

A project lead by 14 European gas infrastructure operators and associations will boost new technologies to curb methane emissions

- The project lead by GERG and Enagás, with the participation of 14 European Gas Infrastructure Operators and Gas Associations, aims to improve the knowledge on and the use of new technologies to quantify and drastically reduce methane emissions in midstream infrastructures.
- The initiative is based on the development of blind controlled release tests that has successfully taken place last week in Spain.

October 13th 2021. The European Gas Research Group (GERG) has kick-started a first-of-its-kind research project to test the most promising site level technologies to quantify methane emissions in midstream assets, thereby reaffirming the crucial role of gas infrastructures in the energy transition.

The project is coordinated by the Spanish Transmission System Operator Enagás and supported by Bureau Veritas, as field coordinator, with the participation of other 13 European Gas Infrastructure Operators and Gas Associations: Danish Gas Center, Gassco, Gasunie, GERG, GRTgaz, Medgaz, National Grid, Open Grid Europe, Snam, Storengy, Sedigas, Synergrid and Uniper.

This initiative is in line with the objective of the European Commission to develop legislation before the end of 2021 to improve quantification and reduce methane emissions in the energy sector.

Moreover, this initiative will help European energy companies' strategy to obtain the OGMP 2.0 gold standard, a voluntary initiative coordinated by the United Nations environmental Program (UNEP). This work will demonstrate the efforts that the midstream gas sector is doing to improve the quantification of their methane emissions, with a view to bringing them down based on the knowledge acquired during this exercise.

The energy sector considers the minimization of methane emissions as an opportunity to actively contribute to short-term mitigation of climate change, accelerate environmental commitments and further enhance the environmental value of natural gas and gas infrastructures. Gas operators remain more than ever committed to deliver EU Green Deals' objective. This is a strategic project to ensure that methane emissions are adequately quantified and thus will be useful to guarantee that further methane reductions are achieved.

New Top-Down Technologies

This project seeks to provide participants further knowledge on how to use new top-down and site level technologies for greater accuracy, since the gas industry is normally using the bottom-up approach to detect and quantify methane emissions. The top-down approach can provide comprehensive information about emissions at a site or in a region, whilst bottom-up approach focuses on individual sources and equipment.

For the blind tests, the most promising technologies have been selected according to the results of a previous GERG project lead by RICE (Research and Innovation Center for Energy of GRTgaz), where a state-of-the-art study of site level technologies was developed.

This project has tested the behavior of 12 cutting-edge different technologies (9 top-down and 3 bottom-up), including fixed and mobile platforms last week, to assess their accuracy and reliability for methane emissions quantification.

The blind tests with controlled leaks has successfully taken place, and has been carried out with different flow rates at the Enagás infrastructure in Spain. The next phase of this project will be implemented in LNG regasification terminals, underground gas storages and compressor stations in different European countries, in order to observe the behavior in real sites of some of these technologies.

Advisory Board Members

The project counts with an advisory board to validate the scope and test program and to check the results. This board is composed by experts on this matter recognized at international level from Authorities and Institutions, Academia, Industry and Civil Society organisations.

An independent analysis of the results will be carried out for the study by the French laboratory LSCE, to produce a public report and a scientific publication. A set of recommendations on the best available technologies to be used for the midstream assets will also be developed. This will be used in a future phase of the project involving measurements on midstream sites.

About the gas infrastructure operators and gas associations:

Danish Gas Technology Center (DGC) is a specialized consulting and development company within energy and environment. DGC's main focus area is gas utilization. DGC offers consulting services, research and development, laboratory testing, measurement, demonstration projects, and training. DGC participates in Danish and international research projects, thereby continually updating its knowledge and methods. Participation in the work on international technical regulation in the gas utilization field keeps DGC up to date with current rules and standards in the energy and environment sector. DGC's laboratory holds accreditations according to EN ISO/IEC 17025:2017 and DGC Certification is Notified Body authorized to test and to approve appliances burning gaseous fuels according to the EU Gas Appliances Regulation (GAR 2016/426) with the aim of CE certification.

