

Modification proposal:	Uniform Network Code (UNC) 256: Amendment to the Network Entry Agreement at St Fergus SAGE Terminal		
Decision:	The Authority ¹ directs that this proposal be made ²		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	30 September 2009	Implementation Date:	TBC by Joint Office

Background to the Proposal

Gas Safety (Management) Regulations (GS(M)R) 1996

The GS(M)R, which are part of health and safety legislation, set the legal parameters for gas entering into and leaving the GB gas network. These parameters are set to ensure the safe distribution and utilisation of gas. All gas entering the National Transmission System (NTS) at either sub-terminals or in some cases specified downstream blending points must comply with these regulations³.

Network entry agreements / legacy contracts

In addition to the GS(M)R, National Grid Gas (NGG) NTS has its own individual gas quality specifications at each entry point, which it agrees with the relevant sub-terminal operator. For some sub-terminals, these specifications are contained in Network Entry Agreements (NEAs). NEAs are subsidiary documents governed by the UNC. However, for other sub-terminals, these specifications are contained in pre-Network Code agreements (so called "legacy" contracts). These legacy contracts were signed primarily by British Gas and the relevant producers at the entry points prior to the introduction of NGG NTS's Network Code in 1996.

The gas quality specifications contained in these agreements are referenced in the UNC and are known as Network Entry Provisions (NEPs). Under section I of the Transportation Principal Document of the UNC, any changes to the NEPs, which include gas entry conditions, measurement provisions and the point or points of delivery, need the written consent of all users who are registered at such a date when the amendment is to take effect. Alternatively, it may be possible to progress changes to NEPs via a modification proposal.

Gas quality parameters

Natural gas contains hydrocarbons (methane, ethane, propane, and butane), small quantities of hydrogen, inert gases such as nitrogen and carbon dioxide, and contaminants such as hydrogen sulphide, oxygen and mercury. In GB, gas appliances are designed and tested to operate on methane. The appliances are tested with this reference gas and some tests are also performed with limit gases⁴. The limit gases are those which fall at the upper and lower ends of the GS(M)R Group H Wobbe range. The

¹ The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority.

² This document is notice of the reasons for this decision as required by section 38A of the Gas Act 1986.

³ Gas Safety (Management) Regulations 1996 Regulations 2(4) and 8

⁴ Limit gases relate to gas falling at the upper and lower end of the group H classification as determined by EN437 Gas Category H. These limit gases have a Wobbe number of 54.7 MJ/m³ at the higher end and 45.7 MJ/m³ at the lower end. These gases are usually tested to confirm that they will operate safely, if temporary excursions up to these limits occur. It should be noted that it is accepted that "operate safely" can be achieved by controlling shutdown of the appliance in a manner that presents no hazard to the user or surrounding property.

Wobbe Index (WI) is related to calorific value (CV) and density. The GS(M)R range for the Wobbe number is 47.20 MJ/m³ to 51.41 MJ/m³.

NGG NTS's obligations

NGG NTS has a number of obligations within the GS(M)R, the Gas Act 1986⁵ and its Gas Transporter (GT) licence⁶ that are relevant when considering changes to gas quality arrangements at entry terminals. NGG NTS must comply with the GS(M)R when allowing gases to enter its transportation system at either sub-terminals or in some cases specified downstream blending points.

Ofgem's statutory duty with regards to gas quality

The principal objective of the Authority is to protect the interests of existing and future consumers, wherever appropriate by promoting effective competition⁷. Further, under the Gas Act 1986, "the Authority may with the consent of the Secretary of State, prescribe (a) standards of pressure and purity to be complied with by gas transporters in conveying gas to premises or to pipe-line systems operated by other gas transporters"⁸. In recent years a number of modifications have been approved, which have made changes to gas quality specification at entry points, within legacy contractual arrangements, to make them consistent with the requirements within GS(M)R⁹.

