

## Weekly Alert

**Russian War Against  
Ukraine: Energy Dimension**

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**Russian War Against Ukraine: Energy Dimension**  
**DiXi Group weekly review**

(November 27 – December 3)

**#StopRussianAggression**  
**#StandWithUkraine****Summary**

- On November 27, shelling damaged equipment at a thermal power plant in the eastern region, on November 30 – a cogeneration facility in the south of Ukraine, with damage to buildings and equipment. As of December 4, 420 settlements in Ukraine remained without electricity supply due to hostilities and technological disruptions.
- On December 1, the occupied Zaporizhzhia NPP lost connection to both external power lines. Supply was provided by diesel generators. On December 2, at 07:00, Ukrainian specialists resumed the connection.
- Electricity consumption was covered by domestic production, as well as by imports from Romania, Slovakia, Poland, Moldova and emergency assistance. Due to increased demand, difficult weather conditions and repairs at generation facilities, the power system experienced deficit in some hours.
- Following the trades on the bilateral contracts market, the Base index for December continued to slightly decrease - to 3,871.5 UAH/MWh (-2.2% WoW). On the day-ahead market, which was

largely in surplus, the Base index increased significantly to 4,506.6 UAH/MWh (+37%). Inter alia, the NEURC's decision to raise price caps starting from November 30 contributed to this.

- On November 28, the ENTSO-E Regional Group Continental Europe confirmed Ukrenergo's full implementation of the Catalog of Measures, which means the completion of synchronization between the United Power System of Ukraine and the European continental grid. The TSOs also decided to increase the maximum volume of electricity imports to Ukraine and Moldova to 1,700 MW.
- The Regulator supplemented the Procedure for the Formation, Maintenance and Use of the License Register with new types of activities - electricity distribution by small distribution systems and aggregation.
- Commercial imports into the Ukrainian gas system have stopped, while commercial exports by non-residents reached 77.5 bcm (actually corresponds to physical volumes). The average daily withdrawal from storages amounted to 83.7 bcm.
- Naftogaz denied the fake information about the introduction of a "social gas tariff", according to which the price of 4 UAH/bcm was allegedly set for families of military personnel, pensioners, large families and low-income households.
- The wholesale price of LPG decreased for the first time since the end of September. Among the reasons is an increase in imports on November 20-27 by 80% as compared to the first week of the Polish carriers strike.
- The government increased by 5.774 billion UAH the amount of loans from the state budget to the Ministry of Energy under the programme "Reconstruction of hydroelectric power plants of Ukrhydroenergo"
- The Cabinet of Ministers approved the Concept of the State Target Economic Program for Energy Modernisation of State-Owned or Municipal Heat Producers by 2030. The implementation of planned measures will allow to reduce annual consumption of natural gas by more than 1 bcm and cut annual GHG emissions by about 2 Mt CO<sub>2</sub>-eq.
- The European Commission supported the hydrogen corridor between Ukraine, Slovakia, Czechia, Austria and Germany as one of Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs) – GTSOU.
- The United States provided a 25 million USD grant contribution to the Ukraine Energy Support Fund. In total, 132 agreements on the purchase of energy equipment, fuel and materials worth almost 100 million EUR have already been concluded under the Fund framework this year.
- At the 2023 UN Climate Change Conference (COP28), Ukraine supported the Declaration to Triple Nuclear Energy Capacity by 2050 and joined the Climate Relief, Recovery, and Peace Declaration.
- The Specialized Anti-Corruption Prosecutor's Office and the National Anti-Corruption Bureau sent an indictment to the court against Andrii Kobolyev, the ex-CEO of Naftogaz, who is accused of unlawful appropriation of 229 million UAH in bonuses.

# IMPACT OF THE WAR

## Attacks

### *Shelling of energy infrastructure*

[According to](#) the Ministry of Energy, as of December 4, 420 settlements in Ukraine remained without electricity supply due to hostilities and technological disruptions. Hostile attacks and, consequently, the interruption of electricity and gas supply took place in:

**Donetsk region.** On [November 27](#), 3 mines were disconnected from power supply due to shelling, and more than 70 miners were trapped underground. On [November 28](#), 19 settlements (7,300 consumers) were offline. On [November 29](#), 6 settlements (3,900 consumers) lost power supply. On [November 29](#), a mine building was partially destroyed by shelling; 4 employees were trapped under the rubble, sustaining injuries of varying severity; a power engineer also suffered shrapnel wounds. On [November 30](#), 54 settlements (almost 30,000 consumers) were disconnected as a result of the weather and hostilities. On [November 30](#), a mine with 47 workers lost power supply, which was restored in 40 minutes. On [December 1](#), 5,600 consumers lost electricity supply; on [December 3](#), 3,400 consumers were offline.

**Zaporizhzhia region.** As of [November 28](#), almost 30,000 metering points were without electricity due to the hostilities; on [November 29](#) - about 26,000 metering points; on [December 1](#) - more than 30,000 consumers; and on [December 3](#) - over 26,000 consumers.

**Kharkiv region.** As of [November 29](#), almost 17,000 consumers were without electricity supply; on [November 30](#) - 16,700 consumers.

**Kherson region.** On [November 30](#), 1,200 consumers lost power supply in the regional center as a result of shelling. 45 settlements in the region (about 7,000 consumers) remained offline.

**Dnipropetrovsk region.** On [November 29](#), 622 consumers were disconnected; gas distribution pipelines [were damaged](#). On [December 1](#), over 3,000 consumers were left without electricity supply.

