

Public consultation on issues and impacts related to the CEN

gas quality standard EN16726:2015

Please respond by 15 July 2016

Introduction

ENTSOG has accepted the invitation to carry out an impact analysis and subsequently draft an amendment to the Network Code on interoperability and data exchange rules in conjunction with the CEN standard EN 16726.

EC foresees making the standard legally binding by including it in the network code and invites ENTSOG to prepare a detailed analysis –on the entire gas value chain in all relevant Member States- on the impacts and issues associated with codifying the standard and subsequently submit to ACER a proposal to amend the Network Code by 30 June 2017.

ENTSOG shares EC's remark that a broad involvement of stakeholder is crucial to provide fundamental input to the analysis, especially on those issues outside the fields of expertise of our member transmission system operators.

ENTSOG invites stakeholders to contribute to the process from the earliest stage by answering to this public consultation. The results will be summarised by ENTSOG in the impact analysis, which will serve as the main supporting document for drafting the amendment.

The following principles should be considered, in view of ENTSOG, by stakeholders responding to this consultation:

- > The standard EN 16726:2015 has been adopted by CEN and any revision of the gas quality parameters contained in that standard are outside the scope of this consultation.
- > Wobbe Index discussion should be kept aside. The standard does not include any specification for Wobbe Index and, therefore, the impact analysis will not cover it. To this respect further standardisation work has been mandated to CEN by EC in pursue of an agreement on Wobbe Index. If this latter initiative is successful, the resulting revised standard will not become automatically binding. At that point in time, a second amendment process of the INT NC might take place.
- > Think of the standard as a tool to remove barriers without creating new ones
- > ENTSOG is open to consider any implementation option; nothing has already been decided.

As regards the methodology for this public consultation, the underlying principle is that an early proposal of policy issues and associated options shall be made to enable a proper impact analysis. Otherwise the lack of a clear legal framework would make it very difficult.

The questionnaire is divided in three different sections:

- **Section 1: general questions.** This is a set of introductory questions on cross trade barriers related to gas quality and the approved CEN standard.
- **Section 2: scenario definition.** This section describes the following policy issues identified by ENTSOG, which has been shared with stakeholders and is open to further suggestions:
 - Scope of application
 - Implementation timing
 - Interaction with existing mechanisms in the INT NC for removal of gas quality related barriers
 - Allowance for off-spec gas
 - A-deviations (conflicts with national legislation)
 - Application of flexible limits contained in the standard (CO₂, O₂)

For each of them, a number of possible options are proposed. The ones considered for the scope of application will be taken as starting point for the definition of four possible implementation scenarios. Stakeholders will be asked to select, for each scenario, the most coherent choices for the rest of policy issues.

- **Section 3: impact analysis of scenarios.** Considering the scenarios presented in section 2, stakeholders will be asked to evaluate the positive and/or negative impacts providing fact-based evidence.

In addition to the answers, any complementary information can be sent to interoperability@entsog.eu from the same e-mail address as indicated in the contact details for this questionnaire.

Based on the answers received, ENTSOG will present in September 2016 an analysis of the 4 possible scenarios, including the related policy choices and the impact, and will base the amendment draft on the one that appears to be the optimum one.

Respondents to this public consultation are highly encouraged to:

- > Support the answers to the questions with fact-based evidence
- > As far as possible, liaise with the relevant European stakeholder organisation

The public consultation will be open until 15 July 2016.

Note: This document is provided to facilitate the preparations of the questions. Actual answers shall be provided via the online survey on the ENTSOG website.

1. Contact details

Phil Hobbins, National Grid Gas Transmission (NGGT)

01926 653432 philip.hobbins@nationalgrid.com

2. Optional contact details

3. Which EU Member State(s) do you represent?

- UK

4. Which segment¹ (s) of the gas value chain do you represent? (multiple choice possible)

- Transmission system operator

5. Please indicate in the text field provided whether you would like any part of the information provided to be kept confidential and be reported only in an aggregate manner :

NGGT understands that ENTSOG will keep all TSO responses confidential.

Section 1: General questions

6. Are you aware of any cross-border trade barrier related to gas quality at interconnection points or EU import points? What parameters are involved?

NGGT is not aware of such cross-border trade barrier due to different gas quality specifications. In the past, there has been some concern about the UK's ability to import gas from the Fluxys network through IUK into Bacton, however, this issue has been addressed by the introduction of ballasting capability at Zeebrugge.

7. Is there any segment, region or circumstance whose specific conditions don't allow the application of the standard? Why? Is that related to any given parameter of the ones included in the standard?

