



MOVING FORWARD TOGETHER: ENERGY AND CLIMATE SECURITY FOR UKRAINE AND EUROPE

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Ukraine is currently grappling with an unprecedented humanitarian crisis triggered by Russia's brutal war. The heavy bombardments of critical energy infrastructure have **reduced the nation's energy capacity by 61%**, leaving an estimated 12 million people with limited or no access to energy. Moreover, the mass exodus of 7.8 million people has left behind a weakened economy and critical infrastructure in urgent need of reconstruction. The rebuilding efforts will present an opportunity to not only overcome the immediate and emergency energy security challenges but to build the foundations for the long-term resilience of the Ukrainian energy sector.

In the decade before the Russian invasion, Europe and Ukraine made only small progress in advancing market integration and infrastructure development necessary for sufficient west-to-east gas flows or for a common electricity market. In fact, the insufficient efforts to align the Ukrainian energy policy closer to that of the EU, and the construction by Russian companies and their European partners of **energy infrastructure circumventing Ukraine** all enabled the Kremlin's invasion. Nord Stream and South Stream provided alternate Russian gas routes, diminishing Ukrainian energy leverage, which undermined the country's sovereignty. Europe's strategic negligence of the detrimental role these projects have played in destabilising Ukraine once again highlights the need for a comprehensive reassessment of energy and climate security policy.

The process of achieving the common European goals has been plagued by **energy sector governance deficits**, which have allowed Russian corporate and oligarchic networks to enhance the Kremlin's political and economic interests. Through collaboration with Ukraine towards common policy and geopolitical goals and evidence-backed support for policy implementation, the EU can support the nation's sustainable reconstruction efforts on the strong basis of energy and climate security.

KEY POINTS

- Europe's energy and climate security would be considerably **strengthened if it includes Ukraine**, united, independent, and at peace.
- Russia's targeted missile strikes have destroyed half of **Ukraine's energy infrastructure**, leading to a severe humanitarian crisis with rolling blackouts and critical service disruptions. The war has been a huge blow to Europe's **energy and climate security**.
- CSD's Energy and Climate Security Risk Index (ECSRI) shows the **stark disconnect** between EU's and Ukraine's geopolitical priorities during the decade preceding the Russian invasion. This has emboldened Russia to continue its heinous attack on Ukraine's independence.
- Widespread **energy poverty, poor energy efficiency and the slow energy transition process**, in Ukraine had made the country excessively dependent on artificially low prices of Russian gas imports, providing the Kremlin and its networks of oligarchs with **powerful geopolitical leverage**. Europe's bet on Russian gas for its energy transition has exacerbated these vulnerabilities.
- Guaranteeing the **security of energy supply** and supporting Ukraine's resistance against the Russian aggression is of utmost priority in the short term. In the medium-to-long term, the full integration and **policy alignment** between the EU and Ukraine needs to be completed.
- Gradually removing inefficient and **market-distorting energy subsidies** while simultaneously providing targeted financial assistance to vulnerable groups can strike a balance between **energy market liberalization and energy affordability** concerns.
- Reconstruction efforts following the war will require significant investment to build a more resilient energy system, focusing on **low carbon energy supply** technologies, the modernisation of the grid, and the uptake of demand-response measure.
- The US and the EU should **strengthen their cooperation** with Ukraine by helping channel inflows of **constructive capital** and technical knowhow for projects of common interest that foster closer market integration.

To ensure the consistency of the rebuilding and reform process, the EU and Ukraine need more reliable tools to **map the energy and climate vulnerabilities** and improve the quality of **governance mechanisms**. Effective policies and measures can both close governance gaps and harness local and regional potential if they are backed by data-driven analysis. The **Energy and Climate Security Risk Index (ECSRI)**, developed by CSD, is a policy instrument that can provide the grounds for this analysis. The tool covers 42 individual risk indicators, based on thousands of data points, which have been synthesised into four risk dimensions.

They allow for a systemic analysis of energy and climate policy trends that provide policymakers with creative ideas about how to overcome challenges and effectively monitor policy implementation. Assessing the evolution of energy and climate security risks in Ukraine on the back of long-term political, financial, and social commitments can allow for the effective and efficient realization of a sustainable and secure Ukrainian energy sector.¹

