








UNC Modification	At what stage is this document in the process?
<div>UNC 0887:</div> <div>Facilitating Bi-Directional Connections Between IGT Pipelines and the NTS</div>	<div><div>01Modification</div><div>02Workgroup Report</div><div>03Draft Modification Report</div><div>04Final Modification Report</div></div>
<div>Purpose of Modification:</div> <div>To establish the commercial transportation arrangements applicable at bi-directional connections between IGT Pipelines and the NTS</div>	
<div>Next Steps:</div> <div>The Proposer recommends that this Modification should be:</div> <div><div><div>considered an Alternative Proposal to Modification Proposal 0871;</div><div>considered a material change and not subject to Self-Governance; and</div><div>assessed by a Workgroup</div></div></div> <div>This Modification will be presented by the Proposer to the Panel on 18 July 2024. The Panel will consider the Proposer’s recommendation and determine the appropriate route.</div>	
<div>Impacted Parties:</div> <div>High: IGTs connecting to the NTS, Customers seeking to inject gas into an IGT connected to the NTS, National Gas Transmission</div> <div>Low: Suppliers, Shippers</div> <div>None: Distribution Network Operators</div>	
<div>Impacted Codes:</div> <div>None</div>	

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Timetable		 0121 288 2107
Modification timetable:		Proposer: Phil Lucas National Gas Transmission
Pre-Modification Discussed	06 Jun 2024	 phil.lucas@nationalgas.com
Date Modification Raised	26 Jun 2024	 07825 592518
New Modification to be considered by Panel	18 Jul 2024	Transporter: National Gas Transmission
First Workgroup Meeting	01 Aug 2024	 phil.lucas@nationalgas.com
Workgroup Report to be presented to Panel	16 Jan 2025	 07825 592518
Draft Modification Report issued for consultation	17 Jan 2025	Systems Provider: Xoserve
Consultation Close-out for representations	07 Feb 2025	 UKLink@xoserve.com
Final Modification Report available for Panel	09 Feb 2025	

1 Summary

What

While the UNC currently contemplates bi-directional connections to the National Transmission System (NTS), these are currently limited to Storage Connection Points and Interconnection Points. National Gas Transmission (NGT) understands that the physical attributes of the connection to the NTS that is the basis of Modification Proposal 0871 ('UNC0871') are principally a bi-directional connection to an independent Gas Transporter pipeline (IGT) that has no other connection to the Total System. A connection of this nature is not currently explicitly contemplated by the UNC. Further, the concept of gas entering the NTS after entering an IGT network is not covered by the UNC, leaving a potential for double counting if the gas is treated as entering the GB network twice.

Why

A number of developers are looking at injecting new biomethane gas from anaerobic digester (AD) plants to potential IGT networks that would be connected to the NTS, creating flow from an IGT to the NTS. If there are additional connections to the IGT network that offtake gas, there is a potential for the connection to the NTS to be bi-directional.

How

It is proposed that the UNC is modified such that it explicitly provides for a bi-directional connection point on the NTS to an IGT pipeline and sets out the commercial transportation arrangements that are applicable at such points:

- Point Definition
- NTS Access: NTS Entry and NTS Exit Capacity
- Measurement and Energy Balancing
- NGT Transportation Charges.

2 Governance

Justification for Authority Direction

The requirement for Authority Direction is sought because the changes proposed are likely to have a material effect on competition in the shipping, transportation or supply of gas conveyed through pipes or any commercial activities connected with the shipping, transportation or supply of gas conveyed through pipes.

This is because this change seeks to establish a new 'point type' in the UNC and application of the specified commercial arrangements to apply at such points. This includes the classification of IGTs as Users of the NTS at these points which is a material change to IGTs' current role in the UNC arrangements.

Requested Next Steps

This Modification should:

- be considered an Alternative Proposal to Modification Proposal 0871;
- be considered a material change and not subject to Self-Governance, and,
- be assessed by a Workgroup.

