

The Statement of the Transmission Transportation Charging Methodology

Effective from 1 April 2005

Issued 1st May 2005

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1. INTRODUCTION

Transco is the owner and operator of the gas National Transmission System (NTS) in Great Britain, and is also the country's largest gas Distribution Network (DN).

The NTS is a network of pipelines, presently operated at pressures of up to 85 bar, which transports gas safely and efficiently from coastal terminals and storage facilities to exit points from the system. Exit points are predominantly connections to Distribution Networks (DNs), but also include storage sites, direct connections to some large volume consumers, and connections to other systems, such as interconnectors to other countries and Independent Gas Transporters (IGTs).

These operations are carried out to meet the needs of the companies that supply gas to domestic, commercial and industrial consumers and to power stations. In 2003/4 1,134 TWh of gas was transported to these customers.

This publication sets out the transportation charging methodology that applies for the use of the Transco NTS pipeline network from 1 April 2005. NTS transportation charges can be found in **The Statement of Transmission Transportation Charges**

Details of Transco and its activities, can be found on Transco's Internet site at www.transco.co.uk. An electronic version of this publication, along with **The Statement of Transmission Transportation Charges** and **LDZ Transportation Charges for the Distribution Networks**, can be found by clicking on "Our Publications", "Pricing Publications". Any enquiries regarding this service should be directed to UK Communications, either by calling **01926 655370** or by e-mail to webmaster@transco.co.uk.

2. NTS TRANSPORTATION CHARGING METHODOLOGY

2.1 Introduction

Standard Special Condition A4 of Transco's NTS Gas Transporter (GT) Licence requires Transco to establish a methodology showing the methods and principles on which transportation charges are based. Transco's present charging methodology was introduced in 1994 and has been modified from time to time in accordance with Standard Special Condition A5 of the Licence. This document does not override or vary any of the statutory, Licence or Network Code obligations upon Transco.

For further details about any of the information contained within this document, please contact our UK Transmission Charging team on **01926 654633**.

2.1.1 Price Control Formulae

With effect from 1 April 2002 the transportation price control has treated the NTS Transportation Owner (TO) and the NTS System Operator (SO) separately. The separate price controls and incentives determine the maximum revenue that Transco may derive from each in a formula year, 1 April to 31 March.

The Maximum Allowed Revenue under the transportation controls and incentives is determined by a number of factors including:

- the volume of NTS entry and exit capacity and linepack made available;
- Transco's performance under the various SO incentive schemes, covering a range of activities;
- the indexation factor - under the TO formulae allowed revenue is adjusted each year by a factor equal to two percentage points less than the rate of inflation, measured on a prescribed historical basis by reference to the Retail Price Index (RPI -2); and
- any under- or over-recovery brought forward under each control from the previous formula year (expressed by means of a separate "K" factor within each control).

The "K" correction factors are necessary because the level of charges set under each control depends on forecasts of some of the above elements together with a view on target auction revenues¹. Outturn will inevitably differ from forecast, thus giving rise to variances between the amount of revenue generated (on an accruals basis) and that allowed under each control. The K factors enable correction for these variances by adjusting either upwards or downwards the maximum level of revenue allowed in the following formula year (taking interest into account).

During the previous price control period April 1997 to March 2002 charges were normally revised on 1 October and only changed at other times when necessary, for example to avoid over-recovery following auctions of entry capacity. Under the new price control regime effective from 1 April 2002 charges will be kept under review and revised as necessary to ensure compliance with Transco's NTS GT Licence.

¹ Auctions presently relate only to NTS entry capacity revenues, for which mechanisms exist whereby a proportion of any excess auction revenue may be returned to shippers within the formula year by reference to the net value of NTS entry capacity buy-back costs in each month or any under recovery of auction revenue charged to shippers through a TO commodity charge levied on entry flows.

2.1.2 Objectives of the Charging Methodology

The transportation charging methodology has to comply with objectives set out in the Licence under Standard Special Condition A5 (5). These are to:

- reflect the costs incurred by Transco where charges are not determined by auctions; and, subject to this principal consideration;
- facilitate competition between gas shippers and between gas suppliers; and
- take account of developments in the transportation business;
- where prices are established by auction and where reserve prices are applied that these are set at a level best calculated:
 - i) to promote efficiency and avoid undue preference in the supply of transportation services,
 - ii) to promote competition between gas suppliers and between gas shippers.

In addition to these Licence objectives Transco has its own objectives for the charging regime. These are that the transportation charging methodology should:

- promote efficient use of the transportation system;
- generate stable charges;
- be easy to understand and implement.

