Appendix 9

Entry Capacity

A9.1 System Entry Point Maximum Capacities
A9.2 Aggregate Beach Supplies
A9.3 Effective Terminal Entry Capacities

Appendix 9: Entry Capacity

The entry capacity associated with terminals on the National Transmission System (NTS) is determined by the installed pipelines and other plant. However, the amount of gas entering the NTS on a particular day cannot greatly exceed demand. Therefore, in general, effective entry capacity reduces as demand reduces and therefore has a seasonal dependence.

It is possible to define the entry capacity available at peak conditions and these maximum capacities are given in Section 9.1.

The interdependent nature of the NTS is such that the profile of supply and demand affects the maximum amount of gas that can be accepted at a particular terminal. It is, therefore, not a simple matter to quantify entry capacities. For the purpose of this Appendix, entry capacity profiles are shown for individual terminals based on seasonal normal weather conditions, and assuming typical patterns of supply and demand. Other than during cold weather periods, shippers will have some flexibility in the quantities that they wish to have transported from individual terminals.

Generally, the NTS has more flexibility in terms of entry capacity than many gas purchase contracts have in terms of peak rate availability during the off-peak months. Gas producers need reduced delivery rate obligations for maintenance purposes. There can be some reduction in NTS capacity in the summer for maintenance reasons, but gas production availability is usually a greater constraint on supply availability. Nevertheless there could be some limitation on NTS entry capacity under extreme combinations of entry flows nominated to meet off-peak demands. If this situation arose it would be because flows in some parts of the NTS would otherwise exceed design flows.

The diagrams and explanatory notes in Section 9.2 illustrate some of these factors. ***The entry capacity profiles shown for individual terminals are indicative only, because they apply only to the specific conditions and assumptions described.***

A9.1 System Entry Point Capacities At Peak Demand Levels

Section I 3.7 of the Network Code deals with situations where an onshore problem affects Transco's ability to accept deliveries at a system entry point. The Code contains a formula to calculate the amount Transco pays to relevant users in such circumstances. The following table shows the maximum capacities for the purposes of applying the formula.

The potential maximum terminal capacities quoted above have been used to derive the system entry point capacities by proportioning the maximum expected delivery in 1998/99.

Table A9.1 System Entry Point Capacities For A Peak Day In 1998/9 (mcm per day)

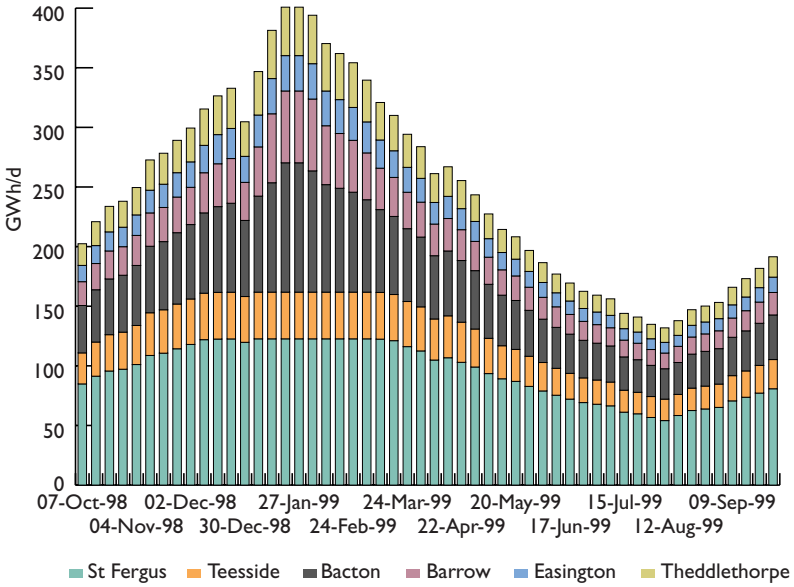
Aggregate Entry Point	System Entry Point	Capacity
Bacton	Bacton-Phillips	31.80
	Bacton-Amoco	37.20
	Bacton-Shell	41.00
	Total Bacton	**110.00**
Barrow	**Barrow-HRL**	**65.00**
Easington	Easington-BP	7.30
	Easington-BP Dimlington	17.40
	Easington-BG Amethyst	10.20
	Easington-BG Rough	40.10
	Total Easington	**75.00**
St Fergus	St Fergus-Mobil	49.70
	St Fergus-Total Oil Marine	32.90
	St Fergus-Shell	42.40
	Total St Fergus	**125.00**
Teesside	Teesside-Enron	24.00
	Teesside-Amoco CATS	16.00
	Teesside Total	**40.00**
Theddlethorpe	**Theddlethorpe-Conoco**	**50.00**

The system entry point capacities show how the delivery facility flows would be accommodated within the maximum terminal flow. They are indicative only and do not reflect the actual physical capacity of delivery facilities connected to the Transco system, nor will they be used for the purposes of determining input curtailment advice.

