Issue	Revision
1	0

The Statement of the Gas Transmission Transportation Charging Methodology

Effective from 1 April 2007

nationalgrid

About this Document

This document describes the methodology that National Grid Gas NTS ("National Grid") employs to levy charges for use of the Gas Transmission System in Great Britain. This document is one of a suite of documents that describe the charges levied by National Grid and the methodologies behind them. The other documents that are available are:

- **Notice of Gas Transmission Transportation Charges**
- **Incremental Entry Capacity Release Methodology Statement**
- **Metering Charging Statement**
- **Connection Charging Statement**

These are available on our Charging website at:

http://www.nationalgrid.com/uk/Gas/Charges/statements/

This statement is effective from 1 April 2007.

This document has been published by National Grid in accordance with Standard Conditions A4 and A5 of its Gas Licence in respect of the NTS and is approved by the Gas and Electricity Markets Authority (the Authority).

If you require further details about any of the information contained within this document or have comments on how this document might be improved please contact our UK Transmission Charging team on **01926 656310 or 01926 656316.**

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GENERAL INTRODUCTION

Background

National Grid is the owner and the operator of the gas National Transmission System (NTS) in Great Britain.

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) and large consumers but also include storage sites, direct 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 (located within DNs) , commercial and industrial consumers and to power stations. In 2005/06 1,067 TWh of gas was transported to these consumers.

This publication sets out the transportation charging methodology that applies for the use of the NTS pipeline network from 1 April 2007. NTS transportation charges can be found in the "Notice of Gas Transmission Transportation Charges".

Details of National Grid and its activities can be found on its internet site at www.nationalgrid.com . An electronic version of this publication, along with the "**Notice of Gas Transmission Transportation Charges"** can be found by clicking on "Gas/Charging/Transportation Charges".

National Grid's Licence Objectives

Standard Special Condition A4 of National Grid's Gas Transporter (GT) Licence requires National Grid to establish a methodology showing the methods and principles on which transportation charges are based. National Grid'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 UNC (Uniform Network Code) obligations upon National Grid.

National Grid's Licence Obligations relevant to the Charging Methodology

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

- reflect the costs incurred by National Grid 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 National Grid 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 National Grid 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.

CHAPTER 1 : PRINCIPLES

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 National Grid 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;
- National Grid's performance under the various SO incentive schemes, covering a range of activities;
- the indexation factor - under the TO formula allowed revenue is adjusted each year by a factor equal to rate of inflation, measured on a prescribed historical basis by reference to the Retail Price Index (RPI); 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 revenues[1]. 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 earlier price control periods, 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 2007 charges will ordinarily be revised on 1 April and 1 October, and only adjusted at other times of the year in exceptional circumstances and with the agreement of the Authority to ensure compliance with National Grid's GT Licence.

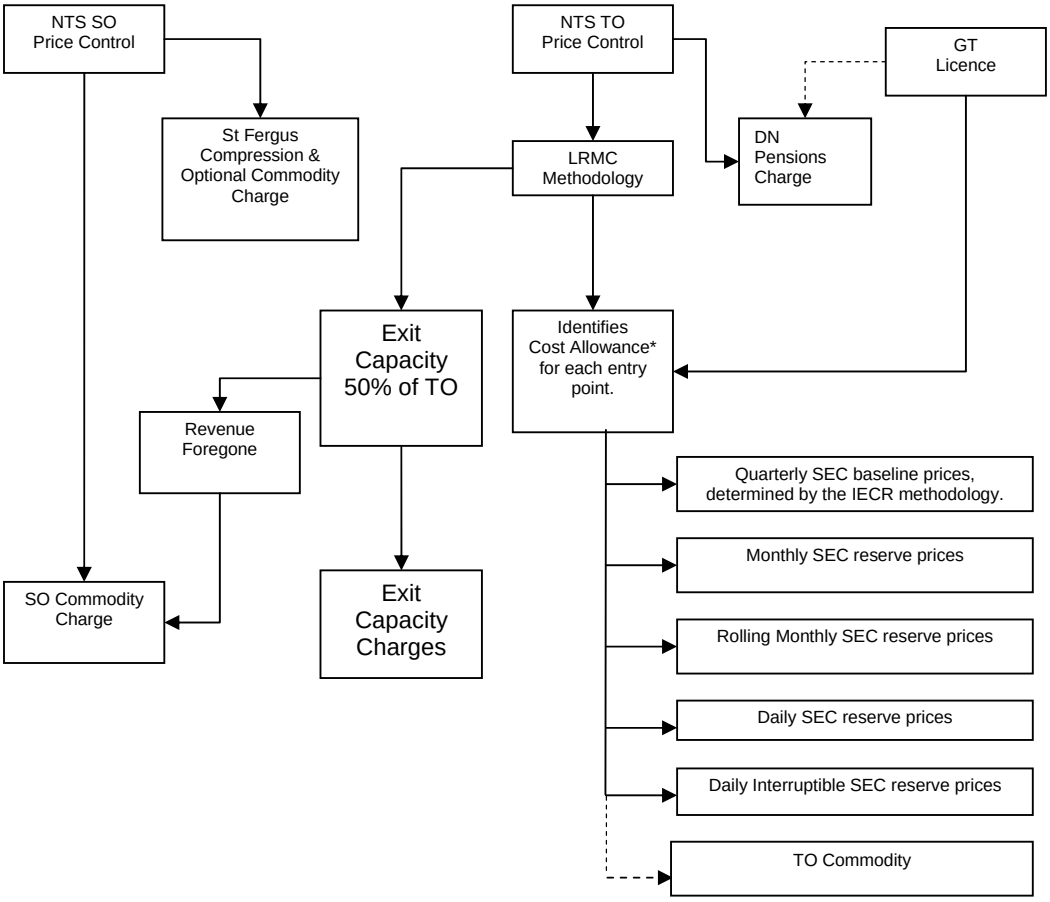
1.2 Structure of NTS Transportation Charges

