

SGN Third Party Connections Briefing Note 8

(Guidance on SGN Reinforcement Policy)

1. Introduction

Requests for new or increases in gas demand that reduce existing network pressures below that of predefined minimums or reduce existing CSEP pressures to a figure lower than its contractual source pressure when Network Analysis is undertaken require the network to be reinforced to ensure system design minimums and CSEP source pressures are restored. This reinforcement may take the form of new pipelines being laid or the installation or modification of other equipment to increase the pressure within the system.

SGN's policy for reinforcement is outlined in SGN Connections Charging Methodology and Standard Condition 4B Statement Section 3.

2. SGN Reinforcement Policy

As per SGN's General Conditions of Contract (GCC) and SGN Connections Charging Methodology Standard 4b statement, all reinforcement must be built on a '*least cost solution*' basis, that being the cheapest option available to ensure contractual customer pressures for new connections are met, extremity pressures on the network model meet minimum operating pressures and that any pre-existing CSEPs are either unaffected in regards to agreed contractual connection pressures.

SGN Connections Standard 4b statement section 3.1 states:

'SGN will construct apparatus on a least cost 'fit for purpose' basis. This means that where there are different design solutions that meet a customer's requirements, the one that is anticipated to have the lowest overall cost of construction will be selected'

Costs associated to reinforcement for new loads where a Security of Supply check has been carried out as part of a Fastrack Submission are wholly the responsibility of SGN and are classified as 'General Reinforcement'.

Costs associated to reinforcement for new loads where Network Analysis has been undertaken or are identified as being non-typical are classified as '*Specific Reinforcement*'. Subject to the location of the Charge Point, Specific Reinforcement is applicable to the SGN Economic Test to identify a split in SGN and customer contribution.

Reinforcement is separated into A, B, C and OTHER on Quotation paperwork.

Reinforcement A is customer contributable for an '*on site charge point*' reinforcement scheme that has failed the Economic test.

Reinforcement B is SGN contributable for whatever the customer does not pay, whether this be entire or part chargeable, post Economic testing.

Reinforcement C is for the economic element of a '*contiguous*' reinforcement scheme, which is single site-purpose reinforcement, that doesn't tie back into the Network. Any uneconomic contiguous reinforcement is classed as Reinforcement A.

‘Other’ Reinforcement is reinforcement chargeable to the customer where the Charge Point is off site and deemed a ‘*Connection charge*’. The reinforcement main is then separated between a ‘Reinforcement cost’ and a ‘*Connection Cost*’.

Where elevated pressures higher than standards quoted in NP/14 are requested by a third party, any associated reinforcement required to provide this enhancement will be fully chargeable to the third party.

SGN’s Standard 4B Charging Statement sections 3.12.10 - 11 states:

‘Costs associated with reinforcement work that are required to increase the gas pressure at an existing supply point or connected system exit point (CSEP) will be charged to the enquirer.

Where requested by the customer, and where practicable and consistent with the other provisions of this statement and the Uniform Network Code, SGN will provide pressure elevation at a new supply point or CSEP, free of charge if the required pressure is predicted to be continuously available during the subsequent planning period. The planning period is five years for below 7Barg networks and ten years for above 7Barg 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 below, the cost of this work will be charged to the person requiring the elevated pressure.’

Reinforcement charges do not apply to individual premises expected to consume less than 73,200 KWH per annum (AQ), and therefore the Economic Test does not apply.

Should a proposed reinforcement scheme be significant enough or encounter an engineering difficulty along the proposed route it will be considered a Sufficiently complex Job (SCJ). See SGN Third Party Connections Briefing Note 19 for further info.

3. Charge Point

The ‘Charge Point’ is an identified economically feasible point on the SGN Network that is deemed to have sufficient capacity to supply a new demand disregarding all existing loads. The Charge Point creates a financial distinction between reinforcement costs that are fully chargeable to the customer (Connection Costs) and upstream reinforcement costs, funded by SGN, subject to the Economic Test.

SGN Specification NP/14 states:

‘The Charging Point is the nearest point on a main of the requested pressure tier, where the fully developed load can be supplied with no other loads on the network. The charging point is a theoretical entity that creates the financial distinction between the ‘connection’, which is fully charged to the customer, and the ‘system reinforcement’, which should be funded by Scotia Gas Networks (subject to the economic test).

