

Daily Alert

Russian War Against Ukraine: Energy Dimension

(status as of 12:00, March 9)

#StopRussianAggression
#StandWithUkraine

Summary

- **On the night of March 9, Russia carried out another massive air attack on Ukraine's energy infrastructure**, firing 81 missiles of different kinds and 8 attack UAVs. The defense forces destroyed 34 cruise missiles and 4 drones, another 8 missiles failed to reach targets due to organized countermeasures.
- **The Minister of Energy Herman Halushchenko reported shelling of energy facilities in the Kyiv, Mykolaiv, Kharkiv, Zaporizhzhia, Dnipropetrovsk and Zhytomyr regions.** Impact of infrastructure facilities was also reported in the Kirovohrad, Odesa, Ivano-Frankivsk, and Vinnytsia regions, and the city of Kyiv.
- **DTEK reported shelling on three TPPs, with equipment severely damaged.** In Kyiv, 40% of consumers were also left without district heating, and in Kharkiv and Zhytomyr, critical infrastructure facilities have switched to generators.
- **There is damage to both thermal power plants and Ukrenergo substations, as well as main grids** - so the CEO of Ukrenergo Volodymyr Kudrytskyi. Restrictions will be applied in the Zhytomyr, Kharkiv, and Odesa regions.
- **The last communication line between the occupied Zaporizhzhia NPP and the Ukrainian power system was disconnected due to the missile attacks.** According to Energoatom, the plant was disconnected and in a blackout mode, with units 5 and 6 being put into cold shutdown, and 18 diesel generators switched on to supply own needs. The fuel reserves for their operation will be enough for 10 days.
- At a meeting with the UN Secretary-General Antonio Guterres, the President Volodymyr Zelenskyi said that the **ZNPP should return under Ukrainian control and that this is a matter of global security.**

- **Ukraine still needs additional supplies of equipment** - so the Deputy Minister of Energy Yaroslav Demchenkov. "We have a particularly high need for high-voltage equipment, including transformers, gas-fired distributed generation, and other power equipment". Ukraine needs to restore stationary power supply schemes for all regions, including broken substations and power plants, said the CEO of Ukrenergo Volodymyr Kudrytskyi.
- **The Ukraine Energy Support Fund, established in April 2022, received 151 million EUR in donations.** About 138 million EUR has been allocated for the needs of affected companies.
- **The Security Service, together with the Economic Security Bureau, discovered a scheme to misappropriate industrial volumes of gas.**
- **The Regulator indicates a positive trend in DSOs' compliance with the requirements on schedules of power outages and proper informing about interruptions in electricity supply.** Most licensees of the NEURC publish schedules which are correct and understandable for consumers, indicating the start and end of outages.

Attacks

On the night of March 9, the terrorist country carried out another massive air attack on Ukraine's energy infrastructure. The enemy [used](#) almost all types of air weapons - from Shahed drones to almost all ranges of missiles. [According to](#) the Ukrainian Air Force, Russia fired 81 missiles (60 air- and sea-launched cruise missiles, 8 guided air missiles, 13 modified anti-aircraft missiles) and 8 attack UAVs. The defense forces destroyed 34 cruise missiles and 4 drones, while another 8 missiles failed to reach targets due to organized countermeasures. It is worth noting that the Armed Forces of Ukraine currently do not have the means to destroy missiles such as Kh-22, Kh-47M2 Kinzhal and modified S-300.

The South Operational Command [reported](#) that infrastructure facilities in the **Kirovohrad, Odesa, Vinnytsia regions and Kryvyi Rih area** were hit. The Minister of Energy Herman Halushchenko also [reported](#) shelling of energy facilities in the **Kyiv, Mykolaiv, Kharkiv, Zaporizhzhia, Dnipropetrovsk and Zhytomyr regions**. [Commenting](#) on the massive Russian missile attack, the President Volodymyr Zelenskyi said the occupiers were trying to return to their tactics of terrorizing civilians. In total, the enemy fired 81 missiles at critical infrastructure facilities and residential buildings in the Kyiv, Kirovohrad, Dnipropetrovsk, Odesa, Kharkiv, Zaporizhzhia, Lviv, Ivano-Frankivsk, Zhytomyr, and Vinnytsia regions.

