

**The January 2003 Long-Term System Entry
Capacity Auctions**

A review document

August 2003

Summary

Transco conducted the first long-term auctions for entry capacity rights to its National Transmission System (NTS) in January 2003. Entry capacity rights were made available out to 2017, in quarterly strips, at each entry point to the NTS. Previously, access to the NTS was available only on a short-term basis, with six months of capacity offered twice a year. The long-term auctions, supplemented by trading of entry capacity rights on secondary markets, are intended to improve the signals Transco receives to inform its investment decisions, which, when combined with its investment incentives, should facilitate efficient levels of investment and security of supply. As these were the first long-term auctions for gas transmission capacity held in Great Britain, Ofgem considered that it would be appropriate to review the outcomes of the auctions.

It was encouraging that there was a high level of participation in the first long-term auctions. 24 gas shippers participated in the auctions, with capacity demanded out to 2017. Demand was naturally highest in the early years and tapered off subsequently. From a logistical point of view, the auctions appear to have operated smoothly, under auction arrangements which were quite different from the previous short-term auctions.

Ofgem considers that the auctions enable Transco to receive improved and reliable investment signals, the importance of which should increase over time. The January 2003 auctions, held shortly after the conclusion of Transco's periodic review, which allowed substantial funding for expanding entry capacity, were not anticipated to result in demand for entry capacity significantly above the existing quantities on offer. While Transco did allocate some non-obligated incremental entry capacity at St Fergus in the early quarters on offer, it is only from the landing of significant 'new' gas or gas at different locations, that Ofgem would expect to see the long-term auctions signalling new investment in Transco's NTS. In this respect, we would expect plans for new liquefied natural gas (LNG) import terminals at Milford Haven in Pembrokeshire, Wales, new storage facilities and gas from new sources (such as Norway and the Netherlands) to be signalled in Transco's long-term entry capacity auctions.

Many market participants have expressed satisfaction with the long-term entry capacity auctions and have warned against making major changes to the auction rules. Ofgem is in broad agreement with this approach and considers that changes should only be made to the auction rules if they are clearly warranted and supported by robust analysis.

However, Ofgem does consider that the January auctions highlighted a number of weaknesses in the design of the auction. Transco pro-rated demand in some quarters at the St Fergus terminal, due to excess demand. Ofgem considers that pro-rating may lead to an inefficient and potentially discriminatory method of allocation and that price is a preferable method of rationing scarce capacity in the short term.

In addition, there were instances of bidding in the auction which appeared to be designed to keep open the auction, rather than being reflective of true demand for entry capacity. While it does not appear that this bidding had an effect on the outcome of the January auctions, Ofgem is concerned that it demonstrates a weakness in the closure rule of the auction.

During the auction, there was confusion over the methodology Transco used to determine the notional clearing price, which is used to determine whether the auction would close early. Transco did not use the methodology which the majority of the industry had understood was to operate. Subsequently, Transco raised a proposal (623) to change its network code, which Ofgem has approved. Our reasons for this decision are set out in an appendix to this document. This change, by reducing the volatility in the notional clearing price, may reduce the ability of shippers to attempt to game the auction, by making it more likely that the auction could close earlier, with shippers being committed to honour their capacity bids. Apart from the changes approved in this modification, there are no other proposals to change the auction rules from those that operated in the January 2003 auction.

Going forward, the next long-term entry capacity auctions are due to be held in September 2003 and at least annually thereafter. Ofgem envisages that the auctions will continue to evolve via a process of ongoing review and incremental changes where these changes are clearly demonstrated to be beneficial. However, Ofgem will be mindful of shippers' concerns, that major change could undermine the value of the capacity product being sold, in considering any future proposals to change the auction rules.

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1. Introduction

Purpose of this document

- 1.1. This document reviews the long-term system entry capacity (LTSEC) auction which was held in January 2003. As this was the first such auction, Ofgem considered that it would be beneficial to conduct a review of the auction as a whole. The purpose of the review is to summarise the results of the auctions, and to identify any changes or improvements that could be made to the auction process.
- 1.2. In a letter to the industry of 25 February 2003, Ofgem suggested the following issues to consider in the review:
 - ◆ the signals from the auction (which indicated that Transco should not release obligated incremental entry capacity at this point in time);
 - ◆ the use of quarterly capacity strips;
 - ◆ the length of the auction process;
 - ◆ the role and effectiveness of the auction closure rule;
 - ◆ Transco's methodology for calculating notional clearing prices and the impact of this methodology;
 - ◆ bidding behaviour, including the effect of the pro-rating rule; and
 - ◆ the extent of information released during the auction process.
- 1.3. Ofgem also sought views from the industry on the above issues and on whether any other matters should be considered. We received a number of responses to this letter and these views are summarised in this document. There was broad agreement with the suggested scope of the review, with strong support for avoiding any major changes to the auction process.
- 1.4. Subsequently, on 16 May 2003, following industry workstream discussions, Transco raised network code modification proposal 623, *'Modification to LTSEC*

Weak Closure Rule'. Ofgem has decided to approve this modification and our reasons for this decision are contained in Appendix 1.

Structure of this document

- 1.5. The content of the remainder of this document is as follows:
- ◆ Chapter 2 outlines the background to the LTSEC auctions, including the rationale for their introduction and a summary of their features;
 - ◆ Chapter 3 considers the process of the auction, over the ten rounds, including bidding behaviour;
 - ◆ Chapter 4 summarises the results of the auction, including allocated volumes of capacity and clearing prices; and
 - ◆ Chapter 5 summarises the results of our analysis and gives a suggested way forward.
- 1.6. The document also has three appendices. Appendix 1 contains Ofgem's reasons for our decision on network code modification proposal 623. Appendix 2 contains a map of Transco's National Transmission System (NTS). Appendix 3 contains our analysis of the operation of the requirement on Transco to reserve 20 per cent of capacity rights for short-term release.
- 1.7. If you would like to discuss any aspect of this document, Mark Vaughan (020 7901 7009, mark.vaughan@ofgem.gov.uk) or Lyn Camilleri (020 7901 7431, lynette.camilleri@ofgem.gov.uk) will be pleased to help.

2. Background

Introduction

- 2.1. The introduction of auctions of entry capacity rights to Transco's NTS over an extended period represents a major development of the entry capacity regime. Prior to their introduction and since 1999, capacity had only been auctioned for a short period ahead. Long-term auctions are an important element of a package of reforms which are designed to improve the signals and incentives on Transco to invest efficiently in the provision of entry capacity to the NTS, to meet the needs of its customers. They also allow shippers the option of having the certainty of securing access rights at known prices for an extended period.
- 2.2. In this chapter, the background to the development of the auctions is outlined, followed by a description of Transco's incentives and other components of the entry capacity regime. The features of the LTSEC auctions are also considered, in advance of the analysis of the auction process and outcomes presented in chapters 3 and 4.
- 2.3. A map of Transco's NTS, showing the existing entry points, is contained in Appendix 2.

Long-term system entry capacity auctions: the rationale for reform

- 2.4. Since 1999, a number of auctions have been developed for the sale of entry capacity rights by Transco. Firm entry capacity has been auctioned in both monthly blocks (via the monthly system entry capacity (MSEC) auctions, held twice each year to date and rolling monthly system entry capacity (RMSEC) auctions held in the last five business days of each month); and in daily blocks for the following day (via the daily system entry capacity (DSEC) auctions); and for the remainder of the gas day within each day (also via DSEC auctions).
- 2.5. In addition to bidding to purchase entry capacity from Transco, shippers can also trade entry capacity with other shippers. Activity in the secondary market is assessed further in Appendix 3.

- 2.6. The short-term entry capacity auctions regime introduced an efficient, non-discriminatory method of selling firm, tradeable entry capacity rights to the NTS. Under this regime, Transco is required to buy back firm entry capacity rights it has sold where expected gas flows against these rights exceed physical capability. Incentives were also placed on Transco to maximise the volume of capacity rights released and to minimise the costs of buying back capacity to manage system constraints.
- 2.7. While these changes to the entry capacity regime addressed short-term availability and allocation issues, the regime did not provide any long-term mechanism for the allocation of capacity rights to shippers. In addition, it did not seek to address the provision of long-term signals and incentives to inform decisions about investment in the NTS.
- 2.8. Ofgem responded to concerns raised by the gas industry and customers about the importance of shippers being able to secure entry capacity rights several years ahead of use and the need for improved long-term investment signals and incentives on Transco, by initiating a review in 2000.¹ The objectives of the review were to:
- ◆ promote the economic and efficient development of the NTS over the long term, to meet the needs of NTS users (and ultimately gas consumers); and
 - ◆ ensure that capacity rights would be sold in an efficient and non-discriminatory manner, such that competition in related markets (such as the supply of gas) would not be distorted.
- 2.9. A major objective of reform was to provide Transco with signals of NTS demand sufficiently in advance of the need for investment to accommodate that demand and to give Transco adequate incentives to respond to those signals where it is economically efficient to do so.

¹ *Long term signals and incentives for investment in transmission capacity on Transco's National Transmission System - A consultation document*, Ofgem, May 2000.

- 2.10. Following a series of consultations with the industry on how the regime could be developed further, Ofgem completed the review in 2000.² Ofgem proposed that a significant proportion of the available entry capacity should be auctioned over the long term, because the resultant price signals would give Transco valuable information to assist it in making future investment decisions. This information would add to the existing information from Transco's planning process and would give a reliable indicator of demand for entry capacity, because it would be backed by a willingness to pay for that capacity.
- 2.11. The exact features of the LTSEC auctions were developed by the industry through workstreams, culminating in the implementation of network code modification 500, '*Long-term Capacity Allocation*', on 30 September 2002. The main features of this modification are outlined later in this chapter.

Entry capacity incentives

- 2.12. Transco is the transmission asset owner (TO) and system operator (SO) of the NTS. Under Transco's Gas Transporter (GT) licence, it is funded through its TO price control to provide a series of baseline output measures (TO output measures) which are specified for each NTS entry point. This revenue includes an assumed rate of return on its regulatory asset value (RAV) of 6.25 per cent. If auction revenue is such that the maximum allowed revenue would be exceeded, other charges are reduced to offset this. If any over-recovery remains by the end of the formula year, this amount is carried forward and reflected in the maximum allowed revenue for the following year.
- 2.13. The TO output measures are based on an assessment of the maximum physical capacity of each NTS entry point. Transco is required to offer for sale 90 per cent of these output measures (referred to as initial NTS SO baseline entry capacity) as firm entry capacity rights, with 80 per cent currently via long-term auctions and the remaining 20 per cent (plus any previously unsold capacity) via shorter-term auctions.

² '*Long term signals and incentives for investment in transmission capacity on Transco's National Transmission System Conclusions on the framework*', Ofgem, December 2000.

- 2.14. Under its GT licence, Transco has an SO entry capacity investment incentive, under which it can earn higher or lower rates of return than the 6.25 per cent assumed under the TO price control on the sale of incremental entry capacity rights above the output measures.
- 2.15. Revenue associated with sales of obligated incremental entry capacity is treated as SO revenue, which must remain within the maximum allowed revenue calculated in accordance with Transco's GT licence. The maximum allowed revenue under the entry capacity investment incentive reflects the caps and collars specified in the incentive scheme. When actual revenue associated with the sale of obligated incremental entry capacity exceeds the associated maximum allowed revenue, the revenue is treated as general SO revenue. Transco is then required to reflect this when setting SO transportation charges, which must be set with a view to not exceeding the maximum allowed SO revenue. Other things being equal, this would lead to the SO commodity charge being lower than otherwise under the present charging structure.
- 2.16. When actual revenue associated with the sale of obligated incremental entry capacity is below the minimum allowed revenue implied by the collars in Transco's GT licence, Transco is also able to reflect this when setting SO transportation charges. Other things being equal, this would lead to the SO commodity charge being higher than otherwise under the present charging structure.
- 2.17. Obligated incremental entry capacity rights are additional to the SO baseline output measures and can be released where there is demand for such capacity signalled through auctions and following an application by Transco to Ofgem demonstrating that it has met the criteria for the release of this capacity as set out in its incremental entry capacity release (IECR) methodology.
- 2.18. The SO output measures and any levels of obligated incremental entry capacity together make up the level of obligated entry capacity which Transco must offer for sale. Transco has an obligation to offer this capacity for sale in at least one 'clearing allocation', which is defined as an allocation in which either the capacity offered for sale is sold, or in which the reserve price is zero. This obligation continues up to and including the gas day to which the capacity relates.

- 2.19. Obligated incremental entry capacity is divided into two types, either 'permanent' or 'annual'. In general, the concept of annual obligated incremental entry capacity was designed to allow Transco to earn entry capacity incentive revenue when it is able to bring forward already planned investment by one or more years, or if it can provide capacity additional to the baseline without necessarily permanently increasing the capacity of the system.
- 2.20. In contrast, permanent obligated incremental entry capacity will generally be associated with a need for investment above and beyond what has already been reflected in the TO price control. Permanent obligated incremental entry capacity is remunerated through the entry capacity investment incentive for a period of five years, and effectively forms part of the SO baseline output measures beyond that.
- 2.21. Under its entry capacity incentive, Transco can earn rates of return of between 5.25 per cent and 12.25 per cent on both types of obligated incremental entry capacity, over the incentive period. For permanent obligated incremental entry capacity, the incentive period is five years. For annual obligated incremental entry capacity, the incentive period is less than five years, as specified in a Transco proposal which has been approved by Ofgem.
- 2.22. At the end of the incentive period for permanent obligated incremental entry capacity, Transco is allowed revenues at the prevailing rate of return specified in its GT licence until the start of the following price control period. After this time, any associated assets are incorporated into Transco's RAV, with the maximum allowed revenue being set on the basis of the assumed TO rate of return, subject to the underlying investment being efficiently incurred.
- 2.23. Transco may also, and at its own discretion, accept bids in both long and short-term auctions for incremental entry capacity rights as non-obligated incremental entry capacity. For example, non-obligated incremental entry capacity may be released to the extent that Transco believes it can accommodate increased flows onto its system, or believes the available revenue is likely to exceed the increased cost of buying back capacity rights when flows cannot be accommodated. Revenue from the sale of non-obligated incremental entry capacity and all sales of capacity made on the day is attributed to Transco's entry capacity buy-back incentive.

