

## **Capacity for distributed gas entry**

### **Gas Act obligation**

Gas Act section 9 obliges transporters to develop an economic and efficient system. Standard Special Condition D12 3b requires the DN to offer the maximum flow rate that is available from time to time.

### **Current method of capacity analysis**

The DNs will analyse capacity using the following principles.

Analyse available capacity on day of minimum demand using network analysis models assuming the appropriate proportion of peak day flow for that network and pressure tier. We would use models for the period up to the end of the next Forecast Year 1. A check will be performed to ensure that the capacity is not reliant on a few large loads. Relying on large loads is not a tenable strategy as there can be no guarantee that the demand will always match the supply for example due to short term or long term plant shutdowns.

- Where there is sufficient capacity the available capacity will be offered
- Where there is insufficient capacity to meet the entrant's request, the entrant may ask the DN to consider other measures to provide the requested capacity. The entrant would need to pay for the feasibility study to determine what options are available and any measures taken to provide capacity which would be chargeable to the connecting party

### **Methods of providing increased network capacity**

Networks can provide increased entry capacity by the following methods which may not be available in all circumstances.

- Changing current network dynamics
- Linking two networks
- Within network compression

#### Changing current network dynamics

This allows the distributed gas injection to be the "lead" and to back out the gas from the NTS. There are cost implications for on going analysis, control centres and operations. This solution may also detrimentally affect pressures at times of high demand.

#### Linking two networks

In this case two adjacent networks could be linked to provide a larger network to take the available gas. Each case would need to be examined on a case by case basis and there is likely to be a cost.

#### Within network compression

This might be possible in the future if the within-network compression IFI project produces positive results. A compressor would be installed to pump gas up to a higher pressure level at times of low demand on the network to which the distributed gas source is connected.

### **Changes in available entry capacity after the connection is made**

If the exit demand on the local network to which the entrant is connected reduces at some point in the future then in some cases the entrant may not be able to inject gas. If it is possible to reinforce the network to allow the entrant to continue to inject gas then either

- The entrant pays for the reinforcement
- The reinforcement is treated as general reinforcement

#### Entrant pays for the reinforcement

In this case the entrant takes on an open ended liability to pay for reinforcement for the life of the plant. This would be inconsistent with the approach taken for Exit demands where a gradual increase in demand leads to general reinforcement. If this approach is adopted it seems likely that the number of distributed gas schemes implemented will reduce as only those where there is plenty of capacity will be viable. This solution is likely to become complex if two or more entrants share inject gas into the same network.

The reinforcement is treated as general reinforcement

This seems to be the only realistic option. This would be consistent with the treatment of exit.

**Proposal**

Following the successful connection of a distributed gas connection any future reinforcement of the Network to provide the contracted capacity should be treated as general reinforcement and included within the DN's RAV.

General reinforcement to support entry would be defined as reinforcement caused by changes in exit demand that means that there is no longer sufficient entry capacity available to enable gas entrants to continue to inject gas at the rate agreed at the time of connection and for which there was sufficient entry capacity at the time of connection over the DN'sTs planning horizon (up to the end of Forecast Year 1).