In the **Odesa region**, damage to an energy infrastructure facility was [confirmed](#) by the Regional Military Administration Head Maksym Marchenko. In the **Dnipropetrovsk region**, the Regional Military Administration Head Serhii Lysak [reported](#) impact and damage to energy infrastructure and industrial enterprises in the Dnipro, Pavlohrad, Kryvyi Rih and Nikopol districts. According to preliminary [information](#) from the **Kyiv City** Military Administration, a Kinzhal-type ballistic missile hit an infrastructure facility in the [Holosiivskyi district](#). At least 15 attacks by S-300 missiles were recorded in the **city of Kharkiv and Kharkiv region**, with impact on critical infrastructure, including a [CHP](#) and transformer substations, [said](#) the Regional Military Administration Head Oleh Syniehubov. In the **Zhytomyr region**, the Regional Military Administration Head Vitaliy Bunechko confirmed that enemy's drone hit an energy infrastructure facility ([substation](#)). In the **Zaporizhzhia region**, one of the critical infrastructure facilities was targeted by five Russian missiles (preliminary, modified S-300), the Regional Military Administration

[informed](#). In the **Ivano-Frankivsk region**, an energy facility was hit during the night attack, [said](#) the Regional Military Administration Head Svitlana Onyshchuk. In the **Kirovograd region**, an energy facility in the Kropyvnytskyi district was hit, [said](#) the Regional Military Administration Head Andrii Raykovych.

[According to](#) DTEK, the shelling damaged three thermal power plants of DTEK Energy and severely damaged the equipment. After the attack ended, specialists started to repair the damage and restore the equipment. Between September 2022 and March 2023, DTEK Energy businesses were attacked 29 times, killing 3 employees and injuring 28.

In February 2023, Ukraine's GDP fell by 26% ($\pm 2\%$) YoY, which is better than in January - 32% ($\pm 2\%$) YoY, [according to](#) the Ministry of Economy of Ukraine. "In February 2023, economic activity was gradually recovering, given the significant reduction in the electricity deficit and the shorter duration of outages due to the resumption of all available types of generation in the power system from mid-February", said the Minister of Economy Yuliia Svyrydenko.

Nuclear Safety

On 9 March, at 03:53, the last communication line between the occupied Zaporizhzhia NPP and the Ukrainian power system was disconnected as a result of the Russian missile attacks. [According to](#) Energoatom, the plant was disconnected and in a blackout mode, with units 5 and 6 being put into cold shutdown, and 18 diesel generators switched on to supply the plant's own needs. The fuel reserves for their operation will be enough for 10 days. As reported, if the external power supply cannot be restored during this time, an accident with radiation consequences for the whole world may occur.

In addition, all Ukrainian NPPs located in the government-controlled territory have unloaded their capacity due to the threat of missile attacks. As of 06:30, all operating power units have supplied a total of 4,700 MW to the grid.

At a meeting with the UN Secretary-General Antonio Guterres, the President of Ukraine Volodymyr Zelenskyi [said](#) that the Zaporizhzhia NPP should return under Ukrainian control and that this is a matter of global, not just Ukrainian, security. The President of Energoatom Petro Kotin [said](#) that the creation of a safe zone around the ZNPP and the satellite city of Energodar remain a priority for Ukraine and the entire international community. In addition, Kotin expressed gratitude to the IAEA Director General Rafael Grossi for intensifying consultations to create a demilitarized zone around the ZNPP.

Electricity Sector

Power system operation

[According](#) to Ukrenergo, on the night of March 9th, the 15th massive missile attack by Russia on Ukraine's energy infrastructure took place. Preventive power supply restrictions were applied in all regions to reduce risks. As of 8:00, the restoration works were ongoing in the power system. Due to the attack, there are damages to energy infrastructure facilities, so restrictions will be applied in the Zhytomyr, Kharkiv, and Odesa regions.

The CEO of Ukrenergo Volodymyr Kudrytskyi [announced](#) that Russia did not achieve its main goals as the power system is still functioning. There is damage to both thermal power plants and Ukrenergo substations, as well as main grids. The specialists are already working on restoring power supply in the regions.

As of March 8, electricity imports were almost not being used, but in case of the situation gets worse, its volumes may increase, [according](#) to Kudrytskyi. The allowed volume of imports is currently 800 MW.

[According](#) to ENTSO-E, as of March 9, insignificant commercial imports of electricity were performed from Slovakia (0-7 MW) and Moldova (0-7 MW) (for different hours during the day). D.Trading [booked](#) capacity in Slovakia->Ukraine (250 MW) and Moldova->Ukraine (120 MW) directions, both on a flat schedule. In both auctions, the marginal price 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 index of Ukraine 1.35-1.84 times.

