

EUROPE'S NEXT FRONTIER: WHY UKRAINE MATTERS NOW



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The Centre for Economic Strategy (CES) is an independent centre for state policy research. CES is tasked with supporting reforms in Ukraine to achieve sustainable economic growth in the country. The Centre contributes to the development of Ukraine's economic growth strategy, analyses the most important aspects of public policies, and works to strengthen public support for reforms. It was founded in May 2015.

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1. EXECUTIVE SUMMARY

This report, based on the European Competitiveness Compass, argues that Ukraine's economic integration into the EU is not only a geopolitical necessity but a unique opportunity to enhance European competitiveness, industrial resilience, and energy security, as well as its defence capacities.

The report explores the economic & industrial benefits of Ukraine's integration:

- **Expanding the Single Market:** Ukraine's 41 million consumers and skilled workforce will expand the EU Single Market by 10%, facilitating trade, boosting labour market efficiency, and reinforcing industrial clusters.
- **Strengthening EU's Industrial Base:** Ukraine's advanced manufacturing, tech, and R&D capabilities align with the EU's nearshoring strategy, enhancing supply chain resilience and supporting industrial competitiveness.
- **Innovation & Digital Economy:** Ukraine's thriving IT and military-tech sectors can contribute to Europe's digital transformation, boosting competitiveness in AI, cybersecurity, and high-tech manufacturing. Addressing EU's Talent Shortage: Ukraine's highly educated workforce, particularly in STEM, engineering, and IT, can help bridge critical EU labour gaps.
- **Energy Security & Green Transition:** Ukraine's energy potential—nuclear, renewables, and natural gas—can help reduce the EU's energy dependence while maintaining decarbonisation objectives. With strategic investment, Ukraine can transition from an energy importer to a major supplier of affordable and sustainable energy to the EU.
- **Geopolitical & Defence Considerations:** Ukraine's rapidly expanding defence-industrial base is already contributing to European security. With sustained efforts to overcome infrastructure, workforce, and governance challenges, both Europe and Ukraine have the potential to become long-term, reliable partners with closely aligned geopolitical interests. A recipient of European support today, Ukraine is rapidly emerging as an indispensable contributor to the continent's defence.

A structured, decisive approach is required to maximise the benefits of Ukraine's accession, aligning with the EU's competitiveness objectives and geopolitical goals. Protecting Ukraine today ensures a stronger, more self-sufficient Europe tomorrow.

2. CONTEXT & RATIONALE

The European Union faces an increasingly complex geopolitical environment marked by heightened security risks, economic fragmentation, and intensifying global competition. Russia's continued aggression against Ukraine has reinforced the need for strategic autonomy in defence, energy, and industrial policy. Against this backdrop, Ukraine's integration into the EU presents a unique opportunity to strengthen European resilience while advancing the bloc's long-term competitiveness objectives.

Recent EU initiatives, including President von der Leyen's proposal for a ReArm Europe Plan and the White Paper for European Defence, highlight the urgency of scaling-up defence investment, securing supply chains and reducing external dependencies. Strengthening Europe's defence capacity, through both internal investments and external partnerships, is no longer a choice but a necessity. Ukraine's industrial and defence capabilities align with these goals, positioning it as both a strategic partner and security contributor.

3. ECONOMIC & INDUSTRIAL BENEFITS

3.1. EXPANSION OF THE SINGLE MARKET

The EU Single Market is based on the philosophy that economic integration leads to political stability, prosperity, and peace. It is rooted in the belief that national markets are stronger when they work together rather than competing separately. The creation of it 30 years ago is considered to be one of the EU's greatest achievements, as it facilitates trade between businesses, stimulates growth and boosts innovation, while making citizens' lives much easier¹.

Integrating Ukraine in line with the process of the membership negotiations, would extend the four freedoms² to 41 mln³ additional consumers/talents and boost single market size to additional 10%, allowing for easier trade expansion, as well as more effective labour markets.

Expansion of industrial clusters and supply chains, particularly in Eastern Europe, would allow for more cost efficiency while adding to the near-shoring/friend-shoring trends amidst global volatility.

