



CONNECTIONS CHARGING METHODOLOGY STATEMENT

STANDARD CONDITION 4B OF THE GAS TRANSPORTER LICENCE

STATEMENT OF PRINCIPLES AND METHODS TO BE USED TO DETERMINE CHARGES FOR GAS DISTRIBUTION CONNECTION SERVICES

This statement is effective from 11 March 2019.

This statement has been approved by the Gas and Electricity Markets Authority.



Introduction

This is a statement of the principles on which, and the methods by which, Northern Gas Networks Limited (NGN) will determine charges for providing connections to its transportation network.

NGN is obliged under condition 4B paragraph 3 of its gas transporter licence to prepare a statement approved by the Gas and Electricity Markets Authority (GEMA) setting out the methodology upon which charges will be made for connection to its transportation network. This methodology must be reviewed annually. Before any changes are made NGN must get approval from the GEMA.

This statement comprises:

- Section 1:** Which describes the principles that NGN has adopted in respect of its connection-charging regime.
- Section 2:** Which outlines the methodology that will be used to determine NGN's connection charges.
- Section 3:** Which outlines the methodology that will be applied where a connection requires reinforcement of NGN's existing network and outlines the Economic Test that is applied to such requests.
- Section 4:** Which outlines the methodology that will be applied where a connection requires extension of the network to facilitate the supply of gas to fuel poor communities.
- Section 5:** Outlines the principles and methodology that will be used to determine NGN's disconnection charges.
- Annex A:** Includes a number of key definitions.
- Annex B :** Contains relevant contact information.
- Annex C:** Explains some additional points, related to the availability and allocation of capacity.
- Annex D:** Contains examples of the application of the Economic Test.
- Annex E:** Contains list of obstacles that would cause a connection to be designated as sufficiently complex.
- Annex F:** Contains connection charging examples.

NGN is also obliged under condition 4B paragraph 9 of its gas transporter licence to prepare a separate statement which sets out NGN's standard connection charges together with examples of how non-standard charges are applied for different types of connection. This statement and further information relating to NGN connection services may be obtained from NGN's web site, www.northerngasnetworks.co.uk.

Section 1 - Principles

1.1 Charging: General

NGN will charge for connections and service alterations in accordance with the principles in the Gas Act and its Gas Transportation Licence. In general terms this means that, in accordance with section 9 and 10(5) of the Gas Act, customers will pay the cost of their service subject to any applicable allowances (including fuel poor allowances) or other provisions. In accordance with the obligation in section 9 of the Gas Act to develop an economic and efficient pipeline system, NGN has developed an Economic Test, a key principle of which is, that existing customers are not made worse off by the connection of a new customer.

NGN aims to recover those costs that it reasonably expects to incur when it provides connection services.

Charges will reflect the cost of labour, materials, and any other expenses required to carry out the work to the customer's requirements including applicable charges under New Road and Street Works Act (1991) and those related to the Traffic Management Act (2004)¹. Each cost element will carry an appropriate level of overhead.

The connection will be provided using the solution that is expected to provide the least cost fit for purpose scheme. Standard quotations and standard charges will be applied for some categories of connection as described in Section 2.

NGN may carry out work additional to that which is required to meet the requirements of the customer to ensure that it complies with the Gas Act (1986) requirement to develop its pipeline system in an economic and efficient manner. Where this occurs the cost of any additional works will not be charged to the customer.

All charges are made subject to the appropriate contract which are available on the NGN website: www.northerngasnetworks.co.uk.

1.2 Quotations

In respect of the provision of quotations for connection charges, the following definitions will apply:

Standard Quotation - A quotation for an individual one-off new service request resulting in the application of a standard price, (excluding self-quotations).

Non-Standard Quotation - Any quotation other than a Standard Quotation but excluding a self quotation, i.e. all quotations that require a bespoke price, a site visit or reinforcement.

¹ Northern Gas Networks Limited is obliged to pass on only those costs which have been efficiently incurred

Self-Quotation – Any quotation produced by a customer rather than NGN under the terms and conditions for siteworks. Normally such quotations are produced by gas shippers for end consumers.

Non-standard quotations will include a statement of any assumptions that were used in the determination of the cost. In accepting the quotation the customer will also be accepting that the assumptions are appropriate and understood. If it is later determined that any stated assumption is significantly wrong, NGN will decide whether the customer's charge should be varied. In circumstances where the charge is increased NGN may cease or delay works pending a customer's agreement to pay the increased charge.

1.3 Standard Connection Pressure

Gas will normally be made available for offtake to consumers at a pressure that is compatible with a regulated metering pressure of 21mbarg. Information on the design and operating pressures of distribution pipes can be obtained by contacting NGN. For more help and advice you can also call NGN on 0800 040 7766 or email: gasconnections@northerngas.co.uk.

1.4 Third Party Laid Pipes or Systems

In accordance with Section 10(6) of the Gas Act, and subject to the principles set out in this statement and the terms and conditions of the contract between NGN and the customer in respect of the proposed connection, where a service pipe is to be laid by a third party to premises expected to consume 2,196,000 kWh per annum or less, ownership of the pipe will vest in NGN once the connection to NGN's system has been made.

Where the connection is for a pipe laid to premises expected to consume more than 2,196,000 kWh per annum, or the connection is to a pipe in NGN's system which is not a Relevant Main, third party laid pipes do not automatically vest in NGN. However, subject to the principles set out in this statement and the relevant contractual terms and conditions, NGN may take ownership of pipes to such premises.

Any party considering laying a pipe that will either vest in NGN or is intended to come into NGN ownership should make contact with NGN prior to the planning phase of any project.

1.5 Reasonable Demands for Capacity

NGN has an obligation to develop and maintain an efficient and economical pipeline system and, subject to that, to comply with any reasonable request to connect premises, provided that it is economic to do so. However, in many instances, specific system reinforcement may be required to maintain system pressures after connecting a new supply or demand.

Details of how NGN charges for reinforcement and the basis on which contributions may be required can be found in Section 3 of this statement. Please note that dependent on scale, reinforcement projects may have significant planning, resourcing and construction lead-times and that as much notice as possible should be given. In particular, NGN will typically require between two to four years' notice of any project requiring the construction of high pressure pipelines or plant, although in certain circumstances, project lead-times may exceed this period.

1.6 Network Extensions for Non-Gas Fuel Poor Communities

From 1st April 2009, new arrangements for the extension of the network to facilitate the supply of gas to non-gas fuel poor communities came into force. Section 2.20 and section 4 of this statement outlines how connection and reinforcement charges will be calculated where an application for a new connection falls within the criteria for these arrangements.



Section 2 - Methodology

2.1 Connection Design Philosophy

NGN will design and/or construct apparatus on a least project cost fit for purpose basis taking into account the customer's requirements and NGN's statutory obligations. This means that where there are different fit for purpose design solutions, which meet a customer's requirements, NGN will select the one that is anticipated to have the lowest overall whole life cost of construction and maintenance. However the customer will only be charged for the lowest cost fit for purpose scheme; this means that any upgrading of the lowest cost fit for purpose scheme to comply with any additional requirements of NGN such as to take into account future development will not be charged to the customer requesting the connection.

'Fit for purpose' refers to a design that satisfies the required engineering standards that will safely transport the required quantity of gas at an appropriate pressure throughout the life of the apparatus taking into account the Gas Act obligation for economic pipe-line system development.

2.2 Connection Work Charging

Charges for connection works are calculated using:

- current materials costs and any special expenses required to carry out the connection plus overheads related to the management of materials and other bought in services,
- Labour or contract rates - - Note: Large projects maybe individually tendered,
- overhead costs related to the management and the general costs of providing connections activities, and
- applicable charges under New Road and Street Works Act (1991) and those related to the Traffic Management Act (2004).

Charges for connection include excavation, backfill and reinstatement in the public highway where relevant.

Charges include excavation, backfill and routine reinstatement on private land except where requested otherwise. The customer may request NGN to carry out permanent reinstatement of a specialist surface (e.g. a mosaic, coloured tarmac, non-standard tiles or flagstones), however this must be requested in advance and will result in a separate charge being made. NGN will try to avoid damaging growing plants, however damage is possible and certain plants may not be replaceable.

Pressure Reduction Apparatus is charged for as follows:

- if it forms part of the Supply Meter Installation, then it is not covered by the provisions of this statement,
- if it is located along the connecting pipework, it is charged for at cost plus overheads, (NGN will not install Pressure Reduction apparatus where this is specifically intended to convey gas to a connected system) or,

- if it is part of any Specific Reinforcement downstream of the Connection Charging Point it is charged for at cost plus overheads or,
- if it is part of any Specific Reinforcement, upstream of the Connection Charging Point, NGN funds it, subject to the Economic Test in respect of Distribution Network System apparatus.
- if it is part of an alternative to reinforcement connection, then the cost is treated in the same way as the proposed alternative to reinforcement connection pipe (refer to section 3.2)

When a premises already has one or more gas service pipes, and the owner or occupier wishes to increase their consumption of gas, it may be necessary for NGN to replace, or duplicate an existing service pipe. No charge will be made if the additional flow of gas is required from an existing supply meter point and the total consumption remains below 73,200 kWh (2,500 therms) per annum. In other circumstances NGN will charge for works as if the customer required a new connection. Duplicate service pipes are not normally permitted for domestic premises.

