| UNC Final Modification Report | At what stage is this document in the process? |
|---|---|

# UNC 0808:

## Reverse Compression

01 Modification

02 Workgroup Report

03 Draft Modification Report

04 Final Modification Report

**Purpose of Modification:**

To modify the UNC to enable a Distribution Network Operator (DNO) and an Independent Gas Transporter (IGT) to enter into a bilateral 'operator to operator' agreement, enabled by the iGT Arrangements Document (IGTAD) and containing Network Entry Provisions, to allow physical gas to be offtaken from a DNO by an IGT, compressed to a higher pressure, then returned to the same DNO by the IGT, through a process known as reverse compression.

Reverse compression has zero net impact on physical flow into or out of the Total System, other than the initial filling (commissioning) of the IGT System, which is already established in IGTAD and the DNO's associated CSEP Connection Arrangements. Neither reverse compression nor commissioning require User involvement.

**Next Steps:**

The Panel recommends implementation.

**Impacted Parties:**

High: Some Distributed Gas Producers, Compression service developers.

Low: Distribution Network Operators (DNOs) and IGTs

None: Gas Shippers and Suppliers, CDSP and Consumers

**Impacted Codes:**

UNC IGTAD

UNC TPD Section I

Possibly - UNC TPD Sections A and Y

Possibly - IGT-UNC

## Contents



## Timetable

**Modification timetable:**

| | |
|---|---|
| Pre-Modification Discussed | 28 April 2022 |
| Date Modification Raised | 09 May 2022 |
| New Modification to be considered by Panel | 19 May 2022 |
| First Workgroup Meeting | 26 May 2022 |
| Workgroup Report to be presented to Panel | 20 July 2023 |
| Draft Modification Report issued for consultation | 21 July 2023 |
| Consultation Close-out for representations | 10 August 2023 |
| Final Modification Report available for Panel (at short notice) | 11 August 2023 |
| Modification Panel recommendation | 17 August 2023 |

**Any questions?**

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# 1 Summary

## What

The Code is silent on embedded "Reverse Compression". This Modification was initially proposed to allow private sector investment in reverse compression to be treated in the same way as network investment, for example with no entry or exit charges applicable. Legal advice is that a Gas Transporter (GT) licence would be required for any pipeline system that supports reverse compression. This Modification now seeks to introduce the requirements that would apply in cases where gas can flow from an IGT to a DNO.

## Why

Compressors can be used to move gas from a lower to higher pressure tier pipeline. This can relieve capacity constraints for distributed entry. This can only be effective if the relevant DNO supports the process and manages its network to accommodate the changed flows. Embedded pipeline reinforcement and smart pressure control are also able to provide additional entry capacity. Compressors can be used when these options cannot deliver all the necessary capacity. It is proposed that this and any specific requirements the DNO has of the IGT be captured in a bilateral 'operator to operator' agreement. This UNC Modification is proposed to require the IGT and DNO to enter into such an agreement.

## How

UNC amendment to recognise that gas can flow from an IGT to a DNO and, when proposed, require an IGT and a DNO to enter into a bilateral 'operator to operator' agreement in order to support this.

# 2 Governance

## Justification for Authority Direction

Reverse compression will only be successful if supported by the relevant DNO and so cooperation is essential. This is an enabling Modification that would require development of the operating parameters, but the actual operation would not be impacted. This is a clarifying and enabling Modification, however implementation may have a material impact on a party, so Authority Direction is appropriate.

## Requested Next Steps

This Modification should:

- be subject to Authority Direction as it may be considered a non-material change.
- proceed to Consultation

## Workgroup's Assessment

The Workgroup agree with the Proposer that this Modification should be subject to Authority Direction and should be issued to Consultation.

# 3 Why Change?

The injection of distributed gas is growing. As at the end of March 2022, 126 DN entry points were registered on Gemini.

Barrow Green Gas (BGG) understands that around 15 existing biomethane projects flare gas from time to time because of DNO capacity constraints. BGG has seen an estimate that suggests around half of the currently identified potential new biomethane sites face local grid capacity constraints and, as a result, are unlikely to be developed. This may be exacerbated by high gas prices that can be expected to reduce gas demand, with a consequence being additional flaring of biomethane due to the capacity reduction (biomethane plants cannot be instantaneously turned off and the ability to flare gas is a safety measure to ensure pressure can be relieved).

Constraints typically arise in the summer months when demand is low. However, it is possible to export gas from one pipeline pressure tier (e.g. Medium Pressure) to a higher one (e.g. Intermediate Pressure). This increases the ability of a DNO to accept gas, with higher pressure tiers able to more easily accommodate additional gas as it provides access to more widespread sources of demand.

The ability of Reverse Compression to increase the capacity available to accommodate distributed gas is established in Europe, for example with over 30 projects in France. Cadent are completing the first such project in GB at a site near Doncaster, funded by Ofgem NIC. All the DNOs are proposing to offer reverse compression within their networks as an option, with discussions underway in an entry connections forum. Distributed gas producers, however, are interested in arranging this for themselves, and a number of such projects are being actively pursued.

This Modification was initially brought forward to ensure a level playing field such that private sector investment in reverse compression could compete with DNO investment. However, legal advice from the DNOs is that any pipeline installed to deliver reverse compression would have to be subject to a GT licence. The UNC is silent on the concept of an IGT that supports gas being injected to as well as receiving it from a DNO, and does not envisage reverse compression via an IGT system. This Modification is, therefore, proposed to address this and provide clarity about the requirements when gas originally taken from a DNO can flow back from the IGT to the DNO.

# 4 Code Specific Matters

## Reference Documents

UNC IGTAD

UNC TPD Section A, I, J and Y

iGT-UNC

## Knowledge/Skills

Understanding of connected system rules and distributed gas entry requirements.

# 5 Solution

**Setting the scene: UNC 'Total System' boundary definitions**

The UNC has generic terms for physical connection facility interfaces between UNC signatory gas transporters and non-UNC signatory operators at the boundaries of the 'Total System':

- 'System Exit Point'
- 'System Entry Point'

The UNC is based upon the operators of these facilities having non-UNC bilateral 'operator to operator' agreements, but requires that such agreements contain specified binding operational provisions/parameters which are referenced and used by UNC gas transportation provisions relating to gas leaving and entering the Total System.

The provisions are respectively:

- 'Network Exit Provisions', enabled by TPD Section J. For non-UNC parties, they are held in a bilateral 'operator to operator' agreement, such as a Network Exit Agreement, which is otherwise operational and does not to contain any commercial gas transportation rules. For IGTs, these provisions are contained within UNC IGTAD, which they are party to.
- 'Network Entry Provisions', enabled by TPD Section I. For non-UNC parties, they are held in a bilateral 'operator to operator' agreement, termed a 'Network Entry Agreement' for UNC purposes, which is otherwise operational and does not contain any commercial gas transportation rules. At the time of creation of IGTAD, it was not anticipated that entry would be required, so there are no entry provisions within it and it cannot be considered a Network Entry Agreement.

For an IGT System to provide reverse compression, it requires exit and entry interfaces with the DNO System.

The arrangements for exit are already established for IGT Systems through the IGTAD, and include provisions for the initial filling of the IGT System with gas (commissioning) without the involvement of Users.

Arrangements for entry exist for non-IGTs, but no variant appropriate for IGT System reverse flow exists. This modification proposal aims to introduce such arrangements through additions and amendments to IGTAD and where required to make this work, minor changes to TPD sections including A and I.

As the modification is based on there being no new gas entry to the IGT System (and therefore the DNO network, being a part of the Total System) and the arrangements being exclusively operational, no changes to iGT-UNC are anticipated, however development of the business rules may change that.

For the avoidance of doubt, whilst outside the scope of this modification, it is recognised that having the principle of an entry point for reverse compression physical flows in IGTAD could facilitate a future modification proposal to add 'new IGT gas entry' provisions to IGTAD by creating 'entry' equivalents of the CSEP Supply Point/IGTS Supply Point principles already in use in TPD and IGTAD, subject to a further UNC modification and corresponding changes in iGT-UNC being agreed.

For the avoidance of doubt, IGTAD A 1.2.3 *"Nothing in this Document provides for the supply of any service between any DN Operator and an Independent Gas Transporter or creates any payment obligation as between a DN Operator and an Independent Gas Transporter"* would remain unchanged, likewise A 1.4.1 (a) under which IGT licensees are required to notify each DN Operator should a connection be envisaged through which an IGT System would be connected to more than one DNO System, or to a DNO System in more than one Exit Zone.

