Balancing Energy Security, Decarbonization, and Competitiveness in Europe's Energy Landscape

As the EU transitions to a low-carbon economy, crude oil and natural gas remain vital for energy stability, serving as essential transitional fuels that support grid reliability and are indispensable for energy-intensive industries. However, Europe's energy security remains fragile, especially after Russia's war in Ukraine, and urgent action is needed to address emerging risks. We share recommendations to help the EU restore its security of supply and competitiveness while staying on track to reach its climate objectives.

With crude oil and natural gas comprising almost 60% of the EU's energy mix and powering key sectors like transport, industry, and heating, ensuring a secure and reliable supply remains a strategic priority – one that is increasingly shaped by regulatory and geopolitical factors. A complex regulatory environment may lead to limited sourcing flexibility and price spikes. Decarbonization efforts, market interventions, and regulatory burdens could further impact long-term energy prices undermining economic competitiveness. Given current geopolitical and market realities, the EU remains exposed to global energy market tightness and volatility, particularly in the crude oil and natural gas sectors, while being in competition with Asia for available supplies. While the EU produces only about 5% of its crude oil and 15% of its natural gas domestically, it remains reliant on imports for the remainder. As global production and export capacity for these energy sources are set to increase, non-market-related policy and regulatory challenges continue to discourage long-term energy contracting. These obstacles include low EU energy demand projections, market interventions, mixed political signals, heavy administrative burden, prescriptive requirements, and regulatory risks for suppliers.

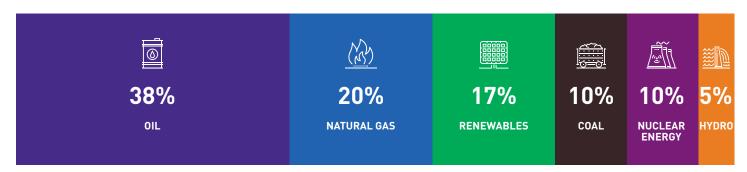


Figure 1: Primary energy consumption by source in the EU, 2023.1

If not adequately addressed, these obstacles could limit the EU's ability to attract and successfully contract diverse energy supplies and potentially leaving the EU vulnerable to energy shortages.² In contrast, tackling them head-on can help restore competitiveness and reduce energy poverty while balancing an increasingly decarbonized and decentralized energy system on the way to climate neutrality. Dialling back emergency measures, subject to a cost-benefit assessment and requirements that could possibly translate into other barriers to trade, will help the security of supply.

EI, 'Statistical Review of World Energy, 73rd edition' (2024): https://www.energyinst.org/ data/assets/pdf file/0006/1542714/684 EI Stat Review V16_DIGITAL.pdf

² Rystad Energy, 'Rebalancing Europe's Natural Gas Supply 2nd Edition' (December 2023): https://iogpeurope.org/wp-content/uploads/2023/12/Summary-Rebalancing-Europes-Gas-Supply-second-edition.pdf

Recommendations to strengthen EU energy security

In addition to sending clear and decisive political signals at the highest level, the EU should consider the following recommendations:

- 1) Conduct competitiveness and fitness checks of EU legislation
- 2) Ensure diversification of energy sources, suppliers, and routes
- 3) Assess and encourage the use of European crude oil and natural gas resources
- 4) Ensuring robust infrastructure and safeguarding its security and full utilization
- 5) Use realistic demand outlooks and pragmatic decarbonization pathways
- 6) Optimize market functioning and avoid the use of distortive measures

1. A Competitiveness and fitness check of EU legislation

President Von der Leyen's focus on energy competitiveness and affordability for 2024-2029 requires optimizing regulations to drive investment and strengthen the sourcing of affordable energy domestically and internationally. Simplifying the existing regulatory framework through the Omnibus proposal and aligning legislation more effectively will be key to achieving these objectives.

The EU Methane Regulation's requirements could lead to disruptions in the security of supply if key suppliers and domestic producers cannot meet compliance requirements on time.

The EU Methane Regulation is the first of its kind - imposing Monitoring Reporting and Verification (MRV) requirements on both domestic and non-EU crude oil and natural gas producers, setting methane emissions intensity thresholds and mandating detailed tracking of producers' emissions across the supply chain. To support the effective implementation of this regulation while maintaining security of supply, clarity regarding the requirements and their feasibility is essential.

More clarity is needed in the legislative text concerning importer requirements (i.e., Article 27, 28, and 29) to help market participants understand how compliance will be demonstrated within both current and future commercial contracting frameworks. The lack of clarity on some requirements is already impacting the finalization of agreements whose terms extend beyond the implementation of the new requirements. Further guidance is needed from the European Commission on how to meet the requirements, specifically regarding MRV equivalence, methane intensity reporting, and the methane intensity limit, in situations where the origin and producer of the natural gas and crude oil imports are unknown or cannot be known (for example, when natural gas or crude is commingled).