The structure of National Grid's transportation charges reflects the revised price control arrangements that came into effect from 1 April 2007. Charges are set separately for those activities related to the Transportation Owner (TO) and to the System Operator (SO).

[1] Auctions presently relate only to NTS entry capacity revenues, for which mechanisms exist whereby a proportion of any forecast excess auction revenue may be returned to shippers within the formula year by the use of the entry buy-back mechanism and an adjustment to the NTS exit capacity charges (see section 2.3.2) , or any under recovery of auction revenue charged to shippers through a TO commodity charge levied on entry flows.

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 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 1 presents a schematic flow diagram of how the NTS capacity and commodity charges are set.

Figure 1 Principles of setting NTS Charges & Reserve Prices



* The Unit Cost Allowance for the new 2007 – 2012 GT licence will be termed as “Revenue Driver” .

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 National Grid’ 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 allocated. 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.

CHAPTER 2 : CAPACITY CHARGES

2.1 System Exit Firm Capacity

The terms on which exit firm capacity is sold are set out in the UNC; 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.

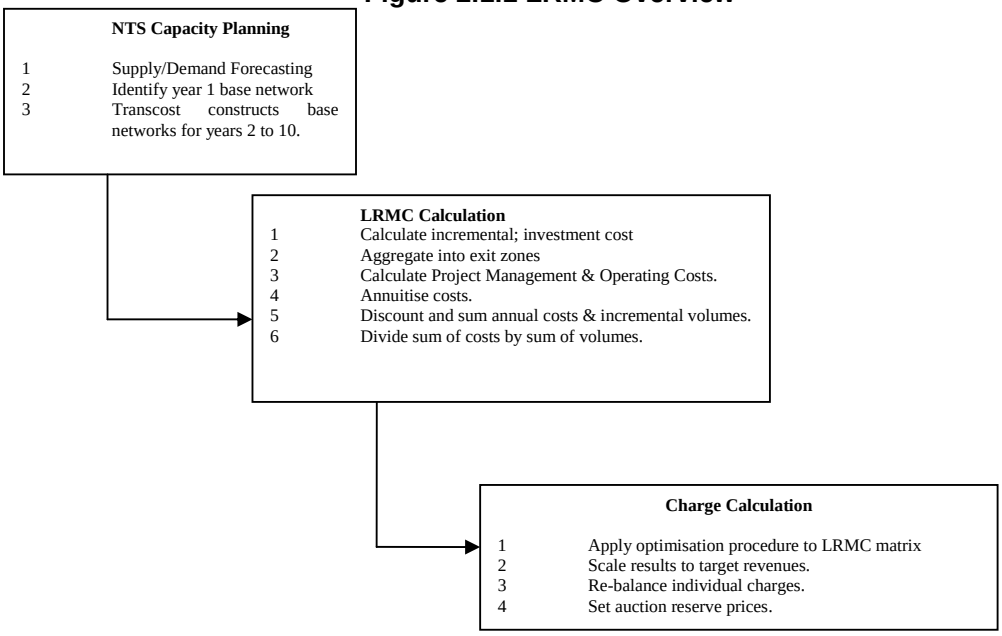
A model, known as Transcost, was developed by National Grid to estimate LRMCs to support the setting of NTS capacity charges. Transcost is also capable of estimating LRMCs for alternative supply and demand patterns relatively quickly and easily. Alternative transport and tariff models are currently under review.

