

**New entry terminals to Transco's National
Transmission System**

**Ofgem's views on Transco's proposals and
Explanatory notes to accompany the section
23 notice of proposed modifications to
Transco's gas transporter licence**

June 2003

Summary

This document sets out Ofgem's views on Transco's consultation relating to proposals for new entry points to Transco's national transmission system (NTS) and has been prepared to facilitate review of the section 23 notice under the Gas Act 1986 issued today by Ofgem. The section 23 notice contains proposed modifications to Transco's gas transporter (GT) licence, necessary to facilitate new entry points at Milford Haven, in Pembrokeshire, Wales and Barton Stacey in Hampshire.

As part of the modifications made to Transco's GT licence with effect from 1 April 2002, an entry capacity regime was established, with the aim of ensuring that Transco invests efficiently in response to customers' demands for entry capacity as signalled through entry capacity auctions. Key features of this regime are long-term auctions of entry capacity rights and an entry capacity investment incentive, which allows Transco to earn up to 12.25 per cent on pre-agreed estimates of the cost of providing incremental entry capacity.

Following the conclusion of Transco's 2002-7 price control review, a number of parties approached Transco with proposals to bring additional gas supplies into Transco's NTS and with proposals to develop storage facilities. These proposals relate to liquefied natural gas (LNG) import terminals at Milford Haven and onshore storage facilities at Humbly Grove in Hampshire and Welton in Lincolnshire.

Under the entry capacity regime, new entry points to the NTS are treated under Transco's entry capacity investment incentive. In order to allow for this, unit cost allowances (UCAs) need to be specified in Transco's GT licence. The UCAs are ex-ante agreed estimates of the per unit costs of providing incremental entry capacity at an entry point and are the basis for determining the range of revenues Transco is allowed for taking on an obligation to release incremental entry capacity rights.

Ofgem is therefore proposing UCAs to apply to the Milford Haven and Barton Stacey entry points. Barton Stacey is a point on Transco's existing NTS and would be the connection point between a pipeline from the Humbly Grove facility to Transco's NTS. We are not proposing a UCA for Welton at this point in time.

At the proposed Milford Haven entry point, there are plans for one LNG import terminal to be operational in 2006 and a possible second terminal to be operational at a later

stage. There is therefore considerable uncertainty about the likely level of demand for capacity at Milford Haven. Transco has published an indicative supply schedule for capacity at Milford Haven, which demonstrates that there are economies of scale in providing capacity at Milford Haven, with decreasing average costs for larger increment sizes. In the light of this uncertainty, we are proposing two alternative levels of the UCA for Milford Haven, based on our estimates of the efficient level of costs to provide capacity levels associated with accommodating either one or two LNG import terminals. The UCA would be set on the basis of the level of demand for entry capacity at Milford Haven signalled in long-term auctions.

While not part of the section 23 notice, Ofgem considers that it may be appropriate to modify Transco's long-term auction arrangements in the case of Milford Haven and allow Transco to operate an 'open season' for capacity bids. Such an open season would allow Transco to keep open the options of accommodating the demand for entry capacity from either one or two LNG import terminals to the extent that parties requesting the open season are prepared to pay for the costs which this imposes on Transco. In order to accommodate an open season, Transco would need to raise a proposal to modify its network code, which would be subject to consultation and Ofgem's decision.

A number of auctions could be held during this open season, with bidders facing the same prices as published by Transco. After each auction held during the open season, subject to the relevant tests in Transco's incremental entry capacity release (IECR) methodology being met and any proposal for the release of capacity being approved by Ofgem, shippers placing bids for capacity would be allocated capacity in accordance with the volumes bid. In the event of further auctions being held during the open season, Transco could aggregate the bids submitted during the open season and determine common cleared prices payable by all parties participating in the open season.

Ofgem would determine the final value of the UCA following the end of the open season. Bidders demanding capacity in subsequent auctions would face a reserve price for capacity at Milford Haven equal to the UCA, in line with Transco's existing methodology.

This treatment allows parties seeking to secure capacity in 2003 to do so, with certainty as to the maximum cost that they will pay and allows for Transco's decision-making

deadlines to be extended in order to allow other potential bidders to signal demand in time to be accommodated by Transco.

The consultation period on Ofgem's proposals ends on 28 July 2003. Transco has indicated that it will be raising an urgent network code modification proposal to allow for an amended auction format, accommodating an open season for Milford Haven. In addition, we expect Transco to be engaging in negotiations with interested parties in relation to option fees to create and extend the open season and with interested parties at all prospective new terminals in relation to protection against Transco not delivering the necessary system extension on time.

Ofgem will be considering the results of its consultation in August and, in the event that it does not result in any material changes to our proposals, it is our intention to implement the changes to Transco's GT licence in August 2003. This timing would allow Transco to offer capacity at Milford Haven and Barton Stacey along with that offered at existing entry points, in the next scheduled long-term auctions in September 2003.

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1. Introduction

Purpose of this document

- 1.1. This document sets out Ofgem's views on Transco's consultation relating to proposals for new entry points to Transco's national transmission system (NTS) and how we consider the long-term entry capacity auctions could operate in relation to these new system entry points.
- 1.2. This document has also been prepared to facilitate review of the section 23 notice issued today by Ofgem in respect of the proposed modifications to Transco's gas transporter (GT) licence to introduce new unit cost allowance (UCAs)¹ for the Milford Haven and Barton Stacey entry points. A copy of the proposed licence modifications is contained in Appendix 1.²

Rationale

- 1.3. Following the conclusion of Transco's 2002-7 price control review, a number of parties have approached Transco with proposals to bring additional gas supplies into Transco's NTS and with proposals to develop storage facilities.
- 1.4. Qatar Petroleum / ExxonMobil ('QP/EM') plans to import LNG to the UK. In addition, Petroplus has announced plans to develop an LNG import terminal at Milford Haven in Pembrokeshire, Wales. Petroplus has secured planning permission for the construction of an import terminal and two storage facilities or tanks and expects its LNG facility to be operational in 2006. In April 2003, QP/EM submitted a planning application for a proposed LNG facility at Milford Haven.

¹ The UCAs in Transco's licence are a feature of the entry capacity investment incentive. They determine the incentive revenue which Transco is allowed to retain when it makes incremental obligated entry capacity available for sale.

² The notice also corrects a spelling mistake elsewhere in the licence.

- 1.5. Star Energy Limited ('Star Energy') has announced plans to enhance oil recovery at two partially depleted onshore oilfields by converting them into natural gas storage facilities. These facilities are located at Humbly Grove in Hampshire and Welton in Lincolnshire.
- 1.6. In order to provide financial incentives on Transco to efficiently respond to demand for entry capacity at these new entry points, as signalled through entry capacity auctions, it is necessary to amend Transco's GT licence.
- 1.7. Ofgem is therefore proposing modifications to Transco's GT licence to specify UCAs at the proposed Milford Haven and Barton Stacey entry points. The Barton Stacey entry point is the point on Transco's existing NTS at which the pipeline connecting the Humbly Grove facility would connect to the NTS. Star Energy will be building the pipeline between Humbly Grove and Barton Stacey.
- 1.8. If this proposed modification to Transco's licence is implemented, Transco will receive a revenue allowance if it offers obligated incremental entry capacity for sale at the proposed Milford Haven entry point. We are not proposing a UCA in respect of the proposed Welton entry point at this time.

Background

- 1.9. Ofgem has put in place price control and system operator (SO) incentive arrangements for Transco for the period 2002 – 2007 with effect from 1 April 2002. These arrangements were implemented through changes made to Transco's GT licence in September 2002³, following an extended period of consultation. Full details of these arrangements are contained in Ofgem's September 2001⁴ and December 2001⁵ final proposals documents, the explanatory document accompanying the

³ *Transco Price Control and NTS SO incentives 2002-2007 Licence modifications*, Ofgem, September 2002.

⁴ *Review of Transco's price control from 2002: final proposals*, Ofgem, September 2001.

⁵ *Transco's National Transmission System system operator incentives 2002-7 Final proposals*, Ofgem, December 2001.

licence changes⁶ and the logs of changes that accompanied the section 23 notices.⁷

- 1.10. Under these arrangements, Transco's price control for its NTS is split between its transmission asset owner (TO) and its SO functions. In respect of NTS entry capacity, Transco is funded under its TO function to provide specified TO baseline output measures of entry capacity at each existing entry terminal to its NTS. Under its GT licence, Transco must offer for sale SO baseline output measures, which it does through a series of long-term and shorter-term entry capacity auctions. The SO baseline output measures are set at 90 per cent of the TO baseline output measures at each terminal.
- 1.11. The first auction for long-term entry capacity rights to Transco's NTS was held in January 2003, under arrangements specified in Transco's network code.⁸
- 1.12. Transco's GT licence includes an entry capacity investment incentive scheme which, for a defined period, potentially allows it to earn a relatively high rate of return on obligated incremental entry capacity offered for sale above its SO baseline output measures. This incentive is designed to encourage Transco to respond to changes in the levels and locations of demand for entry capacity to its NTS.
- 1.13. Ex-ante agreed UCAs are specified in Transco's GT licence for each existing entry point and determine Transco's maximum and minimum allowed revenue under its entry capacity investment incentive.
- 1.14. Ofgem indicated in December 2002⁹ that new entry points would be treated in the same way as existing entry points, in that capacity should

⁶ *Transco price control and NTS SO incentives 2002-7 Explanatory notes to accompany the section 23 notice of proposed modifications to Transco's gas transporter licence*, Ofgem, April 2002.