Disruption and resumption of supply

Due to enemy's attacks on energy infrastructure facilities, a number of railway sections have been disconnected across the country, and 15 trains are operating with delays, [according](#) to Ukrzaliznytsia.

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

- in the **city of Kyiv**, [according](#) to the City Military Administration, on March 9, technological emergency power outages were applied due to the missile attack, causing disconnection for about 15% of consumers, and 40% of consumers were also left without [district heating](#). The power outage [was lifted](#) at 9:00, but emergency outages continued to apply in parts of the Holosiivskyi, Solomyanskyi, and Sviatoshynskyi districts due to overloading at one of the lines;
- in the **Kharkiv region**, [according](#) to the Regional Military Administration, critical infrastructure facilities were hit by modified S-300 missile attacks. The Mayor of Kharkiv Ihor Terekhov [reported](#) damage to a CHP and transformer substations, resulting in a power outage in the city. Critical infrastructure facilities and healthcare institutions have switched to generators. District heating or water supply in the city were also disrupted;
- in the **Odesa region**, [according](#) to the Regional Military Administration, several power transmission lines and a support tower were damaged due to the missile strike. Emergency power outages are in effect in the region. Prior to the massive air attack, the majority of repairs to increase reliability, restore backup lines and substations [was planned](#) to be completed by mid-March;
- in the **Dnipropetrovsk region**, [according](#) to the Regional Military Administration, on March 8, the occupying forces attacked the Nikopol district with heavy artillery and multiple rocket launchers, as a result 20 solar panels and 4 power lines were damaged in the city of Nikopol. On the night of [March 9](#), the enemy attacked the region with drones and missiles, damaging energy infrastructure;
- in the **Kirovohrad region**, [according](#) to the Regional Military Administration, the impact of an energy facility was recorded in the Kropyvnytskyi district. As of [10:30](#), power supply was restored, and all consumers in the region were provided with electricity;
- in the **Zhytomyr region**, [according](#) to the Regional Military Administration, on the night of March 9, the enemy hit one of the energy infrastructure facilities, leaving almost 150,000 consumers without electricity supply. Specialists have successfully restored power supply to critical infrastructure facilities in the region, and they will be able to begin switching consumers to backup power lines as soon as the fire is extinguished;

- in the **Zaporizhzhia region**, [according](#) to the local DSO, as of March 9, 23,950 consumers in 70 settlements (excluding temporarily uncontrolled territories) remained offline. During the day, there were no significant changes in the situation: in the city of Zaporizhzhia, specialists eliminated 2 individual disconnections, and 1 disconnection still remains. Due to active hostilities and the lack of access to damaged power grids, emergency recovery works were not carried out in other areas, and no new disconnections were recorded;
- in the **Kherson region**, [according](#) to the Regional Military Administration, as of March 7, 41 crews (219 specialists and 82 units of equipment) were working to restore electricity supply. Specialists performed works on the damaged lines supplying the cities of Kherson and Beryslav, the villages and towns of Bilousove, Trudoliubivka, Novovoznesenske, Biliayivka, Kalynivske, Novopetrivka, Lymanets, Inhulivka, Tokareve, Kalynivske, Pravdyne, Kirove, Nova Zoria, and Posad-Pokrovske;
- in the **Mykolaiv region**, [according](#) to the Regional Military Administration, as of March 9, 1,077 electricity supply facilities were partially or completely damaged (+1 during the day), while 1 settlement of the Bashtanka district remained offline. Due to the possibility of enemy's missile attacks in the region, a dispatching [command](#) was issued to reduce consumption, resulting in scheduled power outages from approximately 02:00 to 10:00;
- there was no up-to-date consolidated information on power supply in the **Donetsk and Luhansk regions** at the time of the review preparation.

Other

Given the improvement in the general situation with electricity supply throughout Ukraine, the number of consumer appeals requesting not to consider their previous complaints regarding violations of power outage schedules has increased, [according](#) to the NEURC. This provides grounds for the Regulator to cancel scheduled inspections of DSOs that were planned earlier. Thus, at the meeting on March 7, the NEURC made a decision regarding the loss of force of its decisions on conducting unscheduled field inspections of Volynoblenergo PJSC and Chernivtsioblenergo PJSC.

The results of the inspections already performed by the Regulator indicate a positive trend in fulfilling the legislative requirements regarding compliance with schedules of power outages and proper informing about interruptions in power supply. Most licensees publish schedules which are correct and understandable for consumers, indicating the start and end of outages.