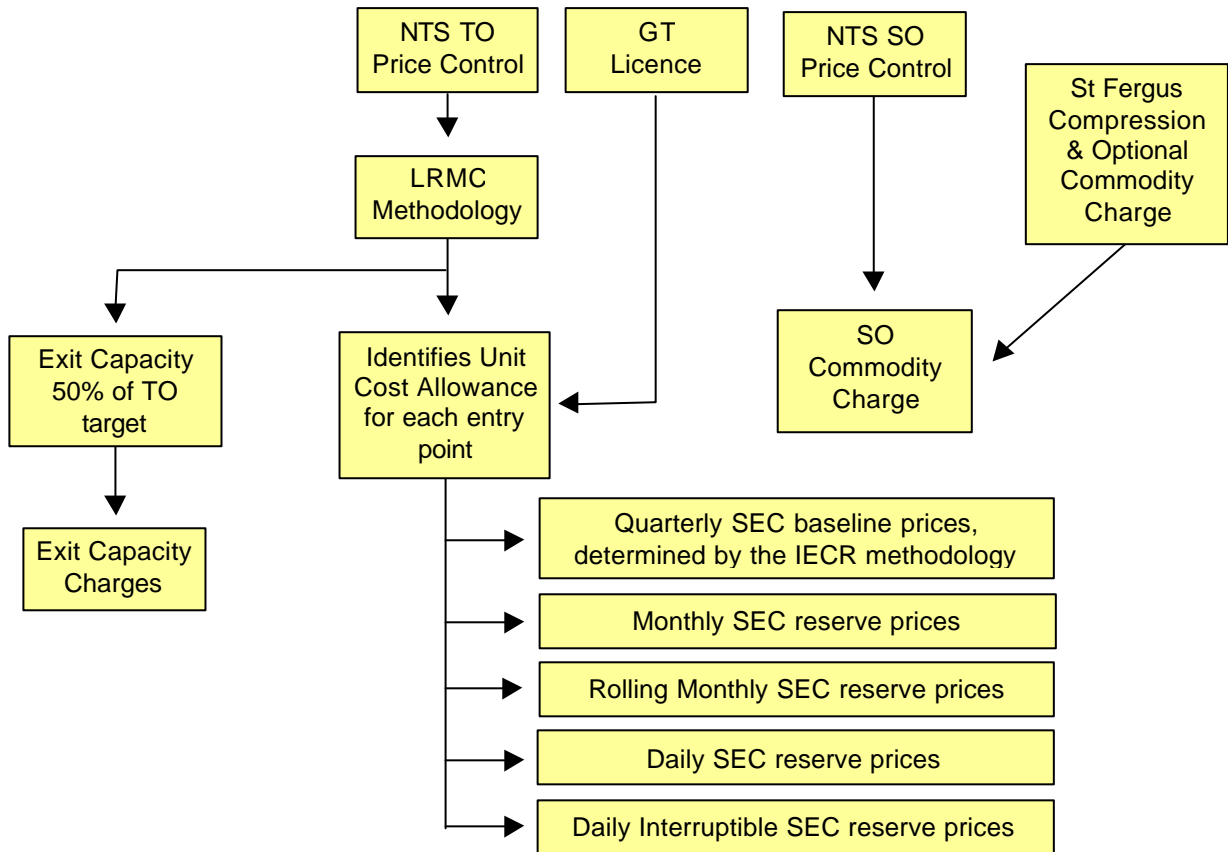
Before Transco makes any changes to the methodology, it consults with the industry in accordance with Standard Special Condition A5 of the Licence. Ofgem has the right to veto any proposed changes to the methodology.

2.1.3 Structure of NTS Transportation Charges

The structure of Transco's NTS transportation charges reflects the revised price control arrangements which came into effect from 1 April 2002. Charges are set separately for those activities related to the Transportation Owner (TO) and to the System Operator (SO).

The maximum revenue to be collected from the NTS TO and NTS SO charges is determined by the TO and SO price controls, as described in section 2.1.1 above. The NTS TO allowed revenue is collected by entry and exit capacity charges, with a TO commodity charge levied on entry flows where entry auction revenue is forecast to be under recovered. The NTS SO allowed revenue is collected largely by means of a commodity charge levied on entry and exit flows. The levels of NTS capacity and commodity revenue are therefore now determined by the separate TO and SO price controls and not, as prior to April 2002, by a 65:35 capacity:commodity ratio. Figure 2.1.3 presents a schematic flow diagram of how the NTS capacity and commodity charges are set.

Figure 2.1.3 Setting of NTS Charges & Reserve Prices



Of the NTS TO target revenue, 50% is assumed to be derived from Baseline entry capacity sales, determined through auctions subject to reserve prices. Exit capacity charges are applied on an administered peak day basis, and are set so as to recover the other 50% of the TO target revenue level when they are applied to the Baseline firm and interruptible exit capacity levels. Both auction reserve prices and exit charges reflect Transco's long run marginal cost (LRMC) methodology. The unpredictability of revenue from auctions means that the target 50:50 entry exit split may not be achieved in practice. A TO commodity charge may be levied where entry capacity auction revenue is forecast to be below the entry target level.

Commodity charges are payable on gas flowed. Capacity charges are payable when a right to flow gas is purchased, with payment due irrespective of whether or not the right is exercised. However, although the obligation to pay for capacity remains with the primary purchaser, all types of entry capacity can be traded between Shippers, such as Monthly System Entry Capacity (MSEC).

Having established by the above methods the target revenue to be derived from each main category of charge, the next stage is to set the charges within each of these charge categories. The methodologies used to do this are described in the appropriate sections below.

