



Russian War Against Ukraine: Energy Dimension

DiXi Group alert

(status as of 12:00, June 5)

#StopRussianAggression

#StandWithUkraine

Summary

- **App. 642,800 consumers all over Ukraine did not have electricity supply, and 167,000 consumers remained without gas supply.**
- Russia committed **another act of nuclear terrorism**. On June 5, a Russian cruise missile, flew at a critically low altitude over the South Ukrainian nuclear power plant.
- **The threat to the Zaporizhzhia NPP remains** as its personnel are working under an increasing pressure from the occupiers, having neither necessary spare parts nor consumables. The MFA [called](#) on IAEA Director General Rafael Grossi and UN Secretary General Antonio Guterres to redouble their efforts to find ways to return ZNPP to full control of Ukraine as soon as possible
- Serhii Makohon, the Director General of GTSOU, told about **the technical possibility of increasing imports from Poland to 18 mcm/day** (6.6 bcm/year). The additional 13 mcm/day of gas (4.7 bcm/year) can be transported to Ukraine with the launch of the Poland-Slovakia interconnector.
- Makohon also noted **a significant reduction in the transit of Russian gas (9 bcm in four months of 2022 against 14 bcm in previous year)**. The Ukrainian GTS can transport much larger volumes of gas. GTSOU offered to cut off gas supply through Nord Stream 1 and compensate it by increasing transit through Ukraine.
- The government sent to the Verkhovna Rada **a number of legal acts on gas market and heat supply for the martial law period and further recovery**. The Cabinet of

Ministers offers inter alia introduction of a moratorium on increasing gas distribution tariffs, tariffs on heat and hot water supply, as well as natural gas prices for household consumers, provision of guarantees for compensation the debt subject to settlement by a special law, and current expenses connected to martial law and decrease of payment levels. Additional expenses of UAH 264.3 bn from the state budget are expected to become a key source of compensation.

Nuclear and Radiation Safety

ZNPP

Energoatom President Petro Kotin [told](#) media that employees of the Zaporizhzhya NPP are forced to coordinate all their actions with the commanders of occupiers, but they have not yet interfered in the work of personnel in the technical or safety fields. ZNPP personnel are working under pressure from the occupiers, which has been deteriorating recently.

According to Kotin, the occupiers may force to shut down the plant under threat of execution, but this will be an act of nuclear terrorism. With the shutdown of the plant, its own needs will be lost, all pumps that cool down the core of the reactor will be stopped. This will lead to a nuclear catastrophe, so the staff will do their best to ensure that the units operate safely.

The Ministry of Foreign Affairs of Ukraine [called](#) on IAEA Director General Rafael Grossi and UN Secretary General Antonio Guterres to redouble their efforts to find ways to liberate ZNPP from Russian invaders as soon as possible, to return it to full control of Ukraine, to restore security at the plant and to find effective ways of deploying missions of international experts under the auspices of the IAEA / UN to ZNPP. The Ministry of Foreign Affairs also counts on the active position of the partner states during the forthcoming meetings of the IAEA Board of Governors and the IAEA General Conference.

The ministry also called unacceptable the attempts of the aggressor country to force Ukraine to buy electricity generated by the ZNPP. Ukraine demands that Russia fully implements the March 3 resolution of the IAEA Board of Governors "The safety, security and safeguards implications of the situation in Ukraine". Russia must immediately cease all actions against nuclear facilities in Ukraine and return to the Ukrainian side control over all seized nuclear facilities.

The Main Intelligence Directorate of the Ministry of Defense [reported](#) recently on the critical situation at the Zaporizhzhya NPP. According to intelligence community, there are almost no spare parts and consumables there. In addition, during the capture of the station, one of the shells fired by the occupiers exploded near the power unit, resulting in an oil leak. The damage was repaired, but the NPP staff had to fill the circuit with used oil. According to intelligence community, the work at the station is currently carried out on a shift basis, the duration of one "shift" is one week. There is a strict access regime at the plant, almost every personal items, especially telephones, are confiscated during each shift.

