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The Statement and Methodology for Gas Transmission Connection Charging

Effective from 1 April 2009

nationalgrid

Document Revision History

Version/ Revision Number	Date of Issue	Notes
1.1	October 2005	
2.Draft	April 2008	Updated for new Licence. Submitted to Authority for Approval
2.0	May 2008	Approved by Authority
2.1 [Draft]	April 2009	Deletion of sections relating to exit capacity as this topic is covered by the Exit Capacity Release Methodology Statement. Costs and examples updated and additional example included. New cost table included. Statement of treatment of charges for exit reinforcement for bidirectional sites. Generally modified for greater clarity. To be submitted to Authority for approval.
2.2	April 2009	Minor edit to update contents. Submitted to Authority for approval.
3.0	22 June 2009	Agreement to publish by Authority.

About this Document

This document describes the methodology that National Grid Gas plc ("National Grid") in its role as holder of the Gas Transporter Licence in respect of the NTS (the "Licence") employs to levy charges for connection to the National Transmission System (the "NTS") in Great Britain. This document is one of a suite of documents that describe the charges levied by National Grid and the methodologies behind them. The other documents that are available include:

- **Statement of Gas Transmission Transportation Charges**
- **The Statement of the Gas Transmission Transportation Charging Methodology**
- **Incremental Entry Capacity Release Methodology Statement**
- **Exit Capacity Release Methodology Statement**
- **Metering Charging Statement**

These are available on our Charging website at:

http://www.nationalgrid.com/uk/Gas/Charges/statements/

This statement is effective from 1 April 2009, the "Effective Date".

This document has been published by National Grid in accordance with Standard Licence Condition 4B of the Licence and is approved by the Gas and Electricity Markets Authority (the "Authority").

If you require further details about any of the information contained within this document or have comments on how this document might be improved please contact our UK Transmission Gas Access and Charging team on **01926 656022 or 01926 656317.** Alternatively you can contact us via email at

mailto:box.transmissioncapacityandcharging@uk.ngrid.com

Or by post to:

Gas Access and Charging Manager
Transmission Commercial
National Grid plc
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Specific connection enquiries should be sent to the address in Annex B.

Contents

INTRODUCTION

1. This Statement applies to charges determined from the Effective Date and remains effective until superseded by any future Statement approved by the Authority and which will be published by National Grid. It also provides information in support of National Grid's Ten Year Statement in respect of connections.

2. This Statement applies exclusively to the design and physical works associated with:
   (a) new NTS connections;
   (b) modifications to existing NTS connection apparatus;
   (c) disconnections of existing NTS connection apparatus; and
   (d) diversions of sections of the NTS.

3. Distribution Network (DN) owners (including National Grid Gas plc in its capacity as a DN owner) publish similar statements and the reader is advised to refer to the relevant statement and contact the relevant DN owner regarding works that may involve connections to, modification of, disconnection of, or diversions of sections of any relevant DN pipes.

4. This is a Statement of the principles on which, and the methods by which, National Grid will determine from the Effective Date the charges specified in Standard Condition 4B of the Licence.

5. This Statement is complementary to National Grid's Incremental Entry Capacity Release (IECR) methodology statement, which details the criteria by which National Grid will release incremental NTS entry capacity.

6. This Statement is also complementary to National Grid's NTS Exit Capacity Release (ExCR) methodology statement, which details the criteria by which National Grid will release NTS exit capacity.

7. It should be noted that in addition to a physical connection to the NTS, the following additional requirements also need to be satisfied before gas can flow through that connection as specified in the Network Code:
   (a) National Grid will require gas shippers at the connection point (or DNs in the case of Exit capacity for NTS/LDZ Offtakes) to acquire the appropriate Entry and/or Exit capacity in accordance with the Network Code and the IECR and ExCR methodology statements;
   (b) National Grid will require a customer to enter into a Supply Point Network Exit Agreement (NExA), Connected System Exit Point (CSEP) NExA, NTS/LDZ Supplemental Agreement, Network Entry Agreement (NEA), Interconnector Agreement or Storage Connection Agreement (SCA), as appropriate.