Allocation of entry capacity rights

- 2.24. Transco makes available entry capacity in a number of blocks of varying duration, with the capacity rights purchased being valid for each day in the relevant period. Quarterly system entry capacity (QSEC) is sold in the long-term auctions, while MSEC is made available in annual and monthly allocations. Daily products are made available both day ahead and within day and interruptible (DISEC) is available ahead of the gas day.
- 2.25. Under its GT licence, Transco is obliged to offer 80 per cent of the initial SO output measures in long-term entry capacity auctions. This amount is referred to hereafter as 'the quantity on offer'. The remaining 20 per cent of capacity is reserved for release in shorter-term auctions. This allows for new entrants and existing players to compete to secure entry capacity in the short term.
- 2.26. Where some of the quantity on offer remains unsold after each allocation process, that quantity will be offered for sale again in future auctions.
- 2.27. The operation of long and short-term auctions is discussed in more detail below.

Quarterly system entry capacity rights

- 2.28. Transco holds auctions of QSEC rights that enable shippers to access the NTS from between two and 14 years ahead of use. In the first LTSEC auction, held in January 2003, entry capacity was sold for the 52 quarterly periods from Q4 2004 to Q3 2017, at each of the 19 existing aggregate system entry points (ASEPs).
- 2.29. The timeframe of future LTSEC auctions and duration offered has recently been changed by network code modification 0617³. Firstly, LTSEC auctions will take place during September every year, instead of August. Secondly, the quarterly periods covered in future long-term auctions will be aligned with Transco's price control formula year, starting in April and ending in March, as opposed to gas years, as was the case in the January auction. In future, the first quarterly period on offer will therefore be the quarter starting 1st April, two years ahead of the

³ The Authority directed Transco to implement modification 0617, '*Revision to the Standard Year for purposes of acquiring and holding Long-term System Entry Capacity*', on 27 June 2003. The January 2003 Long-Term System Entry Capacity Auctions - A review document
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current year. The final quarterly period on offer will be that starting 1st January, 17 years ahead of the current year.

Design of the long-term auctions

- 2.30. The LTSEC auction is a cleared price auction, in which one common price for each ASEP/quarter combination is payable by all shippers who are allocated capacity for that ASEP/quarter. If aggregate demand at an ASEP/quarter is less than or equal to the quantity on offer, the cleared price is P₀, which is the baseline price at that ASEP.
- 2.31. Transco's pricing methodology sets the baseline price (P₀) for the SO baseline volumes equal to the unit cost allowances (UCAs) for each entry point.⁴ The UCAs are ex ante estimates of the unit cost of providing incremental entry capacity at each terminal and are also used to determine Transco's entry capacity investment incentive caps and collars.
- 2.32. Transco publishes a schedule of price steps for each entry point, representing its estimate of the likely construction costs for providing incremental capacity. Transco's methodology for generating these price schedules is set out in its IECR methodology statement. Transco's methodology uses trend analysis, which ensures that prices either ascend or descend in a smooth progression. The price schedules for existing entry terminals are all upwardly sloping from the baseline price.
- 2.33. For each entry point price schedule, each price above P₀ is associated with an incremental volume of capacity, above the quantity on offer. The first increment above the baseline price is referred to as 'P₁', the second price step 'P₂' and so on.⁵ Each price step is set such that the change in Transco's income from bidders, assuming all of the available quantity is sold at the baseline or incremental price step as appropriate, is equal to the estimated cost of providing incremental capacity.

⁴ The exception is at terminals where the baseline capacities specified in Transco's GT licence are zero for all years. In these cases, the baseline price will also be zero.

⁵ The exact number of increments, and their size, varies between ASEPs. For the six main beach terminals, however, there are 20 increments of 2.5%, so the highest increment – P₂₀ – therefore represents (100% + (20 x 2.5%)) = 150% of the quantity on offer.

Operation of the long-term auction

- 2.34. One round of bidding takes place on each business day. Participants submit their bids to Transco by 1700hrs, specifying the ASEPs, quarters and quantities they are bidding for. Participants therefore submit a bid volume for one or more of the price steps on the terminal's schedule, for each of the 52 quarterly periods. The bid volume at each higher priced step cannot be more than the bid volume at a lower priced step.
- 2.35. After the close of bidding on the day, Transco uses the bid information to calculate indicative prices in every quarterly period at each ASEP. These prices, known as 'notional clearing prices', are then published by Transco.
- 2.36. In the January auctions, Transco used the following method to calculate the notional clearing price for each quarterly period at each terminal:
- ◆ Find the highest price step at which the volume of bids is greater than the volume associated with the price step (the 'notional supply level').
 - ◆ Find the first total bid volume against a particular price step which is less than or equal to the notional supply level. The price step where this occurs is the notional clearing price.
- 2.37. The January auction would have closed if all notional clearing prices (in all quarterly periods and across all terminals) were the same in two consecutive rounds. The network code provided that, if one or more notional clearing prices changed from the previous round, the auction would continue for another round, and this is what happened in January. The long-term auctions are limited to a maximum of ten rounds, and always close after the tenth day of bidding, whether or not notional clearing prices have changed since round nine.
- 2.38. Network code modification proposal 623 provides for changes to the methodology for the calculation of the notional clearing price for the forthcoming LTSEC auctions. The details of this modification are contained in Appendix 1.

Allocation and the incremental entry capacity release process

- 2.39. Following the close of the auction, Transco allocates entry capacity to participants by assessing valid bids at the close of the last round of the auction. If aggregate demand in any quarterly period exceeds the quantity on offer, then Transco will follow the pre-agreed decision-making process set out in its IECR methodology. The IECR methodology describes the circumstances under which Transco will seek to release obligated incremental entry capacity. If demand does not justify the release of obligated incremental entry capacity and Transco does not release non-obligated incremental entry capacity, then the quantity on offer is allocated to bidders who placed demand at the first price step where aggregate demand is less than the quantity on offer. If aggregate demand at every price step is greater than the quantity on offer, then demand at the highest price step is scaled back pro rata to bids received such that the quantity on offer is allocated.
- 2.40. The main points of the IECR methodology are:
- ◆ Where there is incremental demand for a continuous period of between three and five years, there will be a presumption that annual obligated incremental entry capacity will be released. For continuous demand between one and three years or between five and eight years, Transco may seek to release annual obligated incremental entry capacity, with the support of non-auction based evidence.
 - ◆ If the net present value (NPV) of bids for incremental capacity over 32 quarters equals at least 50 per cent of the 'assumed project value' for the incremental capacity, Transco will seek approval to release permanent obligated incremental entry capacity. The 'assumed project value' is calculated by multiplying the size of the increment of capacity being considered by the gross, unadjusted entry terminal UCA, as specified in Transco's GT licence.
- 2.41. If Transco's IECR methodology is met for the release of obligated incremental entry capacity, Transco's GT licence specifies the process for Transco making a proposal to Ofgem. Following approval of a proposal to release obligated incremental entry capacity, Transco would allocate up to the total amount of

available capacity. The cleared prices that would apply are determined by determining the step price which is associated with aggregate demand which is equal to or less than the maximum amount to be allocated. Any remaining volumes are offered for sale in future auctions.

Shorter-term entry capacity auctions

- 2.42. Transco operates three other types of short-term auctions of firm entry capacity. These are the annual monthly system entry capacity (AMSEC), RMSEC and daily system entry capacity (DSEC) auctions, where firm entry capacity is sold in monthly, monthly and daily blocks respectively. In addition to the auctions of firm entry capacity, interruptible entry capacity for individual days is also released in daily auctions.
- 2.43. Following the implementation of network code modification 0616⁶, AMSEC auctions will be held in February of each year from February 2004. The format of the AMSEC auctions differs from the previous MSEC auctions, in that monthly blocks of entry capacity will be available for 24 months, as opposed to six months. The first month on offer will be the April of the same (calendar) year, and the last month on offer is therefore the March of the (calendar) year after next. The minimum volumes of capacity made available will be unsold initial SO baseline volumes, as well as, for the first twelve months only, the remaining 20 per cent of the initial SO baseline capacity which was not offered in the first four quarterly periods of the previous LTSEC auction.
- 2.44. Transitional arrangements will apply to the February 2004 and February 2005 AMSEC auctions in relation to the quantities of capacity made available.⁷
- 2.45. If any of the entry capacity is unsold following the AMSEC auction, it will be offered for sale again, as a month-long block, in the relevant RMSEC auction. One RMSEC auction is held every month, within five days of the start of the following month to which the entry capacity applies.

⁶ The Authority directed Transco to implement Modification Proposal 0616, 'Revision to the Standard Year for purposes of acquiring and holding Annual Monthly System Entry Capacity', on 27 June 2003.

⁷ The February 2004 auction will include baseline capacity for April 2004 to September 2004 and the 20 per cent of capacity for October 2004 to March 2005, as well as unsold capacity for October 2004 to March 2006. The February 2005 auction will include the 20 per cent of capacity for April 2005 to March 2006, as well as unsold capacity for April 2005 to March 2007.

- 2.46. Finally, any firm entry capacity not sold via the RMSEC, AMSEC or LTSEC auctions is released via the DSEC auctions, in which capacity is released at either the day-ahead or within-day stage.
- 2.47. Transco also releases a daily interruptible entry capacity product, based on the extent to which holdings of firm entry capacity rights exceed the quantity of deliveries of gas at each NTS entry point. This is referred to as 'use-it-or-lose-it' (UIOLI) capacity and is intended to operate as an anti-hoarding device, to prevent capacity being held and not flowed against. The release of UIOLI capacity does not affect the rights of firm capacity holders, and Transco is able to scale back interruptible capacity, with no compensation paid to the holder, to alleviate an entry capacity constraint. The revenue from UIOLI capacity nets off against Transco's buy-back costs under its buy-back incentive.

Overruns

- 2.48. An important feature of the entry capacity regime is the 'ticket to ride' principle, which is that shippers should acquire entry capacity rights to cover their flows of gas onto Transco's NTS and that there should be incentives for a shipper not to flow gas in excess of its entry capacity rights ('overrunning').
- 2.49. Strong incentives are placed on shippers not to flow more gas through a terminal than their holdings of entry capacity allow for. Where a shipper's physical flow at an ASEP exceeds its holding of capacity at that ASEP, it must pay 'overrun' charges on the excess amount. This assessment of flows versus holdings is made on a daily basis, for each gas day. The charge is the highest of the following:
- ◆ 8 x the highest price from any of the auctions of firm entry capacity; or
 - ◆ 1.1 x the weighted-average price of the top 25 per cent of entry capacity surrender contracts; or
 - ◆ 1.1 x the weighted-average price of the top 25 per cent of entry capacity forward contracts; or
 - ◆ 1.1 x the weighted-average price of the top 25 per cent of entry capacity option contracts.

- 2.50. The revenue from overrun charges nets off against Transco's buy-back costs under its buy-back incentive.

Managing entry capacity constraints

- 2.51. To the extent that Transco is unable to accommodate expected flows against firm entry capacity rights at a system entry point, Transco must buy back these entry capacity rights at market-determined prices. Transco has financial incentives to minimise the costs of such actions under its SO entry capacity buy-back incentive. Its current buy-back incentive is based on a target range of net buy-back costs of between £10 million and £20 million.
- 2.52. Net buy-back costs are equal to the cost of buy-backs less the revenue derived from sales of capacity on the gas day, sales of non-obligated entry capacity and revenue from overrun charges. To the extent that its performance exceeds the target range, Transco shares the gains equally with the industry, whereas it is exposed to 35 per cent of performance below the target range. Transco's incentive exposure is limited to £30 million on the upside and £12.5 million on the downside. Transco's buy-back incentive is due to be reviewed by Ofgem for April 2004.

New entry terminals

- 2.53. In June 2003, Ofgem proposed changes to Transco's GT licence to specify UCAs for two proposed new entry terminals to Transco's NTS, at Milford Haven, Pembrokeshire and Barton Stacey, Hampshire. The consultation period ended on 28 July 2003 and on 18 August 2003, Ofgem directed that the changes to Transco's licence be made. This extends Transco's entry capacity investment incentive to those terminals, and revenue derived from the sale of capacity rights at these terminals will be taken into account under this incentive scheme.
- 2.54. Ofgem approved network code modification 0638, '*Extended LTSEC Auctions at New Entry Points*', on 4 August 2003. This modification provides for Transco to conduct an extended auction for new entry terminals where there is agreement with a market participant(s) to fund Transco's costs of extending the auction. This will allow for Transco to conduct an 'open season' auction at a new entry terminal, such as Milford Haven or Barton Stacey.

Summary

- 2.55. This chapter has set out the background and main features of the LTSEC auctions. The following chapters consider the experience of the January auction, both in terms of round-by-round developments and the final auction results.

3. The auction process

Introduction

- 3.1. This chapter gives an overview of how bidding developed during the process, both in terms of the volumes bid for and the notional clearing prices set. The role of information is also considered, as is the effect the pro-rating rule might have had upon bidding behaviour in later rounds. We summarise the views of respondents to our February 2003 letter and also set out Ofgem's views.