The modification proposal

UNC modification proposal 256 "Amendment to the Network Entry Agreement at St Fergus SAGE Terminal" was raised by ExxonMobil Gas Marketing Europe Limited (EMGME) as a shipper at St Fergus, in consultation with Mobil North Sea LLC, the Delivery Facility Operator (DFO), on 1st July 2009. It seeks to align the lower Wobbe limit to that of the GS(M)R by moving it from 48.2 MJ/m³ to 47.2 MJ/m³, and align the upper Wobbe limit to that of the GS(M)R by moving it from 51 MJ/m³ to 51.41 MJ/m³.

UNC Panel¹⁰ recommendation

At the Modification Panel meeting held on 20 August 2009, the panel voted unanimously to recommend implementation of the proposal. Members considered that, by facilitating the widening of the acceptable gas quality specification at the Sage terminal, implementation of the Proposal would facilitate additional gas entering the pipe-line system. The Panel considered that the proposal would better facilitate the relevant code objectives (a) and (d).

The Authority's decision

The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 20 August 2009. The Authority has considered and taken into account the responses to the Joint Office's consultation on the modification proposal which are attached to the FMR¹¹. The Authority has concluded that:

⁵ Section 9 of the Gas Act 1986

⁶ Standard Special Condition A6 of the GT Licence

⁷ Section 4AA (1) of the Gas Act 1986

⁸ Section 16 (1) (a) of the Gas Act 1986.

⁹ Details of previous modifications can be found on the Joint Office website: www.gasgovernance.com

¹⁰ The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules

¹¹ UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at www.gasgovernance.com

1. Implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC¹²; and
2. Directing that the modification be made is consistent with the Authority's principal objective and statutory duties¹³.

Reasons for the Authority's decision

We agree with the conclusion of the Panel that implementation of this proposal will better facilitate relevant objectives (a) and (d) of the UNC. Our consideration of the impact of the proposal against the aims of these relevant objectives is set out below. The effect of the proposal on the remaining relevant objectives is neutral.

There were nine responses to modification proposal 256, all of which expressed support for the changes. NGG NTS has confirmed through analysis in a similar modification (UNC236) that this type of change has no bearing on its Safety Case as the gas flowing will be within GS(M)R limits.

Relevant Objective (a): the efficient and economic operation of the pipe-line system to which this licence relates;

All respondents agreed that increasing the range of allowed gas aligned the entry specifications to GS(M)R limits without causing undue NTS operational issues. It was also considered by respondents that the increased range of potential gas supplies allowed onto the system would increase the efficiency of the system and therefore make the best economic use of the gas transmission system.

NGG NTS noted in their response that the modification is not driven by a motivation to bring in gas at the extremes of the allowed WI limits, but simply to offer the widest scope allowed under GS(M)R to shippers using the St Fergus SAGE terminal, in line with many other UK entry points. Additionally, it was noted by respondents and NGG NTS that no material impact on CV shrinkage is expected due to the consistent gas quality and historical behaviour of UK Continental Shelf (UKCS) gas to all St Fergus terminals.

As noted in our decision for UNC236, we note the potential for increased CV shrinkage, and hence increased costs as a result of this new proposal. However, we consider that this modification proposal, if it were to give rise to limited additional costs, would not represent a direct cost to Users but a transfer cost, caused by the flow weighted average methodology¹⁴ under regulation 4 of the Gas Calculation of Thermal Energy Regulations 1996 (as amended). If this modification and others of its kind did give rise to additional costs, we would expect this to be considered by NGG NTS in accordance with its obligations under the Gas Act to develop and maintain an efficient and economical system.

By enabling a greater range of potential gas sources to enter GB, this modification proposal should, other things being equal, increase competition in the provision of gas balancing and other system services that National Grid NTS must procure to operate the system. Greater competition in the provision of these services should lead to more efficient and economic operation of the system. For the reasons set out above, we

¹² As set out in Standard Special Condition A11(1) of the Gas Transporters Licence, see:

http://epr.ofgem.gov.uk/document_fetch.php?documentid=6547

¹³ The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Gas Act 1986.