2.2 Exit Capacity Charges

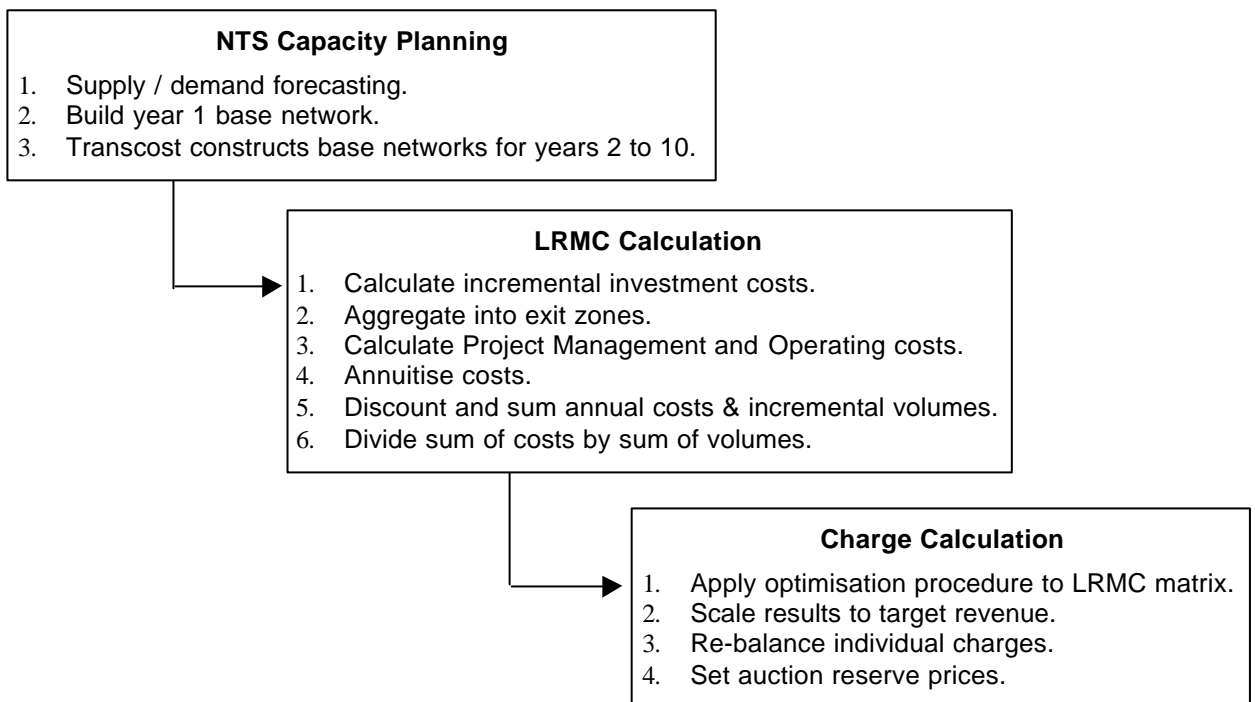
The terms on which exit capacity is sold are set out in the Network Code, Section B. Charges reflect the estimated long run marginal cost (LRMC) of reinforcing the system to transport additional gas between entry and exit points. The calculations are described in more detail below. At present, exit charges are applied only in respect of firm loads.

A model, known as Transcost, has been developed by Transco to estimate LRMCs to support the setting of NTS capacity charges. Transcost is also capable of estimating LRMCs for alternative supply and demand patterns relatively quickly and easily. A free copy of Transcost, supporting documentation and the data used when setting the April 2002 charges can be obtained by calling Transco on **01926 654633**.

2.2.1 Calculation of Long Run Marginal Costs

The LRMC approach derives forward-looking charges, which are intended to provide economically efficient signals to system users. Figure 2.2.1 presents a schematic flow diagram of the steps involved in calculating LRMC reflective NTS TO capacity charges.

Figure 2.2.1 LRMC Overview



The LRMC calculation uses the supply / demand match set out in the Base Plan Assumptions and the reinforcement plans that are derived from it. Transcost first constructs a base network which is just sufficient to support the supply / demand match for year 1 of the analysis. This will equate to the present network plus any known reinforcement projects that will be completed before year 1 begins. For each subsequent year of the analysis Transcost will reinforce the modelled network from the previous year so that it is just sufficient to support the supply / demand match for that year. There are therefore ten separate but related networks to be used in the analysis.

The steps in this process are described in more detail below and illustrated by reference to the derivation of the LRMC for the route between Bacton entry point and SW3 exit zone.

2.2.1.1 Calculation of Incremental Investment Costs

Transcost calculates the additional investment required in new pipelines and / or compressors to support a sustained notional increase in flow along each route. Therefore, the more constrained a route is in terms of available capacity, the higher will be the level of investment necessary. This analysis is carried out using the base case networks described above for all 10 years.

Size of Increment

This is set such that the economic signals resulting from the LRMC process are clear: too small an increment and the LRMCs will tend to zero, too large and they will tend to a distance related charge. The increment chosen, 2,834 mcm / d (100 mcf) represents in general, around 10% of the flow along a route. Transcost is configured such that this increment can be changed as appropriate.

Investment Costs

The estimated costs of various types of investment are set out below. Transcost is configured such that these estimates can be changed as appropriate.