The assumptions and allowances given in Section 2.1 have been applied for the process of setting LRMC's from the date they were calculated in 2002 and their subsequent year on year scaling. It should be noted that with the introduction of the new Price Control Formula for the period 2007 – 2012 many of these figures have been revised. However, for the purposes of determining Exit Capacity Charges, the description and values in this section remain valid for the purpose of the derivation of the LRMCs.

2.1.1 Calculation of Long Run Marginal Costs[2]

The LRMC approach derives forward-looking charges, which are intended to provide economically efficient signals to system users. Figure 2.1.1 presents a schematic flow diagram of the steps involved in calculating LRMC reflective NTS TO capacity charges.

Figure 2.1.1 LRMC Overview



[2] Please note that the costs and volumes used throughout section 2.2.1 are consistent with the use of the 2001 base network in Transcost for generating the LRMCs for exit capacity charges, in accordance with PC76.

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.

2.1.1.1 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 mcfd) 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 × diameter(mm)) + 0.3505652
k 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	35.5	30.25	33.50	35.00	39.00	34.00	41.75
Kenn	34.25	34.75	35.25	35.5	32.25	36.00	38.00	42.00	37.00	42.25

2.1.1.2 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	35.5	30.25	33.5	35	39	34	41.75
	Kenn	34.25	34.75	35.25	35.5	32.25	36	38	42	37	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**	33.8	34.75	34.69	35.5	31.8	35.44	37.32	41.32	36.32	42.14

2.1.1.3 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	33.8	34.75	34.69	35.5	31.8	35.44	37.32	41.32	36.32	42.14
Project Management (15%)	5.07	5.21	5.2	5.33	4.77	5.32	5.6	6.2	5.45	6.32
Total Capital Cost	38.87	39.96	39.89	40.83	36.57	40.75	42.92	47.52	41.77	48.46
Operating Cost(1.50%)	0.51	0.52	0.52	0.53	0.48	0.53	0.56	0.62	0.54	0.63

2.1.1.4 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 previous price controls which applied 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	3.5	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	4.6	4.04	4.69

2.1.1.5 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 1.2.1.5 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	4.6	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	0.94	0.89	0.83	0.78	0.74	0.7	0.65	0.62	0.58
Discounted Cost	3.76	3.64	3.44	3.28	2.76	2.92	2.91	2.99	2.5	2.72
Discounted Volume	30.19	28.38	26.87	25.06	23.55	22.34	21.13	19.62	18.72	17.51

2.1.1.6 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)	13.246
Days in Year	365
LRMC (p / pdkWh / day)	0.0363

2.1.2 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:

yij is the LRMC for the route from entry point i to exit point j;
xi is the entry charge at point i;
xj is the exit charge at point j; and,
eij 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.

2.1.3 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 has been maintained, rather than rebalancing exit capacity charges. Any future re-balancing may have to be re-considered subject to the timing of the reform of the Exit Capacity Regime.

2.2 Interruptible Supply Points

In accordance with the charging methodology as established in Pricing Consultation Paper PC74, and the UNC, NTS Interruptible Supply Points avoid the NTS (TO) Exit Capacity charge and are eligible for transportation credits where the number of days interruption for any Gas Year exceeds 15. The business rules for these arrangements are set out in Appendix 1.

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 discussed in section 2.2.1 below. Under its NTS SO incentive schemes, National Grid is obliged to make available for sale in the Entry Capacity "Long Term" auctions, Quarterly System Entry Capacity (QSEC) calculated in accordance with paragraph 14(5)(g) of part 2 of special condition C8B[3] of National Grid's 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). The methodology for determination of the baseline price and incremental price steps is set out in National Grid's Incremental Entry Capacity Release (IECR) statement.

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[4] of National Grid's GT Licence. National Grid 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

[3] Subject to change as part of the new Transmission Price Control (2007 – 2012) and consequential amendments to NTS' GT Licence .