Enagás is a Transmission System Operator (TSO) with 50 years' experience in the development, operation and maintenance of energy infrastructures operating in eight countries: Spain, United States, Mexico, Chile, Peru, Albania, Greece and Italy. The company has more than 12,000 kilometres of gas pipelines, three strategic storage facilities and eight regasification plants. In Spain, it is the main natural gas transmission company and the Technical Manager of the Gas System. Enagás is committed to achieve carbon neutrality by 2040 and has a firmly commitment to the decarbonisation process. The company is bounded to the development of projects to promote renewable gases –green hydrogen and biomethane–, sustainable mobility and energy efficiency, among other areas. The company is the world leader in its sector in the Dow Jones Sustainability Index (DJSI), according to the latest edition of this index, and has received the highest score so far in Spain from S&P Global Ratings in the field of ESG (sustainability, social and governance criteria) in all sectors.

Gassco is the independent system operator (ISO) for the integrated system for transporting gas from the Norwegian continental shelf to other European countries. This gas transport system consist of 9000 km of subsea pipelines, gas processing plants, offshore riser platforms and receiving terminals in the UK, France, Belgium and Germany. Gassco's operatorship confers overall responsibility for running the infrastructure on behalf of the owners to ensure safe and efficiently gas transport to millions of people. Gassco is also the architect for developing new gas infrastructure on the Norwegian continental shelf.

Gasunie is a European energy-infrastructure company. Gasunie's network is one of the largest high-pressure pipeline networks in Europe, comprising over 17,000 kilometres of pipeline in the Netherlands and northern Germany. Gasunie provides natural and green gas transport services through its subsidiaries, Gasunie Transport Services B.V. (GTS) in the Netherlands and Gasunie Deutschland in Germany. With its cross-border gas infrastructure and services, Gasunie facilitates TTF, which has become the leading European gas trading point. Gasunie also provides other gas infrastructure services, including gas storage and LNG. Gasunie wants to help accelerate the transition to a CO₂-neutral energy supply and believes that gas-related innovations, for instance in the form of renewable gases such as hydrogen and green gas, can make an important contribution. Both existing and new gas infrastructure play a key role here. Gasunie also plays an active part in the development of other energy infrastructure to support the energy transition, such as district heating grids.

GERG, the European Gas Research Group, is an international association established in 1961 and based in Brussels that focuses on five strategic areas: hydrogen, biomethane, methane emissions, LNG, and infrastructure and end-use. GERG members deliver collaborative projects that maximise the value of gas research carried out in Europe. The Group provides a forum for discussion, technological exchange and information dissemination. Committees of technical experts, drawn from our member organisations, meet on a regular basis to exchange ideas, establish collaboration and monitor GERG projects. The Group also strives to raise awareness about the importance of gas R&D in Europe's energy transition, by communicating our findings towards European officials and the wider public.

GRTgaz is Europe's second-largest gas carrier, with 32,500 km of pipes and 640 TWh of gas transported. The company has 3,000 employees and generated nearly €2.3 billion in turnover in 2020. The GRTgaz [core purpose is](#): "Together, we enable an energy future that is safe, affordable and climate neutral". GRTgaz is an innovative company undergoing a major transformation to adapt its network to new ecological and digital challenges. It is committed to a 100% carbon-neutral French gas mix by 2050. It supports the hydrogen and renewable gas sectors (biomethane and gas from solid and liquid waste). GRTgaz carries out public service missions to guarantee the safety of gas transmission for its 945 customers (shippers, distributors, industrial companies, biomethane plants and producers). With its subsidiaries [Elengy](#), the European leader in LNG terminal services, [and GRTgaz Deutschland](#), operator of the MEGAL transmission network in Germany, GRTgaz plays a key role in the European gas infrastructure scene. The company exports its know-how internationally, in particular services developed by its research centre, [RICE](#).

Medgaz is a Transmission System Operator in charge of operating the direct gas pipeline Algeria-Europe via Spain. Medgaz started the activity on April 2011, with a capacity of 8 BCM/year of natural gas and without interruption since then. Expansion project will increase the capacity up to 10 BCM/year in 2021. Medgaz operates the system comprising a compression station in Beni-Saf, Algeria, an offshore pipeline from Almeria to Spain and a reception terminal in Almería. The marine pipeline technical data is: 210km, 24 inches and maximum depth of 2.165m. Medgaz, respectful of the environment, is applying best practices and looking for technical and procedure improvements to help to preserve our surroundings.

