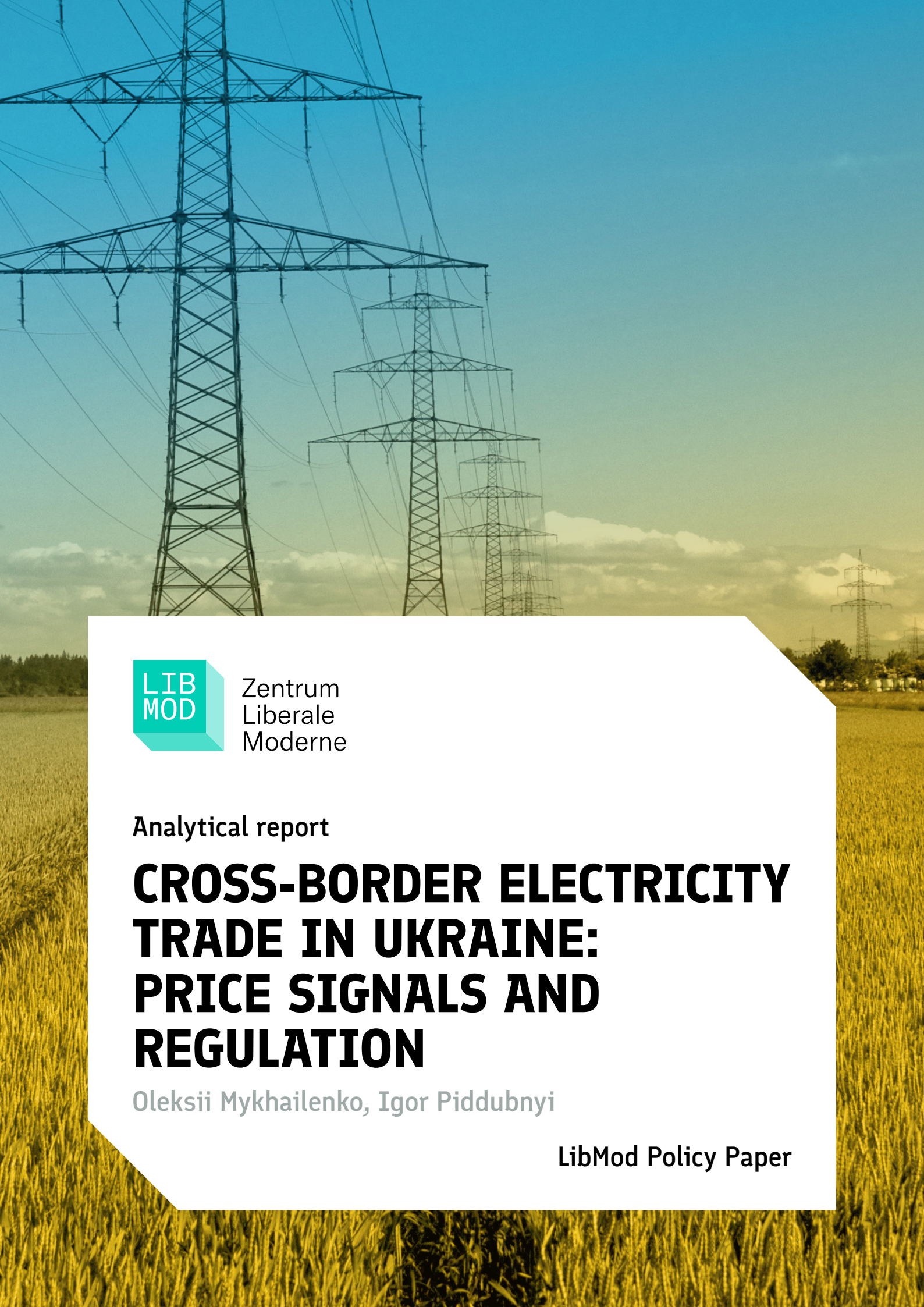

LIB MOD Zentrum Liberale Moderne

Analytical report

CROSS-BORDER ELECTRICITY TRADE IN UKRAINE: PRICE SIGNALS AND REGULATION

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LibMod Policy Paper

CONTENT

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EXECUTIVE SUMMARY

The full-scale war has changed the role of cross-border electricity trade for Ukraine. While in 2022 Ukraine was still a net exporter of electricity, following large-scale attacks on energy infrastructure imports gradually became an important tool for preserving the resilience of the power system. In 2024-2026, imports played an increasingly significant role in covering capacity shortages and reducing the risk of electricity supply restrictions. According to the analysis, the total value of commercial imports from ENTSO-E countries from January 2024 to May 2026 exceeded EUR 1.7 billion.

The import limit announced by ENTSO-E does not equal the import capacity available in every hour. The efficiency of using cross-border interconnection capacity should be assessed across the full chain: the permitted limit, the transfer capacity offered, the capacity allocated at auctions and actual commercial imports. In 2024-2025, the capacity offered at auctions was often significantly below the permitted limit, so import constraints were explained not only by demand or price factors, but the capacity actually available for allocation.

The launch of monthly auctions for capacity allocation on the JAO platform at the end of 2025 substantially improved the availability of interconnection capacity for commercial operations. After the launch of long-term auctions for the borders with Romania, Hungary and Slovakia, the amount of offered and allocated capacity approached the maximum permitted import limit. This reduced the risk of a situation in which imports are needed but commercially available capacity is constrained by procedural or auction-related factors.

Commercial imports are not always explained by the logic of margins between the Ukrainian and neighbouring spot markets. According to the study, since 2024 around 37% of imports have taken place with a negative ex-post margin based on day-ahead market hourly prices. This means that the potential sale of imported electricity on the Ukrainian DAM, or under bilateral contracts linked to the DAM price, would not have covered the sum of the electricity cost on the neighbouring market and the cost of access to the interconnection.

A significant share of imports with a negative spot margin can be explained by the premium paid for continuity of supply. The government regime exempting industrial consumers from supply restrictions if a defined share of consumer's consumption is secured through imports changes the standard market logic. For such consumers imported electricity is not only a commodity but also a tool for reducing the risk of supply disruptions, so they may conclude bilateral contracts with suppliers outside a direct pricing link to the Ukrainian DAM.

Additional government-imposed import obligations at the beginning of 2026 enhanced demand increase outside the standard spot-market logic. In January 2026, the government obliged Ukrzaliznytsia, Naftogaz and Ukroboronprom to secure electricity imports to cover at least 50% of their total consumption until the end of the 2025/26 autumn-winter period. Ukrhydroenergo was obliged to import up to 2,000 MWh during night hours to fill the reservoir of the Dniester PSPP. These measures could support imports during a crisis period, but they also created demand while potentially distorting economic efficiency.

Regulation-driven import demand sometimes led to extremely high prices for access to cross-border interconnection capacity. For peak demand periods, interconnection prices could substantially exceed the expected spot margin and, for some hours, even exceed the price caps set on the Ukrainian market, reaching EUR 150-400/MWh. This provides additional evidence that market participants were competing not only for price arbitrage opportunities, but also for access to imported electricity to ensure continuity of supply or comply with temporary regulations.

Price caps were one of the key factors affecting the use of interconnection capacity for imports. The increase in price caps to UAH 15,000/MWh for all hours in mid-January 2026 amidst Russia's campaign of attacks on the power grid, noticeably activated imports for noon and semi-peak hours: utilisation of the offered capacity increased from around 34% to 61% at noon and from 40% to 54% for semi-peak load. At the same time, for the evening peak, with the highest price cap remained effectively unchanged, utilisation of the interconnection changed marginally. Average hourly imports in the winter of 2025/26 almost doubled after the price caps were raised – from 904 MW to 1,722 MW hourly.

The reduction of price caps by NEURC in April 2026 was a key factor behind the sharp decline in imports during off-peak hours and led to the return of power supply restrictions. After the return to lower differentiated price caps, utilisation of the interconnection fell from 54% to 22% for semi-peak hours (07:00-11:00 and 23:00-00:00), from 47% to 13% for nighttime (00:00-07:00), and from 60% to 44% for noon (11:00-17:00). In absolute terms, average imports fell by about 42% – from 1,276 MW to 741 MW on average per hour when comparing the last two weeks of March with the first two weeks of April 2026.

The current approach to revising price caps is reactive and does not meet the needs of a deficit power system, which can change rapidly. Delays in decisions to adjust the level of price caps constrained cross-border trade and, with it, commercial viability, while adding uncertainty for market participants. At the same time, excessively high price caps in a deficit and concentrated market may create the risk of persistently very high prices for consumers, which is not typical of most neighbouring markets.

If market coupling is not introduced within the planned timeframe and the Verkhovna Rada of Ukraine considers extending the possibility of applying price caps beyond May 2027, the approach to setting them should be reviewed on a more methodological basis. Such an approach should be sufficiently flexible and based on daily price dynamics in neighbouring markets so as not to artificially constrain imports, while at the same time preventing a prolonged period of elevated domestic prices. This is particularly important in a context where the DAM remains the key price indicator for a substantial share of electricity supply contracts.

LIST OF ABBREVIATIONS

AAC Already Allocated Capacity.

ATC Available Transfer Capacity; capacity available for allocation at auction.

ENTSO-E European Network of Transmission System Operators for Electricity.

JAO Joint Allocation Office; a European platform for auctions allocating cross–border transfer capacity.

NTC Net Transfer Capacity; transfer capacity between power systems after accounting for the reliability margin.

TRM Transmission Reliability Margin; a reserve of transfer capacity used to ensure system reliability.

TTC Total Transfer Capacity; the total transfer capacity of a cross–border interconnection.

NPP nuclear power plant.

RES renewable energy sources.

IDM intraday market.

PSPP pumped-storage power plant.

GWh gigawatt-hour.

SE state enterprise.

NPC national power company.

NEURC National Energy and Utilities Regulatory Commission of Ukraine.

AWP autumn–winter period.

TSO transmission system operator.

DAM day-ahead market.

CONTEXT AND ANALYTICAL FRAMEWORK

Since the start of Russia's full-scale invasion in 2022, the Ukrainian power system has undergone fundamental changes. Destruction caused by targeted attacks and occupation reduced available generation capacity by half.[1] As a result, Ukraine gradually shifted from being a net exporter of electricity to a deficit power system with an acute shortage of balancing capacity.

Amidst generation capacity shortages and forced consumption restrictions, electricity imports became an important tool for supporting the power system.

The development of cross-border electricity capacity is important from both a technical and an economic perspective, as it is associated with:

- strengthened energy security through access to an additional resource for balancing the power system, and reducing the risks of grid accidents and the need for electricity supply restrictions;
- more competitive domestic wholesale and balancing markets;
- expanded export potential as an alternative to curtailing domestic generation, since curtailment, particularly in the case of RES supported by the feed-in tariff, puts additional financial burden for consumers and market participants.

However, cross-border electricity trade in liberalised competitive markets is a complex process affected by a range of technical, economic and regulatory factors. As a result, many processes related to electricity imports and exports remain not fully understood by the wider public. This can lead to the formation and spread of overly simplified explanations and even myths in public discourse.

The purpose of this study is to explain how Ukraine's cross-border electricity trade changed during the full-scale war, which factors determined its volumes and how regulatory decisions affected the use of import potential.

Methodological notes

- In this study, imports and exports refer to commercial schedules, not physical flows.
- Import margin is calculated as the difference between the hourly DAM price in Ukraine and the sum of the hourly DAM price on the neighbouring market and the price of access to the cross-border interconnection.
- For markets with 15-minute interval prices, average hourly values are used to ensure comparability with Ukrainian hourly data.
- The data for May 2026 cover 1-17 May.
- Estimates of minimum regulatory-driven imports are analytical calculations based on hourly profiles, rather than company-level published statistics.

1 IEA (2025), Ukraine's Energy Security, IEA, Paris https://www.iea.org/reports/ukraines-energy-security, Licence: CC BY 4.0

WHAT AFFECTS CROSS-BORDER ELECTRICITY TRADE?

Cross-border electricity trade depends on a range of interconnected factors that can be broadly divided into three key groups:

- Technical factors: physical availability of interconnection capacity, available transfer capacity, system constraints, and the availability of generation capacity in Ukraine and its neighbours.
- Regulatory factors: format for allocating cross-border transfer capacity, price regulation (including price caps), and the overall predictability of the regulatory environment.
- Economic factors: the price spread (margin) between neighbouring markets, the cost of access to the cross-border capacity, FX risk, and market participants' expectations regarding future price dynamics.