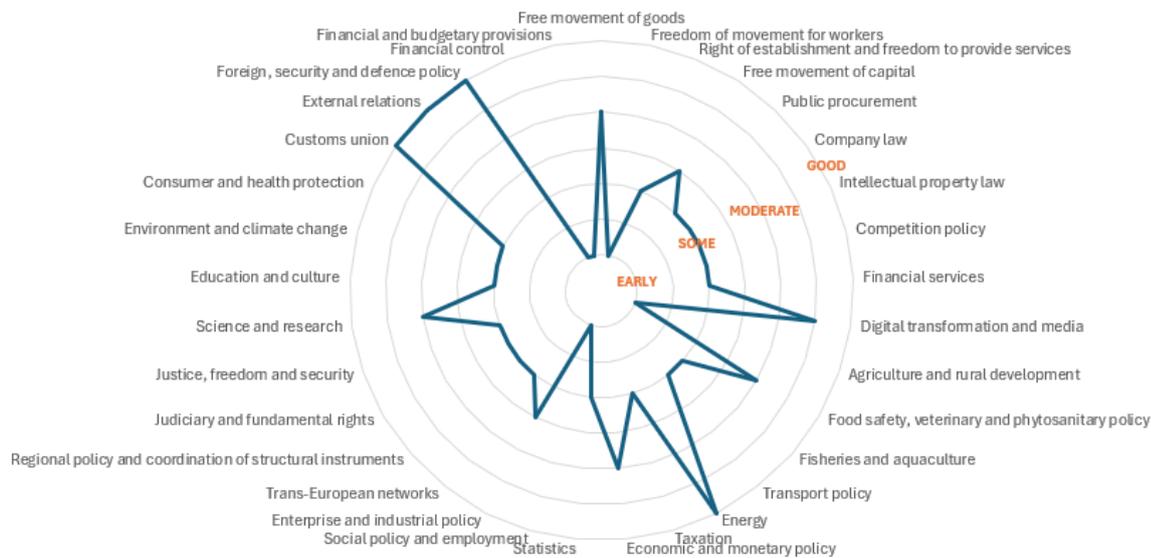
Ukraine has been the associated country since 2014, and a lot of preliminary work has already been done.

¹ <https://www.consilium.europa.eu/en/infographics/30-years-of-the-eu-single-market/>

² Free movement of goods, services, people and capital

³ Pre + war population of Ukraine, currently approx. 4,2 mln of Ukrainians are living as forced migrants in the EU member states and are under the temporary protection schemes

Figure 1. Ukraine level of preparation



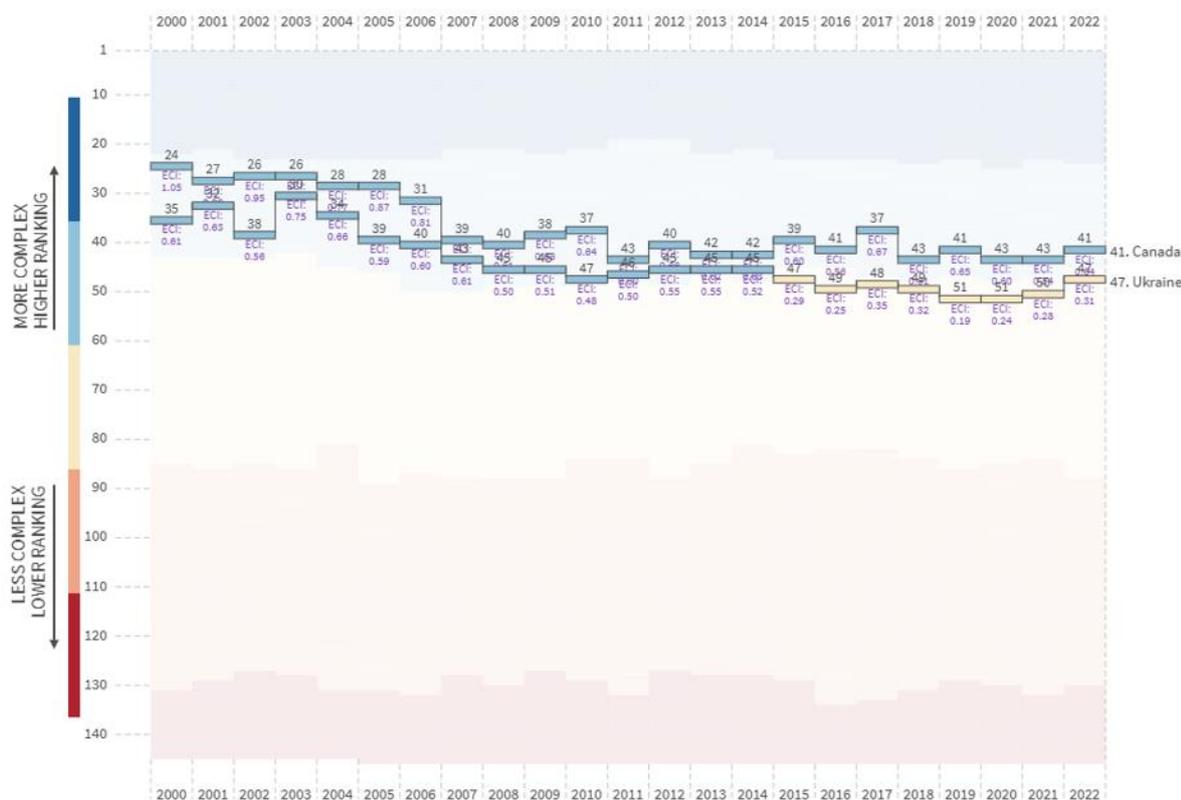
While Ukraine is already at a stage of some preparation or higher on 28 out of the 33 chapters, it is the key economic chapters that have progressed to a moderate level or beyond, namely free movement of goods, digital transformation and media, food safety, energy, science and research, customs union, external relations, foreign, security and defence policy.