Subject to our answers to Q14 and Q15 of this questionnaire, NGGT is not aware of any specific technical condition that would prevent the application of the standard in the UK. We have also not identified any adverse effects on the integrity of our transmission network as a consequence of applying the standard. However, the extent of change required to UK contractual and operational arrangements, with associated costs, could be extensive, dependent upon how the standard is applied.

8. Is there any other policy issue you think should be considered in addition to the ones already identified?

¹ Segment refers to different parts of the gas value chain: production, LNG terminals, transmission, distribution, storage, electricity generations, industrial consumption, domestic/commercial use, mobility, etc,

It is not clear to NGGT what the problem is that the application of the CEN standard is intended to solve, nor do we believe that a cost-benefit case for making the CEN gas quality standard legally binding on member states has been demonstrated. Where any cross border barriers are identified, the rules contained in the Interoperability Network Code would be triggered to provide resolutions. The answers that ENTSOG receives from stakeholders to this consultation will show the extent to which this NGGT view is shared by others.

The Commission's mandate to CEN in 2007 recognised that the purpose of the CEN standard arose from a need to define gas that could be safely and technically conveyed by TSOs in support of third party access requirements pursuant to EU Second Energy Package (Directive 2003/55/EC) legislation in 2003². Since that time, the purpose of the standard appears to have gradually evolved to become, today, a standard that the European Commission proposes to make legally binding on Member States. A potential outcome of this process is one where such EU legislation overrides national specifications and we are concerned that this may compromise the EU subsidiarity principle.

We are also concerned that enshrining a technical specification in EU law will inhibit the flexibility that Member States and the EU as a whole will need in the future to change that specification according to market needs.

Section 2: Scenario definition

Policy issue 1: Scope

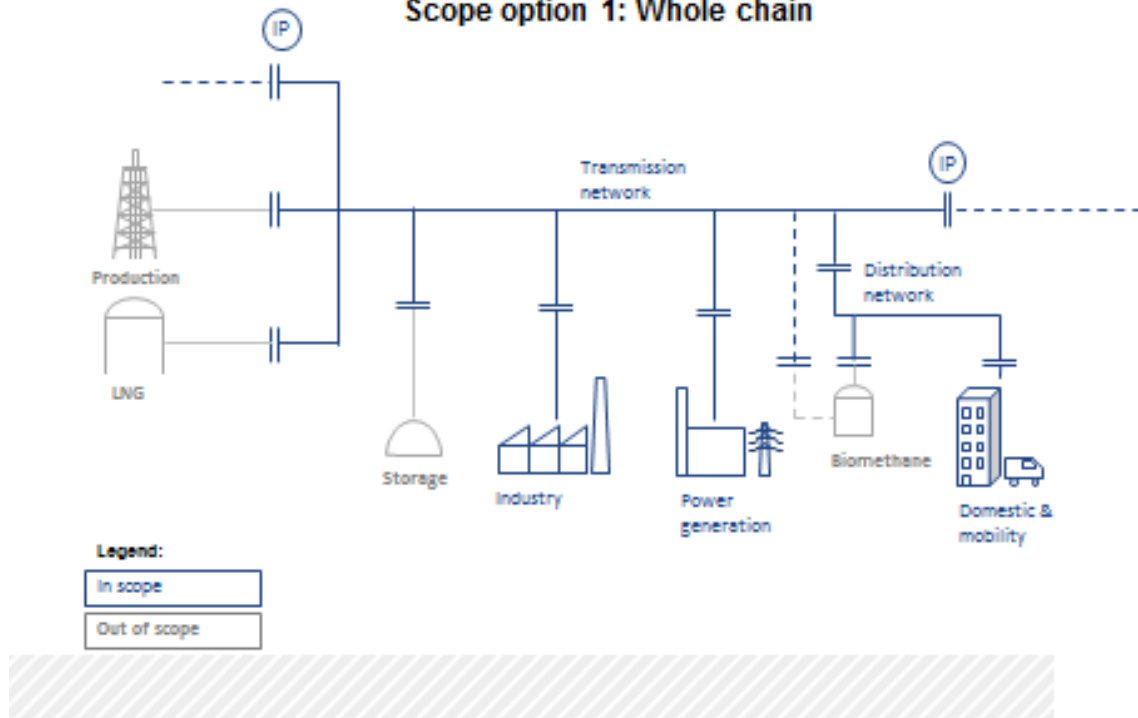
- > Scope of application of EN16726:2015: This European standard specifies gas quality characteristics, parameters and their limits, for gases classified as group H that are to be transmitted, injected into and from storages, distributed and utilised. This European standard does not cover gases conveyed on isolated networks.
- > Scope of INT NC: This Regulation shall apply at interconnection points. But it also applies to transmission networks (Article 18) and to entry and exit points to third countries subject to NRAs' decision.
- > Scenarios considered:
 - **Scenario 1: Whole chain:** same scope as EN16726. That starts at entry points.