Technical factors

How is available cross-border capacity for trade determined?

The nominal capacity of cross-border interconnection lines determines the maximum physical capability for flows. However, this does not mean that the volume of imports and exports will always correspond to the theoretical maximum. Obtaining access to cross-border interconnections begins with a technical assessment of the transfer capacity of lines between power grid. The transmission system operator determines how much capacity can be transferred in a given direction, taking into account the state of the grid, outages and maintenance, forecasted load, available generation and requirements for safe operation of the power system.

The starting indicator is the Total Transfer Capacity (TTC). It reflects the maximum permissible volume of electricity transfer between two power systems under expected grid operating conditions. When calculated, grid configuration, outages and maintenance, forecast generation and consumption, permissible equipment loading, and voltage, stability and contingency-security requirements are taken into account.

A portion of this capacity is reserved to ensure system reliability – the Transmission Reliability Margin (TRM). It covers technical uncertainties that may arise between planned and actual operation: forecasting errors, imbalances, changes in consumption, emergency conditions or other deviations.

After accounting for this margin, the Net Transfer Capacity (NTC) is determined. This is the main indicator showing how much capacity can be used for trade between power systems without compromising their reliable operation. NTC is calculated within the maximum permitted import limit agreed by ENTSO-E for Ukraine and Moldova together. At the same time, the announced ENTSO-E limit is an upper boundary, not a guarantee that all of the relevant capacity will be available for commercial allocation in each individual auction.

The operator then determines what share of this capacity has already been allocated to market participants. For example, part of the capacity may have been allocated through long-term, monthly or previous daily auctions. After accounting for rights already allocated, the remaining value stands for Available Transfer Capacity (ATC) – free transfer capacity available for consequent allocation. It is calculated as the difference between NTC and already allocated capacity (AAC). ATC is what is offered in the relevant interconnection allocation auction.

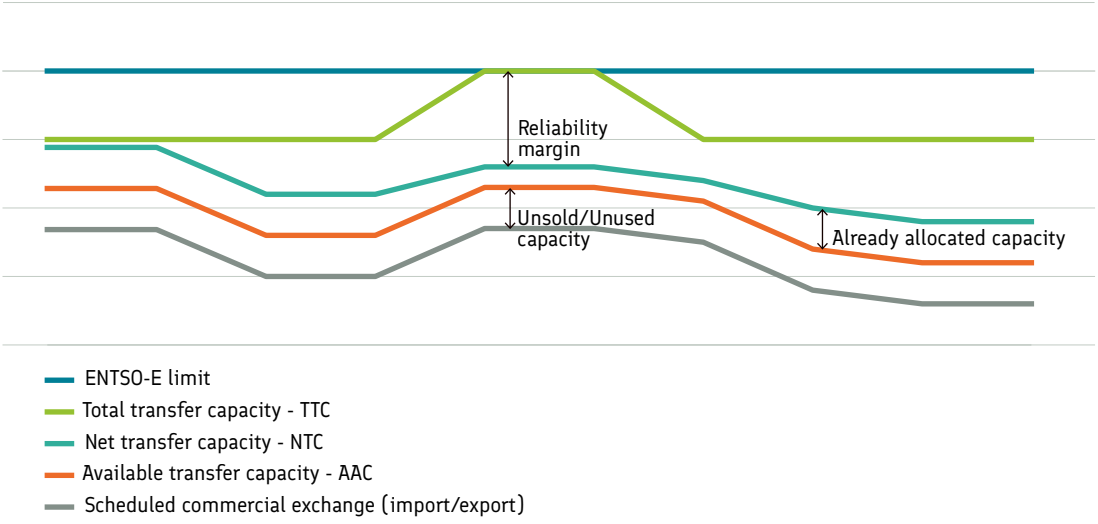
Market participants submit bids on the auction, and upon its results might receive the right to use a certain volume of cross-border interconnection capacity at a competitive price. After obtaining the right to use the interconnection, a participant may nominate a commercial schedule for imports or exports (depending on the auction direction). Such a schedule is a planned trading position: it shows how much electricity the participant intends to buy or sell through a specific cross-border direction in a defined period. When statistics refer to import or export volumes of electricity, they usually refer to net commercial schedules. These reflect market

transactions by participants agreed within the allocated transfer capacity and are netted values for the settlement period – one hour in Ukraine's case. In other words, commercial nominations within a single hour may be made in both directions for each interconnection, but the final commercial schedule reflects the difference between nominated imports and exports.

The actual physical movement of electricity in the grid is determined by the laws governing power-system operation. It depends on the location of generation and consumption, grid constraints, transit flows, imbalances and emergency assistance. As a result, physical flows at the border may differ, sometimes substantially, from commercially nominated imports or exports.

This explains the widespread misconception that during prolonged electricity supply restrictions Ukraine was supposedly exporting electricity abroad. In such critical periods, electricity flows from Ukraine did not reflect commercial exports, but rather physical transit flows needed to balance the operation of the synchronised power system. At the same time, in commercial terms Ukraine was predominantly importing electricity and, when needed, also receiving emergency assistance from neighbouring countries.

Figure 1. Schematic mechanism for determining available transfer capacity of cross-border capacity



Evolution of available capacity of cross-border interconnections with Ukraine

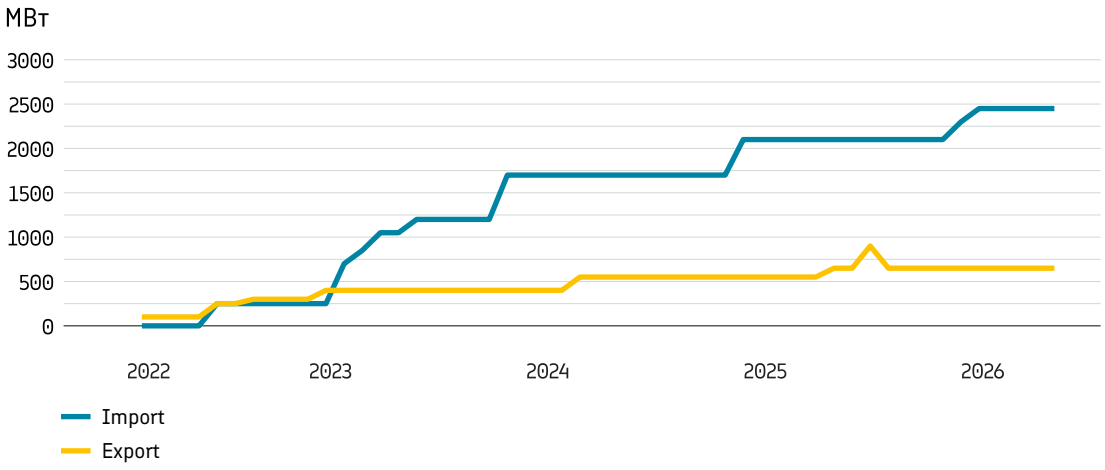
After Ukraine's emergency synchronisation on 16 March 2022 with ENTSO-E, European operators gradually expanded electricity trade opportunities with Ukraine. The initial commercial limit was set at only 100 MW, as each further increase required impact assessments on frequency, power flows, emergency modes and system stability. ENTSO-E explicitly stated that further increases in trading capacity had to be regularly assessed from the standpoint of system stability and security. Subsequently, the key constraints included the condition of interconnection lines, the capacity of neighbouring substations, the availability of power-transformer equipment, outage and maintenance schemes, internal constraints in Ukraine's transmission network and damage to energy infrastructure caused by Russian attacks. Available capacity also depended on the system's ability to operate with import or export flows without overloading domestic grid elements.

Further development and modernisation of the physical infrastructure for cross-border exchange was key to increasing permissible trade volumes. An important step was the commissioning of the modernised 400 kV Khmelnytska NPP – Rzeszow line with a capacity of 1,000 MW in May 2023, which opened the Polish direction and created an additional physical opportunity for imports. On the Hungarian direction, the modernisation of the ₹50/400 kV node was important, particularly the installation of a new autotransformer at the Szabolcsbáka substation at the end of 2024, which replaced the historical role of the Zakhidnoukrainska – Albertirsa corridor as the key transformation node between Ukraine's ₹50 kV network and Hungary's 400 kV network.

At the same time, the approach to calculating available transfer capacity also changed. From 2025 it became more regionalised within the Eastern Europe Capacity Calculation Region. This means that NTC is determined by taking into account not only the operating modes of Ukraine's power system, but also the networks of Moldova, Poland, Slovakia, Hungary and Romania, as well as maintenance, emergency reserves and internal grid constraints in the region.

At the beginning of 2026, the maximum import capacity of the joint Ukraine-Moldova block with the EU was increased to 2,450 MW for imports and 900 MW for exports. At the same time, available transfer capacity is a limit for commercial operations, while physical flows may temporarily exceed it if emergency assistance by transmission system operator (TSO) is used.

Figure 2. Evolution of the cross-border trade capacity with ENTSO-E countries



Source: Authors' estimates based on ENTSO-E data

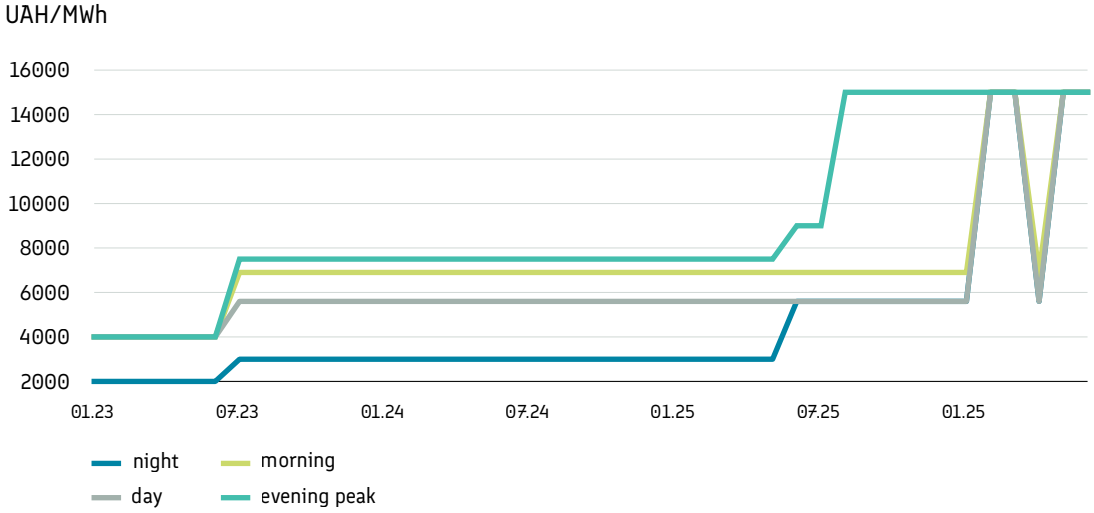
Economic factors

One of the key factors determining the economic viability of imports is the system of maximum prices, or price caps, or price limits, on the day-ahead market (DAM), the intraday market (IDM) and the balancing market. Unlike most EU countries, where price limits are predominantly technical and set at a much higher level, the Ukrainian regime provides for lower caps and their differentiation by time of day. In Ukraine, price caps have historically been set separately for several time blocks. This study uses the following classification of hours, based on historically defined price caps:

- night (00:00 – 07:00)
- semi-peak (07:00 – 11:00, 23:00 – 00:00) (referred to below as 'morning')
- noon (11:00 – 17:00)
- evening peak (17:00 – 23:00) (referred to below as 'evening')

Among EU-members, technical price limits on spot markets are determined according to a specific methodology with certain market-event triggers that activate changes to the caps, and as of May 2026 stood at EUR 5,000/MWh for the upper limit and EUR -600/MWh for the lower limit. In Ukraine, by contrast, price caps remained significantly lower for a long time and, even for peak hours, did not exceed approximately EUR 300/MWh. The Ukrainian regulator (NEURC) revised these limits in response to changes in market conditions.