This process shall be used whenever a potential load cannot be supplied from the nearest main of the pressure tier requested, or higher, (subject to normal Scotia Gas Networks’ Connections Policy Manual rules for connection) without reinforcement being provided. In these circumstances, the charging point shall be identified via network analysis with the potential load as the sole demand on the network.’

If the charge point is different to the connection point, I.E. upstream, it is deemed ‘off-site’ and the downstream section of reinforcement, between the charge point and the connection point to achieve minimum design pressure at the connection point is fully chargeable to the customer. The remaining upstream section is subject to the Economic Test to identify how the cost of this is apportioned between SGN and the customer.

If the charge point is identified as being at the connection point, then this is deemed 'at site' and the entire length of reinforcement will go through the Economic test to identify how the cost of this is apportioned between SGN and the customer.

Where reinforcement is required and a third party has requested elevated pressures greater than standard pressures quoted in NP/14, the difference in reinforcement length from achieving standard design pressure and the requested pressure will not be subject to the Economic test and will be fully chargeable to the customer.

SGN Standard 4b section 3.12.2 states:

'SGN 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. SGN funds specific reinforcement upstream of the connection charging point, subject to the Economic Test in respect of distribution network system reinforcements.'

4. Alternatives to Reinforcement

Where available and least-cost to the customer, an 'alternative to reinforcement' may be deemed the ultimate solution where a proposed load results in connection point or extremity pressures being below minimum.

SGN Standard 4B section 3.12.13 states:

'To ensure efficient system development, it's sometimes necessary to upsize a connection or reinforcement pipe beyond that which is required for the load. SGN 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 the probability that subsequent reinforcement will be required. SGN will fund the reasonable marginal cost of upsizing apparatus that we adopt.'

Where SGN 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*
- *The connection costs plus any contribution towards specific reinforcement associated with the original connection charging point route*

In respect of such 'alternative to reinforcement connections' by Independent Connection Providers or other Gas Transporters, they will be informed of where the connection should be made. They will then be offered a payment to offset the estimated additional cost associated with connecting at the alternative point.

If the customer insists on making a connection at another point which represents a sub-optimal system development solution, then SGN will charge the full cost of any associated reinforcement.'

In short, an 'alternative to reinforcement' solution is warranted when a proposed load results in reinforcement and connecting to an alternative point on the network would result in a lower overall project cost.

Appendix 1 shows an example of an Alternative to Reinforcement solution.

Where warranted by procurement law and approved by SGN, UIPs and iGTs can undertake 'Alternative to Reinforcement' works in the same way that they carry out other installation and

connections work. SGN will fund any additional work that is involved when an '*Alternative to Reinforcement*' solution is required.

Where '*Alternative to Reinforcement*' works are agreed, SGN expects the third party to undertake construction, connection and commissioning of the pipeline, however SGN will offer a final connection service if requested, and the costs will be shown separately on a quotation under '*Connection costs*'.

In accordance with SGN's Standard Licence Condition 4B Statement section 2.13, the '*Alternative to Reinforcement*' route will be designed on the basis of providing lowest overall cost. Where the alternative scheme is more expensive than the original reinforcement proposal, SGN will pay a contribution to the third party, equal to the difference between the two costs.

Where the '*Alternative to Reinforcement*' scheme is cheaper than the original reinforcement proposal a payment will not be made.

In both cases the third party will be required to lay pipe and install any other required apparatus from the alternative connection point to the site.

All cost comparison and approval decisions will be based on contractor and connections rates at the time of quotation.

Where SGN makes a payment to offset the additional cost of the Alternative to Reinforcement, the third party should submit an invoice for works undertaken, matching that of the figure agreed prior to quotation, upon completion of the works. Where SGN are to adopt any pipe line or associated asset, '*completion*' is classified as commissioning, backfill and reinstatement of the works and submission of an acceptable and valid completion file to SGN.

