

TRANSCO PRICING CONSULTATION PAPER PC49

PRICES FOR UNSOLD MONTHLY CAPACITY AND FLOOR PRICES FOR DAILY CAPACITY AUCTIONS

Summary

Network Code Modification 0314 details the proposed changes to entry capacity services that may be effective from 1 October 1999. This consultation paper proposes a methodology for determining the price to be paid for unsold monthly capacity. In addition this paper offers a proposed modification to the methodology for determining floor prices in auctions of both firm and interruptible daily entry capacity.

The proposed prices in this consultation paper seek to encourage participation in the proposed monthly capacity auctions as the primary means of capacity allocation. Consideration has also been given to cleared prices in daily entry capacity auctions that have been held since the introduction of such services in November 1998.

It is proposed that unsold monthly capacity should be offered at 1.5 times the cleared price up to 3 days prior to the month of use. Similarly it is proposed that daily firm capacity shall have a floor price set at 1.5 times the cleared price in the monthly auction. It is proposed that daily interruptible capacity should have a floor price of 0.2 times the cleared price in the monthly auction. In the event of a “pay your bid” auction, the multiples would apply to the second highest accepted price in the monthly auction.

1. Introduction

In the discussion of the Reform of Gas Trading Arrangements (RGTA) the concept of auctioning monthly blocks of entry capacity has been considered. Network Code Modification proposal 0314 details the RGTA capacity service proposals for implementation on 1 October 1999. Increased use of auctions in selling entry capacity will widen the concept of prices determined by market value rather than the cost reflective principles are pursued by Transco for its administered charges. As such the proposals herein are guided by a desire to encourage participation in the monthly capacity auctions wherever possible. It is in that arena that competition and allocative efficiency can best be achieved, and they are being designed as the primary mechanism for allocating entry capacity.

Proposed floor prices in the daily capacity markets have also been informed by events since the introduction of daily capacity auctions in November 1998. In this period floor prices have been set at four times the daily rate of administered charges for firm services and zero for daily interruptible services.

At the time of publication the format of the initial monthly capacity auctions has not been determined. It is probable that it will be either a sealed bid uniform clearing price auction, known as the backstop option, or it could be a “pay your bid” type auction. This paper presents a pricing methodology appropriate for either type of auction.

2. Background

In accordance with developments in RGTA, it is envisaged that four types of entry capacity will be on offer from 1 October 1999.

1. Monthly capacity sold through auction. The quantity on offer will be determined through a methodology based upon analysis of Seasonal Normal Demand (SND) profiles.
2. Residual monthly capacity may be offered for sale ‘off the shelf’ after the auction has closed. It will remain available for purchase up to 3 days prior to the start of the month in which the capacity holding applies. Such capacity is also known as M-3.
3. Daily firm capacity is offered on the day before the gas day, D-1. Unsold M-3 capacity may be added to the quantity of daily capacity on offer. The unused M-3 capacity may be added to the available daily capacity at any suitable entry point. Wherever possible Transco will allocate unused M-3 capacity to locations where monthly auctions have shown that capacity is valued most.
4. Interruptible daily capacity may be offered on D-1 on the same basis as at present.

Table 1. Firm Capacity Quantities

	Monthly	M-3	D
Determinant of Quantity	SND	SND-P where P = quantity sold at auction	Daily capability - SND + unsold M-3

It is apparent from Table 1 that it is possible that shippers could choose not to take part in monthly auctions and concentrate on buying capacity in the daily capacity market. When monthly capacity is under sold, the quantity of daily capacity available will be increased. It may become possible for a shipper to choose this strategy in order to move market prices.

Annual entry capacity will cease to be available for any entry points from 1 October 1999. Daily firm and daily interruptible services will continue to be offered at entry points where monthly auctions do not take place.

3. Proposal

It is proposed that unsold monthly capacity (M-3) should be sold “off the shelf” at a multiple of the cleared price from the auction for the monthly capacity, for the entry point and month pertinent to the capacity required. Floor prices for the auction of daily firm capacity and daily interruptible capacity will also be set in relation to cleared prices in the auctions for monthly capacity.