Table 2.2.1.1a Transcost Investment Costs

| Description | Cost £s m |
|----------------------------|--|
| Pipeline per km | $(0.0003115 \times \text{diameter(mm)}) + 0.3505652$ |
| Compressor – Greenfield | 30.0 per station |
| Compressor – Existing site | 15.0 per turbine |

Transcost analysis determined that the minimum investments required to facilitate an incremental flow from Bacton to two of the exit points in SW3 (Aylesbeare and Kenn) were as follows.

Table 2.2.1.1b Bacton to SW3 Costs (£ million)

| | Yr1 | Yr2 | Yr3 | Yr4 | Yr5 | Yr6 | Yr7 | Yr8 | Yr9 | Yr10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Aylesbeare | 32.25 | 34.75 | 32.75 | 35.50 | 30.25 | 33.50 | 35.00 | 39.00 | 34.00 | 41.75 |
| Kenn | 34.25 | 34.75 | 35.25 | 35.50 | 32.25 | 36.00 | 38.00 | 42.00 | 37.00 | 42.25 |

2.2.1.2 Aggregation into Exit Zones

NTS exit points which deliver gas into the Local Transmission System (LTS) are grouped into 33 exit zones for charging purposes. Grouping is designed to:

- Reduce the number of individual charges;
- Reflect areas with common reinforcement cost drivers; and
- Reflect actual system operation. The gas supplied to a specific area within an LDZ can often be routed through a number of different NTS exit points.

Investment costs for an exit zone are calculated by means of a flow-weighted average of all the individual exit points within that zone. Flow weighting is based upon the projected peak day delivery volumes at each exit point. It should be noted that individual supply points that are supplied directly from the NTS are excluded from this aggregation process.

Table 2.2.1.2 Costs to Exit Points in SW3 (Flow Weighted)

| | | Yr1 | Yr2 | Yr3 | Yr4 | Yr5 | Yr6 | Yr7 | Yr8 | Yr9 | Yr10 |
|-------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Investment | Aylesbeare | 32.25 | 34.75 | 32.75 | 35.50 | 30.25 | 33.50 | 35.00 | 39.00 | 34.00 | 41.75 |
| | Kenn | 34.25 | 34.75 | 35.25 | 35.50 | 32.25 | 36.00 | 38.00 | 42.00 | 37.00 | 42.25 |
| Weightings | Aylesbeare | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 23% |
| | Kenn | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 77% |
| Average | SW3 | 33.80 | 34.75 | 34.69 | 35.50 | 31.80 | 35.44 | 37.32 | 41.32 | 36.32 | 42.14 |

2.2.1.3 Project Management and Operating Costs

Project management costs are variable costs that are dependent upon many factors including location, timing, type and size of investment. Size of investment is the main indicator of the scale of expected project management costs. In the LRMC estimation process project management costs are assumed to be 15% of the previously identified investment costs. Similarly, the change in operating costs associated with the increased throughput of the increment is assumed to be 1.5% of investment costs.

Table 2.2.1.3 Project Management & Operating Costs (£ million)

| | Yr1 | Yr2 | Yr3 | Yr4 | Yr5 | Yr6 | Yr7 | Yr8 | Yr9 | Yr10 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Capital Cost Investment | 33.80 | 34.75 | 34.69 | 35.50 | 31.80 | 35.44 | 37.32 | 41.32 | 36.32 | 42.14 |
| Project Management (15%) | 5.07 | 5.21 | 5.20 | 5.33 | 4.77 | 5.32 | 5.60 | 6.20 | 5.45 | 6.32 |
| Total | 38.87 | 39.96 | 39.89 | 40.83 | 36.57 | 40.75 | 42.92 | 47.52 | 41.77 | 48.46 |
| Operating Cost (1.5%) | 0.51 | 0.52 | 0.52 | 0.53 | 0.48 | 0.53 | 0.56 | 0.62 | 0.54 | 0.63 |

2.2.1.4 Calculation of Annuitised Costs

The capital cost is annuitised, that is spread evenly over the expected life of the asset taking into account the required rate of return. The annuity period considered appropriate is 20 years following the assumption of the average economic life of new NTS pipeline assets made in the BG / Ofgas Joint Consultation Document of February 1993. The annuity discount factor is 6.25% per annum, consistent with the cost of capital used to set maximum allowed revenue under the present price controls which apply from 1 April 2002. To obtain the annuitised present value, the capital cost is divided by 11.9433 (the sum of the discount factors over 20 years at 6.25%).