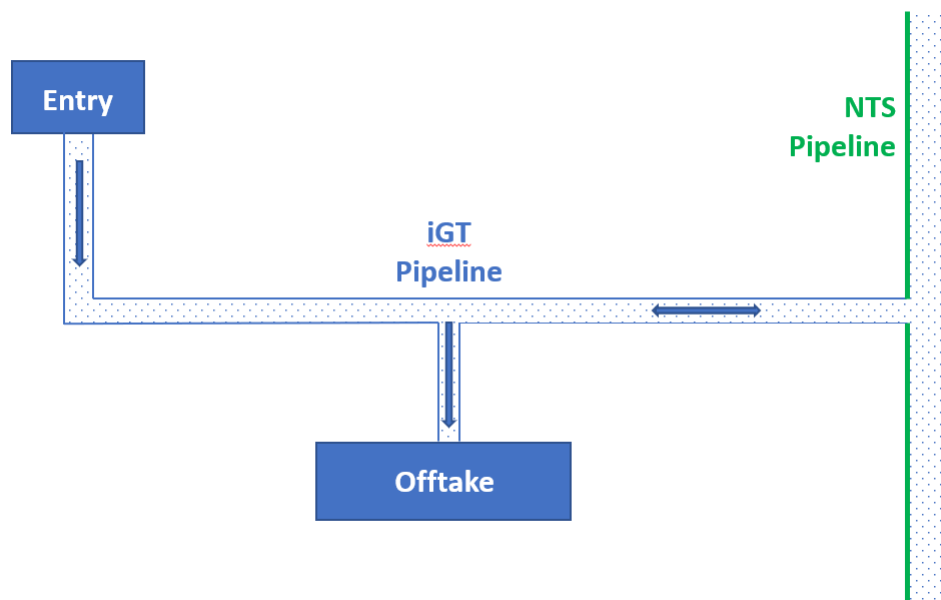
3 Why Change?

1. Introduction

The UNC currently defines the Total System as comprising the NTS and the Local Distribution Zones (LDZs), hence excluding IGT networks. This means that gas flowing from an IGT to the NTS is defined as entering the Total System notwithstanding the fact that it has already entered the GB gas network at the AD/IGT interface. Because of this technicality of how the Total System is defined in the UNC, under the prevailing UNC terms the point of delivery to the NTS would be treated as a new Aggregate System Entry Point (ASEP) and thus subject to existing NTS commercial entry requirements.

A number of potential projects are being developed where gas would be injected into an IGT connected to the NTS. There would also be potential for gas to exit the IGT to supply local gas users. The energy reaching the NTS could therefore be less than the energy injected – and there is potential for the flow to the NTS to be net entry or net exit. Change is needed to ensure the energy is properly accounted for.

The following diagram illustrates the physical pipeline contemplated by this Proposal:



Whilst UNC0871 seeks to ensure deliveries to the NTS via an IGT pipeline are correctly accounted for within Energy Balancing, NGT believes that specification of *all* the applicable transportation arrangements at such points of connection are required. Hence, **NGT believes this Proposal is an Alternative to UNC 0871.**

2. Point Definition

The UNC currently contemplates two types of bi-directional System Points¹, these being Storage Connection Points (as defined in TPD Section A1.5) and Interconnection Points (as defined in EID Section A2.1.1(b)).

Storage Connection Point

TPD Section A: System Classification

¹ TPD Section A1.1.4(b)

1.5 Storage Connection Point

1.5.1 The Individual System Points at which a Storage Facility is connected to a System shall be a System Point (which is in relation to such Storage Facility the "**Storage Connection Point**").

1.5.2 A Storage Connection Point shall be both a System Entry Point (and an Aggregate System Entry Point) and a Connected System Exit Point.

