

IGEM Gas Quality Specification for Conveyance of Group H Gases of the Second Gas Family – Request for comments

28 July 2020

About Energy UK

Energy UK is the trade association for the energy industry with over 100 members spanning every aspect of the energy sector – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership.

We represent the diverse nature of the UK’s energy industry with our members delivering almost all (90%) of both the UK’s power generation and energy supply for over 27 million UK homes as well as businesses.

The energy industry invests over £13.1bn annually, delivers around £85.6bn in economic activity through its supply chain and interaction with other sectors, and supports over 764,000 jobs in every corner of the country.

Energy UK welcomes the opportunity to provide comments on this draft standard and supporting documents. Comments on the draft standard itself are provided in the proforma attached.

Energy UK has participated in the IGEM gas quality working group and supports the progressive decarbonisation of the energy system. To date the generation sector has made significant progress, with increased renewable generation and a decline in coal fired generation. This has increased the importance of gas fired generation for baseload and flexible generation to manage intermittency to ensure security of electricity supply and provide ancillary services to the electricity system operator.

Energy UK also supports initiatives to decarbonise the wider energy sector where these are properly justified and have been subject to a robust impact assessment. The impacts on customers of all types; domestic, I&C and generation must be fully articulated, including whether there will be benefits to these consumers. Safety is, of course, of paramount importance for all users but wider operational, commercial and environmental consequences need to be considered as well, alongside security of supply and ensuring the attractiveness of the GB market for gas supplies.

Energy UK members can see both benefits and costs in the proposed changes to the gas quality standard but see this as part of a package of measures; including the standard moving to IGEM oversight and its future governance. However, we have concerns about the issues below:

- Lack of clarity over governance arrangements
- The lack of an impact assessment¹
- Lack of clear benefits to customers
- Insufficient recognition of the potential impact on gas-fired generation
- Unclear contribution towards decarbonisation of the energy system

Energy UK is therefore **unable** to support this package of change at this time

We provide detailed comments on this below:

Governance

It is important to understand the end to end process for changes to the gas quality specification. This focuses on the IGEM parts of that process but needs to be considered in the wider context, including the role of; HSE / Government, Ofgem, industry, producers, networks, consumers and other stakeholders.

There are a number of principles which support good governance²:

- Independence
- Openness and transparency
- Accountability
- Integrity
- Clarity of purpose
- Effectiveness

IGEM has published a document 'IGEM's Governance of industry recognised Standard - Gas Quality'³

This document outlines the steps from a proposal to change a standard to approval by the Technical Co-ordinating Committee (TCC).

Any party may submit a proposal to amend the standard, but beyond that, all steps are overseen by IGEM, including (it seems) the appointment of a chair of the Gas Quality Working Group (GQWG). The Chair is obliged to ensure that the make-up of the GQWG group represents the relevant industry sector (section 3.4.2). Much of the work is undertaken by the GQWG, followed by consultation with industry and further review by various IGEM technical committees (Gas Transmission and Distribution Committee GTDC, Gas Measurement Committee GMC and Gas Utilisation Committee GUC), for two weeks before approval by the TCC. After this the standard is published.

This process appears to face some challenges in relation to the principles above.

¹ Energy UK acknowledges that the HSE on behalf of government will undertake an impact assessment, we will comment further at that time.

² <https://www.ombudsmanassociation.org/docs/BIOAGovernanceGuideOct09.pdf>

³ IGEM/TSP/20/086

- All activities are overseen by IGEM, and there is no independent chair for the GQWG. There is no clear separation of roles and responsibilities. This does not fit well with principles of independence, accountability and integrity.
- Also, the roles of the GTDC, GMC, GUC, TCC are not clear, are they simply to review that internal processes have been followed or are they to review the detailed evidence in support of the change? If the latter, two weeks is a very short time to achieve this and clearly not adequate. Are there any voting arrangements? Is a majority sufficient or is unanimity required?
- Transparency is a major issue, which impacts all of the principles above. Agendas, minutes, attendees are not published for any of the Committees mentioned above, only for the GQWG. The process is completely opaque to anyone outside of these committees.
- Clarity of purpose is also somewhat vague as it seems a new standard may be published directly after TCC approval with no consideration of timescales for implementation, how this will be communicated to interested parties nor the timing of any potential veto by the HSE, whether that might be during or after IGEM processes
- Openness is also limited in relation to peer review. There is no certainty about how affected parties may be consulted. If the consultation list for this document is used there are many parties missing, including, Energy UK, Energy Intensive Users group, Major Energy Users Council, Oil and Gas UK, Gas Storage Operators Group, Chemical Industries Association.

