Russian War Against Ukraine: Energy Dimension

DiXi Group alert

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#StopRussianAggression

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Summary

- The President Volodymyr Zelenskyi reminded that the government made a decision on mandatory evacuation from the Donetsk region. The Vice PM for Reintegration Iryna Vereshchuk explained the evacuation is due to the intensification of hostilities and the almost complete absence of electricity and gas supply. According to the government’s expectations, this winter, the Donetsk region settlements will have no district heating.

- According to the Minister for Communities and Territories Development Oleksii Chernyshev, the heating season in Ukraine will begin after October 15, depending on weather conditions, with no revision of the temperature standards for residential buildings. The Ministry of Energy, in turn, in case of Russian attacks, is preparing possibilities for fast purchases of equipment and spare parts, prompt repairs of equipment and networks.

- As the Zaporizhzhia City Council Secretary Anatolii Kurtev reported, the authorities decided to refuse from centralized hot water supply in the city. Using electric boilers will help consume less gas and save the city over 500 million UAH every year.

- As of July 31, 770 settlements (app. 625,200 consumers) were left without electricity supply due to damage caused by hostilities. Over 239,400 consumers were left with no gas supply.

- As of August 1, Ukraine increased electricity exports to Eastern European countries to 665 MW. Following the ENTSO-E decision to increase available cross-border flows, exports to Romania and Slovakia increased from 50 to 125 MW each. Exports to Poland (from 205 to 210 MW) and Moldova (from 160 to 200 MW) also increased.

- The Verkhovna Rada has approved the government’s package of laws which introduces a moratorium on raising tariffs for natural gas distribution services; production, transportation and supply of heat energy; district heating and supply of hot water. The ban will be in effect
during martial law and for 6 months after its termination. It also provides for raising over 125 billion UAH as international aid to compensate for the difference in tariffs.

- The parliament also created a Temporary Special Commission to consider issues related to crisis in the energy market before and during the Russian armed aggression.
- At the level of Naftogaz, active consultations go on and first preliminary protocol agreements are being prepared on gas supplies under the Ukraine Democracy Defense Lend-Lease Act of 2022 - so the Minister of CMU Oleh Nemchinov. It could be the U.S. supplying certain volumes of gas, which may not be received by Ukraine otherwise due to hostilities.
- Meanwhile, the government fixed the market value of Naftogaz at 300.4 billion UAH, and the authorized capital was increased by 646.2 million UAH via the transfer of shares of 6 cogeneration plants, recently transferred to the company’s ownership.

 Attacks
The Ministry for Reintegration of Temporarily Occupied Territories has updated the list of communities located in the areas of military (combat) operations, under temporary occupation, or encirclement (blockade). The list includes communities of the Donetsk (66), Kharkiv (56), Dnipropetrovsk (7), Luhansk (37), Zaporizhzhia (55), Kherson (49), Mykolaiv (25), Sumy (21), and Chernihiv (5) regions. In total, there are currently 321 communities in the list.

 Electricity Sector:

 *Power system operation*

 **Interaction with ENTSO-E:** As of August 1, Ukraine continued to export electricity to Eastern European countries at 665 MW. Commercial exports of electricity to Poland via the Dobrotvirska TPP - Zamosc transmission line increased from 205 to 210 MW on a flat schedule. Following the ENTSO-E decision to increase available cross-border flows, exports to both Romania and Slovakia increased from 50 to 125 MW each on flat schedules. Exports to Moldova increased from 160 to 200 MW (with a flexible schedule during the day). Also, technical cross-border flows continued between the energy systems of Ukraine and Eastern European countries (Slovakia, Romania, Hungary, Poland and Moldova).

 At the same time, according to Ukrenergo, on July 25-31, 83.4% of electricity in the United Power System of Ukraine was produced without CO2 emissions.

 **Daily capacity allocation auctions (for August 1):**

 *Ukraine->Poland:* DTEK Zakhidenergo purchased all available 63 MW on a flat schedule; marginal price - "zero".