Interconnection Points

EID Section A: General

2 INTERPRETATION

2.1 Interconnection Point, etc

2.1.1 For the purposes of this Document, subject to paragraph 2.1.3:

- (a) "**Interconnector**" means an interconnector pipeline which connects the National Transmission System to a gas transmission system of an EU Member state (or to more than one such system);
- (b) an "**Interconnection Point**" is the point or points at which an Interconnector is connected to the NTS;
- (c) ...
- (d) an Interconnection Point comprises for the purposes of the Adjacent TSO Rulebook a point at which gas can flow into or out of the Interconnector.

Accordingly, as existing bi-directional System Points are explicitly defined in the UNC, it is necessary for an additional System Point type that contemplates bi-directional gas flows to be afforded an equivalent explicit definition within the UNC, such that the appropriate transportation arrangements can be specified as applicable at this new System Point type. This definition will be limited to the physical attributes set out in the Introduction above i.e. a bi-directional unmetered connection between the NTS and an IGT pipeline where this IGT pipeline is not connected (directly or indirectly) at any other point to the Total System.

3. NTS Access: Capacity

At all existing NTS Entry and Exit Points, NTS Capacity is made available to the Users specified below under the existing 'ticket to ride' principles that underpin the existing Transportation Arrangements. Potential exposure to Capacity Overrun charges for any gas quantities flowed in excess of the NTS Capacity procured creates a financial incentive for the following Users to procure sufficient NTS Capacity:

- at NTS Entry Points (ASEPs): Shipper Users;
- at NTS Supply Points and NTS Connected System Exit Points: Shipper Users; and
- at NTS/LDZ Offtakes: Distribution Network Operator (DNO) Users

On this basis NGT believes it is appropriate, equitable and consistent that at the newly defined NTS/IGT point of connection, the equivalent 'ticket to ride' principles apply in respect of the net (i.e. physical) gas flow/direction for the relevant day, i.e. the relevant IGT to be incentivised, by potential exposure to Overrun Charges, to procure sufficient capacity to cover the net gas flow/direction.

Given that at other gas transporter/gas transporter connections (i.e. NTS/LDZ Offtakes) it is the connecting transporter (i.e. the DNO) that is incentivised to procure capacity NGT believes it is appropriate, equitable and

consistent to incentivise the connecting IGT to procure capacity at these newly defined points. For this purpose, operators of IGTs directly connected to the NTS will be classified as Users of the NTS.

4. Measurement and Energy Balancing

The prevailing Energy Balancing arrangements set out in the UNC apply in respect of the Total System², taking account of energy delivered to (at Aggregate System Entry Points – ASEPs)³, and offtaken from (Supply Points and Connected System Exit Points – CSEPs)⁴ the Total System. Accordingly, within-Total System flows, between the NTS and Local Distribution Zones (i.e. Distribution Networks) at NTS/LDZ Offtakes, are disregarded for Energy Balancing purposes as they are already accounted for upstream and downstream of the NTS/LDZ Offtake.

IGT pipeline systems themselves are not defined as part of the Total System⁵ hence Energy Balancing takes account of the volumes offtaken (in the case of metered CSEPs), or (in the case of unmetered CSEPs) deemed to have been offtaken, from the Total System at those Exit Points. In the case of unmetered CSEPs, volumes deemed to have been offtaken are derived from downstream measurement equipment (i.e. at individual offtake points connected to the IGT system).

It is worthy of note that [UNC Modification Proposal 0842](#) (currently with the Authority awaiting a decision) further provides for gas *delivery* to the Total System at points where an IGT is connected to a Distribution Network (such points remaining unmetered). The equivalent reliance on downstream metering at the point of *entry* to the IGT Network is proposed to apply in respect of determining the quantity of gas deemed to have been delivered at the entry point to the Total System.

Hence, in this case, NGT is proposing that because the point of connection between the NTS and the IGT will be unmetered, volumes deemed to have been delivered to, and offtaken from, the NTS at the point of connection to the IGT in this scenario will be determined by measurement equipment on points of entry and points of exit on the relevant IGT pipeline.