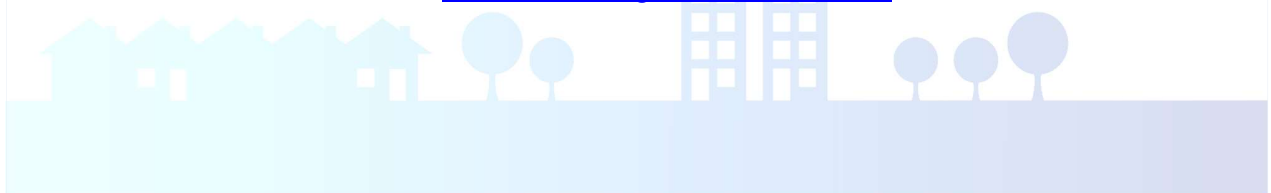
All the costs associated with increasing the gas supply pressure from an existing gas supply pipe will be charged to the person concerned. Customers using less than 732,000 kWh (25,000 therms) per annum are not permitted to receive their gas at a pressure higher than 21 mbarg nominal because of the provisions of the Gas (Calculation of Thermal Energy) Regulations.

2.3 Standard Charges

Standard charges will be used for some types of connections requests. The principles used to establish these charges are:

- the standardisation is based on an analysis of the types of works that are typically carried out in that charge category;
- the analysis is carried out on a statistically significant sample of completed jobs over the previous 12 month period;
- a weighted average component for each work type in that charge category is identified from the analysis;
- current material, labour or contractor charges and overheads are applied to each work type;
- Domestic Load Connection Allowance is applied where applicable to that charge category;
- the costs of such typical works are calculated in accordance with the principles and methods of this statement;
- the resulting standard charges do not entail undue preference or undue discrimination.

Details of the standard charges can be found in NGN's Connection Charges Statement which can be found on the NGN website: www.northerngasnetworks.co.uk.



2.4 Standard Designs

NGN will use standard designs in respect of certain connections, where:

- the cost / benefit of using standard designs is believed, by NGN, to be advantageous to customers,
- representatives of customers, who might be quoted on the basis of a standard design, have been consulted,
- the designs have been produced in accordance with the principles and methods of this statement; and,
- the resulting standard designs do not result in charges which entail undue preference or undue discrimination.

2.5 Charging for Minimum Connections (>7 barg connections)

NGN will follow the same principles that it applies to other connection works in respect of charging for Minimum Connections – please refer to Annex A for full definition.

2.6 Standard Source Pressures

NGN will use, and provide to other connection service providers, standard source pressures for the purpose of the design of certain connections. Types of connection covered by standard source pressures will have previously been subject to public consultation. Standard source pressures are published by NGN and may be subject to change from time to time. Please refer to NGNs specification document NGN/SP/NP14 – Design of System Extensions, Connections and Services to Below 7 Bar NGN Systems available on the NGN website - www.northerngasnetworks.co.uk.

Where a connection type is covered by standard source pressures then NGN will not undertake network analysis other than where NGN deems there to be exceptional circumstances and is requested to do so by the customer. In such circumstances NGN will charge for this service. The charge will be based upon the amount of time typically taken by an analyst to carry out the network analysis and will include an appropriate level of overheads.

2.7 Domestic Load Connection Allowance

The Domestic Load Connection Allowance is deducted from the connection charges for eligible domestic premises. Where applicable standard charges are shown net of this allowance.

A person may request connection to more than one premise, each benefiting from this allowance, provided that each connection is to a different eligible premises and it can be demonstrated that there is a present intent by an identifiable domestic consumer to use gas at each premises.

The Domestic Load Connection Allowance does not apply where customers receive the Fuel Poor Voucher set out in section 2.20 of this document.

2.8 Load Evaluation Service

NGN will not carry out any load evaluation services except under the circumstances detailed below, in which case such load evaluation will be a basic evaluation only:

- to determine whether a potential consumer will require an ARCA or
- to determine whether a potential customer will require a supply point network exit agreement (NEXA) or
- where it is necessary to determine which connection charge category a potential customer is in.

2.9 Connection Design Charges

Except for works of sufficiently complexity (as set out in section 2.10), NGN will only include design charges in non-standard quotations where a bespoke design is required. Design charges are therefore only levied on the party who accepts the quotation. Any design charges will be calculated on the basis of the cost that NGN incurs in carrying out such a design and is dependent upon the information provided by the customer, other publicly available information and information relating to NGN's pipe-line system.

Where the works are of sufficient complexity a chargeable design study will be carried out prior to a quotation being issued for Physical Connection Works. Charges made for the design study will be calculated on the basis of the cost that NGN expects to incur in carrying out the study. This charge will include an appropriate level of overhead. Any element of the cost of the design study which relates to sufficiently complex reinforcement may be refunded subject to the Economic Test, where applicable, when the project proceeds.

NGN will not provide its designs for construction by third parties (except in the special circumstances associated with connections of sufficient complexity).

2.10 Sufficiently Complex Jobs

A connection or load increase is designated to be of sufficient complexity when it requires significant design effort prior to NGN being able to produce a quotation

When a project is determined to be of sufficient complexity NGN will quote for, charge and carry out the design of apparatus prior to estimating the cost of constructing any equipment. NGN may decide that it is appropriate to split the design works into stages e.g. feasibility study, conceptual design study etc. with each stage being quoted, charged and completed before commencing a subsequent phase.

NGN charges for sufficiently complex jobs on the basis of anticipated cost plus applicable overheads.

In the interest of consistency NGN uses published criteria to determine whether a request is of sufficient complexity. Connection and reinforcement related apparatus might be of sufficient complexity. If a project includes both reinforcement and connection works then each part will be considered separately when determining whether the project is of sufficient complexity. The criteria are:

- Sufficiently complex connections occur when the connection is to be made to an above 7 barg system, or where there are known obstacles (see Annex E) on the proposed route of the new apparatus and the anticipated total cost of the construction works including applicable overheads is expected to exceed £10,000, or where the total construction costs including applicable overheads, based on past experience of projects of a similar nature, is expected to exceed £100,000.
- Sufficiently complex reinforcements occur when the reinforcement includes any apparatus that is designed to operate at above 7 barg or where there are known obstacles (see Annex E) on the proposed route of the reinforcement apparatus and the anticipated total cost of the construction works including applicable overheads is expected to exceed £10,000, or where the total construction costs including applicable overheads, based on past experience of projects of a similar nature, is expected to exceed £250,000.
- All entry and storage connections are treated as being of sufficient complexity.

NGN will supply the customer with a design report in respect of sufficiently complex connections. The customer may use the information in this report, under licence, in respect of the hire of an Independent Connection Provider to construct the connection apparatus with the exception of any Minimum Connection element. NGN will not provide a design report in respect of sufficiently complex reinforcement works.

2.11 System Entry and Storage Connections

In general NGN will follow the same principles that it applies to entry and storage connections as it applies to exit connections. In all cases, NGN will charge for a remotely operable valve and telemetry at the interface of the connecting pipeline and the system operated by the other party. In addition to the equipment provided by NGN, there are a variety of requirements (e.g. gas quality measurement) that a customer must fulfil if it is to connect and operate an entry or storage facility that is connected to NGN's system. Prospective entry and storage facility operators should contact NGN for details.

NGN offers a service to connect pipelines or mains laid and intended to be operated by others, which will link entry or storage facilities to NGN's systems, and will follow the same principles that it applies to other connection works in respect of charging for connections to such facilities.

Subject to 2.12 or 2.13 as appropriate, and at the customer's option, NGN will take ownership of apparatus laid by others that is intended to connect entry or storage facilities.

For further information please refer to: biomethane.northerngasnetworks.co.uk

2.12 Adoption of below 7 barg Apparatus

Subject to the exception detailed in the paragraph below NGN will adopt any fit for purpose below 7 barg connections apparatus that is connected to its system and that is not intended to be operated by another system operator (e.g. another gas transporter). NGN will not make any adoption payment for adopting below 7 barg apparatus.

NGN will not adopt apparatus (except Final Connection apparatus) where this forms part of a system of pipes that includes any apparatus, which will become a connected system that will not also be adopted by NGN.

NGN will adopt free of charge below 7 barg connections apparatus installed by Independent Connection Providers that are registered with the gas industry registration scheme.

A charge will be levied to adopt any below 7 barg connections apparatus that is installed by persons who are not registered with the gas industry registration scheme. Details of these charges are given in the Connection Charges Statement published on the NGN website (www.northerngas.co.uk).

Where a person is not registered with the gas industry registration scheme they should contact NGN to explain their intentions and to discuss the adoption procedure before carrying out any works in respect of the design or construction of below 7 barg apparatus that they wish NGN to adopt.

NGN does not offer a service to complete part of a system of pipes that is being constructed, or that is proposed to be constructed, by an Independent Connection Provider.

