

0519:

Harmonisation of Reference Conditions at Interconnection Points

At what stage is this document in the process?

- 01 Modification
- 02 Workgroup Report
- 03 Draft Modification Report
- 04 Final Modification Report

This Modification seeks to facilitate compliance with requirements to implement harmonised reference conditions that are contained in the EU Network Code on Interoperability and Data Exchange Rules.

It proposes to adopt the use of such conditions for mandated processes at Interconnection Points (IPs) whilst allowing processes at other points to continue operating to the current GB reference conditions.



The Proposer recommends that this Modification should be assessed by a Workgroup.



High Impact:



Medium Impact:
Interconnection Point Users, National Grid Gas Transmission



Low Impact:

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About this document:

This is an amended Modification for Workgroup assessment.

The Proposer recommends the following timetable:

Initial consideration by Workgroup	02 December 2014
Amended Modification considered by Workgroup	19 February 2015
Workgroup Report presented to Panel	19 March 2015
Draft Modification Report issued for consultation	19 March 2015
Consultation Close-out for representations	13 April 2015
Final Modification Report presented to Panel	21 May 2015
UNC Modification Panel recommendation	21 May 2015



Any questions?

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1 Summary

Is this a Self-Governance Modification?

Self-Governance procedures are not proposed because this Modification is to be considered in the context of other EU-driven changes that will have a material effect on commercial activities connected with the transportation of gas conveyed via the National Transmission System and the operation of this pipeline system¹.

Is this a Fast Track Self-Governance Modification?

Fast Track procedures are not proposed because this is not a housekeeping Modification.

Why Change?

The European Network Code on Interoperability and Data Exchange (hereafter referred to in this Modification as “EU Interoperability Code”) requires the use of reference conditions of 0°C for volume and 25°C for calorific value (hereafter referred to in this Modification as “0/25”) for any data exchange and data publication related to Regulation (EC) No 715/2009. The GB regime currently uses reference conditions of 15°C for volume and 15°C for calorific value (hereafter referred to in this Modification as “15/15”) and the UNC therefore needs to be amended to reflect the use of different reference conditions for these new IP processes.

It is the view of the Proposer that the new capacity booking process and new nominations process that will be introduced at GB IPs will be captured by the “data exchange” provisions referred to in the EU Interoperability Code.

Solution

The solution aims to ‘ring-fence’ the application of 0/25 reference conditions to the IP processes for which they are mandated whilst keeping processes at all other GB system points, as well as operational and GB User balancing, unchanged at 15/15 conditions. Capacity will be booked and energy will be nominated and allocated on a 0/25 basis, with an IP ‘balancing allocation’, which corrects to 15/15, added to the energy allocation.

Relevant Objectives

This Modification will better facilitate achievement of the following Relevant Objective:

(g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

Implementation

No specific implementation timescales are proposed, however it is the view of the Proposer that this Modification would need to be implemented no later than 1st May 2016 to enable GB to be compliant with the relevant provisions of the EU Interoperability Code.

Does this modification affect the Nexus delivery, if so, how?

This modification is one of a suite of EU-driven UNC Modifications, which form an EU delivery programme. The delivery of system changes associated with this EU programme is already being managed alongside Project Nexus-related changes.

¹ The relevant self-governance criteria as specified in SSC A11 Network Code and Uniform Network Code,

2 Why Change?

Measurement of a quantity of gas is sensitive to several factors, one of which is temperature. Therefore, in order to derive consistency, measurements are 'corrected' to constant reference temperatures for volume and for calorific value in order to derive an energy measurement. At present, these reference temperatures vary across EU member states, for example the majority of Western Europe correct to 0°C for volume and 25°C for CV, whereas GB and ROI/NI operate to 15°C for volume and 15°C for CV.

Whilst reference temperatures fundamentally relate to a physical measurement process, 'commercial' energy figures such as User capacity bookings, nominations and allocations may also be declared at particular reference conditions by virtue of the physical arrangements that prevail which UNC Section GTC 'Interpretation' recognises.

The EU Interoperability Code requires harmonisation of reference conditions at 0/25 "for any data exchange and data publication related to Regulation (EC) No 715/2009" but allows certain exemptions. The GB regime currently uses 15/15 reference conditions both for physical measurement and commercial processes in accordance with UNC, General Terms, Section C, 'Interpretation'. The UNC therefore needs to be amended to reflect the use of different reference conditions for these new IP processes.