3.2. INNOVATION & DIGITAL ECONOMY

Innovation is central to maintaining Europe’s economic strength in an increasingly competitive global landscape. While the EU possesses a strong research base, a skilled workforce, and a large Single Market, it has struggled to translate these advantages into market-leading technologies at the scale of the US or China. European firms lag behind in commercializing new technologies, with structural barriers including limited risk capital, market fragmentation, and slower adoption of emerging technologies across traditional industries.

Ukrainian emerging and light-speeding tech sectors like military-tech and health-tech could provide (and are providing) a burst to the technologies adoption. But not only that. Ukraine has maintained an advanced industrial R&D base rooted in its historical role as a production hub for the region. The country continues to exhibit strong expertise in machinery, electrical engineering, mining, and metallurgy – all sectors critical for the Green Transition and EU’s new Clean Industrial Deal. Before the war, the country ranked 49th in the [Global Innovation Index](#) (GII) and had an [economic complexity ranking](#) of 47th globally in 2022. Though its ranking has since declined to 60th on GII, Ukraine continues to offer considerable expertise in key technology field.

Figure 2. Economic complexity of Ukraine and Canada



Source: Harvard Growth Lab Country & Product Complexity Rankings

A defining strength of Ukraine’s economy is its IT and digital sector. If included in the EU, Ukraine would rank 8th in terms of IT professionals, with over 363,000 specialists working in the field⁴. Its technology ecosystem has developed a strong reputation in cybersecurity, artificial intelligence, and software development, making it a valuable partner for Europe’s digital transformation.

Given these capabilities, closer collaboration between the EU and Ukraine presents a strategic opportunity. Programs such as Horizon Europe can facilitate joint research projects, while industrial partnerships can help integrate Ukraine’s expertise into European value chains.

3.3. ENERGY SECURITY & GREEN TRANSITION

The challenge posed by high EU energy prices relative to global competitors like the US and China must be addressed while maintaining a firm commitment to decarbonization. Reforming energy pricing mechanisms to lower electricity and gas costs, expanding infrastructure, and enhancing storage capacity are key measures to ensure competitiveness. At the same time, industrial support programs must prioritize low-carbon technology innovation to align with the EU Clean Industrial Deal’s objectives. These steps are crucial to

