NTS ENTRY CAPABILITY AT A NODAL LEVEL

1 BACKGROUND

In accordance with the Ofgem industry letter 'National Grid Gas National Transmission System Entry capacity: Development of the regime ahead of winter 2007/8' of the 19th June 2007 and the associated requirement for National Grid to provide further capability data, network analysis has been undertaken to determine system capability on a nodal basis.

Further information that NGG will publish on the physical capability of the NTS to accept gas at nodal level at different levels of system demand by 6 July 2007 at the latest for all ASEPs.

2 ASSUMPTIONS

2.1 Demand Levels

- Network analysis was undertaken on the 2007/8 audited 2007 Plan networks for the following demand levels:-

  438 mscmd (Anticipated highest demand level in an average winter)
  351 mscmd (typical shoulder month demand level)
  257 mscmd (typical summer demand level)

A supply demand balance is maintained at all times throughout the analysis.

2.2 Network Infrastructure

- The infrastructure assumed within these networks are projects currently commissioned and those planned for 2007 completion as follows:-

  2006/7 commissioned pipeline projects
  - Ganstead to Asselby

  Assumed pipeline projects available for winter 2007
  - Pannal to Nether Kellet
  - Milford Haven to Aberdulais
  - Felindre to Tirley

- A 100% plant availability was assumed with no consideration of maintenance activities currently planned or otherwise.

- The system capability determined assumes the ASEP/delivery facility associated with the specified node is not restricted by physical connection assets or contractual limitations e.g. metering ranges.

2.3 Pressure assumptions

- All system pressure commitments and limits were adhered to throughout the analysis.
    - During this process, if any maximum supply point pressure, minimum exit point pressure or system limit is breached and cannot be resolved through reconfiguration of the system, then the capability of the specified node is considered to have been reached.

3 METHODOLOGY

The nodal analysis considered individual ASEPs independently within any given zone.

Due to the limited timescales defined to undertake the analysis, it was agreed with Ofgem that in determining the capability on a nodal level, the maximum nodal level would be limited to 150% of the gas entry capacity baselines stated within the Transmission Price Control Review Final proposals document should this level be reached before a physical network constraint.

3.1 Maximum nodal capability

To derive the maximum capability for a particular 'node' (ASEP), supplies were redistributed across the network in a manner favourable to the specified 'node' prior to determining the capability.

This methodology leads to the reduction of supplies (towards zero) having the greatest interaction with the node being considered.

Generally, these supplies were:-

- within the same 'zone'.
- Adjacent to the node being maximised
- Sharing common infrastructure

3.2 Minimum nodal capability

To derive the minimum capability for a particular 'node' (ASEP), supplies were redistributed across the network in a manner unfavourable to the specified 'node' prior to determining the capability.

This methodology leads to the increase in supplies (towards forecast maximum level) having the greatest interaction to the node being considered.

Generally, these supplies were:-

- within the same 'zone'.
- Adjacent to the node being maximised
- Sharing common infrastructure

In some cases the capability of the specified node was reduced to zero by the capacity effectively being completely 'locked in' due to the resultant unfavourable supply pattern.

3.3 General Points to Note

- All ASEPs within the network can be considered to have an impact on any other ASEP across the network.

- ASEPs located in different zones can have significant impact on each other where common infrastructure is utilised.
  E.g. Teesside within the Northern Triangle Zone can have a significant impact on the adjacent Easington Area Zone ASEPs.

- The methodology employed for the maximum nodal analysis considers that the specified node has preference with respect to capacity, compared to other supplies.
  - ***In order to achieve the maximum capability at the specified node, supplies from other areas of the network will need to be limited towards zero.***

- The methodology employed for the minimum nodal analysis considers that other supplies have preference with respect to capacity, compared to the specified node.
  - ***The specified node may need to be limited in order to maintain supplies from other areas of the network.***