⁷ Changes made to the Notice under section 23 of the Gas Act 1986 dated 12 April 2002 are contained in *Transco price control and NTS SO incentives 2002-07 Log of changes to the proposed licence modifications*, August 2002. Changes made to the Notice under section 23 of the Gas Act 1986 dated 1 August 2002 are contained in *Transco price control and NTS SO incentives 2002-07, Second log of changes to the licence modifications*, September 2002.

⁸ Ofgem's approval of network code modification proposal 500, *Long Term Capacity Allocation*, 30 September 2002, introduced the long-term auction rules into Transco's network code.

⁹ *Transco's proposal to transfer its LNG facilities: update*, Ofgem, December 2002.

be offered for sale in long-term auctions and Ofgem would consult on UCAs for any new entry terminals.

- 1.15. On 10 February 2003, Transco released a consultation paper on the sale of entry capacity at new system entry points. This was in response to requests made to Transco with regard to three proposed new system entry points: Milford Haven, Humbly Grove and Welton. In its consultation paper, Transco set out the way in which it proposed to offer capacity at these proposed entry points, indicative UCAs and price schedules for each of the proposed points. Twelve responses to this consultation were received. Transco is also publishing a report on this consultation.

Structure of this document

- 1.16. The content of the remainder of the document is as follows:
- ◆ Chapter 2 provides a discussion of general issues which apply to the regulatory treatment of new entry terminals to Transco's NTS;
 - ◆ Chapter 3 discusses issues specific to the proposed Milford Haven entry terminal, including Ofgem's proposals for setting a UCA for Milford Haven and the operation of long-term entry capacity auctions for Milford Haven capacity;
 - ◆ Chapter 4 discusses issues specific to the proposed entry points at Humbly Grove and Welton, including Ofgem's proposal for setting a UCA for Barton Stacey; and
 - ◆ Chapter 5 sets out Ofgem's proposed way forward.
- 1.17. The document also has four appendices. Appendix 1 contains a copy of the proposed licence modifications. Appendix 2 provides an illustration of Transco's regulated revenue treatment. Appendix 3 contains a map showing the location of the proposed Milford Haven entry point, while Appendix 4 contains a map showing the location of the proposed Barton Stacey entry point.

Responses

1.18. As set out in the section 23 notice which has also been published today, Ofgem seeks views on the proposed modifications to Transco's GT licence by 28 July 2003. Responses to the section 23 notice should be addressed to:

Kyran Hanks

Director, Gas Trading Arrangements

Office of Gas and Electricity Markets

9 Millbank

London SW1P 3GE

or by email to kyran.hanks@ofgem.gov.uk

1.19. Respondents are free to mark their replies as confidential, although we would prefer, as far as possible, to be able to place responses to this consultation on Ofgem's website and in Ofgem's library. Unless clearly marked 'confidential', responses will be published by placing them on Ofgem's website and in Ofgem's library.

1.20. If you wish to discuss any aspect of this document, Lyn Camilleri (telephone: 020 7901 7431, email lynette.camilleri@ofgem.gov.uk) or Tolani Azeez (telephone: 020 7901 7043, email Tolani.azeez@ofgem.gov.uk) will be pleased to help.

2. General treatment of new terminals

- 2.1. There are a number of general issues that have been raised in relation to the treatment of new entry terminals to Transco's NTS. These issues apply generally to the proposed new entry terminals at Milford Haven, Humbly Grove and Welton. These issues are discussed in this chapter and issues specific to the individual terminals are discussed in chapters 3 and 4.
- 2.2. In this chapter, we give a background to Transco's entry capacity investment incentive and then discuss Transco's proposals, respondents' views, Transco's views as expressed in its consultation report and Ofgem's views on issues relevant generally to new entry points. These issues are: new entry terminals under Transco's SO incentives; setting UCAs for new entry points; Transco's cost estimates; and Transco's liability in the event of non-delivery of capacity at new terminals.

Background to Transco's entry capacity investment incentive

Unit cost allowances

- 2.3. The UCAs, which underpin Transco's entry capacity investment incentive, are ex-ante agreed estimates of the unit costs of providing incremental entry capacity at each NTS entry point. The UCAs determine the range of Transco's revenue allowance for the provision of incremental entry capacity. Transco is allowed to earn a rate of return of between 5.25 and 12.25 per cent on the UCA on each unit of obligated incremental entry capacity offered for sale.
- 2.4. To the extent that the amount of revenue Transco recovers falls outside either its cap or collar, the difference is channelled back to or recovered from shippers, through Transco's SO commodity charge.

Obligated incremental entry capacity

- 2.5. Under Transco's entry capacity investment incentive, Transco can take on an obligation to release either permanent or annual obligated incremental entry capacity and is allowed incentive revenues with respect to this capacity. Under its GT licence, Transco is able to apply to Ofgem to release either permanent or annual obligated incremental entry capacity in response to signals from long-term entry capacity auctions and having satisfied its incremental entry capacity release (IECR) methodology.
- 2.6. Entry capacity that has been designated as obligated incremental entry capacity following an application made by Transco to Ofgem, is entry capacity that Transco is obliged to offer for sale in at least one 'clearing allocation'. A 'clearing allocation' is defined as either an allocation in which all capacity is sold, or in which the capacity has been offered for sale at a zero reserve price.¹⁰ This obligation continues until and including the gas day to which the capacity relates.

Permanent obligated incremental entry capacity

- 2.7. In the case of all terminals, including new entry terminals where the baseline quantity is zero, the UCA also features in a test which determines whether bids in the long-term entry capacity auctions automatically trigger Transco releasing permanent obligated incremental entry capacity. Transco's IECR methodology statement specifies this test which, if satisfied, would result in Transco putting a proposal to Ofgem that it intends to release permanent obligated incremental entry capacity.
- 2.8. This test is a net present value (NPV) test, which requires the NPV of the aggregate value of bids for incremental capacity over 8 years to equal at least 50 per cent of the 'assumed project value' at any one entry point. The 'assumed project value' is an estimate of the cost of providing the

¹⁰ The clearing allocation obligation is subject to Transco's wider licence obligations to not discriminate and may allow the setting of a positive reserve price at uncompetitive terminals.

incremental capacity, and is derived from the UCA multiplied by the volume of incremental capacity being considered.

- 2.9. Under Transco's IECR NPV test, it requires a minimum quantity of aggregate bids to be placed at a particular price on its price schedule that exceeds the volumes published in its IECR price schedule for that price. Taking Transco's indicative price schedule for Milford Haven, for example, in order for Transco to apply its IECR tests in relation to releasing a volume of 250 GWh/day as permanent obligated incremental entry capacity, there would need to be bids placed for greater than 250 GWh/day against a price of 0.0138 p/kWh/day. Such bids would need to be made for such a duration that the NPV of bids equates to 50 per cent of the assumed project value, in order to satisfy Transco's NPV test.
- 2.10. Permanent obligated incremental entry capacity attracts incentive revenue allowances for five years (and the current TO rate of return on the remaining years until the subsequent price control period) and is reflected in a permanent increase in the SO baseline entry capacity output measures. This reflects the intention that permanent obligated incremental entry capacity represents a permanent increase in the capacity at an entry point. Investment associated with providing the level of permanent obligated incremental entry capacity would be expected to result in an adjustment to the TO baseline capacity and Transco's regulatory asset value (RAV) at the subsequent price control review, subject to the normal price control review principles of allowing only efficient levels of expenditure.

Annual obligated incremental entry capacity

- 2.11. In contrast to permanent obligated incremental entry capacity, the intention is that annual obligated incremental entry capacity should not result in any permanent change to the baseline output measures. Under its GT licence, Transco is allowed incentive revenue only in those years for which it has undertaken to offer this form of entry capacity for sale, which must be less than five years.

2.12. This reflects the rationale underlying annual obligated incremental entry capacity, which is to allow Transco to earn entry capacity incentive revenue in circumstances in which 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.

Ofgem's considerations in approving a proposal to release obligated incremental entry capacity

2.13. In considering an application from Transco under its IECR process, Ofgem would wish to be satisfied that any proposal to release capacity at the proposed new terminals is supported by aggregate bids which justify Transco's proposal. In making this assessment, Ofgem would consider whether the NPV of bids is at least equal to 50 per cent of the assumed project value, and thereby assess whether the volume of capacity which Transco proposes to release is supported by the requisite value of bids.

2.14. In principle, Ofgem would be unwilling to approve a proposal to the extent that it assumes that demand in addition to that signalled in the auction will be signalled at some later date. As we have said in discussions leading up to the first long-term auctions, Ofgem will place considerable weight on demand signalled through the financial commitments resulting from auctions, given its clear reliability, as opposed to signals given by the traditional planning process.