Other arrangements which have been considered in order to support Energy Balancing are:

- *Meter Reading Frequency (TPD Section M)*

Akin to all other Entry and Connected System Exit Points on the NTS, and in the absence of metering the point of connection between the NTS and the IGT, NGT believes it is necessary for all points of entry and points of exit connected to a relevant IGT Pipeline to be Daily Metered. This will facilitate compliance with the following existing UNC terms:

- at Entry, TPD Section I2.5.3 requires that the Measurement Provisions (that are a component of the Network Entry Provisions) provide for the establishment of the Entry Point *Daily* Quantity Delivered
- at Exit, TPD Section J4.3.3 requires that the Network Exit Provisions at an NTS Connected System Exit Point specify the procedures, methods and standards by which the volume and quantity of gas are offtaken *each Day*

² TPD Section E1.1.1

³ TPD Section E1.1.2(a)

⁴ TPD Section E1.1.2(b)

⁵ TPD Section A1.1.2

Daily Metering of the relevant points on the IGT pipeline will enable the determination of the physical direction and quantity of energy flow at the point of connection between the IGT and the NTS (for the purpose of determining whether Overrun Charges are payable by the IGT) as well as the daily commercial energy allocations to each Registered User at the points of entry and points of exit on the IGT Pipeline. Such energy quantities will be included in the User Daily Quantity Input (UDQI) and User Daily Quantity Output (UDQO) for the relevant Users.

- *Daily Nominations (TPD Section C)*

Akin to Users at all other Entry Points and Connected System Exit Points, NGT believes it is appropriate for the relevant User/s to be required to submit (respectively) daily Input Nominations and daily DM Output Nominations.

- *Scheduling Charges (TPD Section F)*

Akin to all other Entry Points and Connected System Exit Points, the relevant User/s NGT believes that it is appropriate for the relevant User/s to be subject to Scheduling Charges as set out in TPD Section F3.

- *Shrinkage (TPD Section N)*

As the point of connection between the IGT and the NTS will be unmetered, should any shrinkage occur on the relevant IGT pipeline this will manifest in NTS Shrinkage. The anticipated gas volumes delivered/offtaken at IGT NTS connections of this type are expected to be comparatively low (in the region of [] kWh/d) hence NGT believes that such shrinkage volumes (if any) will be negligible and do not propose any specific shrinkage rules as part of this Proposal. If the gas volumes associated with connections of this type increase in the future, then revisions to the commercial rules may be justified and consequently proposed.

5. NGT Transportation Charges

As a consequence of the principles outlined above and the Transportation Services provided (in terms of the access to the NTS/Total System) NGT believes it is appropriate that:

- the relevant IGT Users be liable for any applicable capacity charges (for the avoidance of doubt including Overrun Charges and Capacity Neutrality Charges); and
- the Registered Users at the entry and exit points on the IGT pipeline be liable for any applicable commodity (flow-based) Charges

6. Emergencies

Existing provisions in TPD Section Q (Emergencies), as set out below, acknowledge that the treatment of Connected Systems in Emergencies will be set out in the relevant Network Exit Provisions. Given this, such provisions would be applicable at the new point type advocated by this Proposal, hence no changes are proposed to these arrangements in this Proposal.

1.8 Connected Systems

The Transporter may agree pursuant to a Network Entry Agreement or Network Exit Provisions (or other agreement with the relevant person) upon procedures or steps to be taken in a Gas Supply Emergency by the Transporter or another Transporter or a Delivery Facility Operator or Connected System Operator and may give effect to such procedures or steps in addition to or in lieu of any Emergency Steps pursuant to this Section Q.

3.5 Firm Load Shedding

3.5.5 The manner in and priority with which Emergency Steps may be taken for the reduction or discontinuance of offtake of gas at a Connected System Exit Point will be in accordance with the relevant Network Exit Provisions (which will where appropriate take account of the requirements of Standard Special Condition A8(15) of the Transporter's Licence); and the Transporter and the Connected System Operator shall be at liberty to take Emergency Steps in accordance therewith.

