

## Stage 01: Proposal

# 0363:

## Commercial Arrangements for NTS Commingling Facilities

What stage is this document in the process?

01

Proposal

02

Workgroup Report

03

Draft Modification Report

04

Final Modification Report

Introduces commercial arrangements into UNC to facilitate the connection of NTS entry projects which require gas offtake from the NTS to meet their gas quality delivery obligations.



The Proposer recommends that this Proposal is sent for development in a UNC Workgroup



High Impact:  
New NTS entry project developers and their shippers



Medium Impact:  
None identified



Low Impact:  
National Grid NTS

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## About this document:

This document is a proposal, which will be presented by the Proposer to the Panel on 17th February 2011. The Panel will consider the Proposer's recommendation, and agree whether this modification should proceed to consultation or be referred to a Workgroup for assessment.



3 **Any questions?**

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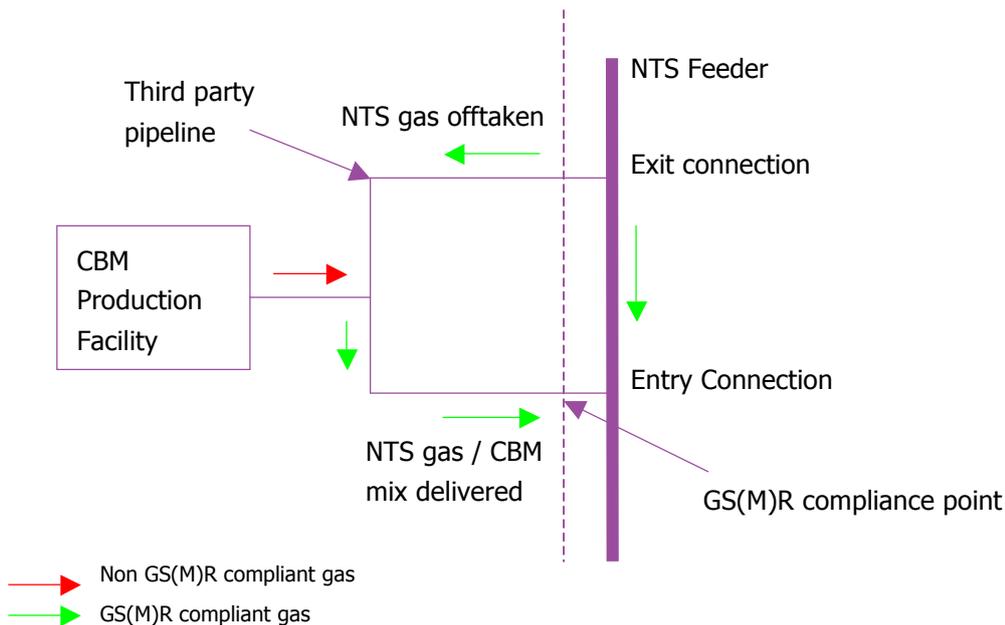
# 1 Summary

## Is this a Self Governance Modification?

In the Proposer's view, Self Governance does not apply because this Proposal would, if implemented, create commercial arrangements for Shipper Users that offtake and deliver gas at a new and unique type of facility that are different from the offtake and delivery arrangements at other exit and entry points.

## Why Change?

National Grid NTS is considering a connection request from a coal bed methane project developer. This is an unconventional source of gas whose composition is not expected to conform to UK gas quality standards as enshrined in the Gas Safety (Management) Regulations 1996 (GS(M)R). The developer has advised that an upstream processing solution is not economically viable and therefore wishes to utilise passing NTS gas for commingling with the coal bed methane gas to produce a GS(M)R compliant mix capable of re-entering the NTS. Therefore, National Grid NTS is proposing to construct two connections – one to facilitate the offtake of gas from the NTS into the coal bed methane production facility and the other to facilitate redelivery of that gas together with the new gas added and mixed by the facility operator, as shown in the diagram below:



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National Grid NTS believes that this will offer a new and unique type of connection to the NTS that warrants different transportation charging arrangements than those which apply to other NTS entry and NTS exit connections.