A9.2 Aggregate Beach Supplies

The following graph shows the variation of demand through the year under seasonal normal weather conditions, with expected profiles of beach supplies used to meet demand. Transco has generated these profiles based on experience of the patterns of scheduling gas supplies. The data is from the 1998 Base Plan Assumptions and is presented in the form of weekly demands over a year. ***The entry capacity profiles shown for individual terminals are indicative only, because they apply only to the specific conditions and assumptions described.***

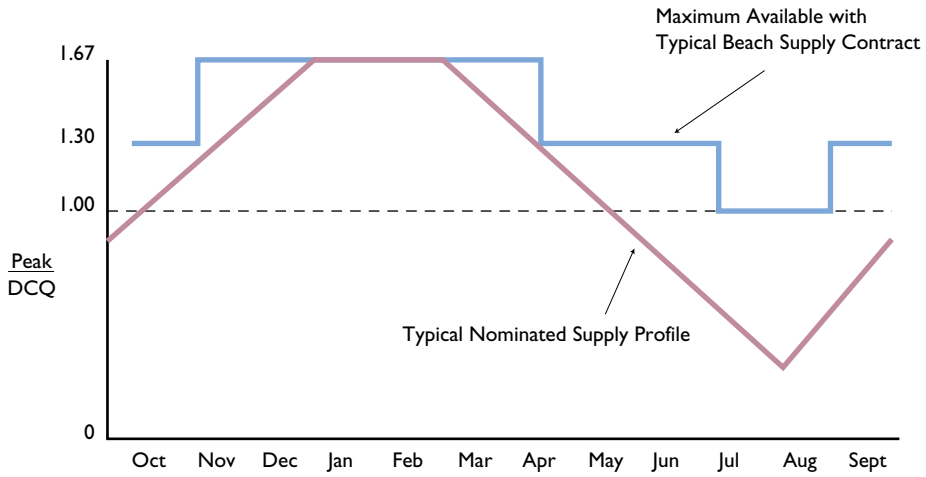
Figure A9.2a Beach Supply Profiles 1998/9



The maximum supply availability at St. Fergus, for which entry capacity has been provided, exceeds the minimum demand day in mid-summer. Consequently the ability of the system to accommodate gas flows at St. Fergus is effectively reduced in mid-summer even if there was no gas at all entering the system at other terminals.

The following graph shows how the envelope of peak rate availability of a beach supply with a high swing factor might be nominated to follow the seasonal demand profile shown in Figure A9.2a.

Figure A9.2b Typical Beach Supply Daily Availability



Note: DCQ = Annual Contract Quantity/365

A9.3 Effective Terminal Entry Capacities

The following graphs show the combined effect of transmission constraint and lack of demand on effective entry capacity associated with the six terminals. The standard profiles, expressed as a ratio of booked capacity, are taken from Figure A9.2a. The maximum profiles are based on the transmission capacity available to move gas further south as demand in the North falls. In each case the effective capacity at an individual terminal could be higher, but there would then be a corresponding reduction at one of the others.