8. It should also be noted that the following Reinforcement will be triggered as a result of the release of Entry and Exit capacity and not as part of the

connection process:

(a) For Entry capacity – all necessary Reinforcement;

(b) For Exit capacity – only that Reinforcement that is needed upstream of the Connection Charging Point ("CCP").

9. This document is organised in the following sections:

(a) Section 1 describes the principles that National Grid has adopted in respect of its connection charging regime.

(b) Section 2 outlines the methodology that shall be adopted to determine National Grid connection charges.

(c) Section 3 contains indicative charges and connection charging examples.

(d) Section 4 details connection works other than the provision of new connections, such as diversion, disconnection and modification services, provided by National Grid and describes how they are charged. (This section is not a requirement of Standard Condition 4B; it has been included for the benefit of customers.)

(e) Annex A includes a number of key definitions.

(f) Annex B contains information about how to contact National Grid regarding specific connection projects.

(g) Annex C explains some additional points, related to the availability and allocation of NTS capacity. (These are not part of the Licence Condition 4B Statement.)

10. Further information relating to National Grid connection services and the IECR and ExCR methodology statements may be obtained from the National Grid web site, www.nationalgrid.com, or by writing to the address given in Annex B.

SECTION 1 - PRINCIPLES

11. National Grid aims to recover the costs that it actually incurs when it provides connection services.

12. Charges reflect the cost of labour, materials, and any other expenses required to carry out the work to the customer's requirements including applicable Lane Rental Charges[1]. Each cost element will carry an appropriate level of overhead.

13. National Grid will charge for the design and construction of new connection apparatus, diversions of pipelines and modifications of existing connection apparatus. This will include the cost of works associated with telemetry and other systems required to enable National Grid to operate the connection apparatus in accordance with its statutory, Licence and Network Code obligations.

14. National Grid will calculate charges using:

    (a) National Grid's fully absorbed direct costs associated with undertaking any works;

    (b) individually tendered rates (including labour and materials), any expenses plus overhead costs, as may be appropriate, related to the management of contractors, procurement of materials and the general costs of providing connections activities.

15. National Grid may carry out work additional to that which is required to meet the requirements of the customer to ensure that it develops the NTS in an economic and efficient manner. Where this occurs, the cost of any additional works will not be charged to the customer.

16. All charges are made subject to the appropriate standard conditions of contract (SCC's), which will be made available on request in respect of specific projects. Please note that in order to comply with its Licence obligation not to unduly discriminate between customers, National Grid is not in a position to vary its SCC's unless there are specific project-related matters that need to be taken into consideration.

17. Bespoke quotations will identify any assumptions that are used in the determination of the cost.

18. National Grid will enter into commercial agreements with customers on the basis of estimated costs, requiring advance payment in accordance with National Grid's prevailing credit policy. Where actual costs differ from estimated costs, then National Grid will charge for the additional costs incurred or refund any overpayment, as may be the case.

[1] National Grid is obliged to pass on only those costs which have been efficiently incurred

SECTION 2 - CONNECTION CHARGING METHODOLOGY

Connection – Load Size Threshold

19. Loads (or sources of gas) below 58,600,000kWh (2 million therms) per annum shall not be connected, or be permitted to connect, to the NTS. In exceptional circumstances where suitable alternative connections to a Distribution Network are not available, then National Grid will consider requests on a case by case basis.

Design Philosophy

20. National Grid will construct apparatus on a least project cost 'fit for purpose' basis taking into account the customer's requirements and its relevant Licence obligations. Where there are different fit for purpose design solutions, which meet a customer's requirements, National Grid will base the charge to the customer on the solution with the lowest overall cost of construction. However, National Grid may choose to implement a solution that has a lower whole-life cost, with the balance of the cost of construction being met by National Grid.

21. The term 'fit for purpose' refers to a design that will safely transport the requisite quantity of gas at an appropriate pressure throughout the life of the apparatus taking into account the Gas Act requirement for economic pipe-line system development.

Design Charges

22. Design charges will be identified within quotations provided by National Grid and will be based upon the estimated cost of design works, which will be calculated on the basis of the cost that National Grid expects to incur, plus overheads, in carrying out such a design. This is dependent upon the information provided by the customer, other publicly available information and information relating to the NTS.

