



# Russian War Against Ukraine: Energy Dimension

DiXi Group alert

(status as of 12:00, July 8)

#StopRussianAggression

#StandWithUkraine

## Summary of the week (July 4-8)

- As of [July 7](#), 860 settlements in Ukraine (about 598,400 consumers) were **disconnected from electricity supply** due to damage caused by hostilities. Over 180,400 consumers remained **without gas supply**.
- Due to active hostilities, **generation facilities are being damaged**. Fighting [continued](#) in the Donetsk region close to the Vuhlehirska TPP, and a [fire](#) broke out due to massive shelling and hitting by the Russian military at fuel oil tanks. In the Dnipropetrovsk region, a solar power plant [was damaged](#) by enemy shelling in the Shyroke community. In total, the Russian army [destroyed](#), damaged or occupied 90% of wind, 30% of solar, 30.1% of cogeneration capacity, as well as the Zaporizhzhia NPP. In the gas sector, on July 7, a main gas pipeline in the Zaporizhzhia region [was damaged](#).
- **Hostile attacks continue in the cyberspace as well** - Simultaneously with the missile attack on the Kryvyi Rih TPP in the end of June, a Russian hacker group carried out [a cyber attack](#) on the IT infrastructure of DTEK group, with the aim of destabilizing the technological processes of generating and distribution companies.
- The Russian side **continues to spread disinformation to cover up its own crimes**. In particular, the Russian Ministry of Defense published [fake news](#) that Ukraine is allegedly preparing a “terrorist attack” on the Slovyansk TPP. In the Kherson region, representatives of the occupation authorities are spreading [fake news](#) about an alleged destruction by the local DSO of software and databases of electricity consumers. In addition, the occupiers announced their [intention](#) to connect wind power plants to the energy system of the occupied Crimea.

- **Gas transit through the Ukrainian system** ranged between 41.9-42.6 mcm/day, which is only 38-39% of the capacities contracted by Gazprom. Physical imports were at 0.6-2.3 mcm/day from the Polish direction and 0.5 mcm/day from the Slovak one. At the same time, app. 0.7-2.8 mcm/day was transported from Ukraine via the Berehove interconnection point (virtual point "Bereg").
- **The power system of Ukraine remained in surplus.** Electricity was exported to Moldova, Poland, Romania and Slovakia at about 470 MW in total. Favorable conditions in the EU markets and significant competition for the allocation of cross-border capacity have led to relatively **high prices for access** in the directions of Romania and Slovakia. At the same time, a **high concentration of capacity distribution** was recorded. The total revenue of Ukrenergo from the auctions was about 100 million UAH.
- The operation of the day-ahead market in electricity was marked by a **growth of the weighted average price** - from 2,366.35 to 2,885.5 UAH/MWh, as well as the Base, Peak and Offpeak price indices. In addition, there was a relative increase in the total volume of sales, which ranged from 18.34 to 23.96 GWh. To note, for the first time since the beginning of Russian military aggression, **certain trading hours were in short supply, and the price reached the upper price cap** of 4,000 UAH/MWh set by the NEURC.
- **The occupiers continued terror at the Zaporizhzhia NPP site and in the city of Energodar.** As a result of severe beating and torture, the hydraulic workshop diver Andrii Honcharuk died; the invaders demanded him to dive into the cooling pools to "justify" the need to drain them. According to the intelligence of the Ministry of Defense, after the majority of Zaporizhzhia NPP employees refused to cooperate, the occupiers are taking Rosatom specialists to the station. According to the plan of the invaders, all Ukrainian personnel of the station who disagrees to cooperate should leave the city of Energodar. In addition, by the end of September, the occupiers **plan to disconnect the ZNPP from the energy system of Ukraine.** In addition, there are signs of turning the NPP site into a military base, which is used by the occupiers as a "shield". According to The Wall Street Journal, the Russians deployed MLRS "Smerch" and "Grad", tanks and armored personnel carriers at the facility.
- Energoatom **restored remote connection between the ZNPP and the IAEA** in terms of nuclear material monitoring.
- Under pilot operation, nuclear fuel assemblies of Westinghouse were loaded into the reactor core of the Rivne NPP unit 3. Ukraine plans to increase the share of Westinghouse fuel at RNPP-3 every year, until it is fully loaded and the Russian "TVEL" fuel is replaced.
- At the Ukraine Recovery Conference in Lugano (Switzerland), **the government presented the draft Ukraine Recovery Plan**, which provides for the implementation of 850 projects for over 750 billion USD in the next 10 years. Investments in the area "Energy independence and Green Deal" are estimated at 130 billion USD. The final document (the Lugano Declaration) approved by representatives of over 40 countries and about 20 international organizations recognized the draft Plan as a framework and a 'living document' which will be adapted over time.
- Due to the threat [of an exemption from sanctions](#) for Gazprom by two G7 countries, Ukraine continued to emphasize **the need to comply with the principle of solidarity**, as well as the [need to](#) completely disconnect Russian banks from SWIFT, introduce an embargo on gold transactions, and block Russian maritime trade. Also, all Ukrainian ministries within their policy domains [received the right](#) to make **proposals regarding the application of sanctions.**
- The government continued to fight against the shortage of working capital in the energy markets **by means of state regulation and increasing the amount of borrowing.** In particular, public service obligations are imposed on electricity exporting companies to cover the difference in prices for households. Also, the government directed 90% of 2021 net profits of Ukrenergo (127 million UAH) to the state budget. Naftogaz [was provided](#) with sovereign guarantees to secure a 300 million EUR loan from the EBRD for emergency purchase of gas.

