



Russian War Against Ukraine: Energy Dimension

DiXi Group alert

(status as of 12:00, June 22)

#StopRussianAggression

#StandWithUkraine

Summary

- **App. 610,700 consumers all over Ukraine did not have electricity supply, and 176,700 consumers remained without gas supply.**
- New **cyber attacks on the critical infrastructure** of Ukraine were registered by the State Service of Special Communications and Information Protection of Ukraine. The Computer Emergency Response Team of Ukraine (CERT-UA) has revealed the distribution of e-mails with malware using the topics of nuclear terrorism and tax appeals.
- According to JSC “Market Operator”, **over 47% of electricity sold on DAM and IDM in May originated from hydropower**, app. 20% each - from nuclear fuel and RES. app. 10% - from coal and natural gas.
- The government established **de facto full control over the gas market**. According to the CEO of Naftogaz Yurii Vitrenko, the company provides gas supply to 100% of district heating companies and almost 98% of households. In addition, the group controls about 60% of gas distribution by its own DSOs and those operators transferred to its management.
- Vitrenko announced **in July Naftogaz could file a new lawsuit against Gazprom** at the Stockholm arbitration, as Gazprom does not comply with the "ship or pay" clause under the transit organization contract. The amount of Naftogaz claims could exceed \$12.2 billion. At the same time, GTSOU reminded Gazprom of the possibility to increase transit volumes to the contracted 77.2 mcm/day.

- The Verkhovna Rada adopted in the first reading **the "gas package" of draft laws**, which provides for a moratorium on raising utility prices and tariffs, guarantees for public service obligations execution and debts settlement - by, in particular, attracting 188 billion UAH from international donors.
- The government announced **the launch of micro-grant program with about 5 billion UAH total budget**. It is planned to provide about 20,000 grants to entrepreneurs 150-250,000 UAH each, after the selection of applications (business plans) submitted through the Diia portal or Oschadbank.

Attacks

The Russian hacker groups are carrying out new cyber attacks on the critical infrastructure of Ukraine, using the topics of nuclear terrorism and tax appeals, the State Service of Special Communications and Information Protection of Ukraine [reported](#). The Computer Emergency Response Team of Ukraine (CERT-UA) has revealed the distribution of e-mails with malicious documents "Nuclear Terrorism A Very Real Threat.rtf" or "Imposition of Penal Sanctions.zip" (on behalf of the State Tax Service), the opening of which will lead to downloading and executing malware.

Electricity Sector:

Power system operation

Ukraine [continued](#) commercial exports of electricity to Poland via the Dobrotvirska TPP - Zamosc transmission line at the stable schedule of 210 MW hourly. Also, [according](#) to Ukrenergo, exports to Moldova were at 142 MW. At the same time, Energoatom continued to book 150 MW (flat schedule) of export capacity to Moldova at [daily auctions](#). Technical [cross-border flows](#) continued between the energy systems of Ukraine and Eastern European countries (Slovakia, Hungary, Poland, Romania, and Moldova).

Ukrenergo continued [repairing](#) damaged network infrastructure. In the south-eastern region, a 330 kV overhead line was put into operation, which allowed the resumption of regional electricity transit. In the eastern region, another 330 kV overhead line has been prepared for testing and reconnection. Also, repairs on sections of adjacent lines were underway. In the central region, TSO crews and sappers continued inspecting lines for final demining.

Electricity market performance

[According to JSC "Market Operator"](#), in May electricity sold on DAM and IDM had the following origin (according to sources): 47.38% - hydropower, 20.34% - nuclear fuel, 17.24% - solar, 5.66% - coal, 4.32% - natural gas, 1.61% - wind, 0.99% - biogas, 0.25% - biomass, 0.18% - fuel oil. Also, for 2.03% of electricity sold, the source of origin was not defined or specified.

Day-ahead market (DAM): As of June 22, the weighted average settlement price [didn't change](#) and amounted to 2,247.88 UAH/MWh (-0.1% vs the previous day). At the same time, exchange prices in the Eastern European markets have shown continuous growth. The Base DAM indices of Slovakia and Hungary have synchronously increased to 4.5-4.6 times [over](#) the Base DAM index of Ukraine. Instead, the price spread with the Romanian and Polish markets amounted to 3.8 and 3.1 times, respectively.

The total volume of trading [decreased slowly](#) to 12,577.3 MWh (-9.3% vs the previous day). At the same time, the supply decreased to 56,304.9 MWh (-17.3%). The combination of these factors contributed to the decreased market surplus: the gap with the volume of purchase bids declined from

4.9 to 4.5 times. [In the structure of purchase](#), 51.1% was occupied by suppliers, 48.8% by system operators and 0.1% by producers.

