

# The Revision of the Third Energy Package for Gas

The [full study](#)<sup>1</sup> takes a closer look at the proposed revision of the Third Energy Package for Gas, the 'Hydrogen and decarbonised gas market package'. It looks at how the revised package including the foreseen unbundling rules affect the transition to a hydrogen-based gas economy. Beyond this, it reflects on the development of hydrogen infrastructure and discusses also short-term options ensuring stable prices and security of supply through for example new EU gas interconnectors, liquefied natural gas (LNG) imports and underground gas storage.

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## Background

The EU heavily relies on gas for its industry, heating and electricity generation. To satisfy this high demand, the EU is highly dependent on imports with an import dependency of nearly 84% in 2021 with most imports coming from Russia (34%), Norway (24%) and Algeria (7%). The EU faces a triple challenge, **to ensure the security of gas supply and, at the same time, to secure affordability and accelerate the decarbonisation of the gas sector**. This challenge has been heightened with the invasion of Ukraine by Russian forces and ensuing EU sanctions against Russia. This already had the effect of restructuring the EU's gas import portfolio away from Russian pipeline imports to LNG imports. Consequently, the green transition of the European gas market and the move towards new and renewable gases is not only a challenging undertaking but also an opportunity to:

- **ensure environmental sustainability** of the European gas sector;
- **enable competitiveness and affordability** by creating a more stable supply of gas; and
- **secure the autonomy of the EU** from gas imports and reduce dependencies.



To support this transition, the EU Hydrogen Strategy proposed among its 20 action points the design of enabling market rules for the deployment of hydrogen. Following up on this, the European Commission proposed in December 2021 the '**EU Hydrogen and Decarbonised Gas Market Package**'. The package revises the 'Gas Directive' and 'Gas Regulation' and has the ambition to adopt a comprehensive governance system for hydrogen and decarbonised gases. Among other, the package proposes to establish a European Network of Network Operators for Hydrogen (ENNOH) to promote the development of hydrogen infrastructure, cross-border coordination and interconnector network construction. It further

proposes to remove tariffs for cross-border interconnections, lower tariffs at injection points for renewable and low-carbon gases and to allow blending of up to 5% of hydrogen with natural gas at interconnectors. The package also carries over many of the existing rules for natural gas to the decarbonised gas market package, while also enforcing ownership unbundling (OU) as the default rule for hydrogen network operators by removing the independent transmission operator (ITO) model as an option after 2030.



## Key findings

The study found that the **Third Energy Package for Gas has been successful when it comes to liberalising the gas market, increasing competition and improving the security of supply**. It also provided sufficient flexibility for emerging markets, which in turn however led to different implementations of unbundling rules across the Member States, though a trend towards the OU model can be observed. The Third Energy Package for Gas did not cater to the decarbonisation of the energy system and disregarded new energy carriers. In this regard, **the ‘Hydrogen and decarbonised gas market package’ is an important step in the right direction**.

Currently, **there is however no hydrogen market and its development is driven more by policy objectives than market demand**. The ambition, outlined by REPowerEU, is to produce 10 million tonnes of renewable hydrogen in the EU and import another 10 million by 2030. Network operators are however critical in regard to the nascent status of the hydrogen market and the proposed cut-off date of 31 December 2030 after which exceptions covering third-party access, unbundling and tariff structures will be removed. They worry that electricity and gas transmission system operators currently operating as ITO would be barred from investing in hydrogen infrastructure after 2030, thereby reducing the willingness of such gas operators to make capital-intensive infrastructure investments in the first place. While OU is preferred by the European Commission, convincing evidence that supports its preference is very thin at best, but implementation comes with costs. Therefore, we consider regulatory alignment preferential over the exclusion of the ITO model.

Considering the ambitions to decarbonise the gas sector, **investments are needed to create hydrogen infrastructure, production and the renewable energy sources** required to produce hydrogen. Regarding infrastructure, European energy infrastructure operators proposed the European Hydrogen Backbone initiative. The initiative represents not a thorough network planning exercise but is a scenario developed by energy infrastructure operators to showcase what would be achievable by 2030 and 2040 and based on that the estimated investment needs. However, currently there is still a lot of uncertainty and it is difficult to predict when and where demand and production will develop. Nevertheless, proponents of the hydrogen backbone point out that risk-taking is needed as, currently, hydrogen is for many users simply not an affordable option due to the lack of infrastructure, raising the question of what should come first: infrastructure or demand.

**Repurposing existing gas networks is generally seen to be the most cost-efficient option** and it also allows current operators to avoid stranded assets. However, a future hydrogen network will not be as extensive as the natural gas network and the use of natural gas is expected to only gradually decrease and likely the need for gas-only networks will remain. Construction of new hydrogen infrastructure will therefore be necessary. The repurposing of LNG terminals to import hydrogen is also under discussion. However, compared to pipelines, their conversion is seen as a technical challenge. Besides repurposing and building new infrastructure, blending of hydrogen with natural gas will likely be initially also a solution particularly to generate demand in areas that otherwise lack infrastructure.

More immediately, Russia’s invasion of Ukraine has also led to a process of **restructuring the EU’s gas imports with LNG becoming a key supply source**. However, despite substantial progress in past decades to increase gas interconnectivity additional investments (EUR 10 billion by 2030 according to REPowerEU) into new gas infrastructure are needed to address several bottlenecks. This includes investments into new LNG terminals, floating storage and regasification units (FSRUs) and pipeline interconnectors. The key bottleneck is between Belgium, France and Germany. The Iberian Peninsula is another bottleneck as its rich LNG capacity cannot be used to source from other Member States due to infrastructural constraints with France. With LNG becoming a key supply source, some Member States expanded LNG terminals and FSRUs, often in record time, although permitting remains an issue leading to slow upgrades in recent years. From the supply side, the volatility of LNG imports into the EU and the high price responsiveness of LNG spot and short-term cargoes have added to the relative irregularity of LNG imports into the EU in recent years.

<sup>1</sup> Heidecke, L., Kustova, I., Flickenschild, M., Dijkhof, Y., Larmi, I., Van Til, H., Van Benthem, M., Nguyen, N., 2022, *The Revision of the Third Energy Package for Gas*, Publication for the committee on Industry, Research and Energy (ITRE), Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg.. Available at: [www.directhyperlink.com](http://www.directhyperlink.com).

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