

## Gas Sensors Workshop Press Release

On 27<sup>th</sup> February **MARCOGAZ**<sup>1</sup> and **GERG**<sup>2</sup> jointly organized a workshop in Brussels on the subject of sensors in the Gas Industry, with a specific focus on gas quality sensing, measurement and control. The event was a great success with over 60 attendees from a broad range of industrial and academic concerns.

The context of the event was presented at the outset with presentations from the **European Commission** and from **GIE**<sup>3</sup>. The European Commission emphasized the importance of gas quality for realizing the Single European Energy Market. GIE illustrated how gas quality in Europe is changing as gas sources become more and more diverse, with new pipeline, LNG and renewable gases having widely varying gas quality. An illustration of the impact was given by Energinet.dk, who showed how step changes in heating value of gases of over 10% are now regularly seen at the Germany – Denmark border. It is vital to understand gas quality (and particularly Wobbe Index which is an important measure of combustion characteristics) in order to ensure safe combustion of natural gas. In turn cheap, fast and accurate sensors allied to effective measurement and control systems are vital to ensure that safe combustion is taking place and can be appropriately managed.



The subsequent sessions of the conference illustrated that there are **many options already in operation**, and **even more options for the future**. The relevant applications range from monitoring and control of distributed gas, through to control at the individual user level.

**Transport** is becoming a major application with the increasing success of natural gas (CNG and LNG) vehicles and ships. Collaborative efforts from OEMs and engine manufacturers to integrate sensors into a new fleet of heavy-duty vehicles were presented. This

<sup>1</sup> The Technical Association of the European Gas Industry [www.marcogaz.org](http://www.marcogaz.org)

<sup>2</sup> The European Gas Research Group [www.gerg.eu](http://www.gerg.eu)

<sup>3</sup> Gas Infrastructure Europe [www.gie.eu.com](http://www.gie.eu.com)

application may lead the way in creating a new market for mass production of small sensors, and new integrated chip based devices such as MEMS<sup>4</sup> are rising to the challenge.

For **domestic users**, integrating gas quality sensing and control into individual appliances, especially boilers and waters heaters is an ambition that has so far only been realized in very small numbers. One early need is a cheap Wobbe meter which can be used by gas installers to check gas quality at point of use.

**Pipeline solutions** may move away from the expensive total gas analysis chromatography based systems towards cheaper correlative type devices. These can be installed at the increasing number of entry points, and give sufficient confidence in the main quality parameters. Here regulatory rather than technical hurdles need to be overcome to ensure their widest use.

The number of diverse technical approaches to sensor development; demonstrate that this is a field which is **not short of possible technical solutions**. The workshop has shown that there is an important need by the sensor industry for information from the Gas Industry on gas quality variations, and application specifications for sensors in the industry. Therefore it is important for the Gas Industry to convey the correct messages to potential developers, manufacturers and integrators, so that the solutions will meet the needs. With this in mind, the Workshop organisers will continue to work closely together in coming weeks to define next steps and an action plan and roadmap that can be communicated back to the sensor community.



***Sensors seem to offer solutions to a number of challenges that gas quality variation will bring. The workshop is a first step for a joint industrial effort toward solutions to manage these variations automatically and with increased confidence.***

**N.B:** Presentations are available at <http://www.marcogaz.org/index.php/gas-sensors-workshop-2014>

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<sup>4</sup> Micro Electrical Mechanical Systems