Ukraine Energy Support Fund attracted over 410 million EUR from 13 partner countries and international organizations. Most of the funds have been allocated to meet the urgent needs of energy companies from the frontline regions of Kharkiv, Mykolaiv, Sumy, Zaporizhzhia, Kherson, and Odesa (purchase of generators, power transformers, switches, spare parts, special equipment, fuel, and physical protection equipment for energy facilities).
- The Cabinet of Ministers held several international consultations and concluded documents with Slovakia, Denmark, and Latvia on the development of cooperation and the realization of specific initiatives in the energy sector.
- The government has canceled the public service obligation to export electricity, which required exporters to allocate 80% of their income to the SOE Guaranteed Buyer - Taras Melnychuk, representative of the Cabinet of Ministers in the Verkhovna Rada.
- The Cabinet of Ministers has extended special obligations of companies of Naftogaz Group to supply natural gas to household consumers, DSOs and electricity producers for 4 months until the end of August 2024. Similarly, the term of preferential supply of natural gas to heat supply companies was extended until August 31.
- Ukgazvydobuvannya JSC launched a well with a daily production of 140 tcm of natural gas. This is the fifth highly productive well launched by Naftogaz Group since the beginning of 2024.

IMPACT OF THE WAR

Attacks

On [April 8](#), Russia launched two drone attacks on a high-voltage substation in the Zaporizhzhia region, resulting in the damage of equipment. In the Dnipropetrovs'k region, rocket fragments caused an explosion on the territory of a gas infrastructure facility, damaging buildings.

On [April 9](#), Russia attacked high-voltage substations in Poltava and Lviv regions, causing a fire and damaging equipment.

On [April 10](#), a high-voltage substation in the Mykolaiv region was attacked, causing a fire. To eliminate the consequences of the strike, two high-voltage lines were disconnected, and consumers in Kherson and partially in Mykolaiv regions (more than 400,000 consumers in total) were cut off from the electricity supply. In addition, the shelling damaged a generation facility in the Odesa region, including industrial premises; no consumers were disconnected

On [April 11](#), the Russians carried out the third massive attack on [Ukrainian energy infrastructure](#) since the beginning of the year: Ukrenergo substations and thermal generation facilities in Odesa, Kharkiv, Zaporizhzhia, Lviv, and Kyiv regions were damaged. The enemy attack resulted in the **complete destruction** of Centrenergo's Trypilska [TPP](#) in the Kyiv region. A large-scale fire broke out in the turbine hall as a result of the attack. Prior to that, on March 22, 2024, Russians destroyed Zmiivska TPP in the Kharkiv region, and on July 25, 2022, they occupied Vuhlehirska TPP in the

Donetsk region. Thus, Centrenergo lost 100% of its generation. **Two [DTEK Energo TPPs](#)** were also affected and the equipment of the companies was severely damaged. Since the start of the full-scale invasion, DTEK Energy's thermal power plants have been shelled almost 170 times. In Odesa and Zaporizhzhia regions, equipment at high-voltage substations was [damaged](#) as a result of the attack. In the Lviv region, the enemy attacked a gas infrastructure - two [underground gas storage facilities of Naftogaz](#).

In addition, settlements near the front line were regularly hit during the week. In the Kharkiv region, equipment at a distribution system substation, gas pipelines, and gas distribution networks were damaged. In the **Donetsk** region, more than 22,000 consumers in dozens of settlements lost power supply. Overhead lines and substations were disconnected in the **Mykolaiv** region. In the **Dnipropetrovsk** region, equipment at a high-voltage power line and substation was damaged, and high-voltage overhead lines, industrial facilities, and household consumers were also cut off from electricity. In the **Odesa** region, equipment at high-voltage substations caught fire, and an overhead line was also disconnected. In the **Sumy** region, over 3,000 consumers lost power supply as a result of shelling; gas pipelines were also damaged. Electricity and natural gas distribution networks were damaged in the **Chernihiv** region.

According [to](#) the Minister of Energy Herman Halushchenko, the enemy's aim in attacking the energy sector is to destroy maneuverable generation. Halushchenko said that since March 22, large-scale attacks on the power system have been taking place daily, resulting in Ukraine's loss of a significant amount of thermal and hydro generation. There are also attacks on electricity transmission system facilities.