2.13 Taking ownership of above 7 barg apparatus

With the exception detailed in the paragraph below, NGN will take ownership of fit for purpose above 7 barg connections apparatus that is connected to its system 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). NGN will not make any adoption payment for adopting above 7 barg apparatus.

NGN will not take into ownership apparatus (except Final Connection apparatus) where this forms part of a system of pipes that includes any apparatus, which will become a connected system that will not also be adopted by NGN.

NGN will charge to establish whether above 7 barg connection apparatus to be installed by a third party and adopted by NGN, is fit for purpose. Charges will be based upon the cost of employing NGN staff together with any costs incurred by service providers employed by NGN. Charges will include an appropriate level of overheads.

Customers are strongly advised to contact NGN to explain their intentions and to discuss the 'Taking Ownership' procedure before carrying out any works in respect of the design or construction of above 7 barg apparatus that they wish NGN to take into ownership.

2.14 Traffic Management Legislation

NGN will pass on to customers the appropriate cost incurred pursuant to prevailing traffic management legislation² in force at the relevant date plus an appropriate level of overheads.

2.15 Entry and Exit Agreements

NGN has the right to require a customer to enter into a supply point network exit agreement (NExA), network entry agreement (NEA) and/or storage connection agreement (SCA) as appropriate. An example of when NGN will make use of these rights is when a Very Large Daily Metered Customer is connected. (The definition of a Very Large Daily Metered Customer is in Section A of the NGN's Network Code.)

2.16 Connection – load size thresholds

Loads (or sources of gas) of 2,196,000 kWh (75,000 therms) per annum or less shall not be connected, or be permitted to connect, to any apparatus operating at a pressure of greater than 7 barg, or which has been declared not to be a Relevant Main.

2.17 Infills

In an Infill, the proportion of any shared costs to be paid at each premises will be calculated as follows:

- The shared costs include the cost of the new mains, connecting the new mains with existing mains, installing pressure controlling apparatus (not part of any Supply Meter Installation) and, if applicable, the charge for the provision of capacity on the existing NGN system.
- For NGN to proceed with an Infill, NGN will conduct a survey in the area to be supplied to assess the number of premises, which are likely to connect within twenty years of the new mains being laid. It is this number, which is used to apportion costs not the total number of premises in the area.
- Subject to the Gas Connection Charges Regulations 1986 as amended, the appropriate proportion of the shared costs is charged to all customers connecting in the Infill area for a period of not more than twenty years until the total cost of the mains has been recovered or the scheme closes whichever is the earlier.
- The twenty-year period starts on the day the Relevant Main is commissioned.
- In an Infill, the cost of the service pipe will be charged on an individual basis in the same way as any other connection. Potential consumers within an Infill will benefit from the Domestic Load Connection Allowance or Fuel Poor Voucher, where this is applicable. Up to five years after the mains have been commissioned the value of the Fuel Poor Voucher will be calculated as per the arrangements for a community based scheme set out in section 2.20. After five years the value of the Fuel Poor Voucher will be calculated as per the arrangements for a one-off connection set out in section 2.20.

² Northern Gas Networks Limited is obliged to pass on only those costs which have been efficiently incurred

- Where a consumer, likely to consume more than 2,196,000 kWh (75,000 therms) per annum, is situated within the Infill, and will connect to gas at the time when mains are laid, they will pay a mains contribution in direct proportion with their share of the estimated total annual offtake quantity within the Infill.
- Where a consumer, likely to consume more than 2,196,000 kWh (75,000 therms) per annum, is situated within the Infill, and declines to connect at the time when mains are laid then that consumer will not be permitted to connect to the Infill mains unless;
 - either the twenty-year Infill period has expired or
 - they fund sufficient reinforcement to enable the remaining not above 2,196,000 kWh (75,000 therms) per annum premises within the Infill, which might connect to gas, to be connected without there being any requirement for any additional reinforcement within the twenty year period.

As outlined in Section 4 separate arrangements apply to infills that fall within the definition of fuel poor communities.

2.18 Meter Housings / Boxes

A meter box is designed to contain a gas meter of a volumetric flow capacity of six cubic metres per hour or less. Meter housings refer to all other structures, which are purposely designed to contain gas meters.

NGN charges for providing and installing meter houses / boxes to customers requiring a connection. Charges will reflect the cost of labour, materials, and any other expenses required to carry out the work. Each cost element will carry an appropriate level of overhead.

NGN will fit bolt on and semi concealed meter boxes. NGN will not provide and install cavity meter boxes. NGN will not provide a meter house / box or transport it to site unless it is also going to be installing it.

A meter housing (or meter box) becomes the property of the owner of the premises after it has been installed; consequently maintenance is the responsibility of the premises owner.

NGN offers a 1 year guarantee in respect of meter boxes that it supplies, however this is invalidated if any defect or damage has been caused other than by fair wear and tear. NGN does not offer a guarantee in respect of meter houses.

2.19 Fuel Poor Voucher

Individual domestic customers may be eligible for a Fuel Poor Voucher if they require a new connection to an existing premises and meet one of the following criteria:

- reside within one of the 25% most deprived Lower Level Super Output Areas (LOSA), as defined by the Index of Multiple Deprivation (IMD) issued by the Department of Communities and Local Government³: or

³ Details of the Index can be found at www.communities.gov.uk

- are eligible for measures under HHCRO(England); or
- are in fuel poverty as the household income is below the poverty line (taking into account energy costs); and its energy costs are higher than is typical for a household of its type.

The Fuel Poor Voucher given to a customer as part of a community based scheme will be equivalent to the net present value (NPV) of the transportation revenue that NGN expects to receive from the new customer with the most recent median typical domestic consumption value (TDCV) as periodically published by Ofgem over the next 45 years provided this is less than the connection charge. Where the value of the Fuel Poor Voucher would exceed the connection charge, the connection charge will be zero.

The Fuel Poor Voucher given to a customer requesting a one-off connection will be equivalent to the lesser amount of the gross cost of connection or the net present value (NPV) of the transportation revenue that NGN expects to receive from the new customer with with the most recent median TDCV as periodically published by Ofgem over the next 45 years.

To obtain the Fuel Poor Voucher individual customers must apply for their new connection via a qualifying organisation that has been approved to assess whether the customer meets the eligibility criteria listed above.

Where customers are part of a community based scheme for extension of the network and reside within one of the 25% most deprived areas, as determined by the Government's Index of Multiple Deprivation (IMD), when measured at the Lower Level Super Output Area (LOSA) the arrangements set out in Section 4 of this document will apply.

Where customers are part of a community based scheme for extension of the network and do not reside within one of the 25% most deprived areas described in the previous paragraph the arrangements set out in section 2.18 of this document will apply. Eligible one-off customers and communities outside of the 25% most deprived areas who meet the eligibility criteria will still receive Fuel Poor Voucher.

For the avoidance of doubt non-domestic or new domestic premises are not eligible for the Fuel Poor Voucher on an individual basis or where they are part of a community based scheme to extend the network.

Customers who receive the Fuel Poor Voucher are not eligible for the Domestic Load Connection Allowance (i.e. customers can not receive the Fuel Poor Voucher and the Domestic Load Connection Allowance).

2.20 CSEP Fuel Poor Voucher - Schemes

Where an IGT is proposing to undertake a network extension to a fuel poor community on receipt of the relevant data the NGN will calculate the level of Fuel Poor Voucher that would apply to the CSEP. The Fuel Poor Voucher would be equal to the lower of either the proportion of the cost of the connection based on NGN's share of the present value of future transportation

revenues to be received by NGN (i.e. the present value of CSEP charges) or the share of the NPV of the transportation revenue. Worked examples are shown in appendix F. The level and timing of any payments to be made by the GDN to the IGT will be determined by Ofgem at the next Price Control Review.

2.21 CSEP Fuel Poor Voucher – One-offs

Where an IGT is proposing to undertake a fuel poor connection, and has satisfied themselves of eligibility for an assisted connection and consequential Fuel Poor Voucher, NGN will calculate the level of Fuel Poor Voucher that would apply to the CSEP. The Fuel Poor Voucher would be equal to the lower of either the proportion of the cost of the connection based on NGN's share of the present value of future transportation revenues to be received by NGN (i.e. the present value of CSEP charges) or the share of the NPV of the transportation revenue. Worked examples are shown in appendix F. The level and timing of any payments to be made to NGN will be determined by Ofgem at the next Price Control Review, but for individual one off connections, will be paid by NGN on confirmation from the IGT that the Gas Connection has been installed to the IGT.

2.22 Adoption of Networks Constructed by Independent Connections Providers (ICP) to Non-Gas Fuel Poor Communities

Subject to the provisions of section 2.12 and 2.13 of this statement NGN will take ownership of any fit for purpose network extension constructed by an ICP. Where NGN takes ownership and the extension contains premises that would have been eligible for a Fuel Poor Voucher if constructed by NGN, then NGN will make a Fuel Poor Voucher payment to the ICP concerned at the time of adoption. NGN will make this payment provided it receives a statement from the ICP concerned, signed by a duly authorised officer of that company, confirming the following:

- The number of eligible premises connected by means of that network extension and that those premises have met the eligibility criteria set out in section 2.19 of this document;
- The Connection Costs determined by the ICP in respect of each eligible premises connected by means of that network extension and confirmation that these are a fair and true representation of the actual costs incurred by that company in relation to the specified connections;
- That the Fuel Poor Voucher payment will be passed on to the relevant connectee in respect of each eligible connection in that network extension.

