

Daily Alert

**Russian War Against
Ukraine: Energy Dimension**

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#StopRussianAggression
#StandWithUkraine

Summary

- On the night of March 22, the Russian occupiers attacked Ukraine with kamikaze drones, the Ukrainian defence forces destroyed 16 of 21 UAVs. One of infrastructure facilities in the Zhytomyr region was damaged.
- According to experts of KSE Institute, as of February 2023, the damage to Ukraine's infrastructure as a result of Russia's invasion increased by another 6 billion USD - to 143.8 billion USD (at replacement cost). In particular, damage to the energy sector amounts to 8.1 billion USD. Ukrhydroenergo estimated its losses at about 40 billion UAH.
- According to Ukrenergo, due to warming, electricity consumption decreased. Due to significant damage to the grids, consumption restrictions apply in the Zhytomyr region. The situation remains difficult in the areas along the front line.
- The Minister of Energy Herman Halushchenko announced that GTSOU implements a pilot project on flexible electricity generation based on its assets (gas turbine installation). He outlined such projects as one of the ways to decentralize the power system and develop distributed generation.
- On March 21, the Moldovan company Energocom sold 1 MWh of electricity to Ukraine in a test mode.
- The government has amended the Procedure for holding auctions for the sale of special permits for subsoil use. The amount of guarantee fee has been increased, which will

be transferred to the state budget in case the first and second winners of the auction refuse.

- The Cabinet of Ministers also approved the draft Law "On Projects of National Interest in the Energy Sector" developed by the Ministry of Energy. The draft defines the concepts (projects of national interest, Projects of Energy Community Interest, Projects of Mutual Interest, as well as the procedure and criteria for selecting such projects, the procedure for the cross-border distribution of investment costs.
- The IMF mission reached a Staff-Level Agreement on a new Extended Fund Facility program for Ukraine. The two-phase program with requested access of SDR 11.6 billion (about USD 15.6 billion) is designed for four years.
- The Energy Efficiency Fund has received 70 applications from homeowners' associations for the VidnovyDIM program, with over 149 million UAH total cost. 32 have already received the first tranche of support, repairs are underway in the Kyiv, Zhytomyr and Sumy regions.

Attacks

On the night of March 22, the Russian occupiers attacked Ukraine with Iranian-made Shahed kamikaze drones from the north (Bryansk region of Russia), as the Air Force Command of the Ukrainian Armed Forces [reported](#). Ukrainian defence forces destroyed 16 of the 21 drones. [According to](#) the Zhytomyr Regional Military Administration Head Vitalii Bunechko, one of the region's infrastructure facilities was damaged as a result of the attack.

[According to](#) experts of KSE Institute, as of February 2023, the total amount of damage to Ukraine's infrastructure as a result of Russia's invasion increased by another 6 billion USD - to 143.8 billion USD (at replacement cost). Damage to infrastructure, education, energy, transport, trade and healthcare continue to grow. Damage to the housing stock amounted 53.6 billion USD. In total, more than 150,000 residential buildings were damaged or destroyed. The second most affected sector is infrastructure, with losses estimated at 36.2 billion USD. Damage to Ukraine's energy sector has also increased, amounting to 8.1 billion USD.

The preliminary estimation of losses incurred by Ukraine's largest hydroelectric generating company, Ukrhydroenergo, due to Russian aggression is about 40 billion UAH, the company's press service [reported](#). According to the CEO Ihor Syrota, there have been over 30 impacts on the company's hydroelectric facilities since the start of Russia's massive shelling of the power system.

Electricity Sector

Power system operation

[According](#) to the Minister of Energy Herman Halushchenko, on March 22, the generation has the necessary capacity to fully meet the demand of electricity consumers throughout the country. Due to infrastructure restoration works in the Zhytomyr and Kyiv regions, power supply restrictions are possible there.