Figure 3. Ukraine's DAM price caps evolution

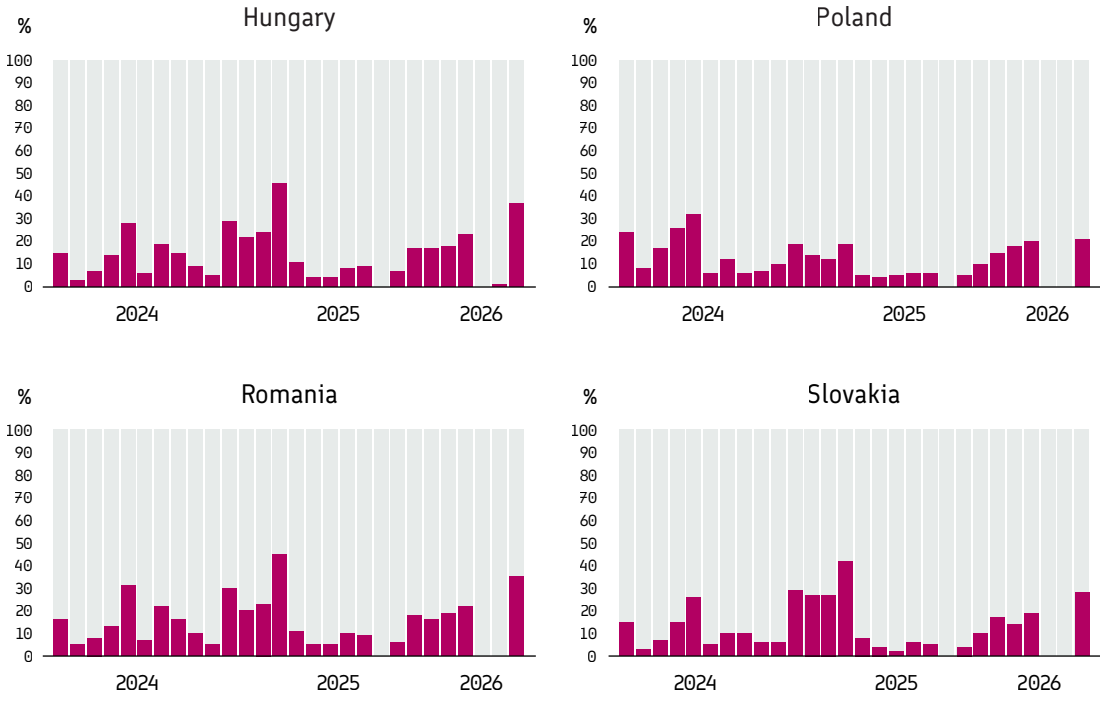


Source: Authors' estimates based on NEURC data

Relatively low price caps create situations when the maximum possible price on the Ukrainian spot market in certain hours is lower than the price of electricity on neighbouring markets. Under such conditions, imports for subsequent sale on organised wholesale segments of the Ukrainian market lose their economic attractiveness, even if the technical factors allow for it.

Our estimates suggests that from January 2024 to May 2026 the share of hours without a theoretical economic incentive for such imports averaged 11-14%, depending on the counterparty direction. During the period of higher price caps in mid-January – March 2026 and after the repeated increase from May 2026, the number of such hours fell to a minimum.

Figure 4. Share of hours when neighbouring country's DAM price was higher than Ukraine's DAM price cap



Source: Authors' estimates based on ENTSO-E and NEURC data

The relationship between neighbouring markets' spot prices is not the only factor determining the economic viability of imports or exports. Imported electricity may be traded outside organised wholesale market segments. Importers, traders and suppliers may conclude direct contracts with consumers with individual pricing terms under which they price in the imports-related risks without linking directly to Ukraine's spot market price indicators. Consumers may be willing to pay a price above the Ukrainian wholesale market and even above the price caps set by the Regulator if it guarantees them uninterrupted supply. In Ukraine, this option is already possible because of government regulatory incentives.

Regulatory factors

Format of allocating cross-border interconnection capacity

In the first year and a half after synchronisation with ENTSO-E, Ukraine held cross-border allocation auctions unilaterally on the specialised platform of NPC Ukrenergo[2] and received all revenue from capacity allocation. For imports or exports, market participants had to account for the rules and procedures of several jurisdictions, which created administrative costs and additional operational risks. At the same time, Ukraine committed to moving to a joint auction format with neighbouring TSOs.

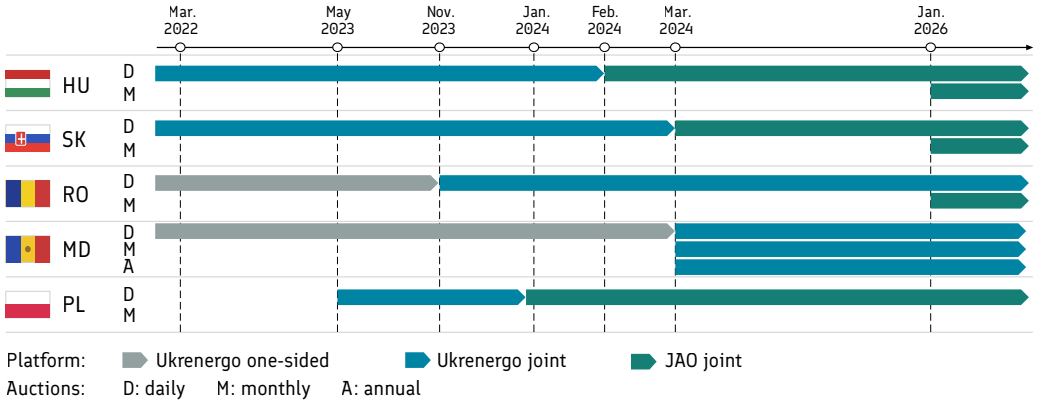
For ENTSO-E member states, a standard practice is to hold joint auctions on the Joint Allocation Office (JAO) platform. This allows two TSOs to coordinate the allocation of access to transfer capacity and share the auction revenues. For market participants, this simplifies access to interconnections, reduces procedural risks and brings trading rules closer to European practice.

Not only the format, but also the allocation horizon matters. Before the launch of joint long-term auctions under European rules, most cross-border capacity was allocated through daily auctions. This format provides flexibility but limits predictability for traders and suppliers, as access to the interconnection and its price are determined only on the day before delivery. This complicates the conclusion of longer contracts for the supply of imported electricity and increases risks for market participants.

Monthly or other long-term auctions, by contrast, allow market participants to secure the right to use interconnection capacity for a longer period in advance. This increases the predictability of access to cross-border transfer capacity, reduces the risk of short-term price volatility in daily auctions and creates better conditions for contracts with final consumers. At the same time, long-term allocation does not fully remove the need for daily auctions, because part of the capacity may still be adjusted depending on the current state of the power system, maintenance and security constraints.

After technical and regulatory aspects were agreed, the Ukrainian side approved the rules for joint monthly auctions during 2023-2024. An important stage in the development of the allocation mechanism came at the end of 2025, when NPC Ukrenergo and neighbouring TSOs began holding monthly auctions on the JAO platform under European rules for the directions with Romania, Hungary and Slovakia. The Polish TSO declined to move to this format with Ukraine.[3]

Figure 5. Launch of auctions for access to cross-border interconnections with Ukraine



2 https://kyiv24.news/news/polskyj-operator-ne-dozvolyv-ukrayini-provesty-dovgostrokovi-aukcziony-dlya-torgivli-elektroenergiyeyu

3 https://zakon.rada.gov.ua/laws/show/1127-2023-%D0%BF/ed20260313

Feed-in tariff RES's export restrictions

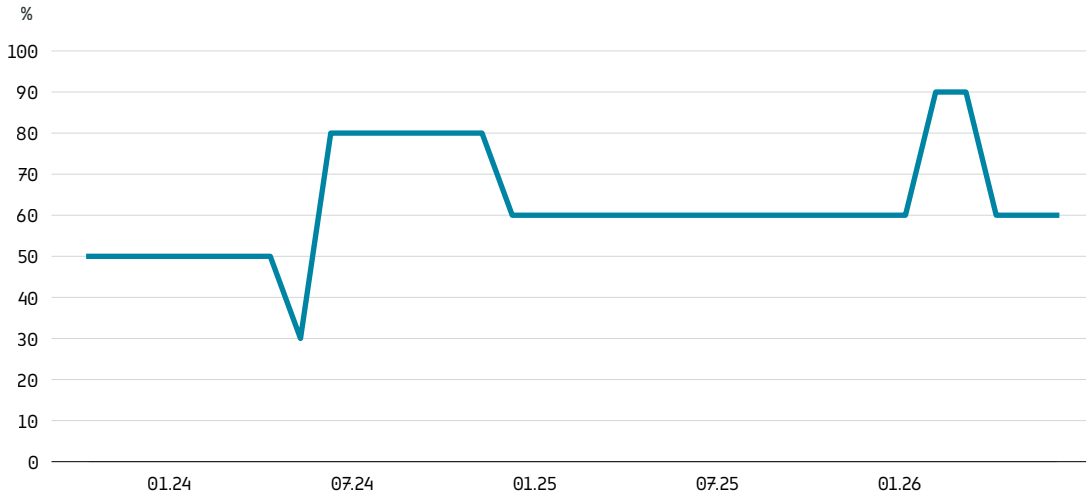
A separate regulatory factor affecting cross-border trade was the rules for the sale of electricity by SE Guaranteed Buyer, which pools RES producers supported under the feed-in tariff mechanism into its balancing group and sells their electricity on the organized market segments.

Until April 2024, Guaranteed Buyer was not allowed to sell electricity from RES in its balancing group for export. This limited cross-border trade opportunities, especially during daytime hours with active solar generation, when domestic demand could be insufficient to fully absorb available output. Generation from such RES facilities had to be curtailed, for which they received full compensation at the established feed-in tariff. Thus, exports could have served as an alternative to generation curtailment and reduced the financial burden on the system, but regulatory rules narrowed this sales channel for electricity.

Regulatory incentive for imports

From October 2023, the Government of Ukraine first introduced a regime[4] under which C&I electricity consumers could reduce the risk of supply restrictions in conditions of a power-system deficit caused by Russian attacks. To do so, such consumers must secure a government-defined share of their consumption through imported electricity or own generation. As of May 2026, the relevant mechanism requires imported electricity to account for at least 60% of consumption in each hour. The government increased the minimum import-share requirements during crisis periods of mass attacks and significant generation constraints, in particular in summer 2024 and temporarily at the beginning of 2026.

Figure 6. Minimum share of imported electricity for a consumer to avoid supply limitations



Source: Authors' estimates based on resolutions of the Cabinet of Ministers of Ukraine

4 https://zakon.rada.gov.ua/laws/show/1127-2023-%D0%BF/ed20260313

This regulatory regime encourages industrial consumers to assess stability and security of supply despite wholesale market signals. In practice, consumers for whom continuity of supply is critical may be willing to pay a price premium for imported electricity, irrespective of the spot market. This creates additional demand for imports even in hours when the spot margin between Ukraine and neighbouring markets is negative. Such a mechanism may also affect the domestic market. If part of industrial demand is covered through imports, this theoretically reduces demand for domestically produced electricity on organised wholesale market segments. All else equal, this may have a restraining effect on prices. This effect was not the focus of the study, so the authors cannot provide a specific estimate for such effects.

In addition, in January 2026 the Government of Ukraine introduced separate obligations for three large state groups – Ukrzaliznytsia, Naftogaz and Ukroboronprom – to secure electricity imports to cover at least 50% of each group's total consumption until the end of the 2025/26 heating period. From February 2026, the state hydropower operator Ukrhydroenergo was obliged to import up to 2,000 MWh of electricity during nighttime (from 00:00 to 07:00) to fill the reservoir of the Dniester PSPP. These measures also created additional demand for imported electricity at the beginning of 2026. From 13 March 2026, these obligations for state companies were lifted ahead of schedule.

Regulatory measures during the crisis period of winter 2025/26 and their impact on import operations are examined in more detail in a separate section devoted to case study.

ANALYSIS AND KEY FINDINGS

I. From net exports in 2022 to reliance on imports from summer 2023

Transformation of the role of cross-border electricity trade during the war

The dynamics of electricity imports and exports changed in waves and reflected not a gradual linear increase in imports, but a sequence of structural breaks caused by attacks, seasonal changes in demand and supply, the pace of power-system recovery and changes in the regulatory environment.