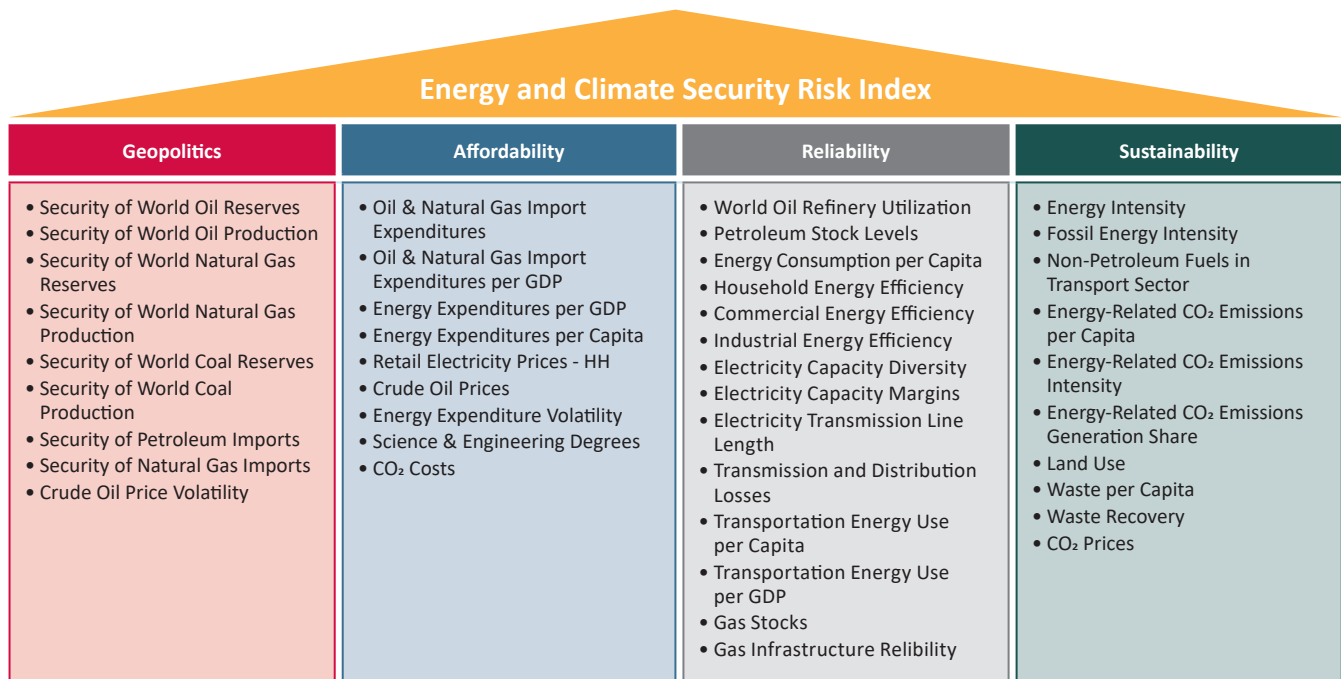
Geopolitical Risk

Natural Gas Security: Europe’s Strategic Betrayal

Excessive dependency on Russian natural gas imports has historically been the dominant geopolitical risk for both the EU and Ukraine. The Kremlin has exploited this strategic vulnerability on a number of occasions in the past three decades as a blackmail tactic in an attempt to maintain pervasive Russian influence over the political elite and the Ukrainian economy (see Box 1).

The results from the ECSRI analysis show a **stark disconnect between the geopolitical priorities** of the EU and Ukraine during the decade preceding the Russian invasion. Unlike the EU, Ukraine succeeded in drastically reducing its reliance on gas imports from Russia.² Meanwhile, the EU not only failed to provide enough support for Ukrainian energy independence, but instead systematically undermined Ukraine’s reform efforts by deepening its own dependency on Russia.

Figure 1. The Energy and Climate Security Risk Index



Source: CSD.

¹ The ongoing Russian invasion in Ukraine has prompted the Ukrainian government to severely reduce public access to key data necessary for the assessment of Ukraine’s energy and climate security position, affecting data availability for 2021 and 2022. Nevertheless, the analysis of the available data has shed light on a number of critical structural risks, which had ultimately become key enablers of the Russian aggression.

² In 2008, Ukraine’s dependence on gas imports stood at a staggering 80%, all of which came directly from Gazprom. On the eve of the invasion, Ukraine relied on imports for just 30% of its domestic natural gas consumption, none of which came directly from Russia.

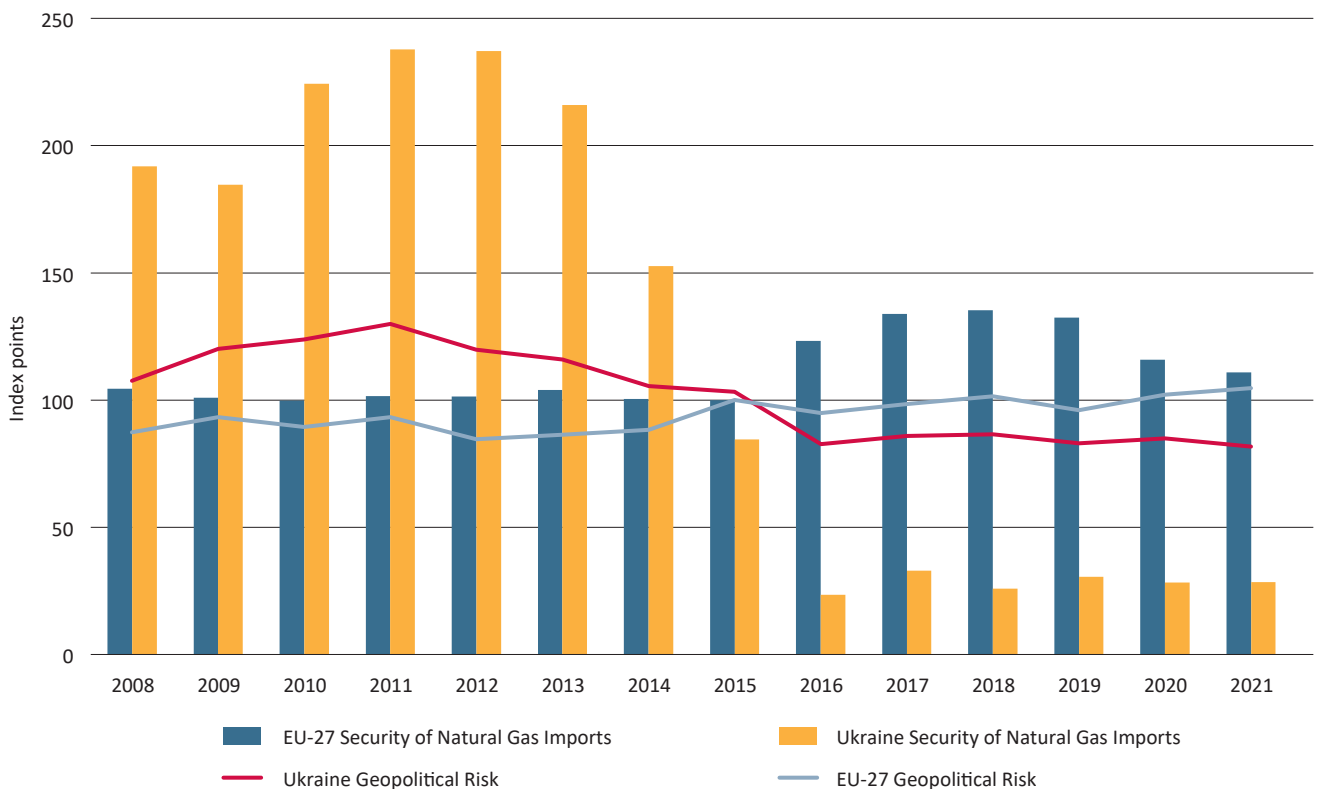
Box 1: The Kremlin's energy blackmail tactics