Changes in bid volumes between rounds

- 3.2. The first LTSEC auction continued for ten rounds and most of the 24 companies made significant changes to their bid volumes from round to round, taking advantage of the multi-round format. Table 3.1, below, reports the change in bid volumes from round to round. Bid volumes shown are those for the notional clearing prices in that round.⁸

Table 3.1: Number and volume of changes in bids in each round

Round	Net change in bid volumes, mcm/day	Number of bids changed from previous round
2	71.3	248
3	-131.1	109
4	23.5	532
5	-88.2	469
6	-19.7	51
7	7.6	40
8	5.6	34
9	6.9	34
10	41.6	512

- 3.3. As illustrated in Table 3.1, significant changes to bids were made in the earlier rounds. Changes in rounds seven, eight and nine were smaller, with net increments of less than 8 mcm per day. However, total bid volumes increased substantially in the final round of the auction, when the net equivalent of 41.6 mcm per day was added to the ninth round bids.

⁸ A similar picture (in terms of direction of changes to bid volumes) is seen at other price levels. The January 2003 Long-Term System Entry Capacity Auctions - A review document
Office of Gas and Electricity Markets

- 3.4. Table 3.1 also reports the number of bids changed in each round. In most rounds, this followed a similar pattern to the changes in bid volumes, with activity highest in the earlier and final rounds, and lowest between rounds six and nine. In some rounds, however, there is some disparity between the volume and bid number statistics. For example in round four, the net change in volume was small, yet over 500 bids changed. Also, round three had the largest change in volume, yet only 109 bids were changed. For comparison, the total number of bids in a round (the number of quarterly periods, times the number of participants at each terminal) is approximately 3,000.
- 3.5. Table 3.2, below, gives a breakdown of the round-by-round changes in bid volume by terminal.

Table 3.2: Volume of changes in bids in each round, by terminal

Round	Change in bid volumes by round at each terminal, mcm/day							
	Hornsea	Bacton	Barrow	Easington	Hole House	St Fergus	Teesside	Theddlethorpe
2	47.4	-12.9	2.7	0.3	0.0	32.7	1.2	-0.1
3	-47.4	-53.1	0.0	0.0	0.0	-12.5	-14.6	-3.4
4	47.4	-2.8	0.0	0.0	0.0	-21.2	0.0	0.0
5	-47.4	-40.9	0.0	0.0	0.0	0.1	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	-19.7	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0
8	0.0	-1.5	0.0	0.0	0.0	7.1	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0
10	0.0	-12.0	0.0	0.0	0.0	50.5	3.1	0.0

- 3.6. As can be seen in Table 3.2, the largest changes in bids occurred at Hornsea, St Fergus, Teesside and Bacton. At St Fergus and Teesside, bid volumes followed the pattern outlined above, increasing significantly in the final round, after three rounds of relative stability. Bid volumes peaked in the final round. For one quarterly period at St Fergus, the bid volume in round ten was 33 per cent more than the quantity on offer.
- 3.7. At Bacton, bid volumes fell quite sharply in rounds three and five of the auction. In round three, this was due to one participant completely withdrawing its bids for a series of quarterly periods. In round five, this was due to one participant

withdrawing a bid of 47 mcm per day it had submitted for a single quarterly period in the previous round.⁹

Bidding at the Hornsea terminal

- 3.8. In common with other terminals, entry capacity for Hornsea was offered until 2017, with 13.3 mcm per day offered for the gas year 2004/05. There is normally a moderate level of demand for entry capacity at Hornsea, with Transco selling within-day firm entry capacity to twelve different shippers by the end of June 2003.
- 3.9. Table 3.3, below, shows bid volumes and notional clearing prices at Hornsea across all ten rounds.

Table 3.3: Bid volumes and prices at Hornsea

Round	Bid volume, mcm/day	Notional clearing price
1	0.0	P0
2	47.4	P10
3	0.0	P0
4	47.4	P5
5	0.0	P0
6	0.0	P0
7	0.0	P0
8	0.0	P0
9	0.0	P0
10	0.0	P0

- 3.10. One participant submitted a bid of 47 mcm per day (500 GWh/day) for a single quarterly period in rounds two and four, withdrawing these bids immediately in the following rounds (three and five).¹⁰ The size of these bids is approximately three and a half times the quantity on offer at the terminal. During the auction, Ofgem noticed what appeared to be unusual bidding at the Hornsea entry point and contacted the shipper concerned. The shipper confirmed that it had no intention of buying capacity at Hornsea and subsequently stopped placing bids at Hornsea after round five. The effect of these bids on notional clearing prices at the terminal is discussed in the next section.

⁹ The effect of this bid in increasing Bacton's fourth round total was more than offset by a net reduction in

Respondents' views

- 3.11. A number of participants noted the changes in bid volumes outlined above. One participant said that the bids appeared to be errors; others expressed concerns that the auctions could be kept open by such bidding behaviour.
- 3.12. One respondent suggested that a way to prevent this would be to limit the amount by which a participant could vary its bids from one round to the next. However, another respondent said that there was little point in trying to control this type of behaviour. It suggested that a more effective solution would be to modify the closure rule, such that it is more easily satisfied, and shippers would need to be prepared to have any submitted bid accepted.

Ofgem's views

- 3.13. Ofgem has carefully monitored the progress of the auction, and noted the changes in bid volumes from round to round. This included the activity at Hornsea.
- 3.14. As stated in the decision letter to network code modification 500, Ofgem considers it important that the design of the auction does not encourage opportunities for gaming, which ultimately might distort the investment signals generated by the process. The bidding behaviour at Hornsea demonstrates a weakness in the design of the auction in that it was relatively easy for a shipper to attempt to artificially keep open the auction.
- 3.15. Ofgem considers that shippers should not attempt to use the LTSEC process to provide misleading information about their demand for entry capacity, or attempt to keep the auction open by placing bids which are not reflective of their demand. In this respect, it is important for shippers to keep in mind that behaviour during the LTSEC auctions is subject to scrutiny under the shippers licence, as well as, ultimately, general competition law.

bids from other participants.

¹⁰ The round 2 bid related to Q1 2005 capacity and the round 4 bid related to Q4 2004 capacity.

- 3.16. While there appears to have been some unusual bidding at Hornsea and Bacton, it does not appear that this affected the outcome of the auctions, and Ofgem is not proposing to investigate the matter further.
- 3.17. The changes made to the methodology for the calculation of the notional clearing price introduced by network code modification 623 should reduce the volatility of the notional clearing price and may make it more likely that the auction will close early. This may help to encourage shippers to place their bids early on in the auction and discourage bids which are not reflective of true demand. In placing bids for capacity in the long-term auctions, shippers should always be prepared to pay for the capacity rights they have bid for.

Notional clearing prices and the early closure rule

- 3.18. The method by which notional clearing prices were calculated, and the early closure rule, were explained in Chapter 2. In the January 2003 auctions, at least one notional clearing price changed in every round, and therefore the auction continued for the full ten rounds. Almost all of the price changes were at St Fergus. Table 3.4, below, shows that notional clearing prices at this terminal were highly volatile.

Table 3.4: Notional clearing prices at St Fergus

Round	Notional clearing price					
	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
1	P8	P8	P8	P0	P3	P7
2	P7	P9	P8	P0	P15	P9
3	P9	P9	P7	P0	P2	P20
4	P7	P9	P20	P0	P12	P10
5	P8	P9	P20	P0	P14	P16
6	P9	P10	P7	P0	P11	P11
7	P10	P9	P14	P0	P14	P10
8	P12	P10	P6	P0	P18	P10
9	P5	P10	P6	P0	P20	P12
10	P10	P20	P8	P0	P8	P18

- 3.19. As is shown in Table 3.4, prices in at least three of the first six quarterly periods changed in every round. In particular, volatility was greatest in Q4 2004 and Q4 2005, where no two consecutive rounds had the same notional clearing prices.

- 3.20. At Hornsea, and as shown in Table 3.3, notional clearing prices were above P0 in rounds two and four, when the bids discussed in the previous section were submitted. This behaviour did not, in itself, prolong the auction because of the volatility in notional clearing prices at St Fergus.
- 3.21. At the other terminals, notional clearing prices were set to P0 throughout the auction, as aggregate bid volumes at those terminals were always less than the quantity on offer.
- 3.22. Assuming that bid volumes would have remained the same, it is possible to calculate what notional clearing prices would have been, had an alternative methodology been used, of the lowest price step at which demand was less than or equal to the notional level of supply. Table 3.5, below, shows the resultant prices in each round.

Table 3.5: Notional clearing prices at St Fergus calculated using the first price step at which demand was less than the quantity on offer

Round	Notional clearing price					
	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
1	P2	P3	P2	P0	P2	P3
2	P3	P5	P3	P0	P1	P3
3	P4	P5	P3	P0	P2	P3
4	P4	P6	P3	P0	P2	P4
5	P4	P7	P3	P0	P2	P4
6	P4	P7	P3	P0	P2	P4

- 3.23. As can be seen in Table 3.5, notional clearing prices in the first six quarterly periods at St Fergus would all have been the same in round six as they were in round five. Given that prices at all other quarterly periods at St Fergus, and for all other terminals, were P0 in every round, the auction would therefore have closed in round six.
- 3.24. However, this assumes that bid volumes would have been the same under the alternative method. If, instead, participants believed that the auction would close in round six, there could have been a surge in bidding as was seen between rounds nine and ten. This in itself might have changed the price outcome in round six, and therefore the auction would have been prolonged to further rounds.

- 3.25. Transco subsequently raised network code modification proposal 623, which has been accepted by Ofgem. It provides that each notional clearing price (which is renamed the 'stability group') will be determined as the step price level at which aggregate demand is less than or equal to the notional supply at that step price level. This change, which will apply for the September 2003 auctions, will align Transco's methodology with that previously understood by the rest of the industry.
- 3.26. The modification also strengthens the auction closure rule, such that the auction will close before the end of the tenth bidding day if the stability group changes in few than five individual quarter/terminal combinations over two consecutive bidding days. This change will have effect from 1 November 2003 and therefore will not apply to the September 2003 auctions.

Respondents' views

- 3.27. A number of respondents indicated that they were unclear as to how Transco had set the notional clearing prices published after each round, in that the calculation method differed from that which they had expected. The prevailing view was that notional clearing prices would be set at the lowest price step at which demand was less than or equal to the notional level of supply. In general, respondents reported that there was considerable confusion over the exact process by which Transco would arrive at the notional clearing price.
- 3.28. A number of respondents commented that the actual methodology used by Transco caused undue volatility in notional clearing prices, such that early closure was prevented by relatively small changes in the aggregate volume of bids at St Fergus.
- 3.29. A number of respondents commented on the suitability of the early closure rule. One suggestion was that in future bidding should be stopped at individual terminals if all prices at those terminals were the same in two consecutive rounds. Had this been the case in the January auctions, bidding at all terminals except St Fergus and Hornsea would have ended in round two.
- 3.30. Another suggested amendment to the closure rule was to split the terminals into two groups – the six main beach terminals, and all the others – and to close bidding in each group separately, according to the existing closure rule.

Ofgem's views

- 3.31. As set out in our reasons for approving modification 623, contained in Appendix 1, Ofgem welcomed the change to the methodology used to calculate the 'stability measure', which applies the methodology which the majority of the industry understood to be applied in the long-term auctions. Ofgem would encourage Transco to provide clear and detailed information, including numerical examples in the form of spreadsheets, explaining the methodology to shippers in advance of the next long-term auctions.
- 3.32. Whilst Ofgem approved the modification, we are less convinced in relation to the aspect of the modification strengthening the auction closure rule. There is a danger that this element of the proposal may result in the auction closing prematurely, when clearing prices at a number of ASEP/quarter combinations are still adjusting. This may lead to inefficient allocations and auction signals.
- 3.33. As stated in our decision, Ofgem considers that, as a general principle, changes to auction rules should not be made unless they would clearly have a beneficial effect and the change is supported by robust analysis. It is therefore unhelpful to combine two proposed changes to the auction rules in one modification proposal.

The extent of information released during the auction process

- 3.34. After each round, Transco published information relating to the round both on its website and via the RGTA systems. Information on the notional clearing prices and aggregate bid volumes was published on a terminal and quarterly basis.

Respondents' views

- 3.35. Several respondents commented on the level of information provision during the auction process. While the majority of respondents felt that the information disclosed was useful, some suggested that the number of shippers bidding at a terminal should be published after the end of each round.

Ofgem's views

- 3.36. While, overall, demand throughout the auction proved to be fairly inelastic, there was some responsiveness of demand to notional price changes. It does not appear that the publication of information during the auction process has led to any attempt to game the auction results and may have led to a more efficient allocation, by allowing shippers to adjust their bids in response to expected changes in price. Ofgem does not, therefore, consider that the amount of information released should be reduced at this stage.
- 3.37. In relation to the suggestion that the number of shippers at a terminal should also be published after the end of each round, it is open to any shipper to raise a proposal to modify the network code in this respect, in order for the issue to be properly considered.

The effect of the pro-rating rule

- 3.38. Where the total volume of bids for a quarterly period exceeds the quantity on offer for that period, and where no incremental entry capacity is released by Transco, each participant's bid will be scaled back such that the aggregate volume of bids equals the quantity on offer. This feature of the auction has been referred to as the 'pro-rating rule'.
- 3.39. As shown in Table 3.2, above, there was a relatively large increase in bid volumes at St Fergus between rounds nine and ten. Bids in various quarterly periods increased by up to 15 mcm per day, which is equivalent to 13 per cent of the quantity on offer. As shown in Table 3.4, while bid volumes as far out as Q2 2010 changed, the bulk of adjustments were made to bids in five of the first six quarterly periods (Q4 2004 to Q1 2006), where total bid volumes exceeded the quantity on offer.
- 3.40. Of the 21 companies bidding at St Fergus, the majority increased their bids in some or all of these quarterly periods. The increase was therefore due to a general upward shift in demand, rather than to the action of one participant in isolation. Table 3.6, below, gives details of the increase in bid volumes between rounds nine and ten, with the quantity on offer also shown for ease of comparison.