South Ukraine Nuclear Power Plant

According to [Energoatom](#), on June 5, Russia committed another act of nuclear terrorism. At 5:30 am, a Russian cruise missile, similar to the Caliber type, [flew](#) at a critically low altitude over the South Ukrainian nuclear power plant. The company believes that Russia continues to pose a threat to the nuclear safety of Ukrainian nuclear power plants and threatens the world with a new nuclear catastrophe. Even the smallest fragment of a missile that can hit an operational unit can cause a nuclear disaster and a radiation leak.

Electricity Sector:

Power system operation

Ukraine [continued](#) commercial exports of electricity to Poland via the Dobrotvirska TPP - Zamość transmission line at the stable hourly schedule of 210 MW. [According](#) to Ukrenergo, as of June 5, Ukraine continues to export 142 MWh to Moldova, while Energoatom and Ukrhydroenergo [bought](#) 150 MWh and 200 MWh of interconnection capacity to Moldova respectively on June 5-6. The technical [cross-border](#) flows continued between the energy systems of Ukraine and the Eastern European countries (Slovakia, Hungary, Poland, Romania, and Moldova).

Ukrenergo [continued](#) to rebuild damaged energy infrastructure. Emergency and recovery works resumed at the 750 kV substation and overhead line, as well as on three 330 kV lines in the central and eastern regions.

Electricity market performance

Day-ahead market (DAM): The weighted average purchase and sale price of electricity continued to [decrease](#) and amounted to 2,195.48 UAH/ MWh (- 0.7% to the previous day) as of June 5 . This value was the lowest during the week of May 30 - June 5, while the upper limit of price [fluctuations](#) was 2,347 UAH/MWh. The Base DAM index of markets in Slovakia, Romania and Hungary was double the Base DAM price index of Ukraine on June 5, while the price spread with the Polish market decreased to 1.8 times.

The total trade volume [continued to decrease](#) and reached 9,260 MWh (-16% to the previous day). During the week of May 30 - June 5, the volume of electricity purchased at DAM [fluctuated](#) significantly between 9,260 - 24,100 MWh. Despite the reduction of supply at DAM to 87,120 MWh (-9.8%), a combination of factors led to an increase in market surplus: the gap with the volume of purchase bids increased from 8.7 to 9.4 times. At the same time, the [structure of purchases](#) has hardly changed: 59.4% was occupied by suppliers, 40% belonged to network operators, and the remaining 0.6% was covered by producers and traders.

Intraday market (IDM): The weighted average electricity price on IDM [decreased](#) and amounted to 2,491.42 UAH/MWh on June 4 (-4.7% vs the previous day). The overall trade volume of trade, showed a significant decrease to 275.7 MWh (-51% to the previous day) due to the low base of comparison. Along with the significant supply growth up to 75,480 MWh (+30.9%), the surplus of IDM increased rapidly. The gap with the volume of purchase bids increased from 102 to 274 times. In [the structure of purchases](#), the dominant part was occupied by suppliers - 95.9%, another 4.1% belonged to network operators.

Disruption and resumption of supply

[According](#) to the Ministry of Energy, as of June 4, due to hostilities, a total of 642,800 consumers in 768 settlements were disconnected from electricity supply. During the day, electricity supply was resumed to app. 70,000 consumers.

Large-scale power supply disruptions and, consequently, active recovery works were taking place:

- in the **Donetsk region**, [according](#) to the Ministry of Energy, 354,200 consumers remained without electricity, while electricity supply to 24,500 consumers was restored during the day;
- in the **Luhansk region**, [according](#) to the Ministry of Energy, 128,200 consumers were left without electricity supply;
- in the **Kharkiv region**, [according](#) to the Ministry of Energy, 70,100 consumers remained without electricity, and energy supply to 5,200 consumers was restored;
- in the **Zaporizhzhia region**, [according](#) to Zporizhzhiaoblenergo, as of 07:00 on June 5, 22,596 consumers in 80 settlements remained without electricity supply. During the day,

DSO specialists resumed supplies to 1,147 families in the Pologi district, and eliminated single outages in the Zaporizhzhya power grids. At the same time, hostilities on June 4 added damages to Vasylivka power grids, resulting in electricity cuts for 4 settlements (a total of 1,100 homes);