**Chernihiv region.** On [November 28](#), 32 settlements were without electricity supply in full and 8 partially (1,800 consumers in total); on [November 29](#) - 12 settlements (1,200 consumers); and on [November 30](#) - 15 settlements (1,700 consumers). On [November 30](#), an overhead line was damaged by shelling, and 4 settlements were disconnected. On [December 3](#), as a result of hostilities, 23 settlements (1,200 consumers) were without electricity supply.

**Sumy region.** As of [November 28](#), 58 settlements (2,700 consumers) were offline due to shelling; on [November 29](#) - 56 settlements (2,600 consumers). On [November 29](#), shelling damaged a gas supply pipeline in one of the settlements. As of [November 30](#), 107 settlements (about 12,000 metering points) were without electricity supply as a result of hostilities and technical problems. On [November 30](#), shelling caused equipment at one of the substations to catch fire, resulting in a power outage in 10 settlements; a gas distribution pipeline was also damaged. On [December 1](#), 73 settlements (5,600 metering points) were offline as a result of hostilities.

On November 27, shelling damaged equipment at a [thermal power plant in the eastern region](#). The facility did not stop operation, but electricity and heat supply to the satellite city was suspended. On November 30, a [cogeneration plant in the south](#) of Ukraine was shelled, causing damage to buildings and equipment; district heating was not interrupted, yet electricity supply was limited.

## Nuclear and Radiation Safety

On December 1, the occupied Zaporizhzhia NPP [lost](#) connection to both external power lines. The IAEA team of experts on the site reported that, at around 22:26 local time, the connection of the ZNPP to the single 330 kV backup line was interrupted due to an external fault. About five hours later, the 750 kV line lost power. As a result, 20 diesel generators automatically started up, and 8 of them were later left in operation. On December 2, at 07:00, Ukrainian specialists resumed the connection to the power grid, namely the 750 kV line was [restored](#).

According to Energoatom, the highest safety threat is at the ZNPP Unit 4. It is caused by the fact that the occupiers operated it - in violation of the license conditions - and kept it in a "hot shutdown" state. When main circulation pumps that cool the core are disconnected from the power supply, the reactor switches to the natural circulation mode. This mode is difficult for the nuclear installation, as its duration is limited by the design, and it can lead to the failure of main equipment of the unit. Unit 4 needs to be urgently transferred to a "cold shutdown" state.

The IAEA team monitoring the situation at the Khmelnytskyi NPP [reported](#) that, on November 29, while in their offices, they heard several explosions near the site.

## Countermeasures

On December 1, at a government meeting, the Prime Minister Denys Shmyhal [announced](#) that the process of synchronizing the Ukrainian and European power systems has been completed. In addition, a decision was made in Brussels that will allow Ukraine to import up to 1.7 GW of electricity from Europe (+500 MW) to cover possible winter shortages. For more details, see the "Power system operation" section below.

In addition, the government [increased](#) by 5.774 billion UAH the amount of loans from the state budget to the Ministry of Energy under the programme "Reconstruction of hydroelectric power plants of Ukrhydroenergo" and by 5 million UAH - for the programme "Improving the efficiency of electricity transmission (modernisation of substations)".

On the same day, an agreement was [signed](#) with the winner of the tender for the procurement of services to select members of the Supervisory Board for Energoatom, which continues the process of transforming the state-owned enterprise into a joint-stock company.

On November 28, the Cabinet of Ministers [approved](#) the Concept of the State Target Economic Program for Energy Modernisation of State-Owned or Municipal Heat Producers by 2030. For more details, see the "Gas" section (Policy and regulations) below.

On November 30, the government [amended](#) the terms of the program for incandescent-to-LED lamps exchange, allowing pensioners to receive each additional five LED lamps.

## MARKETS PULSE

### Electricity Sector

#### *Power system operation*

According to [Ukrenergo](#) and the [Ministry of Energy](#), electricity consumption was covered by domestic production, as well as by imports from Romania, Slovakia, Poland, Moldova and emergency assistance. During the bad weather, output from wind power plants was curtailed to prevent overload: on November 27, in the Odesa region and on November 30 (region not specified). On November 29, from 13:00, due to increased consumption, difficult weather conditions and repairs at generation facilities, the power system experienced a deficit of electricity. To balance the system, emergency assistance from Romania and Poland (3,200 MWh) was activated.

**Repairs continued** at the generation facilities. On November 27, a 100 MW TPP unit came out of scheduled long-term repairs; two TPP units were put under emergency repair. On November 28, a TPP unit was taken offline for emergency repairs; one unit was put back into operation. On November 29, a 180 MW TPP unit was put online after scheduled maintenance; 2 TPP units were put under short-term repair. Also, due to severe weather conditions, hydroelectric units at one of the HPPs were shut down for a short time. On November 30, additional capacities were put into operation to meet the demand: a 100 MW CHP unit, a 180 MW TPP unit, and a hydroelectric unit that can supply over 300 MW to the system at its maximum capacity. On December 1, a 100 MW CHP unit was taken offline for emergency short-term repairs, and brought back online within a day.

On December 3, 5 units at TPPs in different regions were offline for emergency repairs for various technical reasons.