Table 3.6: St Fergus bid volumes in rounds nine and ten

Round	Bid volumes, mcm/day					
	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
9	137.8	148.6	135.9	106.9	128.9	139.4
10	145.0	164.2	139.5	106.3	135.7	153.9
change	7.2	15.6	3.6	-0.7	6.9	14.5
80% SO baseline	125.0	125.0	125.0	125.0	125.0	125.0

3.41. Ofgem notes that Transco released non-obligated incremental entry capacity in three of these six quarterly periods. The final allocation of entry capacity is discussed further in the next chapter.

Respondents' views

3.42. A number of respondents concluded that the surge in demand seen in the final round was due to an expectation of scaling back in these quarterly periods. One participant said that the 'true' level of demand had only been revealed in round ten, and that a stronger closure rule might have produced this result in an earlier round. Another participant suggested that a possible way of avoiding this would be for future auctions to remain open until the current condition for closure is satisfied.

Ofgem's views

3.43. As noted in the previous section, participants had access to information relating to bid volumes, and may have observed that total bid volumes exceeded the quantity on offer in fewer than four consecutive quarterly periods. Under Transco's IECR methodology, because this excess demand was not sustained for a long period, it was unlikely that Transco would have applied to Ofgem to release obligated incremental entry capacity. This could have created the expectation that the final allocation of entry capacity would not be sufficient to satisfy all demands, and may partly explain the increase in bids seen in the final round.

3.44. Ofgem considers that price is the most efficient rationing mechanism where supply is constrained in the short term. We therefore consider that publishing

extra price steps would be more efficient than using a pro-rating mechanism in the case of excess demand in the short term.

- 3.45. Another explanation for the increase in bids in the final round is that only then did shippers reveal their true demand, because the 'weak' closure rule was not expected to bring the auctions to an early close. In this respect, the changes introduced by network code modification 623 may strengthen the closure rule.

Summary

- 3.46. This chapter has considered the development of bid volumes and prices as the auction progressed. The key points and conclusions that arise from Ofgem's analysis and consideration of respondents' views are:

- ◆ 24 companies participated in the January auctions;
- ◆ the auction continued for the full ten rounds, because of the volatility of notional clearing prices at St Fergus;
- ◆ changes in bids at other terminals suggested that shippers may have been trying to keep open the auction. Ofgem considers it important that the design of the auction should not encourage opportunities for gaming and, while the bidding in question does not appear to have affected the outcome of the auctions, it does demonstrate a weakness in the design of the auction;
- ◆ the uncertainty as to the methodology used for the calculation of notional clearing prices is something Transco should attempt to address in future and modification 623 clarifies the methodology to be used in the next LTSEC auctions; and
- ◆ Ofgem considers that the effect of the pro-rating rule may explain the large increase in bids in the final auction round and considers that price is the most efficient and non-distortionary means of rationing capacity in the short term.

4. Auction results

Introduction

- 4.1. Under the terms of its network code, Transco had two months following the final round of the auction in which to determine the allocation of entry capacity among participants. Transco published the final allocations of entry capacity on 27 March 2003. In this chapter, the final results of the auction are summarised, as are respondents' views. Finally, the chapter gives details of the revenue which Transco has accrued from the auction.

Details of allocations

- 4.2. Following the completion of the auction process, Transco published quarterly information on the clearing prices and volumes allocated at each terminal, together with the number of bidders at each terminal. Transco also published details of revenue from the auction, broken down by terminal and quarterly period.
- 4.3. Overall, the total volume allocated between 2004 and 2017 was 419,533 mcm. Table 4.1, below, illustrates this by terminal.

Table 4.1: Allocated volume by terminal, across all periods

Terminal	Allocated volume, mcm
Bacton	79,267
Barrow	42,996
Easington	10,064
Hole House Farm	9,360
St Fergus	246,356
Teesside	20,378
Theddlethorpe	11,112
Total	419,533

- 4.4. As shown in Table 4.1, over half of all volume allocated was at St Fergus. Of the other terminals, Bacton and Barrow accounted for significant shares of the remaining volume. As outlined in Chapter 2, entry capacity was offered at several other terminals in the auction, although (with the exception of Hornsea) no bids were submitted at these other terminals in any round. At Hornsea - and

as described in Chapter 3 - bids were submitted in the earlier auction rounds, but not in the final round. It follows that no entry capacity was allocated either at Hornsea or at any of these other terminals.

4.5. The following charts show how volumes were allocated across the quarterly periods, on a terminal-by-terminal basis. For comparison, the charts also show the quantity on offer. Incremental capacity was allocated only at the St Fergus terminal, in the form of non-obligated incremental entry capacity.

