



# **Distribution Constraint Management Principles Statement**

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# CONSTRAINT MANAGEMENT PRINCIPLES STATEMENT

## Modification History

Modification Reference Number	Date of Implementation	Notes
1	1 <sup>st</sup> April 2009	Minor amendments to the text
2	1 <sup>st</sup> April 2010	Minor amendments to the text and format
3	1 <sup>ST</sup> April 2011	Minor amendments to the text
4	31 <sup>st</sup> October 2013	Insertion of SIU Constraint Management.

# CONSTRAINT MANAGEMENT PRINCIPLES STATEMENT

## Document Revision History

<b>Version/ Revision Number</b>	<b>Date of Issue</b>	<b>Notes</b>
V1.0	September 2008	First Version
V2.0	March 2009	Second Version
V3.0	March 2010	Third version
V4.0	March 2011	Fourth version
V5.0	October 2013	Fifth version

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## **PART A: INTRODUCTION**

### **1. Purpose of the document**

This document sets out the Constraint Management Principles Statement ("the Statement") which Scotland Gas Networks (SGN) is required to establish in accordance with Standard Special Condition D5: "Licensee's procurement and use of constraint management services" of its Gas Transporters Licence ("the Licence") ("the Standard Special Condition") and granted pursuant to section 7 of the Gas Act 1986 (as amended) ("the Act"). The purpose of the Statement is to describe the basis on which SGN will employ constraint management services for its Distribution system. The Licence places an obligation on the licensee to operate the system in an efficient, economic and co-ordinated manner.

The document covers SGN's distribution system and references to pipeline and network should be construed accordingly. SGN's distribution system covers the following Local Distribution Zones, as defined in Special Condition E1 of its licence:

- Scotland LDZ
- SIU LDZs (Wick, Thurso, Oban, Campbeltown and Stranraer).

### **2. Change process**

The Statement has been developed by SGN and the form of the Statement has been approved by the Authority. It may only be modified in accordance with the processes set out in the Standard Special Condition. SGN will monitor the operation and application of the Statement, where appropriate, to consider modifications to the Statement.

The Statement makes reference to a number of provisions contained in the Uniform Network Code. In the event that any of the relevant provisions in the Uniform Network Code are modified it may become necessary for SGN to seek an amendment to the Statement in order that it remains consistent with the Uniform Network Code. Prior to any such amendment the Uniform Network Code shall take precedence over the Statement.

For the avoidance of doubt, this Statement does not form part of the Uniform Network Code.

## **PART B: GENERAL PRINCIPLES AND CRITERIA FOR CONSTRAINT MANAGEMENT ACTIONS**

### **1. Licence Duties**

In establishing the Statement the Licence requires SGN to set out the principles and criteria by which it will determine, at different times and in different circumstances, which constraint management services it will use to assist it in the operation of the distribution pipe-line system to which the licence relates, and for what purpose, and when it would resort to measures not involving the use of constraint management services in the operation of the distribution pipe-line system. Furthermore in establishing the Statement SGN must do so in a manner consistent with its statutory obligations to develop and maintain an efficient and economic pipeline system for the conveyance of gas and avoid undue preference or undue discrimination in the connection of premises to the system or the conveyance of gas through the system.

SGN's other principal regulatory obligation when carrying out the constraint management actions is to take all reasonable steps to do so in accordance with the Statement.

### **2. Criteria**

The Statement cannot set out the particular constraint management measures to be employed by SGN in every possible operational situation.

The criteria applied in respect of deployment of constraint management services will take account of the DN Incentives; the obligation to be economic, efficient and co-ordinated; and risk management considerations.

The Standard Special Condition recognises that in certain circumstances it may be necessary to depart from the Statement but that such departures need to be considered before deciding whether the Statement needs amendment. The reasons for departing from the detail of the Statement may include:

- where circumstances exist where not to do so would prejudice the interests of safety;
- where operational information indicates insufficient time is available to employ particular measures in accordance with the detailed processes defined herein if required effects are to be achieved;
- where the Statement has been shown to be inappropriate; or
- where SGN considers it to be more economic, efficient or co-ordinated to do so.

