

A Guide to obtaining a Gas *exit* connection from the National Transmission System



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Important – please read this first

1. From August 2012, all customer requests for a new connection to the NTS must be submitted through the Uniform Network Code (UNC) process. This does not require a customer e.g. a developer to become a signatory to the UNC however, it must agree to be bound by certain obligations contained within the UNC.
2. Any new NTS connection project must intend to flow **in excess of 58,614,200 kWh (2,000,000 therms) per annum** in order to be allowed to connect to the NTS.
3. Pressures in the NTS typically run up to 70 bar (1015 PSI), but can be as high as 90 bar in certain locations. Therefore, NTS connections are not suitable for ***domestic, commercial or most industrial premises***. Should you require a connection for these purposes, please contact your Distribution Network Operator.
4. It can take a long time to get a new connection designed and constructed – typically around 3 years. However it can take even longer to add additional capacity to the NTS in order to allow you to use your new connection – which might take upto 7 years – therefore it is essential that you contact us at the earliest stages of your project so that we can work with you to deliver a working connection to the timeframe you require. The contact numbers for the Gas Customer Team can be found on the web page that you downloaded this document from.

Introduction

This guide is designed for customers e.g. developers who wish to arrange for a gas exit connection from the National Transmission System (NTS) i.e. a customer connection project that intends to offtake gas directly from the NTS.

This guide seeks to provide an overview of the steps that are needed in order to get a fully functioning connection to the NTS and, explain what you need to do, and when you need to do it by, in order to make the process run as smoothly as possible.

We do not expect to be able to answer all your questions you might have but hope it will provide you with a basic understanding of the processes involved so that when we meet to discuss your project, you will feel more comfortable with some of the detail that we discuss.

We produce a document that provides information on the indicative costs of building a physical connection to the NTS. It is actually a condition of our Gas Transporters Licence from Ofgem that we produce such a statement and therefore it has the rather formal title of '*The Statement and Methodology for Gas Transmission Connection Charging*'. It is sometimes also referred to as the '*Licence Condition 4b Statement*' or the '*LC4B Statement*' as this is the part of our licence under which we are obliged to publish this statement. A link to this document can be found on the NTS Gas Connections page of our website that you downloaded this booklet from.

A basic overview

No matter whether you wish to have an Exit, Entry or Storage connection onto the NTS, the basic principles are the same:

- Step 1. You need a physical connection onto the NTS.
- Step 2. Someone needs to have obtained the commercial rights to use your connection.
- Step 3. You need to sign an Operator agreement with us. In the case of Exit, this is known as a Network Exit Agreement (NExA).

In Step 1, typically the developer of a project will approach us and will submit an application for an NTS Connection Offer to build a physical connection to the NTS. This will be undertaken in accordance with UNC Section V (subsection 13, NTS Connections) and our Licence Condition 4B obligations.

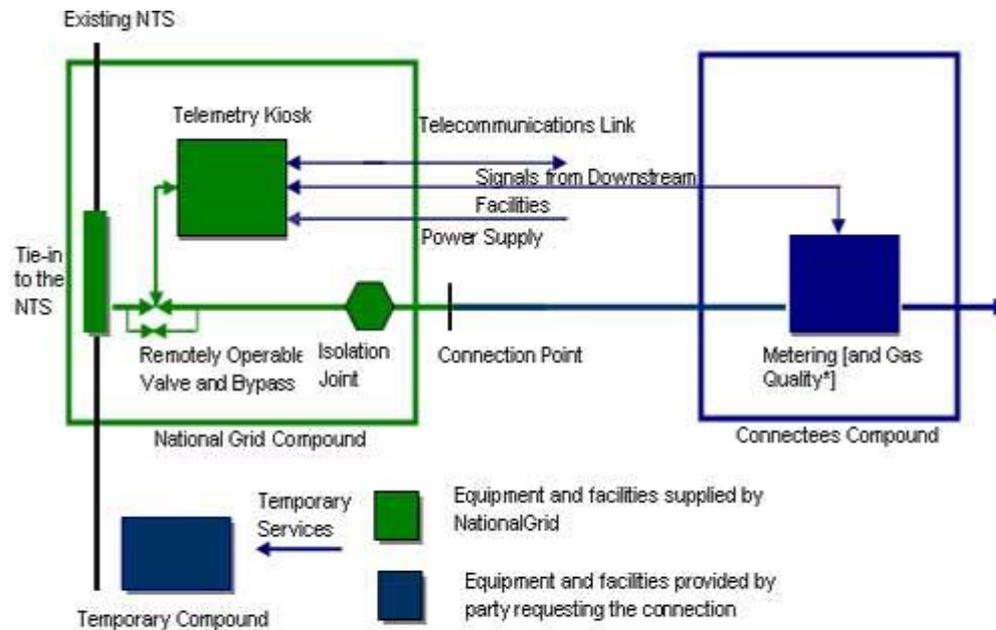
For Step 2, a User(s) will need to have obtained the appropriate commercial rights to flow gas either into or out of the NTS at the new connection point. These rights – referred to as ‘capacity’ rights – usually have a long lead time associated with them as they are essentially the trigger for us to build additional capability into the NTS. Given the amount of time it might take to obtain planning permission for any further expansion of the NTS, it could be up to 7 years between capacity being bought and it being available for use.