The main reason for the outages during the week was **adverse weather conditions**, in particular:

- *On November 27*, 2,019 settlements in 16 regions were without power offline, with the largest number of outages in the Odesa (349 settlements / 148,000 consumers), Mykolaiv (266/88,000) and Kyiv (220/40,000) regions. 32 overhead lines (110-35 kV) were disconnected in the distribution systems. Also, four Ukrenergo's 330 kV lines were disconnected in the Odesa region.
- *On November 28*, 599 settlements remained offline, most of them in the Odesa (312/95,600), Mykolaiv (118/20,600), Donetsk (34/12,800) and Kherson (34/10,500) regions.
- *On November 29*, 368 settlements were without power supply, most of them in the Odesa (228/54,100), Mykolaiv (32/7,600) and Poltava (27/6,700) regions.
- *On November 30*, 191 settlements were disconnected, most of them in the Odesa (109/25,600) and Sumy (49/6,700) regions. Ukrenergo repair crews have restored all 330 kV main lines in the southern region that were damaged due to the weather.
- *On December 1*, 66 settlements remained offline, most of them in the Zakarpattia (35/6,700), Odesa (14/7,700) and Sumy (12/2,400) regions.
- *On December 2*, 497 settlements were left without electricity supply, most of them in the Lviv (305/52,000), Ivano-Frankivsk (72/19,000), Ternopil (67), and Khmelnytskyi (50/6,700) regions.
- *On December 3*, 504 settlements were offline, most of them in the Lviv (388/41,000), Ivano-Frankivsk (36/20,000) and Ternopil (32/3,900) regions.

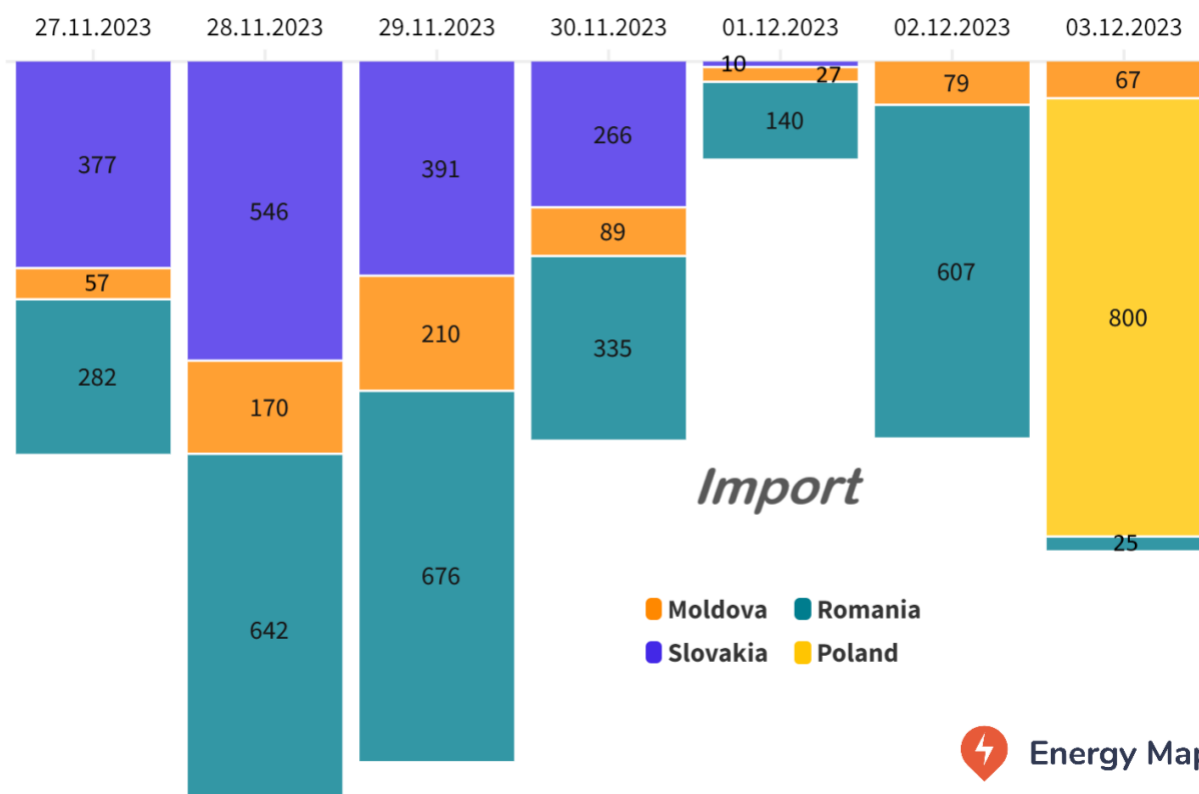
Another reason for the outages was **technological disruptions**. On November 29, overhead lines were disconnected in the Vinnytsia region (4,500 consumers). In Dnipropetrovsk region, 3 settlements (4,500 metering points) were cut off from electricity supply. On November 30, 640 consumers were disconnected in the Chernihiv region and 809 in the Zaporizhzhia region. On December 1, 190 consumers in the Dnipropetrovsk region were offline. On December 2, due to a damaged circuit breaker at Ukrenergo's 330 kV substation, a line was disconnected, resulting in an outage for consumers. On December 3, 16,800 consumers in the Volyn region, 4,100 in the Zaporizhzhia region, and 1,400 in the Kirovohrad region were temporarily disconnected.

On November 28, the ENTSO-E Regional Group Continental Europe [confirmed](#) Ukrenergo's **full implementation of the Catalog of Measures, which means the completion of synchronization between the United Power System of Ukraine and the European continental grid**. The operators also decided to increase the maximum volume of electricity imports to Ukraine and Moldova to 1,700 MW. This decision is based on the results of studies on the safety and stability of synchronous operation of the Ukrainian and European power systems. According to the CEO of Ukrenergo Volodymyr Kudrytskyi, these achievements will help to significantly increase the flexibility and reliability of the Ukrainian system and create the preconditions for expanding cooperation.