Intraday market (IDM): On June 21, the weighted average price slowly [decreased](#) to 2,157.34 UAH/MWh (-13.9% vs the previous day). At the same time, the total volume of trading continued to increase - up to 1,722.9 MWh (+27.5% vs the previous day). At the same time, the supply continued to decrease at 30,818.8 MWh (-22.4%), which in combination with the dynamics of trading led to a considerable decrease in the market surplus - the gap with the volume of purchase bids dropped from 29 to 18 times. [In the structure of purchase](#), 97.9% was occupied by suppliers, 1.5% by producers and 0.6% by system operators.

Disruption and resumption of supply

[Accordinging](#) to the Ministry of Energy, as of June 21, due to damage caused by hostilities, a total of 610,700 consumers in 729 settlements were disconnected from electricity supply. During the day, electricity supply was resumed to app. 24,700 consumers.

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

- in the **Donetsk region**, [accordinging](#) to the local DSO, specialists restored supply to app. 7,133 households in 20 settlements of the Pokrovsk, Bakhmut and Kramatorsk districts; 319 settlements were left without electricity supply ([accordinging](#) to the Ministry of Energy - over 347,100 consumers);
- in the **Luhansk region**, [accordinging](#) to the Ministry of Energy, more than 128,200 consumers were left without electricity;
- in the **Kharkiv region**, [accordinging](#) to the Ministry of Energy, app. 35,500 consumers remained without electricity and supplies were resumed to 1,200 consumers during the day. On June 21, the local DSO specialists [managed](#) to eliminate the damage and completely restore power supply to the Pyatykhatka district of Kharkiv. The restored overhead line of the Zhukovsky substation, which supplies electricity to the Velyka Danylivka microdistrict, the oncology center, the National Aerospace University, industrial enterprises and the city's electric transport;
- in the **Zaporizhzhia region**, [accordinging](#) to the local DSO, as of 07:00 on June 22, 21,473 consumers in 78 settlements remained without electricity supply. Over the last 24 hours, the DSO specialists have restored supply to more than 17,000 consumers (16,260 in the Orikhiv district and 685 in Polohy district) ;
- in the **Mykolaiv region**, [accordinging](#) to the Regional Military Administration, as of June 22, 407 power supply facilities were partially or completely damaged. 97 settlements (1 of them partially) of the Bashtanka and Mykolaiv districts were disconnected;
- in the **Kherson region**, [accordinging](#) to the Regional Military Administration, as of 10.00 on June 21, among the communities with communication established, energy supply to 2 communities (Vysokopil'ska and Kalyniv'ska partially in 4 communities (Novovorontsov'ska, Novooleksandriv'ska, Muzykiv'ska and Velykooleksandriv'ska) left In total, at least 46 settlements were without electricity supply;
- in the **Dnipropetrovsk region**, [accordinging](#) to the Regional Military Administration, on June 22, due the enemy fired on the territory of two communities, the village of Velyka Kostromka of the Zelenodolsk community was left without electricity;
- in the **Chernihiv region**, [accordinging](#) to the Regional Military Administration, as of 06:00 on June 22, power supply to 12,242 consumers in 22 settlements was not provided;
- in the **Kyiv region**, [accordinging](#) to the local DSO, on June 21, due the bad weather and gusts of wind, there were emergency power outages. As of the morning of June 22, specialists resumed the operation of 87 lines and 2,689 transformer substations, electricity supply to 69 settlements were resumed and 122 - partially. 19 settlements, as well as 14 power transmission lines with a voltage of 6-10 kV and 120 transformer substations remained

completely or partially without electricity. In addition, due to the large number of fallen trees, many breaks in the 0.4 kV networks have been recorded;

- **in the Odesa region**, [according](#) to the local DSO, as of 10:00 am on June 22, due to bad weather 9 settlements were left without electricity supply, 6 overhead lines and 69 transformer substations were damaged, most of them in Odesa district of the city. Work on elimination of consequences continued;
- there was no up-to-date consolidated information on power supply in the **Sumy region** at the time of the review preparation.