For Step 3, the person who will operate the new projects facility (such as a power station) will need to enter into a NExA before any gas can flow. This agreement is primarily operational in nature and deals with the communications between us and the operator that need to take place on a daily basis to ensure the safe and efficient operation of the NTS.

A bit more detail...

The physical gas connection on the NTS

A typical *exit* connection from the NTS looks like this:



Not to scale. For indicative purposes only

*if applicable

Contracting for the NTS exit connection works

The Developer must contract with us to physically build the connection to the NTS. National Grid will design, build, own and operate the actual connection equipment to the NTS but it will be funded entirely by the Developer. If you wish to start the process of signing a connection contract with us please complete the proforma on the NTS Transmission Connections page of our website that you downloaded this booklet from.

What is an NTS exit connection?

An NTS connection facility will consist of:

1. A physical tie-in / connection to the NTS
2. A remotely operable valve that is controlled by our Gas National Control Centre
3. A full bore bypass arrangement (to allow us to undertake maintenance on the remotely operable valve without interrupting flows to the site).
4. An electrical isolation joint.
5. A telemetry station
6. A connecting pipeline that ends outside of our compound onto which your site will physically connect

What does National Grid expect the Developer to do / provide at the NTS exit connection point?

National Grid will expect the Developer to:

1. Make the final physical connection to the connection point (see point 6 above).
2. Design, install, own and operate any necessary energy and gas quality measurement equipment at the connection. This equipment will need to measure the gas that passes through the connection point and must be designed and built to a standard set by us.
3. Provide live signals to our control room from this gas quality and measurement equipment.
4. Provide the land, on a freehold basis, on which the NTS connection facility will be built along with the necessary planning permission to allow us to construct the connection.
5. Provide suitable access and security (e.g. fencing) to our connection facility.
6. Provide necessary temporary facilities to allow the construction work including lay down areas and welfare facilities.
7. Provide any necessary permanent facilities to allow the connection to operate (e.g. a power supply, telephony).

What building an NTS exit connection won't get you

Contracting with us to build an NTS exit connection will not include any work beyond the immediate confines of the connection facility.

For example if, in order to allow your site to actually flow gas into or out of the NTS, we needed to lay additional pipelines within our system (we refer to this type of work as 'system reinforcement') then this is not covered by the connections work. Instead it is covered by the capacity processes (see the section on 'Commercial rights to flow gas')

Similarly, if the point you wish to have an NTS connection at a point that the NTS presently does not extend to (i.e. there isn't a nearby NTS pipeline) then again the work of extending the NTS out to your proposed connection point is considered to be 'system reinforcement' and has to be arranged for via the commercial capacity processes.

Other important things to consider

- We typically take around 3 years to build a connection. However if the connection needs to go into an existing NTS connection then this type of connection work is more complex and therefore it will probably take longer and cost more than a connection at a point on the NTS where no one else is already connected (a so-called 'green field' site).
- Remember, just because we have agreed to build you a connection it does not mean that you actually have the rights to use that connection point. You should have the commercial rights in place before you use this connection point to flow NTS gas (including commissioning) and it is these commercial rights that take the longest time to arrange and deliver.

Obtaining the commercial rights to use your NTS exit connection

Overview

Building a connection does not automatically give anyone the right to offtake from (or deliver gas to) the NTS through that connection.

Although there are several different classes of capacity available and different mechanisms by which they can be procured depending on whether you want capacity that allows you to flow gas into the (entry capacity) or out of the NTS (exit capacity) there are, in essence, just two types of capacity product offered by National Grid:

- Firm capacity.
- Interruptible capacity - referred to as 'Off peak' when discussing NTS exit capacity.

Firm capacity

Firm capacity is essentially what it says – it is a firm right to be able to use the capacity you have brought at a given connection point. In order that we can be sure that we can meet this obligation we may need to strengthen the NTS (by building additional pipelines or compression facilities). The basic principle behind the sale of firm capacity is that it provides an 'economic signal' to tell us where to invest in additional pipeline capacity (i.e. someone is prepared to pay for us to enhance the NTS to meet their requirements). Clearly it is critical that we receive this economic signal sufficiently in advance so that we can build the additional system capability in a timely manner for you.