² "Mandate to CEN for Standardisation in the Field of Gas Qualities", European Commission, 16th January 2007, Section 1: Motivation.

Policy issues



Scope option 1: Whole chain

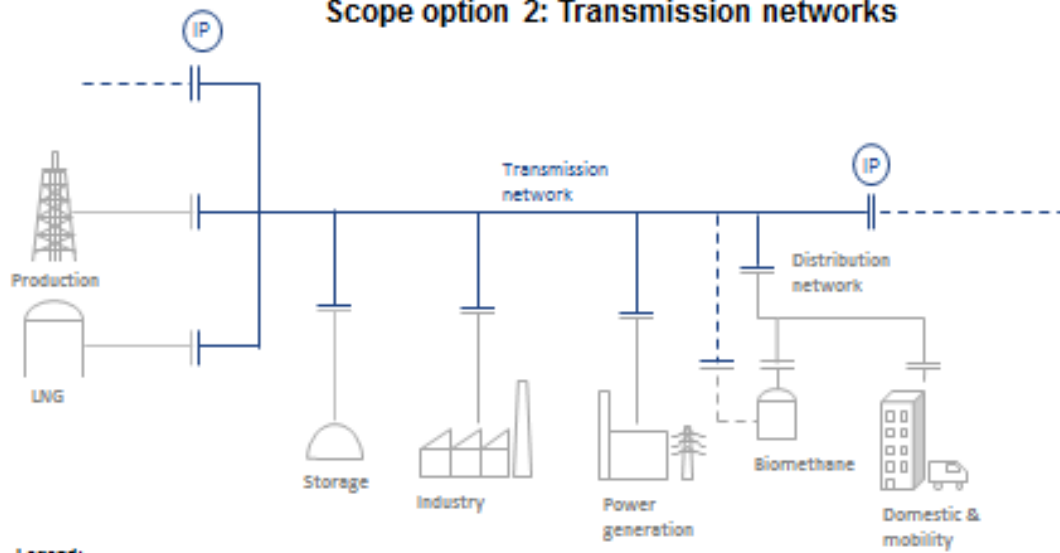


- Scenario 2: Transmission networks.

Policy issues



Scope option 2: Transmission networks



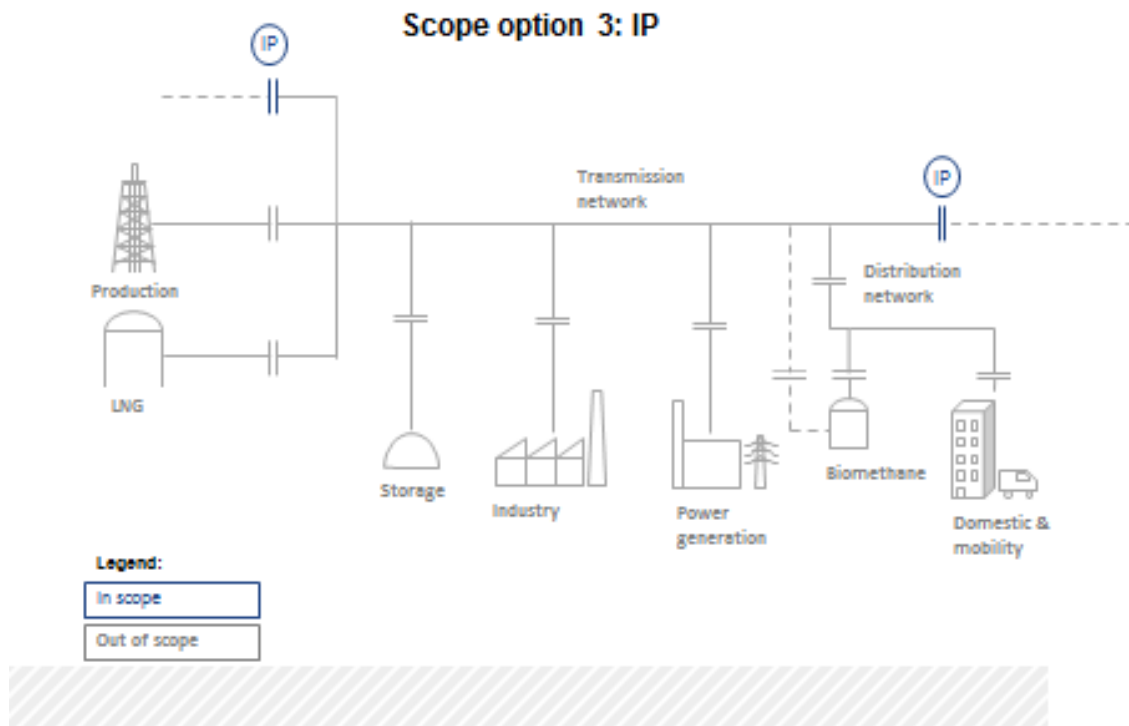
Legend:

- In scope
- Out of scope

7

- **Scenario 3: At IPS:** meaning connection points between two different TSOs and balancing zones.