¹⁴ FWACV requires that the average calorific value be used for a charging area, but it subject to a cap to a maximum of 1 MJ/m³ above the lowest calorific value of gas being transported in the area. The GT must use the lower of either, the flow weighted average calorific value or a figure obtained by adding one mega joule per cubic metre to the lowest CV flowing into the charging area.

consider that this proposal would better facilitate the achievement of relevant objective (a).

Relevant Objective (d): securing of effective competition between the relevant shippers and suppliers and DN operators.

NGG NTS, along with all other respondents, considers that the proposal would enhance competition by bringing St Fergus Sage Terminal into line with the majority of other ASEPs and NTS exit points.

Ofgem is of the view that the modification proposal would secure greater flexibility in the St Fergus area and may facilitate a wider range of potential gas sources than the current parameters permit into GB. Ofgem considers that by enabling these sources of gas to come on stream this would therefore increase competition between shippers which could, other things being equal, lead to downward pressure on gas prices. Therefore, Ofgem considers that this modification proposal better facilitates achievement of relevant objective (d).

Ofgem's wider statutory duties

NGG NTS, along with all other respondents, considers that the proposal would increase security of supply by bringing St Fergus Sage Terminal into line with the majority of other ASEPs and NTS exit points.

By enabling a greater range of potential gas sources to enter GB, this modification proposal should, other things being equal, increase the security of gas supply to GB.

Ofgem has considered whether there is any potential for undue discrimination to consumers as a result of changing the gas quality standards by this modification proposal. NGG NTS has provided a qualitative view in the consultation response to demonstrate that there would be no negative impact on CV shrinkage in the medium term as a result of changing the WI limits. This point of view was furthered by a schematic of the St Fergus terminal and quantitative analysis of CVs from the three sub-terminals, which shows the capability for gas comingling to reduce the incidence of shrinkage.

Based on the information received from NGG NTS, Ofgem considers that there are unlikely to be any direct costs incurred by NGG NTS or Users as a result of implementing this modification proposal.

Other considerations

We would have concerns if high flows of low CV gas were to be input to the system from SAGE. We would therefore urge industry to keep this under review and give thought to whether strategic consideration needs to be given to GB gas quality as a result of the cumulative effect of a number of entry specifications being aligned to GS(M)R. Also, a more fundamental review may be initiated across industry. Given that the longer term GB gas quality requirements and specifications may be revisited, this decision should not be seen as setting any precedent for the future.

Whilst it is open to parties to raise further gas quality modification proposals, any such modification proposal will be assessed on a case by case basis. This is necessary to

determine, amongst other things, whether any modification that seeks to change gas quality limits imposes costs. As a general principle, if any modification proposals were likely to impose significant costs on NGG NTS's system and therefore ultimately consumers, Ofgem considers that it could be appropriate for these costs to be charged back to those parties causing the costs to be incurred.

As other NTS entry points (such as sub-terminals and specified downstream blending points) continue to align their Network Entry Agreements in line with GS(M)R limits, Ofgem looks forward to an assessment by NGG NTS of the viability of a blanket modification to equalise all gas quality conditions at the relevant locations. This is being carried out in the context of the UNC251 Code Review Group for the Determination of Daily Calorific Values, which aims to determine the underlying causes and possible solutions to CV Shrinkage.

For future modifications, we would expect all quantitative analysis supporting the modification proposal to be completed prior to the Panel's decision. This is in line with the consultative process of modifications and is critical for Ofgem's decision making.

Decision notice

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority, hereby directs that modification proposal UNC 256: Amendment to the Network Entry Agreement at St Fergus SAGE Terminal be made.

Andrew Wright
Senior Partner, GB Markets

Signed on behalf of the Authority and authorised for that purpose.