**Proposed Business Rules**

1) Where an IGT System includes reverse compression assets, the arrangements described in these business rules shall apply (and not otherwise).
2) The existing defined term CSEP can remain unchanged; likewise the physical flow and gas transportation principles associated with an 'Unmetered CSEP'.
3) An entry point can include a point where gas flows from an IGT System to the Total System.

4) A new type of entry point is to be achieved by applying a prefix of 'IGT' to the existing TPD Section I 3.11.1 term 'LDZ System Entry Point', thereby creating 'IGT LDZ System Entry Point'.

5) An 'IGT LDZ System Entry Point' shall not be a relevant point for the purposes of commercial gas transportation including capacity, metered flows for daily balancing etc.

6) The flow at an 'IGT LDZ System Entry Point' will not be metered, assessed for pressure or composition.

7) Any generic entry provisions applicable to relevant IGT Systems shall be incorporated in IGTAD, and site specific content shall be held in the 'Network Entry Provisions' section of a bilateral 'operator to operator' agreement outside UNC that shall otherwise be operational and not contain any commercial gas transportation rules.

8) It is proposed that an Independent Gas Transporter and a DN Operator will not permit gas to flow into a DNO System at an IGT LDZ System Entry Point as a result of reverse compression (i.e. through the use of facilities the operation of which by the Independent Gas Transporter causes gas to flow back from the IGT System to the DNO System to which it is connected at an IGT LDZ System Entry Point) unless there is in force an IGT LDZ System Network Entry Agreement.

9) The Independent Gas Transporter shall ensure that any gas that is subject to reverse compression shall not be offtaken at premises connected to the IGT System and all such gas will be returned to the Total System.

10) The IGTAD Section C mechanism for shrinkage shall continue to apply unchanged.

11) The GDN shall have the right to apply, and subsequently alter, a system of monitoring of gas composition values at the redelivery point which is proportionate to the risk posed by the RC facility to the GDN's ability to meet the Standard Offtake Requirements including where appropriate the installation of a ROV to control gas flow off/on to the network. The GDN shall have the right to require reimbursement from the RC facility in respect of the costs associated with such monitoring and, should the RC facility refuse to pay such amounts the GDN shall have a right to terminate the network entry provisions in respect of the relevant system entry point.

12) The GDN will give the reverse compression facility advance notice of maintenance on its network that will impact the operation of the reverse compression facility. This notice of maintenance will cover (i) non-operational windows for assets upstream of the reverse compression facility but which have the potential to impact the behaviour of gas at the reverse compression facility's system entry point and (ii) the action required from the reverse compression facility including exit/entry volume to be reduced, equipment to be turned off or turned on at the GDN's request to assist the undertaking of such network maintenance activities. The maintenance may cover other matters.

13) During the period prior to the commissioning of the IGT LDZ System Entry Point to be used for the purposes of reverse compression the GDN shall, upon request of the relevant Independent Gas Transporter deliver to the Independent Gas Transporter a document.

    (1) containing visibility of system changes planned in the period typically addressed in a document of that type which may impact the technical need for and/or commercial usefulness of the reverse compression assets and

    (2) providing that to the extent network changes are made by the GDN after the period covered by that document, or where network changes are made during the period covered by that document the need for which could not have been reasonably foreseen by the GDN at the time the document was issued, that the GDN shall have no liability to the Independent Gas Transporter / the RC asset owner in respect of any asset stranding or other diminution of expected value experienced by those reverse compression assets. By way of context the period covered by the study in question is expected to be 5 years.

**Additional information to support the Business Rules**

1) Whilst outside UNC, it is anticipated that the Connection Charging Methodology Statements and the associated terms and conditions of connection for the 'IGT LDZ System Entry Point' would have provisions similar to those in existing LDZ System Entry Point documents, but with minimal monitoring equipment required, based on the gas entering the Total System being the same gas that left the Total System, with little potential for change except perhaps rare and exceptional small scale and short duration instances of oil contamination.

    a. Requirements for design assessments, HAZOPs and GL/5 compliance would be anticipated to apply and the DNOs would have further comfort as the IGT System would be subject to the Gas Safety (Management) Regulations (GS(M)R) including the obligation on the IGT to have a Safety Case, which includes arrangements for 'operator to operator' communication and interaction, and also the Pipelines Safety Regulations (PSR).

    b. The details of the initial requirement for the IGT to include any non-fiscal measurement device in the design and construction, for 'operational phase' system operation purposes, and telemetry interface to be constructed for later use under the bilateral 'operator to operator' agreement would be contained here.

2) The design of the exact form of the bilateral 'operator to operator' agreement would be for the DNO as it is outside UNC, other than it having to meet the requirement for such agreement to be a 'Network Entry Agreement' for UNC purposes, i.e. by containing Network Entry Provisions site specific detail.

    a. As with existing NExAs for large Supply Meter Points and NEAs, the provisions for ongoing operation of the telemetry interface to be constructed under (a) above would be contained here.

    b. Likewise provisions for any non-fiscal measurement device for system operation purposes, however such arrangements must not be considered as within the UNC term 'Measurement Provisions' as this triggers gas transportation provisions in TPD sections.

    c. The 'operator to operator' bilateral agreement 'Local Operating Procedures' section as used in 'Network Entry Agreements' would seem to be the place to cover matters such as:

        i. enduring operational communications between IGT and DNO concerning the day-to-day operation of the reverse compression asset

        ii. updates on expected exit and entry flow rates from and to the network.

# 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

Reduced biomethane flaring has positive environmental benefits. Increasing biomethane supply theoretically lowers consumer prices (higher supply and unchanged demand puts downward pressure on prices), but the limited scale means any impact would be minimal.

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

No Change.

| Impact of the change on Consumer Benefit Areas: | |
|---|---|
| Area | Identified impact |
| Improved safety and reliability<br>No change. | None |
| Lower bills than would otherwise be the case<br>Theoretical benefit but too small to be realised in practice. | None |
| Reduced environmental damage<br>Reducing biomethane flaring has clear environmental benefits. Reverse compression will also facilitate additional distributed entry that would otherwise not be developed due to DNO capacity constraints. | Positive |
| Improved quality of service<br>No change | None |
| Benefits for society as a whole<br>Small employment opportunities would be created through the development and installation of compressors (due to the enabling effect of more capacity for biomethane into gas grid). | Positive |

## Cross-Code Impacts

There may be an impact on the iGT-UNC, although at this time it is unknown as to the actual impact. Assessments are being undertaken and any impact is likely to be consequential and not a direct impact on IGT UNC Parties or services.

## EU Code Impacts

None

## Central Systems Impacts

No impact. The CDSP confirmed that based on there being no requirement for these new types of entry points to be entered into the system, there would be no central systems impact.

## Rough Order of Magnitude (ROM) Assessment

None required.

## Performance Assurance Considerations

Workgroup believed there was no impact on Performance Assurance aspects.

## Initial Representations

None Received.

## Panel Questions

1. **Consequential impact on upstream metering**

Workgroup clarified that there is an impact on upstream metering of increased biomethane injection but not directly as a result of this Modification. The upstream metering impact is a separate issue which will be addressed outside this Modification.

2. **Clarification of who would operate the installation and thus whether it is part of "the network"**

Initial Workgroup discussions focused on whether the installation could be;

- Built and owned by the relevant GDN.
- A self-lay option (to be built by the developer) if a specification can be agreed that can be purchased. The relevant Network would then adopt (and operate) the installation.
- The Modification approach where the installation would be owned and operated by the IGT (acting for the local Anaerobic Digestion developer).

**26 January 2023**

The Workgroup concluded that all three options are viable. If the first two options are not possible for whatever reason, the third option can be developed and this Modification facilitates this third option.

**3. What are the charging implications?**

A Workgroup Participant identified that a Modification may be required in order to suspend certain charges in respect of reverse compression exit/entry charges.

This Modification specified in the Business Rules that there will be no Transportation charges. There may be charges associated with Section 4B.

Charging Relevant Objectives have been filled in since there may be changes required in the Legal Text for Section Y due to the Modification Solution. However, no changes are required to UNC TPD Section Y as clarified in the Legal Text published alongside this Workgroup Report.