It is the view of the Proposer that the new capacity booking process and new nominations process that will be introduced at GB IPs will be captured by the "data exchange" provisions referred to in the EU Interoperability Code, although National Grid NTS intends to seek an exemption to be granted by Ofgem for the application of the common reference conditions in respect of the Moffat IP pursuant to Article 13(3) of the EU Interoperability Code.

3 Solution

The solution aims to 'ring-fence' the application of 0/25 reference conditions to the IP processes for which they are mandated whilst keeping processes at all other points, as well as operational and GB User balancing unchanged at 15/15 conditions. The solution to apply to the GB IPs only² is as follows:

Capacity

- Capacity will be made available and booked by Users on PRISMA on a 0/25 basis;
- National Grid NTS will not convert either existing or future User bookings within Gemini; and
- National Grid NTS will not seek to make any change to its baseline capacity obligations at the IPs as a consequence of this Modification.

Energy

- User nominations to be submitted at 0/25 conditions;
- National Grid NTS and its adjacent TSOs will conduct the matching of User nominations at 0/25 conditions;
- Confirmed nominations (post matching) will be provided to Users on a 0/25 basis;
- User allocations (UDQIs and UDQOs) will be determined on a 0/25 basis; and
- GB User balancing will be maintained at 15/15 by adding an additional quantity of gas (an 'IP balancing allocation') to IP Users' imbalance accounts in Gemini equal to the difference between the 0/25 allocation and the value of that energy at 15/15 reference conditions using a fixed conversion factor of 0.9990³.

Example 1 – NTS Entry. User wanting to sell 10,000,000 kWh at the NBP, delivered into the NTS via IUK

- 1) UK quantity required (15/15) = 10,000,000 kWh
- 2) Nomination to NTS (NTS entry at IUK IP, 0/25) = 9,990,000 kWh (10,000,000 x 0.9990)
- 3) Nomination to IUK (IUK exit, 0/25) = 9,990,000 kWh
- 4) Gas procurement required in Belgium (at 0/25) is 9,990,000 kWh
- 5) User UDQI = 9,990,000 kWh (assuming 'allocate as nominate' applies). The User's NTS entry commodity charges will be based on this figure.
- 6) Quantity added to User UDQI ('balancing allocation') by National Grid NTS for the purposes of calculating the User's GB imbalance = 10,000 kWh ((1 / 0.9990) - 1) x 9,990,000
- 7) Quantity available to the User to dispose of at the NBP with a zero GB imbalance (ceteris paribus) = 10,000,000 kWh (the sum of lines 5 and 6)

² The Moffat IP is expected to be excluded – see the 'Why Change' section.

³ This conversion factor is derived from two conversion factors (one for volume, one for combustion) in EN ISO 13443, which assumes a certain gas composition. The 'base' conversion factors are derived from Table 1A (page 4) in this standard and are 0.9476 (volume, line 5, column 3) and 0.9486 (combustion, line 19, column 4). The volume factor divided by the combustion factor gives 0.9989458... Since all other conversion factors in EN ISO 13443 are quoted to four decimal places, it was considered appropriate to adopt a conversion factor of 0.9990 in respect of this Modification.

Example 2 – NTS Exit. User wanting to buy gas at the NBP in order sell 10,000,000 kWh at the Belgian virtual trading point, delivered to the Belgian network from the NTS via IUK

- 1) Quantity required to sell in Belgium (0/25) = 10,000,000 kWh
- 2) User nomination NTS exit at IUK IP (0/25) = 10,000,000 kWh
- 3) Nomination to IUK (IUK entry, 0/25) = 10,000,000 kWh
- 4) NBP procurement (and acquiring trade notification) quantity = 10,010,010 kWh
(10,000,000 x (1 / 0.9990))
- 5) User UDQO (0/25) = 10,000,000 kWh (assuming 'allocate as nominate' applies). The User's NTS exit commodity charges will be based on this figure.
- 6) Quantity added to User UDQO ('balancing allocation') by National Grid NTS for the purposes of calculating the User's imbalance = 10,010 kWh (i.e. the difference between (10,000,000 x (1 / 0.9990)) and 10,000,000)
- 7) Quantity treated as having exited the NTS by the User for the purposes of calculating that User's imbalance = 10,010,010 kWh (the sum of lines 5 and 6)
- 8) User's GB imbalance (ceteris paribus) = zero.