4 Code Specific Matters

Reference Documents

[IGT172 – Provision for gas entry within the IGT UNC](https://www.igt-unc.co.uk/igt172-optional-service-for-physical-gas-entry-into-an-igt-pipeline-and-into-the-unc-total-system-marrying-to-unc-mod-0842/) <https://www.igt-unc.co.uk/igt172-optional-service-for-physical-gas-entry-into-an-igt-pipeline-and-into-the-unc-total-system-marrying-to-unc-mod-0842/>

[UNC Modification Proposal 0842](https://www.gasgovernance.co.uk/0842) – arrangements for bi-directional IGT/DN connections
<https://www.gasgovernance.co.uk/0842>

Knowledge/Skills

Understanding of UNC and its development.

5 Solution

It is proposed that the UNC is modified to incorporate the following requirements.

Point Definition

It is proposed that:

- a new bi-directional Unmetered point type is established in the UNC, an **Unmetered IGT NTS Connection Point**;
- an Unmetered IGT NTS Connection Point is defined as a bi-directional (i.e. gas can physically flow in either direction) connection between the NTS and an IGT pipeline (which is unmetered) where this IGT pipeline is not connected (directly or indirectly) at any other point to the Total System;
- an Unmetered IGT NTS Connection Point will, for the purposes of the Code, comprise an NTS System Entry Point and/or an NTS Connected System Exit Point and as such, will be subject to the requirements (respectively) of TPD Section I and J; and
- the agreement between National Gas Transmission and the relevant IGT at each Unmetered IGT NTS Connection Point (an 'IGT NTS Connection Agreement') shall constitute the Network Entry Agreement and the Network Exit Provisions at that point.

NTS Access: Capacity

It is proposed that at each Unmetered IGT NTS Connection Point:

- the relevant IGT is classified as a User of the NTS at that point (an 'IGT User');
- NGT makes NTS Entry and NTS Exit (Flat) Capacity available; and

- each Day, an assessment is made as to whether System Entry Overrun Charges (pursuant to TPD Section B2.13) or Exit (Flat) Overrun Charges (pursuant to TPD Section B3.13) are payable by the relevant IGT User:
 - in making such assessments, the quantity input to, or output from, the NTS on a Gas Day (as utilised within the existing Overrun calculations) will be equal to DQ_d as determined as set out in the 'Measurement and Energy Balancing' section below; and
 - where DQ_d is a positive value, an assessment will be made to determine if any System Entry Overrun Charges are payable by the relevant IGT; otherwise an assessment will be made to determine if any Exit (Flat) Overrun Charges are payable by the relevant IGT User.

Measurement and Energy Balancing

It is proposed that at each Unmetered IGT NTS Connection Point:

- the quantity input or output (i.e. net flow) for the day at the point of connection (' DQ_d ') will be determined on the basis of the following:

$$DQ_d = \sum_d iGTen_d - \sum_d iGTex_d$$

where:

\sum_d means the sum of across all relevant points on the relevant Gas Day;

$iGTen_d$ means the energy quantity delivered at a point of entry on the relevant IGT pipeline on the relevant Gas Day determined in accordance with the applicable Network Entry Provisions; and

$iGTex_d$ means the energy quantity offtaken at a point of exit on the relevant IGT pipeline on the relevant Gas Day determined in accordance with the applicable Network Entry Provisions.

- energy allocated to a Shipper User:
 - at a point of entry on the IGT pipeline connected to the NTS will be included in the User Daily Quantity Input (UDQI) for the relevant Users for each Gas Day;
 - at a point of exit on the IGT pipeline connected to the NTS will be included in the User Daily Quantity Output (UDQO) for the relevant Users for each Gas Day;
- the IGT NTS Connection Agreement shall require each point of entry and point of exit on a relevant IGT pipeline to be daily metered;
- Registered Shipper Users at each point of entry and point of exit on a relevant IGT pipeline:
 - will be required to nominate quantities of gas for delivery to, and offtake from, the Total System each Day in accordance with TPD Section C;
 - will be subject to Scheduling Charges as set out in TPD Section F3.