In the first months of the full-scale war, a sharp fall in domestic demand and reserve of generation capacity favoured electricity exports (Zone 1 in Figure 8). Dramatic shifts starts in autumn 2022 after the first large-scale attacks on energy infrastructure. Exports declined and, for the first time after synchronisation with ENTSO-E, Ukraine began to systematically import electricity (Zone 2 in Figure 8). However, import volumes remained limited due to the gradual expansion of available cross-border capacity and existing price restrictions on the domestic market.

During the 2022/23 heating season, nationwide forced electricity supply restrictions were applied in Ukraine for industry and households for the first time. As a mitigation policy, the Government of Ukraine introduced a mechanism exempting consumers from supply restrictions if they secured a government-defined share of consumption through imported electricity. This mechanism was subsequently revised several times depending on the situation in the power system. Thus, from 2023 imports became a tool to reduce the risk of supply restrictions for individual industrial consumers, not only system-wide.

During 2023, the partial recovery of the power system, the gradual increase in the trade limit and revisions to price caps by NEURC stimulated cross-border trade (Zone 3 in Figure 8). During periods of lower demand and high RES generation, Ukraine again returned to power exports.

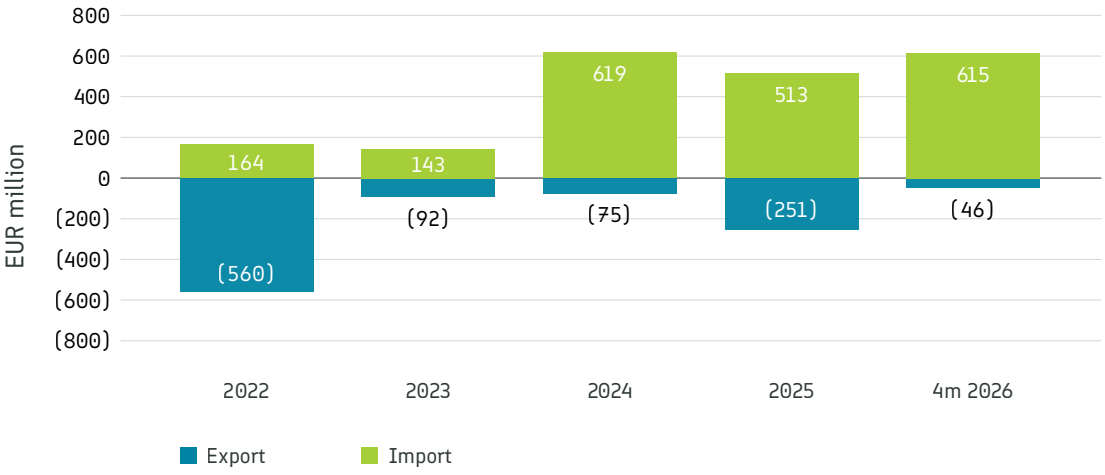
A new structural break occurred in spring 2024 after a large-scale campaign of attacks on generation assets and network infrastructure (Zone 4 in Figure 8). From March, import volumes began to grow rapidly, while exports gradually fell to zero. Import volumes peaked in the summer months, when losses of generation capacity coincided with higher electricity consumption and planned maintenance at Ukrainian NPP units.

During the 2024/25 autumn-winter period, imports relatively stabilised against the background of a partial recovery in available capacity and seasonal consumption decrease. In the first nine months of 2025, seasonal declines in demand and the recovery of generation again created opportunities to increase exports (Zone 5 in Figure 8).

In autumn 2025, another large-scale campaign of attacks was unleashed by Russia and continued throughout the heating period, significantly increasing Ukraine's dependence on electricity imports (Zone 6 in Figure 8). In response to that, the permitted import limit was increased, monthly long-term auctions were launched on the JAO platform and price caps were revised. At the beginning of 2026, imports reached highest levels since the start of the full-scale war.

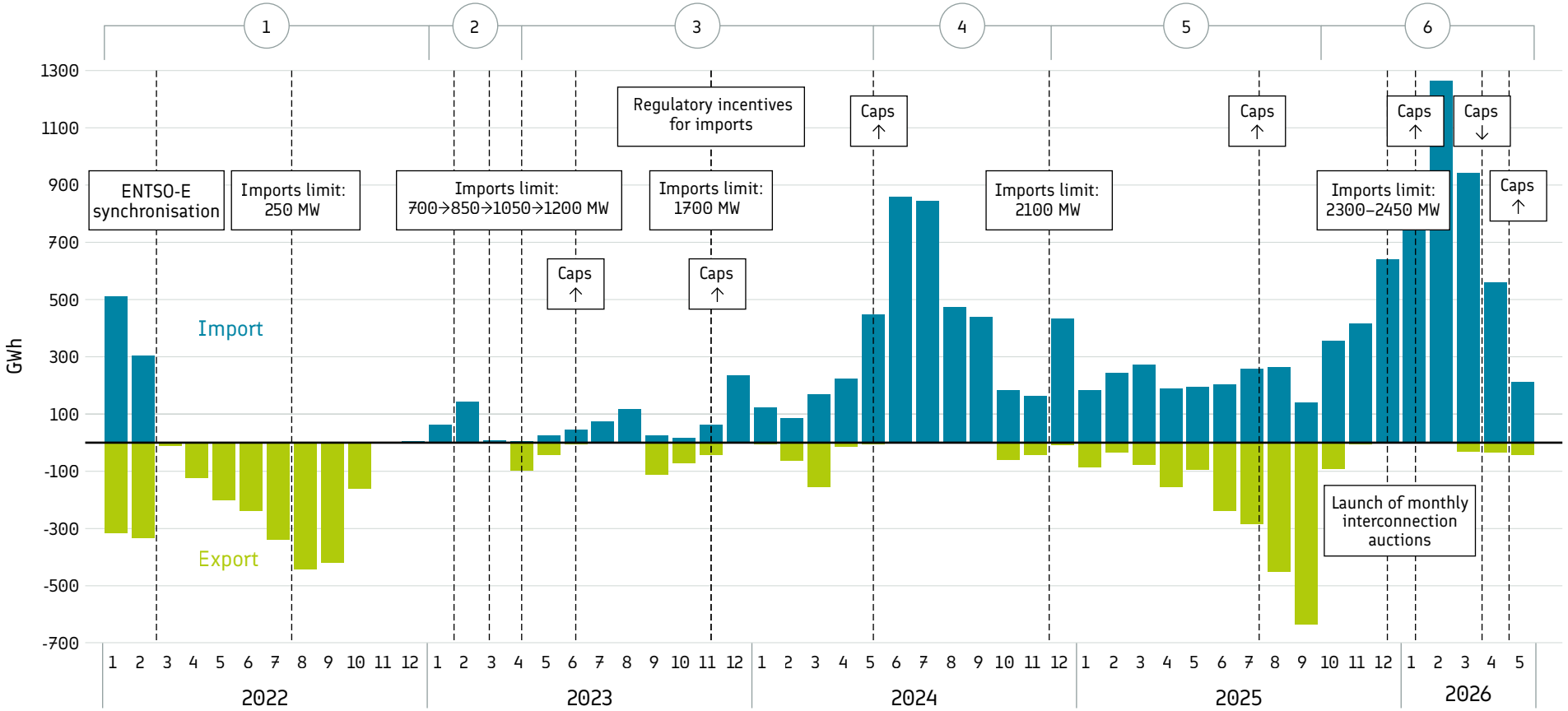
The share of imports in annual electricity consumption in 2024–2025 increased to approximately 4–5%, compared with around 1% previously. By mid-May 2026, imports had already reached 3.7 TWh, covering an increasing share of domestic-market demand amidst another wave of large-scale destruction in the power system.

Figure 7. Electricity imports and exports in Ukraine, 2022 - May 2026 (GWh/month)



Source: Authors' estimates based on State Customs Service

Figure 8. Ukraine's electricity cross-border trade during 2022 – May 2026 (GWh/month)



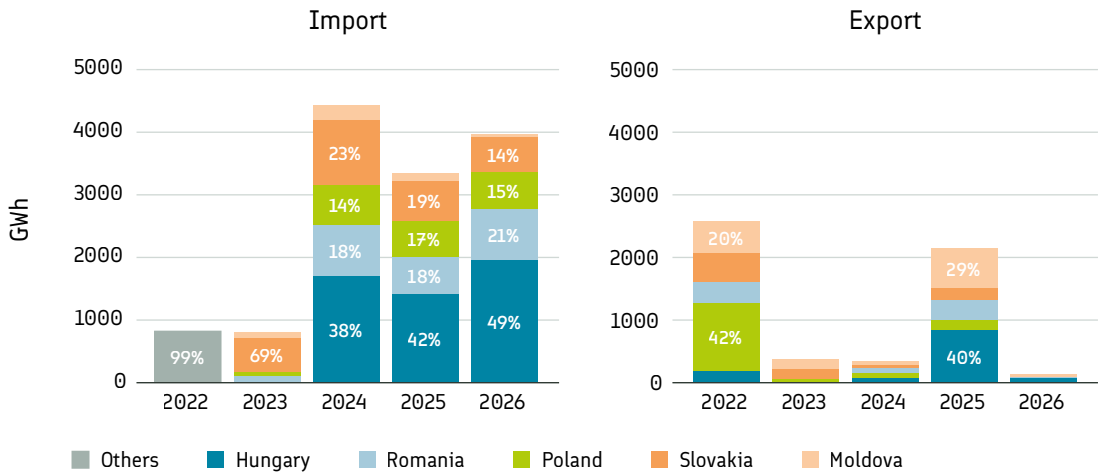
Source: Authors' estimates based on ENTSO-E data

Notes: "Imports limit" indicates the date on which the permitted capacity for imports from ENTSO-E countries was increased.
"Caps" indicates the date on which price caps on Ukraine's wholesale electricity markets were changed, with the arrow showing the direction of the change.

II. Hungary remains the key partner

The structure of cross-border electricity trade changed substantially over the period analysed. In 2022, Ukraine remained a net exporter: the main export directions were Poland, Moldova, Slovakia and Romania, while import volumes were minimal. In 2023, due to Russian attacks on Ukraine's power system, exports fell dramatically and Slovakia became the main source of moderate imports. After large-scale attacks on energy infrastructure in spring 2024, import volumes increased substantially and became more diversified: Hungary became the key direction, and its share remained the largest thereafter, while Romania, Poland and Slovakia also provided significant supply volumes. In 2025, due to the partial power-system recovery, Ukraine temporarily increased exports, mainly to Hungary and Moldova. At the same time, in 2026, after a renewed attacks on the grid, exports again fell to minimal levels and imports increased substantially, with Hungary retaining its key role as a main supplier.

Figure 9. Structure of cross-border electricity trade by direction



Source: Authors' estimates based on ENTSO-E data

Note: the 'Other' category refers to imports from Belarus, which took place only before the full-scale invasion

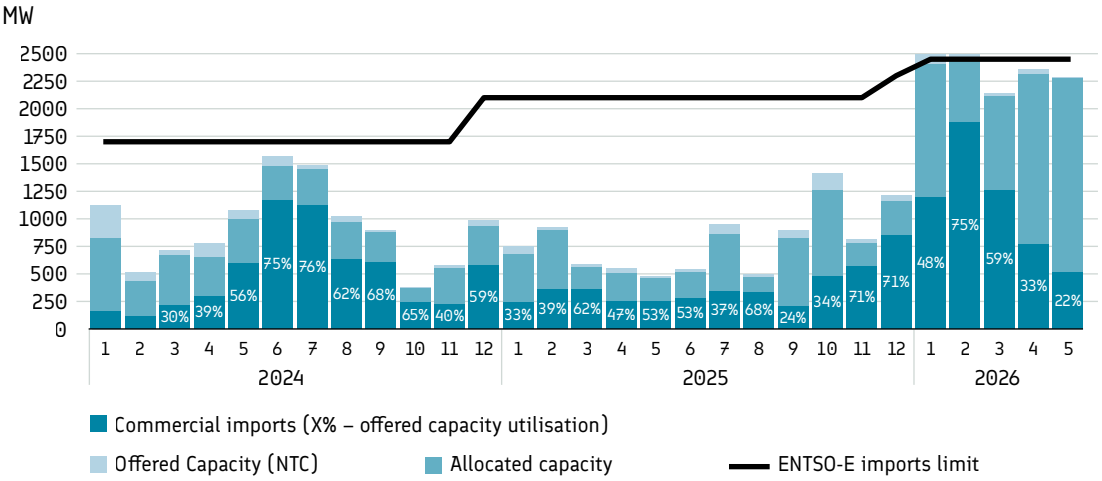
III. Utilisation of Ukraine's import cross-border capacity ranged from 30 to 50% of offered capacity.