[According to](#) the Financial Times, Russia has changed its tactics in striking Ukraine's energy infrastructure, using precision-guided missiles to destroy power plants in regions less protected than Kyiv. Some of the facilities will not be fully restored until next winter.

Nuclear and Radiation Safety

[According to](#) the General Staff of the Armed Forces of Ukraine, by the intelligence information, Russians are preparing provocation at the Zaporizhzhia nuclear power plant - another false flag operation.

All 6 units of Zaporizhzhia NPP have been [put](#) into a cold shutdown mode. IAEA experts at ZNPP report that the security and safety at the plant site and around it continue to deteriorate. During the week, there were drone [attacks](#) near the plant site and the [use](#) of artillery by the Russians. The occupiers [do not provide](#) proper access for IAEA experts to all areas important for nuclear safety. On Monday, the IAEA Director General will address the UN Security Council in New York to discuss the deteriorating situation at ZNPP.

IAEA experts at Khmelnytsky, Rivne, and South Ukraine NPPs, as well as at the Chornobyl NPP, [reported](#) that nuclear safety has been maintained despite numerous threats over the past week. Scheduled repairs are underway at Rivne NPP Units 1 and 4. On April 8, the IAEA experts rotated to Khmelnytsky NPP.

On April 10 and 11, 2024, additional accesses of IAEA inspectors were conducted at the Hydrometallurgical Plant and the Smolinska mine of the Skhid GZK. The purpose was to verify the absence of undeclared nuclear activities and to take environmental metering. There were no comments following the inspections.

Countermeasures

On April 9, during a government meeting, Prime Minister Denys Shmyhal [said](#) that the government's objectives were to minimize risks to the energy sector by next winter through three

dimensions: 1) holding repairs and attracting assistance from partners; 2) decentralization of generation; 3) strengthening the air defense. Shmyhal [instructed](#) the relevant ministries to develop solutions to ensure the provision and procurement of the necessary energy equipment.

At a meeting of the Congress of Local and Regional Authorities, Energy Minister Herman Halushchenko [announced](#) measures planned to restore and increase capacity, including repairs to damaged equipment, increasing electricity import capacity, and implementing projects to increase flexible capacity.

On April 12, Deputy Prime Minister for Reconstruction Oleksandr Kubrakov [said](#) that the Reconstruction Agency was working to build drone and missile protection at 22 power substations. Drone shelters have already been erected at most of them, allowing several frontline regions to have electricity despite daily attacks. Kubrakov added that the construction of type III structures (antimissile protection) requires additional funding, so the government is working to find and attract international technical assistance - grants and affordable loans - to restore generation and the electricity transmission system. In the heating sector, Kubrakov said, they are focusing on modernizing and decentralizing facilities.

On April 10, under the coordination of the Ministry of Energy, power equipment provided by international partners, including 9 generators and 715 portable gasoline generators, as well as cables, disconnectors, and other power equipment needed for restoration work, was [transferred](#) to Kharkiv region. On April 13, Kharkivoblenergo [received](#) nine automobile towers at the expense of the Energy Support Fund.

The Ministry of Energy [reported](#) on the results of the two-year operation of the Energy Support Fund: as of April 9, the Fund attracted over €410 million from 13 partner countries and international organizations. Currently, over €393 million has been transferred to the account (the remaining amount is the announced contributions that will be transferred by donors in the near future). Most of the funds have been allocated to meet the urgent needs of energy companies from the frontline regions of Kharkiv, Mykolaiv, Sumy, Zaporizhzhia, Kherson, and Odesa, including the purchase of generators, power transformers, switches, spare parts, technical equipment, materials, special equipment, fuel, and physical protection equipment for energy facilities.

Additionally, on April 9, the Cabinet of Ministers [allocated](#) over UAH 176.5 million to restore water and heat supply facilities in the Kherson region damaged by the explosion of the Kakhovka hydroelectric power plant dam. The funds were allocated to the Kherson Regional State Administration from the state budget reserve fund. The funds allocated by the Government will be used to restore water supply facilities in the amount of UAH 139.38 million and heat supply facilities in the amount of UAH 37.16 million.