2.15. Transco's obligation to offer capacity for sale in a clearing allocation relates only to its levels of obligated entry capacity (SO baseline and obligated incremental entry capacity), rather than, for example the TO output measures or the physical capacity which Transco has invested in at a new entry terminal.

2.16. To the extent, for example, that Transco chooses to invest in excess of demand revealed in the auctions and therefore above the level of obligated incremental entry capacity, it is taking on the risks and possible rewards on this proportion of the investment. In circumstances in which Transco chose to invest in excess of demand revealed in the auctions,

there would be no presumption that this (excess) investment would subsequently be included in Transco's RAV. Transco would have no obligations to release this 'excess' capacity for sale in a clearing allocation unless and until it took on an obligation to release the capacity as obligated incremental entry capacity.

Shippers' bidding considerations

- 2.17. The UCAs are also important for shippers bidding into the auctions to acquire entry capacity. Transco has set the reserve prices applicable to the baseline quantities of entry capacity in the long-term auctions equal to the UCAs. The reserve prices applicable to the monthly system entry capacity (MSEC) auctions and the rolling MSEC auctions are also set at the UCAs.¹¹ Reserve prices for day-ahead and within-day capacity fall to two-thirds of the UCA and are proposed to be zero for within-day capacity, with effect from October 2003.¹²
- 2.18. To the extent that the UCAs form part of Transco's IECR NPV test, the UCAs also represent an important variable for shippers when considering the amount of capacity they wish to bid for at different prices, and the duration of any such bids. For example, if a shipper were to bid continuously over a period of 32 quarters at a particular price on Transco's price schedule, which equalled the annualised UCA, then this would automatically trigger an application by Transco to Ofgem to release permanent obligated incremental entry capacity. If the annualised UCA price is less than the price at which the shipper has bid, then continuous bidding over a lesser number of quarters would satisfy the NPV test.

¹¹ See Ofgem's decision letter on Transco's Pricing Consultation 76, *NTS TO Entry Capacity Auction Reserve Prices and Exit Charges*, 20 December 2002.

¹² Transco has raised network code modification proposal 0630, *Zero Reserve Price for Within-Day Sale of Daily System Entry Capacity*, which is currently out for consultation.

Re-opening Transco's price control versus application of the entry capacity investment incentive

Transco's proposals

2.19. In its consultation paper, Transco proposed to treat capacity made available at new entry terminals within its entry capacity investment incentive scheme.

Respondents' views

2.20. A number of respondents raised the issue of whether it is more appropriate to treat new terminals under the TO or SO form of control, indicating that at least a proportion of the capacity should be treated as TO baseline outputs. One respondent considered that the purpose of the entry incentive is to encourage Transco to take risks at the margin, rather than to have a guaranteed incremental return on any new investment projects.

2.21. One respondent suggested that mechanisms were required to ensure that Transco's investment decision takes into account supply signals beyond those made in auctions, because the ultimate capacity requirements may not all be signalled in a first auction for capacity at a new entry point.

2.22. Another respondent considered that it is more efficient for capacity at a new entry point to be offered bilaterally rather than through auctions, in order that the needs and timing of the project can be better fitted to Transco's timelines.

Transco's views

2.23. Transco noted that the issue of whether the price control is reopened is primarily an issue for Ofgem and that, if additional baseline outputs were to be added to its TO price control, the appropriate volume level and increase in allowed revenue would need to be determined.

Ofgem's views

- 2.24. Ofgem indicated, in its December 2002 update on Transco's proposal to transfer its LNG facilities, that it intended to treat proposals for new entry terminals to Transco's NTS under Transco's entry capacity investment incentive scheme.
- 2.25. Ofgem considered the alternative proposal of re-opening the TO price control and specifying a baseline level of entry capacity outputs at the new entry terminals and a level of allowed revenue. However, we consider that an approach that relies on demand signalled through the auctions, and therefore backed up by participants' willingness to pay, is preferable to simply relying on non-binding information provided to Transco.
- 2.26. Transco's entry capacity investment incentive was designed to allow Transco to respond to demand revealed in auctions for long-term entry capacity rights. The identification of proposals to develop new entry terminals after finalisation of the price control is an example of the inability of the five-yearly price control reviews, or indeed any other forecasting process, to accurately predict the timing, levels and locations of demand for capacity.
- 2.27. Accordingly, we consider that demand for entry capacity at new entry terminals should be signalled through long-term auctions and to the extent that sufficient demand is signalled, this should lead to changes in Transco's allowed revenue under the entry capacity investment incentive. Transco is able to earn returns on additional capacity release of up to 12.25 per cent on the UCA.
- 2.28. In deciding what investment to undertake in response to the level of obligated incremental entry capacity it proposes to release, Transco will be taking on the possible risks and rewards associated with deciding to invest to provide significantly less or more physical capacity than the level of obligated entry capacity. If Transco decides to invest at levels less than the level of obligated incremental entry capacity, then it risks

exposure to buy back these rights.¹³ To the extent that Transco invests in excess of the level of obligated entry capacity, then it takes on the risks that this investment may not be included in the RAV as part of any future price control process.

Setting new unit cost allowances

2.29. In this section, we consider the general issues raised in relation to setting new UCAs. Particular issues relating to each of the proposed new entry points are covered in chapters 3 and 4.

Transco's proposals

2.30. In its February consultation, Transco proposed price schedules for the new terminals. It stated that the price schedules had been calculated in the same manner as for existing entry points, based on the methodology set out in its IECR statement. Transco similarly calculated indicative UCAs for each of the potential new entry points based upon its understanding of the methodology used for existing entry points, and therefore reflecting a measure of the average cost of providing a 6 mcm/day increment.

2.31. Transco's indicative UCAs were as follows:

Table 2.1: Transco's indicative UCAs for the new entry terminals

Terminal	UCAG (£/kWh)	Annualised UCA (p/kWh/day)
Milford Haven	0.9690	0.0300
Humbly Grove	0.2610	0.0081
Welton	0.1060	0.0033

Respondents' views

2.32. A number of respondents to Transco's February consultation considered that setting the UCAs for new terminals at the 6 mcm/day level was not appropriate. These respondents considered that a UCA for a new entry

¹³ Transco's buy-back incentive is due to be reviewed for April 2004.
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point should be set on the basis of likely volume or the expected size of the pipeline. One respondent considered that the final value of the UCA should not be established in advance of knowing the final capacity commitments and submitted that the UCA should be set at the price point on the supply curve corresponding to the amount of capacity Transco commits to supply. Another respondent considered that Transco should use all available planning information in determining the correct increment size to use in determining the UCA.

Transco's views

- 2.33. In setting out new UCAs based on a 6 mcm/day increment level, Transco argued that this was consistent with the approach used for existing terminals. It argued that, while Ofgem and Transco may have a view as to the likely maximum capacity level requirement, this might not always turn out to be accurate. Transco also stated that attempting to base the volume increment used to set the UCA on the likely level of demand may lead users to provide misleading information to Transco, in order to influence the level of the UCA.
- 2.34. Transco disputed that the incremental entry capacity required at new terminals is likely to be much larger than that at existing terminals. It gave an example of a development of new offshore connecting pipelines connecting to an existing terminal.
- 2.35. In response to the proposal to set the UCA only after commitments for capacity have been revealed in the auctions, Transco argued that this would create a problem in terms of applying the IECR process to determine whether Transco should release obligated incremental entry capacity. Transco therefore argued that the approach used for setting UCAs for the existing entry points should be applied to new terminals.

Ofgem's views

- 2.36. The UCAs for existing entry terminals, which were set at the time of the last price control review, were set on the basis of an average 6 mcm/day increment. This represented Ofgem's views on a reasonable average

level of increment at existing terminals. This view was taken considering the significant volume of spare capacity at most existing terminals compared with demand levels and the substantial levels of investment allowed under the TO price control for expansion at St Fergus. However, the setting of the 6 mcm/day increment level was not made in the context of consideration of new entry terminals to the NTS.

- 2.37. In setting UCAs for new entry terminals, Ofgem considers that the UCA should be based on the best estimate of per unit costs of providing capacity at an entry terminal. This requires a judgement to be made about the likely level of demand for capacity at that entry terminal.
- 2.38. Ofgem considers that the mechanistic application of setting the UCAs for the proposed entry terminals on the basis of a 6 mcm/day increment would be inappropriate and not consistent with the efficient and economical development of Transco's pipeline system.
- 2.39. The consequences of setting a UCA based on an increment level which is clearly less than the likely level of demand and size of investment necessary to create that new entry point are:
- ◆ excessive short-term returns to Transco under its SO incentives;
 - ◆ a high assumed project value under Transco's NPV test, which determines the value of bids which would automatically trigger the release of permanent obligated incremental entry capacity; and
 - ◆ possible undesirable distributional effects between shippers, if the prices paid for capacity are much lower than Transco's incentive allowance. In this case, Transco would recover less revenue in respect of obligated incremental entry capacity than that allowed under its entry capacity investment incentive. This SO under-recovery would need to be recovered from all system users through the SO commodity charge.
- 2.40. It is Ofgem's intention to review all of the entry capacity UCAs at the next price control review and assess whether they still represent

appropriate estimates of the long-run cost of providing additional capacity at particular entry points. This review would also include any UCAs set for new terminals, although any obligation taken on by Transco to release permanent obligated incremental entry capacity would allow Transco incentive revenue based on the initial UCA set for five years of the incentive period (and subsequent years until the next price control review).¹⁴

- 2.41. In relation to the proposed new terminals, assuming that any necessary system extensions and reinforcements have either been completed or are in the course of being completed, and that Transco has released permanent obligated incremental entry capacity, Ofgem would anticipate that any new UCAs set in 2007 would reflect the forward-looking costs of providing capacity above the baseline output measures subsequent to the increased investment. Whether the revised UCAs would be lower or higher than those set initially would depend on a range of factors, including, in principle, the level of available permanent obligated incremental entry capacity not booked and used.