## Solution

It is proposed to introduce commercial arrangements into the UNC based on the net end of day quantity in order to facilitate the connection of this type of facility onto the NTS.

For the purposes of this Proposal:

- 'net end of day quantity' means the difference (in kWh) between:
  - the quantity of NTS gas offtaken on a gas day at this type of facility; and
  - the quantity of the above NTS gas redelivered to the NTS plus the quantity of new production gas delivered to the NTS on that same gas day at an NTS Commingling Facility; and
- 'netting off process' refers to the process by which the net end of day quantity will be determined.

In particular, this Proposal seeks to:

- Introduce a new classification of facility into UNC, an 'NTS Commingling Facility' (NTS CF);
- Apply NTS commodity charges for this type of facility to the net end of day quantity relevant to each NTS CF;
- Incentivise Shipper Users to book NTS Entry Capacity and NTS Exit Capacity in respect of each NTS CF to cover their net end of day quantity in order to avoid capacity overrun charges;
- Introduce a process which facilitates the netting off of each relevant Shipper User's daily entry and exit gas flows in respect of each NTS CF from which a net end of day quantity would be derived and allocated to such Shipper User(s);
- Establish allocation agency arrangements for each NTS CF; and
- Establish the procedures and agreements by which Shipper Users may be registered at NTS CFs.

Business rules in respect of the above are currently being drafted by National Grid NTS. It is proposed that these are discussed with the industry during the development phase of this Proposal.

## Impacts & Costs

- Developers of NTS entry projects and associated Shipper Users will have an alternative method of connection to the NTS available to them. It is considered that this model may be particularly suited to smaller scale connections of unconventional gas sources, where an upstream processing solution is not economically or locationally viable.
- In order to implement this Proposal, National Grid NTS proposes to put in place a daily netting off process for this type of connection. While this Proposal is being developed, National Grid NTS intends to work with xoserve to define and test the proposed netting off process and its links into existing UK Link functionality in order to satisfy itself and Users that this Proposal can be

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facilitated without any changes to xoserve systems or procedures. (referred to in this Proposal as the 'proof of concept exercise').

- The proposed netting off process is only expected to be viable for a small number of NTS CFs (estimated maximum of 4 sites) and as such it is proposed to use existing functionality. However, in the event that NTS CFs proliferate, a fully automated IS solution involving UK Link system changes may need to be developed. User Pays charges would need to be agreed prior to commencement of any development work to facilitate such a proliferation.

## Implementation

An implementation date of 1<sup>st</sup> October 2012 is proposed.

## The Case for Change

This Proposal provides a model that could be utilised by NTS entry projects, particularly to facilitate other new sources of unconventional indigenous gas which may otherwise be uneconomic to produce, benefiting security of supply.

## Recommendations

The Proposer invites the Panel to:

- DETERMINE that Modification Proposal 0363 progresses to development in a UNC Workgroup; and
- CONSIDER the Proposer's view that this Proposal should not be classed as a self-governance Proposal.

## 2 Why Change?

National Grid NTS has received a connection request from a coal bed methane project developer. This is an unconventional source of gas which we have been informed will not meet the UK gas quality standards enshrined in the Gas Safety (Management) Regulations 1996 (GS(M)R).

The developer has requested, and National Grid NTS has agreed, in principle, to facilitate the project by constructing two NTS connections in close proximity – one for NTS exit and the other for NTS entry. This would facilitate the offtake of GS(M)R compliant gas from the NTS through the exit connection to the coal bed methane facility where it would be commingled by the facility operator with the non-compliant coal bed methane gas. Where the resulting blended gas met GS(M)R compliance, this gas could then enter the NTS via another pipeline linking the coal bed facility to the entry connection. Where this occurs it would be fortuitous, i.e. National Grid NTS would not be obliged to ensure that the gas made available for offtake is of a suitable quality or quantity to enable commingling with the CBM gas to produce a mixture that is GS(M)R compliant. If the blended gas fails to meet GS(M)R compliance then National Grid NTS would curtail the entry of that gas into the NTS via a transportation flow advice (TFA) in the same way as it would do in the case of a gas quality breach at any other System Entry Point.