User Pays	
Classification of the modification as User Pays, or not, and the justification for such classification.	No User Pays service would be created or amended by implementation of this Modification and it is not, therefore, classified as a User Pays Modification.
Identification of Users of the service, the proposed split of the recovery between Gas Transporters and Users for User Pays costs and the justification for such view.	Not Applicable
Proposed charge(s) for application of User Pays charges to Shippers.	Not Applicable
Proposed charge for inclusion in the Agency Charging Statement (ACS) – to be completed upon receipt of a cost estimate from Xoserve.	Not Applicable

This Modification seeks to amend the UNC to comply with European Network Code delivery into the GB gas regime. It is part of a wider suite of UNC changes that are being proposed to achieve compliance with the European Network Codes. National Grid NTS has been allocated some funding through the RIIO-T1 price control process for EU market facilitation. National Grid NTS expects to be able to utilise this funding to meet the costs of this EU-related change and where this proves insufficient it anticipates using the mid-point review as the mechanism to address any funding gaps. Therefore no User Pays charges will be raised in relation to this Modification.

4 Relevant Objectives

Impact of the modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None
c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	None
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	Positive

This Modification will facilitate compliance with European legislative requirements by implementing the requirements of the EU Interoperability Code (linked to requirements in the EU CAM and Balancing Codes) to use reference temperatures of 0/25 for capacity and nominations processes at the IPs.

5 Implementation

No specific implementation timescales are proposed, however this Modification would need to be implemented no later than 1st May 2016 to be compliant with the provisions of the EU Interoperability Code.

6 Impacts

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

This modification is one of a suite of EU-driven UNC Modifications, which form an EU delivery programme. The delivery of system changes associated with this EU programme is already being managed alongside Project Nexus-related changes.

This modification is not essential to the go-live of the UK Link Replacement programme.

Pre Implementation

This Modification is not required to be implemented prior to the identified Change being implemented.

Implementation

This Modification is not proposing to add to or amend existing requirements prior to or at the time the Change is implemented.

Post Implementation

Implementation is not proposed after the delivery of the Change.

7 Legal Text

Legal text and associated legal commentary has been provided in response to a formal request from Panel, and is published alongside this Modification.

8 Recommendation

The Proposer invites the Panel to:

- Determine that this Modification should not be subject to self-governance; and
- Progress to Workgroup assessment.

CHAPTER III Units

Article 13 Common set of units

1. Each transmission system operator shall use the common set of units defined in this Article for any data exchange and data publication related to Regulation (EC) No 715/2009.
2. For the parameters of pressure, temperature, volume, gross calorific value, energy, and Wobbe-index the transmission system operators shall use:
 - (a) pressure: bar
 - (b) temperature: °C (degree Celsius)
 - (c) volume: m³
 - (d) gross calorific value (GCV): kWh/m³
 - (e) energy: kWh (based on GCV)
 - (f) Wobbe-index: kWh/m³ (based on GCV)

For pressure, the transmission system operators shall indicate whether it refers to absolute pressure (bar (a)) or gauge pressure (bar (g)).

The reference conditions for volume shall be 0°C and 1.01325 bar(a). For GCV, energy and Wobbe-index the default combustion reference temperature shall be 25°C.

Whenever transmission system operators communicate data on the volume, GCV, energy and Wobbe-index, they shall specify under which reference conditions these values were calculated.

3. In cases where one Member State is connected to only one other Member State, the adjacent transmission system operators and the parties they communicate with may agree to continue to use other reference conditions for data exchange in connection with Regulation (EC) No 715/2009, subject to the approval of their national regulatory authorities.

Article 14 Additional units

The transmission system operators and the parties they communicate with in connection with Regulation (EC) No 715/2009 may agree to use, in addition to the common set of units, additional units or reference conditions for data exchange or data publication. In such a situation conversion between reference conditions shall be done on the basis of the actual gas composition. If the relevant gas composition data is not available, the conversion factors used shall be consistent with the Annex based on EN ISO 13443 "Natural gas – Standard reference conditions" in the version applicable at the time.