 *Ukraine->Moldova:* out of 600 MW available capacity, 300 MW was booked: 200 MW by Energoatom and 100 MW by Ukrhydroenergo on flat schedules; marginal price - "zero".

 *Ukraine->Romania:* 125 MW available capacity was distributed among all 6 companies competing at the auction. At the same time, a significant increase in distribution concentration was observed - the largest total share of cross-border capacity was booked by DTEK Zakhidenergo (67.4%); the remaining 32.6% were distributed among 5 companies (Herfindahl-Hirschman index, HHI = 4,903). The marginal price for different hours of the day fluctuated in a range from 8,628.15 UAH/MWh (for 04:00-05:00) to 16,051.4 UAH/MWh (for 19:00-20:00), which allowed Ukrenergo to receive about 39.1 million UAH in revenues from the auction.
Ukraine -> Slovakia: 125 MW available capacity was distributed among all 4 companies competing at the auction. The results were characterized by significantly higher concentration, since the largest total share of cross-border capacity was purchased by DTEK Zakhidenergo (68.6%), and the remaining 31.4% were distributed among 3 companies (HHI = 5,093). The marginal price for different hours of the day ranged from 8,624.93 UAH/MWh (for 04:00-05:00) to 16,190.6 UAH/MWh (for 16:00-17:00), which allowed Ukrenergo to receive over 39.3 million UAH in revenues from the auction.

Infrastructure restoration: According to Ukrenergo, one of the overhead lines in the south-eastern region has returned to operation. Also, repairs at three 330 kV substations in the northern, central and eastern regions continued.

Electricity market performance

Bilateral contracts market (BCM): On July 25-29, 17 auctions for the purchase/sale of electricity were held at the Ukrainian Energy Exchange (UEEX): 6 in commercial sections, 11 in specialized ones. The bidders included Energoatom-Trading, Guaranteed Buyer, Kharkiv CHP-5, distribution system operators (DSOs) and universal service suppliers (USSs). In total, 1,117 GWh were purchased at UEEX.

Energoatom-Trading sold 839 GWh of base load at a weighted average price of 2,300 UAH/MWh. Guaranteed Buyer sold 27.8 GWh of base load at a weighted average price of 2,202.5 UAH/MWh and 102.9 GWH of daytime block positions at prices in the range of 2,380-2,382.9 UAH/MWh with delivery in August. Kharkiv CHP-5 sold 111.6 GWh at a weighted average price of 2,300 UAH/MWh with delivery in August. As of July 29, the base load index for August was at 2,136.3 UAH/MWh.

Day-ahead market (DAM): As of August 1, due to changes in the supply and demand, the Base, Peak and Offpeak price decreased - to 2,649.41 UAH/MWH (-1.5% vs the previous day), 2,820.54 UAH/MWh (-1.3%) and 2,478.27 UAH/MWh (-1.7%), respectively. The weighted average settlement price also decreased - to 2,724.35 UAH/MWH (-2.3%). At the same time, the highest prices were observed for the evening peak (19:00-23:00) in the range of 3,692-3,718 UAH/MWh. Exchange prices in the Eastern European markets have synchronously increased. The Base DAM indices of Romania, Slovakia and Hungary were app. 6 times higher than the Base DAM index of Ukraine; while the price spread to Poland was at 3.7 times.

As of August 1, the total volume of trading increased significantly to 36,342 MWh (+20% vs the previous day); the supply decreased to 65,193.8 MWh (-12.1%). Altogether, these factors caused a decrease in the market surplus: the gap between the total volume of sale and purchase bids amounted to 1.8 times. At the same time, some hours of the day (23:00-24:00) were characterized by deficit. In the structure of purchase, 90.2% was occupied by suppliers, 9.6% by system operators, and 0.2% by traders and producers.

Intraday market (IDM): On July 31, the weighted average price significantly increased to 3,149.39 UAH/MWh (+42.8% vs the previous day). To note, in some hours (19:00-22:00), the actual price was close to the upper price cap of 4,000 UAH/MWh.