It is common in Ukraine that the level of utilisation of cross-border interconnections is often assessed by comparing actual commercial imports with the maximum permitted ENTSO-E limit. However, this approach may lead to over-simplified conclusions because it does not take into account constraints in the operation of the Ukrainian and neighbouring power systems, as well as differences between the permitted limit, the offered interconnection capacity (NTC) and the interconnection capacity actually allocated at auction. As described in the previous section, the capacity available for commercial imports and exports is not constant and depends on the current state of power systems, maintenance regimes, security constraints and allocated interconnection rights. In addition, the ENTSO-E import limit does not include import limits from Moldova.

In 2024-2025, the capacity offered at cross-border auctions usually was substantially below the maximum permitted ENTSO-E import limit. Overall, the share of offered import capacity at auctions totalled 53% of the permitted limit in 2024 and 38% in 2025. For some months, the average hourly volume of offered capacity was

less than a quarter of the permitted limit. This means that the difference between the permitted limit and actual imports was explained not only by the level of demand for imported electricity or economic incentives for traders, but also because not all potentially available capacity was offered for commercial allocation.

Figure 10. Aggregate utilisation of Ukraine's cross-border interconnection capacity (hourly average)



Source: Authors' estimates based on data from Ukrenergo, ENTSO-E, JAO and Energy Map

Notes: The indicators are presented as average hourly values for the relevant month. The percentages in the columns show the ratio of actual commercial imports to allocated transfer capacity (ATC). The ENTSO-E permitted import limit is the maximum aggregate capacity for Ukraine and Moldova.

At the same time, even capacity offered and allocated through auctions did not always fully translate into commercial imports. In 2024, utilisation of allocated capacity was relatively high during the periods of greatest deficit, especially in summer, when it reached around 75%. In 2025, by contrast, utilisation was more uneven and, in some months, remained low despite the availability of allocated transfer capacity. This suggests that, even after securing rights to use the interconnection, market participants did not always nominate corresponding commercial import schedules in full, largely due to economic factors.

At the beginning of 2026, the situation changed. Alongside the increase in the permitted import limit and the launch of monthly auctions, the volume of offered and allocated capacity increased significantly and approached the upper limit agreed by ENTSO-E. At the same time, actual utilisation of allocated capacity remained unstable: after high levels in January and February, it declined notably in the following months. This underlines that even when technical and commercially allocated capacity increases substantially, actual imports still depend on economic incentives, price limits, the cost of interconnection capacity and regulatory incentives for imports.

IV. Interconnection prices: when imports are more expensive than the spot margin

The cost of access to cross-border interconnection capacity is an important element in the economic viability of electricity imports. In simplified terms, under sufficient competition, the price of interconnection capacity should reflect the expected price difference between two neighbouring markets.

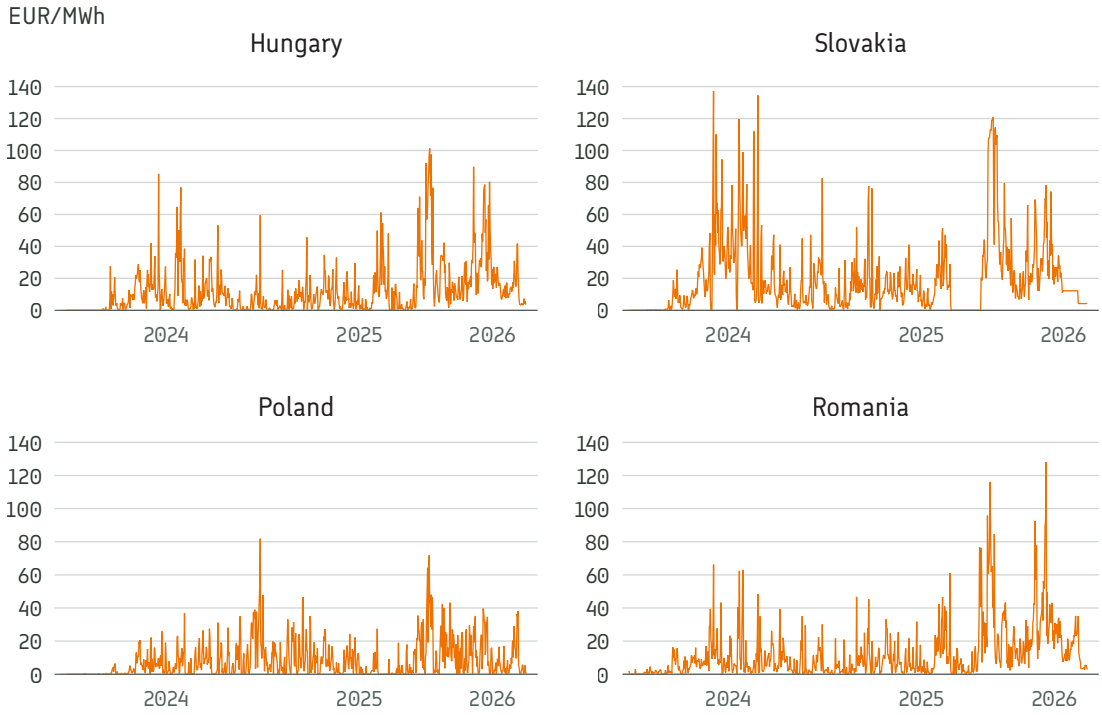
In practice, auction prices for access to interconnections do not always precisely reflect only the spread between spot prices. In some periods, they substantially exceeded the price difference between the Ukrainian and neighbouring markets, creating a negative ex-post spot margin for imports.[5] This means that imported electricity was more expensive than the potential revenue from selling it on the organised wholesale segments of the Ukrainian market.

In some hours, interconnection prices even exceeded the price caps on the Ukrainian electricity market, reaching more than EUR 300/MWh.

At the same time, this does not necessarily indicate irrational behaviour by market participants, as imports may have been carried out under direct contracts with consumers for whom continuity of supply under the government regulation was the key value. Government obligations for certain state-owned companies to cover part of their consumption through imports may also have had a separate impact at the beginning of 2026.

The dynamics of average daily interconnection prices show that the highest values were recorded during periods of the greatest deficit in the Ukrainian power system. In particular, in summer 2024, after large-scale attacks on generation, and during the 2025/26 autumn-winter period, prices on certain routes remained elevated for extended periods. During such periods, average daily prices could reach around EUR 40–140/MWh, while in calmer periods average interconnection prices usually remained much lower and most often did not exceed EUR 20/MWh.

Figure 11. Average daily interconnection price for imports



Source: Authors' estimates based on ENTSO-E and JAO, Dixi Group's energy map data

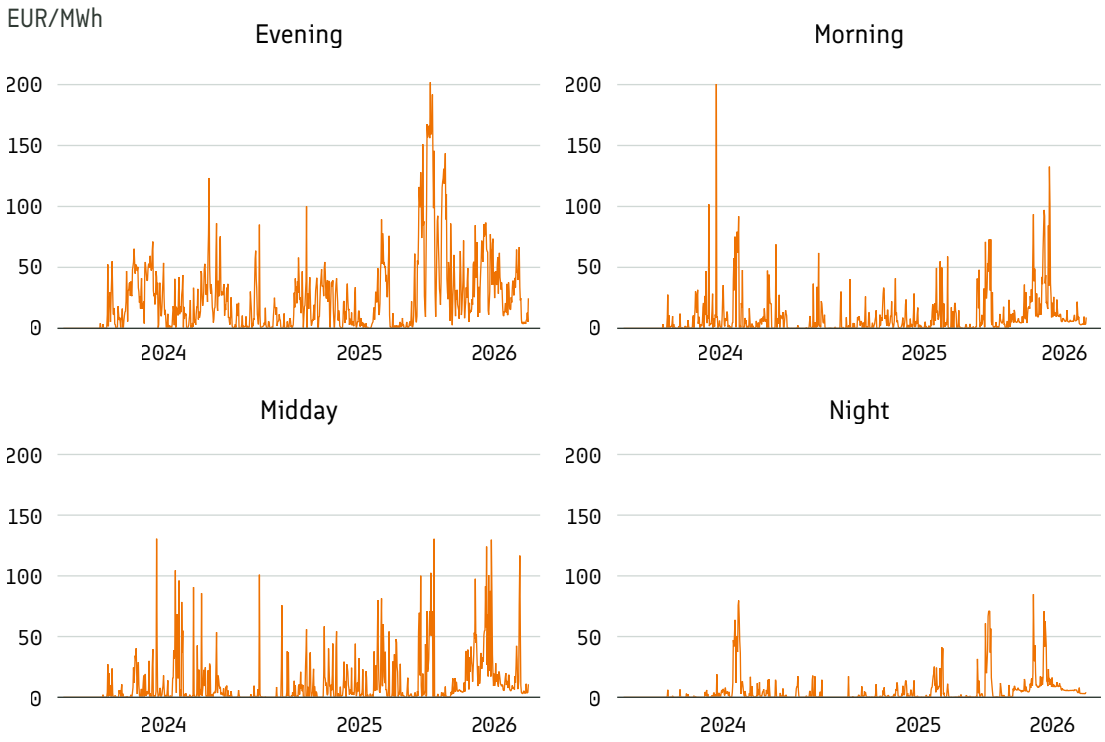
5 Note: The ex-post spot margin is the estimated profitability of imports calculated using actual hourly prices after the close of trading: the Ukrainian DAM price minus the sum of the neighbouring DAM price and the cost of access to cross-border interconnection capacity. A negative ex-post spot margin means that selling imported electricity on the Ukrainian DAM would not have covered the estimated cost of that import.

High interconnection access prices in crisis periods show that market participants were prepared to compete for imported electricity even when its resale on the Ukrainian spot market did not appear economically attractive on an ex-post basis. This points to the presence of additional economic value attached to imports, linked to ensuring security of supply, meeting contractual obligations to consumers and reducing the risk of supply interruptions.

The interconnection price also differed substantially depending on the type of delivery hour. Taking imports from Hungary as an example, the highest and most volatile auction prices were observed during evening peak hours, when the capacity deficit in the Ukrainian power system was most acute and demand for imports was highest. In semi-peak hours, prices also rose periodically, but these spikes were shorter and less systematic.

During daytime hours, the interconnection price was more uneven. It could rise sharply on individual days, but more often remained lower, likely reflecting a smaller deficit in Ukraine or more favourable price conditions in neighbouring markets. Night hours were generally characterised by the lowest and least volatile cross-border prices, except during certain crisis periods when imports remained critically important for industrial consumers and system balancing.