Policy issues

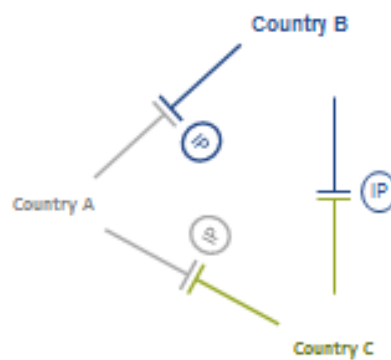


- Scenario 4: National application on a voluntary basis (**voluntary adoption**).

Policy issues



Scope option 4: Voluntary adoption



Legend:

EN 16726
National spec A
National spec C

- Rank the scenarios in order of preference

'Voluntary adoption' is our strong preference, next would be 'whole chain'.

'IPs only' and 'transmission networks only' are our least preferred options.

Policy issue 2 Implementation timing

- > It means the time required for the concerned parties to comply with the amendment to the Interoperability Network Code.
- > Options considered:
 - **Fixed** and equal for all countries and segments
 - **Flexible per segment** of the chain
 - **Flexible per regions**
 - **Flexible per segment and per regions**
 - As decided by **national authorities**

10. Regardless of your preference for a given scenario, what would be the most coherent choice in each case for policy issue 2? Why? (only one choice per row)

Implementation scenario	Fixed and equal for all countries and segments	Flexible per segments	Flexible Per regions	Flexible per segment and region	As decided by national authorities	Reasons (and detail on segment or proposed regions)
Whole chain						
Transmission networks						
Interconnection Points						
Voluntary adoption					YES	SEE BELOW

As stated in our response to Q8, NGGT does not believe that the cost-benefit case for making the CEN gas quality standard legally binding on member states has been demonstrated. We are therefore unable to support implementation across UK transmission and distribution networks.

As a TSO, we would have some specific practical difficulties with applying the standard at IPs only. We have three IPs connected to our network:

- the IUK interconnector which connects Bacton (UK) to Zeebrugge (Belgium) and is physically bidirectional;
- the BBL interconnector which connects Bacton (UK) to Julianadorp (Netherlands) and currently only physically delivers gas from the Netherlands to the UK; and

- the Irish interconnector(s) which connects Moffat (southern Scotland) to Northern Ireland and Republic of Ireland and currently only physically delivers gas from GB to NI and RoI.

The 'IPs only' scenario would mean that NGGT would have to put in place an entry / exit specification at these locations that was compliant with the CEN standard but manage a different specification at other entry and exit points. This would be unworkable for NGGT given that we do not currently have the assets, funding or capability to process or blend different gases.

For example, some of the northern entry points to our network at St Fergus have a 4% limit for carbon dioxide content. The gas that is delivered at those entry points will typically find its way to Moffat. Under the 'IPs only' scenario, NGGT would be obliged to deliver gas to the Moffat exit point with a CO₂ concentration not greater than 2.5%.³ NGGT would have no ability to achieve that without renegotiating the St Fergus entry limits which we would have no legal vires to do, nor, moreover, would we want to for security of supply reasons as further explained in our answer to Q12. The alternative would be to install gas processing equipment to remove CO₂ at Moffat but we have neither the means nor the capability to do so at present.

The same principle applies to the 'Transmission only' option. Even though under this option all of our contracts with transmission entry points would have to be compliant with the CEN standard and we would not, therefore, face the difficulties associated with the IPs only option, potentially, a different specification would apply on the UK distribution networks. There are currently 124 offtakes from the UK transmission system to distribution where gas processing equipment would have to be installed and monitored and it is unclear whether this role would fall to the DSOs or us as TSO. What *is* clear though is that neither party currently has regulatory obligations or funding through its price control arrangements, nor the capability to perform this role.

³ Whilst the standard allows some flexibility for CO₂ between 2.5% and 4%, in our view this flexibility would not apply to the UK because we have brined underground salt cavern storage connected to our network.

