

Modification proposal:	<b>Uniform Network Code (UNC) 266: Amendment to the Gas Quality NTS Entry Specifications for the North Morecambe Terminal</b>		
Decision:	The Authority <sup>1</sup> is minded to direct that this proposal be made		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	1 December 2009	Implementation Date:	N/A

This is a minded to decision based on the criteria set out at the end of this letter.

## 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>2</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 the 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.

No NEA exists for North Morecambe. Rather, the gas entry specifications for North Morecambe have their origins in a legacy contract that was in existence prior to the advent of the Network Code. The arrangements at the time for any such agreements was that upon implementation of the Network Code, the gas quality specifications were incorporated into and governed by the NEPs as outlined above.

<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> Gas Safety (Management) Regulations 1996 regulations 2(4) and 8.

## **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<sup>3</sup>. The limit gases are those which fall at the upper and lower ends of the GS(M)R Group H Wobbe range. The Wobbe Index (WI) is related to calorific value (CV) and density. The GS(M)R range for the Wobbe Number (WN) is 47.20 MJ/m<sup>3</sup> to 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<sup>4</sup> and its Gas Transporter (GT) licence<sup>5</sup> 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 regard to gas quality**

The principal objective of the Authority is to protect the interests of existing and future consumers, wherever appropriate by promoting effective competition<sup>6</sup>. 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"<sup>7</sup>. 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)R<sup>8</sup>.

## **The modification proposal**

UNC modification proposal 266 "Amendment to the Gas Quality NTS Entry Specifications for the North Morecambe Terminal" was raised by British Gas Trading Limited, as a shipper at the Barrow ASEP, in consultation with the Barrow delivery facility operator Hydrocarbon Resources Limited (HRL), on 26 August 2009. It proposes that the WN which forms a part of the gas entry conditions at the North Morecambe NTS entry point be amended to reflect the WN limits contained in the GS(M)R. This would result in the alignment of 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>, and alignment of the upper Wobbe limit to that of the GS(M)R by moving it from 51.2 MJ/m<sup>3</sup> to 51.41 MJ/m<sup>3</sup>.

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<sup>3</sup> 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/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 appliances 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.

<sup>4</sup> Section 9 of the Gas Act 1986.

<sup>5</sup> Standard Special Condition A6 of the GT Licence.

<sup>6</sup> Section 4AA (1) of the Gas Act 1986.

<sup>7</sup> Section 16 (1) (a) of the Gas Act 1986.

<sup>8</sup> Details of previous modifications can be found on the Joint Office website: [www.gasgovernance.com](http://www.gasgovernance.com)

## **UNC Panel<sup>9</sup> recommendation**

At the Modification Panel meeting held on 15 October 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 North Morecambe 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 draft decision**

The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 15 October 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 FMR<sup>10</sup>. On the basis of the information the Authority has received to date, we are minded to conclude that:

1. Implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC<sup>11</sup>; and
2. Directing that the modification be made is consistent with the Authority's principal objective and statutory duties<sup>12</sup>.

## **Reasons for the Authority's current view**

Given the information received to date, we are minded to 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 six responses to modification proposal 266, 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 North Morecambe Terminal 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 NTS would increase the efficiency of the system and therefore make the best economic use of the gas transmission system.

NGG NTS noted in its consultation 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

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<sup>9</sup> The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

<sup>10</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>11</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>12</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.

the widest scope allowed under GS(M)R to the Barrow Delivery Facility Operator (DFO). Additionally, it agrees with the Proposer that there would be minimal impacts to system operation, only requiring additional comingling with St Fergus before exiting Lupton if North Morecambe were to operate continuously at the proposed lower WI limit. Based on historical information, NGG NTS considered that this is unlikely to occur, as incidences of very low WN gas at Lupton are most likely to be caused by short term transient events within the gas day. With regard to CV shrinkage, as it is based on a flow weighted average across the day, NGG NTS considered that any low CV periods occurring over the short term are likely to be smoothed out. However, NGG NTS has not provided quantitative analysis to support this view, and therefore the extent of comingling and blending required is unknown.

In our decisions for UNC236 and UNC256, we noted 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 methodology<sup>13</sup> 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 1986 to develop and maintain an efficient and economical system. In isolation, widening the scope of WN allowed onto the NTS from this Terminal is acceptable, but the broader issue of increased levels of CV shrinkage requires critical analysis to be completed by NGG NTS as gas quality widens across the 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 NGG 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, our minded to view is that this proposal would better facilitate the achievement of relevant objective (a). However, this view depends on a quantitative assessment of CV shrinkage impacts, as set out at the end of this letter.

***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 the North Morecambe Terminal into line with the majority of other ASEPs and NTS entry points.

Subject to receiving the relevant quantitative analysis, Ofgem is of the view that the modification proposal would secure greater flexibility in the 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, given the information presented to date, Ofgem's minded to view is that this modification proposal better facilitates achievement of relevant objective (d).

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<sup>13</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.

### ***Ofgem's wider statutory duties***

NGG NTS, along with all other respondents, considers that the proposal would increase security of supply by bringing North Morecambe into line with the majority of other ASEPs and NTS entry 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. Based on the information received from NGG NTS, Ofgem is minded to conclude that there are unlikely to be any direct costs incurred by NGG NTS or Users as a result of implementing this modification proposal. However, without quantitative analysis of changes to the system, we cannot be assured that CV shrinkage is a low risk event.

### ***Other considerations***

We consider that there may be concerns if high flows of low CV gas were to be input to the system from North Morecambe, given the low CV of South Morecambe gas and increased requirement of comingling gas from St Fergus. As similarly noted in our decisions for UNC236 and UNC256, we would 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, we would welcome consideration of a more fundamental review by the 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 NEAs 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. While the widening of WI limits associated with this proposal is acceptable in isolation, as a whole, we do not feel that gas quality issues are being adequately considered by NGG NTS.

For future modifications, we would expect all quantitative analysis supporting the modification proposal to be completed in time for it to be considered by the Panel for input to their recommendation. We are disappointed that, having stated that we would like quantitative analysis to be completed by the date of the Panel meeting in our

UNC256 decision letter, this has not been undertaken in this case. We consider that it is important for consultation respondents and the Panel to have access to all relevant information when forming their views. It is also critical for Ofgem's decision making.

### **Minded to decision**

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority is minded to direct that modification proposal UNC 266: Amendment to the Gas Quality NTS Entry Specifications for the North Morecambe Terminal be made subject to the conditions below.

1. NGG NTS provision of quantitative analysis to confirm their consultation response view that CV shrinkage as a result of this proposal would likely be a low frequency event.
2. The Panel's confirmation that they do not wish to reconsult following the provision of the above analysis; alternatively, if they do reconsult, that the reconsultation has not raised any new issues.
3. No new or alternative analysis or views being raised in the above two points or otherwise, which would lead Ofgem to reconsider its current position on the proposal.

Should you wish to discuss the contents of this letter, please contact Belinda Littleton (020 7901 7441).

**Ian Marlee**  
**Partner, Trading Arrangements**

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