entsog

european network
of transmission system operators
for gas

Cologne 13 September 2016

Way forward for the INT NC amendment

2nd Workshop on INT NC regarding gas quality

Antonio Gómez Bruque

Interoperability Adviser/System Operations

Image Courtesy of Thyssengas

Summary of Stakeholders' Views

- The existence of barriers is questioned by producers and traders while among operators and users there are divided views, with many seeing differences in specs across borders as a risk.
- There are many segments and Member States which could be adversely impacted by a strict application of the CEN standard.
- Many respondents questioned the value of a gas quality standard without Wobbe Index and several challenged the adequacy of the requirements currently included.
- Scenarios were ranked in order of preference by respondents as follows:
  1. "Voluntary adoption" (53 stakeholders put this as their first choice)
  2. "Whole chain" (30 stakeholders put this as their first choice)
  3. "IPs only" (10 stakeholders put this as their first choice)
  4. "Transmission networks" was the least supported and considered as the least feasible.(4 stakeholders put this as their first choice)
- A number of issues (scope, responsibilities, off-spec gas, flexibility, subsidiarity, A-Deviations, standard revision management) require further clarity before a decision is made on the scenarios.
- Many stakeholders expected no benefit from gas quality harmonisation while others believed that it would bring more certainty
- Costs and timing have been detailed only in a few cases.

Proposed way forward

- As suggested by some stakeholders at the first workshop, an additional workshop will be organised on 16th November 2016 before ENTSOG makes a proposal.
- Today, ENTSOG will present more specific, focused scenarios which take into account stakeholders' feedback.
- A new public consultation will be open to allow stakeholders to:
  - revise their assessments, if necessary
  - provide views on a narrower range of more detailed scenarios
  - provide economic and /or technical evidence on the need to revisit any parameter of the standard.
- Results will be presented at the November stakeholder workshop with ENTSOG's proposed next steps.
- ENTSOG will finalise the impact assessment and publish its view of the most appropriate scenario in December 2016.
- If an amendment is proposed, ENTSOG will develop text in conjunction with stakeholders during Q1 and Q2 2017. ENTSOG is open for any further support to ACER and EC in this case.

Proposed Principles

Competence and subsidiarity

- ENTSOG's understanding of the current legal framework is that the adoption of a technical standard is voluntary unless it is enforced by European or national legislation.
- Even in case of a European standard that is made legally binding, Member States would be entitled to define any additional parameter that is not covered by the European law (such as, in this case, Wobbe Index).

Scope

- The scope of application will implicitly define who is responsible for delivering the gas compliant to the standard.
- The scope of the INT NC is mainly limited to interconnection points. The impact assessment will include an analysis of the legal tools that each scenario may require.

Governance of changes

- To provide stability in the legal framework, if the INT NC is amended, the reference to the standard will be linked to the 2015 version, preventing any revision to become automatically binding

A-Deviations

- If the standard is made legally binding, within the binding scope, A-deviations wouldn't be applicable after the defined implementation period.

Proposed Principles

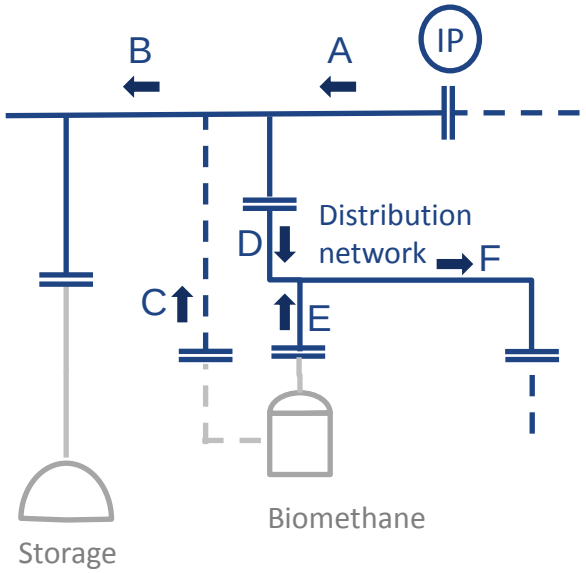
Legal framework for parameters not defined in the standard

