

Modification proposal:	<b>Uniform Network Code (UNC) 222: Amendment of Interconnector UK's Minimum Wobbe Limit (UNC222)</b>		
Decision:	The Authority <sup>1</sup> directs that this proposal be made <sup>2</sup>		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	20 November 2008	Implementation Date:	30 November 2008

## **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 regulations<sup>3</sup>.

### *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 National Grid's network code in 1996.

The gas quality specifications contained in these agreements are referenced in the UNC. Under section I of the UNC, any changes to the Network Entry Provisions (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, changes to NEPs can be progressed 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 gases. The limit gases<sup>4</sup> are

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

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

<sup>3</sup> Gas Safety (Management) Regulations 1996 Regulations 2(4) and 8

<sup>4</sup> Limit gases relate to gas falling at the upper and lower end of the group H classification as determined by EN 437 Gas Category H. These limit gases have a Wobbe number of 54.7 MJ/m<sup>3</sup> at the higher end and 45.7 MJ/m<sup>3</sup> 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.

those which fall at the upper and lower ends of the GS(M)R Group H Wobbe range. The Wobbe index is related to calorific value (CV) and density. The GS(M)R range for the Wobbe number is 47.2 MJ/m<sup>3</sup> – 51.41 MJ/m<sup>3</sup>.

### *NGG NTS's obligations*

NGG NTS has a number of obligations within the GS(M)R, the Gas Act 1986 and its GT licence that are relevant when considering changes to gas quality arrangements at entry terminals. National Grid 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.

Under section 9 of the Gas Act 1986, NGG NTS must comply, so far as it is economical to do so, with any reasonable request for it to connect to the system and convey gas by means of that system to any premises. In doing so, NGG NTS must avoid any undue preference or undue discrimination in the terms on which it undertakes the conveyance of gas.

Standard Special Condition A6 of the GT licence also states that:

“the licensee shall conduct its transportation business in the manner best calculated to secure that neither –

- the licensee or any affiliate or related undertaking of the licensee, nor
- any gas shipper or gas supplier,

obtains any unfair commercial advantage including, in particular, any such advantage from a preferential or discriminatory arrangement.”

### *Ofgem's statutory duty with regards to gas quality*

The principal objective of the Authority is to protect the interests of consumers<sup>5</sup>. Further, under the Gas Act 1986, “the Authority may with the consent of the Secretary of State, prescribe 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”<sup>6</sup>. In recent years a number of modifications have been approved, which have made changes to gas quality specification, within legacy contractual arrangements to the requirements within GS(M)R<sup>7</sup>.

---

<sup>5</sup> Section 4AA (1) of the Gas Act 1986

<sup>6</sup> Section 16 (1) (a) of the Gas Act 1986.

<sup>7</sup> Details of the these previous modifications, all of which were accepted, are as follows:

- UNC110 “Amendment of PX’s Network Entry Agreement” (November 2006)
- UNC069 “Amendment of Network Entry Provisions at European Interconnector sub-terminal at Bacton” (December 2005)
- UNC049 “Optional limits for inert gases at System Entry Points” (September 2005)
- UNC019 “Amendment of Network Entry Provisions to ConocoPhillips sub-terminal at Theddlethorpe to align with Transco 10 year statement” (May 2005)
- Network Code 732 “Amendment of Network Entry Provisions at BP sub-terminal at West Sole Easington” (March 2005)
- Network Code 722 “Amendment of Network Entry Provisions at Hornsea Entry Point” (November 2004)
- Network Code 720 “Amendment of Network Entry Provisions at Rough Entry Point” (October 2004)
- Network Code 711 “Amendment of Network Entry Provisions at Total E&P sub-terminal at Dimlington” (October 2004)
- Network Code 707 “Amendment to the Network Entry Provisions at Total E&P sub-terminal at St Fergus” (August 2004)
- Network Code 0681 “Change to the gas quality parameters at the ConocoPhillips sub-terminal at Theddlethorpe” (July 2004)

## The modification proposal

UNC modification proposal 222 "Amendment of Interconnector UK's Minimum Wobbe Limit" was raised by NGG NTS, with the support of IUK on 26 August 2008. It seeks to align the lower Wobbe limit to that of the GS(M)R by moving it from 48.2 MJ/m<sup>3</sup> to 47.2 MJ/m<sup>3</sup>.

## UNC Panel<sup>8</sup> recommendation

At the Modification Panel meeting held on 16 October 2008, all eleven Voting Members were in favour of the implementation of this modification proposal.

## The Authority's decision

The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 16 October 2008. 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 FMR<sup>9</sup>. The Authority has concluded that:

1. implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC<sup>10</sup>; and
2. directing that the modification be made is consistent with the Authority's principal objective and statutory duties<sup>11</sup>.