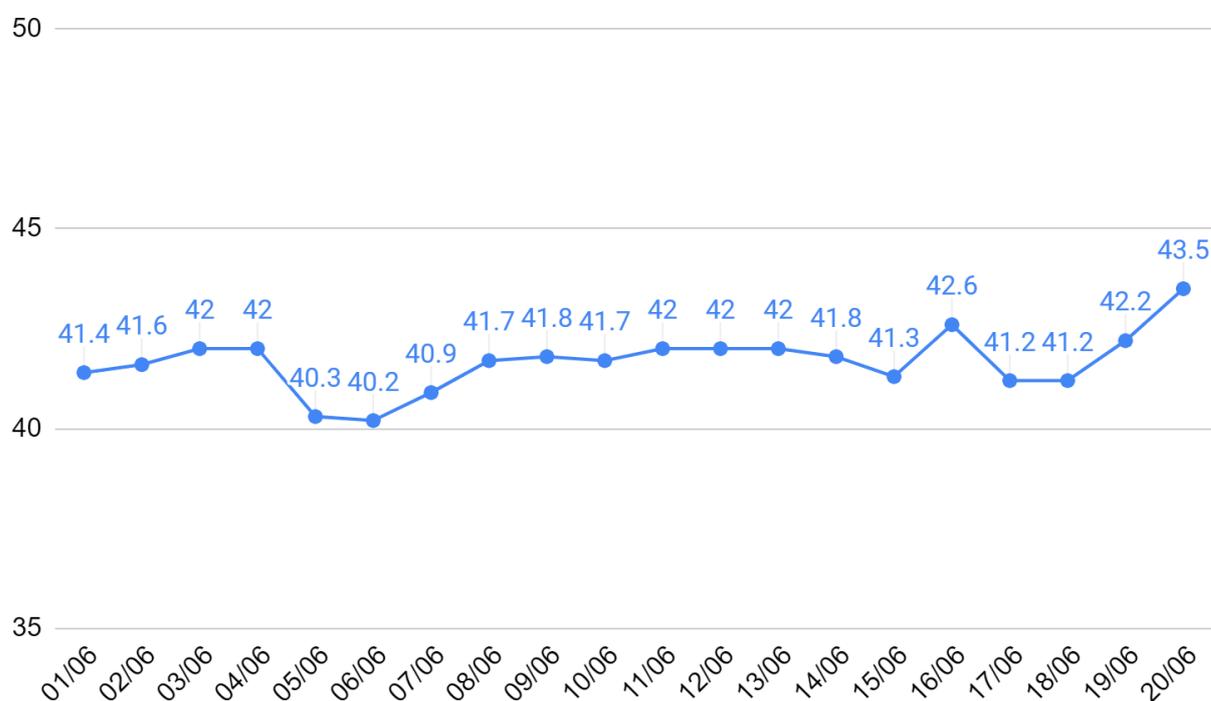
Gas Sector:

Gas system performance

As of June 20, the gas transit through the territory of Ukraine increased by 1.3 mcm as compared to the previous day and amounted to 43.5 mcm. These volumes were only 40% 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 1.6 mcm. At the same time, part of these volumes may be a transit from Poland to Hungary via Ukraine, as on June 20, on Ukraine's gas system exit via the Berehove interconnection point (virtual interconnection point "Bereg") 0.9 mcm of gas was shipped.

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



Source: [GTSOU](#)

GTSOU [again reminded](#) Gazprom of the possibility to increase transit volumes through the Ukrainian system. The Russian monopolist has booked and has access to the Sudzha interconnection point capacity (77.2 mcm/day), although the actual transit volumes have fluctuated at 41-43 mcm/day. In

addition, there are still technical possibilities to transfer 32.4 mcm/day of transit volumes lost due to the suspension of flows via the Sokhranivka interconnection point to the Sudzha interconnection point and thus reach the contracted volumes.

GTSOU also [announced](#) the implementation of a comprehensive automated management system SAP S/4 HANA, which will improve the quality of planning and accounting processes and increase efficiency in system maintenance management.

Gas market functioning

At a [press conference](#), the CEO of Naftogaz Yurii Vitrenko said the company provides gas supply to 100% of district heating companies and almost 98% of household consumers. In addition, the group controls about 60% of gas distribution by its own DSOs and those operators, which were transferred to its management.

Vitrenko also indicated some gas balance figures: the volume in storage is 10.5 bcm. At the same time, Ukgazvydobuvannya plans to produce 12 bcm this year. The monthly injection volume into storage is about 900 mcm. In addition to compensation from the state budget, it also planned to attract the EBRD loans (additionally to the already provided line of \$300 million) to satisfy the demand.

Disruption and resumption of supply

The **Donetsk, Luhansk, Zaporizhzhia, Kherson, Mykolaiv, Chernihiv and Kharkiv regions** had the most challenging situation in gas supply. [According](#) to the Cabinet of Ministers, as of June 21, 176,700 consumers were left with no gas supply.

In the **Donetsk region**, the situation didn't change: almost the whole region remained without gas supply due to the main gas pipeline damage. As of June 16, only 1,900 consumers in 2 settlements [had](#) supply.

In the **Luhansk region**, there were no changes in gas supply: it was completely suspended due to hostilities which were deeply destroying the region's critical infrastructure.

In the **Kharkiv region**, the local DSO [repaired](#) distribution networks in the Chuhuiv district which suffered from enemy's fire, thus preventing the disconnection of 3,000 consumers. In addition, reconstruction work [continued](#) in the regional center (North Saltivka neighborhood), which was significantly damaged by the Russian shelling.