- In **preparation for the heating season**, the government will create reserves of modular boilers, special generators for electricity, and purifiers for drinking water. Also, the Cabinet of Ministers agreed with local self-government authorities on the procedures in case of destruction of large district heating facilities. At the Ukraine Recovery Conference in Lugano, Ukraine agreed on raising over 500 million USD in support to prepare for the heating season.
- Among the strategic initiatives is a regulatory boost for **the development of biomethane market and preparation for "zero transit"**. The NEURC has published draft [amendments](#) to the Gas Transmission System Code and the Gas Distribution Systems Code regarding the reduction of the molar fraction of oxygen content in natural gas - for the development of the biomethane market. GTSOU reported it is working on ensuring imports along the Trans-Balkan route, as well as preparing for the system operation in the absence of Russian transit flows.
- There is a clear movement to **closing data and information**: the NEURC [closed](#) access to draft decisions on 2022 investment programs of distribution system operators; [canceled](#) open discussions on amendments to 2022 investment programs (development plans) in the field of centralized water supply and/or drainage; [canceled](#) canceled open discussions of setting new prices/tariffs, investment programs and changes to them for NPPs, TPPs, CHPs, and cogeneration facilities.

## Attacks

The Russian Ministry of Defense published a fake news that Ukraine is allegedly preparing a “terrorist attack” on the **Sloviansk TPP** in order to blame the Russian occupiers. The Center for Combating Disinformation at the National Security and Defense Council of Ukraine [denied](#) the information, stating that the Russians spread fakes to hide their own crimes. In their actions, the occupiers follow "scorched earth" tactics, so after such a statement, there is a high probability of attack on the TPP.

Fighting continued in the Donetsk region near the **Vuhlehirsk TPP**: [according](#) to the General Staff of the Armed Forces of Ukraine, the occupiers shelled the power plant area with barrel artillery. In the Dnipropetrovsk region, a **solar power plant** [was damaged](#) by enemy shelling in the Shyroke community. In the Kherson region, representatives of the occupation authorities are spreading fake news about an alleged destruction by the local DSO leadership of **software complexes and databases of electricity consumers in the region**. Khersonoblenergo [reported](#) that all the company's software products and consumer databases are saved and located on its servers.

## Electricity Sector:

### **Power system operation**

**Interaction with ENTSO-E:** As of July 8, Ukraine [continued](#) commercial exports of electricity to Poland via the Dobrotvirsk TPP - Zamosc transmission line at 200 MW and to [Romania](#) at 50 MW (both at flat schedule). Also, according to Ukrenergo, pilot exports to Slovakia [continued](#) at the level of 50 MW. Exports to Moldova [amounted](#) to 160 MW. Technical [cross-border flows](#) continued between the energy systems of Ukraine and Eastern European countries (Romania, Hungary, Poland and Moldova).