## Workgroup Impact Assessment

Workgroup Participants have discussed the Modification at the following Workgroup meetings:

- Workgroup 0808 28 June 2023
- Workgroup 0808 23 May 2023
- Workgroup 0808 25 April 2023
- Workgroup 0808 21 March 2023
- Workgroup 0808 23 February 2023
- Workgroup 0808 26 January 2023
- Workgroup 0808 12 December 2022
- Workgroup 0808 24 November 2022
- Workgroup 0808 27 October 2022
- Workgroup 0808 25 August 2022
- Workgroup 0808 28 July 2022
- Workgroup 0808 23 June 2022
- Workgroup 0808 26 May 2022

Discussions have covered the following topics to date:

1. Whether the “special” points where gas will exit at low pressure for reverse compression and entering at higher pressure again need a new definition?

2. Who will own/operate the reverse compression facility (RCF)?
3. How to prevent other connections to the RCF?
4. Responsibility for the gas during reverse compression – licence requirements/title and risk?
5. Would RCF operator need to be an IGT?
6. How will Code obligations be managed by the RCF owner/ operators? How much will need to be disapplied?
7. Metering requirements/ Calorific Value (CV) monitoring
8. Bi-lateral agreement document– requirements, topics and scope
    - Communications between 3rd party & GDN
    - Site management/non-operational windows
    - Gas quality and operating rules
    - Site operation – manual/auto?
    - ROV requirement?
    - Asset responsibility (ownership and operational responsibility)
    - Exit and entry rates (Scm/h)
    - End of life decommissioning responsibilities
    - Impact of conversion of network to hydrogen.
9. Requirement for more detail in the Solution section and an amended Modification (clear solution; business rules; some for avoidance of doubt statement(s) e.g. regarding bi-lateral agreements).
10. Legal Text production not yet possible, answering queries from legal perspectives
11. Requirement for a pre-agreement to enable feasibility/network analysis/lifetime estimate etc.
12. Requirement for changes to IGTAD (January / February 2023)
13. Discussion of the need for definition of reverse compression. (March 2023)

## Workgroup updates (25 August 2022)

The Workgroup has continued to consider whether the issue may be dealt with through direct agreements between network operators and thus not require a Code Modification. The proposer of the Modification has progressed with the option to obtain an IGT Licence that would facilitate such arrangements.

The Proposer has suggested that it will be preferable to have a generic form of arrangement rather than several bilaterally negotiated agreements. The Proposer noted that the specification for compression currently being suggested by networks is not realistically available for installation.

One Workgroup Participant has identified that even if direct arrangements can be agreed (between networks) there may still be a need for a change to Code in order to suspend certain Transportation charges.

The Proposer has agreed to continue in discussions with network operators to determine whether this Modification Proposal is needed. The Workgroup agreed to consider the feedback from these meetings at its next meeting in September 2022 and in the interim to seek from the Modification Panel permission to extend the duration of the Workgroup for two months.

## Workgroup updates (27 October 2022)

Some discussions have taken place between the proposer and Gas Distribution Network operators and the respective positions were considered at the October Workgroup meeting. The discussions have homed in on three potential models for ownership and operation of the 'reverse compression' facilities.

Two operators have indicated that they are content to develop the Proposer's preferred approach and will proceed to develop some business rules for a supporting agreement. Other networks express concerns or have not yet concluded to a preferred view.

It has been determined that a UNC Modification should be pursued to permit 3rd party operation of facilities because some additional drafting will be required to identify these as a special form of iGT and to set a prohibition on the facility being used to supply any other customer and that it cannot otherwise operate as a bypass of the GDN system.

The Proposer agreed to prepare an amended Modification for consideration at the November meeting.

Whilst Workgroup Participants recognised there is a strong desire from potential biomethane producers to have greater certainty on the arrangements for their connection to the System, the Workgroup cannot conclude until the outstanding questions are resolved and the GDN position is cleared. The Workgroup commended the Proposer and GDNs to resolve their discussions and in the interim agreed to seek from the Modification Panel permission to extend the duration of the Workgroup for a further two months.

## Workgroup updates (26 January 2023)

The Proposer clarified that the solution has been updated to make it clear that any DNO that agrees to do this will put it in their Licence Condition 4B statement.

*Business Rules clarifications:*

- The operator – operator agreement is provided to draw people to the process this Modification aims to undertake. The previous terminology "Network Exit and Re-entry Agreement" is not helpful and will be removed.
- It was confirmed there will be several changes required to the Independent Gas Transporter Arrangements Document (IGTAD) which will be detailed in the Legal Text as the IGTAD assumes one directional flow, and it now needs to assume a bidirectional flow of gas.
- It was further clarified that IGTAD assumes that all flows are covered by Transportation Charges, therefore, the disapplication of Transportation Charges needs to be included.
- An amended Modification v3.0 is expected to be discussed at the February 2023 Workgroup.

## Workgroup updates (21 March 2023)

Workgroup reviewed detailed Business Rules contained in v4.0 of the Modification which led to discussion on the potential need for the definition of reverse compression and a review of the potential defined terms IGT unmetered SEP and IGT System Connected Arrangements.

## Workgroup updates (23 May 2023)

Workgroup reviewed detailed Business Rules contained in draft v8.0 of the Modification. The Workgroup considered the need for additional Business Rules, suggested by the Legal Text Provider and discussed the need for these. These additional rules have now formed BR11, BR12 and BR13.

Workgroup discussed whether there was a need for monitoring of gas quality but the consensus was that GS(M)R rules apply and there was no additional need for monitoring.

Workgroup also discussed payment of charges within UNC Section I. Workgroup reviewed the draft Legal Text, going through the document line by line. Overall Workgroup was content with the text provided.

Cadent Gas wished to highlight to Workgroup its view that the industry (Transporters/DNs) cannot operate and develop an economic and efficient network with 3rd parties owning and operating in-grid compressors. Cadent proposes to own and operate reverse compression facilities itself.

### Workgroup updates (28 June 2023)

Cadent Gas reiterated its view that Transporters/DNOs cannot operate and develop an economic and efficient networks with 3rd parties owning and operating in-grid compressors. Cadent proposes to own and operate reverse compression facilities itself.

Wales & West Utilities stated that they have a Gas Act s9.1 obligation to develop an economical and efficient system for the transportation of gas to premises and any installation of reverse compression cannot affect that statutory obligation; therefore they will make it clear in their 4B statements that the overriding primacy of the statutory obligation and that reverse compression will only be permitted where it does not conflict with that obligation and where other measures to provide entry capacity are not sufficient.

## 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<br>(i) the combined pipe-line system, and/ or<br>(ii) the pipe-line system of one or more other relevant gas transporters. | Positive |
| c) Efficient discharge of the licensee's obligations. | None |
| d) Securing of effective competition:<br>(i) between relevant shippers;<br>(ii) between relevant suppliers; and/or<br>(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 |

**Proposer's Views on Standard Relevant Objectives**

Ensuring that an operating agreement is in place between an IGT and DNO will facilitate economic and efficient system operation through clarity and certainty around how the connected systems will be operated.

By facilitating the development of IGT Connected Systems that deliver reverse compression, implementation would increase the likelihood of schemes being implemented that alleviate capacity constraints and allow increased volumes of distributed gas to be injected. This would facilitate:

Efficient and economic operation of the pipeline system through the existence of reverse compression that may not otherwise be installed, increasing the options available to a network operator.

Efficient discharge of the licensee's obligations by ensuring a level playing field between DNO and IGT compression schemes, avoiding any suggestion of undue discrimination.

Securing of effective competition between relevant Shippers and between relevant Suppliers by allowing injection of distributed gas that may otherwise be flared or not developed, with increased supply available to the market when it is economic to inject.

**Workgroup views**

When discussing whether Workgroup agreed with the Proposer's assessment of whether the Modification furthers the Relevant Objectives, the Cadent representative at Workgroup stated that whilst not necessarily opposing the Modification (which is an enabling Modification), Cadent won't be accepting projects onto its network to do with reverse compression at this time. Its view is that the Modification has a negative impact on Relevant Objective b) because this Modification could result in very many reverse compression installations and Cadent does not believe it is the most efficient way of operating its network. Specifically, it is Cadent's view that:

> *An economic and efficient network can't be operated with 3rd parties owning an operating lots of in-grid compressors. If the network can't make it possible for many such facilities, it should not be offered to one.*

This view was supported by Northern Gas Networks.

Representatives from other DNOs did not agree. The SGN and Wales & West Utilities representatives did not share the same view, as they were of the view that each individual site should be reviewed on its own merit.

Other Workgroup Participants agreed with the Proposer and agreed that the Modification furthers both Relevant Objective b) and d) for the reasons given by the Proposer above.