Russia has deliberately cut off gas supply to Ukraine and Europe on multiple occasions since the Orange Revolution, using energy as a geopolitical weapon to intimidate the Ukrainian government and stifle the country's progress towards closer integration with Euro Atlantic institutions. However, since Russia did not have alternative gas supply routes to Europe, Ukraine could use Russian dependence on Ukrainian transit for geopolitical leverage. The Kremlin tried to systematically undermine Ukraine's credibility as a reliable transit country by using transit price and contractual disputes between Gazprom and Naftogaz as pretext for supply cuts to Europe and the accusation that Ukraine was the culprit, guilty of "siphoning gas" from the transit pipeline system.

Russia became ever more assertive in its natural gas hostage strategy. The first supply interruption in January 2006 was resolved within only a couple of days, while in January 2009 it took several weeks for a gas agreement to be reached, both times resulting in higher gas prices for Ukraine and an even stronger grip on European customers, who were convinced that the solution to natural gas insecurity was to avoid reliance on Ukraine for transit and to support direct pipeline links to Russia.

The pinnacle of this strategy came in 2014 when Russia reached again to the gas weapon to weaken Europe's response to the annexation of Crimea. After gradually escalating the threats against Ukraine in the first quarter of 2014, the gas supply was fully cut in June 2014 and the situation was not resolved until the completion of trilateral negotiations at the end of October, thus maintaining strong geopolitical pressure on Europe throughout the Crimean annexation crisis and ensuring that Europe would not impose stronger sanctions and gradually accept the new geopolitical status quo.

Figure 2. Overall Geopolitical Risk to Energy Security and Specific Natural Gas Import Security Risk: Ukraine vs the EU-27



Source: CSD based in the ECSRI.

Ukraine improved the security of its natural gas imports mainly thanks to **considerable demand reduction**, which plummeted by almost 40% between 2014 and 2021. The energy savings allowed the country to cover about two thirds of its needs with domestic production. Ukraine also managed to **diversify its imports through reverse flow** from Slovakia and Hungary, fully replacing direct imports from Russia by 2015. However, the EU failed to recognise the strategic importance of Ukraine's abundant gas reserves and its potential to become a major producer and exporter that could lower dependency on Russia and thus geopolitical risk for both Ukraine and Europe.

Ukraine made considerable efforts to liberalise its domestic gas market as a measure to promote the entry of new players but **inefficient subsidies and price controls** have remained largely in place as Russian price shocks stifled the liberalisation process. Without dedicated support to unlock the country's gas production potential, Ukraine's upstream sector failed to attract enough private capital to develop the projects. As a result, the state-owned Naftogaz has remained the dominant producer and has struggled to maintain stable output amid artificially low prices on the domestic market and severe financial and operational mismanagement of the public company.

Following the Russian annexation of Crimea, Europe not only failed to reduce its reliance on Russian natural gas imports but increased it substantially, with Italy and Germany accounting for half of the import growth.³ The EU allowed **Russia to successfully circumvent Ukraine** as a transit country and to consolidate its **control over strategic infrastructure** including through Nord Stream, Turk Stream and the ownership of strategic gas storage facilities in the EU. When Russia invaded Ukraine in February, 2022, the Kremlin exploited this vulnerability in an attempt to undermine European unity on sanctions. Russia retaliated against the EU sanctions by cutting gas deliveries to several EU member states and offering to sell gas to those paying in roubles. The Kremlin anticipated that Europe's resolve to maintain sanctions would weaken when faced with the choice between economic pain from reduced energy supply or punishing Russia for its aggression, mirroring the situation after the annexation of Crimea in 2014.

³ CSD. *The Great Energy and Climate Security Divide*. Sofia: CSD, 2022

In fact, **Europe showed more resolve than the Kremlin anticipated** in the face of potential major gas supply cuts, even though it remains highly dependent on Russian gas deliveries.⁴

Since the start of the war, **Russian military strikes have strategically targeted Ukrainian gas production assets**, which are primarily aboveground and more vulnerable than the predominantly underground pipeline infrastructure. While official data on the extent of the damage and its impact on gas production has been classified by the Ukrainian government⁵, at least several production facilities have been destroyed or severely damaged, hindering Ukraine's self-sufficiency and energy security.

The Overlooked Threat of Petroleum Supply Risks

The geopolitical risk from Ukraine's excessive dependence on Russian oil imports remained under the radar of national and European policymakers right until the start of the war. The ECSRI reveals **Ukraine's disproportionate exposure**, as the risk score has been 60-70% higher than the EU-27 average. It also rose by 7% between 2014 and 2021 as Ukraine's reliance on imports of oil products from Russia deepened.