[According](#) to Ukrenergo, on March 22, due to warming, electricity consumption decreased as compared to the same day previous week. All types of power plants were in operation, electricity production was sufficient to cover consumption. Minor imports also continued. Due to significant damage to grids in the Zhytomyr region, consumption restrictions apply there. The situation remains difficult in the areas along the front line, where the enemy constantly damages networks with artillery fire. In other regions, consumer restrictions were not applied, limits were not set.

[According](#) to ENTSO-E, as of March 22, minimal commercial imports of electricity were performed from Slovakia (6-7 MW) (for different hours during the day); imports from Moldova were not performed. [Access](#) to the Slovakia->Ukraine cross-border capacity was booked by four companies (126 MW in total): D.Trading (55 MW), ERU Trading (50 MW), Nexttrade (20 MW) and Enerdzhiks (1 MW); access to the Moldova->Ukraine capacity - by D.Trading (100 MW); all on a flat schedule. The marginal price for both capacity auctions was "zero". Capacity in other directions was not offered. At the same time, the Base DAM indices in the countries of Eastern Europe (Poland, Hungary, Romania, and Slovakia) [exceeded](#) the similar indicator of Ukraine 1.4-1.6 times.

On Tuesday, March 21, the Moldovan company Energocom sold 1 MWh of electricity to Ukraine in a test mode. [According](#) to the company's report, as part of this test, electricity was purchased in the EU, transmitted through the Moldova power system and sold to Ukrainian suppliers. Previously, the company purchased electricity from the Ukrainian producers.

Disruption and resumption of supply

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

- in the **Kharkiv region**, [according](#) to the local DSO, restoration of electricity supply was underway in the village of Ruska Lozova, where more than 80% of equipment was damaged or destroyed due to active hostilities. Specialists have already repaired 3 out of 14 substations, restoration of 10 kV and 0.4 kV lines was underway. In the de-occupied territories, due to colossal damage, it is necessary to lay power networks practically from scratch; in addition, the significant landmines contamination of the territories slows down the repair process. [According](#) to the Ministry of Energy, on March 21, electricity supply was restored to about 2,000 consumers in the region;
- in the **Zaporizhzhia region**, [according](#) to the local DSO, as of March 22, 23,953 consumers in 70 settlements remained offline (with the exception of the temporarily uncontrolled territory). During the day, the specialists fixed the failures and restored power supply to 5,825 consumers in the city of Zaporizhzhia and 60 consumers in the Orikhiv district, which were disconnected as a result of enemy's shelling and technological violations. At 08:30 on March 22, due to a technological malfunction in Zaporizhzhia, 2,300 households and legal entities-consumers were [left without electricity supply](#);
- in the **Kherson region**, [according](#) to the Regional Military Administration, as of March 20, 40 crews (191 specialists and 73 units of equipment) were working to restore electricity supply. Specialists performed works on the damaged lines supplying the city of Kherson, the villages and towns of Borozenske, Zarichne, Novovorontsovka, Petropavlivka, Novopetrivka, Krasnoliubetsk, Kalynivske, Kucherske, Pravdyne, Kirove, Soldatske, Bilozerka, Veletenske, Krutyi Yar, and Posad-Pokrovske. [On March 21](#), specialists restored power supply to half of the 300 consumers in the village of Petropavlivka (Novooleksandrivka community), which had been offline since August 2022;
- in the **Dnipropetrovsk region**, [according](#) to the Regional Military Administration, on March 21, the Russian occupiers fired heavy artillery at the Nikopol district, as a result power grids were damaged in the Myrove community;
- in the **Mykolaiv region**, [according](#) to the Regional Military Administration, as of March 22, 1,093 electricity supply facilities were partially or completely damaged,

while supply to 7 legal entities-consumers in the Bashtanka district was suspended;

- in the **Donetsk region**, [according](#) to the local DSO, on March 20, specialists managed to reach a number of damaged networks and equipment and repair them, which made it possible to restore electricity supply to 2,417 households in one of the settlements affected by shelling. Due to hostilities, 109 settlements remained offline, as specialists did not have access to works there. [According](#) to the Ministry of Energy, on March 21, electricity supply was restored for about 3,500 consumers in the region;
- In the **Zhytomyr and Kyiv regions**, [according](#) to the Ministry of Energy, on March 22, due to restoration works on network infrastructure, power outages are possible;
- there was no up-to-date consolidated information on power supply in the **Luhansk region** at the time of the review preparation.

