A new European gas quality standard

CEN SFGas GQS Working Group

C Goy 15 March 2018

Progress towards a new gas quality standard

1. Background
2. Current Status
3. Next Steps – how ETN members can get involved

Background

- CEN has been developing the European Standard for gas quality parameters for H-gas (EN 16726).
- The final draft standard EN 16726:2015 was produced in July 2015.
  - Due to the current variations in Wobbe Index around Europe, it was not possible to agree a WI range within EN 16726:2015.
  - There was also no consensus on total sulphur content of the gas.

- Sector Forum Gas Working Group ('SFGas WG') aims to facilitate the exchange of information between the different gas stakeholders.
- The results of pre-normative work will be provided to CEN Technical Committee on Gas Infrastructure (CEN TC/234) for a future revision of EN 16726:2015.

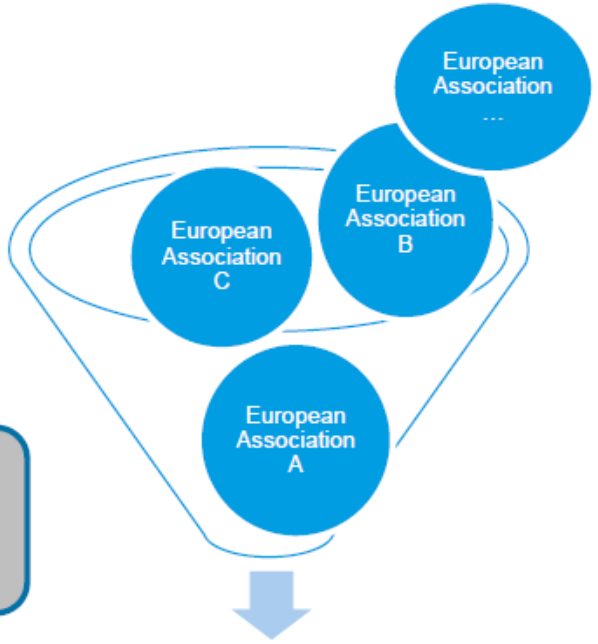
Current Status

- The SFGas WG on Gas Quality has the following sub-groups:
  - Chair Advisory Group (CAG)
  - Task Force 1 ‘Wobbe Index’ (TF1)
  - Task Force 2 ‘National/Sectorial Situations’ (TF2)
  - Ad-hoc Group ‘Units and Definitions’ (AhG)

- Run by EC Joint Research Centre (JRC)
- Uniper has represented ETN at meetings of TF1
- Diverse range of participants across all industries and the TSOs
- Important to represent GT operators in this forum. EUTurbines is also present