Policy issue 3: Interaction with INT NC

- > The INT NC already provides mechanisms (Article 15) for the removal of gas quality related cross-border trade barriers that have been recognised by NRAs. In brief, the INT NC requires TSOs to carry out a joint cost benefit analysis and to submit a joint proposal to NRAs.
- > How should this process interact with the application of the CEN standard?
- > Options considered:
 - INT NC mechanisms **don't apply** after transition period, except for parameters not covered in the standard.
 - INT NC mechanisms are applied as **first option** when a barrier is found. If no agreement is reached, the CEN standard will be applied.
 - INT NC mechanisms should be the **only solution** applied.

11. Regardless of your preference for a given scenario, what would be the most coherent choice in each case for policy issue 3? Why? (only one choice per row)

Implementation scenario	INT mechanisms don't apply after transition period, except for parameters not covered in the standard	NC mechanisms are applied as first option when a barrier is found. If no agreement is reached, the CEN standard will be applied	INT mechanisms should be the only solution applied	NC	Reasons
Whole chain					
Transmission networks					
Interconnection Points					
Voluntary adoption			YES		SEE BELOW

As stated previously in this response, NGGT is currently of the view that any barrier to trade caused by different gas quality specifications is best dealt with locally by the parties involved rather than by imposing a 'one size fits all' specification on the whole of Europe.

The current rules in the Interoperability Code provide for this. In the event that such a barrier appears that is recognised by both relevant NRAs, the current rules require the relevant TSOs to take instruction from their NRAs to develop options and consult with stakeholders about what the most appropriate solution should be. These rules were developed through the open and transparent stakeholder engagement process that ENTSOG ran whilst developing the Interoperability Code. We therefore would not support the first

option here which would effectively remove these rules and replace them with the CEN standard specification. These rules have only been applicable since 1st May 2016 and we believe should at least be given an opportunity to work.

We also do not support the second option of having the CEN standard as a 'default rule' in case the current Interoperability rules do not provide a solution (i.e. adjacent TSOs and NRAs cannot agree). In our view, it is extremely unlikely that a pre-defined specification would serve as an appropriate fall-back position to resolve a local issue at an IP and it could also potentially skew the negotiation between the parties involved if, for example, the CEN standard was a close fit to what one MS wanted but not the other.

Policy issue 4: Allowance for off-spec gas

- > CEN standardisation work on gas quality was initiated in 2007 by Mandate M/400: “The Commission hereby requests CEN to draw up standards that define the minimum range to be accepted for gas quality parameters for H-gas. [...] The goal is to define standards that are as wide as possible within reasonable costs”.
- > A first aspect of this issue is whether TSOs (or DSOs for gas injected directly to distribution networks) can refuse to accept gas that is within the limits of the standard.
- > Options considered:
 - Gas meeting the standard **shall be accepted** by infrastructure operators
 - Gas meeting the standard **may be refused** by infrastructure operators if national legislation sets stricter limits for the parameters contained in the standard

12. Regardless of your preference for a given scenario, what would be the most coherent choice in each case for policy issue 4 ? Why? (only one choice per row)

Implementation scenario	Gas meeting the standard shall be accepted by infrastructure operators	Gas meeting the standard may be refused by infrastructure operators if national legislation sets stricter limits for the parameters contained in the standard	Reasons
Whole chain	NO		
Transmission networks	NO		
Interconnection Points	NO		
Voluntary adoption		YES	

Our reasoning here is that there may be other parameters that are defined in national legislation that could not be met if gas meeting the CEN standard were to always be accepted for delivery.

An example of this is Relative Density and Wobbe Index. The former is in the CEN standard, the latter is not, yet there is a directly proportional correlation between the two. A relative density range of 0.555 to 0.7 implies a Wobbe Index range that is in excess of the current UK range as defined in our national legislation – the Gas Safety (Management) Regulations (GS(M)R). Therefore the UK could not, at present, accommodate the RD range in the CEN standard.

More generally, there may be good reasons for MS to have stricter limits based on local issues.

- > A second aspect is whether infrastructure operators can accept gas that is outside the standard
- > Options considered:
 - Infrastructure operators **can't accept gas outside the standard**
 - Infrastructure operators **may agree less strict limits** than those of the standard

13. Regardless of your preference for a given scenario, what would be the most coherent choice in each case for policy issue 4 ? Why? (only one choice per row)

Implementation scenario	Infrastructure operators can't accept gas outside the standard	Infrastructure operators may agree less strict limits than those of the standard	Reasons
Whole chain	NO		
Transmission networks	NO		
Interconnection Points	NO		
Voluntary adoption		YES	SEE BELOW

The key objective of the CEN standard as stated in the Commission's 2007 mandate was that the standard should be "as broad as possible within reasonable costs". The thinking behind it being "as broad as possible" was to promote competition and facilitate EU security of supply by minimising the amount of processing that upstream parties would have to undertake and thus make EU entry points attractive locations for gas to be landed.