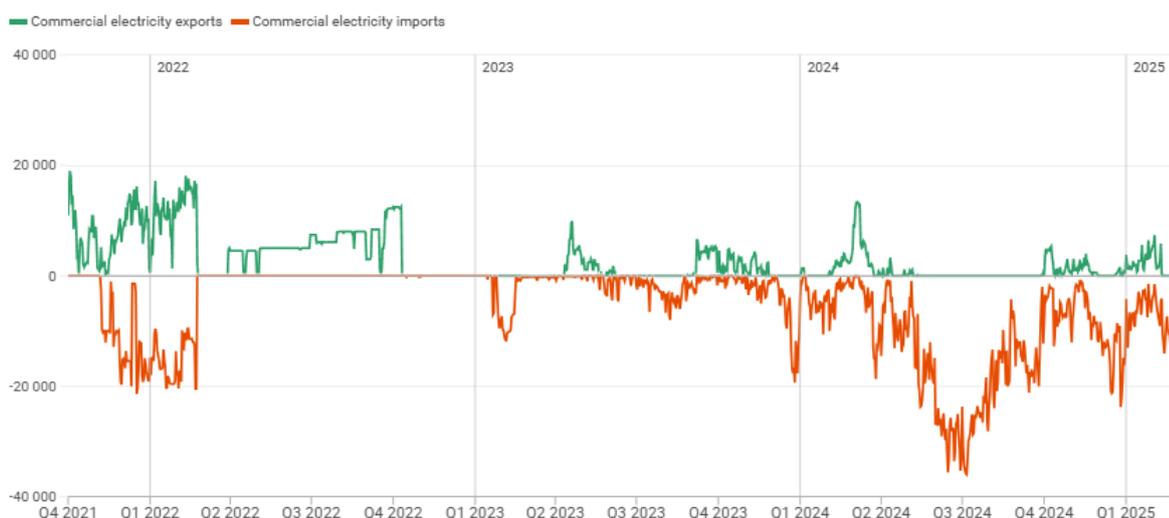
⁴ EU data source – Eurostat. The number for Ukraine is derived from data collected by DOU portal that include the number if IT [private entrepreneurs](#) (form of employment) and the [share of such form of employment](#) among the general community of IT personnel

maintaining Europe's leadership in clean energy while preventing industrial flight to regions with lower energy costs.

Identifying key competitiveness challenges and proposing policy solutions, Mario Draghi argued that the EU must reduce energy costs while maintaining its aim at clean energy and reducing strategic dependencies on energy imports. Ukraine is well-positioned to aid at executing both tasks.

While Ukraine's electricity sector must decentralize and diversify energy sources to survive continued Russian aggression, after the war it can serve as a source for cheap, green and secure energy supply for the EU. The losses were primarily concentrated on thermal (coal and gas generation) and hydrogeneration (Kahkovka HPP). While Ukraine currently imports energy from the EU, the rebuilding effort and using new technologies for that while maintaining it more cost-effective than in the EU member states, could bring Ukraine to a position of a large net exporter of energy. Even amongst the destruction brought by the war, Ukraine is still able to export some amount of the electricity to the EU.