### 3. Constraint Management Tools

The Constraint Management tools used by SGN are designed to ensure the economic, efficient and coordinated delivery of gas to networks and supply points connected to the Distribution system in accordance with the Gas Safety Management Regulations under demand conditions as stipulated by its Licence within the commercial framework prescribed by Uniform Network Code. It does this through the management of system capacity and provision of linepack on the Distribution system facilitated by:

- provision of pipe-line capacity or use of storage within the Distribution system;
- procurement of flow capability products e.g. NTS Offtake (Flat) Capacity and NTS Offtake (Flexibility) Capacity from the National Transmission System;
- submission of revised offtake profile notices to NTS to amend flows into the Distribution system;
- provision of diurnal storage;
- obtaining an assured NTS inlet pressure at each offtake from National Grid;
- obtaining alternative supply arrangements including those associated with the alternate supply arrangements for the SIUs; and
- nomination of Transporter Nominated Interruptible (TNI) sites for up to 120 days (not valid after 1<sup>st</sup> October 2011).

SGN's use of such tools will be influenced by the financial implications of its incentive arrangements, the necessity to achieve timely gas flow rate changes on the system and its broader obligations.

SGN shall have discretion in respect of which system management services envisaged within the Distribution Procurement Guidelines it may deploy.

SGN may also utilise interruption in accordance with the terms of the Uniform Network Code for the purposes of constraint management. The Uniform Network Code allows for interruption to be used for:

- constraint management purposes, i.e. to address a Transportation Constraint ;
- emergencies; or
- maintenance/testing.

### **3. Timing of Actions**

SGN will determine whether measures will be employed close to the time of gas flow taking account of programmed system inputs, forecast outputs and/or projected key pressures for each Gas Day and as a result of information received for the Gas Day from all sources including LOP's (with connected facility operators) and User Nominations. By taking account of the information received from these sources SGN will make operational decisions and apply the decision-making processes set out in this document.

SGN may also take actions well ahead of the Gas Day. This may be to reduce the size or cost of actions, or to improve the estimated risk profile against the DN Incentive Schemes given the expectation of possible prompt constraint management action requirement being necessary close to, or during, the Gas Day. SGN may use any other information, or its own assessments, to assess whether such actions would be appropriate.

### **4. Information Provision**

Where SGN's deployment of constraint management services has a primary impact upon Users' exposures, for instance on Users charges, SGN will, as soon as reasonably practicable after such deployment, indicate to Users the impact of such deployment on charges.

In respect of constraint management services where such deployment only has a secondary effect on Users SGN will have discretion as to what information about the deployment of system management services it publishes and when.

Sufficient information to establish the basis for any charges will be either released to support invoiced amounts or made available to an industry or Ofgem appointed auditor to confirm the validity of the charges.

### **5. Emergency Procedures**

Under the circumstances defined in National Grid's Emergency Procedure documentation Network Gas Supply Emergency Procedures (T/PM/E/1) and SGN Local Gas Supply Emergency Procedure (T/PM/E/2) under which Emergency Procedures would be invoked, the processes and procedures in that document shall supersede all considerations arising from this Statement.



## **PART C: CONSTRAINT MANAGEMENT**

### **1. Constraint Management Services**

#### **Services include:**

##### **Capacity Tools**

SGN may use NTS capacity services (NTS Offtake (Flat) Capacity and NTS Offtake (Flexibility) Capacity) for the purposes of constraint management.

##### **Storage Service Tools**

SGN may procure any storage service from storage facility owners or operators, or any other market, mechanism or contract relating to physical or commercially based storage products for the purposes of constraint management where such storage facilities are connected to the pipeline system owned by the DN.

##### **Transportation Service Tools**

SGN may procure transportation services from a relevant facility owner or operator, or any other market, mechanism or contract relating to physical or commercial transportation products for the purposes of constraint management where such transportation services can be connected to the pipeline system owned by the DN.

##### **Demand and Supply Management Services**

SGN has entered into contracts to incentivise Users or end consumers to affect desired gas flow offtake or delivery into the system in accordance with the terms of the Uniform Network Code for 2011 onwards.