Transco's cost estimates

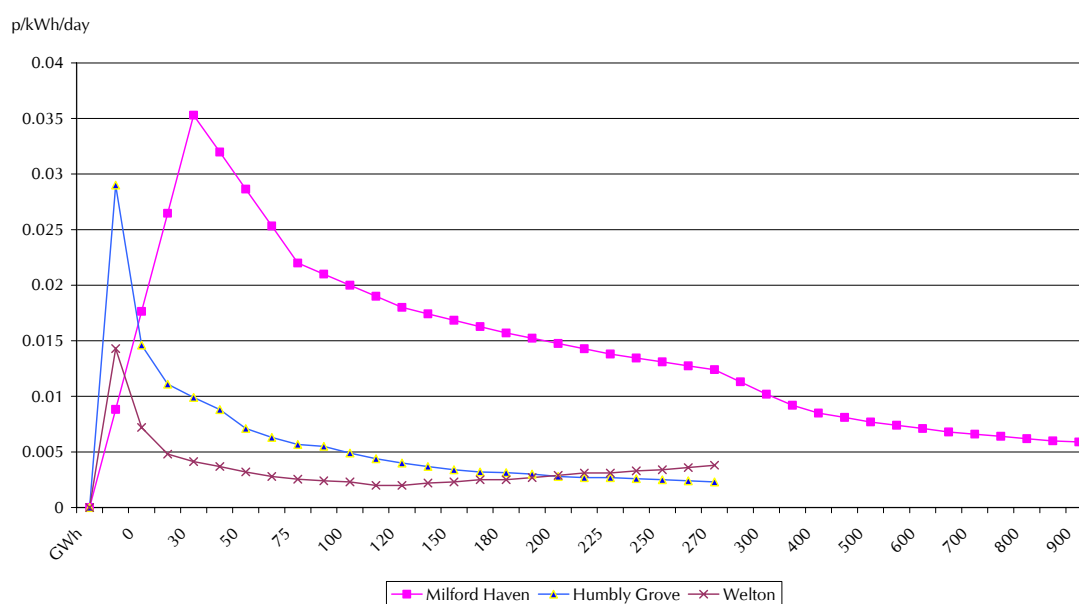
Transco's proposals

- 2.42. Transco's IECR methodology statement provides that, where demand emerges for entry capacity at new terminals, it will publish a price schedule for subsequent long-term auctions, which will commence from an initial price of zero. In its consultation paper, Transco published indicative price schedules on the basis that, for each of the three potential new entry points, the extension from the site to the existing pipeline system will form part of the NTS, and that the cost of the extension is wholly included within the projected cost of providing incremental entry capacity used to determine the price schedule. Reinforcement costs for the existing system were also included.

¹⁴ It may be necessary to make changes to Transco's GT licence to ensure this treatment at the next price control review.

2.43. The price schedules were generally downward sloping, with prices decreasing with increasing increment size. Transco explained this by the fact that the costs were dominated by the costs of extending the system, which displayed economies of scale with lower per unit costs for larger capacities. The price schedules are displayed in Figure 2.1.

Figure 2.1: Transco's indicative price schedules for new entry terminals



Respondents' views

2.44. A number of respondents raised concerns with Transco's estimates of costs underlying its proposed price schedules, arguing both that they were insufficiently transparent and that they appeared too high. Some respondents argued that the new terminals would reduce Transco's costs, by reducing the need for reinforcement of its system to meet peak demand. They argued that the proposed terminals would help reduce the flow imbalance that is a feature of the current market in which gas is predominately moved north to south on Transco's system.

2.45. Star Energy commented specifically on the proposed storage sites, arguing that their location, in regions of high demand, should be expected to reduce the need for overall system reinforcement. This respondent also argued that the Humbly Grove storage facility was

located in an area which Transco had identified as requiring transmission support. It suggested that the Humbly Grove site would provide transmission support to Transco 'for free' and it was therefore difficult to see any way to receive payment from Transco for providing this service.

- 2.46. Respondents also commented on Transco's proposals to allocate all of the estimated costs of providing the system extension to entry capacity charges. It was argued that the system extensions may allow for new exit connections and also that system extension projects are for the ultimate benefit of customers and offer enhanced supply security. It was therefore argued that the costs of system extension should be split between entry and exit charges. In the case of the storage facilities, a number of respondents questioned why the costs were not split equally between entry and exit charges, given that expected flows into and out of the storage facility would, by definition, be equal.
- 2.47. One party questioned Transco's methodology used for converting the estimated project and reinforcement costs into annualised prices. It claimed that the approach used, which applies straight-line depreciation and bases the prices on the early years of the asset's life, results in charges which are too high and would imply that Transco over-recovers against the cost of an investment over the life of the asset.

Transco's views

- 2.48. Transco explained that it calculates the indicative price schedules to reflect the cost of transporting incremental gas over and above the level projected for other entry and exit points. As such, it argued that the need for reinforcement elsewhere on the system is not reduced in the calculation of ex ante costs.
- 2.49. In response to the argument that the development of new southerly entry points reduces the overall need for system reinforcement to provide additional capacity at northern entry points, Transco argued that any such effect should not affect the price for entry capacity at the new terminal. Transco accepted that, if the alternative of entry capacity at the new terminal is capacity provision at northern terminals, then the

provision of capacity at the new terminal does provide a saving relative to this alternative. However, it stated that this saving should logically be subtracted from northern terminal prices.

2.50. While Transco accepted that the use of storage facilities can enhance security of supply, it stated that this also applies to new entry points. It also stated that peak supply can be provided by other means, for example, through other entry points. Transco suggested that if it is believed that particular schemes offer particular benefits, these benefits should be reflected in specific arrangements for service provision at appropriate prices.

2.51. While Transco accepted that the proposed extensions may provide benefits in future years, such as enabling future large loads to be connected to the NTS at lower cost, it stated that such benefits are highly uncertain. As a result, Transco argued that it is inappropriate to include an ex ante value for such benefits in the calculation of entry capacity prices.

2.52. With respect to storage facilities, Transco considered that it is most appropriate to allocate the system extension cost wholly to entry capacity. It argued that the rationale for gas storage is to be able to put gas into the system when desired and that entry capacity is critical to this. It also stated that, if the system extension costs were split between entry and exit, this would entail a change in charging methodology, as well as unnecessarily complicating the determination of whether, and at what level, to release incremental entry capacity.

Ofgem's views

2.53. Following Transco's publication of its proposed price schedules, Ofgem undertook an analysis of Transco's underlying cost estimates in order to determine appropriate UCAs. Our proposals for UCAs are set out in chapters 3 and 4.

2.54. In respect of the argument raised, that the investment necessitated by creating the new terminals may save Transco future costs in the form of

foregone system reinforcement or support, Ofgem considers that any such future savings should benefit customers in due course as follows.

- 2.55. The funding (and obligations) agreed with Transco at the time of the last price control review represented Ofgem's best estimate at the time to allow Transco to undertake the investment necessary to meet projected demand and its obligations to release baseline levels of capacity for sale.
- 2.56. To the extent that circumstances change between price control reviews, it is not Ofgem's practice to attempt to claw back (or make additions to) any agreed funding during a price control period. Therefore, Ofgem considers that it is appropriate to reflect in Transco's price schedules for entry capacity the indicative costs of providing entry capacity at new terminals, including the costs of system extension and any necessary system reinforcement. To the extent that any savings are made relative to the existing price control, these benefits will be available to pass back to system users at the next price control.
- 2.57. Similarly, to the extent that Transco out-performs under its SO incentives as a consequence of the investment it undertakes to provide capacity at new terminals, benefits will flow to users through the sharing factors and will be taken into account in resetting Transco's incentives.
- 2.58. New entry points to the NTS will result in a change to the pattern of gas supplied to the NTS, and this may have the effect of creating spare capacity at existing terminals. We agree with Transco that this is likely to reduce the price for entry capacity in the future at those existing terminals, rather than reduce the indicative entry capacity charges at new terminals. Overall, this will be to the benefit of customers.
- 2.59. It is possible that flows associated with the new entry terminals may offer system support services to Transco and may be replacing services currently provided, for example, by existing LNG facilities. Ofgem believes that the appropriate way for such services to be rewarded is through direct system management services contracts, rather than through adjusting transportation charges. This is consistent with the views we expressed in our decision letters on the network code

modification proposals concerning the application of the SO commodity charge to storage flows and the optional NTS commodity rate.¹⁵