Commercial electricity imports and exports from Ukraine

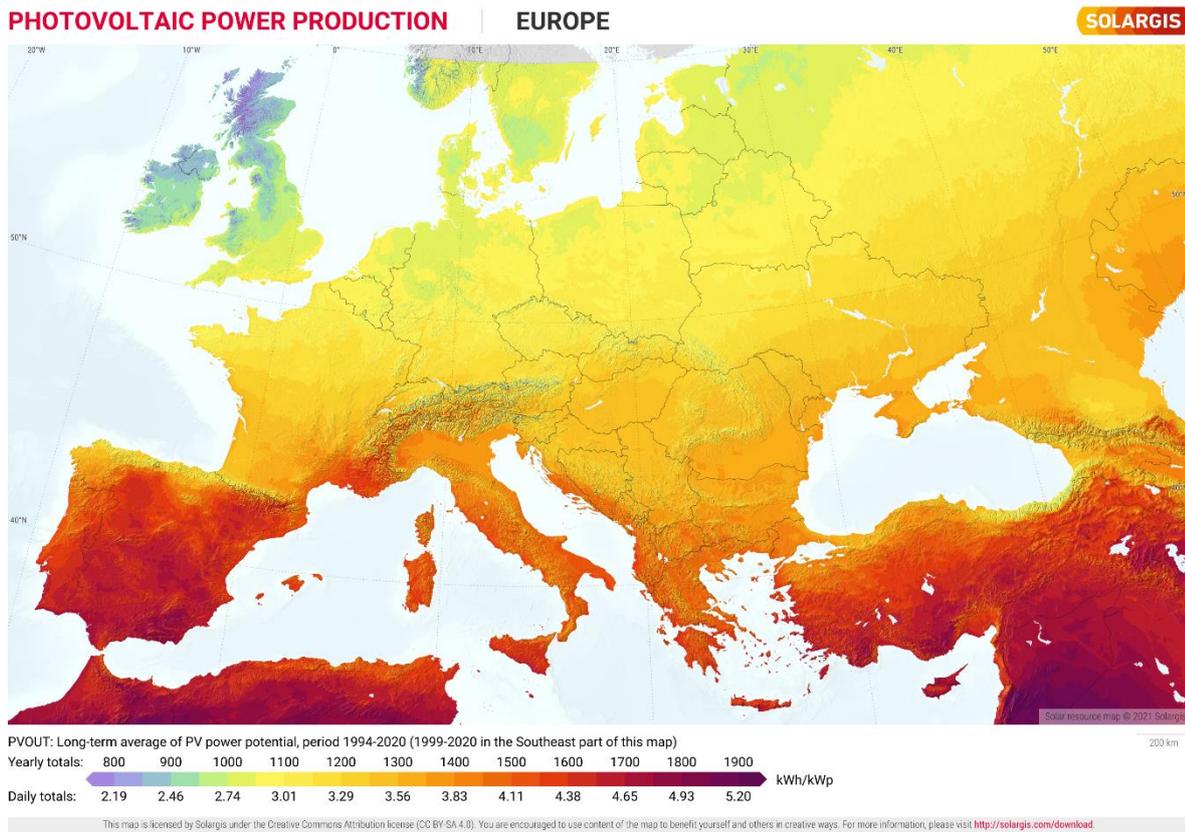


Source: CES Ukraine War Economy Tracker

The 101 nuclear power reactors (98 GWe) currently operating in 12 of the 27 EU member states account for about one-quarter of the electricity generated in the whole of the EU⁵. In Ukraine only the occupied Zaporizhzhya NPP has the capacity of 5,7 GWe (6% of EU nuclear capacities) and is so far Europe's largest NPP. Ukraine has more NPPs before the war nuclear represented 25% of Ukraine's installed capacity with 13,8 GW (Rivne, South Ukraine and Khmelnytsky NPPs, all state-owned) and 56% of its power generation. Ukraine's southern regions (Odesa, Mykolaiv, Kherson) have solar conditions similar to Spain, making them ideal for large-scale solar farms.

⁵ According to [the World Nuclear Association](#)