Even before the war, underinvestment and limited access to non-Russian crude oil contributed to the decay of **Ukraine's refining capacity**, to the point where only one of seven refineries, the Kremenchug facility, remained operational at just a fraction of its designed capacity. Hence, by the start of the full-scale invasion, Ukraine relied almost completely on oil products coming from Russia and Belarus. Russian air strikes completely destroyed the Kremenchug facility soon after the start of the invasion, while oil product deliveries from Russia and Belarus dried up,

⁴ Although the gas transmission through the Yamal and Nord Stream 1 pipelines dropped to zero in January and September 2022, respectively, around 1.82 bcm of Russian gas has been entering the EU each month via TurkStream and the main transit route through Ukraine. The main recipients of the Russian pipeline gas have been Greece, Serbia, Bosnia and Herzegovina, Austria, Slovakia and Hungary. Slovakia in particular has become a distribution hub for Russian gas in Central Europe, acting as a transit country for onward flows to Austria, Germany and Italy from both TurkStream and the Ukrainian gas system. (see CSD. *Making Sanctions Work in the European Energy Sector*. Sofia: CSD, 2023).

⁵ Various industry sources suggest a year-on-year production drop of around 7% to 15% in 2022.

leaving **Ukraine starved for transportation fuels**. These were critical for the successful conduct of military operations, e.g. fueling Ukrainian tanks, as well as the functioning of the economy and survival of the population, as diesel-powered back-up power generators helped maintain electricity supply to hospitals and other critical facilities through the rolling blackouts caused by Russian shelling.

Alternative fuel deliveries from Bulgaria and Poland provided a lifeline for Ukraine but the EU paid a high and avoidable cost for this – the **unnecessary derogation⁶ from the oil embargo for Bulgaria’s Lukoil refinery**. This created a major loophole in the oil sanctions against Russia, making Bulgaria one of the main gateways for Russian oil into the EU market.⁷ Meanwhile, Poland voluntarily reduced its crude imports from Russia despite the derogation from oil sanctions for all flows through the Druzhba pipeline. It even ramped up diesel imports, some of which were paradoxically coming from Russia, and redirected part of them to Ukraine. Russia halted all crude oil deliveries to Poland via the Druzhba pipeline in February 2023 but at the time Urals represented only 10% of all imports and was easily replaced with alternatives.

Affordability Risk

Energy poverty is one of the most severe structural energy security risks faced by Ukraine. The underlying issue of extremely poor energy efficiency performance of buildings and industry, the legacy of Soviet-era wasteful pricing schemes, made Ukraine excessively dependent on artificially low prices of Russian gas imports. Underneath this dependency, **energy poverty provided Russia with powerful leverage** to hold Ukraine hostage. The Kremlin’s extreme gas price hikes whenever the Ukrainian government made a step towards closer integration with the EU and NATO caused severe socio-economic shocks, while also complicating the process of energy market liberalisation, a critical part of Ukraine’s implementation of the EU energy and

climate *acquis communautaire*, and ultimately its integration in the EU energy market.

The price shocks, partially caused by the Russian energy supply cuts, precipitated a deep economic crisis in Ukraine that forced the Ukrainian government to undertake an emergency strategy for addressing energy affordability risks. In 2015, Ukraine stopped buying gas directly from Russia, which contributed to **lower energy expenditures volatility**, while the economy started to recover. The economy also experienced painful restructuring in the form of a sharp **reduction in energy consumption** that was only partially the result of energy efficiency improvements. The permanent loss of some energy-intensive industries played a bigger role, leading to the long-term decline of the country’s production capacity that has accelerated after the Russian invasion.

In addition, the poorly managed market liberalisation process has led to a **significant increase in prices**, without the benefits of greater competition and real consumer choice, nor efficient protection mechanisms for vulnerable groups. As of 2019, 20% of all households were facing difficulties in paying their housing bills, while 23% were unable to keep their homes adequately warm.⁸ Meanwhile, **inefficient and market-distorting subsidy schemes** have not been fully phased out. In the absence of a dedicated energy poverty reduction policy, Ukraine has found it difficult to strike a balance between functional energy markets that foster investments and modernisation and the need to reduce the share of energy vulnerable consumers. The Russian invasion has made this task even more difficult due to skyrocketing global energy prices, **surging unemployment** and the needs of the war economy.⁹ In the first few months of the war, at least 30% of households and 50% of businesses could not pay their energy bills, according to reports by the Ministry of Energy. At the same time, energy prices have surged by 83% for households in the lower consumption band (below 250 kWh per month) and by 57% for those in the higher consumption band in May 2023.¹⁰

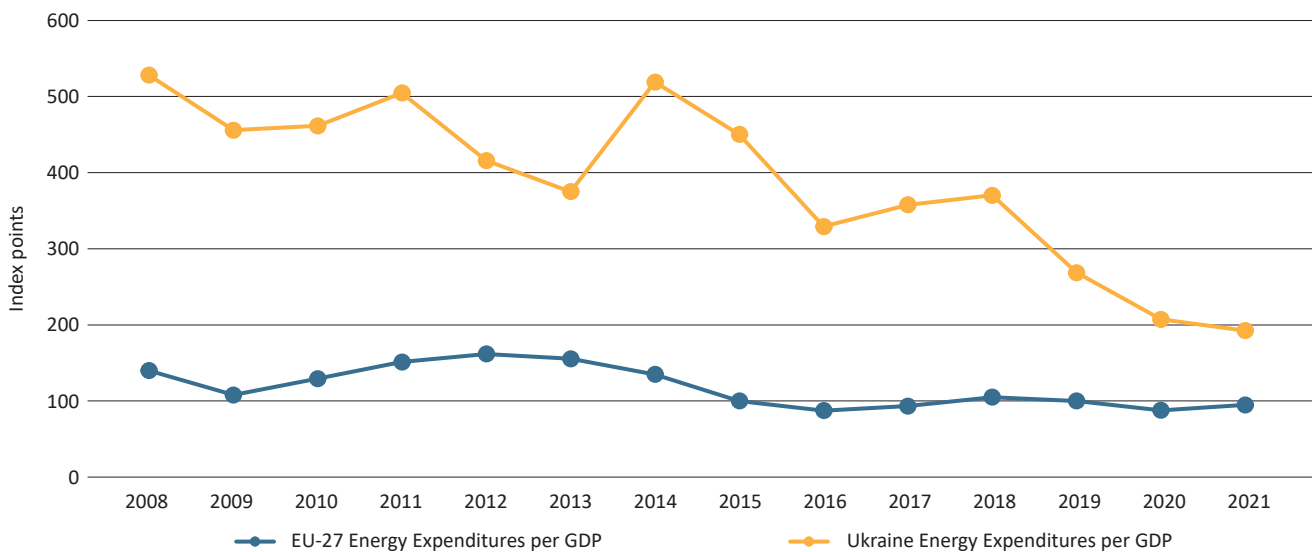
⁶ Bulgaria was allowed to continue importing Russian crude oil without any limitations until December 2024, even though the refinery was technically and economically ready to switch to 100% non-Russian crude already at the date of the embargo’s entry into force, see. *Can Bulgaria Survive without Russian Oil?*. CSD, 2022