- 2.60. Ofgem considers that, in principle, the costs of providing a system extension to a storage facility should be split between entry and exit capacity charges, rather than being recovered solely through entry capacity charges. However, given that currently all exit capacity at storage sites is interruptible, if Transco were to split the recovery of providing the system extension between entry and exit capacity charges, it would not recover any of its costs through exit capacity charges. It therefore seems appropriate, pending long-term reform of the exit capacity regime, to continue to reflect the total system extension costs in the entry capacity UCA for new storage facilities. We note that the interruptible status of storage sites seems particularly anomalous, given the fact that these sites are unlikely to be interrupted, particularly in winter months.
- 2.61. In providing incremental exit capacity at new exit points connected to storage facilities, Transco will receive an allowance under its exit capacity investment incentive. This consideration adds to the need for reform of exit capacity charges. However, pending such reforms, it does not seem appropriate to introduce new charging arrangements which would apply to only some storage facilities and not other, existing facilities.
- 2.62. Transco's methodology for determining the annualised prices in the price schedules is consistent with the approach used to set the UCAs for existing entry terminals. The UCA determines the range of Transco's allowed revenue in respect of a new terminal during the incentive period. However, after that time, any associated assets form part of Transco's RAV (assuming the level of any expenditure incurred is efficient) and it is anticipated that future UCAs and price schedules will

¹⁵ See, for example, Ofgem's decision letter on network code modification proposal 532, *Application of SO commodity charge to storage facilities*, 19 February 2003 and network code modification proposal 0600, *Amendment to Optional National Transmission System (NTS) Commodity Rate requirements to input gas at the local entry point*, 26 June 2003.

be set on the basis of forward-looking costs of expanding capacity at these locations. This treatment is explained more fully in Appendix 2.

Transco's liability in the event of non / late delivery of capacity at new terminals

Background

2.63. Transco's network code provides for firm financial rights to deliver gas to the NTS for shippers who acquire firm entry capacity rights. In the event that the volume of gas flowing onto the system under capacity rights exceeds the physical capacity available on its system (a transportation constraint), Transco must buy back such firm capacity rights (after interrupting any interruptible capacity rights), either in the daily buy-back market or in advance through its capacity management agreements. Transco faces an incentive to minimise the costs of buy-backs through its buy-back incentive scheme.

2.64. However, in the case of a proposed new terminal, the current buy-back arrangements do not protect shippers in the event of non-provision of capacity. That is, prior to the connection of the facilities to the NTS, Transco would not face a physical transportation constraint on its NTS, despite its obligation to provide capacity, because there would be no possibility of gas flowing onto its system at that point. In the absence of a physical constraint on its system, Transco would not be obliged to utilise its system management tools, such as buying back entry capacity rights.

Respondents' views

2.65. One respondent argued that, where a system extension was required, there must be terms which ensure that the connection is made on time, and expressed concern that Transco faces no liability under the current terms of its network code for failure to install a new system extension.

Ofgem's views

- 2.66. In light of the above, it seems necessary to make alternative arrangements to cover the case of non-connected entry terminals with respect to the non / late delivery of entry capacity. Such arrangements would provide protection to the developers (which are investing in new facilities to input gas to the NTS) / shippers (who may acquire entry capacity rights at the new terminals) and ensure that Transco faces appropriate incentives in its commitment to provide firm entry capacity rights at terminals in the process of being connected to the NTS.
- 2.67. Without fettering the Authority's discretion in any decision on future proposed changes to Transco's network code, Ofgem's initial view is that this could take the form of a liquidated damages agreement between the parties, to cover the period between Transco's obligation to first deliver capacity rights and the time at which Transco can physically accommodate gas flows from the new terminal. Such an agreement is likely to be an ancillary agreement to Transco's network code and could approximate some proportion of the estimated losses likely to arise to the developer / shipper in the event that Transco does not meet its commitment, taking into account appropriate mitigation of losses. A liquidated damages approach is common in competitive industries.
- 2.68. Once Transco has made available physical capacity, Ofgem considers that the existing buy-back arrangements will provide sufficient protection for shipper's capacity rights, although the appropriate setting of the buy-back exposure to Transco has yet to be decided.

3. The Milford Haven entry point

- 3.1. In this chapter, we discuss the proposed UCA for Milford Haven and outline how the auction at this terminal could operate (subject to any relevant changes being made to Transco's network code), in the context of uncertainty over the likely level of aggregate demand for Milford Haven capacity and the timing of that demand.
- 3.2. A map showing the location of the proposed Milford Haven entry point in relation to Transco's system is contained in Appendix 3.

The Milford Haven unit cost allowance

Transco's indicative unit cost allowance

- 3.3. Transco published an indicative price schedule for capacity at Milford Haven, which included both the costs of extending the system by 110 kilometres to the proposed new entry point, assuming pipeline diameters between 350 mm and 1200 mm and the estimated costs of reinforcements necessary to accommodate the flows of gas away from Milford Haven. In contrast to the costs of the extension, the costs of that system reinforcement are split between entry and exit capacity charges.
- 3.4. The indicative price schedule published by Transco is downward-sloping, with lower unit prices associated with larger increment sizes. Transco has indicated that this is due to the dominant effect of the costs of extending the system, which are characterised by economies of scale.
- 3.5. Transco published an indicative UCA on the basis of this price schedule and a 6 mcm/day increment, which equates to £0.969/kWh (0.0300 p/kWh/day on an annualised basis). Transco acknowledged, in its consultation paper, that the likely demand for capacity at Milford Haven was much greater than 6 mcm/day and, therefore, the probable clearing price would be lower than 0.0300 p/kWh/day.

Respondents' views

- 3.6. On the basis of a number of arguments, which are discussed in Chapter 2, a number of respondents considered that the UCA proposed for Milford Haven was too high and above Transco's likely costs of providing capacity at Milford Haven.

Ofgem's views

- 3.7. As noted in Chapter 2, Ofgem considers that the UCAs for proposed new terminals should represent the best estimate of per unit costs of providing entry capacity at a particular entry terminal, based on a judgement about the likely level of demand for capacity at that entry terminal.
- 3.8. There is uncertainty about the level of demand for capacity at Milford Haven and indeed whether one or two (or any) LNG terminals will be constructed.
- 3.9. In view of the particular circumstances of Milford Haven, where there is uncertainty about the likely level of demand for capacity at the proposed entry point and therefore uncertainty on the average costs of providing capacity, we are proposing that the value of the UCA for Milford Haven depends on the level of obligated incremental entry capacity which Transco allocates over a defined period of time. As such, Ofgem is also proposing that the UCA is based on increments larger than 6mcm/day. In addition, in the event that one or more terminals are built, it is likely that demand for capacity would exceed 6 mcm/day.
- 3.10. Ofgem has undertaken an analysis to determine an ex ante estimate of the efficient level of costs of providing entry capacity at Milford Haven. We consider that the costs of accommodating one LNG import terminal (based on an increment of approximately 24 mcm/day) is approximately £85 million in system extension costs and approximately £5 million of system reinforcement costs. These costs increase to approximately £105 million in system extension costs and in the range of £85 to £90 million of system reinforcement costs to accommodate two LNG import terminals (based on an increment of approximately 54 mcm/day).

- 3.11. Based on our estimates of investment costs, we are proposing that the UCA is set at either 'UCA1' of £0.343/kWh or 0.0106 p/kWh/day on an annualised basis, or at 'UCA2' of £0.257/kWh or 0.0080 p/kWh/day on an annualised basis.
- 3.12. Whether the UCA value used in Transco's entry capacity investment incentive and IECR methodology is set at the UCA1 or the UCA2 level will be determined on the basis of demand signalled in the long-term auctions. If aggregate demand signalled for Milford Haven capacity over the relevant period is equal to or less than 500 GWh/day, the UCA will be the UCA1 level and if it is greater than 500 GWh/day, it will be the UCA2 level.

Operation of the auction for Milford Haven in the face of timing issues

Background

- 3.13. Coupled with the uncertainty about the likely aggregate level of demand at Milford Haven is the probability that project timescales mean the interested parties would wish to commit to purchasing entry capacity at different times. While this reflects the project economics of the particular schemes, this creates an issue for Transco in making an investment decision about the level of demand to accommodate in choosing a particular diameter size pipe.
- 3.14. Of course, this issue arises with respect to any new investment being considered by Transco. At any one time, there could always be other loads that may, or may not, be likely to wish to connect to Transco's system. However, at Milford Haven, given the distance of the LNG import terminals from the NTS, and the considerable volumes of gas that may, or may not, be delivered from those terminals, Transco's economic choices are particularly acute.

- 3.15. Transco has indicated that, in order for it to be able to provide entry capacity at Milford Haven by 2006, it needs to commence the initial phase of its works prior to an auction in September 2003.¹⁶ Transco has requested that parties seeking to secure Milford Haven capacity in September 2003 should pay for the costs of such works, which would be refunded following the allocation of capacity, through a pre-works agreement (PWA). Ofgem considers that this is a reasonable request and that such PWA amounts should be paid in order for Transco to commence works, provided that such requests are reasonable and supported by an adequate level of detail.
- 3.16. Transco has stated that it has around a three year lead time from receiving a demand signal to being able to provide new entry capacity. This includes a number of steps, such as determining the pipeline route, tendering for the provision of the pipe, ordering steel, acquiring land and construction. In the case of Milford Haven, it may be possible for Transco to keep open the options of accommodating the demand for either one or two LNG import terminals for varying lengths of time.