Table 2.2.1.4 Annuitised Costs (£ million)

| | Yr1 | Yr2 | Yr3 | Yr4 | Yr5 | Yr6 | Yr7 | Yr8 | Yr9 | Yr10 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Capital Cost | 38.87 | 39.96 | 39.89 | 40.83 | 36.57 | 40.75 | 42.92 | 47.52 | 41.77 | 48.46 |
| Annuitised | 3.25 | 3.35 | 3.34 | 3.42 | 3.06 | 3.41 | 3.59 | 3.98 | 3.50 | 4.06 |
| Operating Costs | 0.51 | 0.52 | 0.52 | 0.53 | 0.48 | 0.53 | 0.56 | 0.62 | 0.54 | 0.63 |
| Total Annual Cost | 3.76 | 3.87 | 3.86 | 3.95 | 3.54 | 3.94 | 4.15 | 4.60 | 4.04 | 4.69 |

2.2.1.5 Calculation of Discounted Annual Costs & Incremental Volumes

The LRMC for the entire period of the analysis is the weighted average of each individual year's estimate of the marginal cost, with earlier years having a greater weight than later ones. In order to provide appropriate weighting the costs and incremental volumes for future years are discounted at 6.25% per annum. Capacity charges are expressed in terms of pence per peak day kilowatt-hour per day. However incremental volumes are expressed in terms of millions of cubic metres. Therefore, at this stage in the process, the incremental volumes are converted into energy units.

Table 2.2.1.5 Discounted Annual Costs (£ million) & Incremental Volumes (GWh)

| | Yr1 | Yr2 | Yr3 | Yr4 | Yr5 | Yr6 | Yr7 | Yr8 | Yr9 | Yr10 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Annual Cost | 3.76 | 3.87 | 3.86 | 3.95 | 3.54 | 3.94 | 4.15 | 4.60 | 4.04 | 4.69 |
| Incremental Volume | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 | 30.19 |
| Discount Factor | 1.00 | 0.94 | 0.89 | 0.83 | 0.78 | 0.74 | 0.70 | 0.65 | 0.62 | 0.58 |
| Discounted Cost | 3.76 | 3.64 | 3.44 | 3.28 | 2.76 | 2.92 | 2.91 | 2.99 | 2.50 | 2.72 |
| Discounted Volume | 30.19 | 28.38 | 26.87 | 25.06 | 23.55 | 22.34 | 21.13 | 19.62 | 18.72 | 17.51 |

2.2.1.6 Calculation of LRMC

The LRMC in pence per peak day kilowatt-hour per day is calculated by dividing total discounted cost by total discounted volume.

| | |
|--------------------------------|---------|
| Total Discounted Cost (£s m) | 30.91 |
| Total Discounted Volume (GWhs) | 233.37 |
| LRMC (p / pdkWh / annum) | 13.2460 |
| Days in Year | 365 |
| LRMC (p / pdkWh / day) | 0.0363 |

2.2.2 Calculation of NTS Capacity Charges

It is not practical to apply the full matrix of LRMCs for all the routes on the system directly as charges. Instead, an LRMC reflective charge is determined for each entry point and each exit point such that, when these are combined for any particular route, they replicate as closely as possible the calculated LRMC for that route.

An optimisation procedure (Microsoft Excel Solver) is used to determine the LRMC reflective entry and exit charges. For each combination of entry point and exit point, the solver uses the cost figure as the dependent variable in an equation that represents the sum of one entry charge and one exit charge. Each valid combination of entry to exit can be represented by the following equation:

$$y_{ij} = x_i + x_j + e_{ij}$$

Where:

- y_{ij} is the LRMC for the route from entry point i to exit point j ;
- x_i is the entry charge at point i ;
- x_j is the exit charge at point j ; and,
- e_{ij} is the absolute error.

The optimisation procedure calculates the best fit by minimising the sum of the squared error terms, e_{ij} , for all entry and exit combinations. To achieve a unique solution to the procedure, it is necessary to fix at least one parameter. To achieve this the optimisation is constrained such that there is a minimum permitted charge of 0.0001 p / pdkWh / d.

Since the charges determined by this process are based on long run marginal costs, when applied to forecast peak day flows they may not be expected to generate the target revenue. They therefore need to be scaled, to ensure consistency with the appropriate exit target revenue.

2.2.3 Capacity Charge Re-balancing

The capacity charges actually applied do not necessarily fully reflect the latest scaled LRMCs, particularly if there have been significant year on year changes. The pricing methodology takes account of the potential impact of change on particular charges, in line with a preference for charging stability. Using the existing set of charges, scaled to achieve target

exit revenue, in conjunction with the latest and previous set of scaled LRMC reflective charges, the following re-balancing rules are applied:

- If both the previous and latest scaled LRMC reflective charges are higher than the existing scaled charge, then the existing charge will be increased to a level no greater than the lower of the two scaled LRMC reflective charges;
- If both the previous and latest scaled LRMC reflective charges are lower than the existing scaled charge, then the charge will be reduced to a level no lower than the higher of the two scaled LRMC reflective charges;
- Scaled charges that are already between the previous and latest scaled LRMC reflective charges will remain unchanged except for scaling; and
- Charges are not permitted to move in either direction by more than a given percentage of their existing scaled value.

Following the implementation of PC76 in December 2002, the existing balance for exit capacity charges will be maintained, rather than rebalancing exit capacity charges, until Universal Firm Registration of NTS exit capacity is introduced.

2.3 System Entry Capacity

System Entry Capacity is presently allocated by means of five related auction mechanisms.

- Quarterly (firm) System Entry Capacity (QSEC)
- Monthly (firm) System Entry Capacity (MSEC)
- Rolling Monthly (firm) System Entry Capacity (RMSEC)
- Daily (firm) System Entry Capacity (DSEC)
- Daily Interruptible System Entry Capacity (DISEC)

The reserve prices applicable to each type of auction are outlined in section 2.3.1 below.