NGT Transportation Charges

It is proposed that at each Unmetered IGT NTS Connection Point:

- IGT Users are liable for any applicable capacity charges (based on Entry Capacity and Exit Capacity procured at any Unmetered IGT NTS Connection Points), for the avoidance of doubt including Overrun Charges and Capacity Neutrality Charges; and

- Registered Shipper Users at each point of entry and point of exit on the IGT pipeline are liable for any applicable commodity (flow-based) charges based on energy quantities allocated to such Users at those points.

6 Impacts & Other Considerations

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

No.

Consumer Impacts

Minor. This change constitutes commercial rules to apply at a new type of inter-transporter point of connections including arrangements which ensure gas is fully accounted for when entering and exiting the GB network. However, if this means that additional gas enters the network, and particularly green gas, there would be marginal consumer benefits. Diversification of GB domestic gas sources will have a positive impact on Security of Supply.

What is the current consumer experience and what would the new consumer experience be?

At present, the UNC does not contemplate bi-directional connections between the NTS and IGT Pipelines which deliver gas to, and offtake gas from, the NTS in the manner set out in this Proposal. If this proposal is implemented, the UNC would be explicit in defining such points of connection (to the NTS) and the associated commercial arrangements, which will ensure effective integration into the prevailing regime. This will provide clarity for all stakeholders (including consumers) on the applicable arrangements.

Impact of the change on Consumer Benefit Areas:	
Area	Identified impact
Improved safety and reliability In principle, facilitating additional gas sources supports the reliable delivery of energy, but the impact would be marginal	Positive
Lower bills than would otherwise be the case In principle, facilitating additional sources of gas should put downward pressure on prices, but any impact would be marginal	Positive
Reduced environmental damage To the extent that additional green gas is injected and offsets the use of fossil gas, there would be a marginal benefit.	Positive
Improved quality of service No impact expected	None

<p>Benefits for society as a whole</p> <p>To the extent that some additional consumers connect to the GB gas network, there would be a marginal benefit with the potential for cost reductions and job creation. Plus jobs would be created at new gas production facilities, and new gas production facilities would reduce energy imports to the extent that additional green gas is injected.</p>	Positive
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Performance Assurance Considerations

The requirements to measure and account for gas entering the GB network are well established and monitored, as are the requirements for any gas exiting at Meter points. With no change to Settlement processes, there is no need for additional monitoring.

Cross-Code Impacts

None. All the requirements for gas entering and exiting an IGT network are already covered, including within IGT172 – Provision for gas entry within the IGT UNC, which is currently with the Authority awaiting a decision.

<https://www.igt-unc.co.uk/igt172-optional-service-for-physical-gas-entry-into-an-igt-pipeline-and-into-the-unc-total-system-marrying-to-unc-mod-0842/>

EU Code Impacts

None.

Central Systems Impacts

To be confirmed.

7 Relevant Objectives

Impact of the Modification on the Transporters' Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) Coordinated, efficient and economic operation of <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (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. 	Positive

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.	None

NGT believes that Relevant Objective d) is positively impacted because facilitating gas entry increases supply and hence the potential for facilitating effective competition among Shippers and Suppliers. Ensuring there are appropriate arrangements for all entry options facilitates competition between Gas Transporters.

NGT believes that there is no impact on Relevant Objective f).

8 Implementation

To be confirmed (pending identification of any Central System impacts).

9 Legal Text

Text Commentary

To follow.

Text

To follow.

10 Recommendations

Proposer’s Recommendation to Panel

Panel is asked to:

- Agree this is an Alternative Proposal to Modification Proposal 0871;
- Agree that Authority Direction should apply; and
- Refer this proposal to a Workgroup for assessment.