



(status as of 12:00, November 23)

#StopRussianAggression
#StandWithUkraine

Resume

- As reported by the CEO of Ukrenergo Volodymyr Kudrytskyi, since October 10, the Russian missile attacks damaged practically all coal-fired and hydropower plants, as well as nodal substations in Ukraine's power system. According to preliminary estimates, the losses of Ukrenergo due to war is over 70 billion UAH.
- The President Volodymyr Zelenskyi said that in case the authorities, as a result of new strikes, understand that electricity supply cannot be restored in hours, the "Points of Invincibility" with all basic services will be activated throughout Ukraine. Currently, over 4,000 such points have been prepared, but more are planned.
- The State Customs Service has published guidelines regarding the need for declaring imports of generators to Ukraine. Meanwhile, according to the MP Yaroslav Zheleznyak, on November 1-21, 136,000 generators of various types with a total customs value of almost 88 million USD were imported, including 32,000 ones under import duty relief.
- Gazprom accused Ukraine of Russian gas undersupply to Moldova, citing 'detected deposition'. Gas TSO of Ukraine and Naftogaz denied these claims. GTSOU said that gas volumes delivered via the Sudzha interconnection point (RU-UA), including volumes for Moldova's consumers, were fully transmitted via the Oleksiivka and Hrebenyky interconnection points. This fact is confirmed by transfer and acceptance acts signed with adjacent TSOs, one of which is Gazprom. Also, since the end of September, Moldova has been transmitting gas to Ukraine (for storage) in the backhaul regime which explains the differences in physical flows.
- The government transferred to Naftogaz 12.7 billion UAH received from the Canadian government for the purchase of gas. Before, Norway allocated about 200 million EUR for these needs, and the EBRD agreed to provide another 300 million EUR.

- The Minister of Foreign Affairs Dmytro Kuleba called on the EU to speed up developing the 9th package of sanctions on Russia. Ukraine insists on a full energy embargo, an extension of the oil embargo on the northern line of the Druzhba pipeline, a ban on the imports of LNG from Russia, sanctions on Rosatom and the suspension of Russia's rights at the IAEA.
- According to the media, the oligarch Ihor Kolomoiskyi and his business partners of the Privat group may after the war be entitled to at least 364 million USD in compensations for alienated shares of Ukratnafta and Ukrnafta. According to the law, return of the alienated shares or compensations for them shall be carried out within a year following the termination of martial law or within five years if the war continues longer.

Attacks

After six massive Russian missile attacks, practically no large coal-fired and hydropower plants, as well as nodal substations remained intact in Ukraine's power system, as [reported](#) the CEO of Ukrenergo Volodymyr Kudrytskyi. According to him, since October 10, all large power plants located on the territory controlled by Ukraine (except nuclear ones) were damaged, which reduced their ability to generate electricity. Even before October 9, due to the occupation, Ukraine lost the Zaporizhzhia NPP, which was producing electricity until the beginning of autumn, as well as several important facilities: Luhansk, Vuhlehirsk and Zaporizhzhia TPPs, and Kakhovka HPP.

Kudrytskyi also [noted](#) that the call for Ukrainians to leave abroad due to the Russian attacks on energy infrastructure and problems with electricity supply is currently inappropriate. According to him, the United Power System of Ukraine has repeatedly demonstrated its resilience, yet it is practically impossible to predict definitely whether there will be a complete blackout or not - it depends on the number of missiles in a specific strike, targets they reach, and damage caused to the power system. Engineers and operators of critical infrastructure networks are ready for emergency situations and are currently working to ensure that the power system meets the needs of Ukrainians as best as possible.

According to preliminary estimates, the losses of Ukrenergo due to Russia's military aggression is over 70 billion UAH, the Prime Minister Denys Shmyhal [said](#). 70 repair crews, i.e. more than 1,000 qualified specialists, are currently working on the restoration of power grids.

Electricity Sector

Power system operation

[According](#) to the CEO of Ukrenergo Volodymyr Kudrytskyi, there is a capacity deficit in the power system of Ukraine caused by the massive Russian strikes on critical infrastructure facilities.