Capacity can only be bought by Users so in order to get firm capacity rights a developer will need to either:

- obtain a shippers licence from Ofgem, become a User (UNC signatory) and then buy the capacity itself; or
- arrange for a User(s) to buy the capacity.

For firm exit capacity it is possible for a developer to secure capacity themselves via an Advanced Reservation of Capacity Agreement ("ARCA"). This agreement effectively underwrites any investments that we may need to make ahead of receiving a signal for firm exit capacity via the shipper capacity processes.

Interruptible / Off Peak Capacity

Interruptible capacity (or off-peak capacity as it is known in relation to exit capacity) is not a guaranteed capacity product. This capacity is only offered for sale on the actual day of use i.e. it cannot be purchased in advance. From the perspective of the customer, it is important to note that we can withdraw some or all of this off-peak capacity should we deem that we cannot supply it.

We do not invest i.e. build additional system capability in order to meet interruptible / off-peak capacity requirements.

The benefits of this type of capacity are that because we don't invest to deliver this product it is:

- Cheaper.
- The lead times associated with its availability are much shorter.

The downside of this type of product is:

- It is not guaranteed. The risk that the capacity will not be available on the day (or will be withdrawn within-day) is entirely at the risk of the User(s) / NTS facility.
- It can only be bought on the day of use.

Timescale considerations

It is important to note that firm capacity has a lead time associated with its availability and in some scenarios this lead time might be up to 7 years. This lead time is obviously a much longer than that associated with the construction of the actual connection point. Therefore, it is essential the customer considers its capacity requirements at the outset of any project otherwise there is a risk of an operational delay between the physical connection to the NTS being constructed and the project actually having the right to use this connection to flow NTS gas.

Further Information

Further information about capacity and the methods of its procurement can be found in industry documents that we publish.

Signing a Network Exit operator Agreement (NExA)

Before we can allow a site to flow gas we must have an agreement on how we will work with the operator on the other side of the NTS connection. This operator agreement (Network Exit Agreement ('NExA')) will cover such practical aspects as:

- The location of the physical connection (marked on a diagram)
- The plant and equipment on site, and its ownership
- Responsibilities for maintenance and control of equipment
- Gas quality specification
- Measurement arrangements (what equipment will be used to measure gas delivered)
- Local operating procedures covering such items as:
 - Notification of intended gas flows
 - Confirmation of actual gas flows
 - Site security
 - Management of flow rates, pressures and gas quality
 - Emergency arrangements
 - Maintenance arrangements

In general terms, the NExA is a simple agreement to negotiate. The main challenge is that a lot of the operational parameters that must be included within the NExA cannot be finalised until each party's site is fully designed (i.e. that the actual equipment on, and physical layout of, both parties sites are finalised). Therefore, the NExA tends only to be agreed between the customer and National Grid in the months immediately prior to the customer's site becoming operational.

Glossary

Advanced Reservation of Capacity Agreement (ARCA):

A contract between the developer and National Grid which allows a developer to reserve NTS exit Capacity without engaging a Shipper. The developer accepts liability if a Shipper does not later buy the Capacity they have reserved.

Capacity:

Capacity is the commercial right to flow a given amount of gas into or out of the NTS. This commercial product can only be purchased by Shippers. Capacity must be secured for all projects to ensure there is enough space in the network to accommodate / flow the gas required by your facility. Entry Capacity is needed to deliver gas to the NTS; exit Capacity is needed to offtake gas from the NTS.

Connection:

A point on the NTS where Connection Facilities are located that allows a third party site to physically interface with National Grid's network.

Developer:

The company responsible for managing the development and construction of the directly connected plant.

Isolation Joint:

A piece of equipment which ensures electrical segregation between National Grid and the connecting party's apparatus.

National Transmission System (NTS):

The 4000 mile high-pressure pipelines which transport natural gas across the country to feed the gas distribution networks and directly connected customers such as gas-fired power stations.

Operator:

The company that is, or will, become responsible for the day to day operation of the NTS connected facility, once it has been fully commissioned.

Shipper:

The company which contracts with National Grid for the use of the NTS to transport gas. All Shippers must be signatories of the UNC.

Storage Facility:

A facility which can take gas off the NTS and deliver it back at a later date.

System Reinforcement:

An increase in the physical capability of the NTS via the construction of new pipelines and/or compression plant.

Telemetry:

This is hardware and software systems in place to provide flow information and necessary to manage the status of the installation.

Uniform Network Code (UNC):

The set of rules within a legal framework what define the rights and responsibilities of Shippers and National Grid and forms the basis of all contracts between them.

User:

A shipper that has become a signatory to the UNC and intends to flow gas on the NTS.