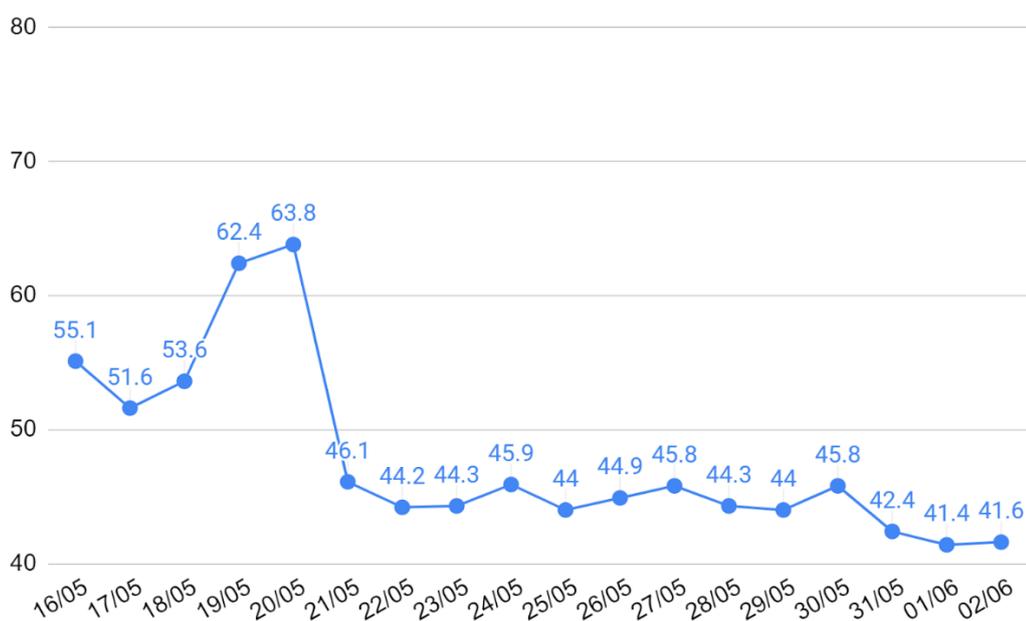
- in the **Mykolaiv region**, [according](#) to the Regional Military Administration, as of June 5, 371 power supply facilities were partially or completely damaged, particularly 4 during the last day. 91 settlements (3 of them partially) of Bashtansky and Mykolayiv districts remained without electricity. [According](#) to the Ministry of Energy, electricity supply to 100 consumers was resumed during the day;
- in the **Kherson region**, [according](#) to the Regional Military Administration, as of 12:00 on June 4, among the communities with which the connection was established, in Muzykivska, Kochubeivska, Mylivska and Novovorontsovska communities the electricity was partially supplied (at least 11 settlements were without electricity). [According](#) to the Ministry of Energy, 700 consumers were reconnected to electricity supply during the day;
- In the **Dnipropetrovsk region**, [according](#) to the Ministry of Energy, electricity supply to 525 consumers was restored;
- there was no up-to-date consolidated information on power supply in the **Chernihiv, Sumy and Odesa regions** at the time of the review preparation.

Gas Sector:

As of June 3, the gas transit through the territory of Ukraine increased by 0.4 mcm compared to the previous day and amounted to 42 mcm. These volumes were only 39% of the capacity contracted by Gazprom (109 mcm per day). There were no transit flows via the Sokhranivka interconnection point.

Physical imports of gas from the EU were reported from the Hermanowice interconnection point (virtual interconnection point "Ukraine-Poland") at 2.6 mcm. At the same time, these volumes may be a transit from Poland to Hungary via Ukraine, as on June 3, on Ukraine's gas system exit via the Berehove interconnection point (virtual interconnection point "Bereg") 1.6 mcm of gas was shipped.

Gas transit through Ukraine (at Sokhranivka and Sudzha interconnection points), mcm



Source: [GTSOU](#)

Serhii Makohon, the Director General of GTSOU, [told](#) media about the technical possibility of increasing imports on the Polish direction (guaranteed capacity at the relevant interconnection point) to 18 mcm/day, or 6.6 bcm/year. The additional 13 mcm/day of gas can be transported from Poland to Ukraine via Slovakia (4.7 bcm/year) with the launch of the Poland-Slovakia interconnector.