## Reasons for the Authority's decision

Ofgem agree with the conclusion of the Panel that implementation of this proposal will better facilitate the Relevant Objectives of the UNC. However, rather than being neutral on Relevant Objective (a) and (b), Ofgem consider that these objectives are better met by the modification. Ofgem consider the impact of the proposal against the aims of the Relevant Objectives below. Please note that unless directly stated, Ofgem consider the proposal to be neutral against the aims of the Relevant Objectives.

The proposer has confirmed that this modification has no bearing on its Safety Case as the gas flowing from, or into IUK will be within GS(M)R limits. It considers that the proposal would increase security of supply and enhance competition by bringing IUK into line with the majority of other ASEPs and NTS exit points.

There were eleven responses to modification proposal 222. All respondents expressed their support for the proposed modification. The respondents in favour of the proposal were of the view that it would enhance security of supply, secure greater flexibility in the transportation of gas, facilitate the economic and efficient development of new gas supplies and facilitate greater competition between suppliers and relevant shippers.

---

<sup>8</sup> The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules

<sup>9</sup> UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at [www.gasgovernance.com](http://www.gasgovernance.com)

<sup>10</sup> 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](http://epr.ofgem.gov.uk/document_fetch.php?documentid=6547)

<sup>11</sup> 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.

One respondent expressed concern regarding the impact upon CV shrinkage and financial implications, whilst another respondent expressed concern, regarding system operation and implications for capacity (entry and exit, particularly flex) in the South East.

Ofgem has noted the concerns raised with respect to increasing CV shrinkage, and hence increasing costs. However, we consider that this modification proposal, if it were to give rise to additional costs, would not represent a direct cost to Users but a transfer cost, caused by the flow weighted average methodology<sup>12</sup> under regulation 4 of the Gas Calculation of Thermal Energy Regulations 1996 (as amended 1997). However, if this modification and others of its kind did give rise to additional costs, Ofgem would expect this to be addressed by NGG NTS. Ofgem also notes the potential to reduced compressor usage as a result of flows into the South East from IUK.

Regarding the concerns relating to capacity (entry and exit, particularly flex) in the South East and based upon information from NGG NTS, Ofgem considers that the proposal will not have a material impact upon the overall gas quality or volumes in the Bacton area, as the NTS is planned and developed to be able to meet the forecast 1 in 20 Peak day demand under a number of different supply patterns. Again, based upon information from NGG NTS, any additional gas which would now be imported through IUK as a result of extending the Wobbe limit is considered to be within the tolerances provided by these supply patterns.

*Relevant objective (a): the efficient and economic operation by the licensee of its pipeline system.*

This modification proposal allows for additional gas supplies to be made available at Bacton. This additional supply of gas will, 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 will lead to more efficient and economic operation of NGG NTS's system. Therefore, Ofgem considers that this modification proposal better facilitates achievement of relevant code objective (a).

One respondent commented that the shared point of entry will lead to rapid dilution effects within the GB pipeline network and that the process control on gas-fired generation equipment would be capable of accommodating minor deviations, domestic users would not be materially affected, and that security of supply would be enhanced. Ofgem agrees, and recognises that the shared point of entry will rapidly dilute the IUK gas, as this will be commingled with the other sources. The proposal will enable additional gases and increased volume to be delivered into the GB pipeline network, increasing security of supply.

*Relevant objective (b): so far as is consistent with (a), the co-ordinated, efficient and economical operation of (i) the combined pipeline system and/or (ii) the pipe line system of one or more other relevant gas transporters.*

---

<sup>12</sup> 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/m<sup>3</sup> 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.

This modification proposal would allow additional sources of supply to flow onto the GB gas network, which would assist the other relevant transporters' to better manage (pressure and flows) their respective systems, leading to a more efficient and economical operation of the combined pipeline system. Therefore, Ofgem considers that this modification proposal better facilitates achievement of relevant code objective (b).

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

The modification proposal would secure greater flexibility in the operation of the IUK interconnector and could 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 code objective (d).

### **Other considerations**

The longer term GB gas quality requirements and specifications may be revisited in the future; therefore this decision should not be seen as setting any precedent for the future.

Whilst it is open to parties to raise gas quality modifications, any such modification proposals must be assessed on a case by case basis. This is necessary to determine whether any modification that seeks to change gas quality limits impose costs. As a general principle, Ofgem would note that if any modification proposals were likely to impose significant costs on NGG NTS's system and therefore ultimately customers, Ofgem considers that it could be appropriate for these costs to be charged back to those parties causing the costs to be incurred.

Ofgem has considered whether there is any undue discrimination as a result of changing the gas quality standards by this modification proposal. NGG NTS has provided network analysis to demonstrate that there would be no negative impact on CV shrinkage as a result of reducing the Wobbe index.

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, as such Ofgem does not consider that the proposal raises any issues of discrimination.

### **Decision notice**

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority, hereby directs that modification proposal UNC 222: Amendment of Interconnector UK's Minimum Wobbe Limit be made.



**Ian Marlee**  
**Director, Trading Arrangements**

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