UNC Modification	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:

Clarification that reverse compression, with zero net flow into or out of the network, is not to be classified as an entry and exit point.

Next Steps:

The Proposer recommends that this Modification should be:

- subject to Self-Governance
- assessed by a Workgroup.

This Modification will be presented by the Proposer to the Panel on 19 May 2022. The Panel will consider the Proposer's recommendation and determine the appropriate route.

Impacted Parties:

High: Some Distributed Gas Producers, Compression service developers.

Low: Distribution Network Operators (DNOs)

None: Gas Shippers and Suppliers, CDSP and Consumers

Impacted Codes:

None

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	18 August 2022
Draft Modification Report issued for consultation	22 August 2022
Consultation Close-out for representations	12 September 2022
Final Modification Report available for Panel	15 September 2022
Modification Panel decision	20 October 2022

Any questions?

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1 Summary

What

The Code is silent on embedded “Reverse Compression”. Clarity is needed that any reverse compression, with net zero flow, should not be regarded as creating a network entry and exit (meter) point.

Why

Compressors can be used to move gas from a lower to higher pressure tier pipeline. If this is done by a DNO, this would be regarded as part of network operation. The installation of compressors does not, however, have to be undertaken as a regulated activity. If carried out by a third party, the movement between tiers could be regarded as an exit and entry point, even though the flow leaving the lower pressure network is identical to the flow entering the higher pressure one (with plant being designed to ensure no losses/venting). Whether a DNO or third party installs such a Reverse Compression plant the physical flows would be identical and this Modification seeks to ensure a level playing field, avoiding a potential requirement to install entry and exit meters and apply transportation charges that would not arise if the plant were installed by a DNO.

How

UNC amendment to clearly provide that third party installation of reverse compression shall not lead to either an entry nor exit meter point being created (or confirmation that this is the case with no UNC change being necessary).

2 Governance

Justification for Self-Governance

If it is accepted that reverse compression does not require exit and entry points to be created, then as a clarifying modification, implementation is unlikely to have a material impact on any party and Self-Governance is appropriate.

A number of biomethane plants face capacity constraints at times of low demand, meaning they are unable to inject gas to the network. There is concern that high gas prices will lead to lower gas demand than otherwise in Summer 2022, and this may mean there are widespread capacity constraints with a larger number of biomethane plants being unable to inject gas to low pressure tiers (gas flow of X scmh into a 2 bar or 7 bar pipeline is only possible if the downstream flow leaving that pipeline is >X scmh).

As a consequence, a number of projects to install reverse compression are being actively pursued with an intention of being operational in summer 2022. If the DNOs accept that any such project would not create an exit and entry point, any preferred confirmation of this through modification of the UNC could follow later. However, if this is not accepted the consequences on project costs and timing may mean that urgent procedures will be requested.

Requested Next Steps

This Modification should:

- be considered a non-material change and subject to Self-Governance.
- be assessed by a Workgroup.

3 Why Change?

The injection of distributed gas is growing. As at the end of March 2022, 126 Distribution Network (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 network 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 in summer 2022, 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 network 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 are 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.

If a DNO includes reverse compression within its network, this would not constitute an entry nor exit (meter) point but simply be part of the network. If a third party were to build an identical facility to transfer gas between two pipeline pressure tiers, BGG believes the UNC is silent on how this should be treated. As such, it may be argued that in the absence of any specific Code terms, the compressor should be treated as part of the network, thereby delivering the same treatment as would apply if the DNO implemented an identical arrangement. Equally, however, it may be argued that the gas passing through the compressor should be treated as having created both an entry and exit (meter) point.

To remove any scope for doubt, and to avoid imposing significant costs on third party developments that would not apply were a DNO to undertake the same development, clarity in the Code that no entry nor exit point is created may be beneficial. This would reflect the fact that no net flow is anticipated, and would be consistent with the principles established by Modification 0363 that charges should be based on net flows – i.e. there should be no network charges for reverse compression, which is achieved by not being an entry/exit point.

4 Code Specific Matters

Reference Documents

UNC

Knowledge/Skills

Understanding of meter point rules and distributed gas entry requirements.

5 Solution

It is proposed that the Code be modified if necessary to clarify that reverse compression - a physical arrangement that moves gas from one pressure tier to another higher pressure tier within a distribution network with no anticipated net flow into or out of the DN – shall not create either an entry nor exit (meter) point.

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 is positive through 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 No change.	None
Lower bills than would otherwise be the case Theoretical benefit but too small to be realised in practice.	Positive
Reduced environmental damage Reducing biomethane flaring has clear environmental benefits. Reverse compression will also facilitate additional distributed entry that would otherwise not be developed due to network capacity constraints.	Positive
Improved quality of service No change	None
Benefits for society as a whole Small employment opportunities would be created through the development and installation of compressors.	Positive

Cross-Code Impacts

None.

EU Code Impacts

None.

Central Systems Impacts

No impact.

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 (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	Positive
c) Efficient discharge of the licensee's obligations.	Positive
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.	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

Implementation of this Modification would ensure no undue costs arise for third parties developing schemes to provide compression that moves gas between pressure tiers, creating a level playing field with the requirements were the incumbent DNO to implement the same solution. The third party would not, for example, be expected to pay Local Distribution Zone (LDZ) transportation charges associated with each of the positive and negative elements of a zero net flow arrangement. Implementation may therefore 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 third party 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.

8 Implementation

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

As Self-Governance procedures are proposed, implementation could be sixteen business days after a Modification Panel decision to implement, subject to no Appeal being raised.

9 Legal Text

Text Commentary

To be provided by the relevant Transporter if DNOs conclude that UNC modification is desirable.

Text

To be provided by the relevant Transporter if DNOs conclude that UNC modification is desirable.

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Self-Governance procedures should apply.
- Refer this proposal to a Workgroup for assessment.