Under Ofgem's final proposals for the NTS SO incentive schemes, Transco is obliged to make available for sale in the Long Term auctions, Quarterly System Entry Capacity (QSEC) calculated in accordance with paragraph 14(5)(g) of part 2 of Special Condition C8B of Transco's NTS GT Licence. QSEC can be obtained in respect of each of Capacity Year + 2 to Capacity Year + 16 inclusive (where 'Capacity Year + n ' is a reference to the Capacity Year commencing on the n anniversary of the first day of the Capacity Year in which the applications are invited to be made).

MSEC is allocated by auction for a period no more than two years ahead of the period of use and is also calculated in accordance with paragraph 14(5)(g) of part 2 of Special Condition C8B of Transco's NTS GT Licence. Transco is obliged to make available for sale in the MSEC auctions capacity at the level of the NTS SO baseline level, as set out in the NTS SO price control, less any NTS SO baseline entry capacity already sold in previous auctions. Any remaining capacity for the succeeding month that has not been sold in the MSEC allocations is offered for sale in a series of Rolling Monthly System Entry Capacity (RMSEC) auctions. The MSEC and RMSEC allocation is on a pay as bid basis.

Any unsold remaining capacity, will be offered for sale ahead of the gas day and during the gas day as DSEC. Bids for DSEC can be made from seven days before the gas day.

Also on the day before the gas day, Transco will establish, on the basis of a rolling 30 day average, the difference between firm capacity held by shippers and their actual nominations (i.e. any unutilised booked firm capacity) at each ASEP. This volume is then made available in the single DISEC auction held on the day before the gas day. Transco retains a right to scale back previously released interruptible capacity for the purposes of system management.

Above baseline capacity can be released by Transco in accordance with its entry capacity investment incentive or entry capacity buy back incentive as set out in its GT Licence. QSEC is the vehicle for releasing additional capacity in accordance with the entry capacity investment incentive. Capacity can be released in accordance with the buy back incentive in all firm capacity release processes, although the quantities should be signalled in advance in the annual and rolling MSEC processes.

A situation may arise in which Transco is unable to meet all entry capacity nominations. In this case it may buy-back entry capacity through a tender mechanism, tenders being accepted in ascending price order until the required level of buy-back has been achieved.

Figure 2.3 below shows schematically how system entry capacity might actually be allocated on a day.

Figure 2.3 System Entry Capacity Auctions

| | | |
|---|--------------|------|
| QSEC Capacity available = (SO Baseline entry capacity) | | |
| QSEC Sold | QSEC Unsold | |
| MSEC Capacity available = (SO Baseline entry capacity – QSEC sold) | | |
| MSEC Sold | MSEC Unsold | |
| RMSEC Capacity available = (SO Baseline entry capacity – QSEC sold – MSEC sold) | | |
| RMSEC sold | RMSEC unsold | |
| On the day System Entry Capacity | | |
| MSEC Nominations | DISEC | DSEC |

2.3.1 Reserve Prices in System Entry Capacity Auctions

System entry capacity is allocated by means of auctions as described in the Network Code and outlined in section 2.3 above. This approach includes various reserve prices below which bids will not be accepted. In the auctions of Long term System entry capacity, held in January 2003, the minimum price at which the baseline level of entry capacity was made available was the Unit Cost Allowance (UCA) as determined by Ofgem (assuming an annuity discount of 6.25% per annum). These UCAs have been determined from incremental cost analysis using the same basic approach as used in determining the LRMCs using the Transcost model detailed in sections 2.2.1 to 2.2.3 above. However, there were a few differences which are listed below:

- the use of a 6 mcmd increment size for the UCA analysis instead of the 2.83 mcmd increment used for the standard LRMC analysis.
- the manner of determining average entry unit costs from the analysis. For the UCA analysis entry and exit unit costs were fitted to the results for each year and a simple average entry unit cost was then calculated across the ten years. For the traditional LRMC determination weighted average costs are first calculated for each route across the ten years and then entry and exit unit costs are fitted to these average costs.
- there is no scaling applied to these UCAs as in section 2.2.3 above. These UCAs represent Ofgem's view of the costs Transco could reasonably be expected to incur in undertaking additional investment in capacity.

Baseline QSEC reserve prices are calculated each year through adjustment of the UCAs by RPI, in accordance with Special Condition C8B Part 2 14(5)(a) of Transco's NTS Gas Transporter Licence. QSEC step prices are calculated with reference to the applicable

reserve price and in accordance with the methodology for the determination of incremental price steps as set out in Transco's Incremental Entry Capacity Release (IECR) statement.

Entry Capacity Reserve Prices for auctions other than QSEC are calculated by applying the following discounts to the QSEC baseline reserve prices:

- Monthly System Entry Capacity (MSEC) and Rolling MSEC (RMSEC); 0%
- Daily System Entry Capacity (DSEC); 33.3%

Note that from October 2003 the discount for DSEC sold on the day of the capacity itself has been 100%. The discount for DSEC sold ahead of the day remains at 33.3%.