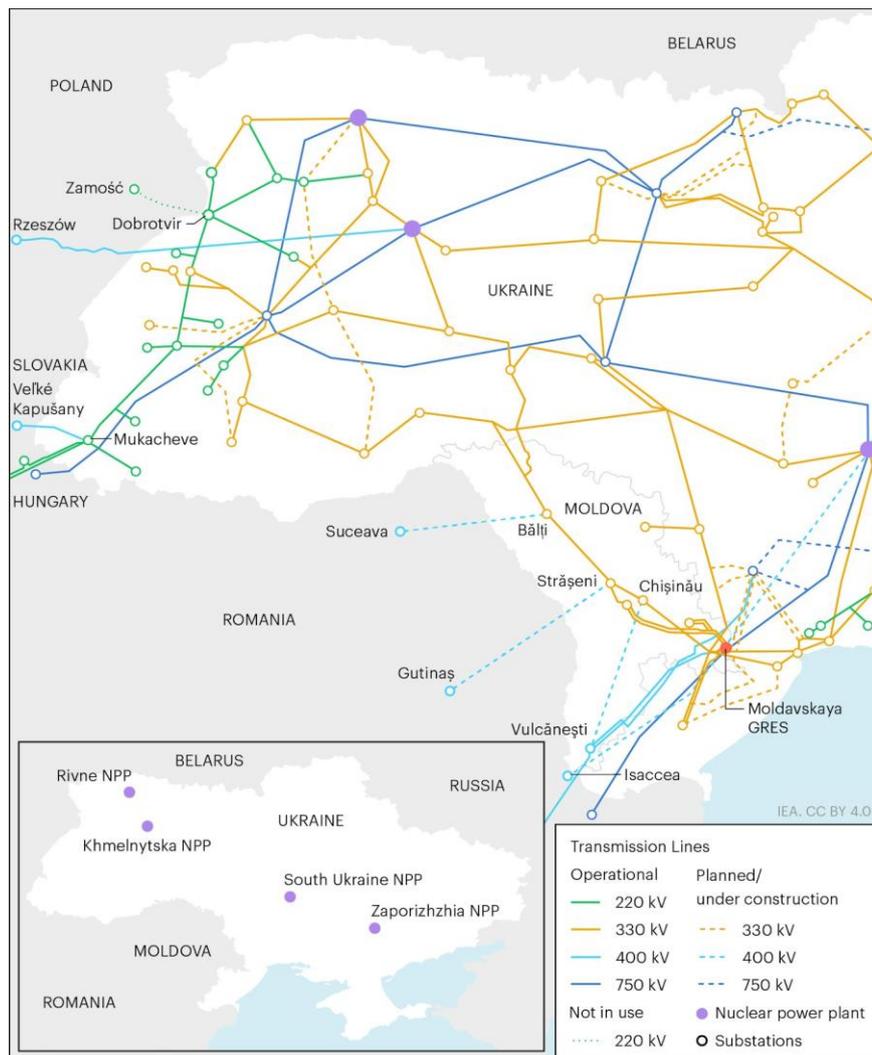
Figure 3. Photovoltaic power potential



Source: [Solargis](https://solargis.com)

Interconnection with the main European system has made a crucial contribution to Ukraine's electricity security, with the limit on cross-border trade increasing to 1.7 GW in November 2023. (Figure 3). Notably it has also opened a way for the EU to benefit from Ukraine's energy exports in post-war years. So it is important for the EU to get back Zaporizhzhya nuclear power plant and protect the grid from attacks.

Figure 4. Map of the Western portion of the Ukrainian grid and its existing and planned interconnectors with Moldova and the continental Europe system

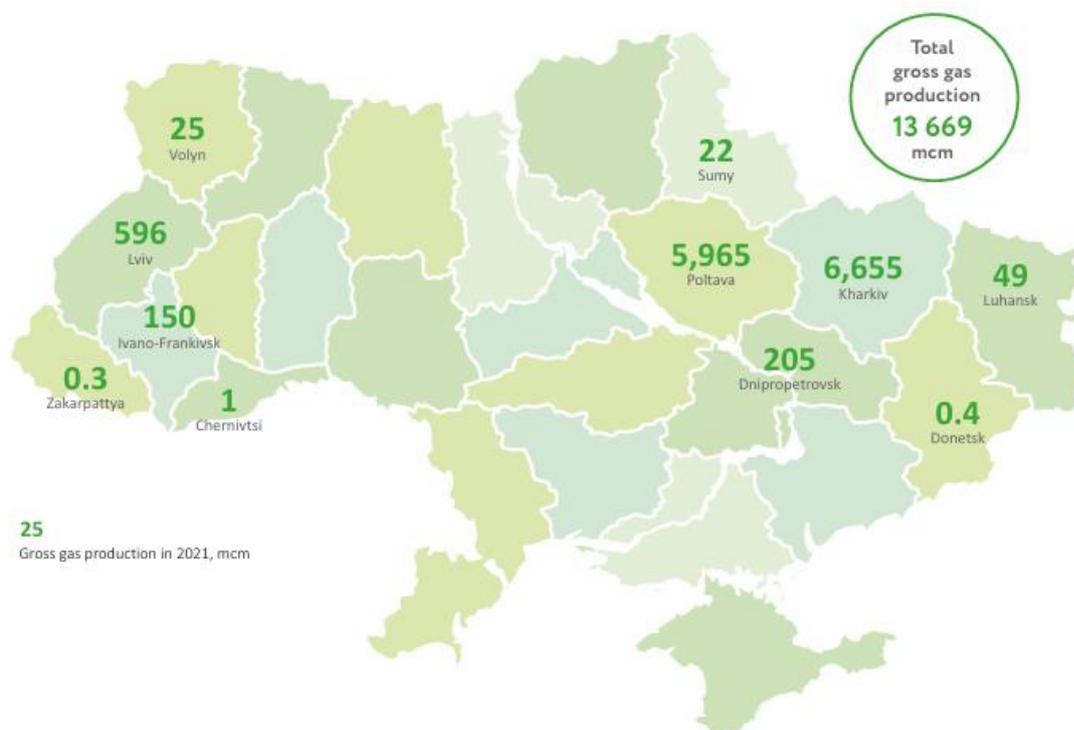


Source: <https://www.iea.org/reports/ukraines-energy-security-and-the-coming-winter/ukraines-energy-system-under-attack>