23. National Grid will quote for, charge, and carry out design works before the construction phase is commenced and irrespective of whether the construction of connection apparatus takes place at a later date.

24. Design may be split into stages e.g. feasibility study, conceptual design study etc. with each stage being quoted, charged, completed and paid for before the commencement of a subsequent phase.

25. Where the customer requests National Grid to design a System Extension to the customer's premises, National Grid will supply the customer with a copy of the design report once a study has been completed. Should the customer not choose National Grid to construct the System Extension, then the customer may use the information in this report, under licence, in respect of the hire of an alternative provider to construct the pipeline. Should the customer choose to use an alternative provider to construct the pipeline, then the customer must inform National Grid and ask for a revised quotation for the connection.

Construction Charges

26. Construction charges will be identified in relevant quotations provided by National Grid and will be based on the best information available to National Grid, including wherever possible, utilising the costs of recent similar projects. The output of any design work will normally include a more accurate value for the estimated construction charges.

27. Construction charges include excavation, backfill and reinstatement in the public highway and excavation, backfill and routine reinstatement on private land except where requested otherwise.

28. Where they are incurred, National Grid will pass on the cost of efficiently incurred connections-related Lane Rental Charges to customers.

Remotely Operable Valve (ROV) Installations

29. All new connections will include a ROV Installation which may be situated either:

    (a) at a point on the NTS, where the customer wishes to:

        (i) construct and connect a pipeline with a view to owning and operating the pipeline (such pipeline would not be a System Extension as it would not be owned and operated by National Grid), or

        (ii) construct and connect a pipeline with the intention that it will transfer to National Grid under a Taking Ownership Agreement (in which case it would become a System Extension); or

    (b) at the termination point of a System Extension constructed by National Grid.

    The costs of the ROV Installation form a part of the connection charge irrespective of whether the connection is for Exit, Entry or Bidirectional purposes.

30. However, where a connection is requested at or adjacent to an existing National Grid site, National Grid will at its sole discretion determine the most appropriate connection point taking into account potential costs of connection, future operational costs, security of supply and operational flexibility.

31. National Grid does not provide gas flow and energy measurement equipment for transmission connections.

32. In addition to the equipment provided by National Grid, there are several technical requirements that a customer must fulfil if it is to have a connection to the NTS. These relate principally to the customer's metering and telemetry equipment and, where relevant, Gas Quality Instrumentation. As these are not within the scope of Licence Condition 4B, they are not included within this Statement. Prospective customers should contact National Grid for details using the address in Annex B.

Gas Quality Instrumentation for Entry and Bidirectional connections

33. All connections that are to be used for the entry of gas to the NTS require Gas Quality Instrumentation to be installed by the customer.

34. National Grid's requirements in respect of the quality of gas entering the NTS are contained in the Transmission Ten Year Statement, which may be obtained from the National Grid web site, www.nationalgrid.com, or by writing to the address given in Annex B.

System Extensions and Reinforcement for Entry (including the Entry element of Bidirectional) connections

35. The need for System Extensions and Reinforcement to accommodate Entry flows at the connection point will be determined when National Grid receives auction signals for incremental entry capacity in accordance with the Licence and Network Code.

36. The costs of System Extension and/or Reinforcement will not be charged to the customer within the connection charge, but will instead be taken into account in the auction price applicable in any capacity auction.

37. Where separately identifiable Reinforcement is required only to accommodate Exit flows to a Bidirectional connection, then this Reinforcement will be dealt with under the section below.

System Extensions and Reinforcements for Exit (including the Exit element of Bidirectional) connections

38. System Extensions for Exit purposes are treated as a component of connection apparatus (unless provided by the customer) and their costs form part of the connection charge as discussed in section 'Design Charges' above.

39. The need for Reinforcement to accommodate Exit flows at the connection point will be determined when National Grid receives the appropriate signals for incremental exit capacity in accordance with the Licence and Network Code.

40. National Grid apportions the cost of Reinforcement according to its location in relation to the Connection Charging Point ("CCP"). Reinforcement downstream of the CCP is charged to the customer under the terms of this Statement and will form part of the connection. Reinforcement upstream of the CCP is not directly charged but may be funded by National Grid where required to enable the provision of capacity under the terms of the ExCR methodology statement.