Figure A9.3a St Fergus Standard & Maximum Supply Profiles 1998/9

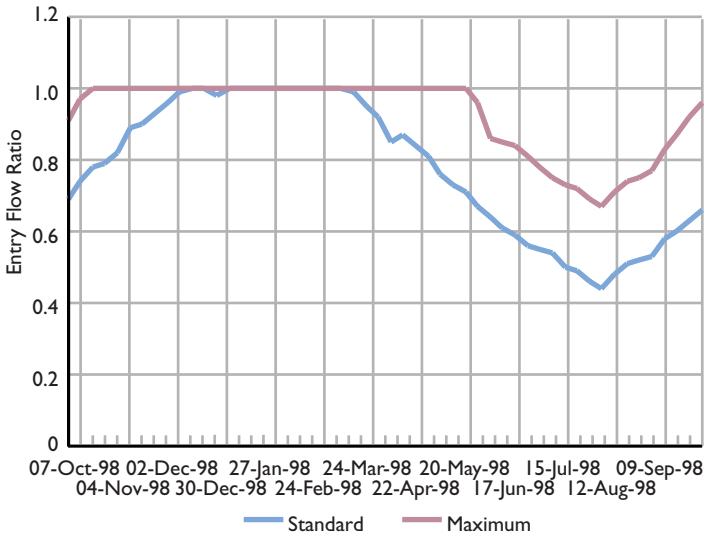


Figure A9.3b Easington Standard & Maximum Supply Profiles 1998/9

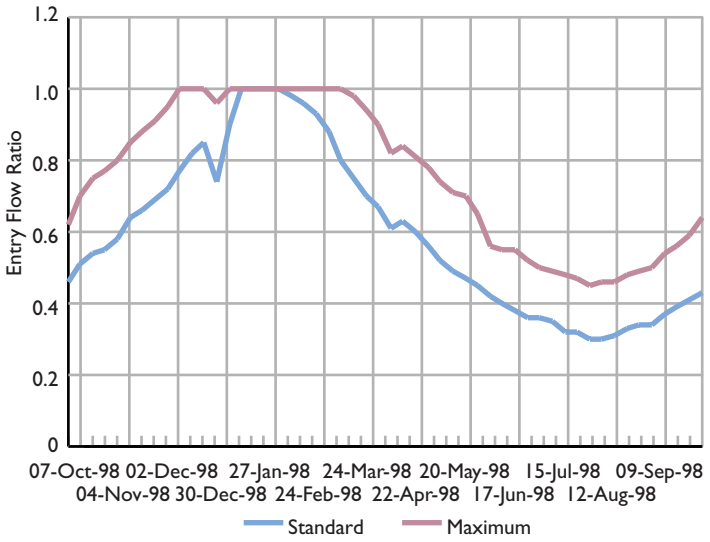


Figure A9.3c Teesside Standard & Maximum Supply Profiles 1996/97

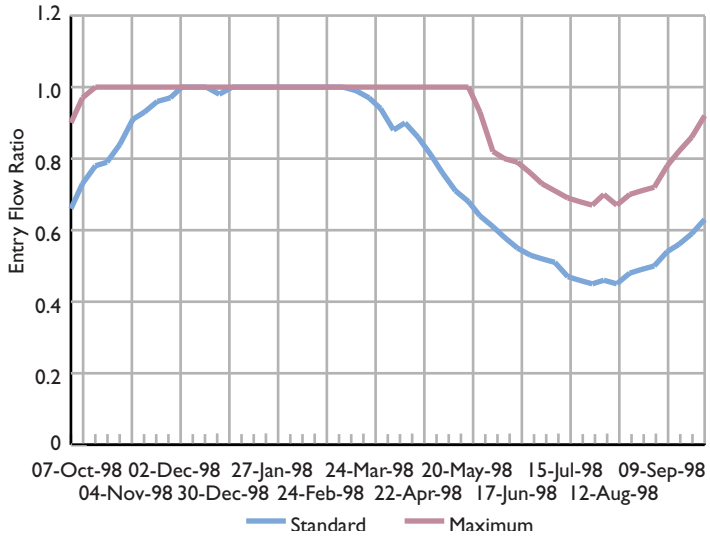
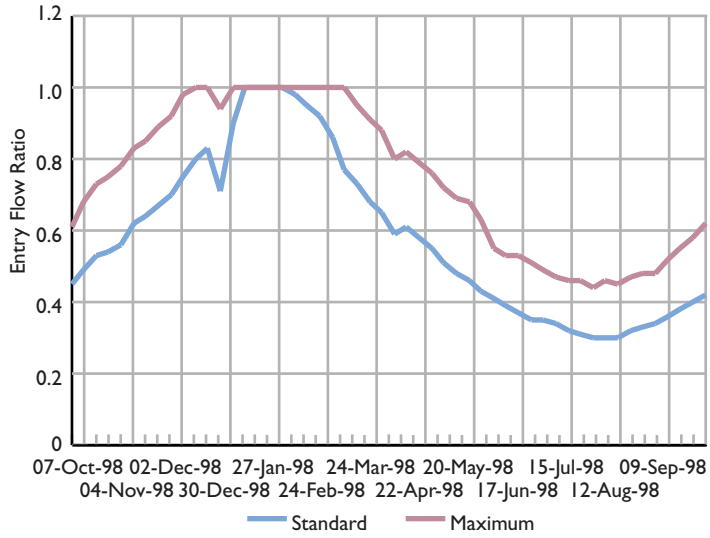