Ukraine can play a critical role in strengthening EU energy security by leveraging its 2nd in Europe 800 billion cubic meters of [proven reserves of natural gas](#) and large [underground gas storage](#) capacity (31 bcm). With EU investment⁶, underdeveloped Ukrainian gas fields could significantly offset Russian gas imports. Ukraine's existing pipeline infrastructure enables seamless gas transfer to the EU, providing a strategic buffer to stabilize supply and counter market volatility with low initial investment requirements. Having a century-long history of oil and gas production and exploration, Ukraine enjoys the availability of industry experts and competent engineering and technical staff, wide range of services contractors and well-developed supply chain of manufactured goods (pipes, cement, etc.).

⁶ Some of these reserves, particularly a significant portion in Kharkiv region, require fracking technology, which is not widely used in the EU; [over 70% of prospective resources](#) are deeper than 3,000 meters and 22% are at depths below 5,000 meters and are spread across many small fields

Figure 5. Naftogas⁷ gas production in 2021 in Ukraine



Source: [Naftogaz 2021 annual report](#)

Ukraine's Black Sea ports offer potential LNG import points, allowing liquefied gas to be shipped, stored, and then transported to the EU via pipelines. While Ukraine currently lacks LNG terminals, its pipeline network is already integrated with the EU, ensuring efficient gas flow. LNG imports to Europe is one of the major gas supply diversification strategies, and utilizing Ukraine's storage could optimize supply flexibility, especially during winter peaks.

Overall, as Russian gas dependence declines, Ukraine's gas infrastructure can serve as a cost-effective, geopolitically secure alternative, reinforcing European energy resilience.

3.4. LABOUR & SKILLS DEVELOPMENT

The Draghi report identifies a significant and growing challenge in the EU labor market: the persistent gap in talent and skills required to drive productivity and innovation. Over the past two decades, Europe has experienced a decline in labor productivity, attributed in part to its slower adoption of digital technologies compared to the United States and China. Additionally, demographic trends point to a shrinking workforce, with an estimated annual loss of nearly two million workers by 2040. This talent shortage is most acute in

⁷ State-owned Naftogaz was producing approx. 70% of all gas, the rest of extraction is private and concentrated in several regions in central and western Ukraine

sectors crucial for the twin green and digital transitions, such as information technology, renewable energy, and advanced manufacturing. The mismatch between available skills and market demands, coupled with fragmented labor mobility policies across member states, further exacerbates this issue, leaving the EU vulnerable to losing its competitive edge on the global stage. While the challenge response calls for expanding lifelong learning initiatives and simplifying recognition of qualifications across borders to facilitate mobility attracting skilled labor from third countries specifically Ukraine, could be part of the solution.

Ukraine, with its highly educated workforce, particularly in STEM, engineering, and IT fields, is well-positioned to help the EU address its labor market challenges. Ukrainian universities produce thousands of graduates each year in disciplines directly relevant to the EU's innovation and decarbonization agenda. Partnerships between Ukrainian institutions and EU-based employers can provide a steady pipeline of skilled professionals to support sectors facing acute shortages. Joint initiatives to recognize Ukrainian qualifications, facilitate labor mobility, and promote remote work in IT and engineering sectors can create a mutually beneficial dynamic, enhancing European competitiveness while contributing to Ukraine's long-term growth and EU accession ambitions.

4. GEOPOLITICAL & STRATEGIC ADVANTAGES

The European Union faces an urgent need to enhance its defence security and self-reliance amid increasing geopolitical instability, particularly due to Russia's aggression and broader global power shifts. [President von der Leyen's letter](#) underscores the necessity of a strategic transformation in defence funding, industrial capacity, and operational coordination to ensure Europe's ability to protect itself and support its allies effectively. This imperative aligns with the EU's broader goal of boosting competitiveness while ensuring security, sovereignty, and resilience—where security and sovereignty are now paramount.

Strengthening European defence capabilities, reducing external dependencies and ensuring energy and economic security are the tasks, where Ukraine could strengthen European union.