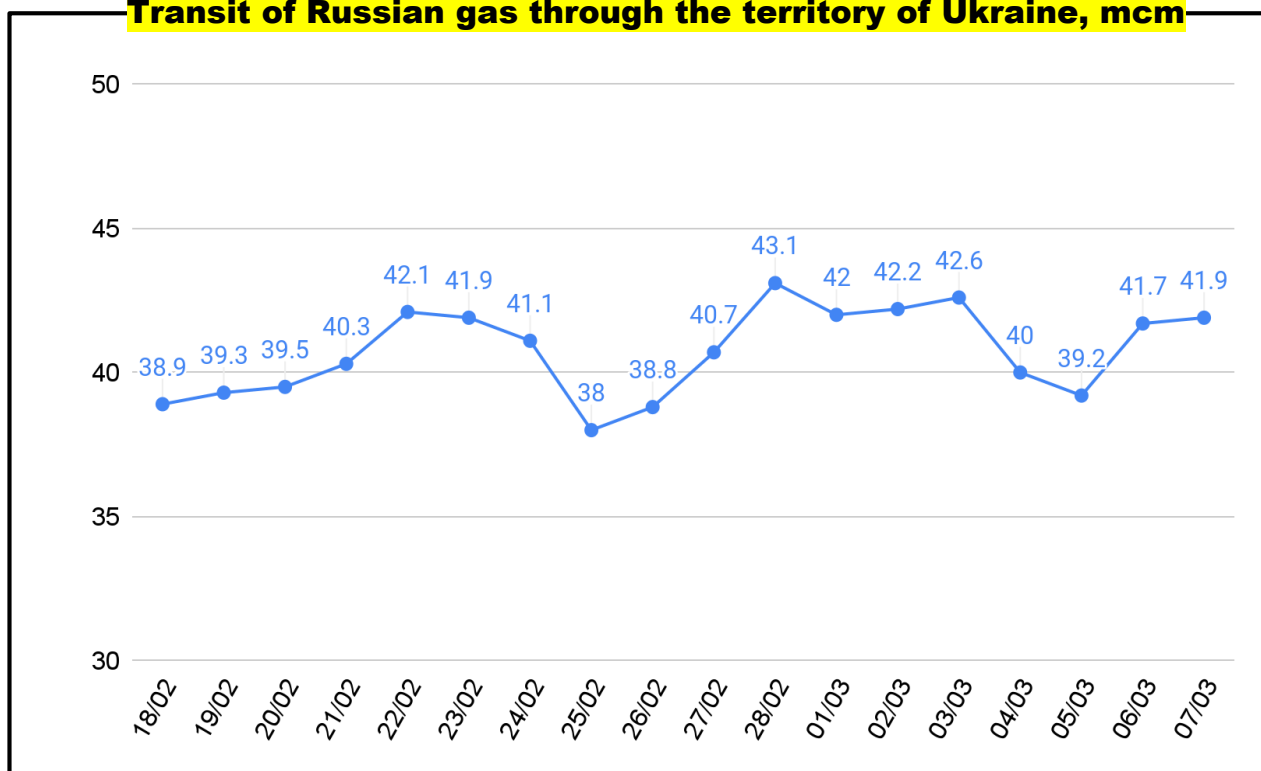
Oil & Gas Sector

Gas system performance

On March 7, the volume of gas transit through the territory of Ukraine amounted to 41.9 mcm (+0.2 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 mcm, via the Hermanowice interconnection point (VIP Ukraine-Poland) at 2.3 mcm, via the Budince interconnection point at 3.4 mcm and via the Căușeni interconnection point (Ukraine-Moldova) at 0.8 mcm. On March 7, 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: [GTSOU](#)

Functioning of the oil and oil products market

Ukrnafta has [signed](#) a contract with PKN Orlen to import oil products to Ukraine. "At the same time, Ukrnafta is negotiating oil exports", said the company's CEO Serhii Koretskyi. He believes that signing the agreement is important as it is necessary to free up space in underground storage facilities for newly produced oil. It is also important to receive petroleum products for company's needs and the Ukrainian market directly from the producer at better prices.

Disruption and resumption of supply

As of March 8, the Ministry of Energy did not update information on the supply restoration and the number of consumers without gas supply.

The **Dnipropetrovsk, Donetsk, Luhansk, Zaporizhzhia, Kherson, Mykolaiv, and Kharkiv regions** had the most challenging situation.