CEN SFGas pre-normative study
Structure

Chair : Kris De Wit, NBN/Gas.be
Secretariat : Hiltrud Schülken, DIN/DVGW



SFGas Infrastructure

SFGas Utilization

EC JRC

WG
pre-normative study
on H-gas quality

Chair Advisory Group

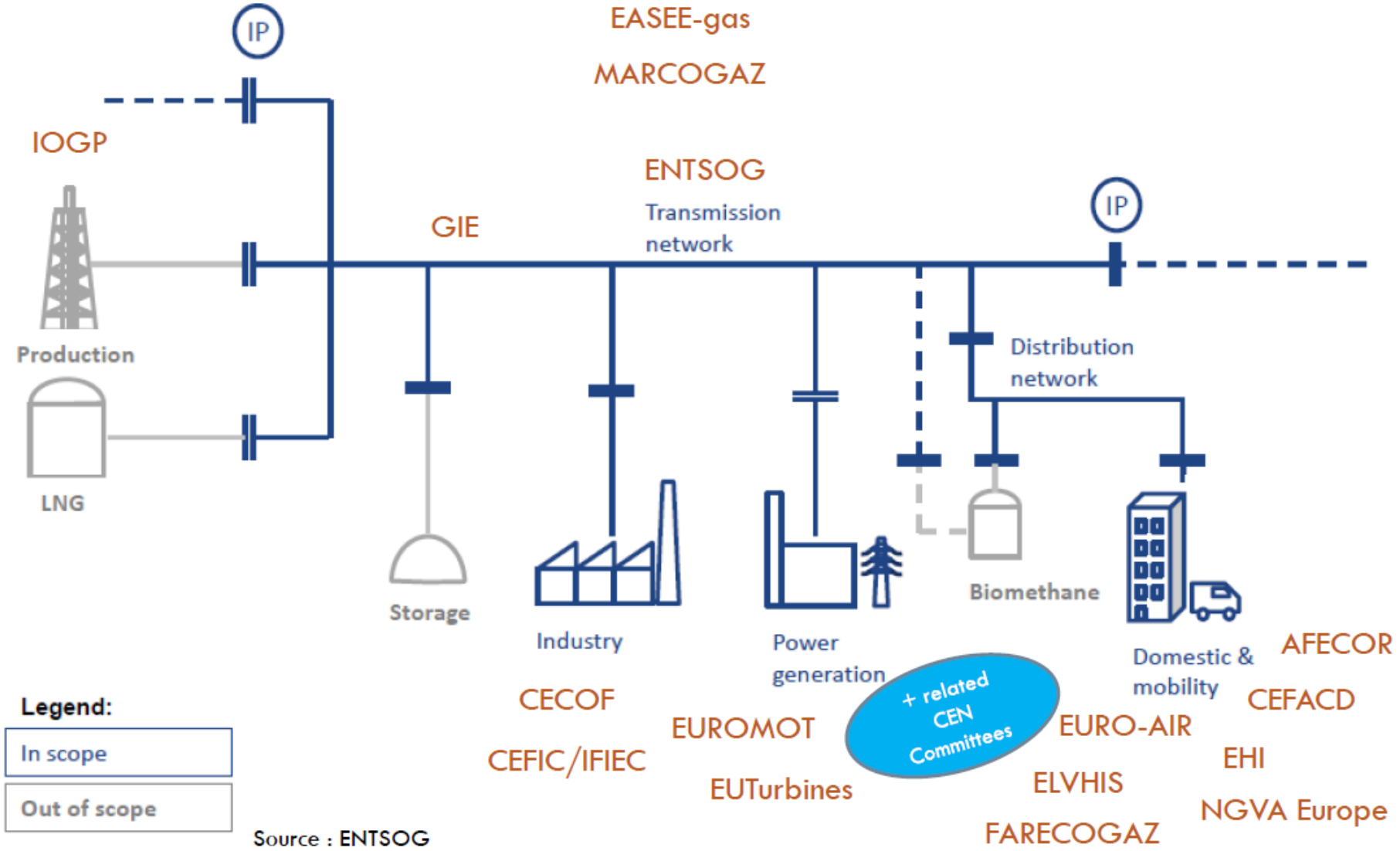
TF 1
Wobbe index

TF 2
national/
sectorial
situations

AhG
units/definitions

...

CEN SFGas pre-normative study
Stakeholder involvement (1)



CEN SFGas pre-normative study
Surveys

Survey 1 : legal and technical national/regional framework

Part A: **Legal and technical framework on gas quality**

Data have been collected. Analysis ongoing.

Part B: **Legal and technical framework on end use performance**

including e.g. emissions, efficiency, safety, maintenance, adjustment on installation.

Survey 2 : distributed natural gas quality

Information on the currently distributed natural gas quality in different European member states for mapping relevant national and sectorial situations and experiences for the assessments in TF 1. Detailed information and adequate data coverage, both in terms of time-span and geography, are necessary for enabling a reliable analysis and deriving meaningful conclusions.

Data have been collected. Analysis ongoing.

Survey 3 : sensitivity of applications/appliances to WI aspects linked to the scenarios produced by TF1

This survey will be based on the scenarios elaborated by TF1 and be prepared on the basis of available information/studies, such as the IGU study, Marcogaz study compilation or the DVGW project and others.