In the summer of 2008 the first commercial tender was issued for voluntary demand management to existing consumers with an AQ > 5.86GWH (200,000 therms p.a.) in accordance with UNC requirements. These contracted services will be used to support the balancing and management of the system from 1<sup>st</sup> October 2011. Further Annual tenders and Ad Hoc tenders have been issued. Annual tenders will continue to be issued in June of each year if appropriate. Additional tenders will be sought via the Ad Hoc tender process where required.

##### **Other Commercial and Contractual Tools**

SGN may develop further services or enter into contracts that will enable it to better manage both its operational and commercial risks.

##### **SGN Diurnal Storage Resources**

SGN will provide diurnal storage from its own dedicated resources and storage sites as required to meet the gas demands of customers, including storage available from Linepack, low pressure and high pressure storage vessels, and other means at its disposal. All such storage will be used and where necessary, replenished in the same gas day.

## SIU LNG Supplies

SGN may enter into contractual arrangements with a UK gas shipper to arrange for Liquefied Natural Gas (LNG) to be made available to SGN for the purposes of meeting gas demands on SGN's Scottish Independent Undertakings (SIUs) located at Wick, Thurso, Campbeltown and Oban. This arrangement would permit SGN to utilise the services of a single UK gas shipper to ensure the required volume of LNG is made available at the required time. These arrangements would be enacted when alternate existing arrangements either failed to provide the necessary volume of LNG or were not available at all.

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## ***PART D: CONSTRAINT MANAGEMENT TOOL DEPLOYMENT AHEAD OF THE DAY***

Rather than wait for imminent gas flows for constraint management actions it may be appropriate for SGN to deploy tools ahead of the gas day. This may be assessed on risk management, efficiency or cost grounds, amongst other considerations (as described elsewhere).

For example, it may be that gas flows at particular points are expected to exceed the capability of the system and so, rather than wait until close to gas flow to achieve the aims defined in Part E, it may be appropriate to consider deployment of system management tool(s) at an earlier stage.

SGN will seek to develop and implement such tools wherever it appears viable to do so, taking account of its obligations to maintain a safe and secure system and its risk/reward profile defined in the context of the DN incentive schemes.

The deployment of such tools will be at the discretion of SGN and will be guided by consideration of the incentive schemes subject to SGN's other obligations.

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## ***PART E: DAILY CONSTRAINT MANAGEMENT CONSIDERATIONS***

The following represents the aims of constraint management processes close to the time of gas flow:

- To maintain linepack levels and other key operational parameters within predetermined operating ranges at all times within the Gas Day whilst ensuring safe operation.
- To address exit constraints where flows are forecast to exceed assessed system capability.
- To implement interruption and give notice of potential interruption conditions.
- To identify potential operational or commercial requirements to use storage services.

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## **PART F: GLOSSARY**

<b>Capacity Constraint</b>	A constraint affecting part of the System which results in the gas flows in that part of the System needing to be restricted.
<b>Gas Day</b>	The period from 06:00 hours on one day to 05:59 hours on the following day.
<b>LDZ</b>	Local Distribution Zone
<b>Linepack</b>	The volume of gas within the DN pipelines calculated to facilitate delivery of gas to networks and supply points connected to the distribution system in accordance with the Gas Safety (Management) Regulations 1996 under demand conditions as stipulated by its GT Licence.
<b>LNG</b>	Liquefied Natural Gas
<b>LOP's</b>	Local Operating Procedures agreed between SGN and Delivery Facility Operators
<b>MCM</b>	Million Cubic Metres
<b>NTS</b>	The National Transmission System
<b>NTS Offtake (Flat) Capacity</b>	Is capacity which a Distribution Network Operator is treated as using in causing or permitting gas to flow from the NTS at a rate which (for a given daily quantity) is even over the course of a Day.
<b>NTS Offtake (Flexibility) Capacity</b>	Is capacity which a Distribution Network Operator is treated as using or releasing from utilisation in causing or permitting gas to flow from the NTS to the extent that (for a given Daily Quantity) the rate of offtake or flow is not even over the course of a Day.
<b>Projected Closing Linepack</b>	The expected end of Gas Day linepack level.
<b>DN Incentive Scheme</b>	Incentive schemes established by Ofgem to promote certain operational and/or commercial behaviours on SGN as Distribution Network Operator.
<b>SIU</b>	Scottish Independent Undertaking.