OPERATIONAL EXCELLENCE

Detection & Quantification of gas emissions

YOU ARE

- **Operators of gas infrastructures** (transmission, distribution, storage, LNG terminals) wishing to carry out a precise audit of their greenhouse gas (GHG) emissions.
- **Producers or users of biomethane, biogas or synthesis gas**, qwho need to comply with regulatory requirements in terms of environmental footprint.
- **Industrial consumers of natural gas** wishing to carry out an audit of their GHG emissions, identify and quantify sources of fugitive emissions, and define an LDAR (Leak Detection And Repair) strategy tailored to your needs.
- …

YOUR CHALLENGES

Although gas is the least polluting of the carbon energies, reducing greenhouse gas (GHG) emissions is a major environmental challenge for gas network operators and their customers. Given the particularly high impact of natural gas, biogas, syngas and other synthetic methane on global warming, it is essential to limit their emissions as much as possible before they are used. The progressive tightening of regulations echoes these observations, and is pushing manufacturers to reduce their environmental footprint ever further.

To achieve these emission targets, it is essential to have state-of-the-art detection and quantification tools to detect ever-lower emission levels, as well as robust test protocols to implement effective leak detection and repair strategies with the best performance/cost ratios.

OUR RESOURCES

NaTran R&I's expertise in the field of emissions detection and quantification is based on recognized expertise and know-how:

- Expertise in emission detection and quantification equipment on the market and under development. Advantages / disadvantages / points of attention and challenges of the various technologies employed
- Expertise in quantification methods and their implementation, both top-down (drone, camera, satellite, light barriers, etc.) and bottom-up (bagging and high-flow sampling).

- LDAR (Leak Detection And Repair) strategy expertise

- Prototyping and development of test equipment & specific detection methods combined with quantification equipment depending on the issues, flow rates and configuration of leaks & sites.
- Performance evaluation of detectors/ analyzers/quantification tools on multi-scale test benches: lab/pilot/field
- Access to a network of international experts
- Access to specific technical and bibliographical resources, as well as high-performance monitoring tools

NaTran R&I has **state-of-the-art industrialized equipment and analysis resources** specific to the problem:

- Numerous detectors using a variety of technologies (IR, laser, etc.) for both contact and remote sensing
- ppb RKI detector (same as NASA's!)
- A prototyping laboratory to bring an idea/ concept to life

- Numerous laboratories, dedicated test benches & pilot installations for qualifying & testing equipment
- Various High-Flow Sampler prototypes for which we hold the associated patents

OUR REFERENCES

- Recommendations and drafting of the LDAR roadmap for various gas infrastructure operators.
- Detection and quantification of emissions at various gas infrastructure operator sites and networks.
  - ➔ Exhaustive detection of leaks on all facilities
  - ➔ Quantification of emissions using recognized and approved methods.
  - ➔ Interpretation of results and recommendations for action

- Studies and benchmarking on issues related to natural gas detection using bottom-up & top-down methods
- Recommendations and feedback on the use of detection and quantification equipment
- European test campaigns & active participation in associated workgroups
- Development of “custom” prototypes based on identified problems, and filing of associated patents
- Communications on this topic at international conferences

YOUR CONTACT

Cristina LOPEZ LAZARO Detection Engineer

Tél. : +33 (7) 63 63 54 34
Email : cristina.lopez@natrangroupe.com

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