



Guidance for Changing an Existing NTS Entry Gas Quality Parameter

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nationalgrid

Document Revision History

Version	Date of Issue	Notes
0.1	21 st October 2021	Draft circulated to GMAP members for review and comment.
0.2	03 rd November 2021	Implementation of modification 0772s
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Section 1: Introduction:

This guidance document has been created by National Grid Gas (NGG) in response to stakeholder feedback received during the development of our Gas Markets Plan Project 'Implementing the Proposed Gas Quality Standards'. The aim is to explain the NTS contractual and market change processes for changing a gas quality parameter within a connection agreement i.e. a Network Entry Agreement (NEA), Storage Connection Agreement (SCA) and an Interconnector Agreement (IA). It is therefore likely to be of primary interest to Delivery Facility Operators (DFOs) but may also serve as a reference source for other GB gas market participants.

The Gas Safety (Management) Regulations 1996 (GS(M)R) set out certain minimum legal requirements that gas transported on our network must comply with. When assessing any request for change, we will need to ensure that we can continue to meet our GS(M)R obligations as well as other relevant legislation and existing contractual obligations. This document describes the key elements which need to be completed:

- Change Categories
- Minor Modification Process
- Uniform Network Code (UNC) market change rules
- Network Analysis & Joint Risk Assessment
- System changes
- Contractual changes
- Costs and Reconciliation

Please note that certain terms in this document are defined in the Uniform Network Code (UNC) and when this occurs the expressions have capital letters at the beginning of each word.

If you require further details or wish to provide feedback regarding any of the information contained within this guide you can contact us via email at:

.box.UKT.Customerlifecycle@nationalgrid.com

Or by post to:

Gas Connections Contract Manager
Commercial
National Grid plc
National Grid House
Warwick Technology Park Gallows Hill
Warwick
CV34 6DA

Section 2: Change Categories

Requests to change gas quality parameters may fall into one of three categories:

1. Change to a GS(M)R parameter that is within the relevant GS(M)R limit
2. Change to a GS(M)R parameter that is outside the relevant GS(M)R limit
3. Change to a non-GS(M)R parameter

Changes to specifications within GS(M)R parameters will normally be acceptable, subject to completion of relevant processes that are described in this guide, including assessment of impact to other parties connected to the NTS. An exception is the level of oxygen content, for which we typically require a lower concentration than that set out in GS(M)R due to the potential for adverse impacts on some of our exit customers.

Where a customer wishes to change a GS(M)R parameter to a value outside that which is specified in GS(M)R, such a request will be considered where it is to apply for a limited duration and is at a

location where other supplies of gas are received by NGG that would be capable of blending with the requesting customer's gas prior to its entry onto the GS(M)R network.

Changes to contractual parameters that are not specified within GS(M)R can also be considered, such as carbon dioxide content. Whilst acceptable limit values are not restricted directly by legislation, requests for change still need to be assessed to determine any NTS network integrity impacts and NGG's ability to continue to meet its other contractual obligations. In the case of requests to increase carbon dioxide content, a carbon cost assessment is likely to be required to be produced by the customer as part of the UNC process to demonstrate the value of the chosen option against alternatives.

It is important for customers to appreciate that all requests for change involve some degree of assessment and that in order to progress them, the customer will normally have some money at risk pending the outcome of such assessments.

Section 3: Minor Modification Process

This section outlines the minor modification process (Application to Offer A2O) for existing NTS Entry Connections which we use to support the contractual changes in the NEA, SCA & IA agreements for gas quality parameters. The minor modification process assumes there is no physical removal or installation of NGG assets.

To start the process an initial pre-application meeting can be offered to any customer wishing to change their gas quality parameters to an existing entry connection to the NTS. Discussion points for this meeting would typically include: Application to Offer (A2O) process, timescales, costs, analysis, and discussion relating to the market change rules. This can be arranged by sending an email to:

.box.ukt.customerlifecycle@nationalgrid.com.

If NGG considers that it may be feasible to implement the requested change, the customer would be invited to submit an application via our online applications portal (Gas Connections Portal) in order to progress the minor modification. The requested gas quality parameter change should be specified in Section B, Summary of Connection Application.

For further information on the Gas NTS Connection Application the following document has been created to walk through the process.

Link: [National Grid Transmission System: Gas Connection Application Guide](#)

A Gas Connection Portal Guide has also been developed to provide further guidance on how to register as a user of the portal and make an application.