Figure 12. Interconnection price for imports from Hungary, average by type of hour



Source: Authors' estimates based on ENTSO-E, JAO and Dixi Group Energy Map data

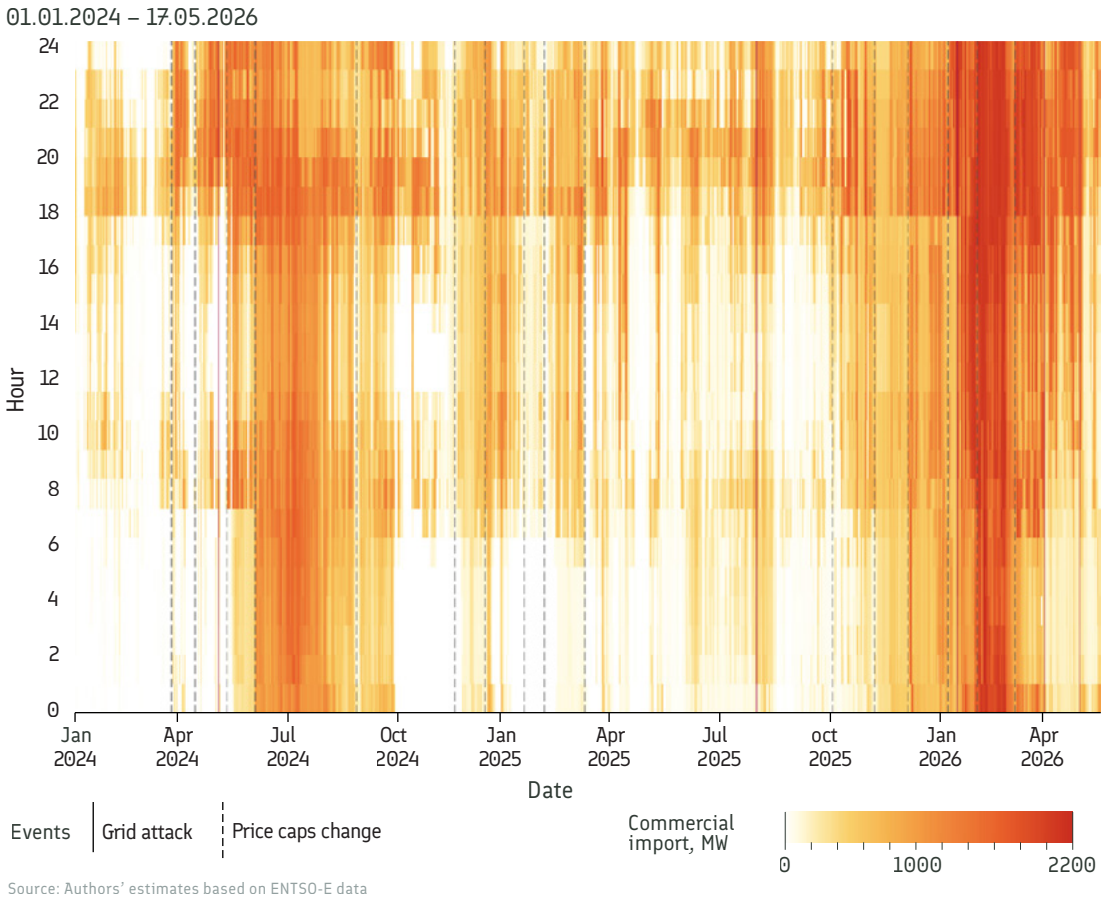
V. Price caps were the main factor behind the daily import profile

Figure 13 shows that commercial electricity imports had a clear intraday profile. In most periods, the largest volumes occurred during evening peak hours. This reflected a combination of two factors: the shortage of domestic capacity in the Ukrainian power system was most pronounced during these hours, while higher price caps on organised market segments created more favourable economic conditions for imports.

Price caps affected not only the level of domestic prices, but also the ability of the Ukrainian market to compete with neighbouring bidding zones for imported electricity. If the Ukrainian price cap was below the purchase price in a neighbouring market, including the cost of interconnection capacity, imports lost their economic rationale for supply through organised market segments. Conversely, higher price caps expanded the scope for imports, especially in hours when the generation deficit was most acute.

From August 2025, the price cap in peak hours was raised to UAH 15,000/MWh. This improved conditions for imports during periods of highest load and partly explains the concentration of import volumes in the evening peak. The most noticeable increase in imports occurred at the beginning of 2026, when several factors acted simultaneously: renewed attacks on the power system, a deficit of available generation, higher price caps in all hours of the day and the launch of monthly auctions for access to cross-border transfer capacity.

Figure 13. Ukraine's commercial import heatmap



Source: Authors' estimates based on ENTSO-E data

VI. Commercial exports may take place in parallel with imports by different market participants

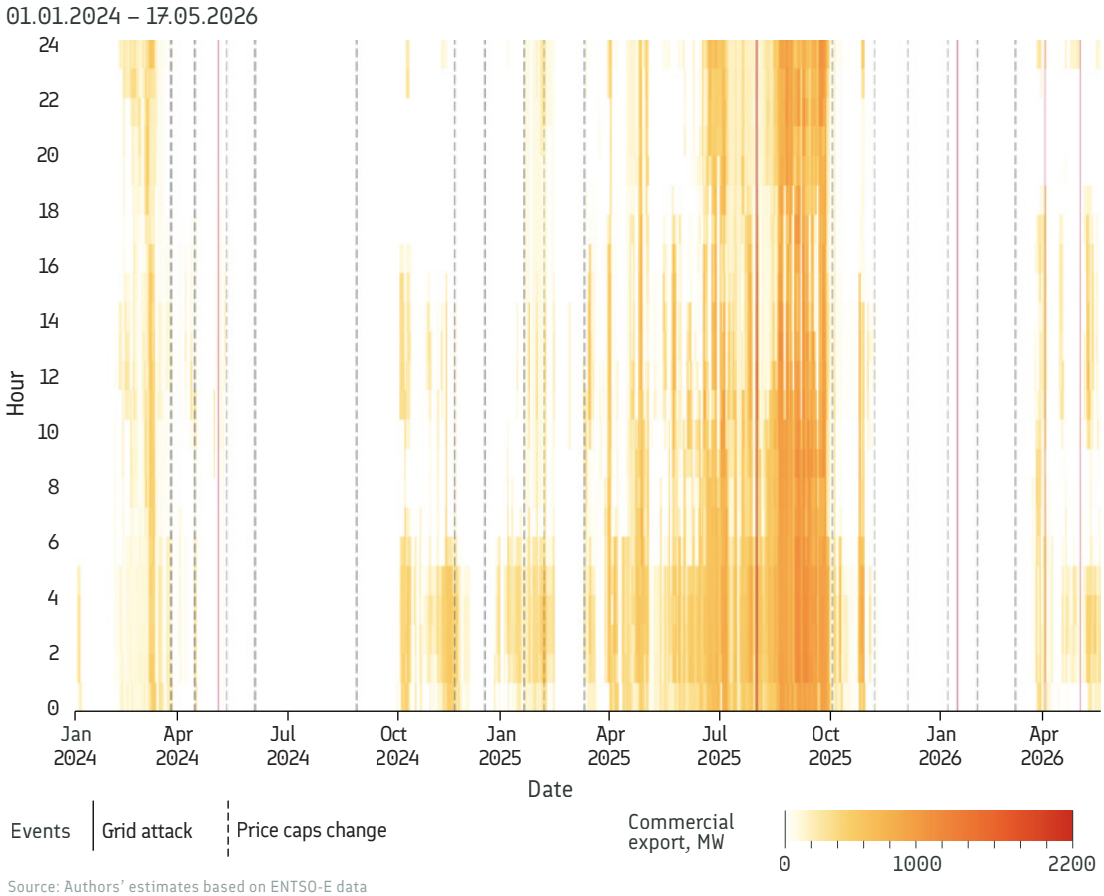
Electricity exports from Ukraine mainly took place during periods when generation was sufficient to cover domestic needs. Historically, they were concentrated in two types of hours: night hours, when a surplus of baseload generation could emerge, and solar-active hours between April and October, when RES generation increased.

Significant export activity was observed in July-October 2025, linked to the stronger role of state-owned producers and large traders.

According to Energoatom's annual report, the company actively exported electricity in Q3 2024 "only at times when the power system had sufficient resources to supply domestic consumers, subject to technical capability and the absence of system constraints". Exports accounted for 1.3% of Energoatom's generation in 2025.

According to our analysis, during this period exports may have taken place simultaneously with imports in other hours or in other directions. This is normal for an open market: import and export decisions are made independently by different participants, across different time intervals and based on different price signals. This period is considered in more detail in the case study.

Figure 14 Ukraine's commercial export heatmap



Source: Authors' estimates based on ENTSO-E data

VII. 37% of import volumes occurred under negative spot-market margins, likely reflecting direct contracts and regulatory incentives

The analysis shows that, from January 2024 to mid-May 2026, 37% of imported electricity had a negative ex-post spot margin. This means that selling such electricity at the Ukrainian DAM price would not have covered the full cost of imports, including the electricity price on the neighbouring market and the cost of access to the cross-border interconnection. At the same time, this does not necessarily indicate economically irrational behaviour by market participants, as the actual motivation for imports, as explained below, may have gone beyond profit under contracts linked to spot-market prices.

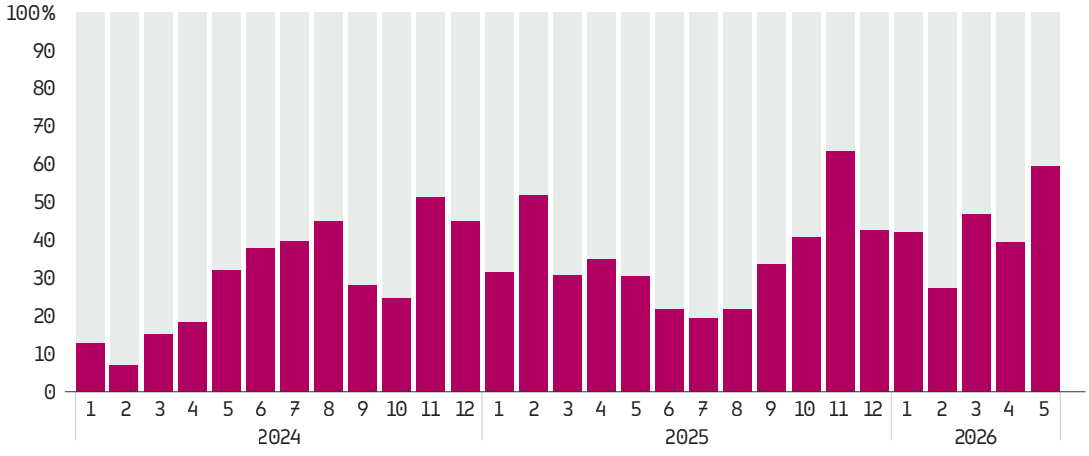
The share of imports with a negative ex-post spot margin was particularly high during periods of the greatest deficit in the Ukrainian power system. In particular, it increased noticeably in summer 2024 after large-scale attacks on generation assets, and again at the end of 2025 and the beginning of 2026 during another deterioration in the supply-demand balance and the resumption of electricity supply restrictions. In these periods, the share of such imports in individual months reached around 40–60%, indicating additional demand for imported electricity beyond the logic of spot-market arbitrage.

One explanation is the government import incentive. During the analysed period, a rule was in force under which non-household consumers could reduce the risk of electricity supply restrictions if they secured a defined share of their consumption through imported electricity. For such consumers, imports were not only a source of electricity, but also an instrument of protection against disconnections. Accordingly, they could be prepared to pay a premium for continuity of supply, while supply under direct contracts could take place without a direct link to the Ukrainian DAM price.

An additional factor at the beginning of 2026 was the obligation imposed on certain state-owned companies to import electricity. As noted in the previous section, in January 2026 these obligations were introduced for Ukrzaliznytsia, Naftogaz and Ukroboronprom, and from February also for Ukrhydroenergo. This could have created demand for imports even in hours when such operations appeared loss-making from the perspective of resale on the organised spot segments of the Ukrainian market.

Another possible explanation is forecast error. Market participants decide whether to purchase interconnection capacity and import electricity based on expected, rather than actual, prices in neighbouring markets and in Ukraine. Therefore, part of the imports with a negative ex-post margin may have resulted from deviations between actual prices and the forecasts used by traders or suppliers.

Figure 15. Share of import volumes with negative spot-market margins



Source: Authors' calculations based on ENTSO-E, JAO and Dixi Group Energy Map data

Note: The margin is defined as the difference between the hourly DAM price in Ukraine and the sum of the DAM price on the relevant neighbouring market and the weighted-average auction price for access to the cross-border interconnection. Since October 2025, DAM prices on some neighbouring markets have been calculated at 15-minute intervals; for comparability, the analysis uses average hourly values calculated from the relevant 15-minute intervals.

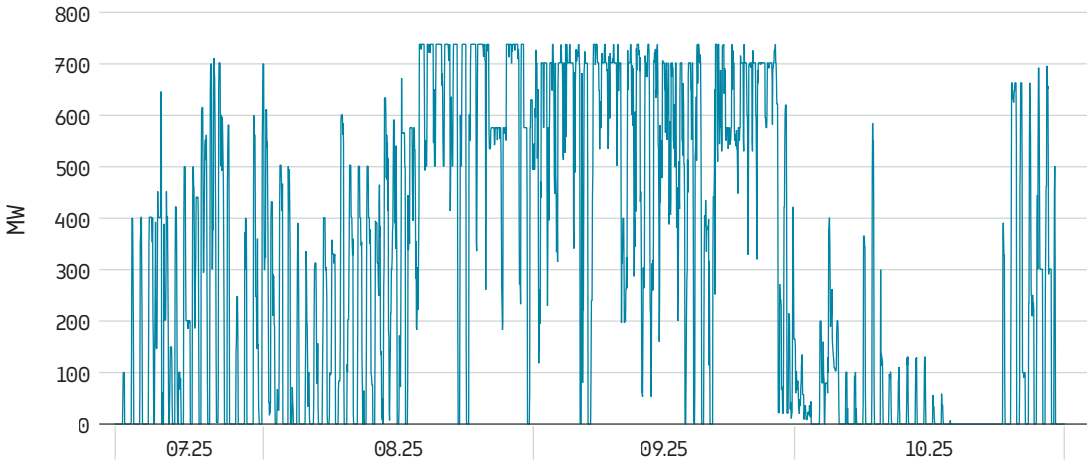
CASE STUDIES

July – September 2025

An analysis of hourly commercial schedules in July–September 2025 indicates a change in the profile of electricity exports from Ukraine. In July and early August, exports were concentrated mainly in night hours and were highly variable. From the second half of August, the schedule became more even and covered a broader range of hours during the day, including peak periods. The most stable profile was observed between 17 and 31 August and throughout September.

