

Methane pollution at Slovakia's gas network and storage



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Full results: [Clean Air Task Force: Field Report: Slovakia Monitoring Report 2026](#)

Executive summary

In September 2026, global, Czech and Slovak environmental NGOs conducted the first independent survey of methane emissions at Slovakia's gas industry since the entry into force of the European Methane Regulation in 2024.¹ The organisations noticed positive developments regarding the methane emissions compared to the survey conducted in 2022, which was before the regulation took effect.² The Regulation makes methane management an operational compliance requirement: fossil fuel companies must routinely detect and repair leaks, quantify and report emissions, and comply with restrictions on flaring and venting. The findings highlight the significance of the issue in the country: 71% of the 35 surveyed gas sites across the Bratislava and Trnava regions showed evidence of methane emissions using a specialised infrared camera. Sources of leaks varied from very small to large enough to compel the survey team to contact the emergency line. Around 80% of the emissions documented were fugitive (unintentional leaks) or originating from pneumatic equipment, and 20% were cases of vented emissions from vent stacks, and in limited quantities. A large number of these emissions could be avoided through improved equipment and monitoring standards, which can bring both economic and environmental benefits, while also improving workers' safety. Against this backdrop, the lack of visible evidence that LDAR surveys are being routinely conducted is a serious concern. The organisations urge the Slovak government, in particular the Main Mining Office, to fully implement the European Methane Regulation without delay.

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¹ European Parliament, Council of the European Union, [Regulation \(EU\) 2024/1787 of the European Parliament and of the Council of 13 June 2024 on the reduction of methane emissions in the energy sector and amending Regulation \(EU\) 2019/942](#), 13 June 2024

² Greenpeace Slovakia, [Na stope metánu](#), 22 April 2022

Introduction

From September 10 to 14, 2026, Clean Air Task Force (CATF), Friends of the Earth-CEPA, and Klimatická koalícia, together with Centrum pro dopravu a energetiku and Greenpeace Slovakia, gathered evidence of methane emissions from the Slovak gas midstream industry. CATF detected a large number of methane emissions across the Western part of the country, by the border with Czechia and Austria.

It is the first time that an independent survey has been conducted in the country since the entry into force of the European Methane Regulation (EUMR) in 2024.³ Some of the sites were surveyed in 2022 by CATF and Greenpeace Slovakia.⁴

The EUMR applies directly across the EU and covers, among many other kinds of facilities, natural gas transmission and underground storage facilities such as those surveyed in Slovakia. It requires operators to prepare leak detection and repair (LDAR) programmes, survey equipment at set intervals, repair leaks above applicable thresholds and verify that repairs are effective. Operators must also monitor and report methane emissions at source and site level, and prevent and minimise emissions, including by observing restrictions on venting and flaring. In practice, these obligations make regular inspections, reliable emissions data, timely maintenance and effective regulatory oversight central to the operation of the facilities covered by this campaign.

The organisations visited compressor, regulation, and metering stations along the central pipeline corridor operated by Eustream, as well the interconnectors with Austria and Czechia. They also visited parts of the underground gas storage facilities of Western Slovakia, operated by Nafta. This brief synthesises the results of the field campaign. The complete technical report, site by site, put together by CATF is available [here](#).

Why methane

After carbon dioxide (CO₂), methane (CH₄) is the second most significant greenhouse gas contributing to climate change. However, its impact is far greater: during the first 20 years after its release into the atmosphere, a tonne of fossil methane is up to 82.5 times more potent at warming the planet than a tonne of CO₂.⁵ Methane is responsible for approximately one-third of global warming to date, accounting for a temperature rise of about 0.5°C compared to pre-industrial levels.⁶ Methane is the main component of natural gas. In the energy sector, it is released mostly from facilities in the oil and natural gas value chain, and from coal mines. The energy sector—including oil, natural gas, coal, and bioenergy (biomass combustion) — accounts for more than 40% of methane emissions from human activity and offers some of the best opportunities to reduce these emissions.⁷

³ European Parliament, Council of the European Union, [Regulation \(EU\) 2024/1787 of the European Parliament and of the Council of 13 June 2024 on the reduction of methane emissions in the energy sector and amending Regulation \(EU\) 2019/942](#), 13 June 2024

⁴ Greenpeace Slovakia, [Na stope metánu](#), 22 April 2022

⁵ Intergovernmental Panel on Climate Change (IPCC), [Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report, Chapter 7: “The Earth’s Energy Budget, Climate Feedbacks, and Climate Sensitivity”](#), 1017, 2021