⁷ CSD. *Making Sanctions Work in the European Energy Sector*. CSD, 2023

⁸ DOOR, EIHP, *Study on addressing energy poverty in the Energy Community Contracting Parties*, Energy Community, 2021

⁹ The unemployment rate in Ukraine increased to 21.1% in 2022 according to the National Bank of Ukraine, *Unemployment rate in 2022 estimated at 21.1% - NBU*, Ukrinform, 2023

¹⁰ Secretariat Commends Ukrainian Government’s steps to achieve cost-reflective electricity prices, Energy Community press release, June 2023

Figure 3. Energy Expenditures per GDP – EU-27 vs Ukraine

Source: CSD based in the ECSRI.

Reliability Risk

Ukraine has failed to improve the reliability of energy supply over the past decade. Critical risks related to gas, oil, and electricity transmission and storage infrastructure have required significant investments in upgrades and modernisation that have not received enough backing from the Ukrainian state.

One of the most critical reliability risks comes from **Ukraine's isolation from the EU gas market**, a vulnerability it shares with other Eastern European countries. Only some of the necessary strategic investments to enable physical west-to-east gas flows materialised¹¹, even though they not only would have supported greater gas infrastructure reliability but would have also facilitated supply diversification efforts for Ukraine and the whole CEE region. Instead, Ukraine has been relying on a **“virtual reverse” mechanism for the majority of its gas imports** after it officially stopped buying Russian gas in 2015.¹² As

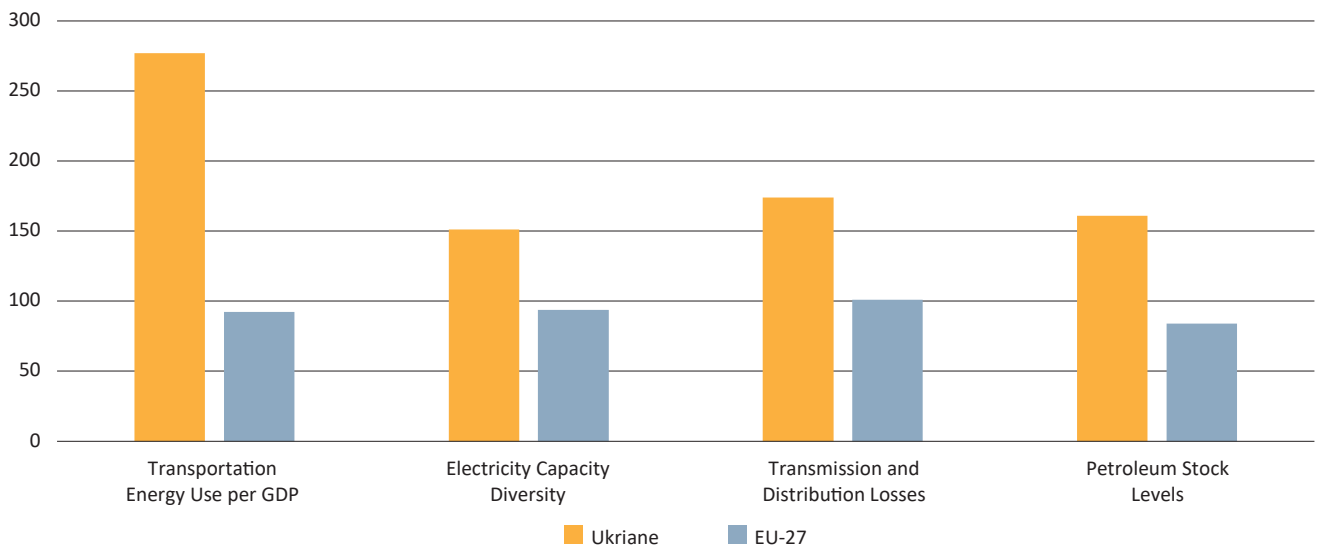
¹¹ Natural gas flows in reverse mode were enabled through the pipeline system connecting Ukraine to Slovakia, Hungary and Poland. However, considerable bottlenecks in the pipeline network between Western and Eastern Europe have been a key limitation factor for the amounts of non-Russian gas that can effectively be delivered to Ukraine.

¹² The virtual reverse mechanism is essentially a financial/accounting settlement between the gas TSOs, while in physical terms Ukraine simply keeps a part of the gas that is transiting from Russia to Europe through its territory. In 2021, 90% of all imported gas was by virtual reverse, according to the Gas TSO of Ukraine (GTSOU), *Ukraine increases its import firm capacities by one third*, GTSOU, December 2021

a result, its gas supply security remains at the mercy of Gazprom's decision to use Ukraine as a transit country for European deliveries, and the ability of EU member states to work together to ensure sufficient alternative gas deliveries to cover both Central Europe and Ukraine's needs in case of a potential interruption of the Ukraine transit route.