Ofgem's views

- 3.17. In view of the different project timescales associated with the main parties interested in acquiring capacity at Milford Haven, and without fettering its discretion as to future network code modification proposals, Ofgem considers that it may be appropriate to modify Transco's long-term auction arrangements in the case of Milford Haven and allow Transco to operate an 'open season' for capacity bids. An open season would extend the time period in which parties can signal their demand for capacity at Milford Haven, in order for Transco to take this into account in investing to provide entry capacity for 2006.
- 3.18. There are, however, costs associated with Transco operating an open season at Milford Haven to keep open the options of two pipe-line sizes, rather than progressing with one pipe-line size determined following a

¹⁶ Ofgem approved network code modification 617, *Revision to the Standard Year for purposes of acquiring and holding Long Term System Entry Capacity*, on 27 June 2003, which provides that the next long-term

September 2003 auction. It seems reasonable that such costs and timings are reflected in an option fee which is recovered from a potential bidder demanding the open season, payable in the event that this party does not participate¹⁷ in the open season.

- 3.19. It is anticipated that Transco would publish the details of the timings and associated costs of an option fee as part of its invitation to tender for the auction. Our initial view, on the basis of information provided to us by Transco, is that an option fee for Milford Haven would consist of a relatively small payment at the time of capacity allocation following a September 2003 auction, creating an open season until the end of 2003, and a significantly larger payment to extend the open season past this date, probably to allow the open season to extend to mid-July 2004.
- 3.20. An open season for Milford Haven capacity could operate in the following way, subject to the necessary changes being made to Transco's network code, which would be consulted on in the normal way and subject to Ofgem's assessment against the relevant objectives of Transco's network code as set out in amended standard condition 9 of Transco's GT licence.
- 3.21. An open season at Milford Haven could operate from the time of the next scheduled long-term auction for all terminals until the time at which Transco needs to order the pipe and commit to a certain pipe route.
- 3.22. A number of auctions could be held during this open season (subject to the necessary changes being made to Transco's network code), with bidders facing the same price schedule as published by Transco. After each auction held during the open season, subject to the relevant tests in Transco's IECR being met and any proposal for the release of capacity being approved by Ofgem, shippers placing bids for capacity would be allocated capacity in accordance with the volumes bid. The price paid for this capacity would not be determined until the completion of the open season. However, owing to the downward sloping nature of the

entry capacity auctions are held by the end of September 2003.

¹⁷ The definition of 'participate' would need to ensure a minimum level of financial commitment to justify Transco creating an open season.

price curve, bidders allocated capacity will know the maximum price they would pay in the event that no other bidders were allocated capacity during the open season.

- 3.23. On the basis of our proposals for a volume dependent UCA at Milford Haven, the UCA which Transco would use to determine whether or not the automatic release of permanent obligated incremental entry capacity had been triggered would be the UCA associated with releasing that level of capacity against which the test was being applied. In the event of additional demand being signalled in a further auction held during the open season, Transco would aggregate the demand from all auctions held during the open season and apply the relevant UCA on the basis of this aggregate level of demand.
- 3.24. At the end of the open season, the level of the UCA will be finalised and the final common cleared prices applying to all allocated bids submitted during the open season will be determined. This would allow for successful bidders to pay lower prices than those against which capacity had initially been allocated, as a result of the higher aggregate demand. In the event that there was not a subsequent auction during the open season, prices paid by the bidders in the earlier auctions would remain in place.

Auctions for Milford Haven held after the end of the open season

- 3.25. Following the end of the open season, it is possible that other bidders may demand capacity in a subsequent auction. In this circumstance, the UCA would have been set at UCA1 and, in line with Transco's present pricing methodology, the reserve price for capacity at Milford Haven would be set equal to this level.
- 3.26. As for all other terminals, Transco would publish a price schedule reflecting the methodology established by Transco's IECR. To be consistent with the methodology which Transco applies for existing terminals, and assuming that Transco had committed to supplying a level

of permanent obligated incremental entry capacity, the price schedule would begin at the UCA and follow Transco's existing methodology.

Summary

3.27. This treatment allows parties seeking to secure capacity in 2003 to do so, with certainty as to the maximum cost that they will pay for that capacity. It also allows for Transco's decision-making deadlines to be extended in order to allow other potential bidders to signal demand in time to be accommodated by Transco. There is an incentive on other potential bidders to participate in the open season and potentially benefit from a lower unit price.

4. The Barton Stacey unit cost allowance

- 4.1. Star Energy is proposing to develop two onshore storage facilities at partially depleted oil fields, located at Humbly Grove in Hampshire and Welton in Lincolnshire. Star Energy is expecting the Humbly Grove facility to be operational by Q2 2005 and the Welton facility to be operational at a later date.
- 4.2. Star Energy is planning to build the pipelines connecting the Humbly Grove and Welton facilities to Transco's NTS, in order to meet its timings. We are therefore proposing a UCA for Barton Stacey, which is the proposed entry point on Transco's NTS and would be the connection point between Star Energy's pipeline from Humbly Grove and Transco's NTS. The location of the proposed Barton Stacey entry point in relation to the Humbly Grove facility is shown in Appendix 4. We are not proposing a UCA for the Welton facility at this point in time.

Transco's proposals

- 4.3. Transco published indicative price schedules for the two proposed new entry points at Humbly Grove and Welton, which included both the costs of extension of the system and reinforcement costs.

Respondents' views

- 4.4. In response to Transco's consultation, Star Energy stated that it is currently intending to build and pay for the pipelines between its Humbly Grove and Welton storage facilities and Transco's NTS. It also stated that it is hoping to enter into a commercial arrangement under which Transco would purchase these pipelines.
- 4.5. Star Energy queried the relationship between Transco's proposed prices for Welton compared with the existing price schedule for the Theddlethorpe entry terminal, which is geographically close to Welton. It expected that the prices for Welton should be below those for Theddlethorpe, because the economies of scale associated with providing capacity at Welton should reduce the incremental costs.

- 4.6. Star Energy submitted, on the basis of a number of arguments which are detailed in Chapter 2, that Transco's indicative UCAs for Humbly Grove and Welton were too high and above the level of Transco's likely costs to provide capacity.

Transco's views

- 4.7. Transco has informed Star Energy that it is unwilling to purchase the pipelines which Star Energy plans should connect the Humbly Grove and Welton facilities to the NTS.
- 4.8. In response to Star Energy's query about the relationship between the price schedules for Welton and Theddlethorpe, Transco explained that it had estimated the system reinforcement costs for Welton to be the same as those for Theddlethorpe. However, for Welton, there is the additional system extension cost, which gives a higher unit cost for incremental entry capacity at the lower end of the capacity range and leads to the Welton price schedule always being higher than that for Theddlethorpe for the same level of incremental entry capacity.

Ofgem's views

- 4.9. In the situation where a developer seeking a new entry point to Transco's system elects to build the connecting pipe itself, there are two broad regulatory approaches that may be taken:
- ◆ System extension, whereby Transco offers entry capacity at the point at which the facility would be connected to Transco's system. Long-term entry capacity auction price schedules would reflect the costs of extension of the system to the proposed new entry point, as well as any appropriate reinforcement costs. If the developer rather than Transco procured the required pipeline, Transco might choose to come to a commercial arrangement with the developer for purchase of the pipeline from it.
 - ◆ The developer builds and operates the pipe and requests a connection to Transco's system. The entry point in this case

would be at the point where the developer's pipeline would connect onto Transco's existing system. Transco would offer entry capacity at a point on its existing system, with the associated price schedules and auction reserve prices reflecting any appropriate reinforcement costs imposed on Transco's existing system. If Transco subsequently took over ownership and operation of the developer's pipeline, the costs of acquiring the pipe would not be included in Transco's regulatory asset base, consistent with the existing treatment of connection assets.

- 4.10. Star Energy has indicated to Ofgem that it would be helpful to include Barton Stacey, which is a point on Transco's existing NTS at which it is proposed to connect Star Energy's pipeline from Humbly Grove to the NTS, in the September 2003 long-term auctions.
- 4.11. Ofgem considers that the costs of accommodating the likely flows at Barton Stacey are zero. We are therefore proposing a UCA at Barton Stacey of £0.000/kWh/day. Transco will need to publish a new price schedule for the auction of entry capacity at Barton Stacey. Ofgem is not proposing a UCA for Welton at this point in time.