Figure 4.1: Volume of entry capacity allocated at Bacton

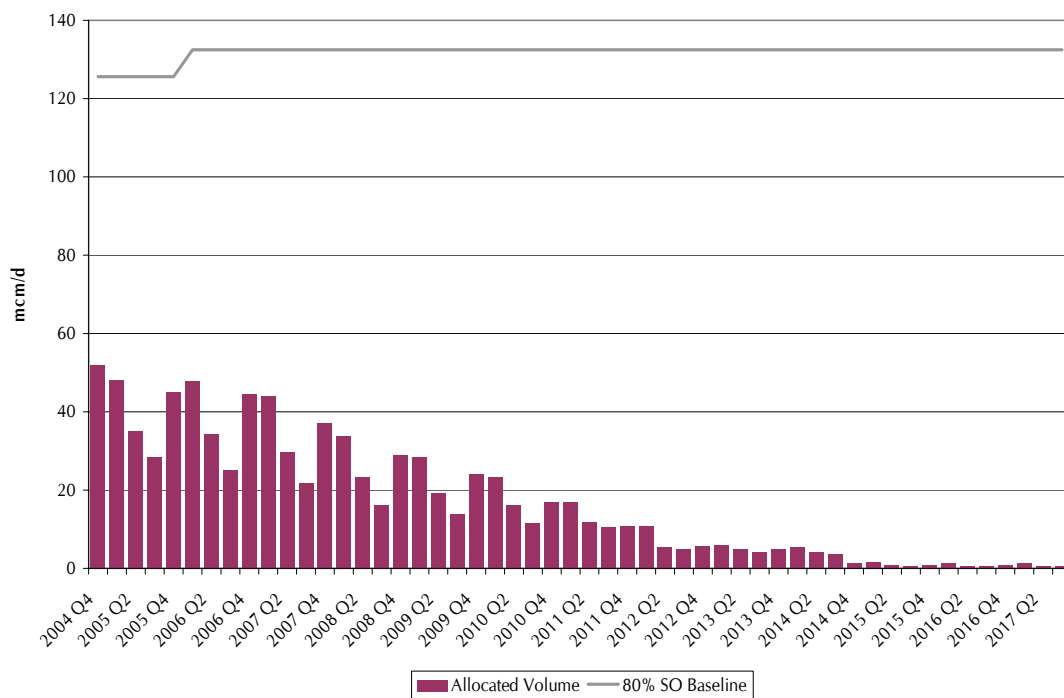


Figure 4.2: Volume of entry capacity allocated at Barrow

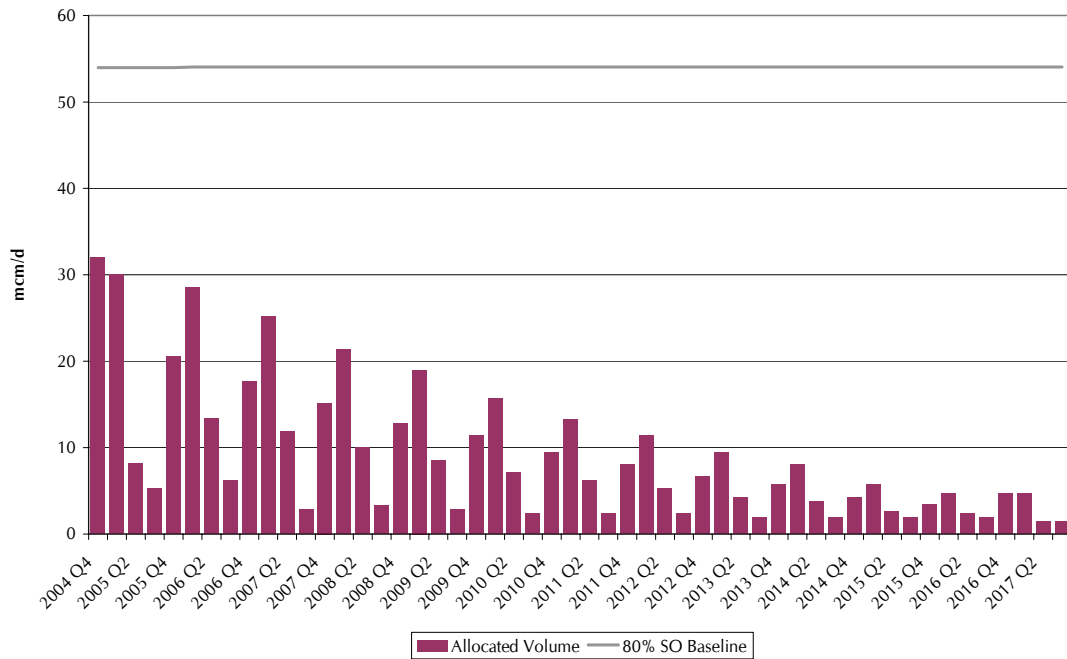


Figure 4.3: Volume of entry capacity allocated at Easington

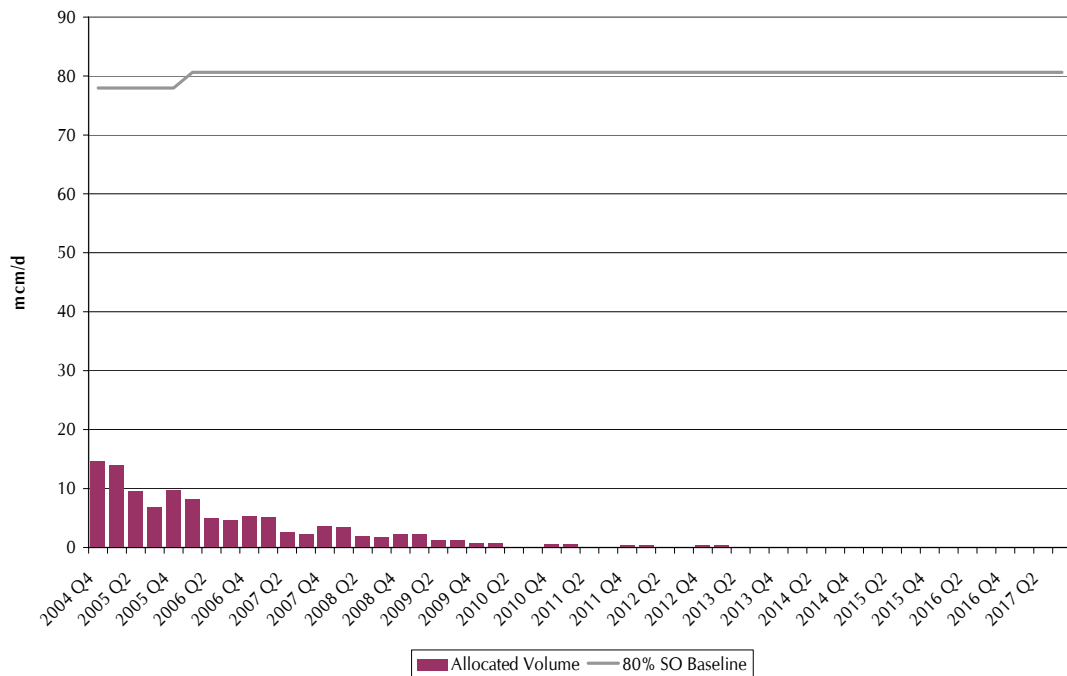


Figure 4.4: Volume of entry capacity allocated at Hole House Farm

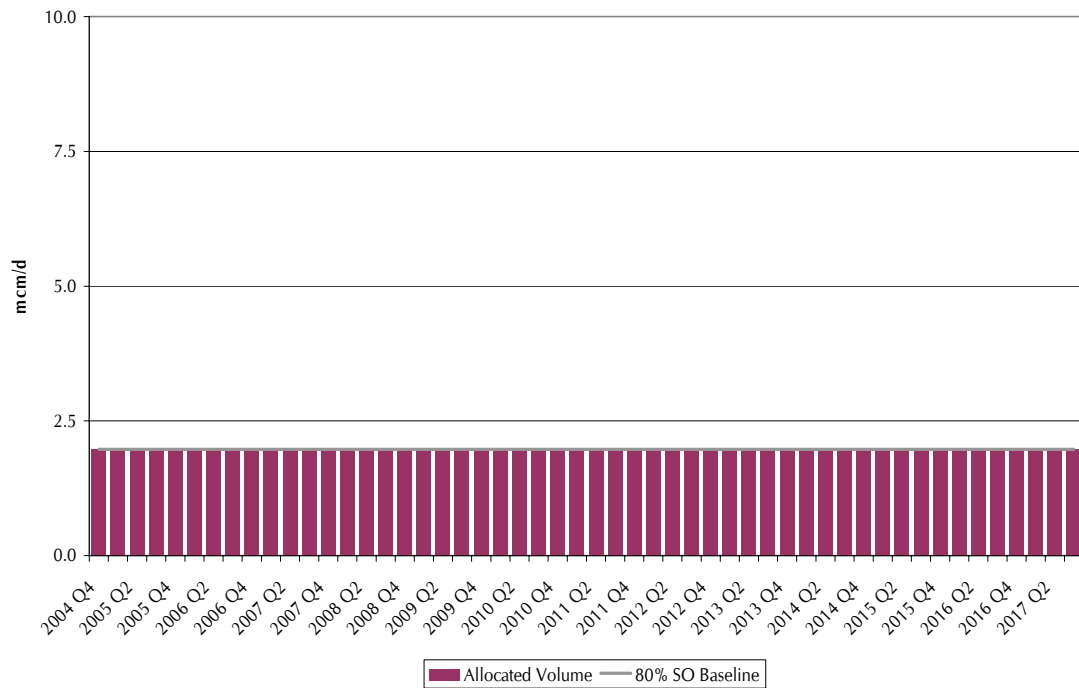


Figure 4.5: Volume of entry capacity allocated at St Fergus

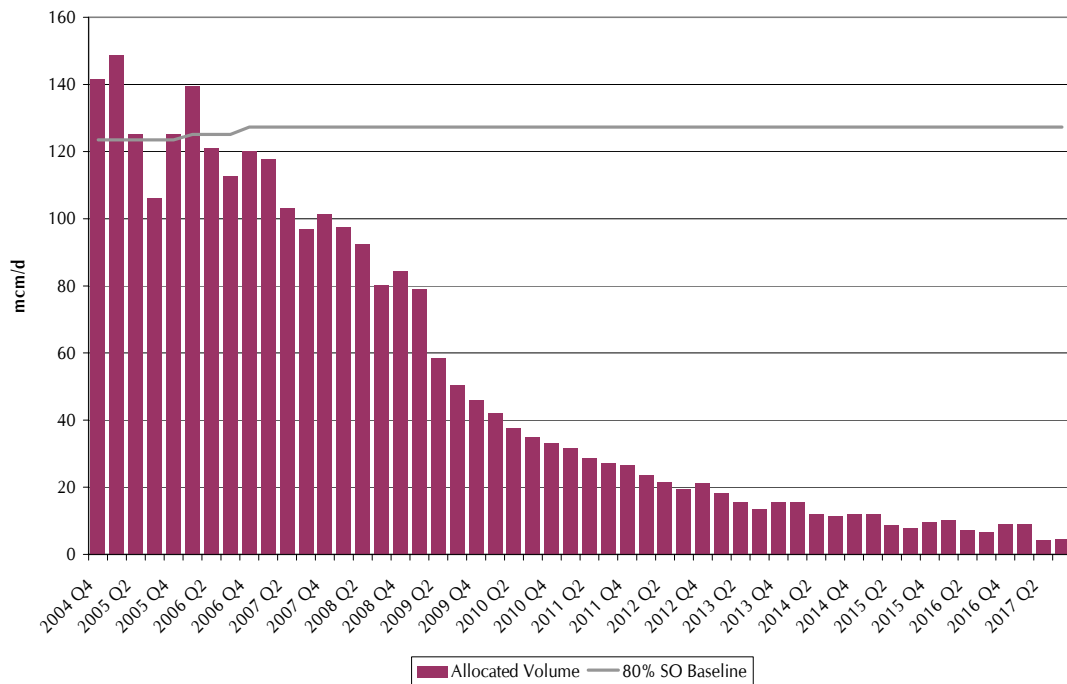


Figure 4.6: Volume of entry capacity allocated at Teesside

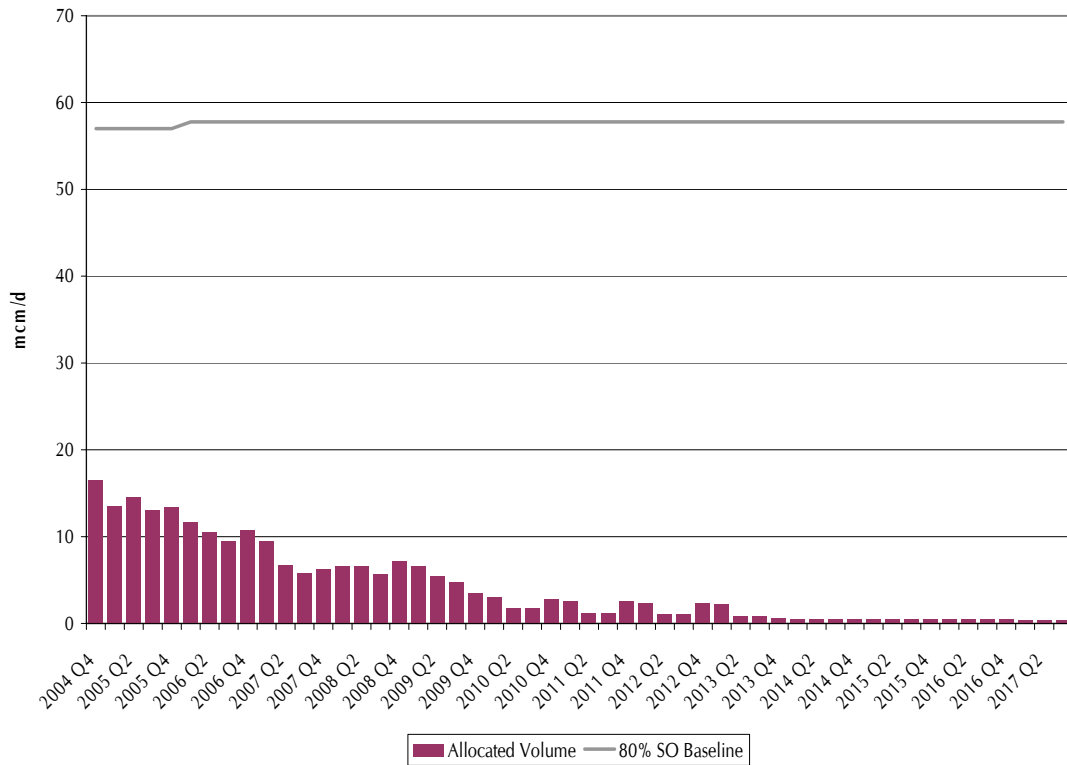
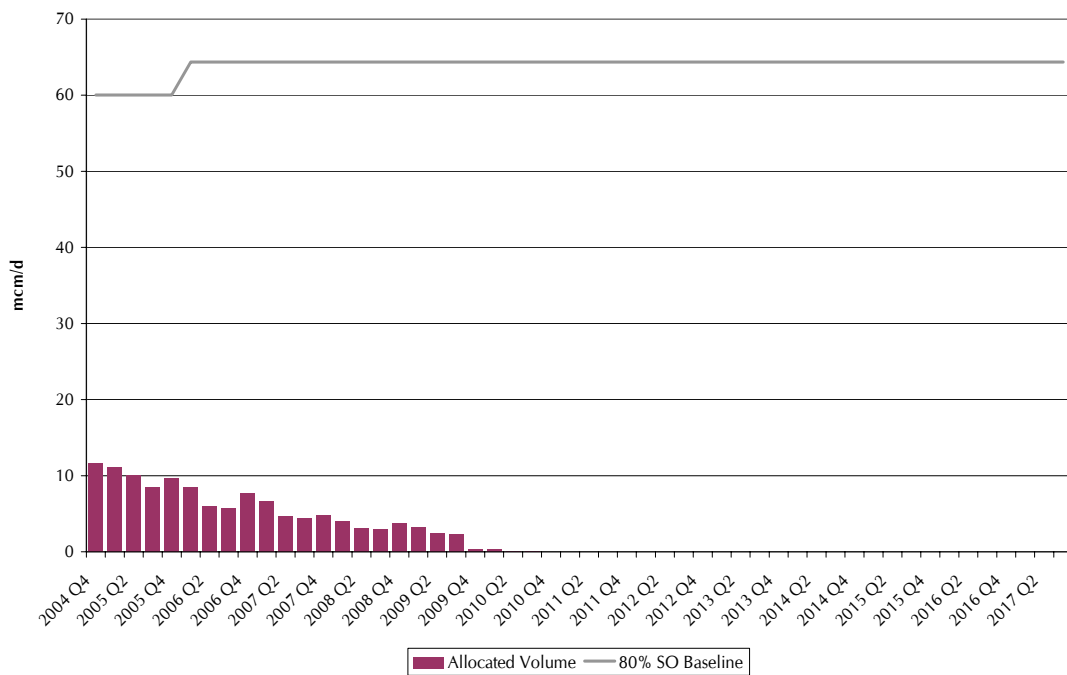


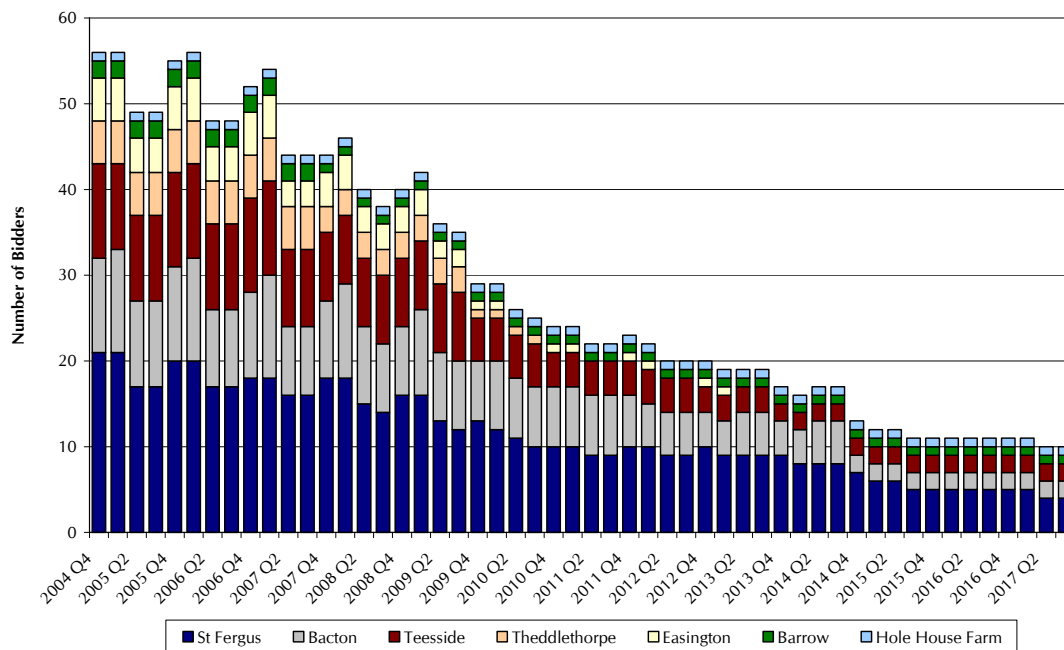
Figure 4.7: Volume of entry capacity allocated at Theddlethorpe



Levels of participation

- 4.6. There was a high level of participation in the auctions, with every major gas shipper taking part. In total, 24 shippers were allocated entry capacity, over the period between 2004 and 2017. Not surprisingly, demand was highest in the early years and fell over time. This is illustrated in Figure 4.8, below.

Figure 4.8: Number of bidders in each quarterly period, split by terminal



- 4.7. As a percentage of the quantity on offer, volumes allocated at St Fergus were 28 per cent in Q3 2010, with around four per cent allocated in Q3 2017. Allocated volumes at the other, less-constrained terminals formed a lower proportion of the quantity on offer, although at Bacton an average of 15 per cent of entry capacity was allocated in the gas year 2009/10. In general terms, the pattern of demand for entry capacity follows a similar trend to forward trading in most markets, where the greatest liquidity is seen in the contracts which are closest to delivery.
- 4.8. As shown in Figure 4.8, above, St Fergus had the highest number of bidders (21 in the first quarterly period, falling to ten in Q3 2010 and four in Q3 2017), but there were also considerable levels of participation at other terminals. As many as 12 participants bid for Bacton entry capacity in some quarterly periods, while there were two bidders in some of the periods at Barrow. For comparison,

approximately 30 companies participated in the last MSEC auction, across all terminals.

Clearing prices

- 4.9. Alongside the allocation of entry capacity, Transco also published the final clearing prices for each quarterly period at each terminal. With the exception of five quarterly periods at St Fergus, clearing prices were set to P0 in all cases. Table 4.2, below, shows the clearing prices applicable at each terminal.

Table 4.2: Clearing prices at each terminal following allocation

Terminal	Clearing price, p/kWh/day
Bacton	0.0056
Barrow	0.0004
Easington	0.0011
Hole House Farm	0.0001
St Fergus – Q4 2004 to Q2 2005 and Q4 2005 to Q1 2006	0.0324
St Fergus – other quarters	0.0198
Teesside	0.0018
Theddlethorpe	0.0010

The application of Transco's incentives

- 4.10. In almost all quarterly periods, participants were allocated all of the entry capacity they bid for, as the quantity on offer almost always exceeded the sum of all bids. The exception to this was in some quarterly periods at St Fergus, where final-round bid volumes exceeded the quantity on offer. More specifically, this occurred in five of the first six quarterly periods on offer, which were: Q4 2004, Q1 2005, Q2 2005, Q4 2005, and Q1 2006.
- 4.11. As outlined in Chapter 2, Transco followed the methodology set out in its IECR statement in deciding whether or not to release incremental entry capacity. Having applied this methodology, Transco concluded that the release of obligated incremental entry capacity was not justified on the basis of the auction results.
- 4.12. In three of the five quarterly periods in which demand exceeded the quantity on offer at St Fergus (Q4 2004, Q1 2005, and Q1 2006), Transco chose to release

non-obligated incremental entry capacity. As noted in Chapter 2, Transco has the discretion to release non-obligated incremental entry capacity. Table 4.3, below, shows the percentage of bid volumes which were allocated in each of these five quarterly periods.