MARKETS PULSE

Electricity Sector

Power system operation

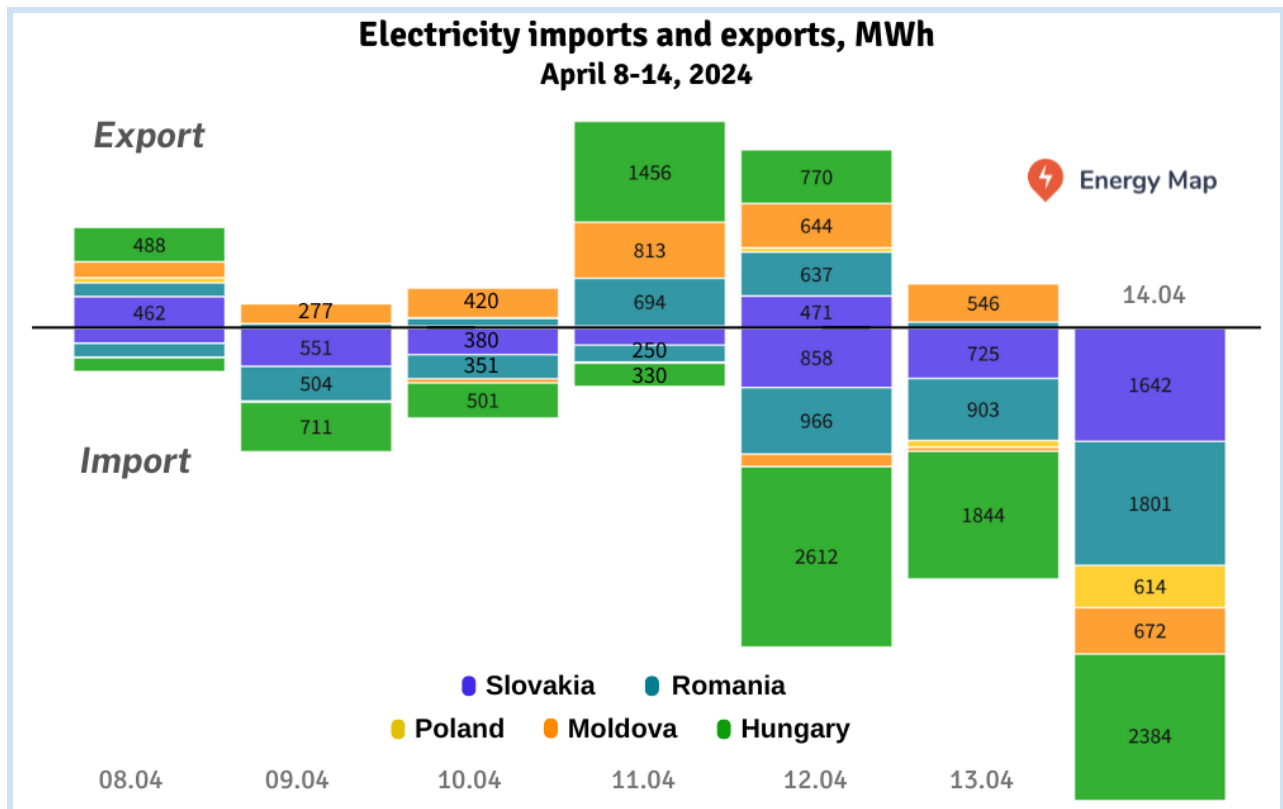
According to [Ukrenergo](#) and the [Ministry of Energy](#), the power grid is stable, balanced, and working steadily despite the Russian attacks. Due to network restrictions on the transmission system operator's lines, Ukrenergo's dispatch center applied hourly power outages in the Kharkiv region, and consumption limits were imposed on industrial consumers in the Dnipropetrovsk region on certain days.

Due to weather conditions and grid restrictions, Ukraine's power system experienced a surplus of electricity. To maintain the system's safe operation, Ukrenergo has been curtailing renewables daily and, on April 8-12, requested emergency support from Poland in the form of urgent offtake of surplus electricity, as well as support from Poland, Romania, and Slovakia to cover the domestic electricity deficit.