On November 23, from 00:00 to 24:00, [scheduled power outages were applied in all regions](#) of Ukraine. As of the morning on the same day, no additional emergency outages were expected.

According to ENTSO-E, for November 23, [Ukraine did not perform](#) commercial exports and imports of electricity. [There was no demand](#) at the capacity auctions for the imports of electricity from Moldova (800 MW), Slovakia and Romania (300 MW each).

Disruption and resumption of supply

The Presidential Office [reported](#) that the Ukrainian defenders have already liberated 1,886 settlements from the Russian occupation, and electricity supply has been restored in 71% of them.

[According](#) to the President Volodymyr Zelenskyi, Ukraine has to liberate about 2,000 more cities, towns and villages. According to him, the Russians destroy all the infrastructure in the occupied territories, and when they withdraw, they steal all the equipment of life support systems.

As of November 22, the Ministry of Energy did not update information on the restoration of supply and the number of consumers without electricity.

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

- in the Kharkiv region, [according](#) to the local DSO, specialists restored more than 8 km of 10 kV high-voltage line, 9 transformer substations, and repaired 0.4 kV lines. After the completion of all works, more than 140 metering points in the village of Bobrivka, as well as about 240 consumers of 6 garden associations located nearby, were reconnected. Emergency crews also worked on restoring electricity supply to the villages of Tsyркuny and Cherkaski Tyshky;
- in the Dnipropetrovsk region, [according](#) to the local DSO, specialists worked on the modernization of an overhead line in the city of Kamianske. The consequences of problems with electricity supply affected large businesses, in particular the metallurgical plant ArcelorMittal Kryvyi Rih [produces only 20-25%](#) of its capacity, and the issue of energy supply is the main problem for expansion of production volumes. Currently, the company consumes 120 MW per hour as compared to the usual 400 MW;
- in the Vinnytsia region, [according](#) to the local DSO, given the planned repairs, temporary disconnections to some consumers in the city of Vinnytsia were possible;
- in the Sumy region, [according](#) to the Regional Military Administration, on November 22, the enemy opened fire on the Druzhba community, as a result a power line was damaged. In the region, there was still a need to save electricity in peak hours, therefore the [DSO called](#) for the maximum reduction of consumption not only by households, but also by businesses in the city Sumy and the region: owners of enterprises and services, markets, filling stations, shops and retail chains, cafes and restaurants;
- in the Kyiv region, [according](#) to YASNO (supply company), as of November 22, power supply restrictions in the amount of 339 MW were activated, with more than 953,000 consumers subject to outages. On November 21-22, the local [DSO specialists restored](#) electricity supply to more than 300 settlements that were completely or partially offline due to bad weather. As of the morning of November 23, 15 settlements were completely or partially without electricity supply, with 5 6-10 kV lines and 148 transformer substations damaged. Also, in some districts of the region, there were outages in the 0.4 kV networks;
- in the Zhytomyr region, [according](#) to the Regional Military Administration, on November 22, due to excessive electricity consumption in all cities and certain communities (in some cases - by 10+% than average), an additional outage was applied to more than 100 settlements;
- in the Khmelnytskyi region, [according](#) to the local DSO, on November 22, an emergency shutdown of a 110 kV line took place, so a third of the city of Khmelnytskyi, as well as the Krasyliv and Starokostyantyniv communities were offline;
- in the Chernihiv region, [according](#) to the Regional Military Administration, due to unfavorable weather conditions, overhead power lines were damaged on November 22, which led to the disconnection of 6 power lines with a voltage of 10 kV (5 of them partially). 6 settlements of the Novhorod-Siverskyi and 1 of the Chernihiv districts remained without electricity supply (a total of 949 consumers);
- in the Rivne region, [according](#) to the local DSO, its dispatch control department has developed a non-standard supply scheme that has never been used in the region before. Developed and implemented switching in the networks should reduce the duration of outages, in particular in the regional center, and make them more predictable;