According to the [NEURC](#) and [ENTSO-E](#), no commercial electricity exports were performed during the week. Imports decreased almost threefold and arrived from Romania, Slovakia, Poland, and Moldova. Commercial imports from Romania were performed every day, with a [total volume](#) of 2.7 GWh (-58% week-on-week), and capacity ranging 10-272 MW. Deliveries from Slovakia were carried out on November 27 - December 1 and amounted to 1.6 GWh (-80%), with a capacity range 2-219 MW. Deliveries from Poland were performed only on December 3 from 18:00 to 22:00 on a flat schedule of 200 MW, the total volume reached 0.8 GWh (-27%). Imports from Moldova were performed in small volumes (from 1 to 108 MW) during the week, with a total volume of 0.7 GWh (-12%).

## Electricity import and export, MWh

November 27 - December 3



Source: [Energy Map](#)

At the daily auctions, 2 to 7 companies [booked](#) capacity for imports in the Romania-Ukraine direction; the main players were Solipower, CPG Energy, Dnirostal-Energo and Kub Energy. The marginal price was set on November 29-30 in the range from 0.22 to 4.01 EUR/MWh, and the revenue of Ukrenergo reached 1,600 EUR (around 64,000 UAH). The capacity from Slovakia was booked by 5-13 companies, with the main players being D.Trading, ERU Trading, TEP and TES. The marginal price was zero. On December 2-3, in the Rzeszów-KhNPP direction, capacity was booked by Euromin Energy with a zero marginal price. In the Moldova-Ukraine direction, capacity was booked by 4-6 companies, with the main players being Artlex-Group, Solipower, CPG Energy, Kub Energy, etc. The marginal price was set on November 28 in the range from 0,04 to 7.11 UAH/MWh, and the revenue of Ukrenergo reached 4,700 UAH. For exports, no capacity was booked.

## Electricity market performance

**Bilateral contracts market (BCM):** Trading dynamics at the Ukrainian Energy Exchange (UEEX) continued the trend of the previous week and showed a sharp increase for the second time. Between November 27 and December 3, UEEX [held](#) 22 auctions for the purchase/sale of electricity (7 in commercial and 15 in specialized sections). Among the initiators of the auctions were Energoatom-Trading, Guaranteed Buyer, Centrenergo, Donbasenergo, Kharkiv CHP-5, Aquaresurs-1, Shamraivskiyi Tsukor, universal service suppliers, distribution system operators and others. In total, 2,599.5 GWh were sold at UEEX with the delivery period in December (+51% week-on-week). The monthly Base BCM index for November remained at 3,859.6 UAH/MWh, while the index for December continued to slightly decrease - to 3,871.5 UAH/MWh (-2.2%).

In particular, Energoatom-Trading sold 1,967.9 GWh of baseload in two trading sessions at prices in the range 3,855.5-3,856.6 UAH/MWh. Kharkiv CHP-5 sold 145.8 GWh of baseload in the specialized section at a weighted average price of 3,900.9 UAH/MWh. Donbasenergo sold 186

GWh of baseload at a weighted average price of 3,871.4 UAH/MWh. Centrenergo sold 157.2 GWh of baseload at prices of 3,857.1-3,905.0 UAH/MWh. Aquaresurs-1 sold 5.2 GWh of baseload at a weighted average price of 3,982.3 UAH/MWh, 8.9 GWh of block position (08-23) at 4,989.0 UAH/MWh and 4.5 GWh (24-07) at 2,450.7 UAH/MWh. Shamraivskiyi Tsukor sold 0.3 GWh of baseload at a weighted average price of 3,705.0 UAH/MWh. Guaranteed Buyer sold 14.5 GWh in block positions of daytime hours at prices 4,301.8-4,669.3 UAH/MWh. In the commercial sections, the companies purchased/sold electricity for individual load profiles.

**Day-ahead market (DAM):** According to the [Energy Map](#) service, from November 27 to December 3, DAM prices showed high [volatility](#): deviations of hourly prices from price caps ranged from 0 to 91.1% and averaged 26.4%. The number of significant price deviations from the price caps (over 50%) was observed in 11.3% of the settlement periods (hours). At the same time, the number of hours when prices were close (with a deviation under 1%) or at the level of price caps again slightly decreased and amounted to 8.3% (compared to 9.5% in the previous week).

The average hourly price of electricity (Base DAM index) increased significantly to 4,506.6 UAH/MWh (+37% week-on-week), while the weighted average daily price [varied](#) in a slightly wider range of 3,237.8-4,777.1 UAH/MWh. At the same time, the ratio between the Base DAM indices in the countries of Eastern Europe (Poland, Hungary, Romania, and Slovakia) and Ukraine increased and [ranged](#) from 0.99 to 1.8.

The total volume of electricity sold on the DAM continued an upward trend and [increased](#) to 584.1 GWh (+6.6%). The daily trading volume varied 64.7-92.9 GWh. In general, the DAM was in surplus: the ratio between the total daily volume of sell and purchase bids ranged from 1.18 to 1.81. At the same time, in 3.6% of the settlement periods (mainly 16:00-18:00), deficit was reported (there were no deficit hours in the previous week). Suppliers [prevailed](#) in the electricity purchase structure (89.5-91.7%), system operators' share was 8.3-10.5%, and the rest (up to 0.1%) belonged to producers and traders.