5. Way forward

- 5.1. The consultation period on Ofgem's proposals to modify Transco's GT licence ends on 28 July 2003.
- 5.2. In order to be able to offer capacity at the next long-term auctions scheduled for September 2003, Transco has indicated that it will be raising an urgent network code modification proposal. This proposal will allow for an amended auction format, accommodating an open season for Milford Haven.
- 5.3. In addition, we expect Transco to be engaging in negotiations with interested parties in relation to agreeing the details of option fees to create and extend the open season at Milford Haven and with interested parties at all prospective new terminals in relation to protection against Transco not delivering the necessary system extension on time.
- 5.4. Under Transco's network code, it is required to give two months' notice of changes to its charges, which implies notice in July. Transco is also required to publish the schedule of prices that will be applied in long-term entry capacity auctions and give notice of the auction 28 days in advance. This implies Transco giving such notice in August 2003.
- 5.5. Ofgem will be considering the results of its consultation in August and, in the event that this does not result in any material changes to our proposals, it is our intention to implement the changes to Transco's GT licence in August 2003. These changes would set the UCAs relevant to the proposed new entry terminals.
- 5.6. This timing would allow Transco to offer capacity at Milford Haven and Barton Stacey along with that offered at existing entry points, in the next scheduled long-term auctions in September 2003.

Appendix 1 Proposed modifications to Transco's gas transporter licence

NOTICE UNDER S 23 (3) OF THE GAS ACT 1986

The Gas and Electricity Markets Authority ("**the Authority**") hereby gives notice pursuant to section 23 (3) of the Gas Act 1986 ("**the Act**") as follows:

1. The Authority proposes to modify the conditions of the gas transporter licence granted to Transco plc ("**Transco**") treated as granted under section 7 of the Act by amending Special Condition 28B: *Restriction of revenue in respect of the NTS transportation owner activity, LDZ transportation activity and NTS system operation activity Part 2*, by amending:

- (a) the current definition of UCAG¹ (including the accompanying table); and

- (b) Schedule A: *NTS output measures for the price control*

Table A1: *NTS TO baseline entry capacity (GWh/day)* and
Table A2: *Initial NTS SO baseline entry capacity (GWh/day)*.

2. The amendments are shown in bold and italicised below. The amendments would be deemed to take effect from 0.00 hours on 11 August 2003.
3. The reasons why the Authority proposes to make these licence modifications and their effects are set out in the following document published by the Authority in conjunction with this Notice and entitled: *New entry terminals to Transco's National Transmission System Ofgem's views on Transco's proposals and explanatory notes to accompany the section 23 notice of proposed modifications to Transco's Gas Transporter (GT) licence*.
4. In summary the effects of the proposed licence modifications are as follows:
 - (a) The addition of new National Transmission System (NTS) entry points at Milford Haven and at Barton Stacey under Transco's NTS system operation activity revenue restrictions and more specifically,

in relation to Transco's NTS system operator entry capacity investment incentive revenue;

- (b) The addition of new unit cost allowances ("UCAs") for the planned new NTS entry points at Milford Haven and Barton Stacey;
- (c) The addition of new NTS entry points at Milford Haven and Barton Stacey under Transco's NTS transportation owner (TO) output measures for the price control and under Transco's system operation (SO) output measures; and
- (d) A correction to the spelling of the name of the entry terminal at Aldbrough (formerly Aldborough). The UCA for Aldbrough remains unchanged.

5. More specifically, the effects of the proposed licence modifications are as follows:

The inclusion of new UCAs for the planned new entry terminals at Milford Haven and at Barton Stacey will supplement the existing UCAs contained in Transco's GT licence for existing entry terminals. The UCAs, which underpin Transco's entry capacity investment incentive, are ex-ante agreed estimates of the unit costs of providing incremental capacity at each NTS entry point. The UCAs determine the range of Transco's revenue allowance for the provision of incremental capacity. Transco is allowed to earn a rate of return of between 5.25 and 12.25 per cent on the UCA on each unit of obligated incremental entry capacity offered for sale in response to signals revealed in long-term entry capacity auctions.

The proposed modifications will provide for two alternative UCAs in relation to the new entry terminal at Milford Haven. The methodology, as set out under the proposed modifications, will determine the relevant UCA dependent upon the level of demand revealed in auctions for entry capacity rights at the Milford Haven entry point.

The Authority has proposed two further modifications in order to update Schedule A of Transco's GT licence. Tables A1: *NTS TO baseline entry*

capacity (GWh / day) and Table A2: *Initial NTS SO baseline entry capacity (GWh / day)* have been updated to accommodate the zero baseline output measures and zero TO and SO baseline entry capacity volumes for the new entry terminals at Milford Haven and Barton Stacey. The current output measures set out in Schedule A provide for the SO baseline entry capacity levels that Transco will be required to offer for sale for each NTS entry point in each year of its current price control.

6. A copy of the proposed licence modifications is attached to this Notice. Copies of the explanatory document that accompanies the proposed modifications are available (free of charge) from the Ofgem Research and Information Centre (telephone 020 7901 7003) or on the Ofgem website at www.ofgem.gov.uk.
7. Any representations or objections to the proposed licence modifications must be made before Monday 28 July 2003 and should be addressed to:

Kyran Hanks

Director – Gas Trading Arrangements

Office of Gas and Electricity Markets

9 Millbank

London

SW1P 3GE

Or by email to kyran.hanks@ofgem.gov.uk

Special Condition 28B: Restriction of revenue in respect of the NTS transportation owner activity, LDZ transportation activity and NTS system operation activity

Part 2: The NTS system operation activity revenue restrictions

Paragraph 14 (5): Entry capacity investment incentive revenue (ECIIR_i)

UCAG^j means the unit cost allowance in pounds per kilowatt hour in respect of terminal j and has the value set out in the following tables:

Terminal j	UCAG^j (£/kWh)
Bacton	0.182
Barrow	0.014
Easington	0.034
St. Fergus	0.639
Teesside	0.059
Theddlethorpe	0.031
Glenmavis	0.532
Partington	0.009
Avonmouth	0.064
Isle of Grain	0.186
Dynevor Arms	0.000
Hornsea	0.153
Hatfield Moor (storage)	0.042
Hatfield Moor (onshore)	0.042
Aldbrough	0.057
Cheshire	0.003
Hole House Farm	0.002
Wytch Farm	0.000
Burton Point	0.002
Barton Stacey	0.000

<i>Terminal j</i>	<i>UCAG^j</i> <i>(£/kWh)</i>	<i>UCAG^j</i> <i>(£/kWh)</i>
<i>Milford Haven</i>	<i>0.343</i> <i>where PRIORCIOECⁱ ≤ 500 GWh/d</i>	<i>0.257</i> <i>where PRIORCIOECⁱ > 500 GWh/d</i>

PRIORCIOEC_m shall mean the cumulative obligated incremental entry capacity in respect of each day in month *m* at terminal *j* at a date to be determined by the Authority.

Schedule A: NTS output measures for the price control

Table A1: NTS TO baseline entry capacity (GWh/day)

Terminal	2002/3	2003/4	2004/5	2005/6	2006 /7
Bacton	1527	1646	1839	1939	1939
Barrow	812	790	790	791	791
Easington	1105	985	1141	1180	1180
St. Fergus	1689	1721	1809	1831	1863
Teesside	910	823	834	845	845
Theddlethorpe	758	628	879	942	942
Glenmavis	110	110	110	110	110
Partington	239	239	239	239	239
Avonmouth	165	165	165	165	165
Isle of Grain	243	243	243	243	243
Dynevor Arms	55	55	55	55	55
Hornsea	195	195	195	195	195
Hatfield Moor (storage)	60	60	60	60	60
Hatfield Moor (onshore)	1.1	1.1	1.1	1.1	1.1
Aldbrough	0	259	259	259	259
Cheshire	0	0	119	179	238
Hole House Farm	29	29	29	29	29
Wythch Farm	3.6	3.6	3.6	3.6	3.6
Burton Point	61.3	61.3	61.3	61.3	61.3
Milford Haven	0	0	0	0	0
Barton Stacey	0	0	0	0	0

Table A2: Initial NTS SO baseline entry capacity (GWh/day)

	MONTH				
	$1 \leq m \leq 12$	$13 \leq m \leq 24$	$25 \leq m \leq 36$	$37 \leq m \leq 48$	$m \geq 49$
Terminal	2002/3	2003/4	2004/5	2005/6	2006/7
Bacton	1374	1481	1655	1745	1745
Barrow	731	711	711	712	712
Easington	995	887	1027	1062	1062
St. Fergus	1520	1549	1628	1648	1677
Teesside	819	741	751	761	761
Theddlethorpe	682	565	791	848	848
Glenmavis	99	99	99	99	99
Partington	215	215	215	215	215
Avonmouth	149	149	149	149	149
Isle of Grain	218	218	218	218	218
Dynevor Arms	50	50	50	50	50
Hornsea	175	175	175	175	175
Hatfield Moor (storage)	54	54	54	54	54
Hatfield Moor (onshore)	1	1	1	1	1
Aldbrough	0	233	233	233	233
Cheshire	0	0	107	161	214
Hole House Farm	26	26	26	26	26
Wytech Farm	3.2	3.2	3.2	3.2	3.2
Burton Point	55	55	55	55	55
Milford Haven	0	0	0	0	0
Barton Stacey	0	0	0	0	0

Appendix 2 Transco's revenue treatment

System Operator (SO) allowance and Transmission asset Owner (TO) allowance

- 2.1 Following the implementation of Transco's 2002 - 2007 price control in April 2002, separate regulatory arrangements were introduced for Transco's Transmission asset Owner (TO) revenue and National Transmission System (NTS) System Operator (SO) revenue and incentive arrangements.
- 2.2 Revenue from the sale of baseline NTS entry capacity falls into the TO revenue stream. Any revenue associated with entry capacity released by Transco which is categorised as permanent obligated incremental entry capacity falls into the SO revenue stream during the five year incentive period and the period remaining until the next price control period, as described below. Following this time it will be treated as existing capacity and remunerated in the TO revenue stream.
- 2.3 In order to understand how permanent obligated incremental entry capacity for any proposed new entry terminal would be remunerated over the longer term, it is helpful to consider the following three distinct periods:
- ◆ a five year incentive period following the release of permanent obligated incremental entry capacity;
 - ◆ an interim period following the end of the incentive period and the start of the subsequent TO price control period; and
 - ◆ the periods covered by subsequent TO price controls.
- 2.4 These are described in more detail and are illustrated in Figure A2.1 below, using Milford Haven as an example.