Table 4.3: Details of final-round bid volumes and volumes of incremental entry capacity

Quarterly period	Q4 2004	Q1 2005	Q2 2005	Q4 2005	Q1 2006
Volume of incremental capacity released, mcm/day	18.0	25.2	0.0	0.0	14.4
Final-round bid volume, mcm/day	145.0	164.2	139.5	135.7	153.9
Allocated volume as a % of final-round bid volume	98%	91%	90%	92%	91%

4.13. Had incremental entry capacity not been released in Q4 2004, Q1 2005 and Q1 2006, bid volumes in these quarterly periods would have been scaled back to 85 per cent, 75 per cent and 81 per cent of their original levels. As Table 4.3 shows, no incremental entry capacity was released in the other two quarterly periods (Q2 2005 and Q4 2005). Bid volumes were therefore scaled back pro rata, such that their total was made equal to the quantity on offer. Consequently, allocated volumes were 90 per cent and 92 per cent of the original bid volumes in each quarterly period respectively.

4.14. Table 4.3 also shows that final-round bid volumes in the three quarterly periods in which incremental entry capacity was released were relatively high, compared to final-round bid volumes in the other two quarterly periods.

Respondents' views

4.15. Ofgem's letter to the industry, which asked participants for their opinions on what aspects of the auctions should be reviewed, was sent in advance of Transco's final allocation of entry capacity. When they replied, most respondents were therefore unaware whether non-obligated incremental entry capacity would be released, with almost all assuming that bids for St Fergus entry capacity would be scaled back in all five quarterly periods.

- 4.16. However, a small number of respondents did comment upon the general process for releasing incremental entry capacity. In particular, the respondents voiced concerns about Transco's discretion to alter the final clearing price paid by all shippers. Two respondents suggested that Transco's decision-making process for releasing non-obligated incremental entry capacity should become more transparent, to ensure that there are 'no adverse impacts' upon participants.

Ofgem's views

- 4.17. Under the entry capacity incentive arrangements, as specified in Transco's GT licence, Transco has discretion as to the quantity of non-obligated incremental entry capacity it releases. This differs from the arrangements for obligated incremental entry capacity, under which Transco is obliged to apply its IECR methodology and submit a proposal to Ofgem prior to the release of any obligated incremental entry capacity, in order to earn revenue under its entry capacity investment incentive. As noted in Chapter 2, revenues from the sales of non-obligated incremental entry capacity are netted off from the costs of buy backs under Transco's entry capacity buy-back incentive.
- 4.18. In making the decision to release non-obligated incremental entry capacity, Ofgem would expect Transco to consider a number of factors, such as the physical capability of the NTS, the expected use of entry capacity as well as the trade-off between the revenue gained from the sale of the entry capacity, and the expected liability from buybacks. While Transco may wish to consider increasing the transparency of its decision-making process for the release of non-obligated incremental entry capacity, in order to enhance understanding of the entry capacity market, and increase participation in the buyback market, Ofgem is not proposing to impose any formal obligations on Transco at this time.

Investment signals from the auction

- 4.19. A primary objective of the LTSEC auctions was to improve the long-term signals for investment in the NTS. Prior to the auctions, these were limited to Transco's planning process, whereby Transco would survey its customers to determine their future needs. There was (and still is) no direct commercial incentive upon

participants in this process to respond with an accurate assessment of their future needs.

Respondents' views

- 4.20. Almost all respondents to our letter of 25 February 2003 expressed an opinion on the investment signals emerging from the auction. In general, two issues were raised:
- ◆ whether the January auction had generated any investment signals; and
 - ◆ whether the LTSEC auctions were capable of generating investment signals.
- 4.21. Several respondents commented that the results of the auction clearly showed that no expansion of the available entry capacity is required. However, one respondent commented that it was too early to judge whether signals had been provided, on the basis of one auction.
- 4.22. Several respondents questioned the ability of the January auction to provide Transco with investment signals, most of these commenting that the decline in bid volumes, particularly beyond the first few years on offer, limited the long-term signals for investment.
- 4.23. Many respondents commented that the reservation of 20 per cent of SO baseline capacity for future short-term auctions had obscured any investment signals from the auction, and would continue to do so.
- 4.24. One respondent commented that there was no need to reserve entry capacity at any terminal (other than St Fergus), because of the large quantities of entry capacity which remain unallocated at them. Others commented that the ability of new entrants to enter the industry would be enhanced if 100 per cent of SO baseline were to be auctioned on a long-term basis. They suggested that this would contribute to liquidity in the secondary market, which in itself would better facilitate the entry of new shippers. Several others expressed concerns that prices at St Fergus had been unnecessarily inflated by this rule, since in their view supply had been 'artificially' restricted.

- 4.25. A number of respondents commented upon results at other terminals, questioning whether the results had provided adequate signals for investment at some entry points, with specific upstream projects in mind. One particular concern was that, should gas from the Ormen-Lange project be landed at Easington, the need for NTS investment might not be adequately provided for by the IECR process, due to the strength of LTSEC auction demand required to satisfy the various IECR tests.
- 4.26. Another concern was that all long-term entry capacity rights at Easington could be purchased by Ormen Lange shippers. This, it was argued, would be of concern to shippers seeking to acquire entry capacity in shorter-term auctions to deliver gas from the Rough storage facility. In this context, respondents argued that shippers using the Rough facility would not buy long-term entry capacity rights. The respondents argued that this would be detrimental to the UK gas market, in that the availability of stored gas could be constrained.
- 4.27. Overall, the most widely-held opinion among respondents was that Transco could not, as yet, rely totally upon auction signals as a basis for its investment planning, and that it should use these in conjunction with its existing planning processes. However, some respondents expected that, as the entry capacity requirements of future upstream projects became known, the auctions would provide increasingly strong signals to Transco.
- 4.28. One respondent further commented that the precise nature of the relationship between Transco's planning process and the signals emerging from the auctions should be clarified.

Ofgem's views

- 4.29. Ofgem considers that the LTSEC auctions will enable Transco to receive improved and reliable investment signals, that are supported by shippers' financial commitments. Ofgem envisages that the information from these auctions will become increasingly important to Transco over time in its decisions about future investment.
- 4.30. The fact that the January auctions did not result in an allocation of obligated incremental entry capacity is not surprising. It was the first long-term auction held shortly after the conclusion of Transco's 2002-7 periodic review, in which

substantial funding was allowed for expansions of entry capacity, predominantly at the St Fergus terminal. This funding, together with the significant levels of spare capacity at other existing entry terminals, is reflected in the TO output measures and the SO output measures, which were made available in the January auction.

- 4.31. Ofgem considers that the auctions will enable Transco to receive improved and reliable investment signals, the importance of which should increase over time. In the initial years of long-term entry capacity auctions, it is only from the landing of significant quantities of 'new' gas or gas at different locations, that Ofgem would expect to see the long-term auctions signalling significant new investment in Transco's NTS.
- 4.32. In future auctions, Ofgem expects that greater experience of the process should also lead to more robust signals, as the industry becomes more accustomed to making long-term commitments, and becomes more familiar with the arrangements.
- 4.33. Ofgem is satisfied that the January auction has identified those areas of the system which are most constrained, namely St Fergus, where there was strong demand. Ofgem also considers the January auction to have shown that there is no excess of demand over supply at the other terminals and that there appears to be no reason for Transco to increase its planned investment at those terminals.
- 4.34. Ofgem considers that the information from the auction represents a significant addition to that which currently exists. In particular, the presence of bids at some terminals out to 2017 – 14 years ahead of use - is a significant extension of the current planning horizon and demonstrates that the auctions have been successful in offering shippers the opportunity to secure long-term entry capacity rights.
- 4.35. In terms of the Rough storage facility, Ofgem considers that shippers seeking to deliver gas from this facility face the same considerations as those delivering gas at any other entry point where the management of commercial risk is concerned. In particular, these shippers have the same opportunity to secure entry rights over the long term as all other shippers. In addition, there is no restriction on the owner of a storage facility securing such rights and offering a packaged right to withdraw gas from the storage facility and flow onto the NTS.

- 4.36. In the 2001 SO Incentives document¹¹, Ofgem stated that our proposal to require Transco to reserve 20 per cent of existing capacity for short-term release was based on concerns that selling all available entry capacity in the long term could create a barrier to entry into Great Britain's gas market. Ofgem stated then that, in the long term, the ability to signal new capacity requirements and have Transco respond with additional investment will reduce these concerns. In the short term, however, barriers to entry may persist for some time in the absence of a liquid and transparent secondary market. In the explanatory notes accompanying the proposed changes to Transco's GT licence in April 2002,¹² we stated that we considered the 20 per cent requirement should be removed once a liquid secondary market in entry capacity had developed. We also stated that we intended to review the requirement in two years' time, with a view to removing it.
- 4.37. Ofgem considers that, so long as participants know a priori the volumes on offer in both the long-term and short-term auctions, they will bid according to their preferences. As such, it is unlikely that the signals from the auction would be distorted by the reservation of 20 per cent of SO baseline. However, Ofgem recognises the arguments raised by some respondents and will consider these arguments further in reviewing the reservation requirement.
- 4.38. Removing the reservation requirement and relying on the secondary market to provide access to the NTS in the short term would require liquidity in the secondary market to be sufficient to ensure that entry capacity could be sourced from this market on a regular basis. In order to inform opinion on this subject, Ofgem has undertaken some preliminary analysis to examine the current status of the secondary market. This analysis is presented in full in Appendix 3, and shows that liquidity in the secondary market has increased over the past three years, with a clear upward trend in traded volumes. In terms of participation, there has also been some growth during this period.
- 4.39. However, Ofgem also notes that total traded volume in 2001/02 was only around 16 per cent of the volume sold in the relevant MSEC auctions. As a ratio

¹¹ 'Transco's National Transmission System system operator incentives 2002-7: Final proposals', Ofgem, December 2001.

¹² 'Transco price control and SO incentives 2002-7 Explanatory notes to accompany the section 23 notice of proposed modifications to Transco's gas transporter licence', Ofgem, April 2002.
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of traded volume to the original quantity released, this is somewhat smaller than in other markets; for example, the volume of natural gas traded in Great Britain is six times higher than physical delivery.

- 4.40. Going forward, Ofgem will review whether this requirement should be removed as part of our review of Transco's SO incentives for April 2004.

The use of quarterly blocks

- 4.41. As noted in Chapter 2, the product made available in the LTSEC auctions was a quarterly entry capacity product. The choice of quarterly blocks of capacity was made by market participants, as part of the development of network code modification 500. Transco supported the use of a quarterly product, which it said could provide valuable signals about seasonal requirements, in a way that an annual product could not.
- 4.42. The seasonal nature of demand for entry capacity is illustrated in Figures 4.1, 4.2 and 4.5, above, with more volume allocated during the winter periods than the summer.

Respondents' views

- 4.43. Almost all respondents were satisfied with the use of quarterly blocks of entry capacity as a basis for the auction, with many stating that this allowed them to bid according to the seasonal profile of their requirements. The majority of respondents were therefore of the view that future auctions should proceed on this basis. However, two respondents commented that the sale of entry capacity by quarterly periods did not allow a sufficiently precise profiling of bids to match their peak-day requirements.

Ofgem's views

- 4.44. In the decision letter on network code modification 500, Ofgem expressed a preference for a bundled entry capacity product, potentially over a number of years. However, Ofgem has also noted the industry's preference for the current arrangements, and considers that the definition of the product is largely a matter for market participants to determine.

Auction revenue

4.45. The total revenue from the auctions was £650.9 million. Of this total, £633 million was from the sale of the original quantity on offer, while the remaining £17.9 million was from the sale of non-obligated incremental entry capacity at St Fergus. Table 4.4, below, illustrates the revenue received by Transco at each terminal.

Table 4.4: Total auction revenue, split by terminal

Terminal	Total revenue, £m	Revenue from incremental capacity, £m	Revenue from baseline capacity, £m
Bacton	46.7		46.7
Barrow	1.8		1.8
Easington	1.2		1.2
Hole House Farm	0.1		0.1
St Fergus	596.1	17.9	578.2
Teesside	3.9		3.9
Theddlethorpe	1.2		1.2
Total	650.9	17.9	633.1

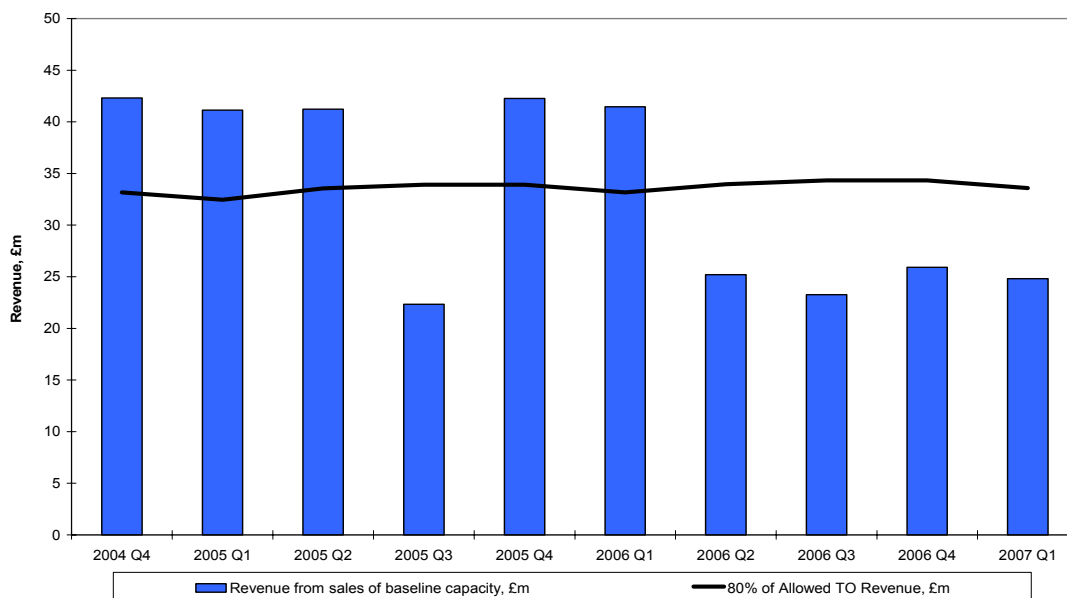
4.46. As shown in Table 4.4, revenues at St Fergus were 91.6 per cent of total auction revenue, with a further 7.2 per cent from Bacton. The other terminals each accounted for less than one per cent of total revenue.