### **Daily capacity allocation auctions ([for July 8](#)):**

*Ukraine->Poland:* DTEK Zakhidenergo purchased all available 65 MW on a flat schedule; marginal price - "zero".

*Ukraine->Moldova:* out of 600 MW available capacity, 500 MW was distributed among two companies: Energoatom - 400 MW (except 00:00-01:00, where it booked 200 MW) and Ukrhydroenergo - 100 MW (flat schedule); marginal price - "zero".

*Ukraine->Romania:* 50 MW available capacity was distributed among 10 companies, while 12 companies competed at the auction. At the same time, the distributed capacity concentration remains relatively high - the largest total share of cross-border capacity (43.9%) was booked by DTEK Zakhidenergo, 21.3% by Energoatom, the remaining 34.8% was distributed among 8 companies. The marginal price for different hours of the day continued to grow and fluctuated in a range from 5,673 UAH/MWh (for 3:00-4:00) to 9,499 UAH/MWh (for 17:00-18:00), which allowed Ukrenergo to receive over 9.3 million UAH in revenues from the auction.

*Ukraine->Slovakia:* 50 MW available capacity was distributed among 8 companies, while 13 companies competed at the auction. The results were characterized by high concentration, since the largest total share of cross-border capacity (74.6%) was booked by DTEK Zakhidenergo, the remaining 24.4% was distributed among 7 companies. The marginal price for different hours of the day ranged from 6,135.43 UAH/MWh (for 11:00-12:00) to 9,971.3 UAH/MWh (for 22:00-23:00), which allowed Ukrenergo to receive about 9.7 million UAH in revenues from the auction.

**Infrastructure restoration:** [According](#) to Ukrenergo, in the northern region, emergency and restoration works continued at three 330 kV substations in different regions (in particular, a 750 kV transformer was replaced, the adjustment of a 110 kV circuit breaker was completed). In the eastern region, recovery works on a 750 kV line were being carried out.

**Day-ahead market (DAM):** As of July 8, the weighted average settlement price continued to slowly [increase](#) to 2,885.5 UAH/MWh (+2.9% vs the previous day). In general, according to the [Energy Map service](#), in the working days of the week (July 4-8), the weighted average price had a steady [upward trend](#) from 2,366.35 UAH/MWh to 2,885.5 UAH/MWh.

Due to changes in the supply and demand on July 8, the Base and Peak price indices [increased](#) to 2,695.36 UAH/MWh (+1.5%) and 2,866.87 UAH/MWh (+4%), respectively, and Offpeak – decreased to 2,523.85 UAH/MWh (-1.2%). To note, in some hours of the evening peak, the actual price was close to the upper price cap of 4,000UAH/MWh, set by the NEURC. At the same time, exchange prices in the Eastern European markets have shown diverse dynamics. The Base DAM indices of Romania, Slovakia and Hungary were 3.1-3.2 times [higher](#) than the Base DAM index of Ukraine; while the price spread to Poland was 2.8 times.

According to the [Energy Map service](#), in the working days of the week (July 4-8), the total volume of trading on DAM [ranged](#) from 18.34 to 23.96 GWh. In particular, as of July 8, the volume of trading [increased](#) to 23,957.2 MWh (+20.3% vs the previous day). The supply also increased up to 67,315.3 MWh (+17.3%), which overall did not change the DAM surplus: the gap with the volume of purchase bids was 2.8 times. At the same time, one certain hour of the day (in particular, 23:00-24:00) was characterized by a deficit. In the [structure of purchase](#), 75.9% was occupied by suppliers, 23.5% by system operators, 0.5 % by traders, and 0.1% by producers.

**Intraday market (IDM):** On July 7, the weighted average price [decreased](#) significantly to 2,355.39 UAH/MWh (-15.2% vs the previous day). At certain hours of the day (19:00-23:00), the price reached the upper price cap of 4,000 UAH/MWh.