The Fuel Poor Voucher payment which NGN will provide to the ICP in respect of each eligible premises in that network extension will have a maximum value equal to the lesser of the total Connection Costs determined by the ICP in respect of that premises, or the NPV of transportation revenue derived as set out in section 2.19.



Section 3 - Methodology to be applied where a connection requires reinforcement of NGN's existing network

3.1 Reinforcements for System Exit connections

Reinforcement required to enable the connection of identified new customers or to permit an increase in flow rate in respect of an existing customer is known as Specific Reinforcement.

When there is more than one technical solution that would meet the customer's requirements the option with the least overall cost of asset construction shall be selected. During this selection process there shall be no consideration of the relative split of costs between NGN and the customer. Costs of upsizing to meet future load growth will not be attributed to the customer.

NGN apportions the cost of Specific Reinforcement according to its location in relation to the Connection Charging Point. Specific Reinforcement downstream of the Connection Charging Point is charged to the customer. NGN, subject to the Economic Test in respect of Distribution Network System reinforcements, funds Specific Reinforcement, upstream of the Connection Charging Point. If any Specific Reinforcement that is subject to the Economic Test does not pass the Test, a financial contribution toward the costs will be payable. In such cases details of the chargeable and non-chargeable elements are set out in a "Reinforcement Template".

Loads anticipated to consume more than 586,000,000kWh (20 million therms) per annum, and which require Specific Reinforcement, will require an ARCA.

3.2 Alternative Connections

Where NGN connects premises and selects an alternative route that provides lower overall reinforcement and Connection Costs, the customer contribution will be based on the lower of:

- the overall costs of the alternative to reinforcement including any associated contribution towards any Specific Reinforcement that is associated with the alternative connection, or
- the Connection Costs plus any contribution towards Specific Reinforcement associated with the original CCP route.

In respect of such "alternative to reinforcement connections" by Independent Connection Providers and other Gas Transporters, the customer will be informed of where the connection should be made. The customer will then be offered a payment to offset the additional cost that NGN estimates will be associated with their being asked to connect at the alternative point. If the customer insists on making a connection at another point, which represents a sub-optimal system development solution, then NGN will charge the full cost of any associated reinforcement.

3.3 General Reinforcement

Where NGN has already planned and financially approved General Reinforcement of a Distribution Network System, which is to be installed prior to the Winter following connection of the new load request and which obviates the requirement for Specific Reinforcement, NGN will

fund the full cost of the General Reinforcement. Where a General Reinforcement project that has already been planned and financially approved has to be upsized prior to construction then only the additional costs necessary to meet the customer's load shall be deemed Specific Reinforcement.

3.4 Requests to increase Gas Pressure

All the costs associated with reinforcement works that are required to increase the gas pressure at an existing supply point or connected system exit point will be charged to the person requiring the increase.

Consistent with the provisions of this statement and the network code, NGN will use reasonable endeavours to provide pressure elevation at a new supply point or connected system exit point free of charge. This will only apply to requests where the integrity of the system is not compromised and the required pressure is predicted to be continuously available during the subsequent planning period. The planning period is 5 years for below 7 barg networks and 10 years for above 7 barg networks. If the requested pressure is determined to be unavailable at any time within the planning period reinforcement will be required. Subject to the exception detailed in the paragraph 3.5 below, the cost of these works will be charged to the customer requiring the elevated pressure.

3.5 Upsizing of Connection or Reinforcement works by NGN

It is sometimes necessary for NGN to upsize a connection or reinforcement pipe beyond that which is required to enable the connection of a load. NGN does this to ensure efficient system development. NGN will do this when the anticipated cost of subsequent reinforcement is greater than the predicted cost of upsizing apparatus, taking into account the time value of money and probability that subsequent reinforcement will be required.

Where necessary, NGN will fund the marginal cost of upsizing apparatus that it adopts. In this circumstance NGN will ask the Independent Connection Provider to quote for the upsizing works and will use this quotation when deciding whether to proceed with upsizing.

3.6 Application of the Economic Test

The Economic Test compares the cost of system reinforcement required to take on the new load with the additional transportation revenue from the load net of the additional operating costs of accommodating the new load. The annual transportation revenue and operating costs are capitalised over the agreed appraisal period at the rate of return allowed in the relevant year of the current price control period. Where the additional reinforcement cost is greater than the capitalised net transportation revenue the net transportation revenue will not provide the allowed rate of return on the investment. To avoid this deficit being recovered by increased charges to other customers, the customer is requested to pay a contribution towards the cost of the reinforcement. This contribution will be equal to the excess of the costs associated with the new load over the capitalised net transportation revenue.

Contributions are made by means of an up-front payment, enabling the standard transportation charges to be applied when the new load is connected.

3.7 Economic Test Methodology

The Economic Test methodology is applied when there is a requirement to immediately reinforce the existing pipeline system in respect of a new load. The costs associated with a new load are split into two types: Specific Reinforcement costs and the assessed cost of growth in respect of the load.

Specific Reinforcement costs are the engineering costs of providing capacity for the new load. The treatment of Specific Reinforcement costs depends on whether they are upstream or downstream of the Connection Charging Point as defined in 3.1. Specific Reinforcement costs downstream of the Connection Charging Point are always fully chargeable to the connectee and so are not included in the Economic Test, whereas those upstream of the Connection Charging Point are included within the Economic Test. Specific Reinforcement costs are assessed based on the particular work that will be required and are location, load and time specific.

The costs of growth are the estimated costs that will be incurred throughout the system as a result of the new load. There are three components to these costs, which are based on average values:

- Additional operating costs. These have been derived from NGN published accounts.
- Costs of developing additional capacity within the system. These costs are averages calculated from the NGN business plan for the current 8 year price control, distinguishing between the costs of developing capacity within the Local Transmission System (LTS), and below 7 barg. systems.
- Additional Formula Rates (business rates). These annual operating costs are calculated to be a fixed percentage of the capital expenditure. This reflects the fact that the amount of business rates that each network has to pay is linked to the Regulatory Asset Value of the business.

Capacity development and additional operating costs are determined using the factors shown in the table below. These factors are the key cost drivers. For each factor the specific value for the new load is multiplied by a set unit cost for that factor to determine the typical one-off and ongoing operating costs and capital costs. The unit cost drivers for each factor are determined from a study of the cost of growth for various types of load. The cost factors used are compatible with the 'Minimum Information Requirements' that apply in respect of site works requests, whilst at the same time ensuring the Economic Test is able to take proper account of the various factors which affect the cost of connection and reinforcement. The transportation income relating to the new load is determined using the transportation charges a shipper would pay to transport gas to a supply point(s) or CSEP, as appropriate.



Description	Value for Load	Unit
Throughput		
Cost of transporting additional gas volumes i.e. gas odourisation and LDZ Gas Shrinkage	AQ (Annual Quantity)	GWh/yr
Capacity (General Reinforcement)		
Cost of developing additional below 7 barg. general reinforcement assets	SHQ (System Hourly Quantity)	MWh/hr
Cost of developing additional LTS general reinforcement assets	SOQ (System Offtake Quantity)	MWh/day
Maintenance of Assets		
Cost of operating additional below 7 barg. Assets	SHQ	MWh/hr
Cost of operating additional LTS assets	SOQ	MWh/day
Other – related to the number of supply points		
Administrative cost of progressing a connection request	per connection enquiry	Number
Cost of providing services to additional supply points irrespective of supply point type e.g. provision of emergency service	No. of supply points	Number
Xoserve cost of administrating an additional CSEP	No. of CSEPs	Number
Xoserve administration cost per supply point	No. of supply points	Number

NB: Note that both the cost associated with additional NTS exit capacity bookings and the revenue attributable to the ECN transportation charge, introduced with effect from 1 October 2012, are excluded from the Gas Distribution Economic Test. As Gas Distribution Networks are allowed to fully recover the costs, revenue and costs are assumed to be equal with a nil cost impact for the individual load.