The multiple for unsold monthly capacity shall be 1.5 times the cleared price of in the relevant monthly auction. Daily firm capacity shall have a floor price that is a multiple of 1.5 times the cleared price in the relevant monthly capacity auction. Daily interruptible capacity shall be subject to a floor price of 0.2 times the cleared price in the relevant monthly auction.

In the event of a uniform price auction the cleared price is the lowest price at which bids are successful. In the event of a “pay your bid” type auction the cleared price shall be the second highest accepted price.

If a consecutive approach (i.e. 4 x 25%) rather than a single monthly auction is used, then the applicable cleared price shall be the highest cleared price in the relevant series of uniform price auctions, or the highest second highest accepted price in a series of pay your bid auctions.

Auctions of daily firm capacity at entry points that are not subject to auctions of monthly capacity will have a floor price that is a multiple of 1.5 times the daily rate of administered charges as published in the transportation charge's statement. Floor prices for interruptible capacity shall be 0.2 times the daily rate of administered charges.

4. Review of Daily Auctions

4.1 Firm Daily Capacity

Daily entry capacity has been available since 17 November 1998. The service was introduced by Network Code Modification 0273. The firm daily capacity services offer firm unbooked capacity on D-1. A floor price of four times the effective daily rate for capacity under the annual capacity regime is applied. Firm daily capacity is sold at all entry points on a regular basis. The floor price has been the binding price on all except five occasions between November 1998 and July 1999. The exceptions were one occasion each at St. Fergus and Teesside, and three occasions at Theddlethorpe. The standard deviation of average offers (accepted plus rejected bids) made at each entry point shows little variation at any of the entry points except St. Fergus. This may suggest that St. Fergus has been the only location where shippers expect a scarcity of daily entry capacity to exist. Daily capacity at St. Fergus was secured by shippers on only one occasion out of the 14 days in which daily capacity had been bid for. A summary table of days in which offers have been made is provided in Appendix 1. The maximum number of possible days in the sample is 242 days.

4.2 Review of Interruptible Daily Capacity

Interruptible daily capacity is offered on a day ahead basis. The floor price is zero at all locations. A summary of interruptible capacity use is provided in Appendix 1. The majority of daily interruptible capacity auctions are cleared close to the floor price of zero p/kWh. Allocations of interruptible entry capacity have been scaled back from time to time at all entry points.

One concern expressed by a number of shippers when the daily interruptible service was introduced was that liquidity in secondary markets may be undermined. The interaction of secondary markets and interruptible entry services is difficult to model. However, it is perhaps reasonable to conclude that a clearing price of zero could impede trading on the secondary market.

4.3 Summary of Daily Auctions

Shipper expectation of receiving firm day ahead capacity at the reserve price is high at all entry points except St Fergus. This would appear to be a reasonable expectation because capacity has been allocated on most of the occasions on which shippers have requested it. Use of interruptible daily entry capacity is far more widespread. However, bids are often submitted close to the minimum floor price of zero p/kWh.

5. Post RGTA Interaction between Daily and Monthly capacity market

One of the principles underlying RGTA is to place incentives upon Transco to manage entry capacity efficiently. This includes exposing Transco to the costs of buying back firm capacity that cannot subsequently be made available and placing incentives upon Transco to make available additional capacity in the short term. The incentive schemes are expected to include sales of both daily firm and daily interruptible capacity. Risks and rewards from such incentives are subject to a cap and collar. Within that constraint 20% of all income from the incentive scheme can be retained in a Transco incentive account. Transco may also bear 20% of the cost of capacity buyback or rebate payments. The residual 80% will be allocated to a shipper incentive account. Full details of the incentives are contained in Network Code Modification proposal 0314.

Income from monthly capacity auctions will be part of Transco's income for the purposes of the application of the Price Control Formula, as set out in Special Condition 9c of the PGT licence.

