

EUROMOT POSITION

Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on common rules for the internal markets in renewable and natural gases and in hydrogen - 2021/0425(COD)

4th of October 2022

1. Abbreviations

DSO	Distribution System Operator
ENNOH	European Network of Network Operators for Hydrogen
ENTSO	European Network of Transmission System Operators
EU	European Union
GTS	Gasunie Transport Services B.V.
HHV	Higher Heat Value or Gross calorific heat
LNG	Liquefied Natural Gas
MN	Methane Number
ROC	Rate of Change
TSO	Transport System Operator
WI	Wobbe Index

2. Introduction

The EU Commission adopted on 15.12 2021 a legislative proposal to recast the 2009 EU Gas Directive /1A, 1B/. According to the proposal transmission, distribution system and network operators shall *maintain the gas quality* in their facilities *according to applicable gas quality standards*. Gas quality has a fundamental impact on amongst all safety, emissions, product quality and energy efficiency and thus a proper gas quality standard as well as sufficient information provision are pre-requisites for all network (end) user operations. EUROMOT supports the ambitions of the proposal. However the gas quality specification to which the refers in the legislative proposal is not properly standardised and needs to be revised to reflect the current gas composition as well as future developments and end user's needs.

The growing volumes biomethane, hydrogen but also LNG and synthetic natural gas from various sources can affect gas quality and thereby the design of gas infrastructure and end-user gas applications. I.e. differences in gas quality parameters and in the volume of hydrogen blended in the natural gas system can affect the design of gas infrastructure, end-user applications and cross-border system interoperability, thus risk a serious fragmenting of the internal market. *Thus, the current gas quality rules are already inadequate and not fit to deal with future developments.*

However, in the proposal regarding gas quality (other than pure H₂) only a reference is given to Regulation (EU) 2015/703, Articles 16 and 17, specifying only very few mandatory gas composition parameters to be measured and reported.

This approach is not at all sufficient.

In below text the gas quality topic is discussed more in detail and a proposal is given to secure undisturbed operations, etc. at the end-user facilities.

3. Gas quality obligations

According to Article 5(1) /1A/ Member States shall ensure that natural gas and hydrogen undertakings are operated according to the Directive with a view to achieving a competitive, secure and environmentally sustainable market in gases ... Article 5(2) prescribes further that “ Member States may impose on natural gas and hydrogen undertakings in the general economic interest, public service obligations which may relate to security, ..., *and quality of supplies*, etc.”

Article 9 quote “ *...Where relevant, Member States shall require transmission system operators, distribution system operators and hydrogen network operators in their territory to publish technical rules in accordance .. , in particular regarding network connection rules that include gas quality, gas odourisation and gas pressure requirements .. “*

Each Member State shall designate a single national regulatory authority at national level with following duties, Article 72(1) quote: “ ...

- *d) ensuring compliance of transmission, system operators and distribution system operators, and where relevant, system owners, hydrogen network operators, ..., with their obligations under this Directive “*
- *e) in close coordination with **the other regulatory authorities, ensuring the compliance of the ENTSO for Gas, the EU DSO entity and the ENNOH with their obligations under this Directive [recast Gas Regulation as proposed in COM(2021) xxx], the network codes and guidelines adopted pursuant to Articles 52 to 56 of [the recast Gas Regulation proposed in COM(2021) xxx] ...***
- *f) monitoring the development of gas qualities and gas quality management by transmission system operators and where relevant by distribution system operators, including monitoring the development of costs related to the management of gas quality by system operators and the developments related to the blending of hydrogen into the natural gas system.*
- *(g) monitoring the development of hydrogen quality and hydrogen quality management by hydrogen network operators where relevant as referred to in Article 46, including monitoring the development of costs related to the management of hydrogen quality.*
- *...”*

The proposal contains texts clarifying that gas transmission, distribution system and network operators shall in their gas quality management task comply with applicable gas quality standards.