Progress: Definition of Simple Scenarios

	Simple SCENARIO					
	0	1	2	3	4	5
W_{min} [MJ/m³]	actual	46,44	47,4	47,4	49	49,24
W_{max} [MJ/m³]	actual	54	52,7	51,4	53	51,15
Range [MJ/m³] – fixed!	actual	7,56	5,3	4	4	1,91
Assessment territory	actual	EU	EU	EU	EU	EU
Rate of change (instantaneously)	actual	4	3,5	3	3	1,91

These scenarios are not pre-empting the proposal for revision of EN 16726;

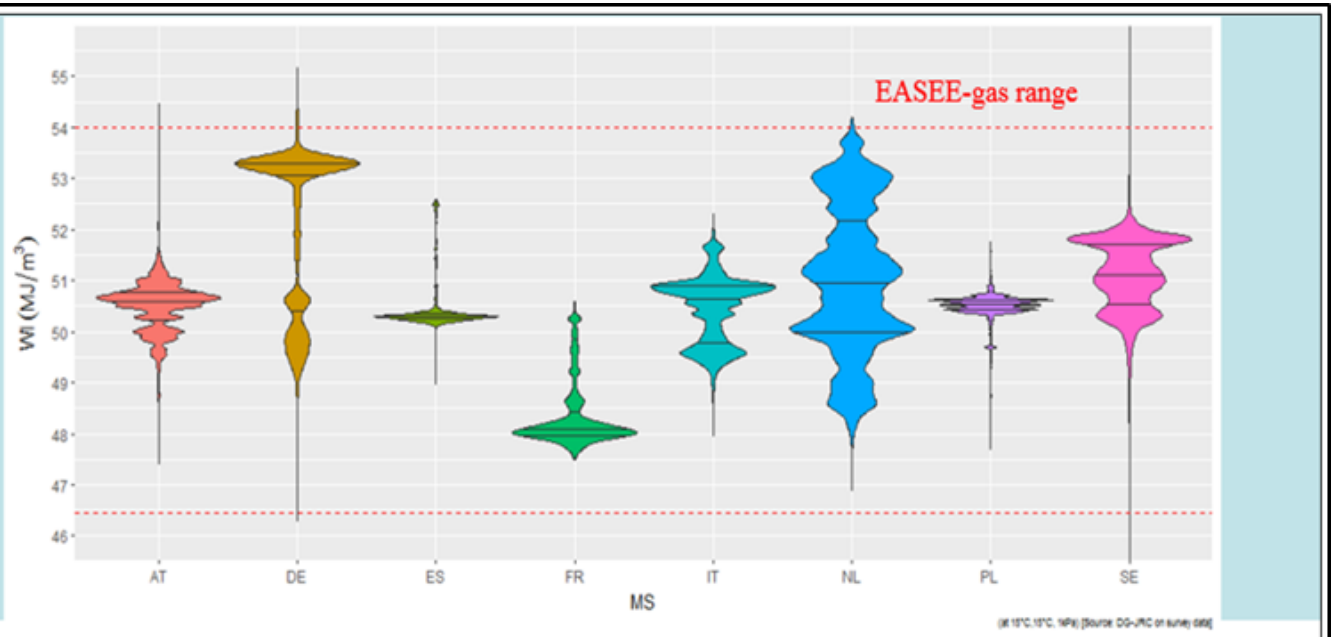
They serve to carry out an exploration exercise (assessment) in order to identify the impact of WI on the different parts of the gas chains.

Actual = current (legal/contractual/real) situation

Progress: Survey 1a – Legal Framework

- Operators and TSOs reported their ranges of fuel composition

Member state	Total number of points
Austria (AT)	21
Belgium (BE)	3
Germany (DE)	33
Spain (ES)	3
France (FR)	1
Italy (IT)	14
Netherlands (NL)	7
Poland (PL)	11
Sweden (SE)	5



N.B. The violin plot for Sweden extends outside the plotted range. Only hourly data are used.