It should be noted that other than the Proposer, there were no other Shipper attendees present at the final meeting to express a view on the Relevant Objectives. This may have been due to a global issue preventing access to MS Teams meetings.

## Impact of the Modification on the Transporters' Relevant Charging Methodology Objectives:

| Relevant Objective | Identified impact |
|---|---|
| a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business; | None |
| aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:<br>(i) no reserve price is applied, or<br>(ii) that reserve price is set at a level -<br>(I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and<br>(II) best calculated to promote competition between gas suppliers and between gas shippers; | None |

| | |
|---|---|
| b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business; | None |
| c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and | Positive |
| d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets). | None |
| e) 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 |

### Proposer's Views on Charging Relevant Objectives

Charging Relevant Objective c) -

Compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers by allowing injection of distributed gas that may otherwise be flared or not developed, with increased supply available to the market when it is economic to inject.

DNOs are likely to change their Licence Condition 4B Connection Charging Methodology Statements but this is unlikely to impact upon the relevant objectives.

### Workgroup Assessment of Charging Relevant Objectives

The Workgroup concluded that the Relevant Charging Methodology Objectives were not impacted as there are no changes proposed to UNC TPD Section Y.

## 8 Implementation

No implementation costs are envisaged as a result of this Modification.

Implementation should be as soon as practicably possible following Authority Direction.

## 9 Legal Text

Legal Text has been provided by SGN and is published alongside this report.
https://www.gasgovernance.co.uk/0808

### Workgroup Assessment

The Workgroup has considered the Legal Text on 27 June 2023. Most Workgroup Participants were content the Legal Text meets the intention of the Modification Solution.

One Participant was concerned the proposed Legal Text for IGTAD Section A 2.4 does not include the reference to Reverse Compression as required by the Modification Solution. The Legal Text provider noted the concern and provided a view that a reference to Reverse Compression is not required as this is referenced in IGTAD Section B 3.5.

Both parties agreed to review their respective comments and amended Legal Text would be provided if needed. It was agreed that if amended Legal Text is required, this would not require an amendment to the Modification Solution.

### Text Commentary

Published alongside this report.

### Text

Published alongside this report.

## 10 Consultation

Representations were invited from interested parties on 21 July 2023. All representations are included within the Appended Representations section, including any initial representations.

The following table provides a high-level summary of the representations. Of the 16 representations received 13 supported implementation, 1 offered qualified support, 1 provided comments and 1 was not in support.

Representations were received from the following parties:

| Organisation | Response | Relevant Objectives | Relevant Charging Methodology Objectives |
|---|---|---|---|
| Acorn Bioenergy Limited | Support | b) positive<br>d) positive | c) none |
| ACR Energy Ltd | Support | b) positive<br>d) positive | c) none |
| Barrow Shipping Ltd | Support | b) positive<br>d) positive | c) none |
| Biogen (UK) Ltd | Support | b) positive<br>d) positive | c) none |
| Cadent Gas Ltd | Oppose | b) negative<br>d) none | c) no response |
| Cannington Enterprises Ltd | Support | b) positive<br>d) positive | c) none |
| CNG Services | Support | b) positive<br>d) positive | c) none |
| Future Biogas Ltd | Support | b) positive<br>d) positive | c) none |
| Grissan Renewable Energy | Support | b) positive<br>d) positive | c) none |
| Iona Capital Ltd | Support | Nil response | Nil response |
| Ixora Energy Ltd | Support | b) positive<br>d) positive | c) positive |

| | | | |
|---|---|---|---|
| Northern Gas Networks | Comments | a) negative<br>b) no response<br>d) no response | c) no response |
| SGN | Qualified Support | b) positive<br>d) positive | c) positive |
| Stream Bioenergy | Support | b) positive<br>d) positive | c) positive |
| Wales & West Utilities | Support | b) positive<br>d) none | c) none |
| VTTI B.V. | Support | b) positive<br>d) positive | c) positive |

Please note that late submitted representations may not be included or referred to in this Final Modification Report. However, all representations received in response to this consultation (including late submissions) are published in full alongside this Report and will be taken into account when the UNC Modification Panel makes its assessment and recommendation.

# 11 Panel Discussions

## Discussion

The Panel Chair summarised that Modification 0808 will modify the UNC to enable a Distribution Network Operator (DNO) and an Independent Gas Transporter (IGT) to enter into a bilateral 'operator to operator' agreement, enabled by the IGT Arrangements Document (IGTAD) and containing Network Entry Provisions, to allow physical gas to be offtaken from a DNO by an IGT, compressed to a higher pressure, then returned to the same DNO by the IGT, through a process known as reverse compression.

Reverse compression has zero net impact on physical flow into or out of the Total System, other than the initial filling (commissioning) of the IGT System, which is already established in IGTAD and the DNO's associated CSEP Connection Arrangements. Neither reverse compression nor commissioning require User involvement.

Panel Members considered the representations submitted during the Consultation noting that, of the 16 representations received, 13 supported implementation, 1 offered qualified support, 1 provided comments and 1 was not in support.

Panel Members were pleased to see the large number of responses to consultation. A Panel Member noted that many were from non-code parties.

**Net Zero**

Some Panel Members acknowledged that this Modification supports growth of the biomethane industry particularly in areas where capacity would be constrained in the absence of reverse compression. It also provides the potential for some existing anaerobic digestion (AD) plants to expand, which is referenced in the consultation response from Iona Capital Ltd. Growth in this area is part of the total picture in achieving Net Zero targets and this growth can contribute positively to GB Energy Security.

Panel Members acknowledged that there would be an amount of energy used in running the reverse compression facility, though this is likely to be small.

**Flaring**

Panel Members also wished to draw attention to the several consultation responses from those close to existing AD plants who refer to flaring being a current issue.

Some Panel Members believed this Modification could contribute to a reduction in flaring.

**Concept**

Panel Members discussed the concerns raised by Cadent in its consultation response relating to 3rd parties operating in-grid compression on another DN's network, noting that Cadent supports in-grid compression as an entry capacity reinforcement option only where the host DN owns and operates such facilities itself.

A Panel Member agreed with Cadent's views on this Modification.

Some Panel Members noted that Modification 0808 offers a solution, however there are alternative solutions available which are for the DNs to put forward.

Some Panel Members believed that if there were viable alternatives then the Modification would not be required.

**Legal Text**

Panel Members discussed the concerns in at least two consultation responses (NGN and Cadent) that the Modification introduces new concepts and rules that are not specifically ringfenced for the concept of "reverse compression" in the Business Rules and therefore the Legal Text. Panel Members agreed this was not a new issue.

The Independent Modification Panel Chair invited the Proposer to clarify their views on the Legal Text. T Davis confirmed that he was happy with the Legal Text because the DN and Dentons, the Legal Text Provider are happy with it.

A Panel Member confirmed they believed the Legal Text does ring fence reverse compression; it is done in a legal manner, rather than as plain text.

Panel Members heard clarification from the legal text provider (SGN) that the matter has been checked by both the legal firm providing the text (Dentons) and the internal lawyer of the legal text provider themselves. This query referred specifically to UNC TPD Section B Para 3.51:

> SECTION B – IGTS SYSTEMS – CONNECTION AND OPERATIONAL ARRANGEMENTS
>
> 3.5 Reverse Compression
>
> 3.5.1 For the purposes of this paragraph 3.5 "reverse compression" occurs where a directly connected IGT System includes reverse compression facilities the operation of which by the Independent Gas Transporter causes gas which has flowed out of the DNO System and into the IGT System to flow back from the IGT System to the DNO System at an IGT LDZ System Entry Point.

Some Panel Members confirmed their concern remained with the text in Section A System Classification, where an IGT Entry Point is defined as an IGT LDZ System Entry Point but not a specific Entry Point for reverse compression. This query referred specifically to UNC TPD Section A Para 2.4:

> SECTION A – SYSTEM CLASSIFICATION
>
> 2.4 IGT LDZ System Entry Point
>
> An "IGT" LDZ System Entry Point is an LDZ System Entry Point where gas can flow from an IGT System (as defined in IGTAD Section A2.1.1) into an LDZ (in which case the IGT System is a Connected Delivery System).

Other Panel Members reminded Panel that a suitable amendment to the UNC can be made by Code Parties.

**Amendments required to DN Connections Charging Methodology and 4B Statement**

Panel Members noted that DNs will need to amend their Connections Charging Methodology 4B Statement[1] to consider the obligations that this Modification would introduce in relation to the recovery of DNO costs associated with facilitating the reverse compression facility. This would be subject to Authority non-veto of the change. Time must be factored in for this process to complete (at least 2 months before it is effective).