- Daily Interruptible System Entry Capacity (DISEC); 100%

2.4 Constrained LNG

Shippers that book the constrained LNG storage service agree to ensure the continuing availability of transmission support gas throughout the winter period on behalf of Transco. During 2006 / 06 the storage sites providing these services are Avonmouth, Dynevor Arms and Isle of Grain. All constrained LNG sites provide a transmission benefit that is effectively in lieu of further investment on the pipeline system. It is therefore appropriate that a credit is offered to reflect the benefit obtained. The credit is based upon the exit capacity charge of the exit zone or zones supported by the CLNG site and the volume of deliverability required.

Full details of associated rules are available on request from Transco's LNG business unit.

2.5 NTS TO Commodity Charge

This is a charge per unit of gas allocated to shippers at entry terminals but not storage facilities. The charge is levied where Transco forecasts that the entry capacity auction revenue will be below the target. The charge will be set to zero where entry capacity auction revenue is at, or above, the entry capacity target level. Transco will assess its forecast entry capacity auction following the February AMSEC auction and, if necessary, determine a 12 month schedule of TO commodity charges to apply from the following October. Transco would only depart from this schedule under exceptional circumstances.

2.6 NTS SO Commodity Charge

This is a charge per unit of gas transported by the NTS and is applied independently of entry and exit points. The charge is payable on both entry and exit flows. The target revenue to be raised by the charge is the NTS SO allowed revenue, including any incentive additions or deductions, less any revenue to be obtained from the St. Fergus compression charge and the Optional NTS commodity tariff. The commodity rate is set by dividing the target revenue by forecast system throughput.

2.7 NTS Optional Commodity Charge

In June 1998 Transco introduced an optional NTS commodity tariff to reflect more accurately the costs of gas transportation from a terminal to a nearby large supply point. Shippers can elect to pay the optional tariff as an alternative to both the entry / exit NTS SO commodity charge and the NTS TO commodity charge. The tariff is derived from the estimated cost of laying and operating a dedicated pipeline of NTS specification. A charging function has been calculated based on a range of flow rates and pipeline distances. Although the tariff is available to all daily-metered supply points, in practice it is only attractive for large supply points situated close to terminals.

2.8 Compression Charge

An additional charge is payable where gas is delivered into the NTS at a lower pressure than that required, giving rise to a need for additional compression. The compression charge is derived from an analysis of costs at the compressor site and the annual throughput at that site.

2.9 Other Charges

There are other charges applied to services which are required by some shippers but not by all, for example special allocation arrangements. It is more equitable to levy specific cost reflective charges for these services on those shippers that require them. Income from these charges is included in the regulated transportation income. These charges include:-

- charges for the administration processes required to manage the daily operations and invoicing associated with CSEPs;
- charges for the administration of allocation arrangements at shared supply meter points and Interconnectors; and
- charges for specific services at Interconnectors.

The methodology used to calculate the appropriate level of these charges is based on an assessment of the direct costs of the ongoing activities involved in providing the services. The costs are forward looking and take into account anticipated enhancements to the methods and systems used. A percentage uplift based on the methodology described in Transco's background paper "Charging for Specific Services - Cost Assignment Methodology" (May 1999) is added to the direct costs to cover support and sustaining costs. The latest level of the uplift was published in PD16, Section 5, (November 2002).

3. Business Rules for Interruptible Supply Points

3.1 Introduction

- 3.1.1 Contracted interruptible exit capacity remains unchanged at 45-day standard. Sites nominated by Transco as TNI can be interrupted for a greater period.
- 3.1.2 All interruptible supply points continue to avoid the NTS (TO) exit capacity charge and the capacity element of the LDZ standard charge. The optional LDZ charge, if chosen as an alternative to the standard LDZ charge, continues to be payable for interruptible supply points.
- 3.1.3 For each occurrence of nominated interruption beyond 15 days an additional credit will be offered. Transco conducts determination of cumulative occurrences of nominated interruption on a site-specific basis.
- 3.1.4 These business rules became effective on 1 October 2002 and refer to additional interruption credits for above 15-day interruption.

3.2 Calculation of Payment

- 3.2.1 The credit will be calculated in accordance with Transco's Pricing Methodology as established in PC74.
- 3.2.2 The charge quantity will be determined from the supply point registered interruptible exit capacity (SOQ) at the point of interruption multiplied by those qualifying occurrences of interruption in excess of 15 days as specified in sections 3.3 and 3.4 but subject to:
- 3.2.3 The charge quantity of any Partial interruptible site, including shared supply points, being limited to that quantity (kWh rate) of exit capacity tranche(s) that was actually requested by Transco for interruption.
- 3.2.4 Subject to 3.2.1 above, such shared supply point tranche(s) charge quantity will, where more than one interruptible shared user holds interruptible exit capacity at the shared supply point, be split by each user in ratio to such user's interruptible initial (D-1) gas flow nomination as a percentage of the total aggregate interruptible initial (D-1) gas flow nomination for the shared supply point.
- 3.2.5 The charge quantity of any IFA site being limited to that supply point registered interruptible exit capacity net of any firm exit capacity entitlement specified within each site IFA agreement.
- 3.2.6 The charge quantity of any interruptible NTS CSEP being limited to that quantity (kWh rate) of exit capacity that was actually requested on the day by Transco for interruption.
- 3.2.7 Subject to 3.2.4 above, such NTS CSEP charge quantity will, where more than one interruptible user is registered at the NTS CSEP, be split by each user in ratio to such user's interruptible initial (D-1) gas flow nomination as a percentage of the total aggregate interruptible initial (D-1) gas flow nomination for the NTS CSEP.
- 3.2.8 For the avoidance of doubt, a shared user's interruptible supply point capacity (SOQ), or such tranche under 3.2.1 above, will be used for charge quantity purposes, and not the shared supply point aggregate interruptible capacity (SSP SOQ).
- 3.2.9 User proposed ratios as alternatives to mechanisms described under 3.2.2 and 3.2.5 above will not be allowed.