Some examples:

- Recital (100) quote *“With the integration of growing volumes of renewable and low-carbon gases in the natural gas system, the quality of gases transported and consumed in Europe will change. To ensure the efficient operation of the natural gas system, transmission system operators should be responsible for gas quality management in their facilities. Where the injection of renewable and low-carbon gases takes place at distribution level and where necessary to manage their impact on gas quality, regulatory authorities can task distribution system operators with ensuring the efficient gas quality management in their facilities. When undertaking gas quality management tasks, transmission and distribution system operators should comply with applicable gas quality standards.”*
- Article 35(4) quote: *“Transmission system operators shall ensure efficient gas quality management in their facilities in line with applicable gas quality standards. “*
- Article 40(2) quote: *“When so decided by regulatory authorities, distribution system operators may be responsible for ensuring efficient gas quality management in their facilities in line with applicable gas quality standards, where necessary for system management due to the injection of renewable and low-carbon gases.”*
- Article 46(3) quote: *“Hydrogen network operators may be responsible for ensuring efficient hydrogen quality management in their networks in line with applicable hydrogen quality standards, where necessary for system management and subject to the approval of the regulatory authority. “*

4. Gas Quality

Article 58(11) prescribes: *“The transmission system operator shall make public detailed information regarding the quality of the gases transported in its networks, based on Articles 16 and 17 of Regulation (EU) 2015/703 “.*

Article 72 (1)(e) asks for compliance with the network codes set by the Gas Regulation legislative proposal /4A, 4B/.

Gas Regulation

In the Gas Regulation legislative proposal /4A/ in Article 30 (7) similar text as in the (above) Directive Article 58(11) is given for the transmission system operators. BUT Annex 1 chapter 3.3 point 4 of the Regulation /4B/ prescribes somewhat different publishing requirement, for the transmission system operator which is confusing.

In Article 35 of the Gas Regulation legislative proposal is for the gas distribution system operator set an obligation to publish detailed gas quality information according to *Articles 16 and 17 of Regulation (EU) 2015/703*.

In the Gas Regulation legislative proposal in Article 48 (3) general reporting requirements for the hydrogen network operator is set.

According to Recital (146) of the Directive proposal /1A/ Member States shall amongst all *“ .. design and implement reforms, including those promoting a competitive internal market in natural gas and in hydrogen, enabling the integration of renewables and low carbon gases, and **increasing cooperation and coordination among transmission and distribution system operators...**”*

- I.e. Gas distribution system operators will also in practice be expected to publish gas quality data according to *Articles 16 and 17 of Regulation (EU) 2015/703*.

EU Regulation 2015/703 /2/:

- Recital (5) quote: “*The provisions of this Regulation relating to gas quality should provide effective solutions without prejudice to the adoption of a European-wide standard for high-calorific gas as is being developed by CEN pursuant to the standardisation process under mandate M/400* “
- Article 16: “*short-term monitoring on gas quality – data publication*”:
“Transmission system operators shall publish on their website for each interconnection point, with a frequency of at least **once per hour during the gas day, the Wobbe-index and gross calorific value** for gas directly entering their transmission networks at all physical interconnection points”
- Article 17 “*Information provision on short-term gas quality variation* “:
 1. In addition to interconnection points, this Article shall apply to other points on transmission networks where the gas quality is measured.
 2. A transmission system operator **may select** one or several of the following parties to receive information on gas quality variation:
 - (a) final customers directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes or a network user acting on behalf of a final customer whose operational processes are adversely affected by gas quality changes, where a direct contractual arrangement between a transmission system operator and its directly connected final customers is not foreseen by the national rules;
 - (b) distribution system operators directly connected to the transmission system operator's network, with connected final customers whose operational processes are adversely affected by gas quality changes;
 3. Each transmission system operator shall:
 - (a) define and maintain a list of parties entitled to receive indicative gas quality information;
 - (b) cooperate with the parties identified in the above list in order to assess:
 - (i) the relevant information on gas quality parameters to be provided;
 - (ii) the frequency for the information to be provided;
 - (iii) the lead time;
 - (iv) the method of communication.
 5. Paragraph 3 shall **not impose an obligation** on transmission system operators to install additional measurement or forecasting equipment, unless otherwise required by the national regulatory authority. The information under paragraph 3(b)(i) of this Article shall be provided as the transmission system operator's **best estimate** at a point in time and for the internal use of the recipient of the information.