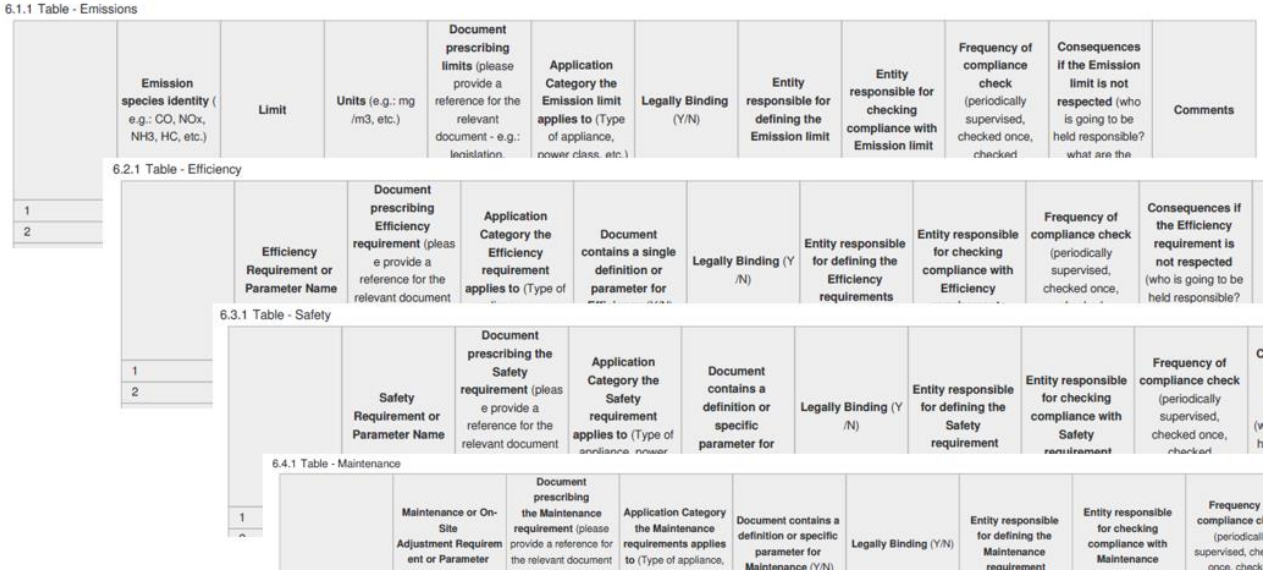
European Commission

Next: Survey 1b

Aims to provide an overview of relevant legislation for Emissions, Efficiency, Safety and Maintenance of different applications using natural gas in the different European regions or member states.

Covers 5 application groups:

1. Heaters, cookers
2. Industry (combustion, non-combustion, steam production devices, etc.)
3. Decentralised power generation
4. Centralised power generation
5. Transport



6.1.1 Table - Emissions

	Emission species identity (e.g.: CO, NOx, NH3, HC, etc.)	Limit	Units (e.g.: mg /m3, etc.)	Document prescribing limits (please provide a reference for the relevant document - e.g.: legislation,	Application Category the Emission limit applies to (Type of appliance, power class, etc.)	Legally Binding (Y/N)	Entity responsible for defining the Emission limit	Entity responsible for checking compliance with Emission limit	Frequency of compliance check (periodically supervised, checked once, checked	Consequences if the Emission limit is not respected (who is going to be held responsible? what are the	Comments
1											
2											

6.2.1 Table - Efficiency

	Efficiency Requirement or Parameter Name	Document prescribing Efficiency requirement (pleas e provide a reference for the relevant document	Application Category the Efficiency requirement applies to (Type of	Document contains a single definition or parameter for	Legally Binding (Y /N)	Entity responsible for defining the Efficiency requirements	Entity responsible for checking compliance with Efficiency	Frequency of compliance check (periodically supervised, checked once,	Consequences if the Efficiency requirement is not respected (who is going to be held responsible?
1									
2									

6.3.1 Table - Safety

	Safety Requirement or Parameter Name	Document prescribing the Safety requirement (pleas e provide a reference for the relevant document	Application Category the Safety requirement applies to (Type of	Document contains a definition or specific parameter for	Legally Binding (Y /N)	Entity responsible for defining the Safety requirement	Entity responsible for checking compliance with Safety	Frequency of compliance check (periodically supervised, checked once,
1								
2								

6.4.1 Table - Maintenance

	Maintenance or On-Site Adjustment Requirem ent or Parameter	Document prescribing the Maintenance requirement (please provide a reference for the relevant document	Application Category the Maintenance requirements applies to (Type of appliance,	Document contains a definition or specific parameter for Maintenance (Y/N)	Legally Binding (Y/N)	Entity responsible for defining the Maintenance requirement	Entity responsible for checking compliance with Maintenance	Frequency compliance ch (periodicall supervised, ch once, check
1								

Next Steps: how ETN members can get involved

Data coverage in earlier surveys was sufficient for definition of scenarios but insufficient for detailed analysis at end-user level.

Wider participation of stakeholders in sharing data is encouraged:

→ Please contact me or the ETN office if you can contribute