- Regardless of any amendment to the INT NC, national specifications for other parameters should still be valid (otherwise the safe use of gas would be not defined).
- Operators should be entitled to refuse gas that meets the standard but not the other parameters defined nationally and not covered by the standard (e.g Wobbe Index, hydrogen, methane content)
- Example:

Parameter	National spec	EN16726:2015	Harmonised national spec
Relative density	0.6 – 0.65	0.55 – 0.7	**0.55 - 0.7**
Wobbe Index	14.00 – 15.20	No value defined	**14.00 – 15.20**
Hydrogen	2%	No value defined	**2%**

If gas is delivered to an entry point that is within 0.55-0.7 RD but outside the national WI range of 14.00-15.20 kWh/m^3, the network operator would be entitled to refuse the entry of that gas

Proposed Principles



'Flexible' limits in CEN standard, e.g. O_2:

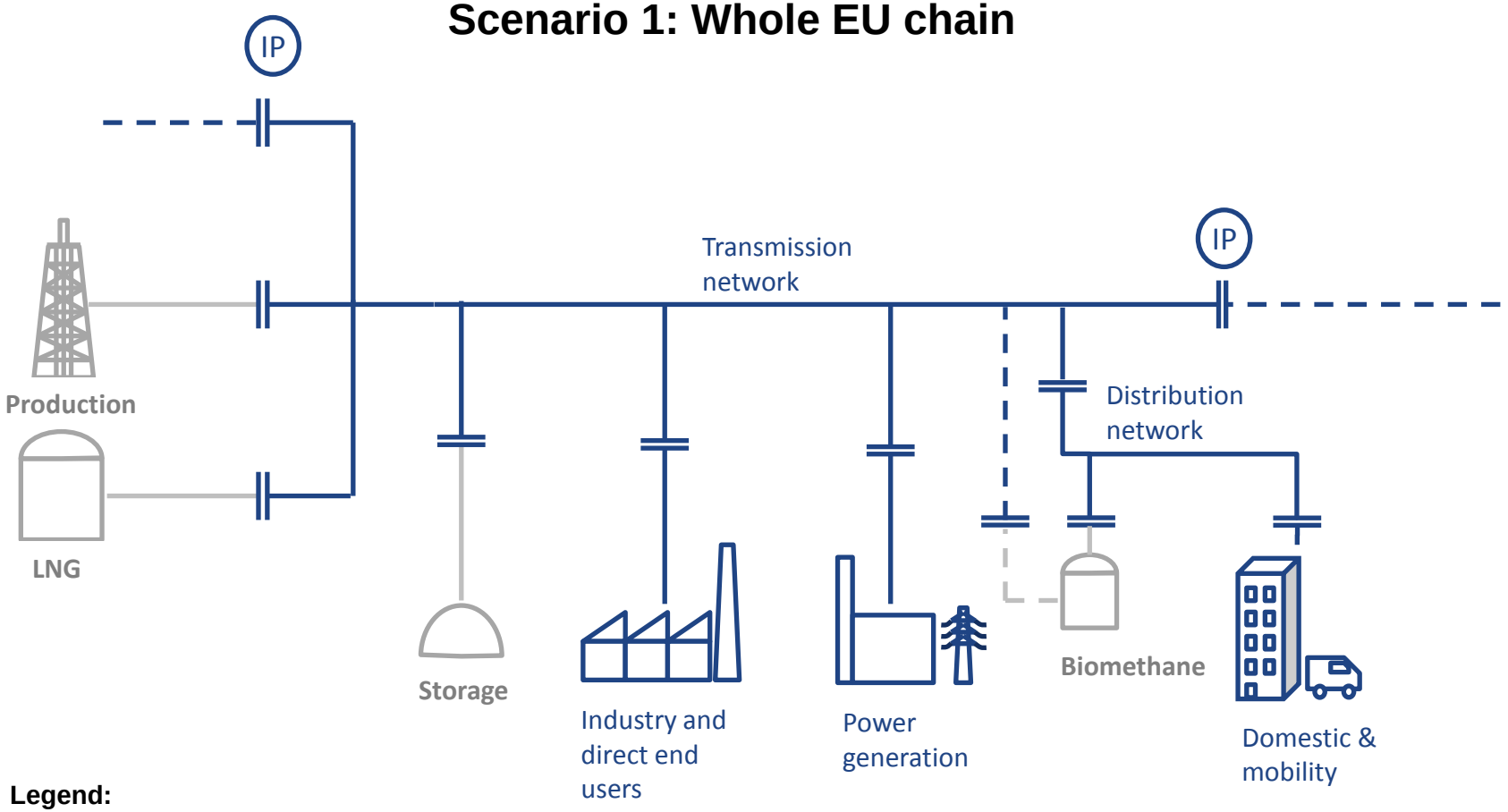
- *"At network entry points and interconnection points the mole fraction of oxygen shall be no more than 0,001 %, expressed as a moving 24 hour average. However, where the gas can be demonstrated not to flow to installations sensitive to higher levels of oxygen, e.g. underground storage systems, a higher limit of up to 1 % may be applied."*
- Similar wording applies for CO_2, with a range of 2.5% to 4.0%
- ENTSOG understanding of flexible limits in the standard
  - The background for this flexibility in the standard is facilitating biomethane injection
  - The effect of a sensitive installation on the limits to be set for a network is to be studied on a case by case basis.
  - When gas is off-spec, co-mingling practices and /or flow commitment arrangements could be used in order to bring the resulting flow into specs.
  - In the graph:
    - Flow in C will be restricted so that flow in B is below the agreed limit
    - Flow in E will be restricted so that flow in F is below the highest limits