4.47. As outlined in Chapter 2, revenue recovered from sales of all SO baseline capacity is accounted for as TO revenue. In contrast, revenue from sales of non-obligated incremental entry capacity is credited to the SO buy-back incentive scheme, alongside flows from within-day sales of entry capacity and overrun charges.

4.48. Figure 4.9, below, shows the flow of revenue into Transco's TO price control over time, from Q4 2004 (the start of the LTSEC auction) to Q3 2007 (the last quarterly period of the current price control period). For the purposes of the TO price control, only the sum of revenues for a financial year is of relevance, rather than the sum for any individual quarterly period. The series is based on the sale of all of the quantity on offer, at all terminals, at a clearing price of P0.

4.49. Figure 4.9 indicates that the sum of these revenues in each year is around £134 million, which itself is around 80 per cent of the annual allowed revenue for entry capacity (approximately £168 million in the current financial year).

Figure 4.9: Auction revenue from the first ten quarterly periods



4.50. The pattern of high revenues in five quarters, illustrated in Figure 4.9, is a result of the volume of entry capacity sold at St Fergus, where entry capacity was sold at P20 in these quarterly periods. However, considering price control years as a whole (2005 Q2 to 2006 Q1, and 2006 Q2 to 2007 Q1), Transco's revenues are in line with 80 per cent of its allowance, being £134.5 million and £136.2 million respectively.

Summary

4.51. This chapter has summarised the results of the auctions, in terms of the volumes allocated and the prices paid for entry capacity. The key points and conclusions that arise from Ofgem's analysis and consideration of respondents' views are:

- ◆ There was a high level of participation in the auctions, with 24 shippers allocated capacity over the period between 2004 and 2017. The volume of capacity allocated was generally significantly less than the quantity on offer, except at St Fergus and Hole House Farm (an onshore storage facility).

- ◆ The majority of capacity allocated was in respect of the first few years on offer, although a significant volume was allocated beyond this time, including some entry capacity for Q3 2017, the final quarterly period.
- ◆ Prices were generally set at the reserve prices, except at St Fergus, where Transco allocated some volumes of non-obligated incremental entry capacity in some early quarters. Ofgem is not proposing at this time to impose any additional obligations on Transco to increase the transparency of its decision-making process for the release of non-obligated incremental entry capacity.
- ◆ Ofgem considers that the LTSEC auctions will enable Transco to receive improved and reliable investment signals, the importance of which should increase over time. Given that Transco's periodic review was completed only shortly before the auction, allowing funding for significant expansion in entry capacity, it is not surprising that Transco did not allocate any obligated incremental entry capacity from these auctions. The auction has identified that St Fergus is still constrained in the short term and there appears to be no reason for Transco to increase its planned investment at other entry terminals.
- ◆ Ofgem's preliminary analysis on liquidity in the secondary market for entry capacity shows that liquidity has increased over the past three years, while remaining limited in absolute terms. Ofgem will build on this analysis in reviewing whether Transco's requirement to reserve 20 per cent of capacity for short-term release should be removed.

5. Key conclusions and way forward

- 5.1. This chapter briefly summarises the results of the review, and outlines Ofgem's conclusions on key issues arising from the January LTSEC auction.

General conclusions

- 5.2. The first long-term entry capacity auctions were conducted without any technical problems and have been successful in offering shippers the opportunity to secure long-term rights. There was a high level of participation in the auctions, with 24 shippers allocated capacity over the period between 2004 and 2017.
- 5.3. Ofgem also considers that the auctions will enable Transco to receive improved and reliable investment signals, the importance of which should increase over time. These were the first long-term auctions, held only shortly after the conclusion of Transco's periodic review, which provided funding for significant investment in expanding entry capacity, predominantly at the St Fergus terminal. It is therefore unsurprising that there was not sustained demand over and above the quantities of capacity on offer. In the initial years of long-term entry capacity auctions, it is only from the landing of significant quantities of 'new' gas or gas at different locations, that Ofgem would expect to see the long-term auctions signalling significant new investment in Transco's NTS.
- 5.4. As Ofgem has stated in the past, in assessing proposals by Transco to release obligated incremental entry capacity, Ofgem will place considerable weight on demand signals from the long-term auctions to justify such proposals. This is because of the clear reliability of signals backed up by financial commitments, as opposed to signals given by the traditional planning process.
- 5.5. In their responses to our letter of 25 February 2003, much of the industry expressed satisfaction with the January 2003 auctions, in particular their technical execution. Most of the respondents advocated a minimum change approach, and Ofgem is in broad agreement with this. In particular, Ofgem considers that changes to the auction rules should only be made when such changes are clearly warranted.

Key issues raised by the January 2003 auction

- 5.6. A number of issues arose in the January 2003 auctions and Ofgem has identified a number of weaknesses in the auction rules. These are discussed below.

Pro-rating rule

- 5.7. Ofgem considers that the pro-rating rule used to ration excess demand at the St Fergus entry terminal is an inefficient way to ration and appears to have distorted bidding in the final round of the auction. Ofgem considers that price should be used to ration demand when there is a short-term constraint, as a more efficient, non-distortionary method.

Notional clearing price and auction closure rule

- 5.8. One of the main issues which arose during the auction was confusion over the methodology Transco was using to calculate the notional clearing price. Ofgem has approved network code modification 623, one aspect of which changes the methodology to be aligned with that previously understood by the industry to be used in the calculation of the notional clearing price. Ofgem would stress the importance of Transco being very clear in its explanation to the industry of the auction rules. In particular, Transco should provide worked examples, in spreadsheet form, to the industry, which explain the calculation of the notional clearing price, or 'stability measure', in advance of the next LTSEC auctions.
- 5.9. There were instances of bidding in the LTSEC auction, which appeared to be designed to keep the auction open, rather than reflecting genuine demand for entry capacity. Ofgem considers it important that the design of the auction should not encourage opportunities for gaming. While the bidding in question does not appear to have affected the outcome of the auctions, it does demonstrate a weakness in the design of the auction. In this respect, the change to the methodology used to calculate the notional clearing price may reduce the volatility of the notional clearing price and may make it more likely that the auction will close early. This may help to encourage shippers to place their bids early on in the auction and discourage bids which are not reflective of true demand. Ofgem considers that, in placing bids for capacity in the long-term

auctions, shippers should always be prepared to pay for the capacity rights they have bid for.

Way forward

- 5.10. The next LTSEC auctions will be held in September 2003, when capacity for Q2 2005 to Q1 2020 will be offered. Ofgem will monitor the September auctions as part of its regular market surveillance. Capacity at new entry points will be made available shortly thereafter, following Ofem's direction on 18 August 2003 to modify Transco's GT licence to provide for new entry terminals at Milford Haven and Barton Stacey.
- 5.11. Going forward, Ofgem envisages that the LTSEC auctions will continue to evolve via a process of ongoing review and incremental changes where these are necessary. However, Ofgem considers that changes to the auction rules should only be made when such changes are clearly warranted. Any proposals to introduce changes to the auction rules should be supported by robust analysis which makes the case for change clear. In this respect, and as stated in our reasons for decision on network code modification 623, it is unhelpful to bundle in a number of proposed changes to the auction rules in one modification proposal, given that Ofgem is obliged to consider the proposal as a whole, against the network code relevant objectives.
- 5.12. Ofgem is also aware of shippers' concerns that ongoing change could undermine the value of the capacity product being sold, and will be mindful of this when we are considering future proposals to change the auction rules.

Appendix 1 Network code modification

proposal 623, '*Modification to LTSEC Weak Closure Rule*'

Proposal

- 1.1 Transco raised network code modification proposal 623, '*Modification to LTSEC Weak Closure Rule*', on 16 May 2003. Ofgem has considered the issues raised in this modification proposal, and has directed Transco to implement this proposal, because we believe that it will better facilitate the relevant objectives of Transco's network code. We have set out our reasons for making this decision below.
- 1.2 The proposal has three elements:
- ◆ A change to the notional clearing price applicable in the long-term auctions to the step price level at which aggregate demand is first less than or equal to notional supply at that step price level.
 - ◆ A renaming of the 'prevailing step price group' to 'stability group'.
 - ◆ Strengthening the auction closure rule so that the auction would close before the end of the tenth bidding day if the stability group changes in fewer than five individual quarter/terminal combinations over two consecutive bidding days.
- 1.3 While the proposed implementation date for the first two aspects of the proposal is 1 August 2003, in its revised final modification report Transco proposed an implementation date for the third aspect of the proposal of 1 November 2003.

Respondents' views

- 1.4 There were 11 responses to this modification proposal. Respondents generally commented separately on the three aspects of the proposal.

Change to the notional clearing price

- 1.5 There was unanimous support for this element of the proposal, with most respondents of the view that the proposed change to the notional clearing price methodology would be in line with how shippers expected the notional clearing price to be calculated and that the proposed change would provide welcome clarification to the rules. A number of respondents also stated that the proposed change in itself may contribute to an early closure of the auction, because the notional clearing price would be less susceptible to small changes in demand.

Renaming of the 'prevailing step price group'

- 1.6 There was general support for this element of the proposal, which was viewed as uncontroversial.

Strengthening of the auction closure rule

- 1.7 Respondents were fairly evenly divided on this aspect of Transco's proposal, with a slight majority supporting, or giving qualified support.
- 1.8 Respondents supporting the proposed strengthening of the closure rule considered that it would encourage more accurate and timely bidding and could be expected to reduce the number of auction rounds. These respondents considered that the proposal was not too dramatic a change as to undermine the auction; while those who qualified their support of the proposal considered that it did not go far enough.
- 1.9 A number of respondents did not support this aspect of the proposal and considered that the issue should be considered more fully, particularly given that it was not possible to implement this aspect of the proposal in time for the next long-term auctions. A number of respondents were against implementing a number of changes to the closure rule concurrently, and considered that it would be preferable to implement the first aspect of this proposal only. They considered that this would allow shippers to better predict the closure mechanism and enable assessment of the effect of the change.
- 1.10 One respondent opposed strengthening the closure rule in the manner proposed by Transco and did not want the auction to close before users have had an

opportunity to adequately explore the impact of the variability in their demand on total demand. This respondent considered that four quarter/terminal combinations in practice is likely to be a significant proportion of the quarter/terminals at which there is potential change in the 'stability group'.

Transco's views

- 1.11 Transco considered that it was appropriate to respond to shippers' concerns about the closure rule and also considered that the balance of shipper opinion supported strengthening the closure rule. Transco considered that improving the clarity of the auction closure rules and strengthening the closure rule would better facilitate a more efficient auction process, which might be expected to better facilitate competition between shippers.
- 1.12 Transco identified advantages of this proposal as providing greater clarity to shippers and stronger incentives on shippers to bid accurate requirements early in the auction process. It considered that disadvantages of the proposal were that it introduces possible uncertainty about how strengthened gate closure rules impinge on bidding strategies and that a stronger gate closure rule would tend to reduce the opportunities for revising bids.

Change to the notional clearing price

- 1.13 Transco considered that it is desirable to provide clear definitions in its network code.

Renaming of the 'prevailing step price group'

- 1.14 Transco considered that the name change should serve to provide further clarity about the purpose of the prices which are published during the auction process.

Strengthening of the auction closure rule

- 1.15 Transco considered that the proposed change should encourage shippers to bid their 'true' requirements early in the process and that a level of uncertainty as to when the auction would close is necessary for this to occur. While Transco noted that the shipper licence requires that misleading information should not be

passed to the gas transporter, it considered that there is benefit from network code changes that could further improve the auction process.

- 1.16 Transco considered that the proposed choice of four terminal/quarter combinations was a pragmatic first step in improving the auction rules and considered that it was unclear what type of analysis could be conducted to determine ex ante what the 'correct' number would be.

Ofgem's views

- 1.17 As a general principle, Ofgem considers that changes to the auction rules should not be made unless they clearly have a beneficial effect and the change is supported by robust analysis. It is therefore unhelpful to combine two proposed changes to the auction rules in one modification proposal. Ofgem would encourage network code participants considering raising proposals to change the auction rules in future to confine their proposals to single changes to the auction rules, in order to allow a consideration of each proposed change to the auction rules on its merits alone.
- 1.18 Ofgem agrees with the point made by a number of respondents that the proposal to strengthen the closure rule should have been considered more fully, particularly given that Transco has stated that it is not possible to implement this aspect of the proposal in time for the next long-term auctions.
- 1.19 Notwithstanding these reservations, Ofgem is required to make a decision on each proposal to modify Transco's network code against the relevant objectives and our reasons for decision are set out below.

Change to the notional clearing price

- 1.20 Ofgem welcomes this aspect of the proposal, which would change the methodology used to determine the 'notional clearing price' to one which is understood by shippers. There was confusion during the first long-term auctions over the methodology used and Ofgem would encourage Transco to provide clear and detailed information, including numerical examples in the form of spreadsheets, explaining the methodology to shippers in advance of the next long-term auctions.

- 1.21 Ofgem considers that this aspect of the proposal would facilitate the securing of effective competition between relevant shippers, through a better understanding of the auction process.

Renaming of the 'prevailing step price group'

- 1.22 Ofgem welcomes this aspect of the proposal to the extent that it also improves shipper understanding of the notional clearing price or 'stability' concept.

Strengthening of the auction closure rule

- 1.23 Ofgem notes that opinion on this aspect of Transco's proposal was more divided than the first two aspects of the proposal. While the closure rule remains a 'weak' closure rule, by strengthening the early closure rule and making it more likely that the auction will close before the end of the tenth bidding day, this should encourage shippers to place early bids which reflect their genuine demand.