41. The System Extension element is the only component that can be provided by the customer.

Quotation Assumptions

42. Quotations for design and/or construction of NTS connections will include a

statement to the effect that the customer, in accepting the quotation will also be accepting that the assumptions are appropriate and understood. If it is determined later that any stated assumption is incorrect, National Grid will decide whether the customer's charge should be varied. In circumstances where the charge is increased, National Grid may cease or delay works pending the customer's agreement to pay the increased charge.

Taking Ownership of Connection Apparatus

43. Subject to the conditions detailed below, National Grid will take ownership of fit for purpose connection apparatus that is connected to the NTS and that is not intended to be operated by another system operator (e.g. a Connected System Operator that has received a Gas Act derogation).

44. Conditions relating to taking ownership:

(a) National Grid and the customer must have entered into a Taking Ownership Agreement before any works are undertaken in respect of the design or construction of any apparatus that the customer wishes National Grid to take into ownership. The Taking Ownership Agreement will allow National Grid to carry out audit work at all stages of the project from design through to construction and commissioning in order to determine whether the apparatus to be installed by the customer and adopted by National Grid is fit for purpose.

(b) The apparatus shall ***NOT***:

(i) be designed to operate at pressures below those normally found in the NTS at the connection point;

(ii) form part of a system of pipes that includes any apparatus that will become a connected system that will not also be owned by National Grid;

(iii) include gas flow, energy measurement and associated equipment; and

(iv) include apparatus that is not fit for purpose.

45. National Grid will charge for audit work carried out under a Taking Ownership Agreement. Charges will be based upon the cost of employing National Grid staff together with any costs incurred by service providers employed by National Grid and will include an appropriate level of overhead charges.

SECTION 3 – INDICATIVE CONNECTION CHARGES AND WORKED EXAMPLES

46. Indicative charges for connection works are outlined in the tables below. As stated above, the customer will be liable for the actual costs of carrying out the agreed works.

47. The actual studies to be undertaken for specific projects will be agreed with the customer.

Table 1 - Indicative Conceptual Design and Feasibility Study Charges

Conceptual design study for new connection	Approx. £30k to £50k
Feasibility study to assess impact of adding a new connection to an existing National Grid site.	Up to approx. £150k
Feasibility study for System Extension pipeline (Exit only)	Approx. £100k to £400k, depending on pipeline length and route

Table 2 - Indicative Construction Charges

Detailed design and construction of a connection at a greenfield National Grid site	Approx. £900k to £1,000k
Detailed design and construction of a connection at an existing National Grid site	Dependent on site complexity. Feasibility and conceptual design studies will give an indication of the likely cost.
Detailed design and construction of System Extension pipeline (Exit only)	Approx. £2M per km in good soil and even topography with 48 inch diameter pipeline. This value will vary according to pipeline diameter and will increase for difficult soil and/or terrain.

Connection for Exit - a Power Station

48. **Example 1** - Power station located approximately 20 km from nearest NTS pipeline across an area with good soil and even topography. National Grid to build connection apparatus at a greenfield site and the System Extension pipeline.

Indicative price details (at the time of publication)

Connection apparatus (excluding any System Extension and Reinforcement): ROV Installation

Conceptual design study	£30 - £50k
Detailed design & construction	£900k - £1,000k
Sub Total	**£930k - £1,050k**

System Extension and Reinforcement downstream of the Connection Charging Point:

Feasibility study	£100k - £400k
Detailed design & construction	£40,000k
Sub Total	**£40,100k - £40,400k**
Total Estimate	**£41,030k - £41,450k**

Notes:

1. In this example the customer would enter into a feasibility study agreement to investigate the possible options for National Grid building the System Extension pipeline.
2. Assuming the customer wishes National Grid to proceed with building the System Extension pipeline, the customer would enter into a single design and build agreement for an ROV installation and the System Extension pipeline. Within this agreement, the design elements would be charged separately and in advance of the construction works.
3. All costs shown include applicable overheads.
4. The example is for indicative purposes only and may be affected by specified requirements or complications associated with specific projects. Actual costs will be charged to the customer.
5. The charges shown in this section do not include gas flow and energy measurement equipment, as National Grid does not offer new transmission connection metering installations.
6. Charges shown in these examples do not include VAT, which may be applicable.

