

Natural gas is expected to be an intermediate fuel in the energy transition to a zero-carbon economy

GIE publishes an in-depth [analysis](#) of the role of gases and the existing gas infrastructure in supporting Central-Eastern- and South-Eastern- Europe towards climate neutrality by 2050. The research covers 10 EU Member States, including Austria, the Czech Republic, Germany, Greece, Hungary, Latvia, Poland, Romania, Slovakia and Slovenia.

Boyana Achovski, Secretary General of GIE states: *“This analysis shows that one thing is clear: there is no one size fits all solution. If we want to deliver climate neutrality by 2050, the specificities of all EU Member States must be considered when designing Europe’s decarbonisation pathways. It will be a mistake if future legislation will ignore this. Only an inclusive and technology-neutral approach will help Europe deliver its 2050 goal. Each Member State will face its own battles and leverage its unique opportunities, but no one should be left behind.”*

Ms Achovski explains: *“For example, due to their transit character and historical circumstances, countries in South-Eastern and Central-Eastern Europe have their energy mix strongly based on coal. Therefore, the existing gas infrastructure will play an important role when switching from coal to natural gas to hydrogen. Building on our well-developed infrastructure, the gas assets will gradually accommodate growing shares of renewable and low-carbon molecules, including hydrogen. Today, it already provides increased flexibility in complementing the electricity systems by storing a huge amount of renewable and low-carbon molecules. On top of that, our pipelines, underground storage facilities and LNG terminals can be fit for hydrogen with some retrofitting and repurposing.”*

Achieving decarbonisation by 2050 requires significant efforts and commitment from all Member States and sectors. The report *Decarbonisation in Central-Eastern and South-Eastern Europe: How gas infrastructure can contribute to meet EU’s long-term decarbonisation objectives* brings forward the decarbonisation potential of the gas infrastructure in that context. It presents multiple pathways in which a future-proof gas infrastructure could ensure resilient security of supply by integrating large volumes of renewable and low-carbon molecules, including natural gas, hydrogen and biogases.

The report highlights:

1. **By 2030:** Switching from coal to gas is expected to be an intermediate step in transitioning to a zero-carbon economy. Coal-based total CO₂ production in the ten selected countries equalled 645,9 Mt CO₂ in 2018, which is equivalent to the overall emissions generated in France and Spain (656 Mt CO₂).
2. **By 2050:** Renewable and low-carbon gases will complement and slowly replace natural gas. These gases will play a major role in the future energy system as they will secure a baseload energy supply in these regions. Renewable gases like green hydrogen will gradually adopt the role of integrating the electricity and gas sectors, providing more flexibility within the entire energy system.

3. **The existing gas infrastructure supports the integration of renewable electricity** in Europe and reduces the need for large investments into electricity grids – on both transmission and distribution levels.
4. In the short-term, **natural gas can have an immediate and tangible positive effect on the life of EU citizens**: air pollution resulting from burning high-emission fuels (including NO_x, SO_x and fine particles) constitutes a serious health problem in many communities.
5. **Each country is moving towards decarbonisation in a different way**. The common denominator is the shared awareness of the issues at stake, their urgency as well as a strong push for efficiency.

Piotr Kuś, Sponsor of GIE CH₄ Area and GIE board member explains: *“The main goal of this report is to raise awareness about the current energy landscape and challenges in Central- and South-Eastern European countries and to showcase these aspects with concrete and actual data. In January 2020, we established a working group to exchange views on the decarbonisation in these respective regions and this platform enables us to provide input to various stakeholders - academia, policy-makers, industry representatives. The discussions and the work so far enabled us to identify the optimal energy transition pathways for the regions.*

Mr. Kuś added: *“The gas infrastructure plays an essential role in decarbonising the regions, both in the short- and long-term. It provides for the switch from coal to natural gas to hydrogen and it plays a role as an enabler of the energy transition towards low-carbon gases. It brings further benefits via fostering security of supply and establishing a competitive EU energy system. Using the existing gas infrastructure offers a cost-effective solution for customers, which is crucial when fostering social acceptance and cost efficiency towards the energy transition. The coal-based power and heat plants generation causes a high level of pollution on top of CO₂ and causes decrease of air quality standards. In that case, natural gas will play an important role as a solution for challenging fast and cost-effective mitigation of air pollution which is caused by a mixture of solid particles and various gases. Their reduction is of crucial importance as some air pollutants like particulate matter and NO_x and SO_x are poisonous for the people.”*

Who is GIE:

Gas Infrastructure Europe (GIE) is the association representing the interests of European gas infrastructure operators. GIE members are active in transmission, storage and regasification via LNG terminals of renewable and low-carbon gases, including natural gas and hydrogen. Gathering around 70 industry entities from 27 European countries, GIE perfectly embodies the multiple transitional decarbonisation pathways of the EU regions. The association's vision is that by 2050, the gas infrastructure will be the backbone of the new innovative energy system, allowing European citizens and industries to benefit from a secure, efficient and sustainable energy supply.