3.8 Determining Outcome of Economic Test

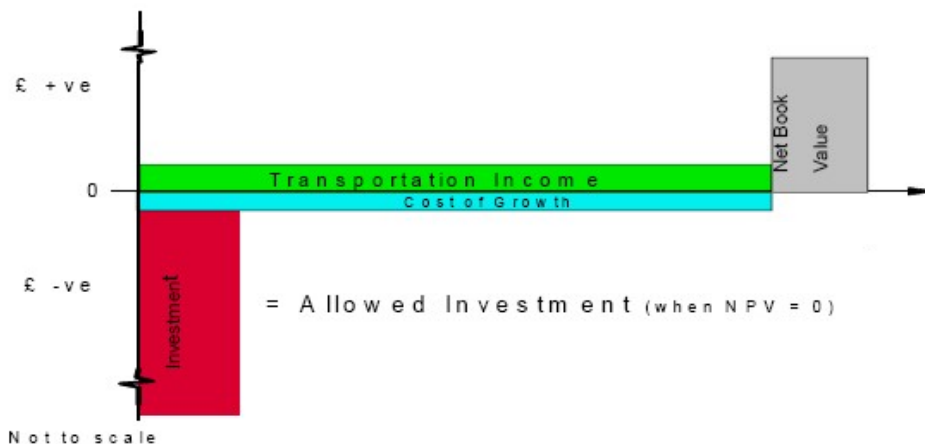
Since the costs involved include both one-off capital costs and ongoing costs the comparison is done using discounted cash flow (DCF) analysis as demonstrated in the diagram below. The cost types, one-off OPEX, ongoing OPEX and CAPEX, and income are kept separate throughout the analysis in order to ensure the proper treatment of each with respect to the time value of money.

The result of the analysis is the determination of a level of investment (the allowed investment) that would make the NPV zero. This is the maximum level of investment on which the net transportation revenue provides the allowed rate of return. The actual level of investment required is then subtracted from the allowed investment. The difference can be either positive or negative. If the difference is positive then the new connection is economic without a contribution to the reinforcement costs. If the difference is negative then it equals the level of contribution towards the reinforcement costs that is required from the connectee in order to make the new connection economic.

Note that within the Economic Test itself, overheads are not applied in respect of Specific Reinforcement costs. However, if a contribution is payable under the Economic Test, overheads are applied to the contribution at published rates. This approach is aligned to that applied in

respect of other charges e.g. the charges applied to rechargeable diversions where there is betterment.

Economic Test financial methodology



Key points underlying the DCF calculation are:

- Both income and costs of growth are assumed to be constant in real prices over the appraisal period;
- There is a 25 year appraisal period for loads greater than 58.6GWh per annum (large loads) and an appraisal period of 45 years for loads with an annual consumption of 58.6GWh or less;
- It is assumed that the depreciated allowed investment costs ('Net Book Value' in diagram above) will be recovered from all customers at the end of the appraisal period;
- A depreciation period of 45 years is applied. This means that for a 25-year appraisal period, it is assumed that approximately 80% of the initial allowed investment is recovered during the appraisal period; using a sum of digits method consistent with the current price control;
- The Economic Test calculates the allowed investment so that the relevant pre-tax cash flows discounted by the pre-tax WACC generate an NPV of zero; (the pre-tax WACC as per the latest output from Ofgem's Annual Iteration Process and
- Costs and transportation income include only distribution elements (not NTS).

In order to compare the ongoing costs and transportation income with the one-off costs, a capitalisation factor is applied to the ongoing costs and transportation income to convert them to an equivalent one-off cost or revenue. The capitalisation factor is therefore a shorthand calculation tool. It is determined such that the NPV of net revenues (transportation revenue minus ongoing costs) over a 45 year period (or 25 years for large loads), is equal to the depreciation incurred over the same period for a one-off capital cost, using a total depreciation lifespan of 45 years. The capitalisation factor is a function of only the discount rate and the length of the appraisal and depreciation periods and therefore is a flexible tool, as shown by the examples below. With the parameters described above, it is 15.48 for small loads and 14.28 for large loads.

Worked examples of the Economic Test can be found in annex D.

3.9 Reinforcement required by System Entry and Storage Connections

Where connection of entry or storage facilities to NGN's system triggers reinforcement of the network, the costs of such reinforcement will be charged to the customer.



Section 4 - Methodology to be applied where a connection requires extension of the network to facilitate the supply of gas to a non-gas fuel poor community

4.1 General

As part of the gas distribution price control arrangements have been introduced to facilitate the supply of gas to non-gas fuel poor communities and individual fuel poor customers. Under these arrangements a Fuel Poor Voucher will apply to connection requests from eligible customers and communities.

The arrangements set out in this section 4 apply to connection requests from non-gas fuel poor communities which are within one of the 25% most deprived Lower Layer Super Output Areas (LSOA) as defined in the latest published version of the Index of Multiple Deprivation issued by the Department of Communities and Local Government.

Where connection requests from communities which are not defined as fuel poor (using the above definition) are received the arrangements set out in section 2.17 of this document will apply.

One-off connection requests from individual domestic customers which are not part of a community scheme and communities outside the 25% most deprived areas may still be eligible for Fuel Poor Voucher in line with the arrangements set out in section 2.19 of this document.

It is envisaged that requests for network extensions for fuel poor communities would come from two sources:

- Multiple Connections Requests from residents within a geographic location who will all individually pay for the connections. It is expected that such requests would be co-ordinated by an individual or organisation.
- Single Connection Request from an organisation on behalf of residents within a geographic location and who will pay for the connections on behalf of those residents. It is envisaged that such requests would come from organisations (e.g. housing associations or local councils).

4.2 Eligibility Criteria

For the purposes of the arrangements set out in this section 4 eligible premises are:

- existing domestic premises which currently have no gas supply
- located within one of the 25% most deprived Lower Layer Super Output Areas (LSOA) as defined in the latest published version of the Index of Multiple Deprivation issued by the Department of Communities and Local Government⁴ or are part of a connection request where at least 50% of the premises are located within 25% most deprived LSOA. The Index of Multiple Deprivation score that applies, is the score that applied when the scheme was first quoted and accepted by eligible premises within that area.

⁴ Details of the Index can be found at www.communities.gov.uk.

For the avoidance of doubt any non-domestic or new domestic premises are not eligible for the Fuel Poor Voucher under these arrangements.

For a new connection request to be eligible for the arrangements described in this section all the new mains and services included in the connection request will be part of Distribution Network System.

Any party intending to make a connection request that would be eligible under these arrangements is advised to make contact with NGN prior to submitting the connection request.

4.3 Methodology

For each connection request NGN will undertake an assessment to determine the likely number of premises that will connect and it is this figure that is used to determine the net transportation revenue and any cost apportionments.

The normal connection charge(s) will be calculated using the same methodology as any other exit connection as set out in Section 2. The Fuel Poor Voucher equals the net present value of the future transportation revenues for eligible premises for the next 45 years with a median typical domestic consumption value (TDCV) using a discount rate in line with NGN's pre-tax cost of capital, as determined by Ofgem's last Annual Iteration Process.

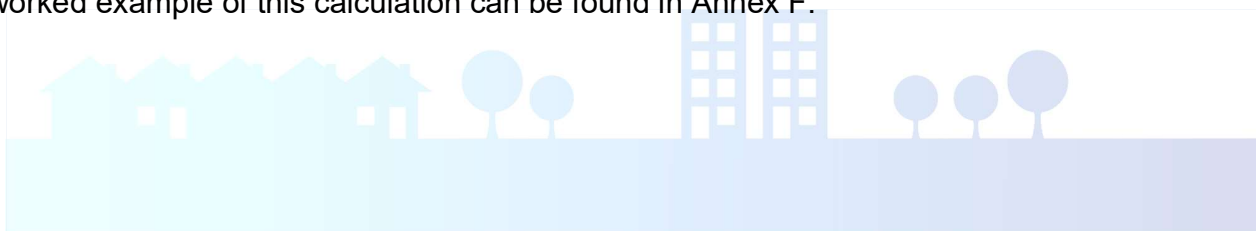
Where the connection request is from a single organisation that will pay the whole connection charge the Fuel Poor Voucher will be deducted from the normal connection charge to derive the applicable connection charge.

Where there is more than one connection request it will be necessary to apportion the connection costs across eligible and non-eligible premises and then apply the Fuel Poor Voucher to eligible premises to determine the applicable connection charge for each individual premises. The mains cost element of the connections costs will be apportioned to each individual premises in proportion to their share of the estimated total annual offtake quantity within the connection request.

For non-eligible premises the connection charge will consist of the relevant share of the mains costs plus the cost of connecting and laying the individual service to the premises.

The connection charge for eligible premises will consist of the relevant share of the mains costs plus the cost of connecting and laying the individual service to the premises less the Fuel Poor Voucher. If the Fuel Poor Voucher is greater than the costs of the mains and services combined then the connection charge for the individual premise will be zero.

A worked example of this calculation can be found in Annex F.



4.4 Upsizing of Mains to Facilitate Non-Domestic Customers

Where any non-domestic customer likely to consume more than 2,196,000 kWh (75,000 therms) per annum wishes to connect to gas at the time the mains are laid and that will require the mains to be upsized to facilitate that load then the non-domestic customer will pay the full cost of upsizing the extended mains.

4.5 New Connectees onto the extended Network

Where a customer at eligible premises wishes to connect within five years of the relevant main being commissioned then the connection charge will consist of a relevant share of the mains costs plus the current cost of laying the service to the premises less the same Fuel Poor Voucher used for eligible premises that connected when the mains extension was originally constructed. Such customers are not eligible for the Domestic Load Connection Allowance (i.e. customers can not receive the Fuel Poor Voucher and the Domestic Load Connection Allowance).