Connection for a System Entry Facility – Onshore Storage

49. **Example 2** – New onshore storage facility – National Grid to provide only the connection apparatus at a greenfield site.

Indicative price details (at the time of publication)

Connection apparatus: ROV Installation

Conceptual design study	£30k - £50k
Detailed design & construction	£900k - £1,000k
Total Estimate	**£930k - £1,050k**

Notes:

1. In this example the customer would enter into a design and build agreement for a ROV installation located immediately downstream of the System Extension pipeline. Within this agreement, the design elements would be charged separately and in advance of the construction works.
2. In this example the customer would provide the Gas Quality Instrumentation to National Grid's satisfaction.
3. The customer would not be asked for a capital contribution towards a System Extension pipeline between the NTS and the ROV, or Reinforcement as these would be provided subject to the rules of the IECR methodology statement.
4. All costs shown include applicable overheads.
5. This example is for indicative purposes only and may be affected by specified requirements or complications associated with specific projects. Actual costs will be charged to the customer.
6. The charges shown in this section do not include gas flow and energy measurement equipment, as National Grid does not offer new transmission connection metering installations.
7. Charges shown in these examples do not include VAT, which may be applicable.

Connection at an Existing National Grid Site

50. **Example 3** – New Entry connection at existing beach terminal

Indicative price details (at the time of publication)

Connection apparatus: To be determined during study work.

Feasibility study	£150k
Conceptual design study	£30k - £50k
Sub Total	**£180k - £200k**
Detailed design & construction	To Be Determined by feasibility and/or conceptual design studies
Sub Total	**£ TBD**
Total Estimate	**£ TBD**

Notes:

1. In this example the customer would enter into a feasibility study agreement to investigate the possibility of providing a connection at the existing terminal.
2. Depending on the findings of the feasibility study, the customer would then enter into single design and build agreement for a connection into the terminal. Within this agreement, the design elements would be charged separately and in advance of the construction works.
3. In this example the customer would provide the Gas Quality Instrumentation to National Grid's satisfaction.
4. The customer would not be asked for a capital contribution towards a System Extension pipeline for Entry purposes between the NTS and the ROV, or Reinforcement as these would be provided subject to the rules of the IECR methodology statement.
5. All costs shown include applicable overheads.
6. The example is for indicative purposes only and may be affected by specified requirements or complications associated with specific projects. Actual costs will be charged to the customer.
7. The charges shown in this section do not include gas flow and energy measurement equipment, as National Grid does not offer new transmission connection metering installations.
8. Charges shown in these examples do not include VAT, which may be applicable.

SECTION 4 – DISCONNECTION, DIVERSION AND MODIFICATION OF GAS CONNECTION APPARATUS

51. In general, National Grid will follow the same principles that it applies to connection works in respect of charges for disconnection, diversion and modification services, subject to appropriate commercial arrangements.

52. The precise nature of these works is likely to vary from project to project. Therefore, in order to determine the estimated charges for these works, it may be necessary for National Grid to undertake an assessment of the potential options under a preliminary works agreement or feasibility study agreement, which the customer will be responsible for funding. National Grid will provide an estimate of the charges for undertaking such an assessment prior to entering into an agreement.

Annex A – Definitions

1. **Bidirectional** connections: connections that combine elements of both Entry and Exit connections to allow flows of gas onto and from the NTS, e.g. storage facilities, interconnector.

2. The **Connection Charging Point** (CCP) is the closest economically feasible point on the NTS, which is deemed to have sufficient capacity to supply the new Exit load disregarding existing Exit loads. The CCP creates the financial distinction between Connection Costs that are fully chargeable to the person concerned (i.e. downstream) and upstream Reinforcement costs which may be funded by National Grid where required to enable the provision of capacity under the terms of the EXCR methodology statement.

3. **Connection Costs** are the costs of physical connection works, which always include the costs of a ROV installation and may, for Exit connections, include System Extension and/or Reinforcement downstream of the CCP.