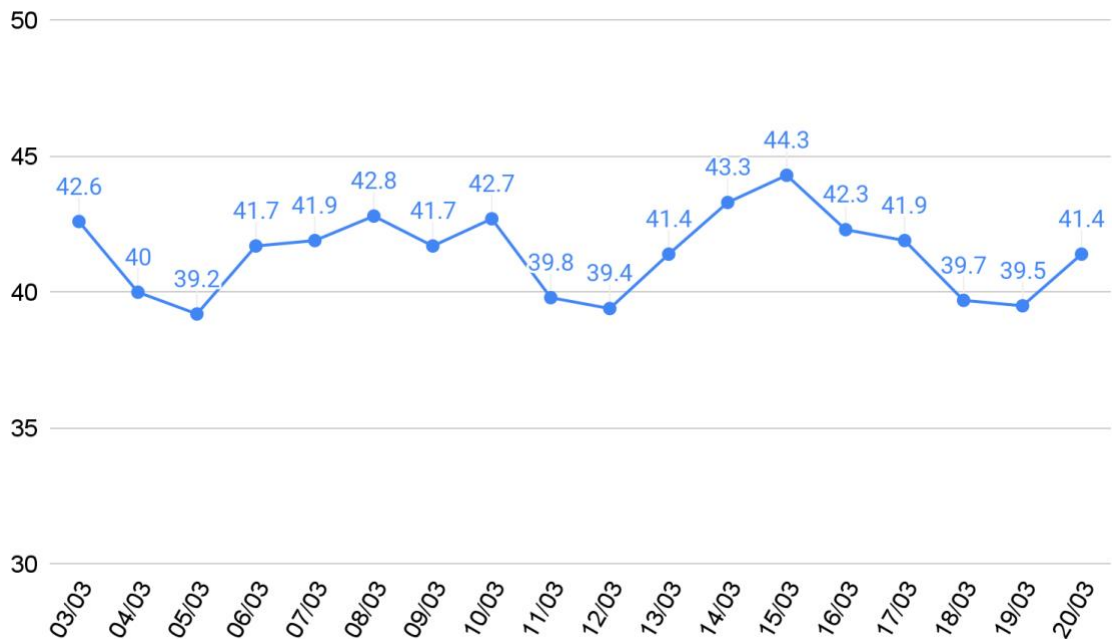
Oil & Gas Sector

Gas system performance

On March 20, the volume of gas transit through the territory of Ukraine amounted to 41.4 mcm (+1.9 mcm as compared to the previous day), i.e. only 38% of the capacity contracted by Gazprom (109 mcm per day). There were no transit flows via the Sokhranivka interconnection point.

The physical imports from EU countries were reported at 13.5 mcm and performed via the Beregdaroc interconnection point (VIP Bereg) at 7.2 mcm, via the Hermanowice interconnection point (VIP Ukraine-Poland) at 2.1 mcm, via the the Budince interconnection point at 3.4 mcm and via the Căușeni interconnection point (Ukraine-Moldova) at 0.8 mcm. On March 20, on Ukraine's gas system exit, except for transit flows, no gas was transmitted.

Transit of Russian gas through the territory of Ukraine, mcm



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

Dmytro Lyppa, the new Director General of GTSOU LLC, has [started](#) to execute duties. At the press conference dedicated to the presentation of the new CEO, the Minister of Energy Herman Halushchenko [announced](#) that the TSO is implementing a pilot project on flexible electricity generation based on its assets (gas turbine installation). Halushchenko outlined such projects as one of the ways to decentralize the power system and develop distributed generation.