This pattern may indicate a shift of some export operations towards a more structured commercial model, through contracts with a fixed hourly or periodic profile. Such a profile is typical of base-load producers, including nuclear generation, or of traders with access to significant volumes of contracted baseload.[6]

Figure 16. Hourly export volumes in July-September 2025



Source: Authors' estimates based on ENTSO-E data

Note: Data are shown for trade directions with Poland, Hungary, Slovakia and Romania, excluding Moldova.

Energoatom's financial statements provide an additional basis for assessing the company's role in shaping the export profile. The company states that it began exporting electricity to Poland on 1 September 2025. In addition, based on Energoatom's financial statements, the calculated volume of its exports in Q3 2025 was 489 GWh. According to our calculations, total electricity exports from Ukraine over the same period amounted to 1,271 GWh. Energoatom may therefore have accounted for around 38% of total exports in Q3 2025.

This confirms Energoatom's significant role among exporters during the analysed period and supports the assumption that the company may have been one of the key participants shaping the stable export profile. At the same time, the available open data do not allow us to determine precisely what share of the hourly schedule was directly attributable to Energoatom and what share may have been formed by other producers or traders with access to contracted baseload resources.

During this period, export schedules in certain hours may have corresponded to the withdrawal of up to 700-750 MW of supply from the domestic market. This coincided with a 67% increase in the price cap for peak hours from 1 August 2025.

6 Примітка: базове навантаження означає рівний погодинний обсяг купівлі-продажу протягом доби.

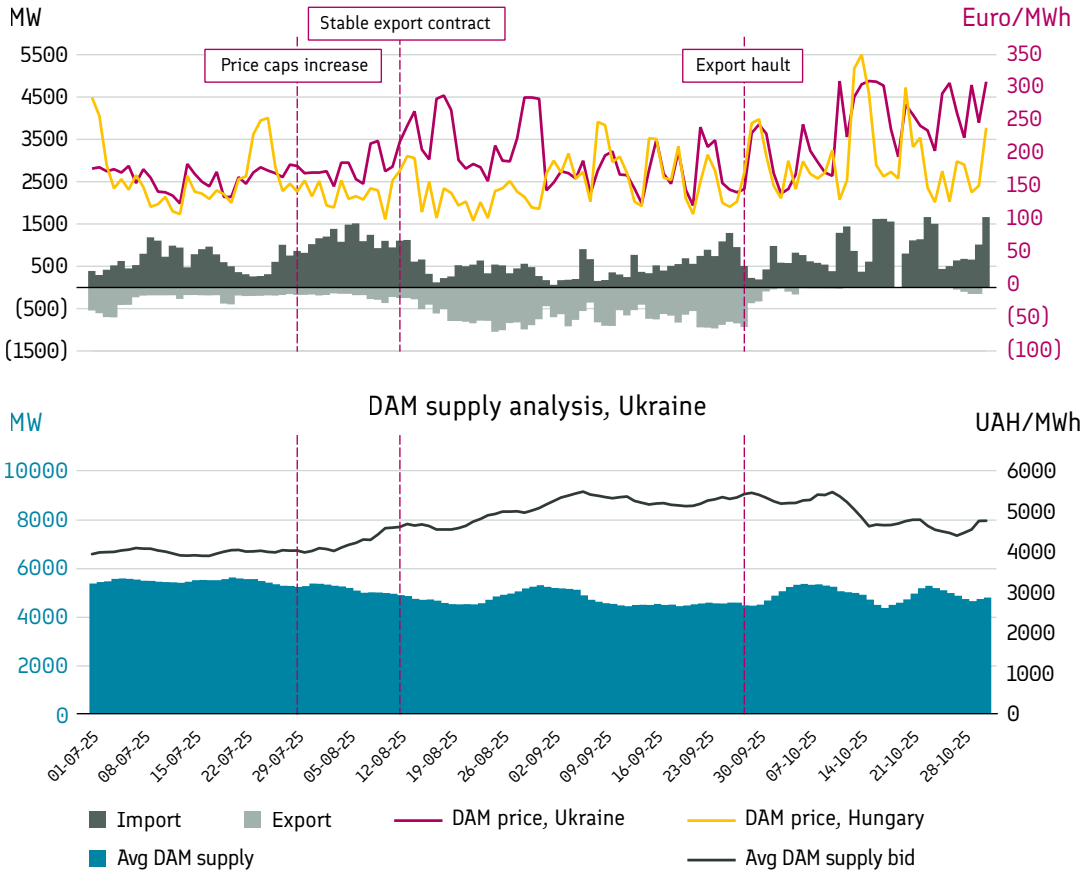
After the change in price caps, peak DAM prices quickly adjusted to the new regulatory level. In parallel, a decline in DAM supply and a gradual increase in the average bid price were observed.

In addition, based on the data presented in Energoatom's 2025 financial statements, the estimated sale price of electricity under export contracts was UAH 3,977/MWh. The estimated weighted-average sale price of baseload electricity on the Ukrainian Energy Exchange during this period was UAH 4,950/MWh, almost 25% higher. In a direct comparison, sales on the domestic market through auctions on the Ukrainian Energy Exchange would have generated an additional UAH 640 million for Energoatom, and possibly even more if the electricity had been sold on spot segments. It should be noted, however, that it is impossible to reliably assess whether DAM prices, and final prices for non-household consumers, would have been lower if these export volumes had not been withdrawn from the domestic market.

The reduction in DAM supply may have been linked to several factors: an increase in export operations, lower availability of cheaper baseload generation for the domestic spot segment, maintenance of generation units, or changes in the pricing behaviour of market participants after the price caps were raised. The most justified assessment is that there was a combined effect, with the regulatory increase in the price ceiling coinciding with a reduction in domestic supply and weaker competition in certain hours.

The activation of exports coincided with a period of high domestic prices and weaker external price conditions. Under such conditions, directing significant volumes of electricity to exports could have reduced potential price competition on the domestic market. After stable export schedules were reduced and part of the volumes returned to the domestic spot segment, the average offer price began to decline, which is consistent with the hypothesis that additional supply affected competition on the DAM.

Figure 17. Average daily volumes of cross-border trade and prices in peak hours, 17:00–23:00 Kyiv time, July–October 2025



The assessment of whether exports were appropriate during a period of high domestic prices remains open to discussion. For producers or traders, exports may have been commercially justified if the sale price covered costs and provided an acceptable margin. For the domestic market, the effect was more complex: selling the same volumes on the DAM could have increased liquidity and partially limited price pressure in peak hours. However, a direct comparison of export revenue with hypothetical revenue on the domestic market has limited analytical value, since additional supply could itself have affected the domestic price level.

The key conclusion is that the change in the export profile in August–September 2025 coincided with the increase in price caps, a reduction in DAM supply and growth in price bids. The available data allow us to identify a significant market effect from export schedules. Energoatom's financial statements also confirm its significant role in exports in Q3 2025. At the same time, a full assessment of the impact of individual participants would require a monthly or hourly breakdown of exports by company.

December 2025 – May 2026

Since January 2026, the transmission system operators of Ukraine, Slovakia, Hungary and Romania have launched joint monthly auctions on the Joint Allocation Office platform. This improved the predictability of access to cross-border capacity and created better conditions for import planning.

During 8–13 January 2026, Russia's massive missile attacks caused significant damage to critical infrastructure and power generation facilities. The Ukrainian power system faced an acute capacity deficit, which increased the need for imports during most hours of the day. In response, the regulator temporarily increased price caps in the wholesale market segments across most time zones, while the price cap for the evening peak remained unchanged. In parallel, an import obligation was introduced for selected state-owned enterprises. Its cancellation from 13 March 2026 can be interpreted as an indicator that the deficit regime had eased.

Import behaviour during evening peak hours provides the clearest example of the market response to scarcity, as the price cap for this period did not change. According to our estimates, in January-March, average imports during peak hours reached around 1,800–2,100 MW. In April, they declined to 1,400-1,800 MW, and from May returned to levels close to those observed before the massive attacks, i.e. below 1,000 MW.

The strongest effect was observed during night, morning and daytime hours, where higher price caps created greater economic headroom for import operations. During the critical period of January-February 2026, average imports in these hours increased from around 600–700 MW to 1,600–2,100 MW. Growth during the evening peak was more moderate, as the relevant price cap remained unchanged. On some days in January, the Ukrainian price cap was also lower than peak prices in neighbouring markets, which constrained imports during the hours of highest scarcity.

Based on the analysed data presented in Figure 18, we draw the following conclusions:

A. The launch of monthly interconnection auctions increased the availability of cross-border capacity and created preconditions for a rapid increase in imports.

The introduction of monthly auctions for access to interconnection capacity substantially increased the amount of allocated cross-border capacity. From January 2026, the average volume of allocated interconnection capacity rose to approximately 2,000 MW, compared with a maximum of around 1,000 MW in December 2025. In the first half of January, utilisation of this capacity remained relatively low, but its availability created the preconditions for a rapid increase in imports once the power-system balance deteriorated.

B. Imports increased sharply after the power-system balance deteriorated and price caps were raised.

In the first half of January 2026, utilisation of offered interconnection capacity remained relatively low during daytime and semi-peak hours: on average, commercial imports amounted to around 34% of offered capacity during daytime hours and 40% during semi-peak load.

By contrast, during the evening peak, when the highest price cap of UAH 15,000/MWh was already in place, utilisation was significantly higher, averaging 62%.

After NEURC increased DAM price caps to UAH 15,000/MWh for all hours of the day, interconnection utilisation in the second half of January rose substantially in the time zones where the price cap changed the most. During daytime hours, utilisation increased from 34% to 61%, while in semi-peak hours it rose from 40% to 54%. In the evening peak, where the price cap effectively did not change, utilisation remained almost stable at around 64%. Average hourly imports after the increase in price caps almost doubled, rising from 900 MW to 1,700 MW.

C. In March 2026, Ukrainian and neighbouring spot prices gradually synchronised in off-peak hours.

Price synchronisation in off-peak hours indicates an easing of the capacity deficit in the Ukrainian power system and the growing role of imports as a competitive source of supply. In January-February 2026, Ukrainian prices often remained higher than prices in neighbouring markets, creating a commercial incentive for imports. In March, this gap began to narrow, especially in night, morning and daytime hours.

This means that imports gradually stopped being solely a crisis tool for covering the deficit and began to function as a mechanism for aligning prices between the Ukrainian and neighbouring markets. As Ukrainian prices approached those in neighbouring markets, the opportunity to earn excess profits from imports decreased, and import volumes became more dependent on the hourly price spread.

At the same time, the evening peak remained a separate segment. On most days, Ukrainian prices in evening hours remained higher than prices in neighbouring markets, indicating that the deficit persisted specifically during peak load. This also explains why imports in evening hours remained relatively high even after the overall deficit level declined.

D. The reduction of price caps in April 2026 sharply reduced imports in off-peak hours.

After the reduction of price caps, the economic rationale for imports during night and morning hours weakened significantly. During these hours, Ukrainian prices often reached the regulated maximum, but this maximum remained below prices in neighbouring markets. Under these conditions, imports ceased to be profitable for traders and suppliers, even when the technical possibility and access to cross-border capacity remained available. While in the last two weeks of March the share of hours in which the electricity price in a neighbouring market exceeded the Ukrainian price cap did not exceed 1 – 4%, depending on the import country, after the reduction of price caps in April this indicator increased to 21 – 43% of hours, despite the overall trend towards lower prices in neighbouring markets.