Appendix 1

Figure 1 (not to scale):

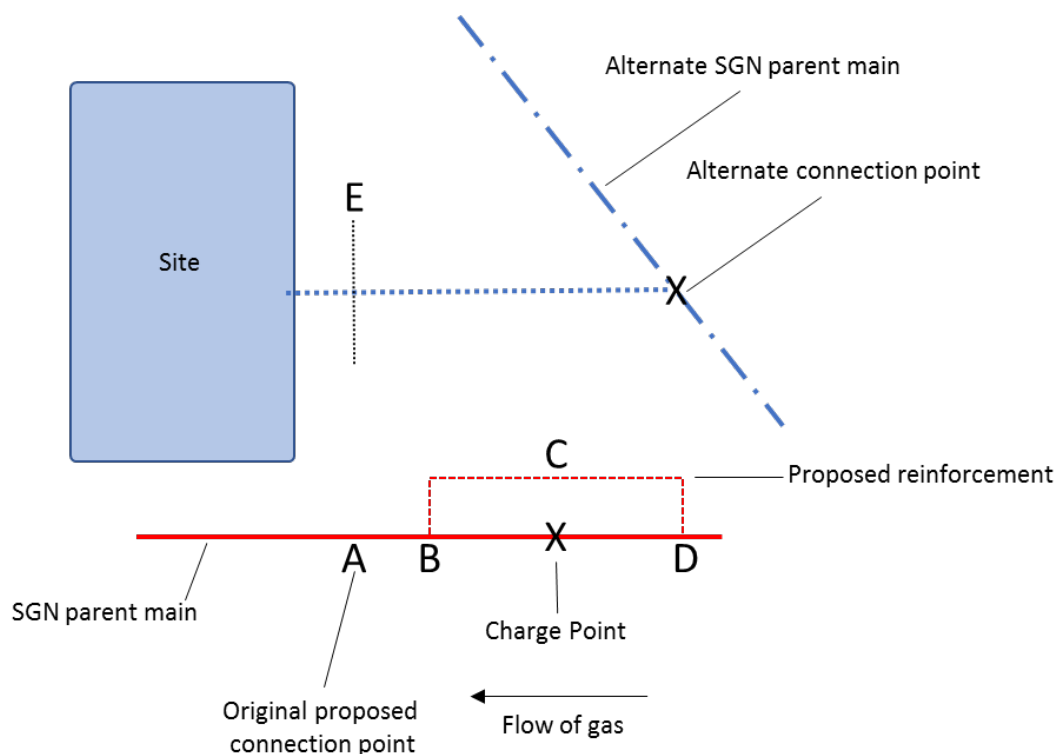


Figure 1 shows a proposed connection point (A) to a new CSEP site, which has triggered reinforcement shown as the dashed line from B to D.

The Charge Point has been identified as being 'Off site', shown as C.

SGN has identified a cheaper 'Alternative to reinforcement' solution, shown as the Alternate connection point onto a medium pressure main. In this instance, the pipeline construction works will be undertaken by the third party but the final connection and commissioning of the asset will be undertaken by SGN, as part of our Costed Connections service. SGN will retain ownership of the new medium pressure pipeline up to point E, which represents the location of the revised iGT CSEP location.

Total costs associated with the original low pressure connection, with reinforcement:

	Excluding overheads	Including overheads
Cost D to C:	£69K	£100K
Cost C to B:	£35K	£50K
Connection (A):	£1.4K	£2K
Total costs:	£105.4K	£152K
Allowable investment:	£55K	£80K

Customer costs associated with the original low pressure connection, with reinforcement:

Connection (A): £2K

Chargeable reinforcement (downstream of charge point) (C to B): £50K

Chargeable reinforcement (upstream of charge point that has failed economic test) (D to C): £20K

Total customer cost for original connection: £72K (Including overheads) (£2K + £50K + £20K)

Total costs associated with the Alternative to Reinforcement medium pressure solution:

Alternate connection:	£5K
PRI:	£15K
Pipe materials:	£100K
 Total costs:	 £120K

Customer and SGN contributions towards Alternative to Reinforcement medium pressure solution:

The total cost of the 'Alternative to Reinforcement' solution (£120K) is lower than the original proposed connection inclusive of reinforcement (£152K) and is therefore the most efficient solution.

The SGN contribution is determined from deducting the customer contribution for the original reinforcement cost from the total cost of the '*Alternative reinforcement*' solution: £120K - £72K = £48K

The revised connection cost of £5K would be shown on the quotation separately.