Other observations:

IGEM has received funding via the networks innovation allowance to provide a secretariat function for the GQWG. How will funding be provided in the future? How will any additional studies that the GQWG may require be funded?

Is IGEM the most appropriate body to provide this function?

GS(M)R primary role are to ensure safety of the public, but there are wider issues relating to commercial, operational and environmental impacts that need to be considered for each potential change. Stakeholders need to understand where these will be articulated and trade-offs made. Essentially will there be an impact assessment for each future change and what is the framework for that?

Network and individual industrial site safety cases may also need to be revised following each change.

The GMAP gas quality project which forms part of National Grid's Future of Gas work, has identified that an understanding of the end to end processes with respect to UNC and Network Entry Agreement (NEA) changes once a new standard has been established would be helpful. It would be even more helpful to incorporate the steps leading to the new standard (and its revision) as well, to provide better understanding of the entire end to end process.

Impact assessment

Energy UK recognises that HSE will be leading the impact assessment work on behalf of government, but we would like to make some observations on the Evidence report published alongside the draft standard.

- The Preamble suggests that the proposed IGEM standard will be a *dynamic framework for changes in gas quality*. Whilst we understand that further changes are anticipated, a standard, by its very nature, should not be *dynamic*. In particular, as changes will need to ensure safety is not reduced the evidence case will be high and not something that should change frequently.
- The evidence report does not clearly separate the changes being considered here and anticipated future changes. The casual reader could find this confusing. An example is increasing the hydrogen limit to enable a hydrogen blend
- The report attempts to link the proposed changes to the decarbonisation pathways to net zero, but this is somewhat tenuous, and only provides a one-sided view. A wider Wobbe range is likely to reduce the processing of gas at certain entry points, so there maybe emissions savings relating to the energy used for processing. However, the quantification of this, does not explore renewable sources for this energy nor is it linked to independent data. It also remains an open question about how much different sources of LNG require processing, even with the current Wobbe limits. The quoted references do not provide this information.
- Biomethane production will see the formalisation of the current exemption rules for oxygen content, this in itself does not promote more biomethane production. In fact biomethane may face adverse cost impacts, depending on the location of plant relative to entry points bringing in lower or higher Wobbe gas. The latter may lead to increases in the propane that needs to be added to biomethane to meet the target calorific value set by the distribution network. We recognise that the work under the Future Billing Methodology project should help with this issue but there is no timescale for implementation of that as yet. It is likely to be several years away.
- The Evidence report in section 5 provides some useful narrative and analysis on gas quality variations, noting there is very little potential for blending once gas is within the NTS and that the variability in Wobbe index and calorific value of gas at offtake point varies widely across the country. The attached proforma of comments on the proposed standard provides comments on the issues that generating plant may face if gas is supplied that falls outside the tolerance set by the OEM around a tuned set point. Setting a wider WI range at entry, with no consideration of the WI range for gas supplied to sensitive offtake points, means that all offtake points need to be able to accept the full WI range. Even if this currently seems unlikely given forecast flows, the future supply pattern through existing or new points is uncertain. A CEN working group has proposed a way of managing this by setting a narrower range for certain sites, unfortunately this not yet a fully developed solution. We acknowledge that wider issues, including those relating to operational, commercial environmental and security of electricity supply are beyond the remit of the IGEM GQWG and will be considered by the HSE led impact assessment.

- The GQWG commissioned some work from DNVGL to look at the impacts of increasing the upper WI on Industrial and Commercial customers. The report is referenced in the evidence report but no link is provided. The report can be found here⁴. The report did not consider reducing the lower limit to that currently proposed so further work is needed here. It is also important to note that the report suggested limiting the change in the upper Wobbe limit to 52.85 MJ/m³ rather than 53.25MJ/m³ originally considered. The reason was:
 - o *all users would experience operating difficulties if they did not previously have appropriate combustion-control systems in place for the current potential Wobbe Index range of 4.2 MJ/m³. For power generators, gas engines and some industrial applications, even the fitting of advanced combustion control systems may not be sufficient and a burner retrofit would be necessary.*

Energy UK concludes that there many issues that require further investigation either before or as part of the impact assessment to determine, all the issues, impacts, costs, benefits and risks for all parties in the gas supply chain, from production to end use. It is likely that trade-offs will be needed to find a way forward and we hope that this will be carried out in an open and transparent manner, with benefits to consumers clearly defined.

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