At the same time, the total volume of trading decreased to 1996.7 MWh (-7.7% vs the previous day), and the supply increased significantly to 28,493.9 MWh (+53.2%). Together, these factors resulted in a significantly increased market surplus: the gap with the volume of purchase bids increased from 7.2 to 14.3 times. To note, same as on DAM, one certain hour of the day (23:00-24:00) was characterized by a deficit. In the [structure of purchase](#), the dominant part (90.9%) was occupied by suppliers, 5.9% by producers, 3% by system operators and 0.2% by traders.

## ***Disruption and resumption of supply***

[According](#) to the Ministry of Energy, as of July 7, due to damage caused by hostilities, a total of app. 598,400 consumers in 860 settlements were disconnected from electricity supply. During the day, electricity supply was resumed to app. 8,000 consumers.

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 over 10,300 households in 13 settlements of the Kramatorsk, Bakhmut and Pokrovsk districts. Residents of 334 settlements remained without electricity supply ([according](#) to the Ministry of Energy - about 349,800 consumers);
- in the **Luhansk region**, [according](#) to the Ministry of Energy, more than 128,200 consumers were left without electricity supply;
- in the **Kharkiv region**, [according](#) to the Ministry of Energy, app. 29,400 consumers remained disconnected and supply to 4,200 consumers was restored during the day;
- in the **Zaporizhzhia region**, [according](#) to the local DSO, as of 07:00 on July 8, 21,081 consumers in 77 settlements were left without electricity supply. During the day, the DSO specialists restored supplies to 10,318 consumers (7,193 in the Vilnyansk and Novomykolaivka districts, 2,114 in the Orikhiv, 867 in the Polohy, and 144 in the Vasylivka districts). Supply for 1,216 consumers of the Orikhiv power grids was restored under a temporary hourly scheme with the use of generators. On July 7, due to damage to equipment at one of the transformer substations, 31 households in the city of Zaporizhzhia were left without electricity supply;
- in the **Mykolaiv region**, [according](#) to the Regional Military Administration, as of July 8, 484 power supply facilities were partially or completely damaged, including 1 in the last day. 89 settlements in the Bashtanka and Mykolaiv districts (incl. 2 partially) remained offline ([according](#) to the Ministry of Energy, a total of 30,700 consumers). In addition, electricity supply to 600 consumers was restored during the day;
- in the **Kherson region**, [according](#) to the Regional Military Administration, as of 12:00 on July 7, among the communities with connection established, power supply was partially available in the Novovorontsovka and Novooleksandrivka communities, with at least 10 settlements offline. 22 settlements of the Vysokopillia community remained completely without electricity supply;
- among the communities with connection established, 22 settlements in the Visokopillia and 7 in the Novovorontsovka communities remained without electricity supply;
- in the **Chernihiv region**, [according](#) to the Regional Military Administration, as of 6:00 on July 8, due to weather conditions and other technical reasons, electricity supply to 280 subscribers was not provided;
- in the **Zhytomyr region**, [according](#) to the local DSO, on July 6, due to difficult weather conditions, 27,807 consumers in 91 settlements were disconnected, and the operation of 525 transformer substations with a voltage of 6-10/0.4kV was disrupted. 53 emergency teams worked to restore electricity supply;
- there was no up-to-date consolidated information on power supply in the **Sumy** and **Odesa regions** at the time of the review preparation.