The total volume of trading decreased rapidly to 277.8 MWh (-69.7%). At the same time, supply increased to 30,819.2 MWh (+22.7%). Together, these factors notably increased the market surplus: the gap with the volume of purchase bids reached 111 times. In the structure of purchase, the dominant part (84.7%) was occupied by suppliers, 15.1% by producers, and 0.2% by system operators.

Other: Guaranteed Buyer published the levels of the weighted average feed-in tariff in 2021 by types of RES facilities: solar - 4,528.45 UAH/MWh, wind - 3,219.31 UAH/MWh, small hydropower - 4,176.9 UAH/MWh, TPPs on biomass - 4,336.56 UAH/MWh, TPPs on biogas - 4,165.57 UAH/MWh. At the same time, in 2021, about 11,435.6 GWh of electricity from RES was purchased for a total cost of over 46,445.2 million UAH.
Disruption and resumption of supply

According to the Ministry of Energy, as of July 28, due to damage caused by hostilities, a total of app. 660,700 consumers in 745 settlements were disconnected from electricity supply, while supply to app. 33,000 consumers was restored during the day.

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

- in the Donetsk region, according to the local DSO, during the day specialists restored electricity supply to app. 58,400 households in 40 settlements of the Bakhmut, Pokrovsk, and Kramatorsk districts. Residents of 334 settlements remained offline (according to the Ministry of Energy - app. 426,500 consumers);
- in the Luhansks region, according to the Ministry of Energy, more than 128,200 consumers remained without electricity supply;
- in the Kharkiv region, according to the Ministry of Energy, about 29,200 consumers remained without electricity supply, and supply to 2,900 consumers was restored during the day;
- in the Zaporizhzhia region, according to the local DSO, the situation did not change during the day. As of 07:00 on July 29, 17,367 consumers in 73 settlements remained offline;
- in the Mykolaiv region, according to the Regional Military Administration, as of July 29, 530 electricity facilities were partially or completely damaged (including 4 during the day). In particular, on the evening of July 28, as a result of enemy shelling, electricity grids were destroyed in the villages of Bereznehuvate community. 116 settlements of the Bashtanka and Mykolaiv districts remained completely without power supply, and 5 - partially (according to the Ministry of Energy - a total of 29,300 consumers). In addition, electricity supply was restored to 14,100 consumers during the day;
- in the Dnipropetrovsk region, according to the Regional Military Administration, on the night of July 29, the enemy fired on the territory of two districts, as a result power lines were damaged in the city of Nikopol, and several thousand citizens (residents of individual houses) were left without electricity supply;
- in the Chernihiv region, according to the Regional Military Administration, as of 6:00 on July 29, a 0.4 kV power transmission line remained partially disconnected, electricity supply service was not provided to 465 consumers;
- there was no up-to-date consolidated information on power supply in the Kherson, Odesa and Sumy regions at the time of the review preparation.

Gas Sector:

Gas system performance

On July 28-30, the gas transit through the territory of Ukraine ranged 41.4-42.6 mcm. These volumes were only 38-39% 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 via the Hermanowice interconnection point (virtual interconnection point "Ukraine-Poland") at 2.7-3 mcm. Also physical imports at 0.5 mcm/day were reported through the Budince interconnection point (from Slovakia). In the reporting period, only on July 28, on Ukraine’s gas system exit via the Berehove interconnection point (virtual interconnection point "Bereg") 0.6 mcm was shipped.
Gas transit through Ukraine (at Sokhranivka and Sudzha interconnection points),
mcm

Disruption and resumption of supply

The Donetsk, Luhansk, Zaporizhzhia, Kherson, Mykolaiv, and Kharkiv regions had the most challenging situation. According to the Cabinet of Ministers, on July 31, over 239,400 consumers remained without 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. The Regional Military Administration Head Pavlo Kyrylenko said that the volumes of alternative fuel needed for the autumn-winter period in the Donetsk region have already been calculated. Accumulation of relevant energy resources has also started. At the same time, given the region’s significant dependence on gas supply and the impossibility of eliminating damage to the gas infrastructure due to hostilities, the evacuation of civilians from the region should continue.

