European imported methane emissions have fallen since start of Ukraine war, Kayrros data shows

- Digital measurement, reporting and verification (MRV) company Kayrros found that the methane footprint of European gas imports has fallen significantly since the outbreak of war in Ukraine.
- The change in natural gas trade flows and the replacement of a large share of Russian gas imports with US and Qatari gas, both of which have a lower methane intensity than Russian gas, are behind the fall
- The overall decline hides stark contrasts between individual European importers, as well as the producing countries supplying them. Some European countries get most of their gas supplies from high-methane-intensity providers; others mostly import "cleaner" gas.

31 January 2024 – New data from digital MRV company Kayrros, a world leader in tracking methane emissions and other climate events, shows that there has been an overall reduction in European imported methane emissions since the outbreak of war in Ukraine.

Kayrros' analysis, which combines satellite imagery, AI and geoanalytics, reveals that the Russian invasion of Ukraine has transformed the continent's imported gas patterns and imported methane footprint. This has changed both the methane intensity of individual European importers and the geographical distribution of imported emissions.

One reason for the fall in imported methane emissions is the replacement of a large share of Russian gas, now at 25%, with US (15%) and Qatari (6.4%) gas, both of which have a lower methane intensity. The intensity of imported US gas is estimated to be 0.13kg/MCF; for Qatari gas, it is 0.10kg/boe.

Additionally, Kayrros reported that the Methane Intensity of the imported European gas in 2021 stood at 0.16 kilograms per thousand cubic feet (kg/MCF), which subsequently dropped in 2022 to 0.14 kg/MCF, meaning a 16% reduction in methane intensity between 2021 and 2022.

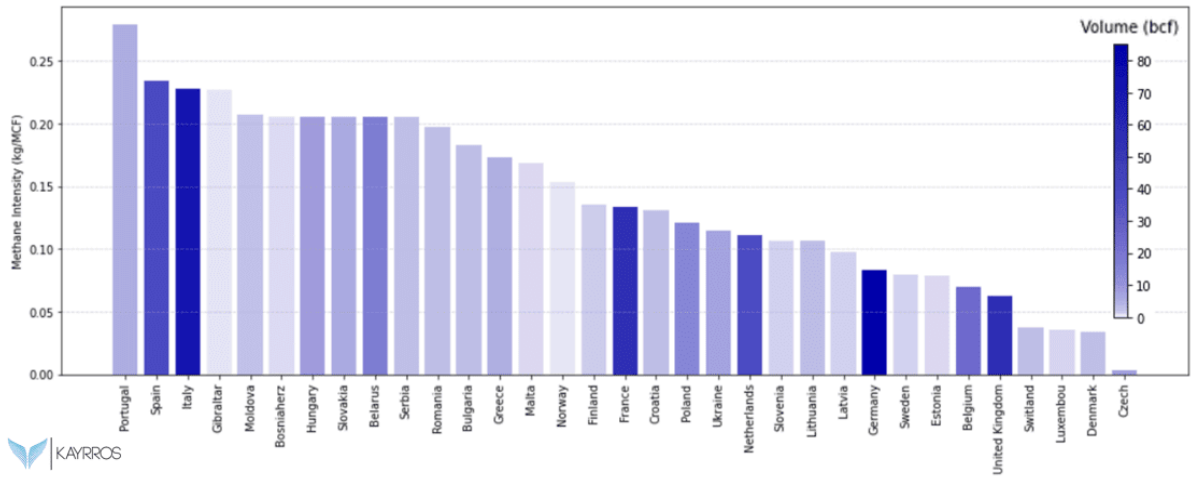

Figure: Methane intensity of EU natural gas imports by importing country
Source: Kayrros SAS analysis, contains IEA data (2023)

The overall decline conceals major differences between individual European importers, however. Kayrros's data shows that southern European countries, including Portugal, Spain and Italy, generally import from high-emitting African nations. Northern countries, such as Germany, tend to import

from ‘cleaner’ producers. Eastern European countries, including Bulgaria, are highly dependent on Russia, while Malta and Latvia show a mixed pattern.

Kayrros has revealed the source of most European gas imports, except for Slovakia and Czechia, where only around 35% of imports have a clear origin.

Reducing imported methane emissions associated with natural gas and electricity is an important EU goal in the wake of COP28, which Kayrros attended as part of President Macron’s delegation, and the historic November 15 EU agreement on imported methane.

One cost-effective way to reduce imported methane emissions is by tackling super-emitters, which can be detected and measured independently from space. Kayrros recently detected 83 super-emission events over a four-year period from the Hassi Messaoud gas field in Algeria.

Antoine Rostand, president of Kayrros, said that remote-sensing and earth-observation technology was key to identifying mitigation opportunities and gauging the impact of any measures introduced to bring down emissions.

> *“The conflict in Ukraine has changed the energy landscape in Europe,” he said.*
>
> *“We’ve seen a change in how and from where gas is imported and in the intensity of the methane imported. The overall methane intensity of gas imports is now lower in Europe, and that’s good news, even if there are stark differences in imported emissions between individual importers.*
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> *“Tackling super-emitters, which are plain to see via satellite imagery, is a relatively easy way to bring down imported methane emissions overall.*
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> *“What is also clear is that without independent, reliable, verifiable and near-realtime data, it’s very difficult to understand the exact effect that geopolitical upheaval, such as the conflict in Ukraine, has on imports, associated emissions, and global warming overall.*
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> *“It’s key that all climate action is informed by the latest and most reliable data.”*

Analysis of the kind undertaken by Kayrros is vital for getting an accurate understanding of greenhouse gas emissions worldwide. The findings can be counter-intuitive. The amount of gas imported and the methane emissions produced aren’t directly correlated, for example.

The methane intensity of the gas imported by large importers, including the UK, Belgium and Germany, is relatively small, Kayrros’ data shows.

Kayrros, recently named one of the world’s 100 Most Influential Companies by TIME, has played a major role in recent years in highlighting flaws in climate reporting and urging concrete action on methane emissions and so-called super-emitters in particular. Awards from the Financial Times and Fortune, among others, have specifically referenced the company’s work tracking methane.

Kayrros recently launched an open-access extension of its Methane Watch platform at COP28. The platform is an online, interactive map showing methane data and allows users to view, scrutinise and verify emissions data and expose ‘greenwashing’ from around the world. The data comes from two distinct satellites, revealing 5,645 methane super-emitters, including 3,320 from oil and gas, 874 from coal and 1,451 from human activity, such as waste and agriculture.

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About Kayrros:

Founded in 2016, Kayrros is a global digital measurement, reporting and verification (MRV) company and a world leader in environmental intelligence. Kayrros use satellite imagery, AI, and geo-analytics to help governments, investors and businesses understand the risks posed by the changing climate and energy landscapes and make more informed decisions.

Kayrros has offices in Paris, Houston, New York, London, Bangalore and Singapore. For more information visit www.kayrros.com