Stakeholder input to scenarios

Policy issue	Scenario 1: Whole chain implementation	Scenario 2: Transmission networks only	Scenario 3: IPs only	Scenario 4: Voluntary adoption
1 Scope	Whole chain	Transmission networks only	IPs only	Voluntary adoption
2 Implementation timing	Fixed and equal	?	As decided by national authorities	As decided by national authorities
3 Interaction with INT NC	Article 15 shall not apply after transition	Article 15 shall not apply after transition	Article 15 shall be the only solution	Article 15 shall be the only solution
4a Acceptance of gas meeting the standard	Gas meeting the standard shall be accepted	Gas meeting the standard shall be accepted	Gas meeting the standard shall be accepted	?
4b Allowance for off-spec gas	Operators may agree less strict limits	Operators may agree less strict limits	Operators may agree less strict limits	Operators may agree less strict limits
5 National specifications (A-deviations)	A-deviations withdrawn	A-deviations withdrawn	A-deviations retained	A-deviations retained
6 Flexible limits (O2, CO2, etc.)	Case by case impact assessment	Case by case impact assessment	Case by case impact assessment	As decided by national authorities

Refined scenarios for consultation

Scenario 1: Whole EU chain



Legend:

In scope
Out of scope

Refined scenarios for consultation

Scenario 1: Whole EU chain

- **Description**: parties injecting gas in gas networks need to ensure compliance of the gas with the CEN standard.
- National requirements/network code will be fully valid and enforceable for parameters not included in the standard, e.g. Wobbe Index, sulfur in end-use (also for end users directly connected to TSOs), hydrogen and any other.
- **Scope**: same as EN16726. TSOs, SSOs and all downstream segments will receive standard gas. It shall also apply at entry points to EU.
- **Impacted parties:** producers/infrastructure operators delivering gas into TSO/DSO networks (all gas supplies) and consumers /infrastructures receiving gas from those networks.
- **Implementation timing**: fixed and equal for all countries and segments. This scenario will fully apply after a fixed transition period (to be consulted) after INT NC amendment.
- **Interaction with NC**: After the transition period, article 15 will not apply for the parameters covered in the standard.