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 Zaporizhzhia region, as of July 31, situation didn’t change: 226,989 consumers in 270 settlements remained without gas supply.

In the Mykolaiv region, as of the morning on August 1, 729 gas infrastructure facilities (+5 as compared to the previous day) were damaged for the whole period of war. As a result, 7,031 consumers (+4) were left without gas supply.

According to the Chernihiv Regional Military Administration, as of the morning on August 1, the situation improved: about 700 consumers (-1,200 as compared to July 29) in 22 settlements (-15) have not received gas supply service.

Operational information on gas supply in the Kherson and Kharkiv regions was not available at the time of the review preparation.

Source: GTSOU
Countermeasures of Ukrainian Companies and Public Authorities

The President of Ukraine Volodymyr Zelenskyi stated in a video address that recognition of Russia as a state sponsor of terrorism is needed not as a political move, but as an effective defense of the free world. In Zelenskyi's opinion, this decision is inevitable - only a matter of time and the format of its adoption. The President also called on the residents of Donbas to evacuate. He reminded that the government made a decision on mandatory evacuation from the Donetsk region, and full support and assistance, including payments, will be provided. The Vice Prime Minister for Reintegration of the Temporarily Occupied Territories Iryna Vereshchuk explained the evacuation is due to the intensification of hostilities and the almost complete absence of electricity and gas supply. According to the government's expectations, this winter, the settlements of the Donetsk region will have no district heating.

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The Minister of Foreign Affairs Dmytro Kuleba, in an interview with the Greek broadcaster EPT, expressed his disappointment that shipping companies from Greece continue to provide Russia with tankers to transport oil by sea, thus helping it to earn money. At the same time, Kuleba noted that Ukraine has no complaints about the Greek government, its consistent position within the EU, support for sanctions and Ukraine's candidacy for the EU membership.

The Verkhovna Rada approved an appeal to the European Union and the G7 countries as founders of the Financial Action Task Force (FATF), calling for the creation of additional mechanisms to strengthen the transparency of ownership and sources of wealth, including the disclosure of the true final beneficial owners of funds and assets in jurisdictions, where their masking is part of national legislation, with the subsequent seizure of these assets (draft resolution No. 7582). The Verkhovna Rada also called for strengthening the control over such instruments as cryptocurrencies and other virtual assets, which become a transit mechanism for the transfer of funds of international terrorists and countries under sanctions, and are also used to finance international trade in sanctioned goods, in particular those from Russia.

In addition, the Verkhovna Rada has approved, as part of the government's package of laws (drafts No. 7427, 7428-2 and 7429), raising over 125 billion UAH at the expense of funds from international partners to compensate for the difference in tariffs. To be reminded, the government-initiated laws introduced a moratorium on raising tariffs for natural gas distribution services; production, transportation and supply of heat energy; district heating and supply of hot water. The moratorium will be in effect during martial law and for 6 months after its termination.

The parliament also created a Temporary Special Commission for preliminary consideration of issues related to violations of the legislation leading to crisis in the energy market of Ukraine before and during the Russian armed aggression (draft resolution No. 7594). The TSC, chaired by the MP Oleksii Kucherenko, has among its main tasks the consideration of issues related to the implementation of the 2035 Energy Strategy Action Plan (stage “Energy Sector Reform by 2020”), the formation of decisions on ensuring Ukraine's energy resilience and their implementation; the creation of insurance reserve of natural gas, as well as the preparation for the 2022-2023 heating season.

The Minister of the Cabinet of Ministers Oleh Nemchinov told the media that, at the level of Naftogaz, active consultations go on and first preliminary protocol agreements are being prepared on gas supplies under the Ukraine Democracy Defense Lend-Lease Act of 2022. According to Nemchinov, the Ukrainian party requested to include supply of certain gas volumes, which may not be received by Ukraine due to hostilities - in particular, it could be gas exported by the United States to European countries.