**Implementation**

Panel Members noted two responses referred to particular projects requiring this Modification (WWU and CNG Services), one of which needs a Reverse Compression solution to operate by 31st March 2024 due to loss of network capacity from a local factory closing.

The Ofgem representative noted that it would be helpful to specify a clear timetable for when Ofgem approval is required in order to facilitate specific projects.

Panel Members requested that the Joint Office/Panel Secretary contact the 16 consultation respondents and ask them to respond directly to Ofgem with the date that they require the Ofgem approval to be received by. The Joint Office/Panel Secretary agreed to carry this out.

The Proposer confirmed that there are long lead time items which must be purchased in advance of installation. He confirmed there are at least 16 projects he knew about. Specific dates are difficult to set.

Panel Members noted that the Green Gas Support Scheme is open to applicants in England, Scotland and Wales for four years from 30 November 2021. Consultation responses have expressed concern that there is no clarity on any replacement for this funding. For more information see:

https://www.ofgem.gov.uk/environmental-and-social-schemes/green-gas-support-scheme-and-green-gas-levy

Panel Members agreed with Workgroup that implementation should be as soon as practicable.

## Consideration of the Relevant Objectives

Panel Members considered Relevant Objective *a) Efficient and economic operation of the pipe-line system.*

Some Panel Members agreed that implementation of this Modification would have a **positive** impact because the Modification requires an operator-to-operator agreement and having such an agreement supports cooperation and therefore efficient and economic operation of the pipe-line system.

Some Panel Members believed that this Modification is **negative** for Relevant Objective a) because it introduces the concept of IGT Entry without that being ring fenced in any way and potentially opens up other forms of IGT Entry without additional controls. The Legal Text is written in such a way that some DNs believe is not tight enough to solely implement this Modification. Entry of unknown gas in the future in different form could involve additional costs in managing and monitoring the network as a result of that Entry. Opening up to any IGT Entry is opening up to unknown costs which is not efficient and economic.

[1] The licence condition can be found here: https://epr.ofgem.gov.uk/Content/Documents/Gas_transporter_SLCs_consolidated%20-%20Current%20Version.pdf

Some Panel Members believed that where the DN agrees that Reverse Compression is the best solution, this Modification furthers and therefore **positively** impacts Relevant Objective a).

Other Panel Members believe that the Legal Text meets the intention of the Modification Solution and therefore there is not a concern to be addressed.

Panel Members considered Relevant Objective *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.*

Some Panel Members agreed that implementation of this Modification would have a **positive** impact on Relevant Objective b) because the Modification requires an operator-to-operator agreement and having such an agreement supports cooperation and therefore efficient and economic operation of the **combined** pipeline system.

A Panel Member believed that this Modification is negative for Relevant Objective b) because Networks would not be able to operate and develop an economic and efficient network with 3rd parties owning and operating in-grid compressors, whose sole purpose is to change the flows on the DN's network. It would be uneconomical and impractical to accommodate, both operationally and commercially.

Panel Members considered Relevant Objective d):

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.

Some Panel Members believed this Modification would have a **positive** impact on Relevant Objective d) as it increases competition between DNs and IGTs. An IGT being able to offer reverse compression provides an alternative to direct injection into the DN system.

Some Panel Members believed this Modification would have a **positive** impact on Relevant Objective d) as it could increase alternatives to dealing with just the DN as a monopoly provider (from the point of view of a connecting Shipper/connecting party wishing to inject biomethane, for example).

A Panel Member believe the Modification will have a **positive** impact on Relevant Objective d) as it levels the playing field which enhances competition.

## Consideration of the Relevant Charging Methodology Objectives

Panel Members considered Relevant Charging Methodology *Objective c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers.* Panel Members agreed with the Proposer's views which are reproduced here below:

> Compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers by allowing injection of distributed gas that may otherwise be flared or not developed, with increased supply available to the market when it is economic to inject.
>
> DNOs are likely to change their Licence Condition 4B Connection Charging Methodology Statements but this is unlikely to impact upon the relevant objectives.

### Determinations

Panel Members voted unanimously (13/13) that no new issues were identified as part of consultation.

Panel Members voted by majority (13/14) that there were no cross code impacts.

Panel Members voted by majority (11/13) to recommend implementation of Modification 0808.

## 12 Recommendations

### Panel Recommendation

Panel Members recommended that Modification 0808 should be implemented.

## 13 Appended Representations

Initial Representations – None

Representation - Acorn Bioenergy Limited

Representation - ACR Energy Ltd

Representation - Barrow Shipping Ltd

Representation - Biogen (UK) Ltd

Representation - Cadent Gas Ltd

Representation - Cannington Enterprises Ltd

Representation - CNG Services

Representation - Future Biogas Ltd

Representation - Grissan Renewable Energy

Representation - Iona Capital Ltd

Representation - Ixora Energy Ltd

Representation - Northern Gas Networks

Representation - SGN

Representation - Stream Bioenergy

Representation - Wales & West Utilities

Representation - VTTI B.V.

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Daniel Lambert, Downstream & Innovation Director |
| **Organisation:** | Acorn Bioenergy Limited |
| **Date of Representation:** | 4 August, 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

Acorn is a developer of anaerobic digestion facilities to produce biomethane for grid injection, focused on developing plants in rural areas using agricultural feedstocks. There are many sites where we have considered developing facilities which would be suitable in all respects (e.g., support from local feedstock producers as the anaerobic digestion plant would provide an ideal repository for agricultural wastes, residues, and rotational break crops; suitability for siting away from human settlements, etc.) except that local gas grid connections often do not provide the capacity to ensure year-round consistent export of biomethane to the gas grid. We support this modification because reverse compression (moving gas from lower to higher pressure tiers) will help mitigate gas grid export constraints such as those described above. This will help enable projects that would be suitable in all other respects other than robustness of gas grid connection, to connect to the gas network and ensure sufficient export capacity to make such projects investable (whereas with the current constraints they would often not be investable).

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

No lead time is necessary and implementation can be immediate when a decision is made. We are aware of a reverse compression project with a target of implementation in early 2024, and implementation well ahead of this is desirable.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

None.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No.

**Please provide below any additional analysis or information to support your representation**

N/A

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Richard Harper |
| **Organisation:** | Acr Energy Ltd |
| **Date of Representation:** | 8th August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

By supporting this modification, we want to encourage competition in gas production and supply, in particular, facilitating competition by renewable (low carbon) biomethane. Reverse compression permits the development of new renewable gas projects in areas that lack sufficient entry capacity due to low or uncertain local demand. The modification also enables independent gas transporters to provide the reverse compression services, creating competition to drive efficiency and lowering costs. They may also be able to offer quicker solutions that the incumbent DNO.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

Implementation should be immediate upon approval as no lead time is required. We have a project that can come on stream in 2024 if reverse compression is implemented promptly.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

None

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No

**Please provide below any additional analysis or information to support your representation**

We are a developer of anaerobic digestion plants focussed upon producing biomethane. One area of uncertainty and great concern to developers is the availability of capacity in the gas network for their production. The lack of capacity or even just uncertainty about available capacity is a major issue for financing. Capacity can be taken by another plant or lost if demand drops.

Reverse compression provides a developer with the certainty that if local demand drops or another plant is developed in the same area capacity can still be made available. Despite a Network Innovation Competition project in 2012 demonstrating the viability of reverse compression no progress has been made, probably due to a lack of competition in its provision. As the production of biomethane expands the lack of available capacity for want of reverse compression becomes an ever bigger impediment to its development.

The idea of an iGT is already established and the use of compressors is a core gas transportation function and established technology. So the operation of independent compressor stations as a concept is nothing new. Clearly as with all operator to operator interfaces cooperation and coordination are critical. Hence the only substantive provision introduced by modification 0808 is the requirement for an operator to operator agreement to be in place.

The modification will allow us to choose between an iGT and the local DNO. That competition between operators will encourage lower costs and better terms in general, for instance quicker implementation.

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Rosanna Butters |
| **Organisation:** | Barrow Shipping Limited |
| **Date of Representation:** | 27/07/2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

We support this modification because it facilitates competition, thereby allowing more green gas producers to connect to the gas network. Reverse compression (moving gas from lower to higher pressure tiers) can increase the availability of network capacity for parties looking to inject gas. This modification facilitates independent Gas Transporters owning the pipeline on which reverse compression assets are installed. By facilitating competition, the modification is expected to help deliver cost effective reverse compression solutions.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

No lead time is necessary and implementation can be immediate when a decision is made. We are aware of a reverse compression project with a target of implementation in early 2024, and implementation well ahead of this is desirable.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

None.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No.