Under the proposed connection arrangement, it is envisaged that virtually all the gas offtaken from the NTS would be redelivered within day and that the facility would, in effect, offtake and deliver gas simultaneously. National Grid NTS believes that this will constitute a new and distinct type of connection on the system and that it warrants different transportation charging arrangements than those which apply to other NTS exit and NTS entry connections.

Whilst only one project has to date requested a connection arrangement of this kind, it is possible that this model may be suitable to be adopted by other connections, particularly small scale, unconventional projects, where an upstream processing solution would not be economically or locationally viable.

## 3 Solution

It is proposed to introduce commercial arrangements which facilitate the connection of this type of facility onto the NTS and a process which facilitates the netting off of each relevant Shipper User's daily entry and exit gas flows at this type of facility from which a net energy allocation would be derived.

Given that virtually all the NTS gas offtaken would be redelivered on the same gas day in essentially the same location, in order to avoid 'double charging', National Grid NTS believes that it would be most cost-reflective to define the chargeable quantity by netting off the end of day entry and exit quantities. Where the end of day entry quantity exceeds the end of day exit quantity, (a 'net entry' flow), the relevant NTS entry commodity charges would be applied to the difference between the end of day entry and exit quantities. Where the end of day exit quantity exceeds the end of day entry quantity, (a 'net exit' flow), the relevant NTS exit commodity charge would be applied to the difference between the end of day entry and exit quantities. Given that the purpose of this type of facility is to deliver gas into the NTS, it is expected that the former would normally prevail.

In essence, it is proposed to implement the following:

- Classify and define this new type of facility in UNC as an 'NTS Commingling Facility';
- Apply NTS commodity charges to the net end of day quantity for each such facility, as described above;
- Incentivise Shipper Users to book sufficient NTS Entry Capacity and NTS Exit Capacity to cover their net end of day quantity in respect of each such facility in order to avoid capacity overrun charges (this is to avoid 'double-charging' as the NTS gas offtaken and redelivered within day would already be 'entry capacity paid');
- Introduce a process which facilitates the netting off of each relevant Shipper User's daily entry and exit gas flows in respect of each such facility from which a net energy allocation would be derived;
- Introduce a requirement for a relevant Shipper User to enter into an ancillary agreement in respect of each such facility in order to facilitate agency arrangements for the allocation of gas;
- Establish allocation agency arrangements for each such facility; and
- Incentivise Shipper User gas flow nominations in respect of each such facility to be consistent with their net end of day quantity in order to avoid scheduling charges (existing input and output scheduling tolerances in UNC will apply).

## 4 Relevant Objectives

The Proposer believes that implementation will better facilitate the achievement of **Relevant Objective (d) below.**

Proposer's view of the benefits against the Code Relevant Objectives	
Description of Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None
c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	See below
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

The Proposer believes that this Proposal will better facilitate the securing of effective competition between shippers by enabling additional supplies of gas to be delivered to the market that may otherwise be uneconomic to produce. These additional sources will compete with existing supplies and will thus potentially displace other higher cost supplies to the benefit of UK gas consumers.

## 5 Impacts and Costs

Developers of NTS entry projects and their shippers will have an alternative method of connection available to them and a process to facilitate the netting off of physical daily gas flows to derive net energy allocations. It is considered that this model may be particularly suited to small scale connections of unconventional gas sources, where an upstream processing solution would not be economically or locationally viable.

In order to implement the Proposal, National Grid NTS intends to put in place a daily netting off process using existing systems functionality. This will involve adopting a new process involving a degree of manual intervention to determine the net end of day quantity from the total measured quantities of gas offtaken from, and input to, the NTS. Where a single Shipper User is registered at an NTS Commingling Facility, that Shipper User's gas allocation for the day would be equal to the net end of day quantity. Where there is more than one Shipper User registered at an NTS Commingling Facility, an allocation agent would be required who would be responsible for allocating the net end of day quantity among the relevant Shipper Users. National Grid NTS intends to work with xoserve to conduct a proof of concept exercise to define and test the above process before this Proposal is issued for consultation.