Where a customer at eligible premises wishes to connect after five years of the relevant main being commissioned then the connection charge will consist of a relevant share of the mains costs plus the current cost of laying the service to the premises less the Fuel Poor Voucher. In these circumstances the value of Fuel Poor Voucher will be equivalent to that given to a customer requesting a one-off connection as set out in section 2.20 rather than a customer who is part of a community based scheme. The cost of connection taken into consideration in calculating the value of the Fuel Poor Voucher for these requests will only be those related to the laying of the service (i.e. mains costs will not be considered for calculating the Fuel Poor Voucher but may still be chargeable to the customer). In addition, the eligibility criteria for the Fuel Poor Voucher will be applied at the time of the new connection request so if the community where the premises are located is no longer in one of the top 25% most derived LSOA's then the Fuel Poor Voucher may not be given. However if the customer is eligible under the other criteria set out in section 2.20 then the Fuel Poor Voucher will still be given.

Where a customer at non-eligible premises wishes to connect to a section of network which has been extended under these arrangements the connection charge will consist of a relevant share of the mains costs plus the current cost of laying the service to the premises.

If the customer (whether at an eligible or non-eligible premises) is connecting after a period of greater than twenty years of the relevant main being commissioned or the total cost of the mains has been fully recovered or offset by the Fuel Poor Voucher issued to earlier connectees then no mains costs will be charged to that customer.

Where a non-domestic customer likely to consume more than 2,196,000 kWh (75,000 therms) per annum wishes to connect to a section of the network extended under these arrangements they will, where applicable, be charged for sufficient reinforcement to enable the remaining not above 2,196,000 kWh (75,000 therms) per annum premises which might connect to the extended network to be connected without there being any requirement for any additional reinforcement. If the non-domestic customer is connecting after a period of greater than twenty years of the relevant main being commissioned then this arrangement will not apply and the connection will be treated in line with any other connection request under the methodologies set out in sections 2 and 3 of this statement.

Section 5 – Disconnection Charging and Charging for Alteration of a Gas Connection

5.1 General Principles for Disconnection Charging

A disconnection occurs when a person requests that an existing gas service pipe is cut off. NGN will disconnect service pipes that it owns when requested by the Registered User. If a person who owns or occupies the premises, or a person acting as their agent, contacts NGN to request a disconnection, NGN will request their permission to contact the Registered User and will then gain permission to disconnect from the Registered User.

Disconnection services as required by condition 4B of the transporter licence do not include meter disconnection services or charges.

In general NGN will follow the same principles that it applies to connection works in respect of pricing disconnection services.

5.2 Methodology for Disconnection Charges

NGN will charge the cost that it reasonably expects to incur when disconnecting a service pipe. In some instances NGN will make use of standard charges. In these respects charges will be levied in the same way as for connection asset installation. Charges will include appropriate overheads.

NGN will not charge the additional cost where it carries out works, which are in addition to those required to fulfil the requirements of a disconnection customer, and which are designed to enhance its system.

If works are unable to proceed as a result of the presence of a Supply Meter Installation, or because outlet pipework has not been purged, NGN will charge an abortive visit charge.

It is possible for service pipe disconnection works to be designated as Sufficient Complexity works.

Details of the standard charges for disconnection can be found in NGN's Connection Charges Statement which can be found on the NGN website: www.northerngasnetworks.co.uk.

5.3 Alteration Services Offered

NGN will alter the position of any service pipe it owns when this is requested by the Registered User or the person who owns or occupies the premises, supplied by that pipe, or a person acting as their agent.

In addition NGN will relocate the position of any Supply Meter Installation where this is required as a result of the relocation of a gas service pipe.

5.4 Methodology for Alteration Charging

NGN will charge the cost that it reasonably expects to incur when altering the position of a service pipe. NGN will not charge for the relocation of a service pipe where a Qualifying Person requires it, subject to assessment and/or site assessment. In some instances NGN will make use of standard charges. In these respects charges will be levied in the same way as for connection asset installation.

NGN will not charge the additional cost where it carries out works, which are in addition to those required to fulfil the requirements of an alteration customer, and which are designed to enhance its system. Where the service pipe is <2" steel NGN will replace the service with a PE pipe. Customers will not be charged for this additional work.

It is possible for service pipe alteration works to be designated as Sufficient Complexity works.



Annex A - Definitions

The **Annual Iteration Process** is the process defined in NGN's transporter licence which updates its revenue allowances to reflect actual costs and performance during a specific year. One of the inputs into the process is an annual adjustment to the cost of debt which then calculates the weighted average cost of capital (WACC) – the WACC is a key input into the economic test and fuel poor voucher value.

ARCA stands for Advanced Reservation of Capacity Agreement. An ARCA is required when a load is to be booked firm (this includes load increases and interruptible to firm transfers) and Specific Reinforcement upstream of the charging point is required. They are required for loads that exceed 586,000,000kWh (20 million therms) per annum in aggregate. An ARCA will oblige the person making the connection (or load increase or transfer) to either ensure that their Registered User books firm capacity (in respect of their supply point, to at least the level of the ARCA) or to pay NGN an appropriate amount to compensate for the loss of transportation revenue. Each ARCA will remain in force for the time specified within it.

The **Connection Charging Point** is the closest economically feasible⁵ point (taking into account any customer request for gas to be made available at a particular pressure) on the NGN system, which is deemed to have enough capacity to supply the new load disregarding existing loads. The Charging Point creates the financial distinction between Connection Costs, that are fully chargeable to the person concerned and upstream reinforcement costs, which may be funded by NGN subject to any contractual requirements.

Connection Costs (in respect of system Exit connections) are the costs of all Physical Connection Works (including applicable overheads) downstream of the Connection Charging Point, which may include Specific Reinforcement costs downstream of the Connection Charging Point.

The **Distribution Network System** means the relevant gas pipe-line system owned by NGN within the Distribution Network of the NGN GT Licence.

The **Domestic Load Connection Allowance** is the contribution that NGN is required to make towards the cost of installing the connection from a premise to the main as required by Condition 4B paragraph 1 of its licence. The contribution is for the laying of the first ten metres of pipe in land that is dedicated to public use. The allowance only applies where the premise is wholly or mainly used for domestic purposes and is situated within 23m of a Relevant Main. The domestic load connection allowance does not apply where customers receive the Fuel Poor Voucher.

The **Fuel Poor Voucher** describes the value of Connection Costs which are offset where customers meet the eligibility criteria set out in section 2.20 and is determined in the manner set out in section 2.20. The Fuel Poor Voucher can be used by eligible customers as full or partial payment of the cost of connection.

⁵ A consumer's premises may be closer to a main that is on the 'wrong' side of a significant obstacle (e.g. a river) than it is to another main. In this circumstance the Connection Charging Point would be deemed to be on the alternative main as the cost of laying a connection pipe across the obstacle would be prohibitive.

The **Economic Test** is a financial assessment tool that is designed to ensure that NGN meets its Gas Act obligations to develop and maintain an efficient and economical pipeline system for the conveyance of gas (Gas Act, section 9(1)(a)) and to comply with any reasonable request to connect to its system any premises or any pipeline system operated by an authorised transporter (Gas Act, section 9(1)(b)). The Economic Test is used to identify new requests for capacity where the level of investment would be considered 'uneconomic', and so avoids existing NGN customers subsidising the new load.

The **Final Connection** is the labour and materials to physically connect the pipe at the point where it interfaces with the NGN Relevant Main but does not include costs of excavation, backfill or reinstatement.

General Reinforcement of NGN's pipeline system is reinforcement for load growth associated with individual premises expected to consume 73,200kWh per annum or less, and for general load growth where this cannot be associated with specific requests for a new or an increased load.

An **Infill** is the extension of new Relevant Mains to an area having a number of existing premises; there may also be new premises being constructed in the area, where not all of the owners or occupiers of those premises have expressed a desire to be connected to a gas supply at the time the mains are laid. In an infill, an individual contract is formed when sufficient premises have returned completed acceptances for a gas connection and an individual charge is made to carry out that connection. NGN will only accept acceptances that would establish an infill when the expected uptake of gas connections in the first twenty years is sufficient to make the project economic. The infill is only confirmed when sufficient acceptances have been received to confirm that the expected uptake of connections to gas is likely to be achieved. The charging arrangements for Infills are covered by the Gas Connection Charges Regulations.

A **Minimum Connection** comprises the apparatus, determined by NGN, required to connect apparatus laid by a third party to an above 7 barg system operated by NGN. NGN will not permit a third party to install Minimum Connection apparatus. Minimum Connection apparatus will remain in NGN ownership irrespective of the ownership of the downstream system.

Physical Connection Works are works to supply and lay gas services and mains, including any associated equipment and works to reinforce NGN's system.

A **Qualifying Person** is a person who is unable to operate the emergency control valve because of his or her physical condition, who is either:

- of a 'state' pensionable age and / or
- is a registered disabled person and / or
- is a chronically sick person.