1. Incentive period (the first five years from the release of permanent obligated incremental entry capacity)

- 2.5 Transco will be able to earn a rate of return between 5.25 per cent and 12.25 per cent based on the unit cost allowance (UCAG)¹⁸ during the five year incentive period on any permanent obligated incremental entry capacity that it releases.
- 2.6 In effect, the UCAs for all NTS entry terminals provide 'deemed SO regulatory asset values' (deemed SO RAVs) which are equal to the UCA multiplied by the volume of permanent obligated incremental entry capacity that Transco is able to sell to shippers at each NTS entry point.
- 2.7 Where the price paid by shippers in entry capacity auctions is greater than the annualised UCA (which is based on a 6.25 per cent rate of return), Transco will be able to retain extra revenue up to a 12.25 per cent rate of return on its deemed asset base. Where the price paid by shippers is less than the annualised UCA, Transco's exposure to the loss of revenue is capped so that it earns a minimum return of 5.25 per cent.
- 2.8 Where the actual costs of investment are lower (higher) than those implied by the UCA, Transco could earn a higher (or lower) rate of return than implied by the 5.25 per cent and 12.25 per cent band, depending on the extent of the cost differences and the timing of price control periods.
- 2.9 If a revised price control is implemented during the five year incentive period, all of Transco's actual and projected investment in the previous five-year period would have been assessed as part of the process of determining the TO RAV.
- 2.10 Because Transco would continue to earn a rate of return on that investment associated with providing permanent obligated incremental entry capacity through its SO investment incentives, an adjustment would be made to the actual investment which is to be added to the TO RAV.

¹⁸ The UCAs are set out in Transco's GT licence as in terms of capital expenditure (UCAGs), expressed in £/kWh.

- 2.11 This adjustment is made such that the TO RAV would be increased by the total value of actual investment (subject to a test that it has been efficiently incurred) less the deemed SO RAV. From the start of the price control period, this adjustment has the effect of reducing the impact of any differences between the UCA and the actual costs of the investment.

2. Interim incentive period (following the end of the incentive period to the start of the next TO price control period)

- 2.12 After the incentive period and up until the subsequent price control period, Transco will be entitled to revenue associated with the deemed net SO RAV and a 6.25 per cent rate of return. The 5.25 per cent to 12.25 per cent rate of return band used during the five year incentive period does not apply to this period.

3. TO control (from the next price control period after the expiry of the incentive period)

- 2.13 For the price control period after the expiry of the incentive period, the net SO RAV will fall into the TO RAV and it would then be treated as a TO price control asset in the normal way. TO assets currently earn a 6.25 per cent rate of return.

An illustrative example

- 2.14 Figure A2.1 illustrates the impact of these arrangements, based on illustrative parameters. This example illustrates the treatment of allowed revenue if Transco invests £ 110 million to meet demand of 246 GWh/day, bid against an annualised UCA of 0.0106 p/kWh/day.¹⁹ The 'allowed revenue' line is illustrative of participants bidding at the annualised UCA to secure capacity during the incentive period, while the 'actual costs (annual)' line is based on Transco's price schedule. Transco would actually be allowed to earn a band of revenue consistent with prices between the annualised UCA with a 5.25 per cent and a 12.25 per cent rate of return.

¹⁹ In the example, opex appears as an allowance. Opex will also be a cost to Transco, but this is not shown in the example.

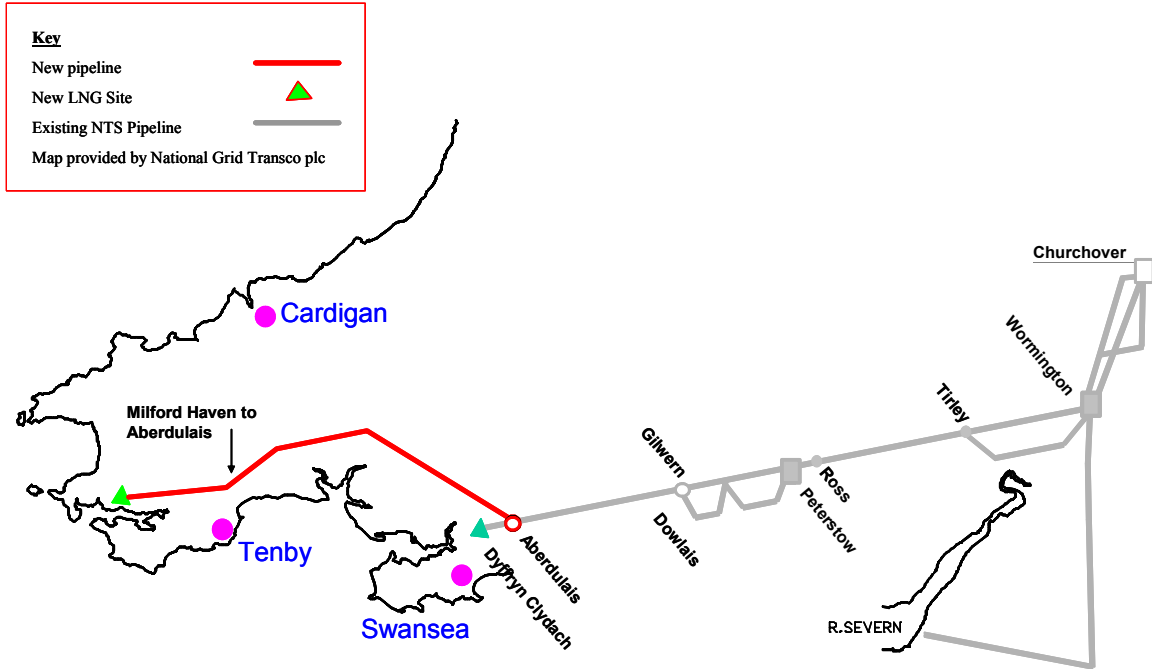
Figure A2.1: SO and TO allowances for Transco at Milford Haven (illustrative)

		Incentive period										Standard price control treatment
		PC 1					PC 2					
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
SO control		1	2	3	4	5	6	7	8	9	10	
Allowed revenue =UCA * capacity	£m	9.51	9.51	9.51	9.51	9.51	9.51	0.00	0.00	0.00	0.00	
Actual costs (annual)	£m	12.38	12.38	12.38	12.38	12.38	12.38	0.00	0.00	0.00	0.00	
Actual SO RAV = investment	£m	110.0	107.6	105.1	102.7	100.2	97.8					
Depreciation	£m	2.4	2.4	2.4	2.4	2.4	2.4					
Closing RAV	£m	107.6	105.1	102.7	100.2	97.8	95.3					
Deemed SO RAV	£m	84.3	82.4	80.5	78.7	76.8	74.9					
Depreciation	£m	1.9	1.9	1.9	1.9	1.9	1.9					
Closing SO RAV	£m	82.4	80.5	78.7	76.8	74.9	73.0					
		1	2	3	4	5	6	7	8	9	10	
TO control		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Opening RAV	£m	0	0	25	25	24	23	23	95	93	90	
Investment (total)	£m		107.6									
Added to RAV	£m		25.2					73.0				
Depreciation	£m	0.0	0.0	0.6	0.6	0.6	0.6	0.6	2.5	2.5	2.5	
Closing RAV	£m	0	25	25	24	23	23	95	93	90	88	
TO allowed return	£m		0.8	1.6	1.5	1.5	1.5	3.7	5.9	5.7	5.6	
TO allowed opex	£m		0.2	0.4	0.4	0.4	0.3	0.9	1.4	1.4	1.3	
TO allowed revenue	£m	0.0	1.0	2.5	2.4	2.4	2.4	5.1	9.8	9.6	9.4	
Total allowed revenue	£m	9.5	10.5	12.0	11.9	11.9	11.9	5.1	9.8	9.6	9.4	

Adjustment to RAV = Investment - SO RAV

Reducing allowance through time continues for 45 years

Appendix 3 Map showing location of proposed Milford Haven entry point



Appendix 4 Map showing location of proposed Barton Stacey entry point

Map provided by National Grid Transco plc