National Grid NTS believes that the proposed netting off process using existing systems functionality would facilitate the coal bed methane project and is likely to represent the most economic and efficient implementation option in the short term. The incremental opex costs associated with this process for National Grid NTS are expected to be minimal, therefore National Grid NTS does not propose to seek recovery of these costs. However, as stated above, it is expected that this process will involve a degree of manual intervention and therefore may only be viable for a small number of NTS Commingling Facilities (estimated maximum of 4 sites). Therefore, in the event that NTS Commingling Facilities proliferate, a fully automated IS solution may need to be developed on a User Pays basis and User Pays charges agreed prior to the commencement of system development works.

### Indicative industry costs – User Pays

National Grid NTS does not currently envisage there to be any User Pays costs to result from implementing this Proposal.

Identification of Users, proposed split of the recovery between Gas Transporters and Users for User Pays costs and justification

Not applicable.

Proposed charge(s) for application of Users Pays charges to Shippers

Not applicable.

Proposed charge for inclusion in ACS – to be completed upon receipt of cost estimate from xoserve

Not applicable.

## Impacts

### Impact on Transporters' Systems and Process

Transporters' System/Process	Potential impact
UK Link	<ul style="list-style-type: none"><li>National Grid NTS does not currently envisage any UK Link impacts associated with this Proposal. However, in the event that the proof of concept exercise referred to above determines that the proposed netting off process is not a viable implementation solution or if the number of NTS Commingling Facilities were to proliferate, it may be necessary to introduce new functionality into UK link systems.</li></ul>
Operational Processes	<ul style="list-style-type: none"><li>National Grid NTS intends to work with xoserve to define and test the proposed netting off process.</li></ul>

User Pays implications	<ul style="list-style-type: none"> <li>National Grid NTS does not currently envisage there to be any User Pays implications associated with this Proposal. However, as stated above, should the proof of concept exercise determine that the proposed netting off process is not a viable implementation solution or if the number of NTS Commingling Facilities were to proliferate, it may be appropriate to commence an IS change programme, funded on a User Pays basis.</li> </ul>
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Impact on Users	
Area of Users' business	Potential impact
Administrative and operational	<ul style="list-style-type: none"> <li>None</li> </ul>
Development, capital and operating costs	<ul style="list-style-type: none"> <li>None are currently envisaged.</li> </ul>
Contractual risks	<ul style="list-style-type: none"> <li>There are not envisaged to be any consequences on the level of contractual risk to Users generally, however, any Shipper User utilising this new type of facility would be exposed to the risk of being prevented from delivering gas to the NTS where a GS(M)R compliant mix could not be achieved by the commingling activity.</li> </ul>
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"> <li>None.</li> </ul>

Impact on Transporters	
Area of Transporters' business	Potential impact
System operation	<ul style="list-style-type: none"> <li>Due to the expected short time of flight from gas offtake to gas input, National Grid NTS may need to monitor the quality of the gas entering the NTS from this type of facility more closely but otherwise would manage this in the same way as any other NTS entry connection.</li> </ul>

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Impact on Transporters	
Development, capital and operating costs	<ul style="list-style-type: none"> <li>• None are currently envisaged.</li> </ul>
Recovery of costs	<ul style="list-style-type: none"> <li>• No cost recovery mechanism is currently envisaged to be required.</li> </ul>
Price regulation	<ul style="list-style-type: none"> <li>• None.</li> </ul>
Contractual risks	<ul style="list-style-type: none"> <li>• The level of contractual risk for the Transporter will be unchanged due to the 'fortuitous' nature of the commingling activity that will be conducted on the facility operator's system.</li> </ul>
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"> <li>• None.</li> </ul>
Standards of service	<ul style="list-style-type: none"> <li>• None.</li> </ul>

Impact on Code Administration	
Area of Code Administration	Potential impact
Modification Rules	<ul style="list-style-type: none"> <li>• None</li> </ul>
UNC Committees	<ul style="list-style-type: none"> <li>• None</li> </ul>
General administration	<ul style="list-style-type: none"> <li>• None</li> </ul>

Impact on Code	
Code section	Potential impact
TPD section E	<p>Amend the requirement for aggregate shipper allocations to equal physical flows at entry and exit to one where they equal the net end of day quantity at this type of facility.</p> <p>Amend the contingency entry and exit allocation arrangements in respect of this new type of facility.</p>

Impact on Code	
TPD section I	Include this type of facility within the definition of a "Connected Delivery Facility". Amend the definition of "Delivery Proportion" for this type of facility.
TPD section J	Include this type of facility within the definition of a "Connected Offtake System". Amend the definition of "Offtake Proportion" for this type of facility.
	It will also be necessary to describe the site classification and definition within UNC.