**Monthly numbers for the DAM and intraday market (IDM):** In November 2023, the Base index on the DAM amounted to 4,041.0 UAH/MWh, and the weighted average price of electricity was 4,357.8 UAH/MWh. The volume of trading on the DAM increased by 46.2%, while the volume of trading on the IDM decreased by 3.7%. In November, 2,345.0 GWh were accepted in both market segments. Demand on the DAM increased by 44.3% as compared to October, while supply increased by 36%. Demand on the IDM decreased by 6.1%, supply decreased by 19.8%.

## **Policy and regulation**

The Energy Community Secretariat [has commended](#) the NEURC's decision to raise price caps starting from November 30, noting this step will further liberalize the market, create economic conditions for electricity imports and improve the reliability of electricity supply.

The Regulator [has approved](#) amendments to the Methodology for calculating the tariff for universal service suppliers (USS). In particular, for the USS operating in the territories where military operations are (were) conducted or temporarily occupied by the Russian Federation, when determining the 2024 tariff for universal services, the current volumes of electricity supply to consumers in the applicable 2023 tariffs are used instead of the forecasted volumes taken into account (the changes apply to 4 USS: Donetsk Energy Services, Zaporizhzhiaelectropostachannia, Enera Skhid, and Khersonska Regional Energy Supply Company).

The Regulator [has also amended](#) the Methodology (Procedure) for the formation of transmission and distribution systems connection fees, in particular by approving the specific cost of standard connection for 1 kW of the customer's installations for the period of martial law - for the calculation of the rates for standard connection. In addition, the NEURC supplemented the Procedure for Temporary Connection of Electrical Installations to the Distribution Systems in the Period of Martial Law in Ukraine, according to which the DSOi shall connect electric vehicle charging stations and/or energy storage facilities by January 1, 2025, without payments for the capacity connection.

The Regulator [amended](#) the Procedure for Setting (Formation) of Electricity Distribution Tariffs in terms of determining certain components of tariff calculation for DSOs located in the territories

where military operations are (were) conducted or temporarily occupied by the Russian Federation (the amendments apply to 6 DSOs: DTEK Donetsk Power Grids, Zaporizhzhiaoblenergo, Khersonoblenergo, DTEK High Voltage Networks, Luhansk Energy Association, and Regional Electricity Networks).

Given the ongoing reform of the Ukrainian electricity market based on the EU model and the introduction of new forms (models) of market participation, the Regulator [supplemented](#) the Procedure for the Formation, Maintenance and Use of the License Register with new types of licensed activities - electricity distribution by small distribution systems and aggregation in the electricity market. At the same time, the Regulator restricted access to some information from the license register in order to protect information under martial law.

In addition, the Regulator has [published](#) a draft resolution "On Amendments to the Code of Commercial Metering of Electricity" to bring its provisions in line with the requirements of the Law "On Amendments to Certain Laws of Ukraine on Restoration and Green Transformation of the Energy System of Ukraine" in terms of taking into account the peculiarities of organizing commercial metering for active consumers, generating facilities of private households, and aggregation units.

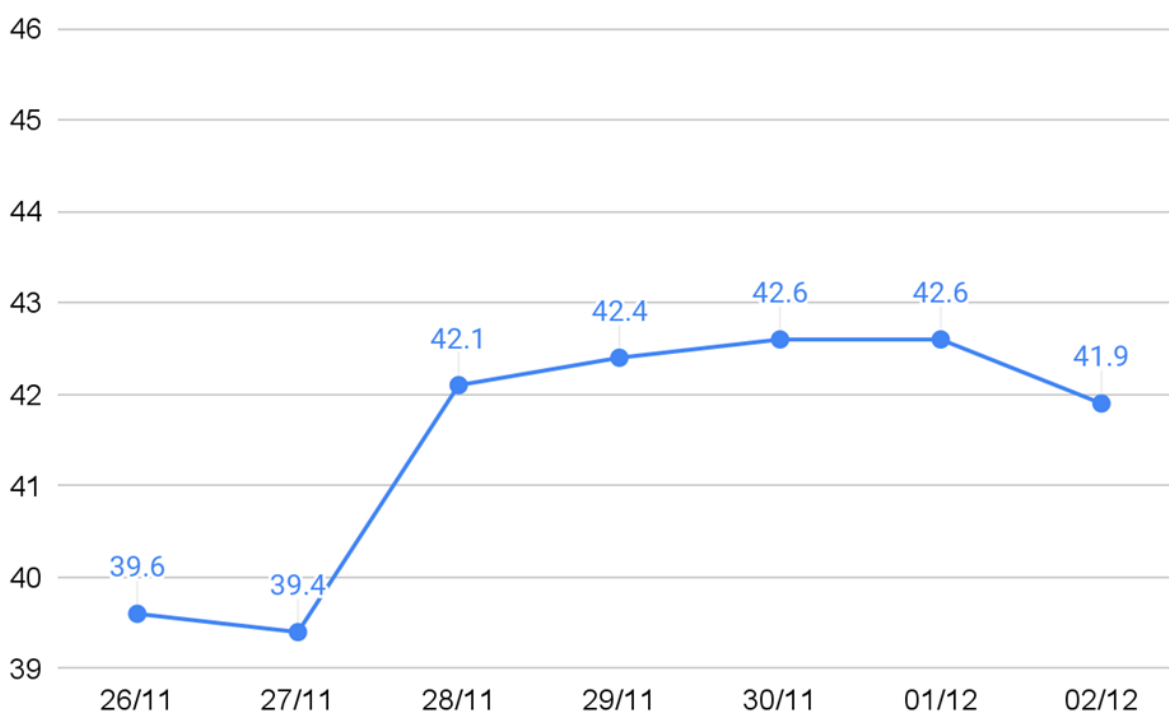
The Regulator also approved 2024-2028 distribution system development plans for three DSOs.