- 1.24 However, Ofgem is concerned that this element of the proposal has not been properly developed and is not supported by robust analysis. There is a danger, highlighted by one respondent, that this element of the proposal may result in the auction closing prematurely, when clearing prices at a number of ASEP/quarter combinations are still adjusting. This may lead to inefficient allocations and auction signals.

- 1.25 Ofgem notes that Transco's proposed implementation date of November 2003 would mean that the change would not be implemented for the forthcoming long-term auctions in September 2003. On balance, while this change may reduce the extent to which shippers are able to revise their bids during the auction process, Ofgem considers that the potential adverse effect is limited because it would only affect four or less ASEP/quarter combinations.

Ofgem's decision

- 1.26 Considering the two main aspects of this proposal as a whole, Ofgem considers that the potential dangers with the strengthening of the closure rule are outweighed by the positive effects of the change to the methodology for the calculation of the 'stability measure'. In particular, we consider that the

proposal as a whole better facilitates the securing of effective competition between shippers by improving the efficiency of the auction process. For the reasons given above, Ofgem has decided to approve this modification.

- 1.27 However, as stated above, Ofgem does have some reservations about strengthening the closure rule and given Transco's delayed implementation date for this element of the proposal, it is open to any network code signatory opposed to this aspect of the proposal to raise a modification proposal to prevent the application of this change to the auction rules. Such a modification proposal could facilitate a more informed analysis of the effects of a strengthened closure rule.

Appendix 2 Map of Transco's National Transmission System



Appendix 3 Reserving entry capacity for short-term auctions

Background

- 3.1 Under the terms of Transco's GT licence, it is required to reserve 20 per cent of SO baseline capacity for sale in short-term auctions. This rule was intended to allow new entrants to contest the GB gas market, by preventing incumbent shippers from buying all the available entry capacity for some years hence. Ofgem stated that it intends to remove this requirement once a liquid secondary market has developed, and stated our intention to review the requirement with a view to its removal, along with our review of other aspects of Transco's NTS SO incentive regime. In this appendix, we provide our analysis of the development of the secondary market for entry capacity to date.¹³
- 3.2 The secondary market for entry capacity operates on an over-the-counter basis, whereby shippers agree to trade entry capacity holdings bilaterally. This market therefore provides shippers with an alternative to trading entry capacity with Transco.
- 3.3 As part of its regular market surveillance activities, Ofgem receives information relating to the secondary market from Transco. In particular, and for the relevant gas day, Ofgem receives details of the counterparties to each trade, the volume traded, and the terminal to which the entry capacity applies. Ofgem has used this information to produce the analysis set out in this appendix, which covers the level of participation in the market, and the volumes traded. Ofgem considers that both of these statistics are key indicators of the market's level of development.

¹³ Data given for the gas year 2002/03 are for the current gas year up until 29 May 2003. The January 2003 Long-Term System Entry Capacity Auctions - A review document
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Analysis of the development of the secondary market for entry capacity

Participation in the secondary market for entry capacity

3.4 Table A3.1, below, shows the number of shippers active in the secondary market in each gas year since 2000/01. As can be seen from the table, there has been a slight increase in the number of shippers operating in the secondary market since 2000/01.

Table A3.1: Number of shippers trading in the secondary market, by gas year

Gas year	2000/01	2001/02	2002/03
No. of shippers	40	45	45

3.5 The level of participation in the market can be compared to the total number of licence holders, which has grown from around 90 in 2000/01 to over 130 in 2002/03. However, since a company may hold more than one shipping licence, a more meaningful comparison is based on the number of companies trading in the market in each gas year. The following table shows how this statistic has developed over the same period of time, split by NTS entry point.

Table A3.2: Number of companies trading at each terminal, in each gas year

Terminal	2000/01	2001/02	2002/03
Bacton	17	18	19
Barrow	1	1	5
Dynevor Arms	1		
Easington	7	15	13
Hole House Farm		1	
Hornsea	4	4	5
Isle of Grain	1		
St Fergus	21	25	27
Teesside	15	19	18
Theddlethorpe	10	9	9
Total	77	92	96

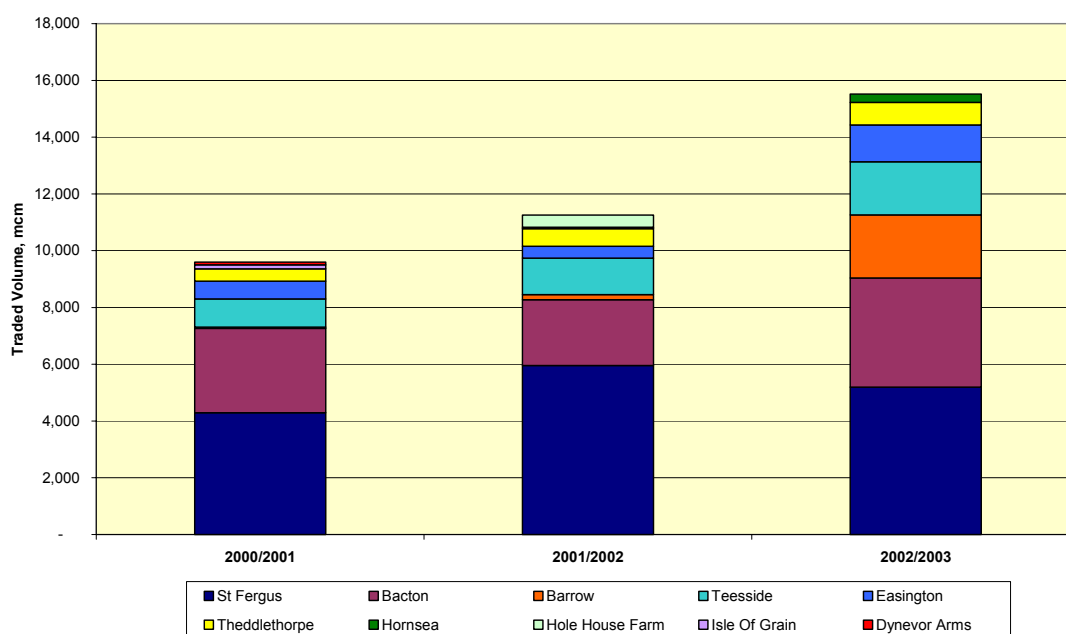
3.6 As Table A3.2 shows, there has been some growth in participation during this period of time. The highest level of participation is at St Fergus, where 27 different companies have traded entry capacity so far in 2002/03. This number

is consistent with the number of bidders at the terminal in the LTSEC auction. Bacton, Teesside and Easington have also seen significant levels of participation. At each of the other terminals, fewer than ten companies have traded entry capacity in 2002/03.

Traded volumes of entry capacity in the secondary market

3.7 Figure A3.1 shows the total traded volume of entry capacity in each gas year since 2000/01. The total for each year is broken down further, showing the volumes traded at each terminal.

Figure A3.1: Secondary market traded volumes, split by terminal

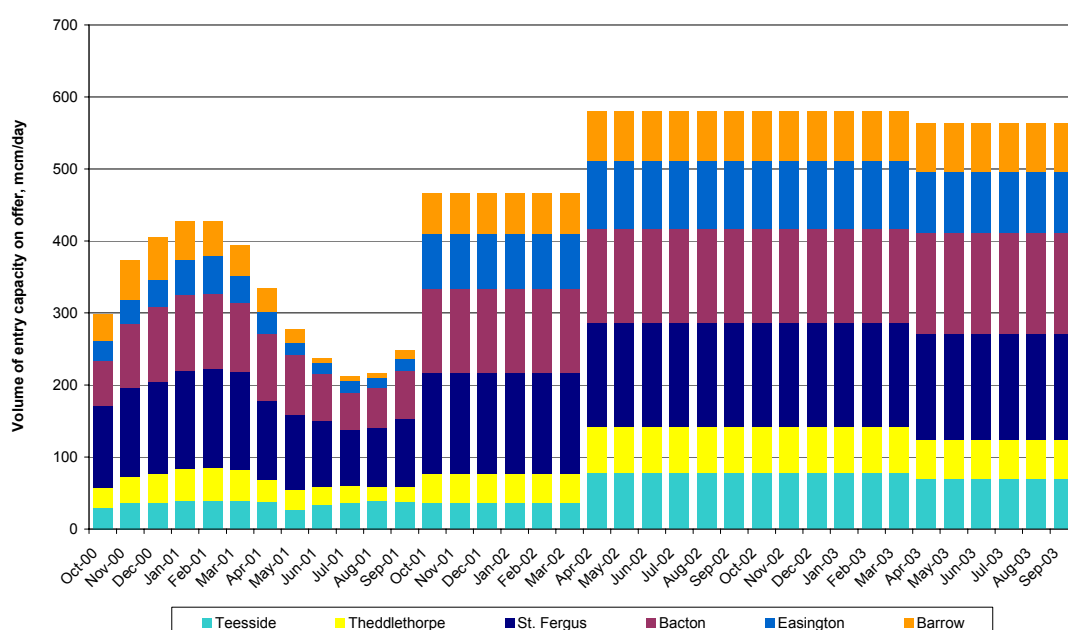


3.8 As Figure A3.1 shows, there has been some growth in the total traded volume of entry capacity, with the current gas year showing the largest total yet, despite this total being for less than a full year. Over 15,000 mcm has been traded in 2002/03, compared with 11,200 mcm in 2001/02 and 9,500 mcm in the previous gas year.

3.9 At a terminal level, the picture is less straightforward, with solid growth at some terminals (for example, Teesside and Theddlethorpe) but year-on-year fluctuations at others (St Fergus and Bacton). Also of note is the large volume of Barrow entry capacity traded in the current gas year.

3.10 There was a significant change to the entry capacity regime in October 2001. Before this point, the volume of MSEC released for each month was based on seasonal normal demand (SND) in that month. In contrast, from October 2001 onwards, the quantity on offer was based on each terminal's maximum physical throughput. As Figure A3.2 shows, this created a significant increase in availability at most of the six main beach terminals, particularly during the summer months when SND tends to be lower.

Figure A3.2: Entry capacity offered in MSEC auctions at the six main beach terminals

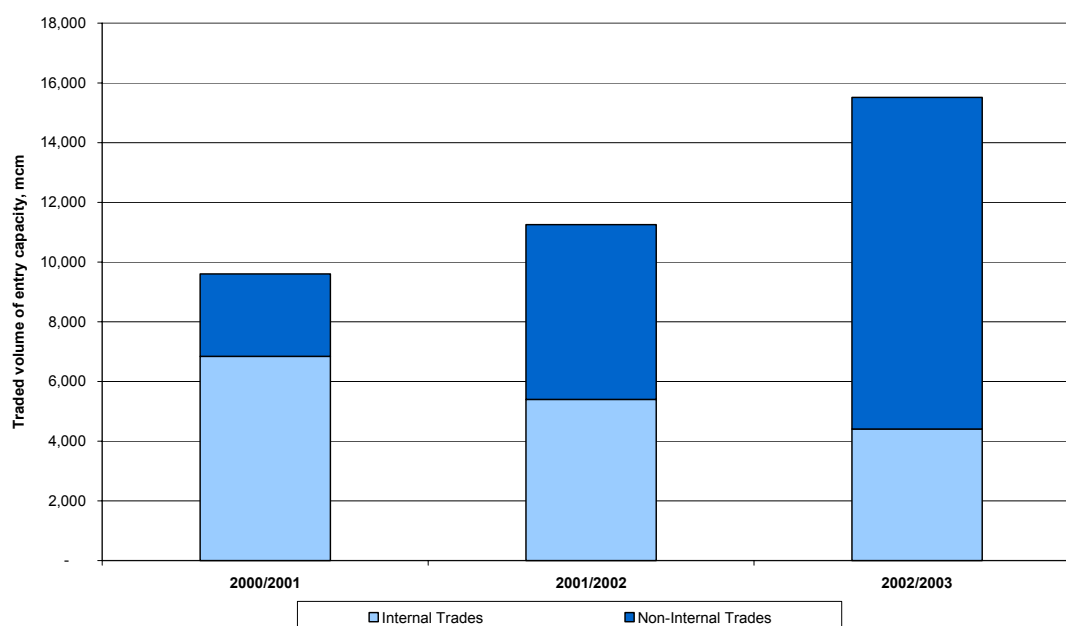


Internal trades in entry capacity

3.11 In conducting this analysis, Ofgem has observed that many trades of entry capacity are between two shipper identities which are owned by the same company. These can be referred to as 'internal trades', as the company's overall holding of entry capacity is unchanged following the trade, as is its net financial position. Also, these trades have no real effect upon market liquidity, since the entry capacity is not being traded with another company.

3.12 Therefore, to represent accurately the activity in the secondary market, it is important to note how large a proportion of the total volume internal trades account for. The following chart splits the total traded volume in each gas year into volumes traded internally, and volumes from other trades.

Figure A3.3: Volume of internal trades of entry capacity, in each gas year



3.13 As shown in Figure A3.3, the proportion of internal trades has decreased, falling from 71 per cent in 2000/01 to 28 per cent in the current gas year thus far. In absolute terms, the volume of internal trades has fallen less sharply, though there is still a clear downward trend. Overall, therefore, it appears that the volume traded between separate companies has increased since 2000/01.

Summary and conclusions

3.14 This appendix has reviewed the development of the secondary market in recent years. The key points are that:

- ◆ liquidity in the market is developing, with a noticeable growth in traded volumes in recent years;
- ◆ levels of participation have also grown, though by a smaller proportion than traded volumes;
- ◆ however, the ratio of traded volume to physical flows remains much smaller than in other, comparable markets. This ratio becomes smaller still if the volume of internal trades of entry capacity (between two shippers owned by the same company) is taken into account.

3.15 Going forward, Ofgem will review whether this requirement should be removed as part of our review of Transco's SO incentives for April 2004.