If infrastructure operators were not permitted to accept gas outside of the CEN standard limits that currently they are happy to accept, this would run counter to the Commission's stated objectives in this regard.

NGGT has conducted analysis which shows the impact on UK security of supply of applying the CO₂ and O₂ parameters of the standard restrictively. This analysis is attached to our response and concludes that if the CO₂ and O₂ limits in the standard had been applied restrictively during calendar year 2015 (that is to say, CO₂ limits of 2.5% and O₂ limits of 0.001%mol at every UK transmission entry point), 20% of UK gas supplies would have been refused entry to our transmission system.

Restrictive application could also deter offshore investment by gas producers seeking to maximise economic recovery of gas from the North Sea.

Policy issue 5. A-deviations (conflicts with national legislation)

- > A-Deviations inform on conflicts between national legislation and European standards.
- > EN 16726 already includes A-deviations from several Member States. In addition, A-deviations can also be requested after publication.
- > Adoption of standards is voluntary. When there is an EU harmonisation legislation enforcing the standard, it is not clear whether national legislations should be amended to eliminate A-deviations.
- > Options considered:
 - A-deviations should be **withdrawn** after transition phase (implementation timing).
 - A-deviations should be **retained** unless otherwise decided by competent national authority.

Questions 14 to 18 are mainly addressed to stakeholders representing the interest of a given Member State

14. Are there any national constraints caused by national legislation/ regulation?

Yes. The UK national legislation for Wobbe Index would prevent the UK adopting a relative density range of 0.555 to 0.7.

15. Are there stricter legal/regulatory requirements than given in EN 16726:2015 (A-Deviation)? For which parameters?

Yes. The UK national legislation for Wobbe Index would prevent the UK adopting a relative density range of 0.555 to 0.7.

16. Is an A-Deviation documented in EN 16726:2015?

No, the UK does not have an A-Deviation documented in the standard.

17. Are there less strict legal/regulatory requirements than given in EN 16726:2015 (no A-Deviation)? For which parameters?

Total Sulphur: UK legislation currently permits 50 mg/m³ whereas the CEN standard requires 20 mg/m³ for non-odourised networks such as ours.

Hydrocarbon and water dewpoints: The CEN standard would impose stricter limits than current standard practice for UK transmission.

Oxygen: The legal limit in the UK is 0.2%, with a class exemption granted by the UK safety regulator for biomethane entry points of up to 1%. In practice, historically, NGGT has typically sought to agree with upstream parties to limit the O₂ content in their gas deliveries to our system to 0.001%mol (or 10 ppm) due to the difficulties that may be experienced by some offtakes.

18. Are there any other legal/regulatory constraints? Please describe

19. Regardless of your preference for a given scenario, what would be the most coherent choice in each case for policy issue 5? Why? (only one choice per row)

Implementation scenario	A-deviations should be withdrawn after transition phase (implementation timing)	A-deviations should be retained unless otherwise decided by competent authority	Reasons
Whole chain			
Transmission networks			
Interconnection Points			
Voluntary adoption			NGGT has no specific preference on the scenarios presented but offers the comments below.

Our understanding is that A-Deviations are adopted into a CEN standard if a member state is unable to adopt that standard because existing national legislation conflicts with it. Alternatively, a MS may submit a Special National Condition (SNC) to note its inability to implement a CEN standard, or part thereof, if there is a technical reason or a reason outside the control of that MS which prevents adoption. In a gas quality context, a hypothetical example could be that a MS in southern Europe is unable to apply the hydrocarbon dewpoint temperatures in the CEN standard because of its hot climate.

Our understanding is that A-Deviations form an integral part of the standard itself and therefore, unless any text is proposed to amend the Interoperability Code that specifically excludes A-Deviations, they would continue to apply by default. It is not clear to us whether A-Deviations would be time-limited; in other words, whether the relevant MS would have an obligation to amend its national legislation in order to comply with the CEN standard. If not, it appears that the enduring application of A-Deviations would run counter to harmonisation objectives and also raises the practical question of how the interfaces between a MS that has an A-Deviation and one that does not would be managed. Specifically, if TSO A which does not have an A-Deviation in place receives gas from TSO B who does, which of these TSOs would be obliged to process that gas at that location in order to be compliant with a legally binding CEN standard?