4. A **Design Study** is the design work, which must occur before construction works can commence. Projects may require several stages of Design Works, e.g. a project may require a feasibility study, potentially in two or more stages, before it is possible to proceed to a conceptual or detailed design study.

5. **Design works** can be defined as the preparatory work required before the physical connection activity can commence.

6. A **Disconnection** occurs when existing connection apparatus is disconnected.

7. A **Distribution Network (DN)** is a geographically defined network of distribution pipes, typically comprising interconnected local transmission, intermediate pressure, medium pressure and low pressure networks, connected to and downstream of the NTS (see Special Condition C8A of the Licence for formal definition).

8. A **Diversion** is a change made to the route of an existing NTS pipeline or the relocation of other gas transportation (not normally connecting pipe associated) assets.

9. **Entry** connections: connections to delivery facilities processing gas from gas producing fields or, LNG vaporisation (i.e. importation) facilities, for the purpose of delivering gas into the NTS.

10. **Exit** connections: connections that allow gas to be offtaken from the NTS to premises (a 'Supply Point'), to Distribution Networks or to Connected System Exit Points (CSEPs). There are several types of connected system including:
    - A pipeline system operated by another gas transporter
    - Any other non-National Grid pipeline transporting gas to premises consuming more than 2,196MWh (75,000 therms) per annum.

11. **Gas Quality Instrumentation** comprises instrumentation that will be installed by the customer to monitor compliance of gas entering the NTS with legislative and

contractual specifications.

12. **Incremental exit capacity** is as defined in Paragraph 1 of Special Condition C18 of the Licence.

13. A **modification** is any change made to an existing connection, and associated equipment.

14. The **National Transmission System (NTS)** is that part of the pipeline system for the time being designated by National Grid as such and described in the National Grid Ten Year Statement.

15. **Network Code** means the network code prepared by National Grid, as from time to time modified, pursuant to the Licence. National Grid's Network Code comprises the provisions set out in the Uniform Network Code (UNC), more details of which can be obtained at the Joint Office website: www.gasgovernance.com.

16. An **NTS/LDZ Offtake** is the exit connection from the NTS to a Distribution Network as defined in the Network Code - Transportation Principle Document Section A3.4.3.

17. **Reinforcement:** National Grid must ensure that the NTS has sufficient capacity to supply new and existing demands at the applicable pressures and to transport new and existing gas supplies. NTS pressures affected by the connection of a new load (or an increase in load at an existing connection) may cause National Grid to need to reinforce the NTS, prior to the load/supply coming on stream. This reinforcement may take the form of new pipelines being laid or the installation, modification of other equipment to increase the pressure within the NTS or commercial alternatives to physical works.

18. A **Remotely Operable Valve (ROV) Installation** comprises the apparatus, constructed by National Grid, at the interface between the NTS and apparatus provided by a third party and will typically include a valve as required with remote operation actuation, full bore bypass and telemetry. ROV Installation apparatus will remain in National Grid ownership irrespective of the ownership of the up/downstream system.

19. A **System Extension** is a new connecting pipeline, constructed by National Grid, which runs from the existing NTS to a location specified by the customer. System Extensions typically terminate with a ROV installation.

Annex B – Contact information

Address for specific connection enquiries

Any enquiries relating to specific connection projects should be sent to the address given below.

Gas Customer Manager
Transmission Commercial
National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

www.nationalgrid.com

or by email to

transmission.newgasconnections.NTS@uk.ngrid.com

Complaints

In the first instance complaints should be raised with National Grid.

If it ultimately proves necessary to refer the matter to Ofgem for a determination correspondence should be addressed to:

The Chairman
The Gas and Electricity Markets Authority
Office of Gas and Electricity Markets
9 Millbank
London
SW1P 3GE

Annex C – Additional Points Relating to Capacity

Capacity booking

The provision of a connection does not confer any rights on a party to offtake or introduce gas. Gas may only be offtaken / introduced by a Registered User who is a party to the Network Code and has been licensed by the Gas and Electricity Markets Authority to do so.

Allocation of available capacity

National Grid will make capacity available in accordance with the Network Code and the IECR and ExCR methodology statement rules.