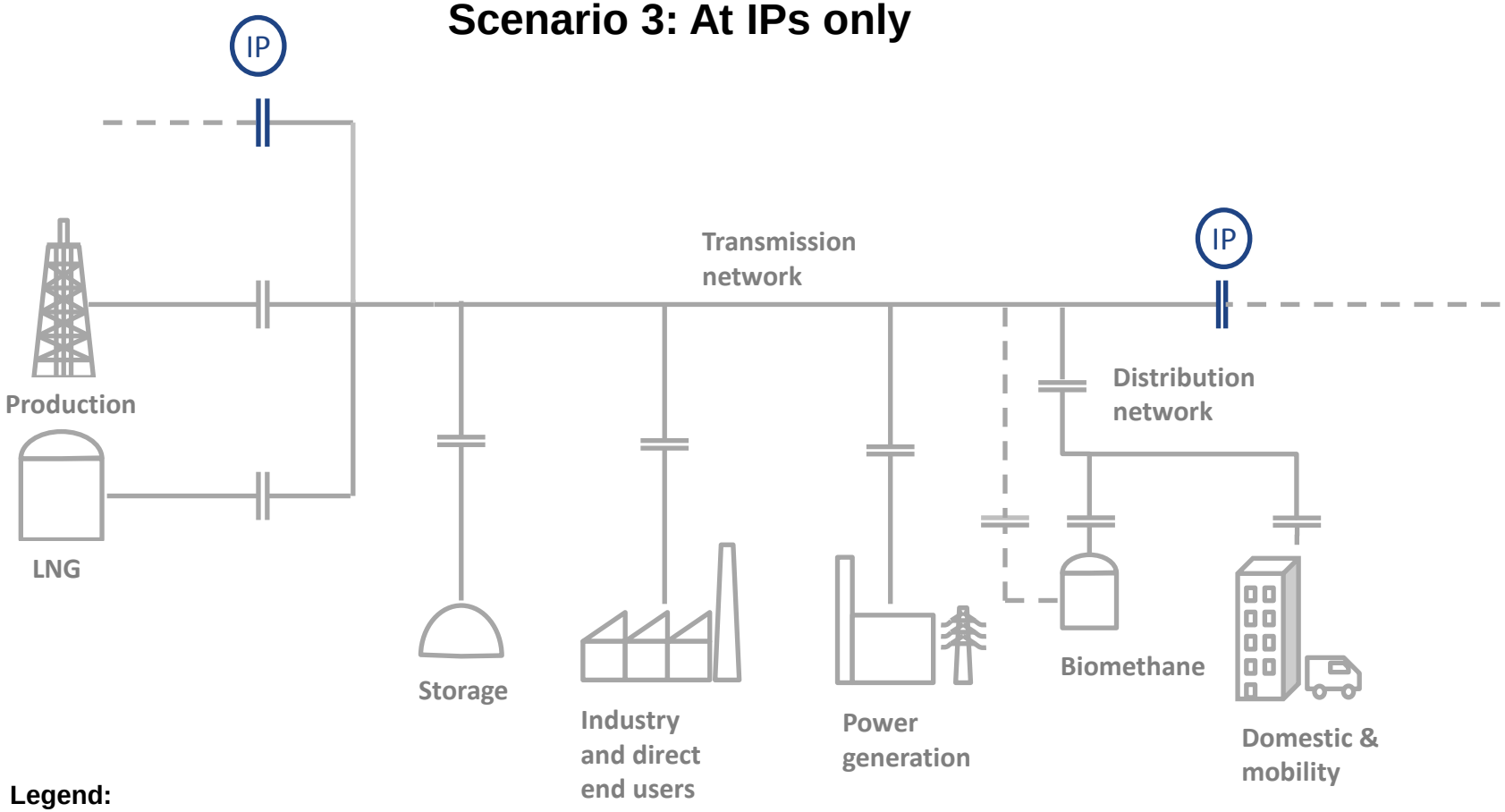
Refined scenarios for consultation

Scenario 1: Whole EU chain (continued)

- **In-spec gas**: Any gas meeting the standard shall be accepted provided that national requirements for additional parameters are also met.
- **Off-spec gas**: Any gas not meeting the standard shall be refused.
- **A-deviations**: Applicable up to the date on which compliance with the standard is required but not afterwards.
- **Flexible limits**: See slide 6

Refined scenarios for consultation

Scenario 3: At IPs only



Legend:

In scope
Out of scope

Refined scenarios for consultation

Scenario 3: At IPs only

- **Description**: only when a restriction to cross-border trade is recognised, TSO will analyse, via the process set out in Article 15, feasible solutions (flow commitments, gas treatment) without changing specs and, as another possibility, adopting EN16726:2015 for the conflicting parameter.
- This scenario does not have as a prerequisite a full harmonisation of national legislation.
- **Scope**: interconnection points between EU Member States.
- **Impacted parties**: transmission system operators
- **Implementation timing**: as described in Article 15, the best timeframe will be determined on case by case basis by the involved TSOs and competent authorities.
- **Interaction with NC**: CEN standard will neither substitute nor act as a fall-back (default rule) for Article 15. On the contrary, the application of the standard for the parameter causing the restriction, together with retaining national specs, will be subject to the cost-benefit analysis and public consultation process described in the network code.

Refined scenarios for consultation

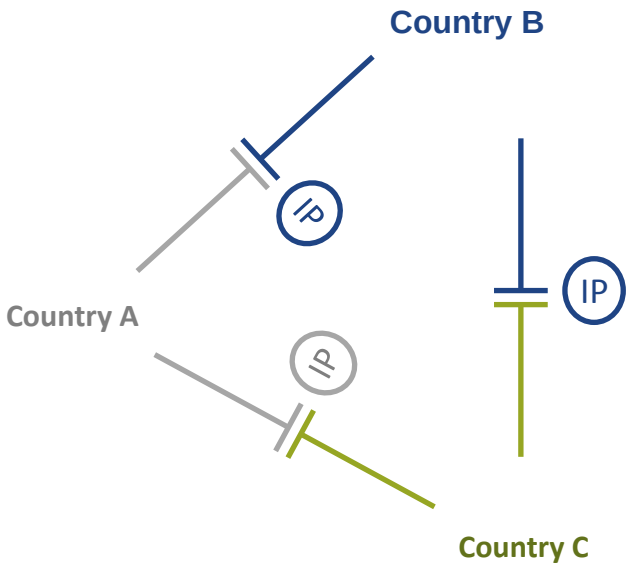
Scenario 3: At IPs only (continued)

- **In-spec gas:** If the standard comes out as the optimal solution, any gas meeting the standard shall be accepted provided that national requirements for any other parameter than the one causing the barrier are met.
- **Off-spec gas**: If the standard comes out as the optimal solution, TSOs will retain flexibility they have today to cope with gas not meeting the standard by swapping or co-mingling (Article 15(1)).
- **A-deviations**: will not be applicable at those IPs where the standard is applied
- **Flexible limits**: The cost benefit analysis will determine the required flexibility to apply the standard (or the national requirements).

Applicable specs	Flow commitments	Gas treatment	…
National requirements	CBA 1	CBA 2	
EN16726:2015 (without A-deviations)	CBA 3	CBA 4	

Refined scenarios for consultation

Scenario 4: Voluntary adoption



Legend:

- EN 16726
- National spec A
- **National spec C**

Description: This scenario means that ENTSOG would propose not to amend the INT NC,

If there is any cross-border trade restriction due to gas quality, Article 15 will be applied.

New public consultation

Questions (high level)

- Contact details, country and segment
- Rank the refined scenarios in order of preference
- Could you please summarise for each scenario (if needed, refer to former consultation).
  - Impacts (positive or negative)
  - Benefits/savings
  - Costs
  - Time required to implement
  - Feasible yes or no?
- Do you propose any amendments to the refined scenarios proposed by ENTSOG?
- Do you agree with a static reference to the standard?
- For the “At IPs only scenario”, would you agree to use the CEN standard as default rule when TSOs fail to agree?
- (Only with the purpose of reporting to CEN) Would you recommend the revision of the CEN standard? For which parameter, term or condition? What would be the value proposed? Can you provide evidence for that? Would such revision change your preference for the scenarios? Which one would you choose?
- Do you agree to amend the INT NC to include a binding gas quality standard?

Thank You for Your Attention

Antonio Gómez Bruque
Interoperability Adviser / System Operations

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: antonio.gomez@entsog.eu
WWW: www.entsog.eu