## Gas

### Gas system performance

On November 26 - December 2, the volume of gas transit through the territory of Ukraine amounted to 39.4-42.6 mcm per day, i.e. 36-39% of the capacity contracted by Gazprom (109 mcm per day). In the reporting week, the average daily transit was 41.5 mcm (-0.3 mcm week-on-week). There were no transit flows via the Sokhranivka interconnection point.

**Transit of Russian gas through the territory of Ukraine, mcm**





There were no physical imports from EU countries in the reporting week. 7.7 mcm of gas arrived from Moldova through the Căușeni interconnection point, but it was probably a transit of gas, which later returned to Moldova through the Ukraine-Moldova virtual interconnection point. At the same time, gas exports from Ukraine continued. In the circumstances of the ban on the exports of Ukrainian-produced gas, exports are the volumes withdrawn from the storage facilities by non-residents, previously injected for storage in the "customs warehouse" regime. The volume of such exports in the reporting week was 77.4 mcm (+40%), which were transported through the Drozdowicze/Hermanowice interconnection point with Poland.

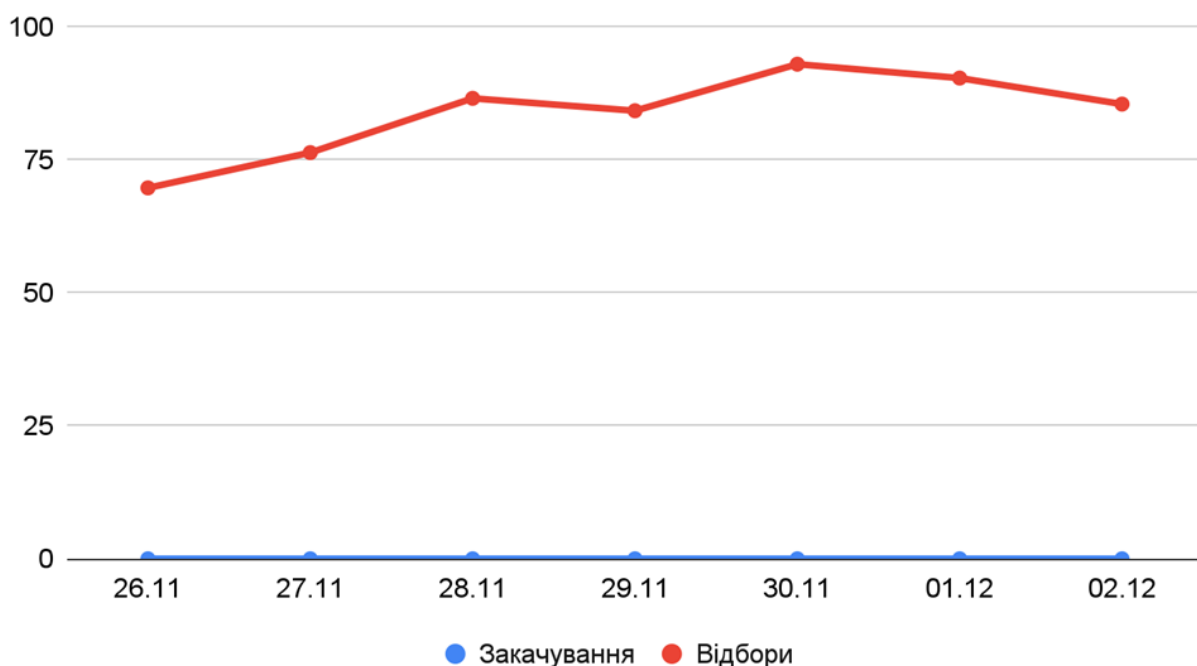
Commercial imports into the Ukrainian system have stopped as well. At the same time, commercial exports of gas through the VIP Ukraine-Poland have begun in the amount of 77.5 mcm (actually corresponds to physical volumes). It is also likely that part of the volumes exiting the Ukrainian system to Moldova is the transmission of gas stored by Moldovan companies in Ukrainian storages. This assumption is due to the fact that the volumes of gas transported from the system in the "customs warehouse" mode exceed the indicators of commercial exports to Poland and amounted to 171 mcm.

GTSOU [reported](#) that the European Commission supported the hydrogen corridor between Ukraine, Slovakia, the Czech Republic, Austria and Germany. It became one of 166 Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs) in the field of European energy system modernization. Projects supported by the European Commission will have access to simplified permitting and regulatory procedures, and will also be able to receive financial support from the Connecting Europe Facility funding.

### **Underground storage facilities**

According to the AGSI platform, as of December 2, 10.62 bcm of gas was accumulated in the Ukrainian storage facilities (-1.93% week-on-week). It corresponds to 35.05% of the total working capacity, i.e., without 4.662 bcm of "long-term storage" buffer gas. Withdrawals from storage increased by 28% and totaled 585.6 mcm, the average daily withdrawal amounted to 83.7 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 November 27 - December 1, nine companies (three buyers and six sellers) submitted bids for purchasing gas at the Ukrainian Energy Exchange (UEEX). In the reporting period, UEEX received purchase bids for 91.5 mcm of gas (-26% week-on-week) with a total starting cost of 1.19 billion UAH (-27.5%). The weighted average starting price of bids was 12.99 UAH/cm (excluding VAT), which is 2.4% less than the indicator of the previous week.