Due to **technological disruptions**, on April 9, a high-voltage substation in the Lviv region went offline cutting off power to the railway and industry, and reduced the generation of SPPs. 7,600 consumers in the Dnipropetrovsk, Zaporizhzhia, and Kyiv regions were disconnected. On April 10, equipment was disconnected at a high-voltage substation in the Poltava region, resulting in power outages for households in the Kharkiv and Poltava regions, industry, and the railway. On April 11, over 4,000 consumers in the Dnipropetrovsk and Sumy regions lost power supply; on April 12, 4,600 consumers in the Dnipropetrovsk region lost power supply; on April 14, almost 18,000 consumers in the Zaporizhzhia and Odesa regions experienced outages.

According to the [NEURC](#) and [ENTSO-E](#), during the week, commercial electricity exports and imports were performed with 5 countries (Moldova, Romania, Poland, Slovakia, and Hungary). Imports decreased by 57% to 19.9 GWh, while exports increased almost fivefold to 8.6 GWh.

Cross-border direction	Supply days in April	Supply volume, GWh	Week-on-week dynamics	Capacity range, MW
Moldova - Ukraine	8-14	1.0	-73%	2-116
Poland - Ukraine	13-14	0.7	-85%	5-209
Romania - Ukraine	8-14	5.0	-46%	2-255
Slovakia - Ukraine	8-14	4.6	-47%	1-255
Hungary - Ukraine	8-14	8.6	-57%	22-615
Ukraine - Moldova	8-13	2.9	+482%	14-80
Ukraine - Poland	8, 10, 12	0.1	not performed in the previous week	10-64
Ukraine - Romania	8-13	1.8	+371%	8-82
Ukraine - Slovakia	8, 10-12	1.0	not performed in the previous week	5-82
Ukraine - Hungary	8, 11-12	2.7	+184%	10-215



Source: [Energy Map](#)

Capacity allocation based on the results of daily auctions

Direction	Number of bidders/winners of the auction	Clearing price, EUR/MWh	Total revenue, thousand EUR	Ukrenergo's revenue, thousand UAH
Moldova - Ukraine	4-6	0.01-15.1	3.0	63.8
Poland - Ukraine	2-4 / 1-3	0.01-3.75	3.5	74.2
Romania - Ukraine	7-10	0.01-35.53	42.7	896.6
Slovakia - Ukraine	9-14 / 7-10	0.01-42.61	43.9	923.4
Hungary - Ukraine	1-5 / 1-4	0.1-25.81	99.7	2,095.5
Ukraine - Moldova	2-3 (April 8-13)	0.01-0.99	0.1	2.6
Ukraine - Poland	1-2 / 1 (April 8, 10, 12)	1.44-2.08	0.1	2.3
Ukraine - Romania	2-4 (April 8-13)	0.15-8	9.0	189.6
Ukraine - Slovakia	1-2 (April 8-12)	0.01-4.51	1.2	25.8
Ukraine - Hungary	1-2 (April 8-12)	0.06-6.74	1.4	29

Market performance

Bilateral contracts market (BCM): on April 8-14, Ukrainian Energy Exchange (UEEX) [held](#) 14 one-side auctions for trading electricity (5 in commercial and 9 in specialized sections). Trades were initiated by Guaranteed Buyer, Ukrhydroenergo, universal service suppliers, distribution system operators, etc. In total, 220.6 GWh were sold at UEEX (-75% week-on-week). The monthly Base BCM index for April remained at 2,662.5 UAH/MWh. Trading results for the week:

Company	Sales volume, GWh	Offer type	Price, UAH/MWh	Delivery period
Ukrhydroenergo	69.4	base load	2,407.67 – 2,721.67	April
	13.7	block positions (01-12)	2,070.33	
	4.8	block positions (13-24)	2,955.24	
Guaranteed Buyer	78.4	block positions	1,240-2,268.15	April

In the commercial sections, companies purchased/sold electricity by individual load profiles.