Another key reliability risk for Ukraine comes from the **poor state of its electricity grid** (even before Russia's heavy bombardments). Transmission and distribution losses have been 70-80% higher than the EU average at more than 10% of net electricity production in the country. This represents over 15TWh of losses annually, roughly equal to the net electricity production of Croatia. Insufficient investment in maintenance and modernisation is a key contributing factor, as is theft. **Significant losses of the gas distribution network**, to a large extent due to illegal syphoning by some industrial consumers, is also a major reliability concern, together with the extremely low energy efficiency of the economy.

Russia's attacks on Ukraine's energy infrastructure have exacerbated an already vulnerable energy supply. While gas pipelines have remained mostly intact and there has been limited damage to gas storage sites representing less than 10% of Ukraine's vast capacity, the **electricity transmission and generation** as well as the **oil refining and storage infrastructure** have suffered catastrophic damage, in which more than half of the electricity transmission and distribution grid has been destroyed, while a sizeable share of the electri-

Figure 4. Key Reliability Risks Indicators in 2021 – Ukraine vs EU-27

Source: CSD based on the ECSRI.

city production capacity has been either occupied by Russian military forces, or destroyed or damaged under constant shelling attacks¹³, leading to rolling blackouts especially during the 2022/2023 heating season.

The infrastructure damage has roughly doubled the reliability risks for the electricity system, which were already 60-70% higher than the EU27 average before the start of the war. The destruction of oil storage sites, another key target of Russian attacks, has also further exacerbated the risk stemming from low petroleum storage levels, contributing to fuel shortages.

The integration between the Ukrainian and European electricity systems provided much-needed balancing support and helped Ukraine avoid more frequent blackouts without compromising the stability of the new common European electricity market.¹⁴ This underscores the critical role of electricity market integration in improving the overall resilience of the system and ensuring security of supply.

¹³ Estimates of the damage to electricity infrastructure evolve constantly as Russian attacks continue, while emergency repair works restore some of the damage. Overall, 30-40% of power generation capacity has been affected, mostly from lost nuclear and coal power capacity, which dominates the Ukrainian electricity mix. The Zaporizhia nuclear power plant, the largest in Ukraine and accounting for over 40% total nuclear capacity in the country, has been occupied by Russian military forces. More than half of coal power plants have been occupied or severely damaged. Hydropower plants have also been under severe attack, affecting 20-30% of total installed capacity.

¹⁴ Bottcher et al, *Initial analysis of the impact of the Ukrainian power grid synchronization with Continental Europe*, Energy Advances, 2023

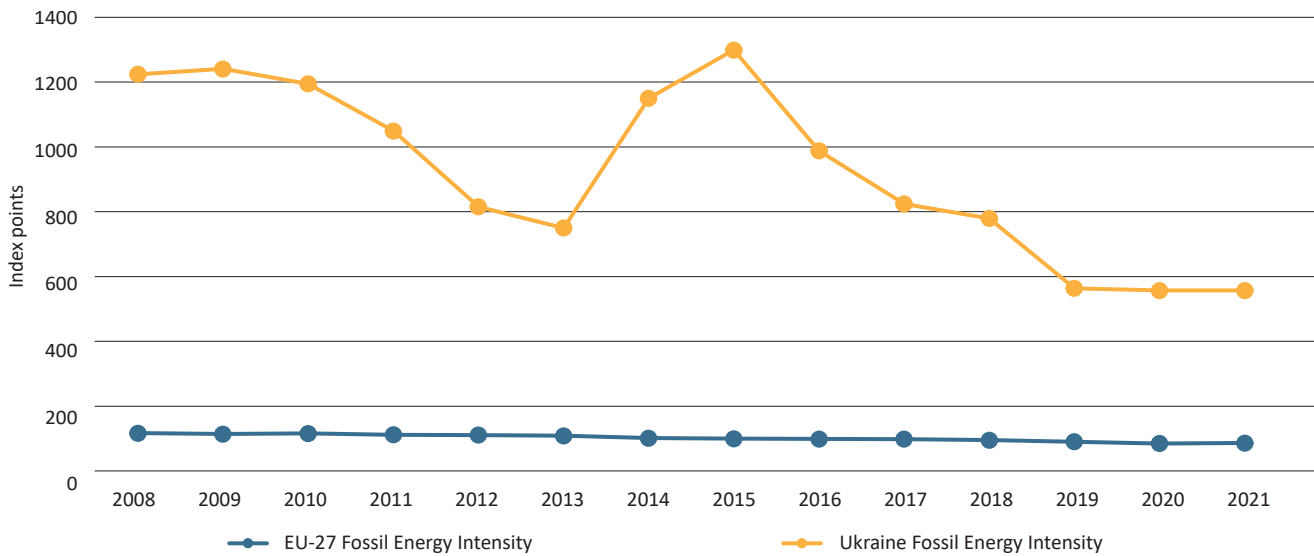
Sustainability Risk

Ukraine faces high fossil energy intensity of its economy and considerably lags behind the EU decarbonisation policy efforts. Even considering the substantial reduction of natural gas demand, Ukraine's **fossil energy intensity has remained almost 6 times higher** than the EU-27 average. In addition, Russia's aggression has contributed to a climate and environmental catastrophe, which risks reversing the whole progress of Ukraine's clean energy transition.

The deployment of renewable energy sources in Ukraine was accelerating before the Russian invasion, with total installed capacity of wind and solar rising from less than 2% of total installed capacity in 2015 to about 10% at the start of the war (close to 10 GW). The national energy strategy from 2018 set a goal for wind and solar energy to cover 10% of the primary energy production by 2035. A combination of a generous feed-in tariff (the highest in Europe) introduced in 2009, tax incentives and preferential conditions for grid connection have underpinned the rapid growth.

