



Session III

Sources, Supply and Security for Europe

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The harmonization of gas quality

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The harmonization of gas quality in Europe – EN 16726



- EN 16726 “Gas infrastructure - Quality of gas - Group H” is the core of the standardization efforts initialized by the European Union, DG ENER, in order to turn natural gas into a commodity without trade barriers within Europe.
- The standard has been elaborated on basis of the EU mandate M 400
- It needs to be regarded as “first step” on a long way

Steps to harmonization of gas quality in Europe

- EASEEgas CBP 2005-01-001: first document to specify the properties of natural gas type H for border-crossing trade on private initiative
- Mandate M 400 (2006): the subject has been taken up by the EU, resulting in a standardization mandate give to CEN
- CEN allocates the mandate to CEN/TC 234 “Gas infrastructure” which in turn found its WG 11
- European Standard EN 16726 voted positively in late September 2015.

European harmonization process under mandate M/4

~400 Comments

5 days comments treatment

reference

2007-01 2011-09 2011-12 2012-10 2014-05 to 2014-10 2015-07 to 2015-09 2015-12

Final completion of gas app

9 WG meetings + consultations in parameter specific TGs

ENQ

stakeholders consultation
5 month

Comments treatment and preparation for Formal Vote (FV)

FV

CEN Member approval
2 month

Phase II – Standardisation
(CEN/TC 234 WG 11)

DG ENERGY Workshop

Comprehensive TC consultation

Mandate signed

Start of Phase I

Final report Phase 1
CEN/BT WG 197

DG ENERGY: Formal confirmation of standardisation in CEN/TC 234

EU Madrid Forum/DG ENERGY: Active monitoring and reporting

+ EU GQ Harmonisation Pilot
(5 countries)

OVGW

ÖSTERREICHISCHE VEREINIGUNG FÜR DAS GAS- UND WASSERFACH

TECHNICAL ASSOCIATION OF THE EUROPEAN NATURAL GAS INDUSTRY

GERG
groupe européen de recherches gazolères
the european gas research group

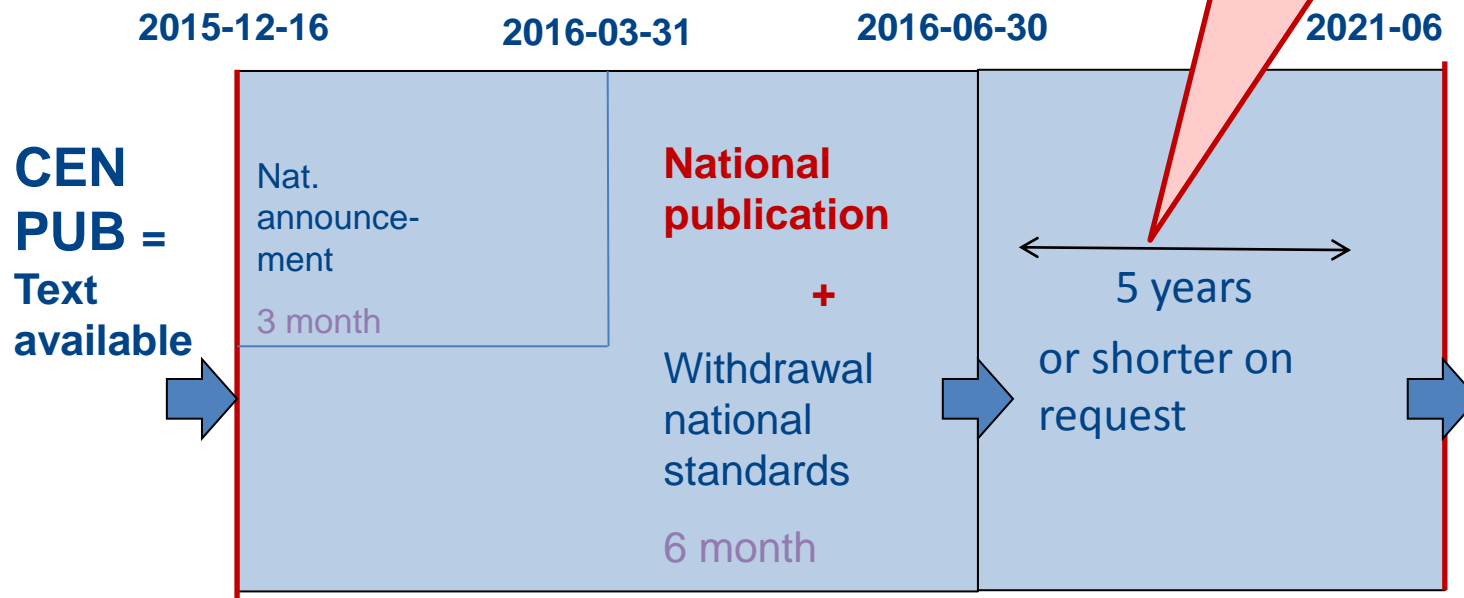
EN 16726 – standardization process

Time schedule:

- 05/2014 - 08/10/2014 Public consultation (ENQ)
- 12/2014 - 03/2015 ENQ Comments treatment
- 04/2015 - CEN/TC 234 approval for Formal Vote
- 11/09/2015 Formal Vote by CEN Members (yes/no vote, no technical comments)
- **10/2015 Formal vote result: positive (74,07 %; 71 % required)**
- 12/2015 Publication as European Standard
- 03/2016 Latest national announcement
- 09/2016 Latest national publication

European harmonization – how to continue

Amendments and revisions possible at any time, when appropriate!