[4] Subject to change as part of the new Transmission Price Control (2007 – 2012) and consequential amendments to NTS' GT Licence .

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, National Grid 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. National Grid retains a right to scale back previously released interruptible capacity for the purposes of system management.

Above baseline capacity can be released by National Grid 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 National Grid 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)	
MSEC Sold	MSEC 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 UNC and outlined in section 2.2 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 National Grid 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 the approach in Special Condition C8B Part 2 14 (5) (a) of National Grid's GT Licence. QSEC step prices are calculated with reference to the applicable reserve price and in accordance with the methodology for the determination of incremental step prices as set out in National Grid's Incremental Entry Capacity (IECR) statement.

Pricing Consultation PC76 proposed that the MSEC reserve prices should be equal to the baseline price for capacity offered in the auction of QSEC capacity. This proposal was not vetoed by Ofgem

Floor prices are calculated by applying the following discounts to the baseline prices for capacity offered in the auction of QSEC capacity:

- 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%

2.3.2 Entry Capacity Buy-Back Mechanism

Following an assessment of entry capacity auction revenue for any forthcoming financial year, if auction implied revenue for that year is anticipated to be more than 10% above the target TO allowable revenue, the level of this excess revenue is divided into 12 monthly amounts (for the following financial year) and is used to fund the entry buy-back scheme. This has the effect of offsetting the costs of entry capacity buy-back that would otherwise be borne by shippers through the capacity neutrality mechanism, by way of a reduction in their entry capacity charges for each month (by the lower of the monthly excess and monthly buy-back cost). Any excess amount (of over-recovery) remaining for any month is carried forward to the end of the period and rebated to Shippers through adjustments to NTS exit capacity charges. This methodology was implemented in October 2001 following approval of PC65.

2.4 Constrained LNG

Shippers booking the constrained LNG storage service agree to ensure the continuing availability of transmission support gas throughout the winter period on behalf of National Grid. During 2007 / 08 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 National Grid's LNG Storage business unit.

CHAPTER 3 : COMMODITY CHARGES

3.1 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 National Grid 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. National Grid 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. National Grid would only depart from this schedule under exceptional circumstances.

3.2 NTS SO Commodity Charge

This is a charge per unit of gas transported by the NTS and is applied uniformly on both entry and exit flows at all NTS system points. 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.

At present, National Grid does not levy the charge on gas flows at NTS Storage facilties. However, an amount of gas is utilised as part of the operation of the NTS Storage facility, known as storage “own use” gas. This is effectively the difference between the quantity that is injected into storage and the quantity that is available for withdrawal back into the system. For the purposes of charging, the “own use” gas is treated as leaving the NTS at that exit point, and hence attracts the standard NTS SO commodity charge. The quantity of storage own use gas attributed to Users is notified by the Storage Manager to National Grid in accordance with the terms of the Storage Connection Agreement in respect of the NTS Storage Facility.

3.3 NTS Optional Commodity Charge

In June 1998 National Grid 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.

3.4 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.

CHAPTER 4 : OTHER CHARGES

4.1 Other Shipper Services 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 National Grid'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)

4.2 DN Pensions Deficit Charge

A specific annual cost allowance for the part-funding of the deficit in the NGUK Pension Scheme has been included in National Grid NTS' TO price control formula. In respect of the share of this allowance that arises from pension deficit costs associated with former employees of the DNs, the allowed cost is recovered via the application of a DN Pensions Deficit Charge which is levied on each of the DNOs on a monthly basis. The actual monthly pension charges for each DN are given in National Grid's Statement of Charges and are in accordance with the annual allowances set out in Special Standard Condition C8B[5] of NTS' GT Licence.

As the "target revenue" is fixed for each of the formula years in the Price Control period 2007 - 2012, we would anticipate that this should equal the recoverable revenue for each formula year. Hence this should avoid any "carry over" of allowable revenue from one formula year to the next. For the first formula year commencing on 1 April 2007, in the event that the timing of the TPCR outcome has not allowed charges to become effective from 1 April 2007, the monthly charges may be determined from the annual allowances divided by the remaining number of months in the formula year.

[5] Subject to change as part of the new Transmission Price Control (2007 – 2012) and consequential amendments to NTS' GT Licence .

APPENDIX 1 - BUSINESS RULES FOR INTERRUPTIBLE SUPPLY POINTS

A.1 Introduction

1.1 Contracted interruptible exit capacity remains unchanged at 45-day standard. Sites nominated by National Grid as TNI can be interrupted for a greater period.