Registered User means the user in whose name the supply meter point is registered

A **Relevant Main** is a distribution main operated by NGN which is being used for the purpose of giving a supply of gas to any premises in its authorised area at a rate not exceeding

2,196,000 kWh per annum, except any pipe which is not relevant in accordance with Section 10(13) of the Gas Act 1986 as amended by the Gas Act 1995.

Specific Reinforcement occurs when NGN has to undertake system reinforcement, or additional system reinforcement, as a result of one or more of the following:

- an increase the rate of gas consumption at a supply point or
- an increase in the rate of gas consumption of a Connected System or
- the connection of a new supply point where the consumer in question is anticipated to be likely to consume more than 73,200kWh per annum or
- the connection of a Connected System

A **Supply Meter Installation** is the gas meter and associated apparatus used to measure the volume of gas offtaken at a supply point.

An **Independent Connection Provider (ICP)** is an organisation which designs and constructs gas infrastructure for adoption by Gas Transporters (They may also offer to construct other utility related equipment e.g. a water service pipe and / or install gas appliances and / or offer other services.)

Winter is defined as the period from 1st November in any year until and including 30th April in the following year.



Annex B – Contact information

Operational Contacts

For all General Connections enquiries please contact 0800 040 7766 or email: gasconnections@northerngas.co.uk

Complaints

If there is a problem with the service you have received from NGN, please contact us in writing, by e-mail or by telephone. It will be helpful, when contacting us, if you can provide any information relating to your case (i.e. reference numbers so that we can deal with your complaint more quickly).

We will be better able to help you if you direct your complaint / query to contacts below.

A written complaint / query should be sent to:

Customer Service
Northern Gas Networks
1st Floor
1 Emperor Way
Doxford International Business Park
Sunderland
SR3 3XR

Telephone complaint: 0800 040 7766 (office hours)

E-mail complaint:

customercare@northerngas.co.uk

Copies of our complaints procedure can be found on our website

www.northerngasnetworks.co.uk

In the first instance complaints should be raised with NGN at the above address. If the matter is not resolved it should be referred to the Energy Ombudsman. If the Ombudsman are able to help they will study your complaint, make a decision and let you know what they have decided. If the Ombudsman believes there may be a case to answer then we may be required to:

- provide an apology; or
- provide an explanation; or
- take corrective action; or
- if appropriate, pay compensation

The Ombudsman is not able to help you unless you have gone through our complaints procedure first. The Energy Ombudsman can be contacted as follows:

Energy Ombudsman
PO Box 966
Warrington
WA4 9DF

Tel: 0845 055 0760 Fax: 0845 055 0765

Email: enquiries@energy-ombudsman.org.uk

Website: www.energy-ombudsman.org.uk

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

Address for enquiries relating to this statement

Any enquiries relating to this statement should be sent to the address given below.

Michael Conaboy
Connections Commercial Manager
Northern Gas Networks
1100 Century Way
Thorpe Park
Leeds
LS15 8TU
Tel: 0113 397 5399
Email: mconaboy@northerngas.co.uk



Annex C – Additional Points Relating to Capacity

Capacity booking

The provision of a connection to NGN's system 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 NGN's Network Code and has been Licensed by the Gas and Electricity Markets Authority to do so.

Allocation of available capacity

NGN will allocate any available capacity on a first come first served basis. This means that (except where an ARCA is applicable) where a main, or other apparatus, has surplus capacity that capacity will be provided to the first Registered User, which books it in accordance with the NGN's Network Code. Capacity will be allocated on the basis of the date when a Registered User confirms their site nomination and has nothing to do with any connection contract.

Construction of capacity

It is sometimes necessary for NGN to reinforce its system to enable additional gas to be offtaken or to permit gas to be introduced into its system. This work, particularly where it affects an above 7 barg system, may take a period of time to complete. NGN will endeavour to inform customers, as soon as is reasonably practical, how long a proposed reinforcement project is likely to take and consequently the likely date when gas may be offtaken / introduced.



Annex D – Examples of Application of Economic Test

The following examples show how the ET is applied to different types of connection requests. These are indicative only and based on data at time of publication.

Example 1 – Housing Estate

AQ:	1,850,000 kWh
SOQ:	13,625 kWh
SHQ:	1,000 kWh
No of Premises:	100 domestic properties

	Amount	Units
Load Income	10,382	£ p.a.
Marginal Opex	(1,794)	£ p.a.
Net annual income	8,589	£ p.a.
Income capitalisation factor	15.48	Number
Capitalised net income	132,920	£
One-Off Opex	(300)	£
General Reinforcement	(224)	£
Total One-off costs	(524)	£
Allowable Investment	132,395	£

Example 2 – Connected System operated by another GT

AQ:	1,850,000 kWh
SOQ:	13,625 kWh
SHQ:	1,000 kWh
No of Premises:	100 domestic properties

	Amount	Units
Load Income	4,813	£ p.a.
Marginal Opex	(1,008)	£ p.a.
Net annual income	3,905	£ p.a.
Income capitalisation factor	14.28	Number
Capitalised net income	55,757	£
One-Off Opex	(300)	£
General Reinforcement	(224)	£
Total One-off costs	(524)	£
Allowable Investment	55,233	£

Example 3 – Industrial or Commercial connection

AQ:	800,000 kWh
SOQ:	5,480 kWh
SHQ:	450 kWh
No of Premises:	1 Non-Daily metered industrial premises

	Amount	Units
Load Income	2,677	£ p.a.
Marginal Opex	(417)	£ p.a.
Net annual income	2,260	£ p.a.
Income capitalisation factor	14.28	Number
Capitalised net income	32,260	£
One-Off Opex	(300)	£
General Reinforcement	(94)	£
Total One-off costs	(394)	£
Allowable Investment	31,867	£

Annex E – List of Obstacles

The list below details those obstacles, which have the potential to cause a project to be determined to be of Sufficient Complexity. Projects which have at least one obstacle and which are exclusively <7 barg will only be determined to be Sufficient Complexity if they are likely to cost in excess of £10,000 including overheads.

List of obstacles:

1. Works which involve the crossing of, or which are affected by, the presence of motorways, dual carriageways or highways, which have been designated by the Highway Authority to have Special Engineering Difficulties.
2. Works which involve the crossing of, or which are affected by, the presence of a railway line or tramway.
3. Works which involve the crossing of, or which are affected by, the presence of a river, stream, estuary or canal (navigable or otherwise), body of water, aqueduct, or a drainage channel.
4. Where works are in, or likely to affect, a Site of Special Scientific Interest, nature reserve, scheduled monument or archaeological site.
5. Where works are situated within, or likely to affect, a woodland, marsh, peat bog or coastal wetland.
6. A connection to a listed building.
7. Connections to existing blocks of flats where any service pipe will terminate more than two stories above the adjacent ground level or where internal risers are requested.
8. Connections to new blocks of flats where any service pipe will terminate more than five stories above the adjacent ground level.
9. Works which involve any requirement for a public enquiry or planning permission, including planning permission associated with any buildings including meter houses.
10. Where the route of any apparatus involves a significant (greater than 2m) change in elevation within a short horizontal distance e.g. a cliff or retaining wall.
11. Where any apparatus will be laid in contaminated ground, disused slag heaps or rubbish dumps.
12. Where any apparatus will be laid in land likely to suffer from severe subsidence or other significant ground movement including the laying of apparatus near to disused mine shafts / workings.
13. Where works are likely to be affected by special security provisions, e.g. military bases, prisons etc.
14. Where works will take place within top tier COMAH sites.
15. Where an easement or other legal permit has to be obtained from any person other than the person requesting the works.
16. Any other works where special difficulties or unusually high costs might occur.

Annex F - Connection Charging Examples

Please note that in all examples shown in this annex:

- Charges are indicative only, as at the time of publication.
- Meter work charges are excluded here, but may be shown on connection quotations.
- VAT is excluded, however it may apply in certain circumstances.
- Costs exclude any cost pursuant to traffic management legislation.
- All quotes include overheads.

Example 1 - Connection to an existing 4 bedroom house

Job Detail

- Property located in a town
- Existing premises in a street with containing an NGN Relevant Main.
- Gas main 15m from the boundary of the property.
- 5m of pipe to lay in garden.
- Northern Gas Networks Limited to excavate and backfill in private land.
- Customer requires semi-concealed meter box.
- Anticipated annual consumption: 20,800kWh
- Anticipated peak flow rate: 3 standard cubic metres per hour

Quote details

Customer would receive a standard charge quotation as per the relevant Connection Charges Document. (The standard charge is net of the Domestic Load Connection Allowance.)

At the time of publication, **quote = £585**

Example 2 - Connection to a shop

Job Detail

- Existing premises in a street containing an NGN Relevant main located in the road.
- Gas main 5m from the boundary of the property.
- Meter box will be placed on outside wall that is also on the boundary.
- Anticipated annual consumption: 35,000kWh
- Anticipated peak flow rate: 4 standard cubic metres per hour

Quote details

Customer would receive a bespoke quotation.

