

GIE Position Paper:

- **Responsibility and Cost Allocation for Gas Quality**
- **Implementation of a new Gas Standard**

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What is GIE?

Gas Infrastructure Europe (GIE) is an association representing the sole interest of the infrastructure industry in the natural gas business such as Transmission System Operators, Storage System Operators and LNG Terminal Operators. GIE currently has 70 members in 25 European countries.

GIE is a representative organisation towards the European Institutions (European Commission, European Parliament, Council of the European Union) as well as the European bodies of regulators (ACER, CEER) and other stakeholders.

One of the objectives of GIE is to voice the views of its members vis-à-vis the European Commission, Regulators and other stakeholders. Its mission is to actively contribute to the building of a single, sustainable and competitive gas market in Europe underpinned by a stable and predictable regulatory framework as well as by a sound investment climate.

Introduction

GIE supports the general objective of the European Commission in the area of gas quality standardization, as gas quality plays a major role in the interoperability of gas systems and the free flow of gas across Europe. Therefore, GIE is committed to contribute to and participate in all the current work activities on gas quality (CEN Mandate M/400, CEN Mandate M/475, Cost/Benefit Analysis, Pilot Study, etc.). Moreover, GIE is open to cooperate with the European Commission in the development of the Gas Quality Roadmap.

For these reasons GIE published a position paper on gas quality in December 2011 (Ref.: 11GIE129)¹. This document does not include figures for each parameter, but includes an overview of the possible impacts of each component in the infrastructures GIE represents.

Currently different natural gas qualities across Europe exist depending largely on the different sources of gas. Furthermore, with the declining European natural gas production and the expected increase in demand in the coming decades, Europe's import dependency is likely to grow, potentially diversifying the sources and quality of gas used. Moreover, the development of renewable energy sources like biomethane is also increasing due to the current legislative framework (Renewable Energy Directive) and it is expected that they will be injected into the European gas system as an additional and renewable energy source, promoting indigenous production, supporting commitments towards sustainability, diversifying energy sources and contributing to security of supply.

¹ http://www.gie.eu/index.php/publications/doc_download/231-gie-position-paper-on-gas-quality

It is normal that new gas production and the development of renewable energies may bring the need for the installation of gas treatment facilities due to the inherent differences in gas quality and the need to meet current specifications as this is currently the case. However, this could be partially mitigated if a revised gas quality standard in Europe is implemented with specifications as wide as safely and technically possible. Also it should be noted that currently there are some Member States capable of receiving a wide range of different gas qualities and users that are capable of consuming the gas without any problems. Furthermore, industrial users have been able to maintain good operating efficiencies through increased monitoring instrumentation and control systems, and some infrastructure operators give advanced notice of gas quality variations.

GIE would like to highlight that it is very important to clearly-define the responsibility for gas quality at this time.

Safety and technical considerations

The first priority of this initiative is safety and it is important to recall that gas infrastructure operators are responsible for the safe operation of their facilities in order to ensure the security and continuity of gas deliveries. As gas quality is one of the factors impacting the functionality of gas infrastructures, it is vital that in the development of any new gas quality standard its parameters should have ranges as wide as safely and technically possible, with the safety case or technical justification for each range clearly documented and published with the standard. A gas specification should not be set on the basis of historic values unless supported by a safety or technical justification.

As highlighted in our paper 11GIE129, changes in gas quality specification including the introduction of new parameters may potentially endanger end users and the integrity of the gas infrastructure system (e.g. corrosion, growth of microbes, abrasion, etc). Any changes must not compromise the proper functioning and safety of infrastructure facilities and certain new parameters may need to have the level of technically free² in the future standard.

Cost efficiency and responsibilities

Where possible, the implementation of the new gas quality standard should not introduce unnecessary additional complexity or costs with each parameter having as wide a range as safely and technically possible to encourage new supplies and to lower treatment costs for gas quality adjustments in order to assist producers/shippers to deliver on grade gas.

Generally both natural and renewable gas production requires some degree of treatment upstream at source in order to meet current gas quality specifications, prior to injection into the European gas system. Examples include the removal of Natural Gas Liquids³ (NGLs) that affect Wobbe Index, or the removal of hazardous parameters. However, the extent of the gas treatment will depend upon several factors including the design of the process equipment, the operating environment and, particularly in the case of NGLs, whether it is economic to market these products. Gas will be supplied to Europe with a higher Wobbe Index if the NGLs can't be physically removed at the upstream production and processing facilities or if it does not make economic sense to do so.

² Technically free means the concentration of a component which will neither damage nor impact gas appliances, gas metering components and/or gas infrastructure components.

³ Natural Gas Liquids (NGLs) are naturally occurring hydrocarbons found in natural gas, and include ethane, propane and butane, amongst others

Further processing of the gas downstream would not be economic as the amount of NGLs extracted would be very small and the problem could be exacerbated if the supply is commingled with other gas increasing the volume requiring processing.

In view of this, the responsibility for quality compliance generally lies with the owners (producers/shippers) of the gas being brought into the European gas system, as it is today, aided by the adoption of specifications as wide as safely and technically possible or facing financial consequences of adjusting the gas quality. The installation of further gas treatment facilities should not be an obligation for the gas infrastructure operators and they should not be exposed to bearing the underlying financial and operative risks of the installation of such facilities.

It should be noted that the European Commission prepared a non-paper on a Gas Quality “Roadmap” presented at the XXI Madrid Forum (22-23 March 2012), which includes a section on “binding rules on information provisions for gas quality fluctuations”. GIE believes the information needs of the different end users should be studied on a case by case basis and that information provisions should be tackled at a national level. Moreover the operators may not have all the relevant information on gas quality fluctuations.

Implementation of a new gas standard

Consistent with GIE position paper 11GIE129, the harmonised gas standard with ranges as broad as safely and technically possible for each component should be adopted by as many Member States as possible in order to:

- Maintain safety standards in the gas industry.
- Improve market connectivity and ease of doing business in Europe, promoting a single European gas market.
- Minimize additional costs in the gas supply chain.
- Increase security of supply by providing access to as many sources of gas as possible.
- Increase Europe’s competitiveness in the global gas market.

As current gas quality specifications throughout the Member States vary considerably it is impractical to expect a single gas quality standard could be applied in the near-term. A long-term transition period should be allowed. This would help Member States manage any issues with domestic appliances that are not GAD⁴ compliant or have been adjusted away from their factory settings or have not been subject to regular maintenance. During the transition period the manufacturers of domestic appliances and gas consuming hardware may also be able to develop new designs and technology to better operate with a wider range of gas qualities, noting that some Member States already have and operate with a wide Wobbe Index range.

To further assist with the standardisation of the Wobbe Index, GIE supports Marcogaz’ and EASEE-gas’ initiative to establish a pilot study with some Member States that already operate with similar Wobbe Index ranges and are willing to study the adoption of a common gas quality specification, in order to identify practical issues for the implementation of a new standard and update CEN TC234 WG11 *et al* on a regular basis. As a key stakeholder GIE is happy to cooperate in and assist with identifying existing barriers to the adoption of a harmonization Wobbe Index range and identify Member State specific actions required to remove such barriers. The proposed Wobbe Index range⁵

⁴ Gas Appliance Directive 2009/142/EC

⁵ Basis of 15°C, 15°C 1013.25 hPa

is 46 to 54 MJ/m³, which is step 5 of the CEN/BT WG197 recommendations⁶ and, by setting a target, Member States can plan how to accommodate the range rather than allow existing boundaries set a specification.

⁶ See CEN/BT WG197 final report