In the reporting week, only two companies (GSC Naftogaz Trading LLC and PJSC AK Kyivvodokanal) succeeded in buying gas; the total volume of purchases – 24.63 mcm (-80% week-on-week). GSC Naftogaz Trading LLC bought 24.2 mcm at a weighted average price of 12.86 UAH/cm (without VAT), PJSC AK Kyivvodokanal - 0.43 mcm at a weighted average price of 13.47 UAH/cm (without VAT). All of the commodity was sold with delivery in December; 56% will be transferred in underground storages, 44% - at virtual trading point (VTP).

## **Gas system performance**

In the [trading sessions](#) of November 27 - December 1, nine companies (three buyers and six sellers) submitted bids for purchasing gas at the Ukrainian Energy Exchange (UEEX). In the reporting period, UEEX received purchase bids for 91.5 mcm of gas (-26% week-on-week) with a total starting cost of 1.19 billion UAH (-27.5%). The weighted average starting price of bids was 12.99 UAH/cm (excluding VAT), which is 2.4% less than the indicator of the previous week.

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## **Policy and regulations**

The Cabinet of Ministers [approved](#) the Concept of the State Target Economic Program for Energy Modernisation of State-Owned or Municipal Heat Producers by 2030. The Concept [provides](#) for the solution of following tasks at national level:

- development and updating of district heating schemes for settlements;
- provision of 100% commercial heat energy metering;
- modernization of heating inputs of consumers; capital repair and reconstruction of district heating facilities that have completed the standard period of operation;
- increasing the efficiency and reliability of district heating systems;
- reduction of consumption and substitution of natural gas in the processes of heat energy production;
- development of dispatching and introduction of energy management at enterprises in the field of heat supply.

As it follows from the document, the implementation of the planned measures will allow to achieve:

- reducing the annual consumption of natural gas by more than 1 bcm;
- reduction of annual GHG emissions by about 2 Mt CO<sub>2</sub>-eq.;
- reduction of the specific consumption of fuel for the production of heat energy to app. 105 kgoe/Gcal;

- reduction of the share of heat energy losses in networks to 11%;
- increasing the share of RES in the production of heat energy to 30%.

## Other

On November 27, 3 more DSOs (JSC Rivnegaz, JSC Zaporizhgas and JSC Chernivtsigaz) came [under the control](#) of Naftogaz. Thus, the total number of DSOs "integrated" into the Naftogaz Group has increased to 22. Collectively, the mentioned 3 enterprises serve almost 1 million consumers.

In addition, in accordance with the [NEURC resolution](#) of November 29, the territory of business activity for LLC Gas Distribution Networks of Ukraine was expanded from December 1 to the Volyn, Chernihiv and Cherkasy (part of the settlements) regions. In total, the number of branches reached 17 with 7.7 million consumers.

Naftogaz [denied](#) the information about the introduction of a "social tariff" for households, according to which the price of 4 UAH/cm was allegedly set for families of military personnel, pensioners, large families and low-income households. Dissemination of such information is another illegal scheme with the aim of acquiring personal and banking data. Naftogaz Group will send an appropriate request to the law enforcement agencies in order to check the sources of information.

In November, JSC Ukgazvydobuvannya [commissioned](#) three more wells, which in total provide over 400 tcm of natural gas per day. Two of them are new, the third one is restored from the liquidation fund. A new exploratory well was drilled in a recently discovered field. Another new evaluation and exploitation well was drilled in the "old" field, which has been exploited for more than 50 years.

PJSC Ukrnaftoburinnia - one of the largest private gas producers, whose shares were transferred to the management of Ukrnafta - [announced](#) the suspension of production at the Sakhalinske oil and gas condensate field. The reason is the annulment of the special permit by the decision of the Sixth Appeal Administrative Court of Ukraine. However, the procedure took place by reversing the execution of the court decision in the administrative case No.2a-7778/09/2670, according to which the old special permit, issued back in 2009 and canceled in 2019, was annulled. Therefore, the company considers the court's decision unreasonable.

The Specialized Anti-Corruption Prosecutor's Office (SAPO) and the National Anti-Corruption Bureau of Ukraine (NABU) [sent](#) an indictment to the court against Andrii Kobolyev, the ex-CEO of Naftogaz, who is accused of unlawful appropriation of 229 million UAH in bonuses. According to the investigation, Kobolyev deliberately violated the requirements of the Cabinet of Ministers resolution, which established the maximum amount of bonuses for officials working at state-owned enterprises.

## Oil and Motor Fuels

The wholesale price of LPG [decreased](#) for the first time since the end of September: at the UEEX auctions held on November 27, most lots were sold at prices in the range of 59-60,000 UAH/t, while at previous auctions they fluctuated in the range of 63,600-65,000 UAH/t. Among the reasons is an increase in imports on November 20-27 by 80% as compared to the first week of the Polish carriers strike - to 22,900 tons. At the same time, the difficulties with the supply of imported LPG by road transport have not ended; in order to bypass queues at the border with Poland, fuel companies redirect gas carriers to the checkpoints with Hungary, Slovakia and Romania.