Day-ahead market (DAM): According to the [Energy Map](#) service, on April 8-14, DAM prices demonstrated high [volatility](#): the deviation of hourly prices from price caps ranged from 0 to 93.5%, with an average deviation of 49.6%. The number of cases with significant price deviations (over 50%) from the price caps was observed in 57.7% of the settlement periods (hours of the week). At the same time, the number of cases when prices were close (with a deviation under 1%) or at the level of price caps decreased and was observed in 1.8% of the settlement periods.

The average hourly electricity price (Base DAM index) moderately increased to 2,517.9 UAH/MWh (+16.7% WoW), while the weighted average daily price [ranged](#) from 2,242.3 to 2,935.5 UAH/MWh. At the same time, the ratio between the Base DAM indices in the markets of Eastern European countries (Poland, Hungary, Romania, Slovakia) and Ukraine significantly [ranged](#) from 0.30 to 1.78.

The total volume of electricity sales on the DAM of Ukraine moderately [decreased](#) and amounted to 429.1 GWh (-5.1%). The daily trading volume varied in the range of 55.7-65.5 GWh. The DAM remained in surplus: the ratio between the total daily volumes of sell and purchase bids ranged from 1.35 to 1.49. During the week, the total supply decreased to 609.9 GWh (-7.8%), while demand decreased to 433.2 GWh (-4.4%). At the same time, a deficit in the DAM was observed in 1.2% of the settlement periods. Suppliers [prevailed](#) in the purchase composition (89.7-91.2%), the share of system operators was 8.8-10.2%, and producers accounted for the rest (0.1-0.6%).

Policy and regulation

The Kyiv District Administrative Court [accepted](#) for consideration the case filed by Karma Trading LLC against the NEURC. The lawsuit concerns the NEURC's obligation to consider setting the price caps for DAM and IDM in accordance with the methodology and to declare illegal and invalid certain resolutions of the NEURC regarding changes in the price caps. The court hearing is scheduled for May 1, 2024.

The Regulator has provided [clarifications](#) for retail market participants on the possibility of concluding self-production contracts with active consumers. Thus, active consumers who have installed cogeneration units and use alternative energy sources to generate electricity must meet the following requirements:

- electricity generation is not their core activity;
- the installed capacity of generating facilities at one site is under 5 MW;
- annual electricity supply to the grid is under 50% of the total amount of their electricity consumption (from the grid and from the installations of the active consumer);
- permitted capacity for supply is under 50% of the permitted (contractual) consumption capacity;
- must be recorded in the relevant NEURC Register, indicating the type of fuel used by the cogeneration unit.

The NEURC [has published](#) a draft resolution amending the Market Rules and the Methodology for Setting Prices for Ancillary Services. The amendments relate to the launch of special auctions for the purchase of ancillary services for frequency and active power control by the transmission system operator. The aim is to increase supply in the ancillary services market and stimulate the construction of power plants capable of providing automatic reserves to address the shortage of flexible generating capacities in Ukraine's IPS.

The Regulator [published](#) a draft resolution on amending the Transmission System Code on the implementation of a compensation mechanism between TSOs and a common regulatory approach to setting electricity transmission fees. Another draft resolution provides for [amendments](#) to the Electricity Commercial Metering Code regarding the approval of regulatory documents of the commercial metering administrator.

The NEURC [published](#) a draft resolution amending the License Terms for Electricity Distribution. In particular, the licensees must ensure the functioning of the personal accounts of the distribution services customers and the commercial metering service customers on its website. In addition, it is clarified that the licensees must perform the operation and maintenance of the distribution system (except for parts of the distribution system under agreements on the joint use of technological power grids) exclusively by their own personnel with whom employment contracts have been concluded.

The Regulator also [published](#) data on compensation provided to consumers for non-compliance with electricity supply quality standards, in particular in 2023:

- for non-compliance with voltage standards, 45,195 consumers received compensation totaling UAH 4.6 million;
- for interruptions in the supply of more than 22 hours - 3,710 consumers (UAH 1.9 million);
- for failure to meet the deadlines for eliminating the causes of unsatisfactory quality - 15,500 consumers (UAH 3.4 million);
- for exceeding the deadline for consideration of consumer complaints regarding quality - 18,261 consumers (UAH 5.9 million).