It is clear that if floor prices for daily services are inappropriately set, then entry capacity income could 'leak' from the monthly capacity auctions to the daily capacity auctions. If all income was treated in the same manner then the issue would merely be one of ensuring that markets are operating efficiently. However, daily income will be allocated to a capacity incentive account, whereas income from monthly capacity auctions will be part of Transco's price control formula income.

If bidders do not take part in the monthly auction, monthly capacity may then be carried over to daily capacity auctions. If this happens formula related income in the monthly auctions will be less than anticipated and income in the daily capacity auctions may be greater. In this respect the floor price set for monthly auctions will not offer any protection against large under recovery in the monthly auction. Under recovery may then need to be recovered

elsewhere on the transportation system to maintain parity with Transco's price control formula.

6. Conclusion

Analysis of historical firm daily capacity booking indicates that on a majority of occasions the markets have cleared at the floor price. This may be symptomatic of an auction in which the floor price is set at too high a level. Floor prices should be set at a level that for most circumstances allows efficient allocation of capacity to those that value it most whilst continuing to encourage take up of monthly capacity. A floor price multiple for daily capacity should encourage shippers to book monthly entry capacity, which is included within Transco's price controlled income, whilst continuing to facilitate short term daily capacity booking which will count towards capacity incentives. A firm daily capacity floor price of 1.5 times the cleared price of the monthly capacity auction may provide a balance between the competing aims of reducing floor prices to encourage greater allocative efficiency and a desire to preserve incentives for monthly capacity booking.

Interruptible daily capacity auctions have cleared at the floor price of zero on the majority of occasions, a level that is less than the cost of delivering the service. In an incentivised capacity regime, which may apply for daily capacity from 1 October 1999, markets that clear at less than cost will have a negative impact on incentives to provide that service. A floor price of 0.2 times the marginal price of monthly capacity will introduce the potential for positive incentives for capacity expansion of the interruptible daily capacity service.

7. QUESTIONS FOR CONSULTATION

Transco welcomes respondent's views on the following, to be applicable from 1 October 1999 if Modification proposal 0314 is implemented:

Unsold monthly capacity should be sold at 1.5 times the cleared price obtained in the relevant monthly auction. (1.5 times the second highest accepted price in a pay your bid auction).

Auctions of daily firm capacity should have a floor price of 1.5 times the cleared price obtained in the relevant monthly auction. (1.5 times the second highest accepted price in a pay your bid auction).

Auctions of interruptible daily capacity should have a floor price of 0.2 times the cleared price obtained in the relevant monthly auction. (1.5 times the second highest accepted price in a pay your bid auction).

At locations where auctions of monthly capacity are not offered, the floor price for daily firm capacity will be 1.5 times the daily rate of the published charges. Interruptible capacity shall be 0.2 times the daily rate of published charges.

Appendix 1.

Firm Daily Capacity Auctions

Days in which offers made - maximum possible 242 days

Entry Point	Offers made	Capacity sold at reserve	Capacity sold above reserve	Standard deviation of offer price (to 3 decimals)
Bacton	59	59		0.000
Barrow	59	59		0.000
Burton Point	2	2		0.000
Easington (incl Rough)	44	41		0.002
Hornsea	2	2		0.000
St Fergus	14		1	0.201
Teesside	29	26	1	0.002
Theddlethorpe	24	21	3	0.004

Interruptible Daily Capacity Auctions

Days in which offers made - maximum possible 242 days

Entry Point	Offers made (days)	Capacity sold above floor (days)	Cleared price p/kWh
Bacton	229	62	0.0001
Barrow	27	0	0.0000
Burton Point	27	0	0.0000
Easington (incl Rough)	242	41	0.0001
Hatfield Moors	25	0	0.0000
Hornsea	242	2	0.0000
St Fergus	197	67	0.0027
Teesside	234	121	0.0021
Theddlethorpe	232	33	0.0002
Wytch Farm	2	0	0.0000