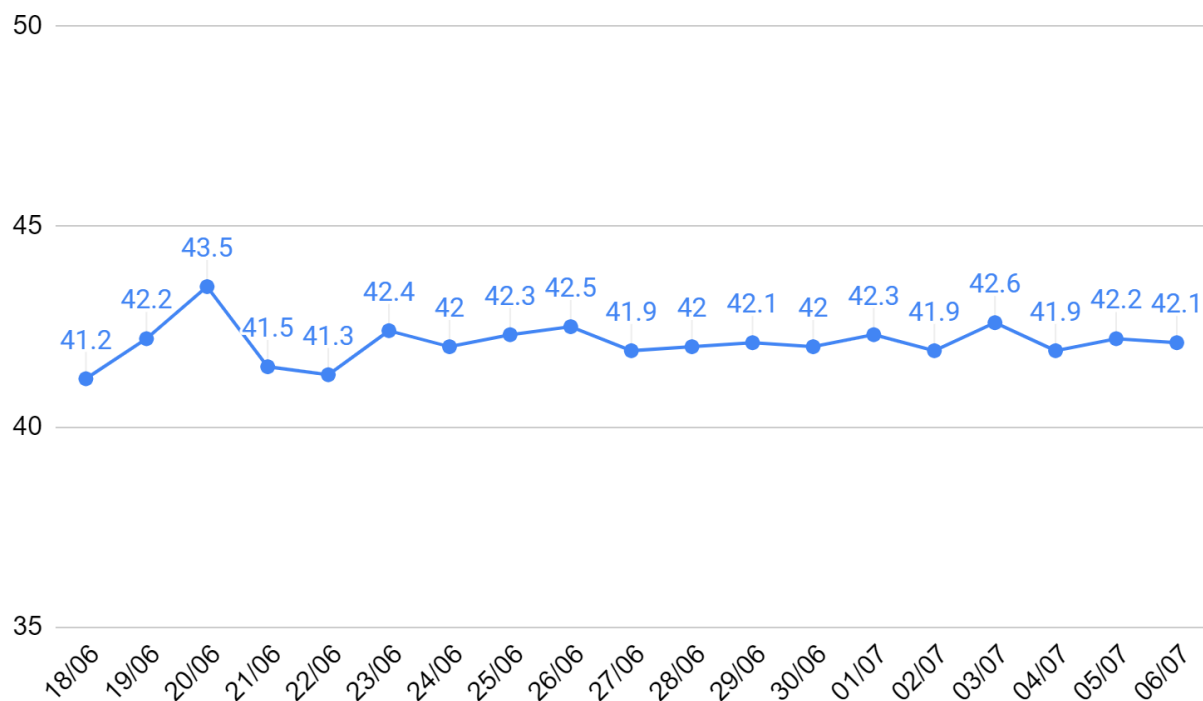
## Gas Sector:

### **Gas system performance**

As of July 6, the gas transit through the territory of Ukraine decreased by 0.1 mcm as compared to the previous day and amounted to 42.1 mcm. These volumes were only 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 1.5 mcm. Also, on July 5, physical imports at 0.5 mcm/day were reported through the Budince interconnection point (from Slovakia). At the same time, on Ukraine's gas system exit via the Berehove interconnection point (virtual interconnection point "Bereg") 1.5 mcm of gas was shipped.

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



Source: [GTSOU](#)

### Disruption and resumption of supply

The **Donetsk, Luhansk, Zaporizhzhia, Kherson, Mykolaiv, and Kharkiv regions** had the most challenging situation in gas supply. [According](#) to the Cabinet of Ministers, as of July 7, app. 180,400 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 July 2, only 1,900 consumers in 2 settlements [had](#) supply. Given the impossibility of restoring gas supply in the region before the end of hostilities, local administrations were [considering switching](#) district heating systems to alternative fuels. The Regional Military Administration Head Pavlo Kyrlyenko [noted](#) again that the heating season with 350,000 people staying in the region would be very problematic. That is why the evacuation of all citizens not related to the activities of the Armed Forces and the functioning of critical utilities is necessary.

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. According to the Luhansk Military Administration Head Serhii Haidai, Severodonetsk is on the [verge of a humanitarian disaster](#): housing and utility services in the city are not provided due to the destruction. At the same time, the occupiers are focused on looting apartments.

In the **Kharkiv region**, during the full-scale aggression of Russia, gas supply was [restored](#) to 110,000 consumers in the city of Kharkiv and almost 130,000 consumers in 350 other settlements of the region.

In the **Kherson region**, [as of 12:00 on July 7](#), 2 communities (Vysokopillia and Velyka Oleksandrivka) have completely remained without gas supply. In the Velyka Oleksandrivka community, a gas distribution point was damaged by Russian shelling. Two communities (Novovorontsovka and Stanislav) remained without gas supply partially. However, there was no mobile connection in some of these communities, so there was no up-to-date information on gas supply. Problems of LPG supply were reported in the Kochubeivka community.