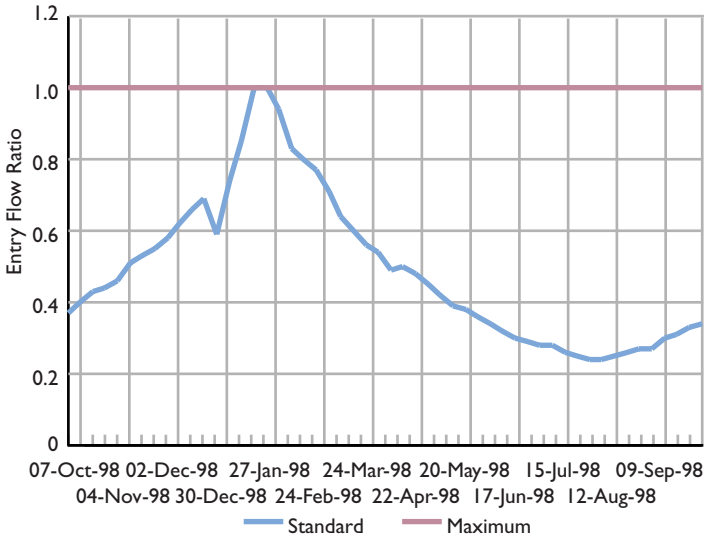
Figure A9.3d Theddlethorpe Standard & Maximum Supply Profiles 1998/9



In the case of the four terminals above, the maximum profile for about three months in mid-summer is constrained by total system demand. The profiles are based on the assumption that there is no other gas entering the system at other terminals, and would be lower if that were not the case. Conversely the maximum profiles would generally be higher (nearer to 1) during cold weather because of the "system demand" effect.

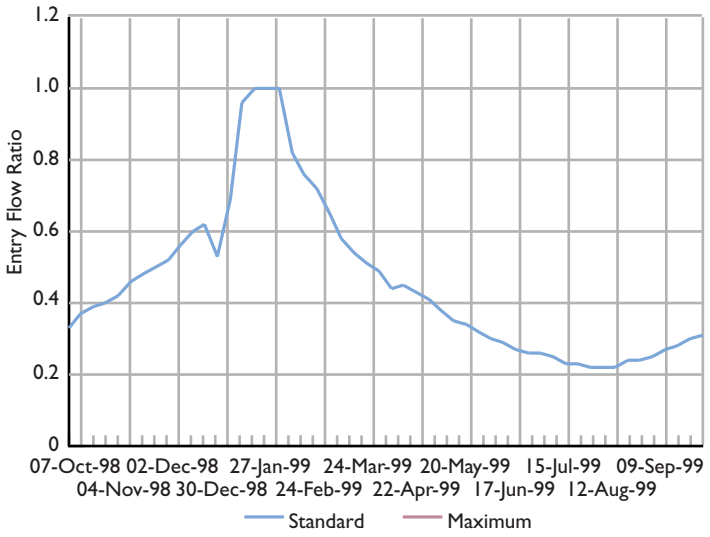
Within the "system demand" constraint, there is considerable flexibility to vary individual terminal inputs relative to the "standard" profile when considered in terms of the forecast supplies and demands.

Figure A9.3e Bacton Standard & Maximum Supply Profiles 1998/9



The "system demand" effect is accentuated in the case of Bacton, as effective entry capacity is always less than demand, even in midsummer. The maximum profile assumes that all other supplies entering the system are reduced to zero for about three months during the summer. In practice this is unrealistic and shows that there is little likelihood of real constraint on entry capacity at this terminal.

Figure A9.3f Barrow Supply Profile 1998/9



A maximum profile is not shown for Barrow as it is not currently stand-alone gas.