At the time of publication:

Total charge £ 1,141,73

Example 3 - Connection has to be upsized to enable an increase in flow rate at a factory unit

Job Detail

- Existing premises in a street containing an NGN Relevant Main.
- Gas main 10m from boundary of property.
- From the street the existing service pipe runs for 25m across a yard before terminating in a meter house.
- No anticipated difficulties associated with the construction works.
- Current annual consumption: 1,350,000kWh
- Anticipated annual consumption: 2,100,000kWh
- Current peak flow rate: 38 standard cubic metres per hour
- Anticipated peak flow rate: 64 standard cubic metres per hour
- No requirement for mains reinforcement

Quote details

Customer would receive a bespoke quotation. Although the existing service pipe is being upsized, charges would be applied in a similar way to the situation where a service was being laid to the premises for the first time. (The cost of cutting off the existing service pipe would be included within the quotation.)

Cut off 63PE service in the road. Connect new 90PE service from 90PE mains and lay 10m 90PE in the road and 25m 90PE in customers yard. Assuming meter housing is brick built and suitable for upgrade. Valve is included in the price along with new termination.

At the time of publication:

Total charge £ 12,253.83



Example 4 - Connection to a new housing estate

Job Detail

- Proposed premises in a new development site.
- 46 proposed properties, a combination of 3 and 4 bedroom houses.
- Gas main 100m from site entrance.
- No anticipated difficulties associated with the construction works.
- Anticipated aggregate annual consumption: 890,000kWh
- Anticipated peak 6 minute flow rate (entire estate): 58 standard cubic metres per hour.
- No requirement for mains reinforcement

Quote details

90PE main from existing 90PE main in the road, Lay 100m new 90PE in the road and 184m 90PE in customer provided excavation. Connect 46 services within 5m from the termination to the main in a customer provided trench. Assumed site is a cul-de-sac with a T shape layout.

Customer would receive a bespoke quotation.

At the time of publication:

Total charge £ 32,659.64

Example 5 - Connection to a new housing estate where reinforcement is required

Job Detail

The estate is identical to that in example 4, however reinforcement upstream of the Connection Charging Point is required.

Quote details

Customer would receive a bespoke quotation.

At the time of publication, quote:

Connection costs:

Labour cost	£ 14191.00
Materials cost	£ 11339.49
Total charge	£ 25530.49
Reinforcement costs:	

Labour cost	£ 17,783
Materials cost	£ 800
Allowed investment	£ 52,670 ⁶
Reinf. cost charged	£ Nil

Total charge £ 36,553

Example 6 - Connection to a village that is not a fuel poor community

Job Detail

- Existing premises in a village that has no gas supply.
- 185 premises in the village, 180 houses and 5 small commercial premises (e.g. shops).
- Nearest existing gas main 750m from village.
- No anticipated difficulties associated with the construction works.
- Anticipated aggregate annual consumption (provided all premises in the village connect) is 3,937,500kWh
- Anticipated number of connections within 20 years = 130 (70%)
- Anticipated peak 6 minute flow rate (assuming 185 properties including the commercial premises connect to gas) = 230 standard cubic metres per hour
- No requirement for mains reinforcement

Quote details

Potential consumers in the village are quoted on the basis of bespoke estimate of mains cost (divided by the number that are believed to be likely to connect in 20 years) and the standard charge service costs (except the commercial premises which have bespoke cost service quotations).

At the time of publication, quote:

Mains cost:

Labour cost	£ 297,775.22
Materials cost	£ 571,007.04
Governor cost	£ 30,000.00
Design Cost	£ 608.00
Total mains cost	£ 899,390.36

Mains contribution required from each person requiring a connection =
 Total mains costs / anticipated number of connectees = £ 3,283
 The basic methodology is that the cost of new mains is funded by 70% of premises in the village, and that 40% of this number must accept and pay in

⁶ This information is not normally provided to a customer.

advance for the scheme to proceed. The price is applicable to all new connections for up to 20 years, but the scheme will close before then if enough properties have been connected to fully recover the mains cost. Thereafter, a normal service connection cost only will apply.

Total scheme cost = £899390.36

70% of premises = 205

Cost per dwelling = £4387.27

40% of required dwelling uptake = 82 houses

Amount to be paid in advance = 82 x £4387.27 = £359756.14

This results in an indicative individual mains contribution of £4387.27 + VAT, and in addition to this there would also be an individual service pipe charge, this is currently £583 + VAT for a standard domestic connection. 82 acceptances with advance payment would be required for a project to proceed.

Potential domestic consumers would receive a standard charge quotation in respect of each service pipe as per the relevant Connection Charges Document. These standard charges are net of the Domestic Load Connection Allowance. The commercial premises would be charged a bespoke price for their service pipe, which would not include an allowance. However as their annual consumption is likely to be less than 2,196,000 kWh they would pay the same mains contribution as the potential domestic consumers.)

At the time of publication, domestic service quote = £583

Total payment required from each domestic consumer within the infill period would be share of mains costs + domestic service cost = **£4970.27 (4387.27 + 583)**

Example 7 - Connection to a village that is a fuel poor community

Job Detail

- Village lies within one of the top 25% most deprived LSOA's.
- Existing premises in a village that has no gas supply.
- 185 premises in the village, 180 houses and 5 small commercial premises (e.g. shops).
- Nearest existing gas main 750m from village.
- No anticipated difficulties associated with the construction works.
- Anticipated aggregate annual consumption (provided all premises in the village connect) is 3,937,500kWh
- Anticipated number of connections within 20 years = 185 (100%)

- Anticipated peak 6 minute flow rate (assuming 185 properties including the commercial premises connect to gas) = 230 standard cubic metres per hour
- No requirement for mains reinforcement

Quote details

Potential consumers in the village are quoted on the basis of bespoke estimate of mains cost (divided by the number that are believed to be likely to connect in 20 years) and the bespoke service costs.

At the time of publication, quote:

Mains cost:	
Labour cost	£ 297,775.22
Materials cost	£ 571,007.04
Governor cost	£ 30,000.00
Design cost	£ 608.00
Total mains cost	£ 899,390.36

Bespoke quote for the services would be provided. For illustrative purposes a figure of £1100 per service is used.

Mains contribution required from each person requiring a connection =
 Total mains costs / anticipated number of connectees = £ **4387.27**

Total payment required from each domestic consumer would be:

Share of Mains Cost	£4387.27
Cost of Service	£1300
Less Fuel Poor Voucher	(2410)
Cost to customer	£3277.27

Total payment required from each commercial premises would be:

Share of Mains Cost	£4387.27
Cost of Service	£1300
Cost to customer	£5687.27

Example 8 - Connection to another Gas Transporter's system supplying a housing development

Job Detail

- Gas Transporter's system situated adjacent to an existing NGN main
- Gas Transporter to install their system up to relevant main

- No anticipated difficulties associated with the construction works
- Anticipated aggregate annual consumption 1,560,000kWh
- Anticipated peak 6 minute flow rate: 45 standard cubic metres per hour
- No requirement for mains reinforcement

Note: Each CSEP connection cost is based on the size of the parent main, the connection type and the offtake size.

Quote details

Customer would receive a bespoke quotation.

At the time of publication, quote:

Labour cost	£ 472
Materials cost	£ <u>268</u>
Total connection charge	£ 740

Example 9 - Connection to another Gas Transporter's system supplying a non-gas fuel poor community

Job Detail

- Gas Transporter's system situated adjacent to an existing NGN main
- Gas Transporter to install their system up to relevant main and self connect
- No anticipated difficulties associated with the construction works
- Anticipated aggregate annual consumption 1,900,000kWh per annum with SOQ of 14,184 kwh per day
- Gas Transporters system will supply 100 properties all domestic
- System lies within one of the top 25% most deprived LSOA's
- No requirement for mains reinforcement
- Cost of construction is £250,000

Quote details

IGT would receive a zero quotation as no connection charges would apply, together with the applicable CSEP Fuel Poor Voucher that would apply if all 100 properties connected to the Gas Transporters System.

Total forecast annual revenues from customers = £10,815

NPV of total revenues over 45 years = £167,374

Total forecast annual value of NGN CSEP charges = £5,068

NPV of forecast CSEP revenues over 45 years = £78,450 = CSEP Fuel Poor Voucher as cost of construction greater than NPV of total revenues

CSEP Fuel Poor Voucher per eligible customer = £785

Example 10 - A single connection by a fuel poor customer to another Gas Transporter's system

Job Detail

- Property located in a CSEP with 50 other properties already connected to the Gas Transporters system
- Existing premises in a street with containing a Gas Transporter Relevant Main.
- Anticipated annual consumption: 19,000kWh per annum (SOQ 142 kWhr/day)
- Cost of connection £1000

Quote

No quote would be issued as this is not a connection to the NGN system. A CSEP Fuel Poor Voucher would apply.

Total forecast annual revenue from customer = £108

NPV of total revenue over 45 years = £1674

Total forecast annual NGN CSEP revenues = £58

NPV of NGN CSEP revenues = £898

CSEP revenues as a percentage of total revenue = $898/1674 = 54\%$

As cost of construction (£1000) is less than NPV of total revenues (£1674) then CSEP Fuel Poor Voucher = cost of construction * NGN share of future revenues = $£1000 * 54\% = £540$