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.

1.3 For each occurrence of nominated interruption beyond 15 days an additional credit will be offered. National Grid conducts determination of cumulative occurrences of nominated interruption on a site-specific basis.

1.4 These business rules became effective on 1 October 2002 and refer to additional interruption credits for above 15-day interruption.

A.2 Calculation of Payment

2.1 The credit will be calculated in accordance with National Grid's Pricing Methodology as established in PC74.

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 2.3 and 3.4 but subject to:

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 National Grid for interruption.

2.4 Subject to 2.2.1 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.

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.

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 National Grid for interruption.

2.7 Subject to 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.

2.8 For the avoidance of doubt, a shared user's interruptible supply point capacity (SOQ), or such tranche under 2.1 above, will be used for charge quantity purposes, and not the shared supply point aggregate interruptible capacity (SSP SOQ).

2.9 User proposed ratios as alternatives to mechanisms described under 2.2 and 2.5 above will not be allowed.

2.10 Supply point data at the point of interruption will be used for charge calculation purposes.

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.

2.12 The registered shipper at the point of interruption will be the qualifying shipper for receipt of any payment.

A.3 Count of Interruptible Days

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.

3.2 The count will include such occurrence of qualifying interruption as defined within section A.4 below.

3.3 The count will start from zero on 1 April of each formula year beginning at April 2002.

3.4 The count will end on 31 March of each formula year.

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.

A.4 Qualifying Interruption

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:

4.2 Interruption arising from an NTS or LDZ constraint within National Grid's transportation system;

4.3 Interruption arising for Test purposes as described within UNC section G 6.7.3 (ii).

4.4 The count of qualifying interruptible days under section 3.3 above will not increment where curtailment of gas supply was due to:

4.5 Emergency interruption [emergency cessation of gas supply];

4.6 Any form of commercial interruption instigated by a shipper.

4.7 National Grid's determination of a site for interruption will increment that site's count of interruptible days under section 3.3 above.

4.8 Where National Grid 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 UNC. In such circumstances National Grid will, for the purposes of section 3.3 above, maintain a count based on the site National Grid originally nominated for interruption.

4.9 Failure to interrupt of the National Grid 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:

4.10 no payment will be made for the National Grid proposed and shipper accepted site that subsequently fails to interrupt;

4.11 no payment will be made for the National Grid proposed site where shipper substituted for a matched target volume site that subsequently fails to interrupt;

4.12 where multiple sites are substituted by a shipper, the payment(s) made to National Grid 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.

A.5 Unit Rate

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.

5.2 NTS unit rates will be 1/15th of the annual (daily rate × 365) NTS (TO) exit 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.

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 any peak capacity component contained within such rate calculation, subsequently change within the formula year.

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.

A.6 Invoice

6.1 Payment of all credits accrued in a calendar month will be made within the following month.

6.2 Subject to 4.5 above, National Grid 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.

A.7 Information Provision

7.1 National Grid 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 National Grid web site and updated on a weekly basis.

Glossary

1 in 20 Peak Day Demand	The peak day demand that, in a long series of winters, with connected load being held at the levels appropriate to the winter in question, would be exceeded in one out of 20 winters, each winter being counted only once.
Baseline Entry Capacity	The amount of System Entry Capacity which National Grid is required to make available to Users pursuant to the National Grid Licence as set out in the Transportation Statement.
Base Plan Assumptions	A document setting out initial assumptions as to supply and demand in Gas Years and requesting information from users and other persons.
Capacity Year	The period from 1 April in any year until and including 31 March in the following year.
Distribution Network	
Exit Zone	The area in which each LDZ is located is divided into one or more exit zones.
Formula Year	The period from 1 April in any year until and including 31 March in the following year.
IECR Statement	The statement prepared and published by National Grid in accordance with Special Condition C15 of the National Grid Licence.
Local Distribution Zone (LDZ)	Part of the system, other than the NTS, for the time being designated by National Grid as such, and described in the Ten Year Statement, or (where the context requires) the area in which such part of the system is located.
National Transmission System (NTS)	Part of the system for the time being designated by National Grid as such, and described in the Ten Year Statement.
Supply Point	A System Exit Point comprising the Supply Meter Point or Supply Meter Points for the time being registered in the name of a User pursuant to a Supply Point Registration.
Ten Year Statement	A statement (or revised statement) required to be prepared by National Grid pursuant to Special Condition C2 of the National Grid Licence.