**Please provide below any additional analysis or information to support your representation**

As a Gas Shipper, we are not directly involved nor impacted by this modification. We raised Modification 0808 since we hear the concerns of current and potential customers about the availability of network capacity. Reverse compression has the potential to relieve capacity constraints for parties that may be flaring gas at times when capacity is not available, and also provides the potential for some existing AD plants to expand. There is also considerable potential for additional grid injection of green gas in areas where capacity would be constrained in the absence of reverse compression.

Reverse compression involves short new pipelines hosting an embedded compressor to move gas from lower to higher pressure tiers. A Network Innovation Competition project to demonstrate the principle was completed successfully in 2012, but the distribution networks have not subsequently taken forward reverse compression other than a current Cadent project to provide capacity for a range of injection projects as opposed to a single site.

Allowing the pipeline that hosts a compressor to be iGT rather than DN owned should not be a material issue. The concept of iGTs is clearly not new. Similarly compressors to move gas are not a new concept – for example, around 20 AD plants already have compressors installed that mean the gas produced can be injected to higher pressure tiers. When an iGT hosts a compressor, however, it is obviously important to ensure that the iGT and DNO cooperate to ensure the compressor is operated appropriately to deliver the intended outcome. In fact the aim is for the compressor to be run exactly as it would be if the pipeline were owned by the DNO. That is why Modification 0808 requires that an operator to operator agreement is implemented, and that is the only substantive provision introduced by 0808.

With Modification 0808, AD developers will be able to choose whether an iGT or DNO hosted solution will best meet their requirements. This may be a lower cost option but the timing of delivery can also be important. If, for example, an iGT is able to deliver reverse compression with a shorter lead time than the local DNO can offer, that may enable a project to go ahead earlier – or even to go ahead (as opposed to be cancelled).

Making the provision of reverse compression open to competition is expected to lead to innovative and efficient solutions and to more green gas being injected to the network, supporting the transition to net zero.

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Ruby Jones |
| **Organisation:** | Biogen (UK) Limited |
| **Date of Representation:** | 8th August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

There is a significant portion of the existing gas network where injection of Biomethane is constrained restricting injection, especially on Summer nights but also meaning that there is zero capacity for new injection projects. The Green Gas Support System is time limited and at this stage no future funding mechanisms have been confirmed. Given the climate crisis, now is the time to maximise renewable gas production & this modification would be a significant step in delivering projects into the market place. We would like to see this implemented as soon as possible and for DNO's to facilitate additional network capacity within a reasonable timeframe.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

As soon as possible

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

None – it would remove uncertainty

## Legal Text: *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No

**Please provide below any additional analysis or information to support your representation**

None

Cadent
Your Gas Network

Cadent Gas Limited
Pilot Way, Ansty Park
Coventry CV7 9JU
cadentgas.com

Bob Fletcher
Joint Office of Gas Transporters
Radcliffe House,
Blenheim Court,
Warwick Road,
Solihull
B91 2AA

Andy Clasper
Andy.clasper@cadentgas.com
Direct tel +44 (0)7884 113385

4th August 2023
Your Reference: UNC Modification Proposal 0808

UNC Modification Proposal 0808 – Reverse Compression

Dear Bob,

Thank you for your invitation seeking representations with respect to the above Modification Proposal to which Cadent opposes.

## Do you support or oppose implementation?

Oppose

## Relevant Objective:

b) negative
d) none

## Reason for support/opposition:

Cadent are fully supportive of initiatives which efficiently maximise the flow of bio-methane into DN networks.

We also understand that this is an enabling modification and further operational agreements will be required between the relevant iGT and DN before any 'in-grid' compression facilities can be fitted and operated. We do though have reservations regarding this modification.

Cadent wish to highlight its view that the DN's would not be-able to operate and develop an economic and efficient network with 3rd parties owning and operating in-grid compressors, whose sole purpose is to change the flows on another DN's network.

We acknowledge that whilst it may be possible for a small number of highly bespoke projects to be made to work both technically and operationally, such arrangements cannot work everywhere.

It would therefore be uneconomical and impractical to accommodate, both operationally and commercially, as numbers of in-grid compression connections increase, both in routine and emergency conditions, and as flows change over time across the gas grid, including new competing gas to grid connections.

So at a principle level, we do not support this proposal. The DN is responsible for the economic, efficient and safe development of capacity on their networks, whilst facilitating competition and fair allocation of system access.

Therefore Cadent supports in-grid compression as an entry capacity reinforcement option only where the host DN owns and operates such facilities itself.

## Implementation

As this is an enabling modification, we agree that implementation can be as soon as possible following Authority Direction.

## Impacts and Costs

Impacts and Costs of amending 4b statements and putting in place necessary Network Entry Agreements have not been assessed as yet.

## Legal Text

We have discussed with the legal text provider that we believe the provided text within Section A 2.4 could have been clearer to more directly point at its use for 'reverse compression' only.

BR1 states *"Where an IGT System includes reverse compression assets, the arrangements described in these business rules shall apply (and not otherwise)."*

The term *'and not otherwise'* is pertinent here. The legal text provided in 2.4 (whilst not in itself conferring any rights) makes no mention of reverse compression. The legal text provider has provided an explanation, given by the lawyer, that 2.4 simply sets out the new defined term for an iGT Entry Point and it is Section B 3.5 which provides the substantive text conferring rights.

We agree with this but when read in isolation in the future, a new reader may take a different view if they are not aware of the development of the mod.

## Are there any errors or omissions in this Modification Report that you think should be taken into account?

No such errors or omissions identified.

## Please provide below any additional analysis or information to support your representation

Nothing further to add.

We trust that this information will assist in the compilation of the Final Modification Report. Please contact me on 07884 113385 (andy.clasper@cadentgas.com) should you require any further information.

Yours sincerely,

Andy Clasper

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Alan Armstead |
| **Organisation:** | Cannington Enterprises Ltd |
| **Date of Representation:** | 1st August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

We support this modification because it has the potential to ensure additional capacity in the overall gas pipeline / network for producers. This can be considered a positive step in encouraging and enabling gas producers to help in the achieving the Governments targets of Net Zero by 2050.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

Given the completion of a successful trial in 2012. No additional lead time is necessary and implementation should be immediate when a decision is made.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

None

## Legal Text: *Are you satisfied that the legal text will deliver the intent of the Solution?*

No legal opinion has been obtained.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No.

**Please provide below any additional analysis or information to support your representation**

As an AD operator, we support any measure that helps limit the occasions whereby pipeline capacity constraints for operators result in gas being flared off, wasted and emission to the atmosphere created.

CE fully supports initiatives that enable more green gas to be created and injected into the network, supporting all of the Governments climate objectives as we transition from fossil fuels to a more balance energy portfolio of AD, wind, solar, tidal, nuclear and hydrogen, whilst also enhancing our energy security as a country. But with a reducing quantity and reliance on oil and gas.

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | John Baldwin |
| **Organisation:** | CNG Services Ltd (CSL) |
| **Date of Representation:** | 4th Aug 23 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

To meet Netzero we need biomethane with Bio-CO2 capture/CCS. To continue to grow the biomethane market, the UK needs reverse compression (RC). We support this enabling modification because it facilitates competition in the provision of RC - moving gas from lower to higher pressure tiers via two (short) connecting pipelines. In principle, there should be no difference between DNO and iGT ownership of any connecting pipelines that host a compressor. However, to deliver the capacity benefits expected from RC, the network operators need to co-operate. If the DNO owns the connecting pipelines, this would be an internal matter. The substantive provision of this modification is that where an iGT owns the connecting pipelines, an operator-to-operator agreement is put in place. This agreement can specify the terms that would otherwise be internal arrangements such that competition is facilitated while network operation can be as it would be if the facility were owned by the relevant DNO. By facilitating competition, the modification is expected to help deliver timely and cost effective RC solutions without impacting operational efficiency.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

CSL is progressing a project that needs an RC solution to operate by 31st March 2024 due to loss of network capacity from a local factory closing. While 12 – 15 months is normally required, CSL can deliver this one in 9 months as it is particularly simple. Modification 0808 is required for the project to progress and gas to flow such that the

biomethane project stops having to flare gas caused by the factory closure reducing network capacity.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

None

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

We do not think the Modification Report provides a justification for this straightforward enabling proposal not being subject to self-governance.