Disruption and resumption of supply

The Ministry of Energy did not update information on the number of consumers without gas supply. The **Dnipropetrovsk, Donetsk, Luhansk, Zaporizhzhia, Kherson, Mykolaiv, and Kharkiv regions** had the most challenging situation.

In the **Donetsk region**, the Regional Military Administration [reported](#) another damage to gas pipelines due to enemy's shelling.

In the **Mykolaiv region**, according to the Regional Military Administration, as of March 22, 1,388 gas infrastructure facilities (no change as compared to March 21) were damaged during the war, as a result, 5,139 consumers (-14) [remained with no gas supply](#).

In the **Kherson region**, the local DSO [carried out](#) restoration works in one of the settlements of the Velyka Oleksandrivka community. As evidenced by the surveys of infrastructure, a complete restoration of the system (installation of new gas pipelines) is needed almost everywhere.

Operational information on gas supply in other affected regions was not available at the time of the review preparation.

Countermeasures of Ukrainian Companies and Public Authorities

At a joint press conference with the Prime Minister of Japan Fumio Kishida, the President Volodymyr Zelenskyi [said](#) that new sanctions on Russia should be imposed faster than it can adapt to such restrictions. Zelenskyi also [called](#) to look for new mechanisms to liberate the Zaporizhzhia NPP from Russian invaders, as no international institution can currently resolve this issue. In addition, the President [accepted](#) an invitation to participate in the G7 summit in May online.

According to the Permanent Representative of the Cabinet of Ministers in the Verkhovna Rada Taras Melnychuk, the government has [amended](#) the Procedure for holding auctions for the sale of special permits for subsoil use. In particular, the amount of the guarantee fee has been increased, which will be transferred to the state budget in case the first and second winners of the auction refuse. The amendments were made to "prevent the disruption of electronic auctions and to meet the needs of the national economy with strategically important raw materials".

The Cabinet of Ministers also [approved](#) the draft Law "On Projects of National Interest in the Energy Sector" developed by the Ministry of Energy. The draft, in particular, defines the concepts "projects of national interest in the energy sector", "Projects of Energy Community Interest" (PECIs), and "Projects of Mutual Interest" (PMIs), as well as the procedure and criteria for selecting such projects. The document also defines the procedure for the cross-border distribution of investment costs for PECIs between the countries with the most positive impact from implementation.

The Prime Minister Denys Shmyhal [said](#) that, on March 21, the EU transferred another 1.5 billion EUR tranche of macro-financial assistance. The funds are already at the National Bank accounts. In total, since the beginning of the year, financial assistance from the European Union has amounted to 4.7 billion EUR.

The IMF mission [reached](#) a Staff-Level Agreement on a new Extended Fund Facility (EFF) program for Ukraine. The two-phase program with requested access of SDR 11.6 billion (about USD 15.6 billion) is designed for four years. "In the first phase, we will focus on mobilizing external revenues and activating domestic resources, maintaining financial stability in the long term, in particular by preparing a deeper assessment of the banking sector. The second stage will be devoted to large-scale reforms. Their goal is to restore and rebuild Ukraine, to ensure fast and sustainable economic growth, in particular through measures to facilitate Ukraine's accession to the EU," [said](#) the National Bank Governor Andrii Pyshnyi.

The Energy Efficiency Fund has [received](#) 70 applications from homeowners' associations for participation in the VidnovyDIM program with over 149 million UAH total cost. According to the EEF, 32 homeowners' associations have already received the first tranche of support, which is 70% of the total cost. Today, repairs are being carried out in multi-apartment buildings in the Kyiv, Zhytomyr and Sumy regions. The most applications come from the Kyiv and Zhytomyr regions.

The network of heating points (Point of Invincibility) in Kyiv is [planned](#) to be put on standby, given the gradual seasonal warming. It is noted that, in the event of a massive power outage or emergency, all 767 points should resume provision of services within three hours.

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).