- in the Kherson region, [according](#) to Ukrenergo, the difficult situation with power supply was not related to shelling, but to the fact that the Russians intentionally blew up and mined almost the entire energy infrastructure. There are sections of power lines where a single square meter needs to be demined for an hour, and tens of kilometers of such lines, so a huge number of teams of both sappers and energy specialists were working on restoration. Currently, Ukrenergo plans to restore at least one power transmission line that will ensure the supply of electricity to the Kherson region. [According](#) to DTEK, the company's engineers were working on the repair of a 150 kV overhead line, the restoration of which will allow to reconnect the Beryslav and adjacent districts. Another team was working in the Bilozerka district, where specialists have already completed 75% of the works;
- in the Mykolaiv region, [according](#) to the local DSO, works to restore electricity supply in the de-occupied settlements continued. For this purpose, bomb technicians inspected the networks and neutralized explosive objects, and power engineers repaired damaged equipment in the inspected areas. In particular, one of the substations on the recently liberated territory was put into operation;
- in the Zaporizhzhia region, [according](#) to the local DSO, as of 07:00 on November 23, 24,665 consumers in 72 settlements remained offline (not including 11 district offices to which the occupation "authorities" restricted access). During the day, the specialists repaired damage to equipment and restored electricity supply to 4 consumers of the city of Zaporizhzhia;
- in the Donetsk region, [according](#) to the local DSO, on November 21, specialists restored electricity supply to 11,208 households in 3 settlements. 99 settlements still remained offline, as the emergency crews did not have access to works;
- there was no up-to-date consolidated information on power supply in the Odesa and Luhansk regions at the time of the review preparation.

Oil & Gas Sector

Gas system performance

On November 21, the volume of gas transit through the territory of Ukraine amounted to 42.2 mcm per day (-0.5 mcm as compared to the previous day). This volume was only 39% of the capacity contracted by Gazprom (109 mcm per day). There were no transit flows via the Sokhranivka interconnection point.

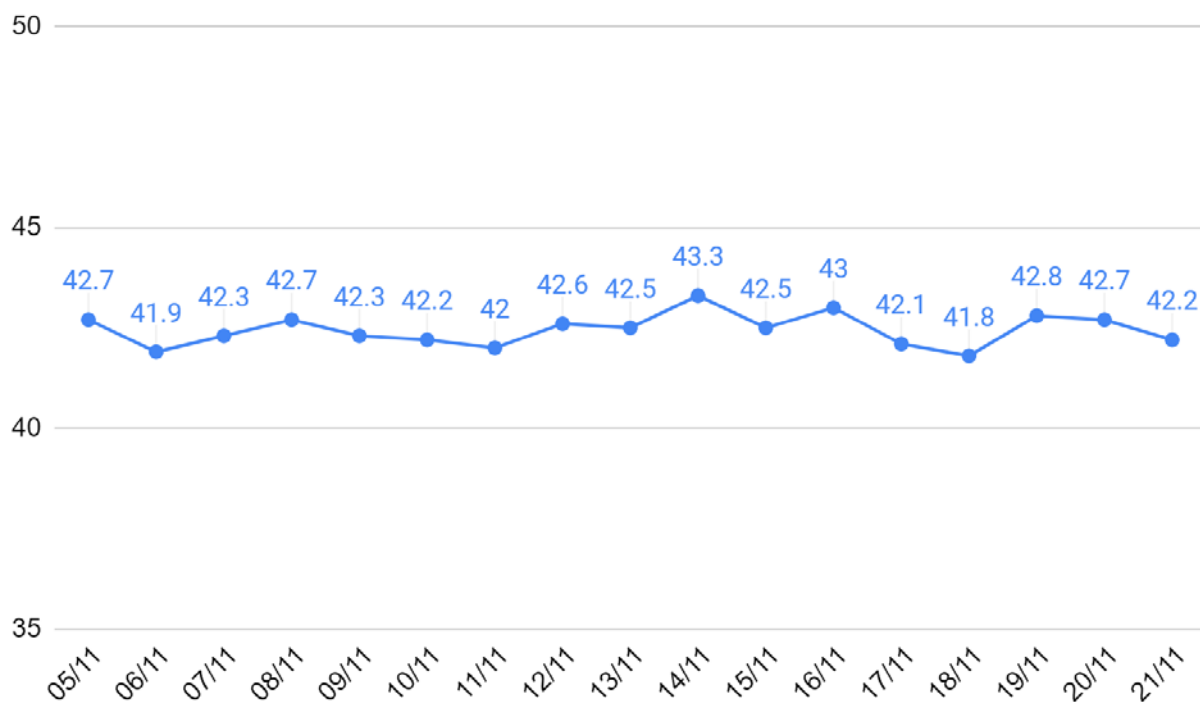
On November 21, the physical imports of gas from the EU countries was reported at 0.6 mcm only via the Beregdaroc interconnection point (VIP Bereg) from Hungary. On Ukraine's gas system exit, except for transit flows, 7.3 mcm were transported via the Drozdovychi interconnection point (VIP Ukraine-Poland).