Policy issue 6. Flexible limits

- > For two parameters in the CEN standard (O₂, CO₂) there is a base limit with the potential for a higher limit up to a cap.
- > Example (CO₂): “At network entry points and interconnection points the mole fraction of carbon dioxide shall be no more than 2,5 %. However, where the gas can be demonstrated not to flow to installations sensitive to higher levels of carbon dioxide, e.g. underground storage systems, a higher limit of up to 4 % may be applied.”
- > It is unclear who decides on flexible limits, how the decision is taken and for how long, what is the definition of a sensitive installation?
- > Options considered:
 - Network operators and concerned parties carry out an impact assessment demonstrating the limit that could be applied with involvement of the relevant national authorities.

20. What is your opinion on the proposed option?

NGGT regards these flexible limits as unworkable for a number of reasons:

- It is not clear who has the obligation to determine whether sensitive sites would be affected. We assume that this duty would fall upon TSOs.
- It is impossible to establish definitively how far gas from a particular source of supply will penetrate into a TSO's network. The answer will be different depending on the supply and demand assumptions that are used in the network modelling. The uncertainty of this is exacerbated for a pipeline network like the UK's which has multiple sources of geographically dispersed supply and where demand off the transmission system can be dynamic within the gas day in response to a number of factors such as changes in weather patterns, gas price movements in different European markets and other operational and commercially driven impacts from the electricity market.
- Even if it *were* possible to establish a definitive area of penetration, we are unsure how any higher limits would be managed over time as flow patterns change and new connection requests are made. For example, if it were agreed that an entry point could have a 4% CO₂ limit but then in a few years' time the TSO receives a connection from a salt cavity storage operator close to that source of supply, the TSO would either have to renegotiate the 4% down to 2.5% or refuse the connection request. In our view, this would contribute instability to the EU regulatory environment that would be to the detriment of investor confidence.
- It is not clear what the definition of a sensitive site is. It may be possible to establish an answer on this point technically, but other parties could also be affected commercially. At ENTSG's workshop in Cologne on 28th April 2016, a question was asked about whether the UK transmission system constituted a 'sensitive network' given that it has several salt cavern storage sites connected to it. The answer from CEN was yes. NGGT therefore concludes that the UK could not apply flexibility in respect of the CO₂ and O₂ limits. Given that the CEN standard specifically states that these parameters should be applied at all entry points not just IPs, this would mean

that the potential 20% drop in UK supply referred to in Q13 would become a reality.

We would also highlight that applying the oxygen limit as a 'daily average' rather than instantaneously does not fit with NGGT's gas quality excursion management procedures. If the gas quality being delivered to our network by an upstream party goes outside of the agreed specification, we as the TSO need to take curtailment action straight away, not wait until the end of the day to see if the average of all measurements taken within the day was within the limit.

21. Do you suggest any other option?

No, because ENTSOG has made it clear that the parameters in the CEN standard are outside the scope of the consultation.

General question:

22. Please rank the policy issues in terms of difficulty

From (1) being the most difficult to (6) being the most straightforward, our assessment is as follows:

- 1) Flexible Limits
- 2) A-Deviations
- 3) Allowance for off-spec gas
- 4) Scope
- 5) Implementation timing
- 6) Interaction with existing INT NC rules

Section 3: Impact analysis of different scenarios

In terms of the impact of a possible **whole chain** implementation scenario for your segment, organisation or country please answer the following questions under the assumption that all national legislations deviating from the standard are withdrawn or amended and provide evidence supporting your statements:

23. What benefits do you expect?

There may be benefits to EU security of supply at a 'macro' level if a common specification applies for the entire EU bloc because upstream parties – particularly LNG producers – would have certainty on the specification wherever they chose to land their gas. Any existing barriers due to different specifications between MS would also be removed.

However, we have not seen any analysis to support this potential security of supply benefit, nor are we aware of any gas quality related barriers that currently exist in Europe that the implementation of the CEN standard would resolve. On the contrary, the analysis that we have completed shows that from a UK perspective, security of supply would be materially compromised rather than enhanced.

24. What negative impacts might this scenario have?

Additional costs associated with more gas processing and monitoring equipment for no obvious benefit. Also please refer to answer 23 above.

25. Are there any barriers to implement it?

If NGGT were required to implement changes to equipment then additional regulatory funding would need to be secured which would increase the cost of gas to consumers. However, if NGGT could not show that such funding would be economic and efficient then our NRA may be disinclined to grant it. Furthermore, the majority of gas quality measurement equipment that is currently installed at transmission entry points to the UK network is not owned by NGGT but rather by the upstream party delivering the gas.

26. How much would it cost to overcome them?

We are currently unable to provide a view on potential costs.