**Please provide below any additional analysis or information to support your representation**

Biomethane is acknowledged by CCC as being a valuable contributor to the UK meeting NetZero targets. It is now critical and urgent that RC becomes routine in GB. Around 50% of potential biomethane projects cannot go ahead due to the lack of network capacity for the injection of biomethane. Reduction of pressure in the grid (as per WWU Optinet) is always the best option for allowing injection, but increasingly this cannot overcome the fundamental lack of capacity. With high gas prices, electrification and Hydrogen Business Model projects there are likely to be increasing problems caused by lack of local pipeline demand, and hence capacity, for existing biomethane plants as well as new sites. The technical solution of RC means that wherever there is a gas pipeline, there can be network capacity.

CSL has worked on RC since our first feasibility study in 2009 and has completed around 15 feasibility studies. The technical solution is straightforward, and in widespread use in Europe (we recently visited France and shared our report on their RC approach with the DNOs). An NGN NIC project demonstrated the feasibility of RC in 2012. While the DNOs could have installed RC since that demonstration project, only one project has been started – a WWU/Cadent NIC project that started in 2018 and is scheduled to be completed in 2024. We believe that competitive solutions will be able to be completed in a much shorter time than by the DNOs and having choice is valuable to customers.

There is no security of supply risk to customers because there is no change to the existing PRSs in the grid. All that happens, for example, is that the set point for summer in a 19 bar grid is reduced to 18.5 bar to allow the RC to operate. This is not novel as such pressure reductions already happen, with around 75% of biomethane projects given increased access to the grid by the DNO reducing grid pressures in summer. RC simply adds additional capacity by moving gas to higher pressure tiers so that a wider area of demand can be accessed.

There are no material technical issues and similar compressors are used to inject biomethane directly into the LTS - more than 15 sites have this, with no technical issues. The RC is a simpler version of a Bio-CNG compressor that compresses gas to 300 bar

(there are over 30 in operation in GB) and the same technicians who look after such compressors will maintain and monitor the RCs installed by CSL as a result of this modification and the anticipated granting of an iGT Licence.

(https://www.ofgem.gov.uk/publications/cng-services-limited-notice-statutory-consultation)

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Ben O'Meara |
| **Organisation:** | Future Biogas Ltd |
| **Date of Representation:** | 10 August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br><br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

Growth of the biomethane industry is crucial in achieving NetZero targets. We have a number of large 'blue chip' FTSE100 clients looking to procure large volumes of biogas and support the development of new Biomethane sites but we also have number of high potential sites that we cannot develop due to the lack of network capacity. These sites provide other benefits, not just gas, including improved land management, employment and eventually sequestered CO2. A standardised reverse compression solution delivered by private investment, which is overseen by the DNO would be the most effective and efficient approach to the development of the gas network, we actively encourage and support the implementation as quickly as possible.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

As soon as possible, we have potential project sites that could be developed without further delay if a viable means of implementing reverse compression exists.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

For a project site with reverse compression, analysis costs would be minimal, while development, execution and operational costs would vary widely from site to site, depending on the size, location and operating duty of the reverse compression facility.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No.

**Please provide below any additional analysis or information to support your representation**

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Nic Crowe |
| **Organisation:** | Grissan Renewable Energy |
| **Date of Representation:** | 9 August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br><br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** None*e* |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

We support this modification because it will enable greater capacity for green gas to be injected to the low-pressure gas network and increase the overall potential for green gas usage in the UK. Reverse compression (moving gas from lower to higher pressure tiers) can increase the availability of network capacity for parties looking to inject gas. This modification facilitates independent Gas Transporters owning the pipeline on which reverse compression assets are installed. By facilitating competition, the modification is expected to help deliver cost effective reverse compression solutions.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

No lead time is necessary and implementation can be immediate when a decision is made. We are aware of a reverse compression project with a target of implementation in early 2024, and implementation well ahead of this is desirable.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

None. Reverse compression assets and better grid access should reduce the overall cost of biomethane generation in the UK.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

N/A

**Please provide below any additional analysis or information to support your representation**

Grissan Renewable Energy operates multiple biomethane sites with grid injection across Scotland.

Sites are often best located in rural areas where they ensure minimal disruption to other local amenities, however, this can mean that gas grid access can be a limiting factor in production.

For example, in 2022 despite the Government's desire to increase energy security and domestic gas production in the wake of Russia's illegal invasion of Ukraine, Grissan was unable to inject due to local pressure restrictions. As gas demand begins to reduce across the economy with the drive to Net Zero it is likely that grid restrictions will increasingly become a limiting factor.

Modification 0808 provides the regulatory basis to prevent such future bottlenecks and facilitate investment in necessary infrastructure to prevent the supply and demand issues of the network of tomorrow. On that basis, we are happy to lend our support to the proposal.

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Julia Safiullina |
| **Organisation:** | Iona Capital Ltd |
| **Date of Representation:** | 31 July 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | |
| **Relevant Charging Methodology Objective:** | |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

Our portfolio consists of 17 biogas facilities across the UK. We continuously look to improve the economics of the plants, which could be achieved by expansion. However, these expansion projects are put on hold due to gas to gird constraints. We also have rejected a number of potentially economically viable biogas projects due to the summer constraints from the gas grid. If reverse compression is available as an option, not only we will be able to expand existing facilities to produce more gas but would also be able to resurrect some of the rejected biogas projects.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

To take advantage of the opportunities at present, we would like to have a short lead time for the implementation of the changes proposed. The competition for feedstocks is always present and whilst the opportunities are economically viable today, they might not be there in 18-24 months due to the feedstock availability.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

Analysis of feedstock requirements and sources, consents (planning permission and environmental permit) amendments and some amendments to existing contracts (e.g. lease) on top of actional construction costs and operational costs.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No

**Please provide below any additional analysis or information to support your representation**

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Mark Voss |
| **Organisation:** | Ixora Energy Ltd |
| **Date of Representation:** | 08 August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** Positive |

## Reason for support: Please summarise (in one paragraph) the key reason(s)

Reduced flows due to lack of grid capacity are unpredictable and intermittent. Both of which pose serious issues when operating an AD plant. Multiple stop/starts of any equipment reduces equipment lifespan and increases maintenance cost. Being kicked out of grid unpredictably also puts pressure on gas storage volumes – often leading to excessive flaring of biogas. Following on from this feeding has to be reduced. This of course does not reduce gas production immediately – so the lag between feed changes and gas production of 2-5 days results in excessive gas being flared when kicked out of grid, then reduced gas flows once back in the grid. No matter how accurately the operators try to manage this situation the result is always excessive flaring and reduced flows (beyond even what could be accepted) of green gas into the grid. In recent weeks we have seen flows reduced by 200 Sm3/hr of biomethane to grid – a 50% reduction on flows and therefore revenue compared to last summer. During this period flaring can reach up to 15% of our biogas production due to the issues brought from intermittent grid availability. Having hedged a significant proportion of gas sales this issue then becomes the ultimate ‘double whammy’ whereby on days of low flows we may not reach our hedged sales volume – meaning that while suffering the loss of reduced gas sales the site then has to pay a premium price to buy ‘fossil derived’ gas from the grid to meet its contracted volume.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

As short as possible. We are aware that network owners can install compressors – but have yet to do so. We have put together a team of industry experts to work with network owners and deliver such projects at speed. The first of which we believe can be delivered within the next 9 months - this will deliver a solution at least one year earlier than previously thought.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

Approx £1.5 million

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

None

**Please provide below any additional analysis or information to support your representation**

None

Joint Office
Enquiries@gasgovernance.co.uk

10th August 2023

Dear Joint Office,

**Re: 0808 - Reverse Compression**

Thank you for the opportunity to provide representation on the above noted Modification Proposal. Please find below Northern Gas Network's (NGN) comments in respect of this change.

**NGN offers Comments in relation to this Modification Proposal.**

**Reason for Comments**
Whilst NGN is supportive of changes that could aid in the move towards Net Zero, we feel that as currently drafted the modification and legal text are too wide in scope, and introduce new concepts and rules that are not specifically ringfenced for Reverse Compression. Whilst we appreciate this is likely not the intent of the proposer, we find that without this level of detail within the modification solution, and legal text, that this potentially opens the code to IGT entry for other purposes. Without additional level of controls around IGT entry, we feel that this would potentially be negative against Relevant Objective a) *Efficient and economic operation of the pipe-line system*.