Link: [Customer Portal User Guide](#)

A Connection Application Fee will be required to be paid following submission of the application form and the requested technical data being provided. Once NGG has deemed the application Competent, the customer will be advised that a Connection Offer will be produced within 6 months, also network analysis and scoping of the work will begin (please refer to Section 5). Typically, the Connection Offer will include a modification agreement, scope of work (not a conceptual design study), a cost estimate, and an indicative timeline. The Connection Application Fee will be reconciled against the actual outturn costs incurred by National Grid. We will endeavour to produce a Connection Offer as quickly as possible depending on the scope of the change and will commence activities in parallel for example to align with the UNC process where requested by the customer. Annex A is a high level diagram outlining the processes in this document for further guidance.

As at January 2021, the Connection Application Fee for a Minor Modification is £30,000 (excluding VAT). Details of our current Application Fees are stated in The Statement for Gas Transmission Connection Charging which is published on our website. [The Statement for Gas Transmission Connection Charging](#)

Customers should note that at this stage it will not be possible to confirm whether the request can be implemented; rather the purpose of the minor modification process is to facilitate the necessary assessments that are explained later in this guide. A Connection Offer will be open for acceptance by the customer for a period of three (3) months and if the customer does not accept within this period the Connection Offer lapses. To accept the offer the modification agreement will need to be signed and returned to NGG.

Section 4: Market Rules

A change to a gas quality parameter at an NTS entry point alters the terms on which NGG accepts gas for delivery from shippers at that entry point for the purposes of the UNC. It may also have an impact on other customers connected downstream. There is normally therefore a requirement to engage with parties who may be impacted by the request for which the rules are set out in the UNC. This section summarises those rules and provides guidance on timelines.

The UNC currently has four different potential processes to enable a gas quality parameter to be changed within a connection agreement.¹ NGG will consider the most appropriate route in each case and seek agreement to this with the requesting party.

1. Enabling Modification:

The 'enabling modification' process is where a UNC modification is raised to make the gas quality change within an existing connection agreement. No text is changed within UNC as a result, rather its approval 'authorises' us and the relevant operator to execute the desired change in the connection agreement.

An enabling modification is required to go through the standard formal UNC governance processes which includes a workgroup, the creation of a modification report, a formal consultation and decision (by the UNC Panel if designated as 'self-governance' or otherwise by Ofgem). It is currently the primary way gas quality changes are made. It is an open and transparent process which the industry can fully engage with and is suitable for requests for change at entry points where multiple shippers deliver material volumes of gas. We require the operator requesting the change to raise the enabling modification. The terminal operator may either become a UNC shipper to be eligible to do this or may arrange for a current shipper to raise the modification on their behalf. The average time for a gas quality change to go through this process is about one year.

2. Signatories of capacity holders

This is an alternative to the enabling modification process, whereby, National Grid NTS shall notify the industry of the proposed change and provide network analysis in order for parties to provide a view as to whether they feel they may be impacted by the change. If no objection is received within a ten business day window then National Grid will agree the change in writing with the UNC shippers that hold NTS entry capacity at that relevant entry point. Should an objection be received then the proposed change will follow the enabling modification route. Changing the gas quality via this route tends only to be used for single shipper sites or small volumes.

3. Inert gas limit change

The UNC inert gas limit rule currently allows changes to certain inert levels to be made without industry consultation. For the purposes of the UNC, inert gas limits mean specifically that the carbon dioxide limit shall be not more than 2.5% (molar), while there is no direct limit on nitrogen levels². It should be noted that the total inerts content (CO₂ & N₂) should not normally exceed 7%.

¹ UNC: Transportation Principal Document, Section I, 2.2.2 (a) & (b)...

² UNC: Transportation Principal Document, Section I, 2.2.3 (b) & 2.2.7 (a).

4. Legislation change

The final way a gas quality parameter can be changed within an NTS connection agreement is if changes are required to comply with a legal requirement. In that scenario gas quality changes could be made without industry consultation. This allows contractual changes to be implemented, for example if a limit or range were to be narrowed/ reduced or became no longer applicable.

If a change in legislation is expected to result in multiple requests to change a gas quality limit(s) and/or introduce a new limit that multiple parties may wish to access, then NGG may consider raising a UNC modification to put the revised limit(s) into the UNC itself to enable a wider range for an existing limit(s) and/or a new limit(s) to be accessed by customers. In such cases, the need for the A2O process may be removed.

In respect to timelines for both the minor modification process and the market change process and in particular the enabling modification, there is the potential for these processes to be run in parallel and we would seek to facilitate this where requested by the customer. Please refer to Annex A diagram for further information.