Integrating Ukraine into Europe's security architecture serves two major objectives: reinforcing Europe's defence capabilities and preventing adversaries from exploiting Ukraine's military, industrial, and resource potential. Historically, Russia has relied on Ukrainian manpower and resources for military campaigns—most notably during WWII. Ensuring Ukraine remains aligned with Europe helps neutralize this historical risk while using its battle-tested defence industry for the European benefit.

Since 2022, Ukraine's military-industrial complex has undergone a dramatic transformation, evolving from a fragmented sector into a highly innovative and rapidly expanding defence powerhouse. With substantial state and private investment, surging domestic production, and deepening European partnerships, Ukraine is positioning itself as a cornerstone of European defence autonomy.

The scale of this expansion is unprecedented. In 2024 alone, Ukraine [produced](#) 154 self-propelled howitzers. To put the number into perspective, Bruegel [estimates](#) the total number of howitzers available in Germany at 120 units, and Russian production capacities - at 456 howitzers per year. The [number](#) of FPV drones produced has increased to 2.2 mln, long-ranged drones – to 100 thous. Ukraine has also [produced](#) 100 anti-battleship missiles and a number of sea drones that have already drastically reduced Russian dominance in the Black Sea. The Ukrainian ministry of strategic industries [claims](#) that Ukraine has already developed not only assembly, but components market, having more than 50 producers.

The invaluable push for this development was [provided by the so-called Danish model](#), which was then joined by 9 other countries. Over \$500 million were funded for the military industry development, when partner country reimbursed the cost for the existing contracts between the weapons producer and the Ministry of Defence of Ukraine. Joint ventures with European defence manufacturers are expanding, with new partnerships in Germany, Lithuania, and the Czech Republic

Overall, Ukraine is increasingly integrating into the European defence landscape. With sustained efforts to overcome infrastructure, workforce, and governance challenges, both Europe and Ukraine have the potential to become long-term, reliable partners with closely aligned geopolitical interests. A recipient of European support today, Ukraine is rapidly emerging as an indispensable contributor to the continent's defence.

5. CONCLUSION & POLICY RECOMMENDATIONS

Ukraine's integration into the EU is not just an economic opportunity but a strategic necessity. Strengthening ties in energy, trade, and human capital will enhance Europe's resilience, reduce external dependencies, and reinforce security in an increasingly volatile geopolitical landscape. Investments in energy infrastructure, including LNG terminals and grid interconnectivity, will secure long-term energy stability while integrating Ukraine into EU value chains will boost industrial competitiveness and innovation.

Protecting Ukraine today ensures a stronger, more self-sufficient Europe tomorrow. By incorporating Ukraine into key EU initiatives and industrial ecosystems, the Union can reinforce its security framework while supporting a partner that has already demonstrated its commitment to European values and stability. Aligning these efforts with the Competitiveness Compass and evolving defence priorities will position the EU for sustainable growth and strategic autonomy.

A decisive, structured approach to integration with practical steps such as increasing energy interconnectedness and building LNG terminals will maximise mutual benefits and solidify Ukraine's role as a key contributor to Europe's economic and security landscape. Now is the time for the EU to act with clarity and resolve, ensuring that Ukraine's integration is not delayed but accelerated to meet the challenges of the future.

As Ukraine emerges as a critical part of Europe’s future, the current moment demands action with a clarity and urgency rarely seen before. Success will depend on bold but pragmatic strategies—ones that reconcile the immediate challenges of wartime with a long-term vision for sustainable integration. The priorities should be realistic, grounded in Ukraine’s strengths, aligned with Europe’s strategic interests, and mindful of the scale of transformation ahead.

- **Focus on High-Impact Regulatory Wins.** Ukraine should prioritize regulatory alignment in sectors that unlock immediate access to European markets and funds—digital services, energy, and trade infrastructure. This targeted convergence will build credibility, reduce friction, and accelerate integration without overwhelming institutional capacity.
- **Rebuild Energy Systems with Strategic Purpose.** Energy isn’t just infrastructure—it’s leverage. Ukraine must stabilize its grid, modernize transmission, and invest in renewables not just to survive, but to offer Europe a resilient, affordable energy partner. Positioning as a future exporter starts with building internal strength.
- **Transform Defence Industry into a European Pillar.** The war-forged defence sector must evolve beyond improvisation. Clear governance, streamlined procurement, and EU-aligned production standards will turn Ukraine’s arms innovation into a lasting pillar of European security and industrial autonomy.