In the **Mykolaiv region**, according to the Regional Military Administration, as of March 9, 1,386 gas infrastructure facilities (no change as compared to March 8) were damaged during the war, as a result, 5,233 consumers (no change) [remained with no gas supply](#).

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

The National Security and Defense Council of Ukraine is preparing new sanctions against those who are trying to weaken the state, as the President Volodymyr Zelenskyi said in

a video [address](#). According to him, a meeting of the NSDC will soon take place with relevant draft decisions on the agenda.

In an online conversation, the Prime Minister Denys Shmyhal and the Vice-President of the European Commission Maroš Šefčovič [coordinated](#) further steps towards European integration and the restoration of Ukraine's energy sector. "We are working to complete the full synchronization of the Ukrainian power system with ENTSO-E to increase our electricity imports and exports capabilities. We also expect to join the EU Raw Materials Strategy by 2030 this year", the Prime Minister wrote. He also expressed gratitude to the European Commission for allocating 180 million EUR for the purchase of solar panels for Ukraine.

At a meeting of the OSCE Permanent Council's Security Committee, the Deputy Minister of Energy Yaroslav Demchenkov [emphasized](#) there is still a great need for additional supplies of equipment to ensure the stable functioning of the electricity sector. "We have a particularly high need for high-voltage equipment, including transformers, gas-fired distributed generation, and other power equipment", he added.

[According](#) to the Ministry of Energy, the Ukraine Energy Support Fund, established in April 2022 at the Energy Community Secretariat, received 151 million EUR in donations. About 138 million EUR has been already allocated for the needs of affected Ukrainian energy companies. One of the latest purchases made by the Fund is 4.5 million EUR of equipment for JSC Khersonoblenergo.

The CEO of Ukrenergo Volodymyr Kudrytskyi [said](#) that backup power supply schemes are currently used in many cases, while Ukraine needs to restore stationary power supply schemes for all regions, including broken substations and power plants. "We need to maximize the fleet of power units that we will dispatch in the next winter period. This is the main task: to restore the power system's ability to cover demand during the winter", he summarized.

During a visit to the Energy Community Secretariat, the Chair of the NEURC Kostyantyn Ushchapovskiy [said](#) that the Regulator has a plan of decisions for the post-war reconstruction of Ukraine based on clean energy, taking into account the challenges of the war. "Over the past year, we have fully set regulations for electricity storage activities. We expect this new area will soon be actively developed. We are also focusing on the development of distributed generation. We do not ignore the issue of introducing demand response mechanisms and incentives for energy efficiency", he said.

The NEURC [announced](#) a meeting on March 14, with plans to consider:

- [amendments](#) to the Procedure for developing distribution system development plans and investment programs of DSOs, in particular in terms of justifying the measures proposed by the DSOs;
- [extension](#) of the deadline for submitting applications for amendments to 2022 investment programs in the field of water supply and sewerage until November 1, 2023;
- draft [amendments](#) to the Rules of Day-Ahead and Intraday Markets in terms of calculating the amount of a fixed payment for the use of Market Operator software and the tariff for purchase/sale transactions on DAM/IDM;
- draft [amendments](#) to the Procedure for Funds Distribution and the Algorithm for Funds Distribution from Special Accounts of Electricity Suppliers to avoid emergence of artificial tax liabilities.

The Security Service, together with the Economic Security Bureau, [discovered](#) a scheme to misappropriate industrial volumes of natural gas owned by Gas Transmission System Operator of Ukraine LLC. According to the investigation, the criminals set up an illegal mechanism for gas withdrawal for further sale to third parties. For the fraud, the

organizers submitted to GTSOU forged bank guarantees on fulfillment of obligations totaling 195 million UAH, which allowed them to inject gas into storage facilities without actually paying for the commodity.

For subscriptions, comments and other questions, please email to:
author@dixigroup.org

SUPPORT UKRAINIAN ENERGY SECTOR



Ukraine urgently needs emergency energy equipment to restore energy supply in the regions affected by war. More than 12,000 items are on the list of requested emergency energy equipment. If your company, association or country is ready to help, please [contact the Energy Community Secretariat's Ukraine Support Task Force](#).

[Energy Community Homepage \(energy-community.org\)](http://energy-community.org)

SUPPORT UKRAINIAN ARMY

To financially support the Armed Forces of Ukraine, please follow the [link](#) (the National Bank of Ukraine special account).