DG ENERGY; EU Madrid Forum: Active monitoring and reporting

+ EU GQ Harmonisation Pilot II
(all countries)

EN 16726 – formal vote result

EN 16726 “Gas infrastructure – Gas Quality – Group H” approved by final vote (2015-09-23):

- 18 National Members approved
 - 4 National Members disapproved
 - 10 National Members abstained
- Weighted percentage approving: **74.07 %**
(requirement $\geq 71\%$)

(National Members having abstained are not counted in this vote.)

Steps to harmonization of gas quality in Europe

- ENTSOG develops network code, to take reference to EN 16726
- DG ENER (EU) currently discusses internally how to proceed with European legal framework for gas quality, likely to take EN 16726 as reference

EN 16726 Gas infrastructure - Quality of gas - Group H



Scope

This European standard specifies gas quality characteristics, parameters and their limits, for gases classified as group H that are to be transmitted, injected into and from storages, distributed and utilized.

- NOTE For information on gas families and gas groups see EN 437.

This European standard does not cover gases conveyed on isolated networks.

For biomethane, additional requirements indicated in prEN 16723-1 apply.

EN 16726 – content - components

Content: components

- **Sulfur (total, H₂S+COS, RSH, as S)**
 - In general, 20 mg/m³
- **Odorants**
 - out of scope, national practices in informative annex B
- **Methane number**
 - 65, calculation method given in normative Annex A
- **Oxygen**
 - 0,001 % as 24 h average; for non-sensitive grids 1%

EN 16726 – content

The “head cases”:

- **Wobbe Index:** deleted from standard/reasons described in Annex
- **Variation of gas quality:** Lack of experiences: issue for investigation
- **Implementation:** according to CEN rules (6 month after availability) and depending on national authorities
- **Responsibilities and liabilities:** statement in introduction; as legal matter no place in a standard

EN 16726 – Wobbe?

What Wobbe?

Wobbe Index deleted from 1st edition of EN 16726 because:

- No consensus possible due to diverging positions of stakeholder groups and/or national standardisation bodies
 - narrow Wobbe range = minimise GQ variations
 - broad Wobbe range = allow free trade of all gas qualities
- Thorough evaluation of impact on residential and industry gas applications required (Wobbe index range and variations)

EN 16726: No Wobbe index – and now?

Diverging positions lead to:

- Suggestion of EU Commission to remove Wobbe index from 1st edition of EN 16726 (letter to CEN)
- Re-launch of enlarged Gas Quality Implementation Pilot, opened to all member states

CEN/TC 234 and its WG 11 supports this approach and is ready to support the Pilot's work at its utmost.

EN 16726 – Reference conditions

- During a workshop held at the EU premises in Brussels in early May 2014 it became evident that there is no unified application of the reference conditions, leading to significant differences in results e.g. for the Wobbe index, if a gas is in spec. or out of it.
- For the 1st edition, EN 16726 prefers the standard reference conditions according to ISO (15°C, 15°C, 1 013,25 hPa), but others are not excluded.

EN 16726 – Oxygen content

- For the oxygen content in cross-border gas transport and in access lines to underground storages the value 0,001 % (molar) has been confirmed. It has been refined, however, that this value is regarded as a 24 h sliding average limit value so that single content peaks are permitted.
- For distribution grids etc. 1 % oxygen is permitted, easing e.g. the access of biomethane.
- However, in some countries gas from underground storage facilities contains some hydrogen sulfide

- At the moment the requirements for “sulfur” does not fully reflect distributed and utilized gases. Therefore:
 - a **requirement for gas into and from distribution networks** is requested.
 - a requirement on **total sulfur** including odorant into and from distribution networks is needed, since “odorization with a sulfur containing odorant” being the most widely used current practice.

EN 16726 – specific national situations

1st edition of EN 16726 causes conflicts with national law in:

- **Germany**
 - **Hungary**
 - **The Netherlands**
- The deviations are described in a specific Annex according to the CEN Rules

Carry-On: CEN/TC 234 Brainstorming

2015-11-18, Brussels

- **IMPORTANT:** common approach carried by all parts of the industry involved
- EU Commission DG ENERGY considers CEN as the appropriate organisation for the “Pilot II” (continuation M/400, to be applied for)
- DG ENER in favour of continuation
- Brainstorming participants acceptance provided that:
 - all Stakeholders are involved
 - Secretariat/Chair are independent.
- Involvement of JRC for analysis, reporting support in verification
- CEN/TC 234 secretary asked to prepare formalities.

Thank you for your valuable attention!

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