According to Taras Melnychuk, a representative of the Cabinet of Ministers in the Verkhovna Rada, the government [has canceled](#) the public service obligation to export electricity, which required exporters to allocate 80% of their income to the SOE Guaranteed Buyer.

Gas

Gas system operation

On April 7-13, the volume of gas transit through the territory of Ukraine amounted to 41.8-42.6 mcm per day, i.e., 38-39% of the capacity contracted by Gazprom (109 mcm per day). In the reporting week the average daily transit was 42.2 mcm (almost corresponds to the indicator of the previous week).

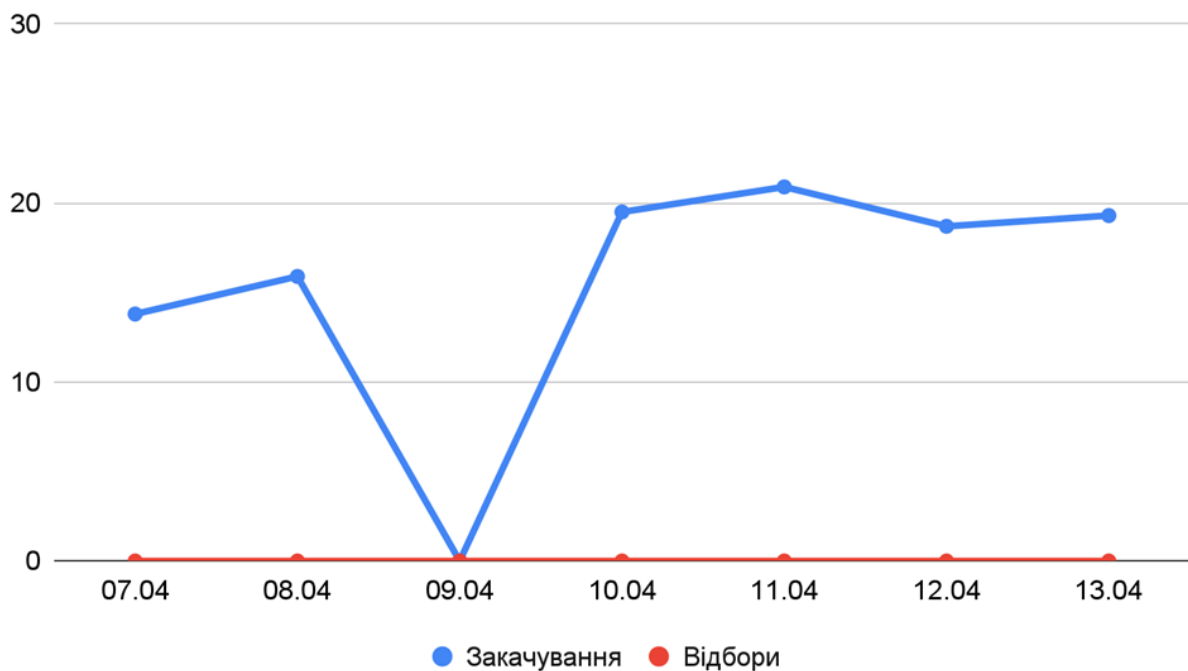
At the same time, in the reporting week physical imports of gas from Hungary amounted to 12.7 mcm (-49%). Probably, these flows or part of them pass through Ukraine in transit and are further transported to Moldova or Slovakia. Also, part of these flows could be subsequently injected into Ukrainian underground storages. Commercial flows into the Ukrainian system from Hungary almost corresponded to the physical indicators (12.6 mcm). In particular, 6.1 mcm arrived in the "customs warehouse" mode and 7 mcm in the short-haul mode (service of the TSO, which provides a discount in the transmission tariff for transit over short distances).