⁶ Intergovernmental Panel on Climate Change (IPCC), [Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report, Chapter 7: “The Earth’s Energy Budget, Climate Feedbacks, and Climate Sensitivity”](#), 7, 2021

⁷ International Energy Agency (IEA), [Global Methane Tracker 2026](#), 2, May 2026

Preliminary remarks: methodology, constraints, and limitations to the detection campaign

The footage documenting methane pollution cases was made and prepared by Théophile Humann-Guillemot (CATF).⁸ He is a trained thermographer, certified level 1 (ITEMA), using an Optical Gas Imaging (OGI) GF320 infrared camera by FLIR.⁹

OGI results are qualitative and are not used in this report to quantify emission rates. The magnitude of a source of emission can be empirically assessed in qualitative terms such as small/large. Non-detections should not be interpreted as proof of absence of emissions, as detectability depends on operating conditions, distance, background contrast, wind, humidity, and line-of-sight constraints. The fieldwork campaign was performed from publicly accessible land, outside the fenceline, and therefore did not give the thermographer viewpoints maximizing the probability of detecting emissions.

The detection campaign covered 35 gas sites over 350 km, which represent only a small fraction of the Slovak gas network.

Key numbers and observations

The team visited 35 gas sites operated by Nafta (24), Eustream (8), and Pozagas (3), across the Bratislava and Trnava regions. The main results include:

- methane emissions identified at 25 out of the 35 sites visited . With 71% of sites with methane emissions, Slovakia finds itself in the European average of 2023 CATF synthesis report.¹⁰ However, the report was written prior to the adoption of the European Methane Regulation aiming at the reduction of voluntary and fugitive methane emissions.
- A total number of 49 sources were documented with various sizes. Of the leaks, the team documented sources from very small to large enough that it led the team to reach out to the emergency line for 2 sites. Some sites had more than 5 fugitive sources simultaneously, and the most common leak observed concerned poorly sealed valves. Similar observations have been made during previous fieldwork by CATF, confirming that the source is a systemic problem across oil and gas infrastructure. These emissions can be effectively addressed through a combination of well-performed leak detection and repair (LDAR) programmes, routine maintenance, and upgraded valves.
- Close to 80% of the emissions documented were fugitive (unintentional) or originating from pneumatic equipment, and only 20% were cases of venting (voluntary releases) from vent stacks, and in limited quantities. This ratio has evolved compared to previous detection campaigns led by CATF in 2021, 2022, and 2023 (prior to the ban on routine venting and flaring) where the majority of sources documented were from venting.
- While the European Methane Regulation imposes an obligation to conduct leak detection and repair (LDAR) surveys, Clean Air Task Force and Priatelja Zeme - CEPA did not observe any tag¹¹ characteristic of an inspection. In comparison, CATF observed tags indicative of

⁸ Clean Air Task Force, [Théophile Humann-Guillemot](#), accessed 8 October 2026

⁹ Clean Air Task Force, [Filming methane pollution from the oil and gas sector](#), accessed 8 October 2026

¹⁰ Clean Air Task Force, [It Happens Here Too: Methane Pollution in Europe's Oil and Gas Network](#), 7 May 2023

¹¹ LDAR tags are labels, typically attached to a component such as a valve, flange, or connector, to indicate that it has been inspected for leaks. It usually records the inspection date and, where a leak was found, its status or repair details.

leak detections in every other visited country (France, Romania, Germany) since the entry of the LDAR provisions from the regulation into force. And they were found at both oil and gas, upstream and midstream facilities.

Selected representative cases of methane pollution

West-East gas corridor (Eustream) and Slovakia-Austrian interconnector

The locations surveyed included the interconnector at Brodské to Trnava via the Compressor Station of Lakšárska Nová Ves. CATF documented methane emissions at the 5 sites visited on this section of the pipeline. Additionally, the team surveyed three locations on the Slovak side of the interconnector with Austria, in the village of Vysoká pri Morave, and found emissions at two of them.

One particular type of gas-powered pneumatic device showed emissions at every location visited. The valve controller on high pressure segments of the gas pipeline (see below) was venting-by-design at five different locations.



Fig.1: Valve (venting-by-design) - Regulation station 1 Vysoká pri Morave [\[video link\]](#)

Underground gas storage facilities of Láb and Gajary

The survey focused on the above-ground wellheads at the two underground gas storage facilities. A total of 22 wells were surveyed, 13 of which showed active emissions. The most common source of emissions (16 individual sources documented) originated from leaks on poorly sealed valves and gauges.