**Implementation:**
As this is Authority Direction, it should be implemented on a date as directed by the Authority.

**Impacts and Costs:**
Due to the way that NGN manages capacity and pressure within its network, it is not currently felt that this is a feasible solution within our network. However, the impacts and costs will be assessed on a case-by-case basis.

**Legal Text:**
We note that within 3.5, whilst 'reverse compression' is defined, its use within the paragraph is not capitalised. Whilst we appreciate that there are other examples of this within code, we feel that capitalisation of the use in this instance would remove any potential ambiguity within the section.

Whilst the Legal text in relation to TPD A new paragraph 2.4 matches the Business Rule, we believe the Business Rules do not fully align to the intent of the modification in that it does not limit IGT Entry to reverse compression. We believe the new TPD Section A paragraph 2.4 being added to define an IGT LDZ System Entry Point should be specific to reverse compression.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?**
None identified.

**Please provide below any additional analysis or information to support your representation**

Whilst we encourage solutions that propose to further the target towards Net Zero, we are aware that these also need to not impact on the safe operating of the Network, or potentially increase the end consumers charges, especially when the proportion of the country is in fuel poverty. Within NGNs network the way we manage pressure and capacity is carefully balanced, and additional capacity being moved between different pressure pipes, outside of our existing systems, would result in a need for manual monitoring and balancing to counter the additional risk to the network. The cost of this to the network, and as a result potentially all end consumers, would need to be taken into account and therefore any applications would need to be considered on a case-by-case basis.

Whilst we appreciate the proposers reasoning that Offtake or Entry pressure monitoring or metering can be managed as part of the NExA or the NEA, we feel that this being part of the UNC should be a fundamental requirement to ensure there is no issue with the compressor, and that the pressure entered is correct. Additionally, we believe that a combined NExA & NEA document would be more appropriate rather than two separate documents being used. This would ensure all parties were aware of the end-to-end obligations and the entire process was visible.

I hope these comments will be of assistance and please contact me should you require any further information in respect of this response.

Yours sincerely,

Tracey Saunders (via email)
**Market Services Manager**
Mobile: 07580 215 743

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | David Mitchell |
| **Organisation:** | Scotland Gas Networks Ltd and Southern Gas Networks Ltd |
| **Date of Representation:** | 9th August 2023 |
| **Support or oppose implementation?** | Qualified Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** Positive |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

SGN would like to offer qualified support to this modification on the basis that our Connections Charging Methodology 4B statement will need to be amended to consider the obligations that this modification would introduce in relation to the recovery of DNO costs associated with facilitating the reverse compression facility. Amendments to our Connections Charing Methodology 4B statement are subject to an authority approval of the costs that we will apply to this process hence our qualified support due to this requirement.

All requests to install Reverse Compression Facilities on a Distribution Network (DN) will be subject to the Distribution Network Operator (DNO) completing the necessary analysis of its network to determine the suitability of the gas network to facilitate the Reverse Compression Facilities and whether other solutions would be more appropriate to deliver the necessary entry capacity. DNOs will typically assess their current pressure management processes before they allow a Delivery Facility Operator (DFO) to enter gas onto their network. If the DNO is unable to facilitate the necessary capacity on the network then they will assess, on request, the suitability of the Reverse Compression Facility in moving gas from a lower to higher pressure tier to facilitate additional capacity on the DNO network to permit the DFO to enter gas onto the DNOs network at the required rate.

We believe that this modification contains suitable obligations that will require parties to enter into a bilateral 'operator to operator' agreement which will permit the DNO to stipulate the requirements of the Reverse Compression Facility noting that each facility will have its own site-specific agreement. Gas will not be permitted to flow at a Reverse Compression facility unless an IGT LDZ System Network Entry Agreement is in force. Only parties that hold an IGT licence will be able to enter into an IGT LDZ System Network Entry Agreement with the DNO.

**Implementation:** *What lead-time do you wish to see prior to implementation and why?*

If this modification is implemented then there would need to be a suitable period of time to allow the DNOs to update and publish their Connections Charging Methodology 4B Statements that the authority would need to approve.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

SGN does not envisage any direct costs as a result of this modification being implemented.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

As legal text providers for the modification we are satisfied that the legal text discharges the intent of the business rules in the modification solution.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

We do not believe that there are any omissions in the modification report that need to be considered.

**Please provide below any additional analysis or information to support your representation**

None identified.

Joint Office of Gas Transporters

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Kevin Fitzduff |
| **Organisation:** | Stream Bioenergy |
| **Date of Representation:** | 27/07/2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** Positive |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

Given the government targets for net zero and significant demand from industry there is substantial room for the biomethane industry to grow in the UK. The lack of network capacity is constraining the implementation of many new biomethane plants. Reverse compression is the most economically and technically feasible solution to removing this constraint on the gas network. It is also the most environmentally friendly solution to the problem as less energy would be used than moving biomethane by road or connecting directly to transmission networks.

Private sector investment in reverse compression would speed up construction times and likely lead to lower costs for biomethane plants.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

We would support the implementation as soon as possible.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

Insert Text Here

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Insert Text Here

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

Insert Text Here

**Please provide below any additional analysis or information to support your representation**

Insert Text Here

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Tom Stuart |
| **Organisation:** | Wales & West Utilities |
| **Date of Representation:** | 01.08.23 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br><br>**d)** None |
| **Relevant Charging Methodology Objective:** | **c)** None |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

The intention of Modification 808 was to enable the introduction of 3rd party owned within-grid Reverse Compression Assets to operate on the Distribution Network. WWU supports this modification as it delivers a workable solution and furthers the delivery of green gas into the DNO system. We propose to amend our 4B statement to describe the circumstances to which we agree to this arrangement subject to our Gas Act s9.1 obligation to develop an economical and efficient system for the transportation of gas to premises.

We believe the Modification furthers relevant objective 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.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

There is a site on the WWU network to looks to make use of this modification and we would like to see this modification implemented as soon as possible.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

As provided in IGTAD B 3.5.2 B i the DNO may incur costs which it may have to recover from the IGT.

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

The legal text delivers a workable solution.

We have the following comments:

1. The definition of the entry point is described in the legal text as '*An IGT LDZ System Entry Point is an LDZ System Entry Point where gas can flow from an IGT System (as defined in IGTAD Section A2.1.1) into an LDZ (in which case the IGT System is a Connected Delivery System)'.*

   a) We cannot find a connected delivery system in general terms, defined terms, however there is a definition of Connected Delivery Facility in TPD I1.2.1.

   b) Although IGTAD B (3.5.2) An LDZ System Network Entry Agreement should be in force we would like a specific clause that refers to the IGT LDZ System Entry Point shall only be connected when if fulfils the criteria in the DNO's statement under Standard Licence Condition 4B (commonly known as the 4B statement).
   WWU will be amending our 4B statement to state that we will only agree to an IGT System Entry Point where we agree that this satisfies our Gas Act s9.1 obligation.

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

None

**Please provide below any additional analysis or information to support your representation**

WWU has a Gas Act s9.1 obligation to develop an economical and efficient system for the transportation of gas to premises and any installation of reverse compression cannot affect that statutory obligation; therefore we will make it clear in our 4B statement that the overriding primacy of the statutory obligation and that reverse compression will only be permitted where it does not conflict with that obligation and where other measures to provide entry capacity are not sufficient.

# Representation - Draft Modification Report UNC 0808

# Reverse Compression

**Responses invited by: 5pm on 10 August 2023**

**To:** enquiries@gasgovernance.co.uk

*Please note submission of your representation confirms your consent for publication/circulation.*

| | |
|---|---|
| **Representative**: | Daniel Purvis |
| **Organisation:** | VTTI B.V. |
| **Date of Representation:** | 7th August 2023 |
| **Support or oppose implementation?** | Support |
| **Relevant Objective:** | **b)** Positive<br>**d)** Positive |
| **Relevant Charging Methodology Objective:** | **c)** Positive |

## Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)

The development of UK biomethane projects is currently significantly constrained by a lack of reliable injection capacity into the networks. At VTTI we are keen to deploy significant capital into UK projects however a major barrier to final investment decisions on projects is the reliability of gas offtake into the network.

## Implementation: *What lead-time do you wish to see prior to implementation and why?*

Immediate implementation – the Green Gas Support scheme currently runs out in November 2025, we need to enable as many projects as possible to proceed now in order to construct and inject gas before this deadline.

## Impacts and Costs: *What analysis, development and ongoing costs would you face?*

N/A

## Legal Text: *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

No

**Please provide below any additional analysis or information to support your representation**

N/A