27. How long would it take?

At least 5 years would be our expectation since this would be additional work on top of existing planned maintenance and changes to the measurement equipment on our network. A thorough safety and network integrity assessment may also be required.

28. Do you foresee any risk in terms of security of supply?

Yes – please refer to our answer to Q13.

29. Do you foresee any impact in terms of price for your product(s)?

We do not consider that this question is applicable for us as a TSO.

30. Is this given scenario feasible for your segment/organisation/country?

Whole chain implementation is feasible in the sense that it could, technically, be done. However we do not believe it would be desirable for the reasons explained elsewhere in this response.

31. Could there be any unintended consequences?

Yes, we believe that a 20% drop in permitted UK supplies and increased cost of gas to UK consumers would be unintended consequences that would run counter to what the Commission is trying to achieve.

In terms of the impact of a possible **transmission networks** implementation scenario for your segment, organisation or country please answer the following questions and provide evidence supporting your statements:

32. What benefits do you expect?

As answer to Q23.

33. What negative impacts might this scenario have?

As answer to Q24.

34. Are there any barriers to implement it?

As answer to Q25.

35. How much would it cost to overcome them?

As answer to Q26.

36. How long would it take?

As answer to Q27.

37. Do you foresee any risk in terms of security of supply?

As answer to Q28.

38. Do you foresee any impact in terms of price for your product(s)?

As answer to Q29.

39. Is this given scenario feasible for your segment/organisation/country?

Given the large number (124) of offtakes from our transmission network to the

distribution networks, we consider it neither feasible nor desirable for the UK to manage a different gas quality specification on the transmission system to the distribution networks.

40. Could there be any unintended consequences?

An unintended consequence could be to install gas processing equipment at the transmission / distribution interface, causing additional costs for no benefit.

In terms of the impact of a possible implementation at **interconnection points** scenario for your segment, organisation or country please answer the following questions and provide evidence supporting your statements:

41. What benefits do you expect?

Any existing barriers at IPs due to different specifications between MS would be removed. However we are not aware of any such barriers.

42. What negative impacts might this scenario have?

It would require either TSOs to blend / process gas (which NGGT does not currently do) or upstream parties that deliver gas into our network at non-IP entry points to agree to stricter limits which we expect they would be disinclined to do, nor would we necessarily want them to, given the expected detrimental effect on security of supply.

43. Are there any barriers to implement it?

The nature of the UK pipeline transmission network with its multiple sources of supply and multiple IPs is not conducive to managing different specifications for gas quality at IPs compared to non-IPs.

44. How much would it cost to overcome them?

We are unable to provide cost information.

45. How long would it take?

Somewhere in the region of 5 years would be expected.

46. Do you foresee any risk in terms of security of supply?

Yes. If the standard were applied at IPs only then the gas we receive at the St Fergus terminals which has CO₂ content greater than 2.5% could no longer be accepted because of our obligation to make gas available for offtake at Moffat at this level. This could adversely affect not only the security of supply of GB but also of Northern Ireland and the Republic of Ireland, given that the vast majority of their gas is sourced from the Moffat offtake.

47. Do you foresee any impact in terms of price for your product(s)?

As answer to Q29.

48. Is this given scenario feasible for your segment/organisation/country?

No, we do not consider it to be either a feasible or desirable scenario because of the security of supply implications.

49. Could there be any unintended consequences?

Yes, as stated in our answers to Qs 20 and 46.

In terms of the impact of a possible **voluntary adoption** scenario for your segment, organisation or country please answer the following questions and provide evidence supporting your statements:

50. What benefits do you expect?

Least cost to implement, adverse impacts on security of supply would be avoided.

51. What negative impacts might this scenario have?

None that we are aware of.

52. Are there any barriers to implement it?

No.

53. How much would it cost to overcome them?

Not applicable, given our answer to Q52.

54. How long would it take?

Not applicable.

55. Do you foresee any risk in terms of security of supply?

It would be useful to understand from the upstream community whether the lack of a harmonised gas quality specification at EU transmission system entry points would be likely to lead to the EU bloc becoming a less attractive option for them to land gas that could go elsewhere (such as LNG) or whether other factors such as regulatory stability and market liquidity are more important when making these decisions.

56. Do you foresee any impact in terms of price for your product(s)?

As answer to Q29.

57. Is this given scenario feasible for your segment/organisation/country?

Yes – it is effectively the status quo.

58. Could there be any unintended consequences?

Not that we are aware of, subject to the issue raised in our answer to Q55.

Last general question

59. Is there any other option that should be considered?

No, we consider that the options presented by ENTSG are sufficiently exhaustive.