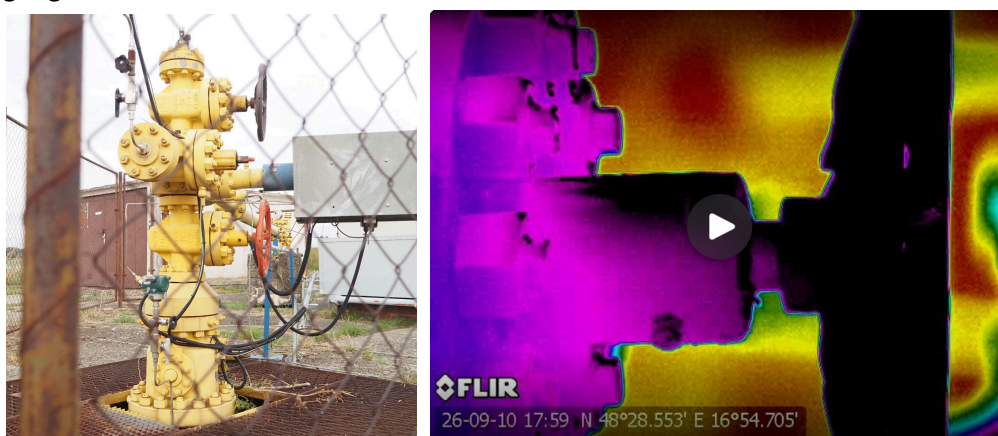


Fig. 2: Leaking wellhead - Well GaZ55 in Gajary [\[video link\]](#)

Two cases of emissions were documented with large fugitive emissions diffusing from the cellar or casing (Z11 and Z09). In the case of Z11, the emergency hotline was called because the emissions were documented crossing the fenceline surrounding the wellhead, with diffuse methane escaping at the base of the fence posts. The team also documented a large significant leak from a manual valve at the regulation station Plavecký Peter, which also led the team to call the emergency hotline.

Čistiaci uzol plynovodov ZS1 DN700, ZS3 DN700, CA DN900 (Jakubov)

The team documented emissions from two poorly sealed scraper traps at this pipeline launcher and receiver station. The utilization of scrapers (“pigging”) is a routine practice used to clean and inspect pipelines by removing liquids and debris. Because each pigging operation requires depressurizing and opening the trap, gas can be released during these operations, and worn seals or improperly closed doors can cause continuous leaks like the one below.



Fig. 3: Pig trap - Čistiaci uzol plynovodov Jakubov [\[video link\]](#)

Conclusions

The organisations noticed the positive effects of the European Methane Regulation with regards to venting emissions reduction: less emissions vented from stacks were documented in Slovakia compared to the 2022 survey.

There is still a long way to go for operators: the detection rate (71%) and average number of sources of emissions per site with emissions (1.9) remains high. In addition, the absence of signs indicating LDAR surveys are being conducted is worrying, and should be a priority for both the state's authorities and independent inspections to ensure the requirements of the European Methane Regulation are being implemented by the operators.

A large number of emissions could be avoided via better equipment standards, in particular the pneumatic devices emitting large plumes of methane on the midstream pipeline indicate that the zero venting-by-design equipment is yet to be implemented in the country.

The use of best available techniques and technologies to perform LDAR programs should be reinforced to increase the detection rate of emissions and minimize the impact of sources over time.¹²

The European Methane Regulation is an effective and realistic policy that has strong potentials to enhance workers safety, fight against climate change, and protect public health. Around 70% of methane emissions from the fossil fuel industry could be avoided thanks to existing technologies, often at low cost and 30% of existing emissions could even be avoided without any cost because the cost to reduce the emissions are below the value of the gas saved, that could be sold.¹³

Organisations

Clean Air Task Force (CATF) is a global nonprofit organisation working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies. With 30 years of internationally recognized expertise on climate policy and a fierce commitment to exploring all potential solutions, CATF is a pragmatic, non-ideological advocacy group with the bold ideas needed to address climate change. To this date, CATF has inspected more than 1300 oil and gas industry locations across 23 countries around the world.

Priatelía Zeme – CEPA is a Slovak civic association that protects nature, promotes social justice, supports balanced regional development, and strengthens citizen participation.

Klimatická koalícia is an independent group of Slovak organisations and initiatives dedicated to addressing climate change.

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Photos and videos: Théophile Humann-Guillemot, CATF

Cover photo: Viera Minarovičová

¹² Clean Air Task Force, [A Policymaker's Guide to Implementing Leak Detection and Repair for Methane Mitigation](#), 30 June 2026

¹³ International Energy Agency (IEA), [Global Methane Tracker 2026](#), 8, May 2026