As a result, the retail price of LPG also began to decrease. [According to](#) the monitoring of the specialized media, on December 1-4 some filling stations reduced prices. On average, the price of LPG in Ukraine decreased by 0.09 UAH/l - to 36.65 UAH/l.

On November 27 - December 1, the average retail price of A-95 petroleum [fluctuated](#) at the end and at the beginning of the week, reaching 43.5 UAH/l, while diesel fuel rose in price by 0.25 UAH/l to 45.25 UAH/l. At the same time, on December 1-4, the average retail price for A-95 petroleum [decreased](#) by 0.26 UAH/l (to 54.07 UAH/l), for A-95+ petroleum - by 0.45 UAH/l (to 57.12 UAH/l), for diesel - by 0.25 UAH/l (to 54.03 UAH/l).

## International Cooperation

John Kirby, Coordinator for Strategic Communications at the U.S. National Security Council, [said](#) that the U.S. administration is working in three areas to preserve Ukraine's energy infrastructure this winter:

- strengthening Ukraine's air defense;
- strengthening of Ukraine's critical energy infrastructure;
- backup equipment and supplies (high-voltage autotransformers, industrial gas generators and mobile autonomous equipment).

At the same time, Kirby noted that in order to further provide Ukraine with air defense systems, protective equipment and reserve stocks, the U.S. Congress should approve additional funding.

On November 30, the 28th United Nations Climate Change Conference (COP28) [began](#) in Dubai and will last until 12 December. For the second time in its history, Ukraine is presenting its pavilion at the conference. Visitors to the exposition will have the opportunity to learn stories of Ukrainians who are bringing parks, cities and agricultural lands back to life, as well as to get acquainted with Ukraine's recovery plan, which includes the priority programmes of Restoring Clean and Protected Environment, Energy Independence, and Green Deal.

Ukraine's goals for COP28 are to advocate for the Environmental Declaration and to continue the international dialogue on the Global Platform for Assessment of War Damage announced by the President of Ukraine at COP27. Also, within the framework of COP28:

- Ukraine was among over 20 countries to [support](#) the Declaration on tripling nuclear power capacity by 2050, recognising the industry's key role in achieving global zero emissions. The parties committed to take measures to ensure responsible operation of nuclear power plants and compliance with the highest standards of safety, sustainability and non-proliferation, which will be achieved through investment in nuclear energy, in particular through innovative financing mechanisms and the involvement of international financial institutions;
- Ukraine [joined](#) the Climate Relief, Recovery, and Peace Declaration, and a number of new financial commitments were announced to support its implementation;
- The Ministry of Energy of Ukraine and the Ministry of Environment and Energy Security of Italy [agreed](#) to cooperate in the field of energy transition and RES, in particular during the post-war recovery and reconstruction of Ukraine to achieve the goals of the entire energy sector decarbonisation. The memorandum envisages cooperation in technology transfer and capacity building, exchange of best practices and knowledge in the renewable energy and energy efficiency sectors; accelerating the use of hydrogen, biogas and biomethane, as well as strengthening public participation and sharing best practices in energy system management;
- The Deputy Minister of Environmental Protection and Natural Resources of Ukraine Viktoriia Kireyeva [met](#) with Alessandra Sgobbi, Head of Unit Climate Finance, and Diana Acconcia, Director for International Affairs and Climate Finance, DG CLIMA (European Commission). The parties agreed to cooperate in 2024 in the following areas: development and implementation of climate assessment of recovery projects to implement the principles of green recovery, elaboration of the draft Climate Law, in particular bringing it in line with the EU legislation, formulating and implementing climate change adaptation policies, etc.

On December 1, a high-level meeting of the G7+ Coordination Group on Assistance to Ukraine's Energy Sector was [held](#) under the chairmanship of Geoffrey Pyatt, U.S. Assistant Secretary of State for Energy Resources. Pyatt informed the participants about the U.S. grant contribution to the Ukraine Energy Support Fund totalling 25 million USD. The meeting was also attended by the leadership of the Energy Community Secretariat, representatives of the United Nations Development Programme and other UN agencies, international organizations, foreign and energy ministries of the G7+ countries, and the Deputy Minister of Energy Yaroslav Demchenkov from Ukraine. The Fund is [used](#) to purchase equipment needed by energy companies for restoration. In particular, between 1 January and 27 November, 132 agreements for the purchase of energy equipment, fuel and materials totalling almost 100 million EUR were concluded under the Fund.

On November 27, Energoatom's President Petro Kotin and the CEO of Urenco CEO Boris Schucht [signed](#) a contract for the supply of enriched uranium products for the Ukrainian NPPs. Urenco will supply Energoatom with enriched uranium until 2035.

On November 30, an agreement of intent was [signed](#) between Energoatom and Hyundai E&C outlining the possibilities for future cooperation. The agreement includes support for the implementation of new NPP projects in Ukraine with PWRs of large and small capacity, exploring financing opportunities for the deployment of new nuclear facilities, etc.

The President of Energoatom Petro Kotin [called](#) on European countries to develop a joint strategy to diversify from Russian nuclear fuel. According to him, the Horizon Euratom programme is implementing a project for the accelerated introduction of alternative fuel, led by Westinghouse. Its goal is to complete the licensing of nuclear fuel for VVER-440 reactors in Europe by 2026. If all European countries switch to alternative fuel for this type of reactor, Russia will lose at least 2-2.5 billion USD in revenue over the next 5 years.

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### **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).*