Unlike the large thermal and hydro power plants operating in the country, the **renewable energy installations suffered limited damage from the war** (6% capacity loss), but about a quarter of the capacity

Figure 5. Fossil energy intensity Risk – Ukraine vs EU-27



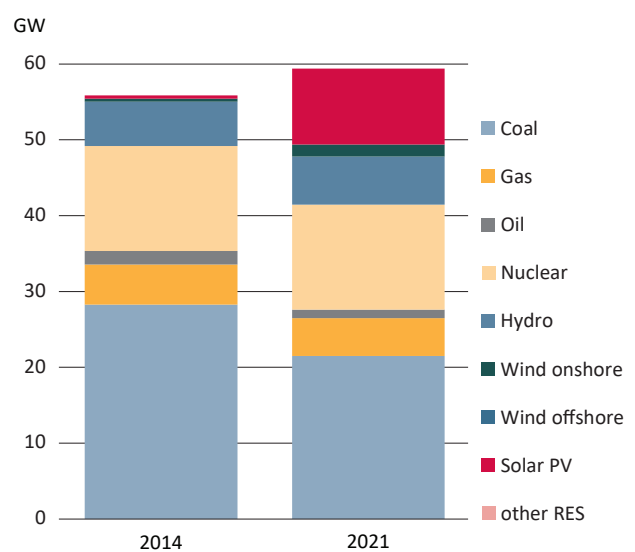
Source: CSD based on the ECSRI.

is located in occupied territories.¹⁵ The role of coal and gas-fired thermal power plants in the electricity mix has increased due to the war despite the severe damage from Russian shelling and because of the seizing of the Zaporizhia nuclear power plant by Russian forces. **Non-affected facilities** (mines and power plants) in Central Ukraine have been expanding their production capacities and boosting heat and electricity supply. The coal phaseout process, which had gradually begun before the invasion, has not been officially abandoned but is under a de facto moratorium, as energy security concerns have toppled climate policy objectives.

The fact that Ukraine is not part of the EU ETS and does not put a price on carbon emissions presents a considerable sustainability risk, as energy businesses have **no incentive to invest in clean technologies**. The planned entry into force of the EU’s Carbon Border Adjustment Mechanism (CBAM) as of 1 October 2023 (in a transitional phase) would, however, create an indirect incentive for Ukrainian goods exporters to the EU to reduce the carbon intensity of their production. As electricity is included in the CBAM, this will likely create a strong incentive for Ukraine’s electricity producers to decarbonise its power system amid Ukraine’s ambition to remain a major electricity exporter.

Currently, Ukraine has an unfinished and outdated draft National Energy and Climate Plan (NECP) and no just transition strategy, exposing its energy sector and national economy to significant long-term risks from the closure of inefficient and unprofitable coal mines and power plants, job losses, and low economic competitiveness. The country needs structural change to cope with the future social and economic challenges on the path to the future low-carbon economy.

Figure 6. Ukraine Electricity Mix: 2014 vs 2021



Source: CSD based on the ECSRI.

¹⁵ *Ukrainian energy sector evaluation and damage assessment – VIII (as of March 24, 2023)*, Energy Charter, 2023

What's next?

Ukraine's energy and climate security is going through its most difficult test following Russia's invasion. The Kremlin has managed to create and exploit a number of critical vulnerabilities in the hope of weakening Kyiv's resistance to the military aggression and undermining Europe's unity and solidarity with Ukraine. Russia's targeted missile strikes have already destroyed half of Ukraine's energy infrastructure, causing an unprecedented humanitarian crisis in the country including rolling blackouts leaving millions of people without water, heat, and electricity. The attacks on the oil infrastructure have also starved Ukraine of diesel fuel, which is critical for the country's counteroffensive and for meeting the energy needs of hospitals, schools and other essential services. Guaranteeing the security of energy supply is of utmost priority in the short term. In the medium-to-long term, the need to rebuild Ukraine's energy system requires a new energy and climate security strategy for Ukraine backed by strong European support of the process of policy realignment.

Ensuring Security of Supply

The Russian invasion in Ukraine has clearly demonstrated that **close energy market integration with Europe** is the most powerful tool to improve the resilience of the energy system against Russian energy and economic blackmail. The **integration of electricity markets** and the **securing of alternative fuel deliveries** have already provided a lifeline for Ukraine. Yet, Europe needs to step up its support by increasing electricity imports from Ukraine, while also protecting and enhancing the Ukrainian grid infrastructure to improve its resilience against the Russian aggression.

Similarly, Europe and Ukraine need to work more closely on integrating their gas markets, taking advantage of **Ukraine's vast underground gas storage capacity** that can serve in the short run to build up the European gas stocks ahead of the next heating season. In the long run, Ukraine's sophisticated gas pipeline and storage network could be repurposed to support the transition to green hydrogen use, enhancing the common European decarbonisation objectives.

Diesel deliveries from Bulgaria to Ukraine need to continue but the Russian ownership of the Bulgarian refinery and its continuing reliance on 100% Russian

crude presents a key security of supply concern. Lukoil has been using its strategic position to blackmail Bulgaria and the EU through threats of higher prices and supply cuts, using false claims that without the derogation the refinery would not be able to operate and the country would not have adequate supplies of refined products. The financial and political interests served by this derogation are not those of Bulgarian consumers nor those of Ukraine, but rather those of Lukoil and the Kremlin. For each barrel processed at Neftochim, Lukoil doubles its wellhead netback margin compared to the simple export of Urals, which translates into substantial direct financial assistance to the Russian government and to Lukoil.