In the **Zaporizhzhia region**, the situation with gas supply has deteriorated sharply: according to the Regional Military Administration, as of July 8, 101,768 consumers (+15,041 vs July 7) in 137 settlements (+27) [remained](#) without gas. Supply to 26 settlements (16,760 consumers) of the Vasylivka and Polohy districts was completely disconnected due to the damage to a main gas pipeline. At the same time, the local DSO [reported](#) on the complete restoration of gas networks in the village of Balabyne.

In the **Mykolaiv region**, as of the morning on July 8, 690 gas infrastructure facilities were [damaged](#) for the whole period of war (+4 as compared to July 7). As a result, 7,228 consumers (+226) were left without gas supply. The growing destruction to gas infrastructure is a [consequence](#) of the enemy's missile attack.

[According](#) to the **Chernihiv** Regional Military Administration, as of the morning on July 8, about 700 consumers in 22 settlements have not received gas supply service.

## Countermeasures of Ukrainian Companies and Public Authorities

Citing a source in the Ministry of Energy of Ukraine, [Reuters](#) reported that Ukraine opposes the transfer of a turbine to Gazprom from Canada to resume gas supply to Germany through the Nord Stream pipeline, as this step contradicts sanctions on Russia. A source at the Ministry of Energy noted that if Canada decides to hand over the turbine, regardless of the delivery point, it will be a precedent when two G7 countries bypass sanctions imposed on Russia. As Reuters reported, the decision to return the turbine has already been made, Canada and Germany do not want the turbine to be an excuse for Russia to reduce gas supplies through Nord Stream.

At the government meeting on July 7, following a motion by the Ministry for Reintegration of Temporary Occupied Territories and the Cabinet of Ministers Secretaria, [a decision was made to improve](#) the sanctions policy. As reported, from now on, all ministries within their policy domains can make proposals regarding the application of sanctions.

As the Prime Minister Denys Shmyhal [announced](#), the government approved a resolution on the imposition of public service obligations (PSO) on market participants which export electricity to the EU. He noted that record high prices for electricity in the European countries allow the Ukrainian generating companies to earn significant revenues, which the government aims to partially direct to support low prices for households. The decision has not yet been published.

The Cabinet of Ministers representative in the Verkhovna Rada Taras Melnychuk [announced](#) the government's decision to allocate 90% of the 2021 net profit of Ukrenergo (127 million UAH) to the state budget. According to the 2021 financial statements, Ukrenergo received 141.2 million UAH in profit.

In addition, the Cabinet of Ministers by the Resolution [No. 760](#) of July 7 provided sovereign guarantees to secure a loan to Naftogaz from the European Bank for Reconstruction and Development (EBRD) in the amount of up to 300 million EUR. The revolving loan is provided for the emergency purchases of gas. The government also [gave consent](#) to amend the loan agreements between Naftogaz and Kondor Finance plc for an amount exceeding 3 billion UAH.

The first deputy head of the Verkhovna Rada Committee on Finance, Tax and Customs Policy Yaroslav Zheleznyak [announced](#) that the government canceled the list of critical import goods, which limited the purchase of foreign currency by importers. The government's representative Taras Melnychuk [clarified](#) that restrictions on the import of services are partially maintained, but the government has approved a list of services, works, intellectual property rights, and other non-property rights, for the imports of which the National Bank is recommended to allow transfers.

According to the results of the meeting on July 7, the National Energy and Utilities Regulatory Commission (NEURC) [decided to](#) start an investigation into violations on the electricity market by United Energy LLC for the period from February 11 to June 30, 2022. According to media [investigations](#), the company was associated with the oligarch Ihor Kolomoiskyi and, before the war, could control the sales of the largest state-owned producers of electricity - Energoatom and Centerenergo.

**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.*

For subscriptions, comments and other questions, please email to: [author@dixigroup.org](mailto:author@dixigroup.org)

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