Discussion:

According to the Directive proposal, gas transmission operators are responsible for the gas quality management in their systems. However, many TSOs, such as e.g. in France, have basically no technical means installed for gas quality management yet. As an exception, GTS in the Netherlands does have such facilities, such as blending installations and mixing organs. This is a main reason why many European TSOs participating in CEN TC 234 are not promoting an obligatory wide standardization of gas quality rules that would result in a safe, fuel efficient end use with minimum emissions while ensuring a free exchange of gas in the EU. There is unfortunately currently no proper gas quality standard in the EU that takes into account the requirements of a wide range of end users. Unfortunately some stakeholders (of TSOs and DSOs) seem to procrastinate the standardisation process within CEN 234 WG 11 to establish EN 16726 with proper rules for the Wobbe Index value, the calorific value and the Methane Number and an acceptable Rate of Change (ROC). Further, the Member States have still the right to set their own gas quality standards and the values in these standards are often set after **not** consulting with all impacted stakeholders such as end users but only primarily with TSOs. Moreover, the Member States are in general **not** setting their gas quality rules with a focus to enable a proper cross-border exchange of gas.

Gas distribution operators (DSOs) currently often receive gas composition information from the TSOs at feed-in transfer stations. In a typical DSO network, the feed-in into their ring systems can occur at multiple locations from different supply lines. Therefore there is a big risk that the end user cannot be provided at its' location with the proper gas quality within a ring system. Some EUROMOT Members have experienced problems with this during calamities. Many DSOs have today no provisions for measuring the composition of the gas offered to customers and no quality control at all.

According to the Directive proposal text the gas system transmission operator only needs to supply very limited gas quality information - according to Article 16 WI (Wobbe Index) and HHV (Gross calorific value) measured once an hour. Additionally gas variation *indicative* information on additional parameters, different measurement frequencies *might be provided* to customers with sensitive processes which might be damaged by gas quality changes. To note is that the transmission system operator is **not obliged to provide more information than specified in Article 16 – WI, HHV (gross calorific value) – unless** the national regulatory authority requires this!

The mandatory minimum gas quality information prescribed by Article 16 would **not** be enough for many network final customers – many final customers/end users need more gas quality parameter data timely in order to be able to operate their processes in an optimal way.

Recital (5) of EU Regulation 2015/703 refers to (M/400) the EU EASEE Gas process in which amongst all the EN 16726-2015 H-gas standard is being revised. To note is that the EN 16726-2015 standard contains much more additional components than Article 16 of EU 2015/703 specifies as mandatory measurement data the transmission operator is to provide as a minimum.

6. Conclusion

In the above texts it has been shown that no proper gas quality specification to which the legislative Directive proposal /1A, 1B/ refers exists. The gas quality standard for the EU needs to be revised to reflect the current end user's need and future (gas) developments. Further, this gas quality standard should preferably be obligatory for the whole EU in order to achieve common product specifications, maximum fuel efficiency, minimum emissions, a guaranteed safety and easy cross-border transfer. Until now, TSOs and Member States are not obliged to adopt to a common EU gas quality standard.



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In addition, all EU TSOs should be obliged to install proper technical provisions to ensure an adequate gas quality measurement and control. The needed required technical provisions have been on the market for decades already. CEN should be urged to finalize EN 16726. That standard is indirectly referred to via Recital (5) of the Regulation 2015/703. EN 16726 is currently under revision for inclusion of a range/bandwidth for the Wobbe Index (WI), the gross and net calorific values and a possible adaptation of some parameter ranges in the standard. As the gas legislative Directive proposal text is written (reference to Regulation EU 2015/703 Articles 16 and 17) future needed gas quality information aspects will not be met in many cases and if additional gas parameters would be provided (by the gas transmission system operator) these are only of indicative/best estimates nature – i.e. not binding information! A direct reference to the EN 16726 standard should be made in the proposed legislative Directive proposal or Regulation 2015/703 revised in order to better reflect future gas quality information needs.

In the “Explanatory Memorandum” /1A/ is also stated “.. *current gas quality rules are not fit to deal with future developments ..*”!

EUROMOT has in Position paper /3/ shown that limiting ranges and information of many additional gas parameters (such as MN, ROCs of MN and WI) besides WI, HHV (gross calorific value) are needed for the future gases in order to support the gas end users in their operators. This EUROMOT Position Paper was made for the ongoing revision of the EN 16726 H-gas standard.