Section 5: Network Analysis and Joint Risk Assessment

This section outlines information relating to network analysis and the joint risk assessment. This is to examine whether the proposed change could have an impact on NGG assets (such as compressors) and the extent to which the gas would be likely to penetrate into the network to inform whether Distribution Networks or other Directly Connected customers may be impacted.

As part of the process, network analysis would normally be required, and the results shared with the customer and the industry. We will work with the customer to establish suitable scenarios to model, to assess the potential penetration of the relevant supply source into the network and thereby which oftakes might be impacted by the requested change. The modification fee will cover what needs to be assessed and the analysis. Timelines for this activity may be dependent on the change being proposed and the market change route. For guidance the cost of gas quality modifications network analysis is estimated to cost in the range of £9,500 to £14,000 and this is part of the modification fee.

In respect to sharing the information, the market rules section above outlines this. Should the route be via an enabling modification, the network analysis will be presented and developed further as part of the UNC modification workgroup discussions. If the route is to gain consent from capacity holders at the entry point, then the network analysis will be shared with the customer and with the industry as explained in Section 4.2.

In respect to the gas quality change a joint risk assessment (GQ/8) may be required, dependant on the change being requested. This assessment is from a technical point of view, whether there are any concerns from a NTS integrity perspective (such as compressors) and to ensure we can continue to comply with our GS(M)R obligations.

Section 6: System Changes

As part of the minor modification process and the Connection Offer a scope of work will be developed based on the operational parameters and gas quality parameters provided. The system changes identified will commence in line with the indicative timeline outlined in the connection offer once the modification agreement has been signed and if identified any further costs invoiced. These may include a requirement to re-range telemetry settings and/or operational alarm limits.

All gas quality equipment shall be evaluated against the principles of ISO 10723 and as part of this process it will be confirmed if an ISO Performance Evaluation is required and whether the Calibration/Test Gas Specifications are still valid with Telemetry 'End to End' Testing being completed.

If new customer equipment were to be installed as part of the modification, NGG would then want to:

- Review the Functional Design Specification (FDS).
- Review any relevant Factory Acceptance Tests (FAT) procedures and witness FAT.
- Review any relevant Site Acceptance Tests (SAT) procedures and witness SAT including ISO 10723 Performance Evaluations (if applicable).
- Review FAT/SAT/ISO 10723 Reports.

Section 7: Contractual Changes

Upon completion of the required approvals, NGG will draft the gas quality changes to the contractual agreement and these will be reviewed with the customer. The revised contractual agreement can then be executed between NGG and the customer.

Section 8: Costs and Reconciliation

This section outlines costs and reconciliation activities associated with a minor modification.

As mentioned in Section 3, Connection Application Fees may be reconciled in accordance with Section V, paragraph 13.2 of the Uniform Network Code once the modification agreement has been signed or the Offer has lapsed.

In respect to costs outlined in the modification agreement and the scope of works a cost estimate is provided to reflect the best available information at the time. Any payments required by the customer will be outlined as part of the scope of works. On completion of the project a reconciliation of the amount(s) invoiced to actual costs will be undertaken, with further details outlined in the minor modification agreement.

Cost recovery arrangements for gas quality limit changes was discussed at the Transmission Workgroup on 1st October 2020, and the links below provide more detailed information about which costs are recoverable from the customer as part of this process.

Link: [Cost Recovery Arrangements for Gas Quality Limit Changes](#)

Link: [The Statement for Gas Transmission Connection Charging](#)

Section 9: Summary

In conclusion, the aim of this document is to outline additional support and guidance for those parties that wish to change a gas quality parameter in a connection agreement with NGG. The Gas Market Plan research project noted that here is the potential for an increase in gas quality regulatory change over the next decade, which could subsequently lead to an increase in requests to change connection agreements from parties who haven't been through the process before.

Throughout the above guidance we have mentioned the importance of further discussions that will be required between NGG and customers to optimise timescales and to seek to ensure that resources are available to meet expectations.

Annex A: Diagram to aid Guidance on Delivery Facility Operators Changing Existing Entry Gas Quality



Glossary of Acronyms

A2O	Application to Offer
DFO	Delivery Facility Operator
FAT	Factory Acceptance Test
IA	Interconnector Agreement
NTS	National Transmission System
NEA	Network Entry Agreement
SAT	Site Acceptance Test
SCA	Storage Connection Agreement
UNC	Uniform Network Code

Associated documents

You may find these related links useful

[Customer Portal User Guide](#)

[National Grid Transmission System: Gas Connection Application Guide](#)

[The Statement for Gas Transmission Connection Charging](#)

The Uniform Network Code, Transportation Principal Document

<http://www.gasgovernance.co.uk/TPD>

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