Impact on UNC Related Documents and Other Referenced Documents	
Related Document	Potential impact
Network Entry Agreement (TPD I1.3)	A combined Network Entry Agreement and Network Exit Agreement is envisaged for this type of facility.
Network Exit Agreement (Including Connected System Exit Points) (TPD J1.5.4)	An ancillary agreement is envisaged to register Shipper Users at each NTS Commingling Facility and to facilitate common agency arrangements between Shipper Users at each such facility via accession to a designated agency agreement pursuant to TPD J6.5.2.
Storage Connection Agreement (TPD R1.3.1)	None.
UK Link Manual (TPD U1.4)	None.
Network Code Operations Reporting Manual (TPD V12)	None.
Network Code Validation Rules (TPD V12)	None.
ECQ Methodology (TPD V12)	None.
Measurement Error Notification Guidelines (TPD V12)	None.

Impact on UNC Related Documents and Other Referenced Documents	
Energy Balancing Credit Rules (TPD X2.1)	None.
Uniform Network Code Standards of Service (Various)	None.

Impact on Core Industry Documents and other documents	
Document	Potential impact
Safety Case or other document under Gas Safety (Management) Regulations	None.
Gas Transporter Licence	Entry and exit points for this type of facility will need to be included in National Grid NTS' Licence.

Other Impacts	
Item impacted	Potential impact
Security of Supply	Provided that NTS gas is available at the right quality and quantity to facilitate commingling to GS(M)R specification, security of supply will be enhanced due to the admission of additional indigenous volumes into the NTS. However, if the mixing stream was not available, neither would new production from this type of facility which would be to the detriment of security of supply.
Operation of the Total System	As 'System Operation' above.
Industry fragmentation	None.
Terminal operators, consumers, connected system operators, suppliers, producers and other non code parties	This Proposal is designed specifically to facilitate the input of coal bed methane to the NTS, however, the transportation charging arrangement proposed could apply to Shipper Users registered at other System Entry Points if those facilities qualify under the proposed definition of a "NTS Commingling Facility". (such definition to be included in the business rules that will accompany this Proposal).

## 6 Implementation

An indicative schedule is as follows:

17th February 2011 – Present Proposal to Modification Panel

March & April 2011 – development of the Proposal and business rules in a UNC Workgroup

19th May 2011 – Workgroup Report to Modification Panel with a recommendation to issue the Proposal for consultation

10<sup>th</sup> June 2011 – Close out of representations

21<sup>st</sup> July 2011 – Final Modification Report to Modification Panel

19th August 2011 – Ofgem decision

1<sup>st</sup> October 2012 – Modification implemented

## 7 The Case for Change

In addition to that identified the above, the Proposer has identified the following:

### Advantages

- This Proposal provides a model that could be utilised by NTS entry projects, particularly to facilitate other new sources of unconventional indigenous gas which may otherwise be uneconomic to produce, benefiting security of supply.
- To the extent that this Proposal facilitates coal bed methane projects, there may be a marginal environmental benefit as the CO<sub>2</sub> emissions from burning this gas are slightly lower than that associated with natural gas.

### Disadvantages

- The downstream calorific value of gas in the pipeline to which an NTS Commingling Facility connects will marginally reduce. However, this will not affect the energy allocations of Shipper Users that are not associated with such a facility and the effect of the commingling arrangement would be no different to a rich source of gas and a lean source of gas being delivered at any other entry point.

## 8 Recommendation

The Proposer invites the Panel to:

- DETERMINE that Modification Proposal 0363 progresses to development in a UNC Workgroup; and
- CONSIDER the Proposer's view that this Proposal should not be classed as a self-governance Proposal.