Bulgaria and the EU need to **terminate the unnecessary derogation from the oil embargo** before the December 2024 deadline and take the strategic control of the facility out of Russia's hands. This will strip Lukoil, and by extension the Kremlin, from the additional profits to finance its war effort in Ukraine and help break the powerful state capture networks that have been influencing strategic decisions in Bulgaria and the EU, leading to full strategic decoupling from Russia in the energy sector.¹⁶

Strengthening Solidarity and Resilience to Russia's Blackmail

Europe's solidarity with Ukraine in the face of the Russian aggression came as a surprise to the Kremlin, especially following the EU's decision to further deepen its dependence on Russian energy in the decade before the war. Europe has largely resisted Russia's energy blackmail tactics and remained firm on introducing and maintaining unprecedented sanctions in response to the Russian invasion. However, **the EU needs to urgently strengthen the enforcement of the current sanctions regime** and close the glaring loopholes that allow Russia to continue playing a key role in European energy markets.

The EU needs to **accelerate the phaseout of Russian oil and gas** even if this means short-term economic pain. The implementation of the REPowerEU targets is the first step to the process of strategic decoupling from Russian economic influence in Europe. The second is to convince individual member states to break the toxic relationships many national majors still maintain with Russia. This is the only way to **break**

¹⁶ *Decoupling from Russian Oil: Ending the Derogation from the EU Sanctions*, CSD 2023

the Kremlin's informal networks of influence, which have been undermining EU solidarity with Ukraine by advocating for the weakening of sanctions, the increase of imports of Russian LNG and the promotion of Russia's foreign interests in national and EU energy and climate policies.

Meanwhile, the EU should strengthen its cooperation with Ukrainian energy companies, providing constructive capital and expertise for projects of common interest that foster closer market integration and enhance regional energy and climate security. **Enabling physical west-to-east gas flows across Europe** through strategic investments in gas infrastructure will decrease the reliance on Russian gas transiting through Ukraine. Developing Ukraine's oil and gas production potential should also be explored but in the context of a broader energy and climate security strategy with a **larger uptake of renewables, energy efficiency measures**, and other clean energy technologies. This strategy relies on a clear coal phase-out strategy and ambitious decarbonisation goals that ensure a just energy transition. Closer collaboration with European partners can facilitate the establishment of a common electricity market, building new cross-border connections and upgrading and modernising the grid.

Reducing Energy Poverty without Compromising Market Liberalisation

Ukraine needs to tackle the deep energy poverty crisis in the country. Developing and implementing a dedicated energy poverty policy is the most critical step in this direction, as it will allow the **protection of the most vulnerable groups in the most efficient way**. Artificially low prices and subsidy schemes are contributing to market distortions, and are a major disincentive for the middle-class, which does not invest in energy efficiency improvements or in switching to less energy-intensive consumption patterns.

Gradually removing subsidised energy prices while simultaneously providing targeted financial assistance to vulnerable groups can strike a fine balance between energy market liberalisation and affordability. Close cooperation with many European countries, which face similar challenges due to the energy crisis, is necessary for sharing best practices and designing common policy instruments. The EU can support Ukraine in creating efficient protection mechanisms for the most vulnerable groups. Implementing energy efficiency measures in buildings and industries can further reduce energy

consumption, lower energy bills, and alleviate the burden on households and businesses.

In addition, the process of **market liberalisation** needs to accelerate and foster the emergence of effective competition to the benefit of consumers. Completing the unbundling of state-owned utilities and breaking regional monopolies, especially when it comes to DSOs, is crucial for facilitating the entry of new market players with more competitive price offers. It will also break the vicious cycle of political meddling in the day-to-day activities of state-owned energy companies, where low energy prices are used for gaining political capital, while at the same time fostering financial mismanagement practices.

Rebuilding the Energy System

The unprecedented destruction of Ukraine's energy infrastructure will require enormous investment in reconstruction activities. Ukraine and its Western partners must ensure that **Russia pays for the damage caused by its brutal war**, including by exploring the possibility of using Russia's frozen assets to finance the rebuilding efforts. This represents an opportunity to design a more resilient energy system as a buttress for faster and more sustainable economic development. Mobilising private sector actors in the reconstruction, from Ukraine, the EU and the US will be key as they are multipliers of public investments and accelerators of the upscaling of transition policies/investments.

At the same time, Ukraine and Europe's economic security requires safeguards that **prevent the entry of corrosive capital and illicit financial flows**. These flows hinder economic development and promote rent-seeking and strategic corruption, in addition to undermining confidence in state institutions and the health of the business environment. A robust FDI screening mechanism is an essential defence tool against foreign malign influence, together with the attraction of constructive capital flows to ensure that the Ukrainian economy is rebuilt on a more transparent basis.

Reconstruction investment must focus on improving the future energy and climate security of Ukraine by prioritising:

- The scale-up of **renewable energy sources** taking advantage of Ukraine's enormous potential, focusing both on large-scale offshore wind projects, as well as small PV-based plants supporting the process of decentralisation and active energy citizenship

- A modern, **digitalised, decentralised and resilient electricity grid**
- **Energy efficiency** measures in buildings and industry
- Modernising Ukraine's industry by introducing **new technologies** such as industrial heat pumps, digitalised enhanced energy management systems and AI-driven automation solutions
- Supporting **innovation**, including through regional innovation hubs with a particular focus on Ukraine's nuclear energy know-how

Strengthening Energy Sector Governance

Ukraine and the EU must work together to strengthen the country's energy sector governance by implementing **key anti-corruption measures** including:

- Limiting political interference in the management of state-owned energy companies,
- Increasing the financial transparency of regulatory decisions,
- Conducting detailed impact assessments of strategic decisions for infrastructure projects
- The full unbundling of supply and transmission/distribution companies according to the EU Competition Law
- Strengthening the professional capacity, the integrity and independence of the management boards of state-owned energy companies and the energy regulator.