Commercial exports through the VIP Ukraine-Poland were stopped. However, it is likely that part of the volumes exiting the Ukrainian system to Moldova and Slovakia is the transmission of gas, which either was stored by foreign companies in Ukrainian storages or was previously imported from Hungary. This assumption is due to the fact that on April 7-13, 19.1 mcm of natural gas was transported to the exit from the Ukrainian GTS in the "customs warehouse" mode (+3% WoW). Besides, in the reporting week, 19.4 mcm of gas exited Ukrainian GTS in the "short-haul" mode (almost corresponding to last week's indicator).

Underground storage facilities

According to the [AGSI platform](#), as of April 13, 3.56 bcm of gas was accumulated in the Ukrainian storage facilities (+0.44% as compared to April 6). It corresponds to 11.8% of the total working capacity, i.e., without 4.662 bcm of "long-term storage" buffer gas. Injections in storages in the reporting week amounted to 108.1 mcm (+67%); the average daily injection amounted to 15.4 mcm.

Natural gas withdrawals and injections into/from Ukrainian storage facilities, mcm



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

Gas market performance

In the [trading sessions](#) of April 8-12, five companies (three buyers and two sellers) submitted bids for purchasing gas at the Ukrainian Energy Exchange (UEEX). In the reporting period, UEEX received bids for 261.8 mcm of gas (+6% WoW) with a total starting cost of 3.08 billion UAH (+10.2%). The weighted average starting price of bids was 11.78 UAH/cm (excluding VAT, +3.9%).

In the monitoring period, 60 mcm (+55%) at a weighted average price of 12.1 UAH/cm (without VAT) (+5.6%) were purchased. 82.7% of the resource was bought by GSC Naftogaz Trading LLC, 15.6% was sold by Ukrnafta, and 1.7% - was bought by GTSOU. 14.6% of gas was sold with transfer at a virtual trading point (transfer to GTS), and 85.4% - with transfer in storages. 85.4% was sold with delivery in April, 14.6% - in May 2024.

During the meeting with representatives of Ukrainian private gas production companies, the Naftogaz CEO Oleksii Chernyshov [stated](#) that the companies of the Naftogaz Group are ready to buy all volumes of privately produced gas that Ukrainian companies will offer in 2024.

Policy and regulation

The Cabinet of Ministers [adopted](#) amendments to Resolution No. 222 dated March 6, 2022, which imposes special obligations on Naftogaz Group companies regarding gas supply to household consumers, DSOs and electricity producers. According to the amendments, the effect of special obligations was extended for 4 months - until the end of August 2024.

Similarly, a [separate resolution](#) extended the term of preferential supply of natural gas to heat supply companies until August 31. Also, the list of information that heat supply companies must provide to the NEURC for monitoring the use of tariff incomes has been clarified. Another [resolution](#) changes the formula for calculating the price of selling gas to heat supply companies for the production of heat for consumers of the "other" category (i.e., consumers who are not households or public sector entities). Now the coefficient that takes into account the time value of money at the NBU discount rate is presented without specifying a specific numerical value, which will allow changing the coefficient and taking into account fluctuations in the discount rate.

Other

Ukrgezvydobuvannya JSC [launched](#) a well with a daily production of 140 tcm of natural gas. This is the fifth well launched by Naftogaz Group since the beginning of 2024. The well is 2,350 meters deep and was drilled in one of the partially depleted fields in the eastern part of Ukraine.

Oil and Motor Fuels

As [reported by](#) specialized media, on April 10, the weighted average price of liquefied petroleum gas (LPG) at the UEEX auction decreased to 41,095 UAH/t, i.e., by 802 UAH/t if compared to the previous auction. The producers managed to sell almost the entire volume of gas offered for sale (5.1 thousand tons). The price of LPG by Ukrnafta PJSC varied in the range of 40,746-41,700 UAH/t, by Ukrgezvydobuvannya JSC – 41,000-41,535 UAH/t. At the private producers' auction on April 9, the price of LPG ranged between 38,600-41,160 UAH/t.

Also, in the first 10 days of April, the wholesale price of petroleum [increased by](#) 1.2 UAH/l, up to 49.27 UAH/l.