This was particularly evident during off-peak hours, when demand in Ukraine is lower and domestic generation is more often able to cover consumption. In January-March, imports during these hours were supported by a combination of scarcity, high price caps and regulatory incentives. In April, this balance changed: scarcity eased, the price ceiling was lowered, and the market incentive for imports declined.

During daytime hours, the decline in imports was less uniform. Imports decreased on average, but increased on days when prices in neighbouring markets fell below Ukrainian prices. Such situations occurred mainly during periods of lower demand, public holidays or high solar generation in the EU. This shows that after April, imports returned to a more selective logic, in which the key driver was no longer the general deficit, but the hourly commercial margin.

Comparing the last two weeks of March, when higher price caps were in force, with the first two weeks of April after their reduction, interconnection utilisation declined:

- for morning semi-peak hours – from 54% to 22%;
- for night hours – from 47% to 13%;
- for daytime off-peak hours – from 60% to 44%.

In absolute terms, this corresponded to an average 42% reduction in imports – from 1,276 MW to 741 MW on average per hour, comparing 18–31 March with 1–14 April 2026.

E. Regulation-driven imports gradually declined after the most acute phase of the deficit passed.

A separate category consists of imports driven not so much by the short-term commercial margin, but by the need to ensure uninterrupted supply during periods of restriction risk. Such imports could be used by industry as a hedging instrument against the risk of disconnections: purchasing imported electricity allowed consumers to reduce the likelihood of consumption restrictions or to comply with regulatory requirements on the import share, including for the defined list of state-owned companies.

According to our estimate, the minimum level of such imports was around 400–500 MW per hour before the start of the large-scale attacks and up to 800 MW during the active deficit phase in January-March. After the January shock, it may have remained higher due to expectations of further attacks, the risk of generation shortages and the operation of regulatory incentives. From April 2026, this minimum level declined to around 200-300 MW in night and morning hours. In daytime hours, the corresponding effect is estimated at around 300–400 MW.

This decline may reflect several processes at once: a seasonal reduction in consumption, an improvement in the power-system balance, lower expectations of disconnections, the end of the mandatory import requirement and greater confidence among market participants in the availability of domestic supply. Regulation-driven imports in this period should therefore be viewed as a temporary anti-crisis mechanism whose intensity declined as the situation in the power system gradually normalised.

F. In April-May, daytime imports increased during periods of very low or negative prices in neighbouring markets.

In April-May, the hourly price situation in neighbouring markets became an increasingly important factor for imports. Growth in solar generation in the EU, lower consumption on weekends and public holidays, and surplus supply in certain hours led to very low or even negative prices. In such hours, imports to Ukraine could become commercially attractive even under lower Ukrainian price caps.

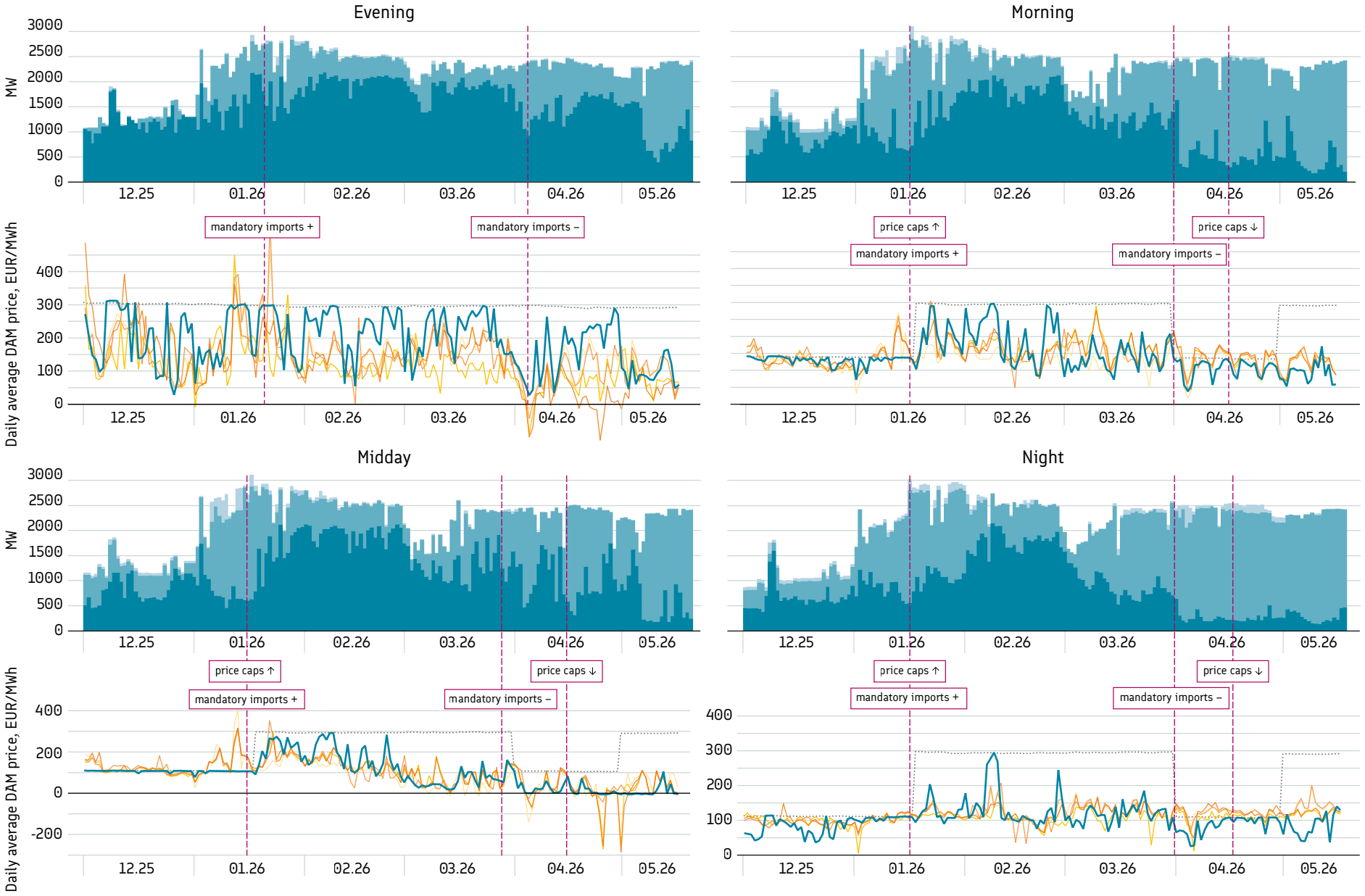
This mechanism is especially important for daytime hours. It is during this period that solar generation most often puts downward pressure on prices in neighbouring power systems. If the Ukrainian price remained higher than the neighbouring-market price after accounting for the cost of interconnection access, imbalances and transaction costs, imports again became economically viable.

Thus, after April, daytime imports increasingly depended not on the deficit in Ukraine, but on short-term price opportunities in the region. This distinguishes April-May from January-February, when imports primarily responded to domestic shortages and the increase in price caps. In a normalised regime, imports became more flexible and selective, responding to specific hourly spreads between Ukraine and neighbouring markets.

G. The possibility of imports created competitive pressure on the domestic market.

After price limits returned to UAH 15,000/MWh in all hours, prices on the Ukrainian DAM did not automatically rise to the new upper level. In many hours, they remained lower than or close to prices in neighbouring markets. This suggests that the mere availability of imports can restrain price bids by domestic participants and strengthen competition on the spot market.

Figure 18. Utilisation of cross-border import interconnection capacity, import volumes and average daily prices on neighbouring markets, Dec 2025 – May 2026, daily



Note: The labels 'mandatory imports +' and 'mandatory imports –' indicate the start and end of the Government-adopted rule on the higher share of imported electricity in the consumption structure for the non-application of electricity supply restrictions to industry, as well as the rule on a mandatory import share for certain state-owned companies.

CONCLUSIONS

After synchronisation with ENTSO-E, electricity imports became an important element of Ukraine's energy security. In crisis periods, they performed not only a commercial function, but also a systemic one: helping to cover generation deficits, reducing the risk of consumption restrictions and creating additional competitive pressure on the domestic market.

The analysis shows that the availability of imports depends not only on technical transfer capacity. It is determined by a combination of available interconnection capacity, auction rules, the cost of interconnection capacity, prices in neighbouring countries and regulatory restrictions on the Ukrainian market. If Ukrainian price caps do not allow the import parity price to be covered, imports may decrease even when the physical possibility of supply remains. In its June 2026 analysis, the regulator noted that the revision of price caps in January 2026 contributed to attracting imports, balancing the market and passing the winter peak.

At the same time, regulatory instruments may have side effects. Frequent or abrupt changes in price caps, special obligations for particular consumer groups or administrative intervention in electricity sales may reduce domestic-market liquidity, weaken price signals and complicate planning for traders, producers and large consumers. This is particularly sensitive when imports and access to interconnection capacity require advance commercial planning.

The expansion of cross-border trade has a dual positive effect. First, it increases the availability of imports in periods of deficit. Second, it strengthens competition within the country and may restrain domestic prices if imported electricity is available to a wide range of market participants. In this sense, imports are not only an emergency resource, but also an element of market discipline.

In a highly concentrated Ukrainian market, the trading strategies of dominant players can have a substantial impact on domestic prices. Decisions by large producers regarding sales volumes on the DAM, bilateral contracts, exports or the withholding of resources may affect market liquidity and shape price signals. Therefore, expanding access to imports, developing competition in auctions and ensuring transparent regulation of generation sales remain interconnected elements of market policy.

RECOMMENDATIONS

The policy for applying price caps should become more predictable. Abrupt regulatory changes, such as those in April 2026, can quickly alter the economics of imports and the behaviour of market participants. Therefore, any revision of price caps should be carried out with advance notice, clear justification and an assessment of its impact on imports, liquidity and system security.

The methodology for revising price caps should be forward-looking rather than reactive. It should take into account forecast import prices, expected costs of interconnection access, prices in neighbouring markets, generation availability in Ukraine, consumption forecasts and deficit risks. Before lowering price caps, the regulator should verify that the new level of price limits would not block imports in deficit hours.

Further expansion of the auction horizon for interconnection capacity is critically important. Monthly products have already improved the ability to plan imports, but the market needs longer and more predictable instruments for access to transfer capacity. This would reduce dependence on daily auctions in crisis periods and allow traders and consumers to better hedge price and volume risks.

The gradual relaxation and removal of price caps should remain part of preparations for market coupling with the EU. However, this process should not reduce the availability of imports. On the contrary, the regulator should explicitly take into account the role of imports as a source of competition and ensure that access to imported electricity remains open to the broadest possible range of participants. This is important to avoid imports becoming concentrated in the hands of a limited number of traders or dominant players.

In a concentrated market, regulation of electricity sales by dominant producers may be justified, but only under clear conditions. Such regulation should not merely require certain volumes to be sold; it should ensure their effective distribution among independent market participants. Otherwise, administrative intervention may formally increase supply without creating real competition or liquidity.

Expansion of cross-border transfer capacity should be considered as one option for strengthening power-system resilience. Currently, available capacity is used unevenly and mainly during crisis periods. However, further strengthening of cross-border interconnections may become a partial alternative to building generation that remains exposed to the risk of repeated attacks. Such decisions should be based on a cost-benefit analysis comparing the costs of new interconnections, domestic generation, reserves and import potential in hours that are critical for Ukraine.

The overall approach should combine short-term security of supply with long-term market integration. In the short term, price caps should be sufficiently flexible not to block imports in deficit hours. In the medium term, their role should gradually diminish, while the main instruments should become competition, transparent access to interconnection capacity, liquid forward products, effective market monitoring and integration with European trading rules.

Zentrum
Liberale
Moderne

Following synchronisation with ENTSO-E, electricity imports have become a key element of Ukraine's energy security. During periods of crisis, they have served not only a commercial but also a systemic function: helping to cover generation shortfalls, reducing the risk of consumption restrictions and creating additional competitive pressure on the domestic market.

Expanding cross-border transmission capacity should be considered as one of the options for enhancing the resilience of the power system. At present, the available capacity is utilised unevenly and predominantly during periods of crisis. Further strengthening of cross-border interconnections could serve as a partial alternative to the construction of new generation capacity, which remains at risk of constant attacks.

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