Some elements of the EU Methane Regulation require substantial technological and human capital resources. Implementing the Regulation's provisions for domestic production is extremely challenging for operators, while third country suppliers may not be able to achieve the same results within the same timeframe. Collaboration with industry on addressing these challenges could help mitigate the risks of supply disruptions and increased energy costs.

The EU imports oil and gas from multiple countries, as diversification is key for energy security. To enable effective and smooth compliance with the EU Methane Regulation's requirements for imports, the EU should seek to establish equivalence with third countries that have the most advanced methane emissions regulatory frameworks as soon as possible and collaborate with third countries that are earlier on their methane journey to help them prepare for compliance with the EU methane regulation requirements.

Additionally, penalties for non-compliance must balance the need to incentivize methane emissions reductions in natural gas, LNG, and crude oil supplies to the EU, while preventing supply constraints. For example, penalties could be phased in gradually over time.

Proposed actions:

- European Commission should include EU Methane Regulation in the scope of the Omnibus proposal as soon as possible to ensure that technical implementation challenges are addressed thoroughly, and workable timelines are proposed for market participants to comply with the provisions.
- European Commission should establish MRV equivalence with major exporters to the EU as soon as possible (e.g., with the US EPA '40 CFR Part 98, Subpart W'; or by providing documented evidence of the accuracy levels of quantification otherwise performed).
- European Commission should provide clear guidance and prioritise development of EU Methane Regulation's Implementing and Delegated Acts foreseen by the Regulation, to provide the necessary clarity and assurance to market participants.
- European Commission and Members States should assess the impact on security of supply on EU Methane Regulation.
- European Commission should promote the development of an international GHG Supply Chain Measurement, Monitoring, Reporting, and Verification (MMRV) framework that enables comparable and reliable information on GHG emissions across the supply chain, for example, through the US DoE-led MMRV Framework.

Technology neutrality: Simplifying the regulatory framework and adopting technology-neutral policies are essential to ensuring security of supply and achieving the EU's climate objective. However, in the past 10-15 years the EU has deployed technology-exclusive policy objectives and legislative initiatives. Many of these – on renewable hydrogen, heat pumps, or internal combustion engines to name a few – are proving difficult and costly to achieve, often leading to negative reactions from citizens. Pursuing this approach in 2024-2029 may lead to a continuation of costly deployment, public acceptance issues, technical limitations, and missed targets or ambitions.

To achieve climate and economic objectives, we recommend ending technology-exclusive sub-targets, mandates, and electrification at all costs, and focusing instead on decarbonization, backed by incentives and de-risking mechanisms for promising technologies.

Alongside renewable hydrogen, low-carbon hydrogen, specially produced from natural gas with carbon capture and storage (CCS) or methane pyrolysis, can play a significant role in Europe's energy security, diversifying the energy sources, supporting renewable integration, and decarbonizing hard-to-electrify sectors. The required deep decarbonization of hard-to-electrify sectors will critically depend on Europe's capability to produce and/or import low-carbon fuels at substantial scale meeting the continuous demand pattern required by industry which is unlikely to be possible with domestic renewable hydrogen only in the near and medium term. We welcome the recognition of low-carbon hydrogen in the EU Hydrogen and Gas Decarbonisation package, and we strongly encourage that this example of technological neutrality be integrated into other EU legislative frameworks. To achieve this, further improvements to the Delegated Act for Low Carbon Fuels (LCFs) are required, ensuring technology-neutrality, incentivizing GHG emission reductions and establishing a simple and robust methodology. This will enable the creation of a hydrogen market in Europe, boosting investor confidence and enabling FIDs both in the EU and other jurisdictions that can serve the EU market.

Proposed actions:

- European Commission and Member States should shift from technology-exclusive mandates to technology-neutral policies that allow for a variety of solutions to allow market forces to determine the best technologies for decarbonization.
- European Commission and Member States should establish mechanisms to incentivize all industries to adopt low-carbon technologies while ensuring that the most cost-effective solutions are pursued without prescribing specific technologies.
- European Commission and Member States should integrate hydrogen strategies in the EU energy security framework to ensure resilient and technologically neutral approach to the energy sources, supporting the transition to a decarbonized energy system.
- European Commission should recognise in the Union Data Base (UDB) system also imported hydrogen from third countries as this will be necessary to support the growth and security of a fully fungible market. Project developers need certainty that the carbon intensity of feedstocks and low-carbon fuels transported via grids outside the EU will be recognized (based on mass balancing principles).