[Gas Transmission System Operator of Ukraine LLC](#) and [Naftogaz of Ukraine NJSC](#) rejected the Gazprom's accusations of Russian gas undersupply to Moldova through Ukraine. GTSOU claimed that gas volumes delivered via the Sudzha interconnection point (RU-UA), including volumes for Moldovan consumers, were fully transmitted via the Oleksiivka and Hrebenyky interconnection points between Ukraine and Moldova. This fact is confirmed by transfer and acceptance acts signed with adjacent TSOs, one of which is Gazprom. GTSOU additionally indicated that, since the end of September, gas was transmitted from Moldova to Ukraine via the Hrebenyky interconnection point in the backhaul regime (virtual reverse flow). This can explain the differences in physical gas flows. The Moldovan Minister of Infrastructure and Regional Development Andrei Spinu confirmed it by stating that part of the transit gas flow reserved for Moldova was not received physically but was injected to the Ukrainian underground storages instead (as reserves).

According to the Director on Government and International Affairs of GTSOU Olga Bielkova, the accusations of Gazprom is another attempt to use gas as a tool of political pressure. In such a way the Russian monopolist seeks to find 'justifications' for further reduction of supplies to the European countries.

To remind, on November 22, Gazprom '[detected deposition](#)' of gas, reserved for Moldova, in Ukraine. Such deposition was 'inferred' due to alleged differences between physical volumes of gas delivered at Russia-Ukraine and Ukraine-Moldova borders, respectively.

Transit of Russian gas through the territory of Ukraine, mcm



Source: [GTSOU](#)

Functioning of the oil and oil products market

Investigative journalists of Censor.NET have [estimated](#) that the oligarchs Ihor Kolomoiskyi and Hennadii Boholiubov, as well as their business partners from the Privat group, may after the war be entitled to at least 364 million USD (13.3 billion UAH at the current exchange rate) in compensations for alienated shares of Ukratnafta PJSC and Ukrnafta PJSC. According to the law, return of the alienated shares or compensations for them shall be carried out within a year following the termination of martial law or within five years if the war continues longer.

If the government will return the shares in companies, temporarily managed during the war, to Kolomoiskyi and his partners, the oligarch may claim the repayment of lost profits. If the governments decides to compensate the shares' value, the abovementioned businessmen may receive hundreds of millions of dollars for the assets destroyed by Russian missiles. Before the war, the Privat group's share in Ukrnafta was estimated at 600 million USD, in Ukratnafta - at 270 million USD. According to Forbes, during the war the value of the shares in Ukrnafta dropped to 314 million USD, in Ukratnafta - to 50 million USD.

Disruption and resumption of supply

As of November 22, 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 Donetsk region, the local DSO, as of November 21, [restored](#) gas supply to 80,000 consumers of the region.

In the Kherson region, the local Regional Military Administration [reported](#) on the continued works to restore gas supply. In general, gas distribution has been restored to 43 settlements (out of 86 ones with gas supply provided before the war).

Operational information on gas supply in the Dnipropetrovsk, Zaporizhzhia, Luhansk, Mykolaiv and Kharkiv regions was not available at the time of the review preparation.

Countermeasures of Ukrainian Companies and Public Authorities

The President of Ukraine Volodymyr Zelenskyi [said](#) that in case the authorities, as a result of new missile strikes, understand that electricity supply cannot be restored in hours, the "Points of Invincibility" with all basic services will be activated throughout Ukraine. Currently, over 4,000 such points have been prepared, but more are planned. The facilities will necessarily work at all regional and district administrations, as well as at schools, buildings of the State Emergency Service, etc. A [dedicated website](#) with the map of such points throughout the country has also been launched.