The Cabinet of Ministers, by its resolution, fixed the market value of Naftogaz at 300.4 billion UAH (the value of 190,000 ordinary registered shares as of June 30). At the same time, the authorized capital of the company was increased by 646.2 million UAH by the transfer of shares of 6
cogeneration plants, recently transferred to the ownership of Naftogaz (Dniprovskva CHP JSC, Mykolaivska ChP PrJSC, Kryvorizka Teplotsentral JSC, Khersonska CHP JSC, Odeska CHP JSC, Severodonetska CHP JSC).

The Cabinet of Ministers also extended the regulated gas price for hot water suppliers by August 31, 2022. The Resolution No. 839 of July 29 extended by August 31 the public service obligations (PSO), under which the fixed price of Naftogaz Trading LLC is 7,400 UAH/tcm. The decision is of a technical nature, since the date of entry into force of the previous Resolution No. 812 was simultaneously postponed to September 1 - apparently, additional time was needed for the Ministry for Communities and Territories Development to determine and approve the fixed volumes of gas for the needs of PSO for producers of heat and hot water. In addition, the Resolution No. 839 regulates the calculation of subsidies and benefits for apartment building residents who use gas or electricity for individual heating (only applies to payment for heat supply services for heating common areas and auxiliary premises, operation of indoor heating systems).

The MP Yaroslav Zheleznyak reported that the Verkhovna Rada introduced the cash method of calculating VAT for RES electricity producers (draft law No. 7428-2). According to the changes, RES facilities, along with other electricity market participants, shall until January 1, 2026, determine the date of tax liabilities and tax credit using the cash method.

The Minister for Communities and Territories Development Oleksii Chernyshov stated that the heating season in Ukraine will begin after October 15, depending on weather conditions. He also added that the standard temperature indicators will not be revised. According to him, the minimum temperature level that must be ensured during the heating season in residential premises is 18°C.

The Deputy Minister of Energy for European Integration Yaroslav Demchenkov said that the Ministry expects Russian attacks during the 2022-2023 heating season, and is preparing possibilities for fast purchases of equipment and spare parts, prompt repairs of equipment and networks. Demchenkov noted that the Ukraine Energy Support Fund, created at the Energy Community Secretariat, has already become one of the effective tools of international financial assistance.

The Deputy Minister for Development of Communities and Territories Nataliia Khotsyanivska reported on the government's approval of a draft law to include waste management facilities to the list of vital services, disruption of which would lead to negative consequences for the national security. According to the draft law, new status will be given to waste sorting stations, waste processing and waste incineration facilities - with certification, identification to be carried out, and criteria defined.

The National Energy and Utilities Regulatory Commission (NEURC) announced a meeting on August 2, where it plans to consider a number of decisions regarding:

- settlement of urgent issues of economic activities of licensees under martial law (the draft decision has not been published);
- amendments to the license conditions of guaranteed buyer regarding compliance and certification of the quality management system, occupational safety and anti-corruption;
- on energy storage activities - amendments to the license conditions for gas distribution and transmission, electricity transmission;
- cancellation of approval of 2022 development plans of the licensees in the field of centralized water supply and sewerage;
- amendments to the Gas Transmission System Code and Gas Distribution Systems Code to provide incentives for the development of the biomethane market and expanding opportunities for access of biogas installations;
- amendments to the Transmission System Code regarding the preparation of the generation adequacy report.

The National Bank of Ukraine, in its Inflation Report, forecasts an increase in fuel prices over the next year. The expected gradual decrease in global oil prices, according to the regulator's
assumption, is offset by the need to return the taxes on fuel to the pre-war levels. At the same time, the NBU believes the situation on the Ukrainian motor fuels market may improve closer to the fall, when long-term contracts with foreign suppliers shall be signed.

The Secretary of the Zaporizhzhia City Council Anatolii Kurtev reported that the municipal authorities decided to refuse from centralized hot water supply. According to him, the need to switch to alternative means of water heating will allow the city to save over 500 million UAH every year, as well as cancel the fee for hot water supply service. Kurtev added that volumes of gas supply allowances in the next heating season will be 10% lower year-on-year, so the use of electric boilers will also help saving gas.

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

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