In summary, the major points are:

1. There does not exist proper EU-wide gas quality rules yet, so the EC cannot refer to that;
2. Many TSOs have no means to properly control and maintain and measure the gas quality;
3. DSOs have today in general no means to measure and control the gas quality.

Thus following actions are needed in order to secure a sufficient gas quality for the network users:

1. The Commission should urge CEN to finalize the revision and improvement of the gas standard EN 16726:2015, preferably in the year 2022.
2. CEN should take into account the needs of all end users when finalizing the revision of EN 16726:2015.
3. The Commission should aim for an obligatory application (via network codes) of the revised standard EN 16726 in the EU, thereby taking away the prerogative of the Member States to set their own rules. Having different gas quality rules between the Member States hampers the free exchange of gases in the EU, limits a uniform product specification for the equipment manufacturers and increases the costs for the gas end users.
4. The commission should also urge the TSOs to install the proper measures for measuring and controlling the gas quality. Ditto for the DSOs.
5. The EC should additionally urge Member States to accept a universal gas quality standard for the whole EU area.

National regulatory authority would then in practice implement the set new network codes later on and a universal gas quality standard would be achieved in the EU area.

7. Sources

- /1A/ “Proposal for a Directive of the European Parliament and of the Council on common rules for the international markets in renewable and natural gases and in hydrogen” at web: https://eur-lex.europa.eu/resource.html?uri=cellar:2f4f56d6-5d9d-11ec-9c6c-01aa75ed71a1.0001.02/DOC_1&format=PDF
- /1B/ Annexes at https://eur-lex.europa.eu/resource.html?uri=cellar:2f4f56d6-5d9d-11ec-9c6c-01aa75ed71a1.0001.02/DOC_2&format=PDF
- /2/ EU Regulation 2015/703 at web <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R0703&from=EN>
- /3/ EUROMOT POSITION EUROMOT REVISION OF EU RULES ON GAS MARKET ACCESS – EUROMOT POSITION ON GAS QUALITY REQUIREMENTS, 2021, at web: https://www.euromot.eu/wp-content/uploads/2021/06/EU-gas-legislation-revision_EUROMOT-position-on-gas-quality-requirements_FINAL_16-June-2021.pdf
- /4A/ Proposal for a regulation .. on the internal markets for renewable and natural gases and for hydrogen (recast), 15.12.2022, at web: https://eur-lex.europa.eu/resource.html?uri=cellar:0c903f5a-5d8b-11ec-9c6c-01aa75ed71a1.0001.02/DOC_1&format=PDF
- /4B/ Annex at web: https://eur-lex.europa.eu/resource.html?uri=cellar:0c903f5a-5d8b-11ec-9c6c-01aa75ed71a1.0001.02/DOC_2&format=PDF

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THIS IS EUROMOT

Founded in 1991, EUROMOT is the European association of internal combustion engine and alternative powertrain manufacturers. Representing the key global manufacturers for over 30 years, we provide an invaluable centre of expertise for businesses, authorities, regulators and public stakeholders worldwide. We are the industry's united voice to drive smart and gold standard global regulations for sustainable mobile machinery and stationary applications, helping the manufacturers shape innovations and markets for the future.

With an ecosystem of working groups spanning current and future power and mobility systems, we facilitate cross-fertilisation of innovation across industries. EUROMOT provides an essential gateway to the EU Single Market and forms a bridge for the transition from traditional to alternative energy and advanced powertrains.

Since our foundation, we have been facilitating ever increasing environmentally friendly and sustainable products as well as the decarbonization of our sector and its transition to low/zero-carbon emissions and renewable energy. With a membership encompassing all major ICE and alternative powertrain manufacturers and well-established connections to regulators, EUROMOT is uniquely positioned to decarbonise entire industries from agriculture to construction and from land-based to marine alongside stationary power for heat and electricity.

Headquartered in Brussels, EUROMOT is a European interest group, and our profile is registered in the EU Transparency Register under the identification number 6284937371-73. We have been granted consultative status at the United Nations IMO (International Maritime Organization, London) and United Nations ECE (Economic Commission for Europe - Geneva) and other relevant stakeholders.

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