In the **Kherson region**, [as of 10:00 on June 21](#), 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 some of these communities, so there was no up-to-date information on gas supply. LPG reserves were running out in 4 communities (Tyahynka, Hornostaivka, Velyka Lepetykha and Rubanivka); in the Novoraysk community, LPG supply had run out.

In the **Zaporizhzhia region**, as of the morning of June 21, 81,001 consumers in 107 settlements [remained](#) without gas supply. The day before, 23 consumers were disconnected due to the damage to low-pressure gas pipelines in the city of Orikhiv. At the same time, in Orikhiv, damage to other low-pressure gas pipelines caused earlier that day by shelling was repaired.

In the **Mykolaiv region**, as of the morning on June 22, 635 gas infrastructure facilities were [damaged](#) for the whole period of war (no changes as compared to June 21). As a result, 6,097 (-1,275) consumers were left without gas supply.

[According](#) to the **Chernihiv** Regional Military Administration, as of the morning on June 22, about 900 consumers in 22 settlements have not received gas supply service (-1 as compared to the previous day).

Operational information on gas supply in the **Sumy region** was not available at the time of the review preparation.

Countermeasures of Ukrainian Companies and Public Authorities

The Verkhovna Rada adopted in the first reading the "gas package" of draft laws ([reg. No. 7427](#), [7428](#), [7429](#)), which provides for a moratorium on raising utility prices and tariffs by, in particular, attracting more than 180 billion UAH from international donors.

The draft law [No. 7427](#) envisages for the period of martial law and 6 months after its abolition a ban on increase in gas prices for household consumers from February 24 levels, a ban on increase in tariffs for gas distribution, district heating and hot water supply, and a ban on making households to pay debts. It also provides that the NEURC will have the right to allow transferring consumers of the supplier of last resort to the basic annual offer of the same supplier.

The difference in tariffs, taking into account the accumulated debts to district heating companies, DSOs, and gas suppliers, will be compensated from the state budget according to the methodology set by the Cabinet of Ministers exclusively for settlements with Naftogaz group and for the purpose of infrastructure restoration. At the same time, the amount of state expenditures to [compensate](#) suppliers under public service obligations is set at 150 billion UAH, debt settlement in the gas market - at 76 billion UAH, and subventions to local budgets to cover the difference in tariffs - at 38.2 billion UAH.

The Verkhovna Rada also approved in the first reading the draft laws ([reg. No. 5688](#), [5689](#)) providing tax and customs benefits for industrial parks. In particular, the canceling of VAT on the imports of new equipment is proposed for such parks in the target areas of processing industry and R&D. The MPs also plan to exempt the residents of industrial parks from the income tax for 10 years, provided that the profits are directed to the development of the park.

The government has [announced](#) the launch of a micro-grant program with a total budget of about 5 billion UAH to provide incentives to small businesses. It is planned to provide about 20,000 grants to entrepreneurs 150-250,000 UAH each, after the selection of applications (business plans) submitted through the Diia portal or Oschadbank. Such support shall enable starting any microbusiness, such as tailoring and shoes making, dry cleaning, service or repair centers, car service, construction service works. In addition, two more grant programs have been announced: for the creation or development of horticulture, berry growing and viticulture, and for the creation or development of greenhouses.

The Cabinet of Ministers also [expanded](#) the list of grounds for conducting unscheduled inspections of businesses during the martial law, including the implementation of Ukraine's international obligations. As before, inspections are carried out following a decision of the central executive body, responsible for public policy in the respective area.

At the meeting on June 21, the National Energy and Utilities Regulatory Commission (NEURC) [adopted](#) a number of decisions, including:

- publication of draft amendments to the TSO license conditions on [requirements](#) to compliance, certification of quality management system, occupational safety and anti-corruption;
- [settlement](#) of supplier switching by non-household gas consumers without the need to certify the absence of debts to incumbent supplier;
- [amending](#) the procedure of registering the results of NEURC inspections;
- [resumption of](#) submission by licensees of several NEURC reporting forms for the period from February 24;

- publication of draft [amendments](#) to the procedure for supplier switching in the retail electricity market.

The CEO of Naftogaz Yurii Vitrenko [announced](#) in July the company could file a new lawsuit against Gazprom at the Stockholm arbitration, as Gazprom does not comply with the "ship or pay" requirement under the transit organization contract. The amount of Naftogaz claims may exceed \$12.2 billion. As noted, the terms of the contract with Gazprom provide 45 days for pre-trial settlement of disputes between the parties.

Vitrenko also [confirmed](#) that Naftogaz is negotiating the imports of liquefied natural gas (LNG) to Ukraine in the fourth quarter of 2022. At the same time, the company is developing technological capabilities to ensure the physical transmission of regasified LNG to Ukraine, or to carry out swap operations.

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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