Serhii Makohon also noted a significant reduction in the transit of Russian gas through the Ukrainian GTS: in four months of 2022, transit amounted to 9 bcm, while last year, a similar figure was 14 bcm. He reminded that the Ukrainian GTS can still transport much larger volumes of gas despite the cessation of transit through the Sokhranivka interconnection point due to unauthorized gas withdrawals by the occupiers. Therefore, to limit Russia's influence and increase Russia's dependence on the Ukrainian route during the war, GTSOU proposed to the EU allies to cut off gas supply through Nord Stream 1 and compensate it by increasing transit through Ukraine.

The government proposes several legislative amendments for adoption in the natural gas market. Thus, the [draft Law](#) of Ukraine "On the peculiarities of regulating relations in the natural gas market and in the field of heat supply during martial law and further recovery" provides:

- a moratorium on increasing gas distribution tariffs, tariffs on heat, its supply as well as hot water supply services, natural gas prices for household consumers (from the level before February 24, 2022);
- the Regulator's ability to set the gas price for household consumers - customers of the supplier of last resort at the annual base level of the supplier, determined by the supplier of last resort (essentially the same procedure as before April 30 for Naftogaz consumers as a supplier of last resort);
- provision of compensation guarantees for:
 - a) DSOs - debts subject to settlement under a special law, as well as the difference between the actual costs of providing gas distribution services and tariff revenue established by the NEURC;
 - b) heat suppliers - differences in tariffs, including differences between the gas price provided for in the tariff and the actual purchase price;
 - c) suppliers of natural gas - debts of household consumers, which are subject to settlement under a special law;
 - d) business entities that have special obligations - economically justified costs for their implementation;
 - e) to the subjects in items a)-c) - also current losses related to martial law and reduction of the level of payments starting from March 1, 2022;
- guarantee financing mechanism, which provides for expenditures exclusively for the benefit of Naftogaz Group of companies (Naftogaz of Ukraine, Naftogaz Trading LLC, Naftogaz of Ukraine LLC, Ukrtransgaz JSC) and GTSOU. At the same time, other gas market players and heat supplying companies can only receive compensation from the budget for losses due to hostilities and the repair of damaged assets.

The main financial sources for settling the debts and losses mentioned above should be additional expenditures of UAH 264.3 bn from the special fund of the State Budget of Ukraine, which will be accumulated through:

- 1) payment of dividends (including in advance) by Naftogaz for the year 2022 (UAH 64.4 bn);
- 2) advance payment of income tax upon payment of the dividends mentioned above (UAH 11.6 bn);
- 3) revenues from the donor and other international assistance (UAH 188.3 bn).

The relevant [draft law](#) on amendments to the state budget for 2022 has been submitted to the Verkhovna Rada. Another [draft law](#) of Ukraine proposes not to tax funds transferred within the debt settlement procedure temporarily.

The draft law mentioned above also amended the Law of Ukraine "On the Natural Gas Market" regarding legal relations from January 1 to February 28, 2022. According to these amendments, the procedure for allocating funds to the GDN operator account with a special mode of use is changed. In case of changes adopted, the money from the special account can also be transferred to the supplier of last resort or the business entity's current account, which has special responsibilities for gas supply to DSOs.

In addition, the draft law proposed changing the procedure for settling debts under a special law. In particular, it is proposed to add debts of water utilities for distribution/transmission of electricity and accounts payable of heating utilities for centralized water supply and wastewater disposal. According to the changes, the gas supplier can obtain ownership of 100% of the authorized capital of such an enterprise free of charge in case of non-fulfillment of obligations by district heating companies under the debt restructuring agreement. In addition, debt of such enterprise is collected ahead of schedule; fines and penalties are accrued on the outstanding amount of the debt.