National Grid Gas Transmission owns and operates the gas National Transmission System in Great Britain, with day-to-day responsibility for balancing supply and demand. Our network comprises approximately 7,630 kilometres (4,750 miles) of high-pressure pipe, 23 compressor stations and more than 600 above-ground installations. Today, natural gas keeps 85 per cent of the UK's 28 million homes warm and comfortable, generates electricity and fuels industrial and manufacturing processes. We aim to serve customers well and efficiently, supporting the communities in which we operate and making possible the energy systems of the future.

Open Grid Europe (OGE) is one of Europe's leading transmission system operators. With our approximately 12,000 kilometers of pipeline network, we transport gas throughout Germany and, due to our geographical location, we are the link for gas flows in the European internal market. Our approximately 1,450 employees stand for security of supply. We make our network available to all market participants in a non-discriminatory, market-oriented and transparent manner. We shape energy supply. Today and in the energy mix of the future. For more information on the company, visit [www.oge.net](#).

Snam is one of the world's leading energy infrastructure operators and ranks among Italy's largest listed companies, by market capitalization. Through its international footprint, Snam operates in Albania (AGSCo), Austria (TAG, GCA), France (Teréga), Greece (DESFA), Italy, UAE (ADNOC Gas Pipelines) and UK (Interconnector UK) and has started activities in China and India. Snam is also one of the leading shareholders in TAP (Trans Adriatic Pipeline). The Group has the largest natural gas transportation network (over 41,000 km including international assets) and storage capacity (approx. 20 bcm including international assets) among its European peers and is also a leading player in regasification, through the LNG terminal in Panigaglia (GNL Italia) and its stakes in the Livorno (OLT) and Rovigo (Adriatic LNG) terminals in Italy and in the Revithoussa (DESFA) terminal in Greece. Snam also invests in energy transition businesses: biomethane, energy efficiency, sustainable mobility and hydrogen. The company also operates in forestation and is committed to achieving carbon neutrality (Scope 1 and Scope 2 CO₂ eq emissions) by 2040.

Storengy, an ENGIE subsidiary, is one of the world leaders in underground natural gas storage. Drawing on 60 years of experience, Storengy designs, develops and operates storage facilities and offers its customers innovative products. The company owns 21 natural gas storage sites with a total capacity of 136 TWh in France, Germany and the United Kingdom. Storengy is positioned today as a key player in the development of geothermal energy (heat/cold production and power generation), as well as innovative production and storage solutions for renewable gas (biomethane, hydrogen, synthetic methane).

Sedigas is the association representing the Spanish companies involved in the transmission, distribution and retail sale of gas. It aims to strengthen the role of gas in a sustainable energy mix promoting the development of renewable gases, while encouraging competitiveness and enhancing security of supply.

Press Release

Synergrid is the federation of electricity and gas system operators in Belgium. As an exchange platform, the federation primarily represents the interests of its members towards the public authorities and other bodies, promotes the core activities of its members aimed at efficient and secure network management and provides high quality services to the network users. Synergrid is the sector's reference in the field of standardization and technical regulations, but also in social matters, by ensuring coordination on sectoral social issues.

Uniper is an international energy company with around 12,000 employees in more than 40 countries. The company plans to make its power generation CO2-neutral in Europe by 2035. With about 35 GW of installed generation capacity, Uniper is among the largest global power generators. Its main activities include power generation in Europe and Russia as well as global energy trading, including a diversified gas portfolio that makes Uniper one of Europe's leading gas companies. In 2020, Uniper had a gas turnover of more than 220 bcm. Uniper is also a reliable partner for municipalities, public utilities, and industrial companies for developing and implementing innovative, CO2-reducing solutions on their way to decarbonizing their activities. As a pioneer in the field of hydrogen, Uniper is active worldwide along the entire value chain and is implementing projects to make hydrogen usable as a mainstay of energy supply. The company is headquartered in Düsseldorf and currently the third-largest listed German utility. Together with its main shareholder Fortum, Uniper is also the third-largest producer of CO2-free energy in Europe. All expertise in underground gas storage is pooled in Uniper Energy Storage that operates natural gas storage facilities in Germany, Austria and the UK with a working gas capacity of over 7.5 billion cubic meters and makes a key contribution to security of supply.