- 3.2.10 Supply point data at the point of interruption will be used for charge calculation purposes.
- 3.2.11 Payment constructed from charge quantities determined in accordance with this section 2 will not be the subject of later reconciliation should any component capacity subsequently change prospectively within the formula year.
- 3.2.12 The registered shipper at the point of interruption will be the qualifying shipper for receipt of any payment.

3.3 Count of Interruptible Days

- 3.3.1 A count of interruption occurrence will be maintained for each site within each formula year, with each day or part day of interruption representing an increment of 1.
- 3.3.2 The count will include such occurrence of qualifying interruption as defined within section 4 below.
- 3.3.3 The count will start from zero on 1 April of each formula year beginning at April 2002.
- 3.3.4 The count will end on 31 March of each formula year.
- 3.3.5 This count will be used solely for determining the level of credit due, if any, for each site where the frequency of nominated interruption exceeds 15 days within any formula year, monitoring of transportation contract interruption will be maintained separately for each gas year.

3.4 Qualifying Interruption

- 3.4.1 The count of qualifying interruptible days under section 3.3 above will increment, but subject to 3.4.3 below, where curtailment of gas supply was due to:
 - 3.4.2 interruption arising from an NTS or LDZ constraint within Transco's transportation system;
 - 3.4.3 interruption arising for Test purposes as described within Network Code section G 6.7.3 (ii).
- 3.4.4 The count of qualifying interruptible days under section 3.3 above will not increment where curtailment of gas supply was due to:
 - 3.4.5 emergency interruption [emergency cessation of gas supply];
 - 3.4.6 any form of commercial interruption instigated by a shipper.
- 3.4.7 Transco's determination of a site for interruption will increment that site's count of interruptible days under section 3.3 above.
- 3.4.8 Where Transco has called interruption, a User can request that an alternative site(s) should be interrupted as described in section G 6.8.2 of the Network Code. In such circumstances Transco will, for the purposes of section 3.3 above, maintain a count based on the site Transco originally nominated for interruption.
- 3.4.9 Failure to interrupt of the Transco proposed site or shipper proposed alternative site(s), will result in a reduction by 1 (to a minimum of zero) of the site count of interruptible days determined under 3.4.3 above and such that:

- 3.4.10 no payment will be made for the Transco proposed and shipper accepted site that subsequently fails to interrupt;
- 3.4.11 no payment will be made for the Transco proposed site where shipper substituted for a matched target volume site that subsequently fails to interrupt;
- 3.4.12 where multiple sites are substituted by a shipper, the payment(s) made to Transco proposed site(s) will be reduced by that shipper substituted target volume identified as failing to interrupt, with such volume reduction being applied in site highest unit charge rate ranked order.

3.5 Unit Rate

- 3.5.1 The unit rate will be expressed in pence per kWh of peak day capacity and will be the rate as determined by Pricing Methodology PC74.
- 3.5.2 NTS and LDZ unit rates will be 1/15th of the annual (daily rate × 365) NTS (TO) exit capacity rates and LDZ standard capacity rates valid at the point of interruption, and will be site-specific rates applied to occurrences of qualifying interruption in excess of 15 days.
- 3.5.3 Payment constructed from unit rates determined in accordance with this section 5 will not be the subject of later reconciliation should firm NTS (TO) exit capacity rates or LDZ standard capacity rates, or any peak capacity component contained within such rate calculation, subsequently change within the formula year.
- 3.5.4 For the avoidance of doubt, User election of the optional LDZ tariff excludes such sites from qualification for LDZ payments in respect of interruption in excess of 15 days, such sites will still be eligible for receipt of any NTS component.

3.6 Invoice

- 3.6.1 Payment of all credits accrued in a calendar month will be made within the following month.
- 3.6.2 Subject to 3.4.5 above, Transco will not issue a payment where it has reasonable grounds to believe that such payment is dependent upon the outcome of failure to interrupt investigation. Payment will be released as soon as practically possible should such failure to interrupt be disproved.

3.7 Information Provision

- 3.7.1 Transco will publish the count of interruptible days as specified within section 3.3 above where that supply point count exceeds 12 days, publication will be at an aggregate LDZ or aggregate NTS level. The information in 3.7.1 will be published on the Transco web site and updated on a weekly basis.