In addition, according to the changes, the debt settlement procedure will apply to debts of gas suppliers to GSC Naftogaz of Ukraine LLC for gas supplied in February-March 2021; DSOs' debts under gas supply/purchase agreements to cover actual losses and production and technological costs incurred from November 1, 2021, to February 28, 2022.

Disruption and resumption of supply

The **Donetsk, Luhansk, Zaporizhzhia, Chernihiv, Mykolaiv and Kharkiv regions** had the most challenging situation in gas supply. [According](#) to the Cabinet of Ministers, as of June 4, 167,000 consumers were left with no gas supply. Supply to 2,700 consumers was restored during the day.

In the **Donetsk region**, the situation didn't change: almost the whole region remained without gas supply due to main gas pipeline damage, and the local DSO [continued](#) evacuating the staff. Only 1900 consumers in the region [had](#) gas supply.

In the **Luhansk region**, gas supply was completely suspended. [According](#) to the Regional Military Administration Head Serhii Haidai, the region's critical infrastructure was destroyed by 90%.

[According](#) to the **Zaporizhzhia** Regional Military Administration, 75,452 consumers in 97 settlements were left without gas supply. At the same time, the day before, in the city of Huliaipole, the operation of the gas control point was restored, which was shut down on May 29 due to significant damage to medium-pressure gas distribution pipelines due to intense hostilities. Gas supply to 252 consumers was restored. Also, on June 4 and on the morning of June 5 in Polohy and Orikhiv, the damage to low-pressure gas pipelines caused earlier by shelling was eliminated.

In the **Kherson region**, [as of 12:00 on June 5](#), there was no information regarding any significant change as compared to the previous day: 1 community (Vysokopillia) has completely remained without gas supply and 3 communities (Velyka Oleksandrivka, Novovorontsovka, Stanislav) partially. However, there is no mobile connection in these communities, so there is no up-to-date information on gas supply. LPG reserves were running out in 4 communities (Tyahyn, Hornostaivka, Velyka Lepetykha and Rubanivka); in the Novoraysk community, LPG supply had run out.

In the **Mykolaiv region**, as of June 4, the situation became worse: 590 gas infrastructure facilities (no changes vs the previous day) were [destroyed or damaged](#) for the whole period of the war, and 6,573 consumers (-552) were left without gas supply.

Operational information on gas supply in the **Kharkiv, Sumy and Chernihiv regions** was not available at the time of the review preparation.

Countermeasures of Ukrainian Companies and Public Authorities

On June 7, a meeting of the National Energy and Utilities Regulatory Commission will be held, at which, among other things, the following questions will be considered:

- approval of the draft [amendments](#) to the license conditions of the electricity and natural gas markets, taking into account the peculiarities of the relevant storage activities by licensees;
- approval of the draft [amendments](#) to the Procedure for setting (forming) tariffs for electricity distribution services in terms of streamlining the application of electricity distribution tariffs for energy storage installations;
- approval of the draft [amendments](#) on the adding of licensees of energy storage activities in to those, who pay regulation contributions;
- [the establishment](#) of the lower limit for TSOs and DSOs for mandatory purchase of electricity at the DAM to compensate for technological losses;
- [amendments](#) to the calculation of the projected electricity purchase price for USS for the supply of small non-household consumers, which should be purchased at BCM (10% of actual consumption instead of 50%);
- [amendments](#) to the Procedure for temporary connection of electrical installations to the distribution system during martial law in Ukraine (to bring temporarily connected electrical installations in accordance with the requirements of the Distribution System Code);
- approval of draft [amendments](#) to the Procedure for Compilation, Submission, Approval, Publication of the DSO Compliance Program, Report on its Implementation and Approval of DSO Authorized Persons for Compliance, [amendments](#) to the Procedure for Data Collection and Transmission on electricity market operation for publication on the ENTSO-E transparency platform.

[According to](#) the Acting Head of Lviv Customs Daniil Menshikov, "green corridors" for fuel trucks were organized on both sides of the Polish border. It is also reported that the queues at customs have been reduced and controlled.

Sources:

The alerts are developed based on collected, verified, and analyzed information reports of over 100 official sources: ministries, state agencies, network operators, and energy companies. Information was collected only from official websites and official social media accounts.

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