International Cooperation

During the intergovernmental [consultations](#) between Ukraine and Slovakia, the representatives of two delegations discussed joint steps in the nuclear field, diversification of oil and natural gas transmission routes, as well as synchronization of market conditions and products to increase liquidity in the gas and electricity markets. The Deputy Minister of Energy of Ukraine, Mykola Kolisnyk, and the Minister of Economy of Slovakia, Denisa Sakova, discussed increasing the capacity of interconnectors and developing projects of common interest for maximum market synchronization. Additionally, the parties signed a Memorandum on deepening cooperation in the nuclear sector and agreed on cooperation to foster investment in the energy sector and ensure the operation of energy systems of both countries.

During his speech at the Budapest LNG Summit, the Deputy Minister of Energy of Ukraine, Mykola Kolisnyk, [emphasized](#) that the Ukrainian gas infrastructure is an integral part of the EU gas transmission system as a single Eastern European gas market. Over 200 European traders utilize the Ukrainian gas transmission infrastructure annually, and their number continues to grow. The Deputy Minister noted that despite the military actions in Ukraine, the exchange products, new services of gas TSO and UGS operator, and new supply routes, such as the Vertical Corridor, are being developed.

During the meeting between the Minister of Energy of Ukraine Herman Halushchenko and the Minister of Climate, Energy, and Utilities of the Kingdom of Denmark Lars Aagaard:

- The parties [entered into agreements](#) on partnership in the field of renewable energy with a special emphasis on biogas. This area will be included in the Ukraine-Denmark Energy Partnership Program. The relevant document was signed by the heads of the ministries;
- Denmark announced a 5.8 million USD [contribution](#) to the Ukraine Energy Support Fund to foster necessary reconstruction efforts enabling Ukraine to maintain its energy supply;
- The ministers discussed implementing other cooperation programs, including a study by Ukrainian experts of Danish experience in the development of the energy sector within the framework of the energy modeling program.

Following Lars Aagaard's [meeting](#) with the team of the Ministry of Communities, Territories and Infrastructure Development of Ukraine, a Memorandum of Partnership was signed between the Ministry of Infrastructure of Ukraine, the State University of Information and Communication Technologies, Kyiv National University of Construction and Architecture, the National Technical University "Igor Sikorsky Kyiv Polytechnic Institute" and the Ministry of Climate, Energy and Utilities of Denmark. Denmark will support the implementation of joint educational and scientific projects and the organization of study tours and internships for Ukrainian students with their further involvement in the development and implementation of energy efficiency and renewable energy policies in Ukraine.

During the Steering Committee meeting of the Multi-Agency Donor Coordination Platform (MDCP) in Kyiv, the Minister of Communities, Territories and Infrastructure Development of Ukraine, Oleksandr Kubrakov, [emphasized](#) that the restoration and protection of energy infrastructure are essential conditions for the recovery and functioning of Ukraine's economy. The meeting was attended by representatives of the Government of Ukraine, G7+ countries, and international financial organizations. Among the topics discussed were the restoration of the private sector, involvement of business in Ukraine's recovery, utilization of frozen Russian assets, and budget support issues. The Ukrainian side proposed to organize the work of the technical Secretariat of the MDCP directly in Kyiv to ensure high-quality sectoral coordination.

As part of the Ukrainian-American cooperation, preparations [are underway](#) at the Khmelnytsky NPP for the construction of energy units KhNPP-5 and KhNPP-6 using Westinghouse AR1000 technology. Preparatory work for the construction of cooling towers has begun at the plant site.

In Vilnius, the President of Ukraine, Volodymyr Zelenskyy, and the President of Latvia, Edgars Rinkēvičs, [signed an Agreement](#) on cooperation in the field of security and long-term support. The document confirms the readiness of the Republic of Latvia to assist with recovery and reconstruction, critical infrastructure protection, demining, unmanned technologies, and cybersecurity. The document is valid for ten years and allows for its extension by consent of the parties. According to the document, Latvia will continue to support the strengthening of Ukraine's energy sector by providing training, materials, and technical equipment, as well as exchanging experience in energy policy development.

The report was prepared on the basis of carefully checked and analyzed reports from more than 100 official sources: ministries, state agencies, network operators and energy companies. The information was collected from official websites and social media pages, and in some cases, media reports. For subscription, comments and other questions, please write 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).