The President also [expressed gratitude](#) to the partners for "significant steps of solidarity" in the form of 2.5 billion EUR in macro-financial assistance from the EU, as well as the announced additional U.S. funding for direct budget support in the amount of 4.5 billion USD. The Prime Minister of Ukraine Denys Shmygal, in turn, [announced](#) that the World Bank plans to mobilize an additional 4.5 billion USD in support of Ukraine, which will help Ukraine meet its urgent needs during the winter period.

The Minister of Foreign Affairs of Ukraine Dmytro Kuleba [called](#) on the EU to speed up developing the ninth package of sanctions on Russia, which would include strict restrictions on the Russian missile industry. Ukraine also insists on the need for a full energy embargo, an extension of the oil embargo on the northern line of the Druzhba pipeline, and a ban on the imports of LNG from Russia. In addition, Ukraine calls for the introduction of sanctions on Rosatom and the suspension of Russia's rights at the IAEA.

At its Tuesday meeting, the Cabinet of Ministers [approved](#) the procedure for using state budget funds for the purchase of gas, and also transferred to Naftogaz 12.7 billion UAH received from the Canadian government for these purposes. Before, Norway allocated about 200 million EUR to Ukraine for the purchase of gas, and the EBRD agreed to provide another 300 million EUR for these needs. According to the Prime Minister Denys Shmyhal, these funds will also be transferred to Naftogaz.

Japan will [send](#) emergency aid to Ukraine (generators and lamps on solar batteries) for 2.57 million USD. The equipment will be transferred to Ukraine through the Office of the United Nations High Commissioner for Refugees. [According](#) to Yaroslav Zheleznyak, the First Deputy Head of the Verkhovna Rada Committee on Finance, Taxation and Customs Policy, on November 1-21, 136,000 generators of various types with a total customs value of almost 88 million USD were imported to Ukraine. This includes 32,000 generators imported under import duty relief, and the amount of the relief is 5.2 million USD.

The State Customs Service has [published](#) guidelines regarding the need for a written declaration when importing generators to Ukraine. As noted, the following goods are not subject to written declaration:

- with a cost of ≤ 500 EUR and a weight of ≤ 50 kg when imported personally in luggage;
- with a cost of ≤ 150 EUR when imported by mail to one recipient from one sender per day.

Generators that do not meet these criteria or are imported by a person more than once per one day are subject to a written declaration without payment of customs fees.

According to the media, on November 22, the Security Service of Ukraine [conducted searches](#) at the premises of VS Energy group, which owns a number of DSOs and "occupies 10% of Ukraine's electricity market". The final beneficiaries of the group are considered to be the Russians - the State Duma member Aleksandr Babakov, businessman Yevgeni Giner and the so-called "thief in law" nicknamed "Misha Luzhnetskiy" Mikhail Voevodin - whose assets were previously [arrested](#) by the Kyiv court. VS Energy owns JSC Zhytomyroblenergo (95.54%), JSC Khersonoblenergo (99.99%), JSC Kirovohradoblenergo (72.9%), JSC Chernivtsioblenergo (96.78%), and JSC Rivneoblenergo (93.24%).

The Cyprus-based company Ornex Limited, which is part of Rinat Akhmetov's SCM group, has [announced](#) a tender for the purchase of DTEK Renewables' Eurobonds (issued for 325 million EUR with a coupon of 8.5% and maturity in 2024) for a total amount of up to 20 million EUR. According to the Frankfurt Stock Exchange, on Tuesday, quotes for the DTEK Renewables' bonds dropped by 47.64% - to 18.85% of nominal value.

The mayor of Mykolaiv Oleksandr Sienkevych [reported](#) that the municipal water supply system is currently completely worn out and needs urgent replacement, as salt water destroys the entire system. The number of accidents increased 20 times. According to him, the city council, together with the Regional Military Administration, were working with the Cabinet of Ministers and MPs to receive targeted funding for the repair of at least part of the pipes.

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).