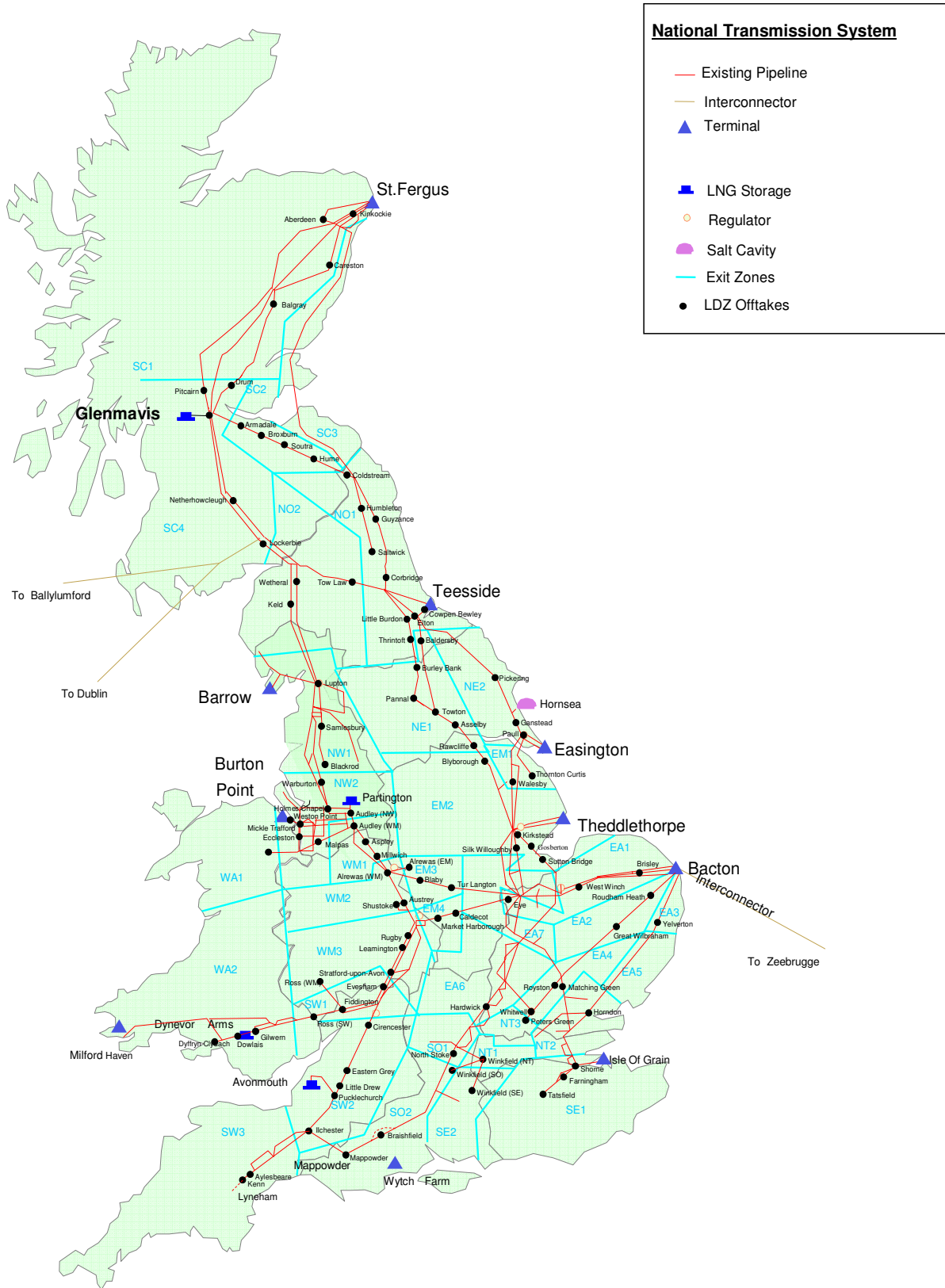




# **Gas Transmission Transportation Charges**

Effective from 1 Oct 2009

# National Grid's Gas Transmission System



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# 1 Introduction

This publication sets out the transportation charges which apply from 1 October 2009 for the use of the NTS, as required by Standard Special Condition A4 of the National Grid NTS Gas Transporter Licence. This document does not override or vary any of the statutory, licence or Uniform Network Code obligations upon National Grid NTS. Further information on the methods and principles on which Transmission transportation charges are derived is set out in **The Statement of the Gas Transmission Transportation Charging Methodology**.

Details of National Grid and its activities can be found on the National Grid Internet site at [www.nationalgrid.com](http://www.nationalgrid.com). An electronic version of this publication, along with **The Statement of the Gas Transmission Transportation Charging Methodology** can be found on our web site.

For more information on the charges set out below, please contact our UK Transmission Charging team on 01926 654633 or e-mail to [charging.enquiries@uk.ngrid.com](mailto:charging.enquiries@uk.ngrid.com).

## 1.1 Changes to Charges – Indicative and Final Notices

NTS Transportation Charges are normally updated on 1 April and 1 October of each year in line with our Licence obligations. When considering changes to charges, National Grid will give an estimate of such changes in an “Indicative Notice” published 150 days prior to implementation and a “Final Notice” published two months prior to implementation. The notices will be available on our website at the following locations, respectively; <http://www.nationalgrid.com/uk/Gas/Charges/indicativecharges/> and <http://www.nationalgrid.com/uk/Gas/Charges/NoticeofChange/>

## 1.2 Uniform Network Code

The Uniform Network Code (UNC) forms the contractual framework between NTS and DN Gas Transporters, and the shippers whose gas is transported. It is supported by an integrated set of computer systems called UK Link. The charges and formulae in this booklet will be used in the calculation of charges within UK Link, which are definitive for billing purposes.

There are a number of areas of the UNC that impact upon the cost to shippers of using the transportation network, such as imbalance charges, scheduling charges, capacity overruns, top-up neutrality charges and contractual liability. Reference should be made to the UNC – as modified from time to time – for details of such charges and liabilities. UNC modification Proposal 0262 ‘Treatment of Capacity affected by Force Majeure’ has been raised by National Grid NTS with a requested implementation date of 1 October 2009, this proposal were it to be implemented will introduce a Force Majeure rebate into the UNC.

## 1.3 Units

Charges are expressed and billed as follows:

- Commodity - pence per kilowatt hour (kWh).
- Exit Capacity - pence per peak day kWh per day.
- Entry Capacity - pence per kWh per day.
- Fixed - pence per day.

## 1.4 Invoicing

Invoices derived from the transportation charges shown within this publication are produced and issued by xoserve. xoserve is the invoicing service provider to the NTS and the Distribution Networks (DNs). To clarify this link between pricing and invoicing, charge codes and invoice names are included in the tables.

For more information on invoicing, please contact the xoserve invoicing team via email at [xo\\_css\\_billing@xoserve.com](mailto:xo_css_billing@xoserve.com).

## 1.5 The National Grid NTS Transportation Price Control Formulae

Transportation charges are derived in relation to price control formulae which are set by Ofgem, the gas and electricity market regulator, for the transportation of gas. These formulae dictate the maximum

revenue National Grid NTS can earn from the transportation of gas. Should National Grid NTS earn more or less than the maximum permitted revenue in any formula year, a compensating adjustment is made in the following year. Where a significant over- or under-recovery is anticipated within a year an adjustment to charges may be made during the year.

Since April 2002 the price control for the NTS has been divided into Transportation Owner (TO) and System Operator (SO) controls. Transportation charges are split to reflect these price control arrangements.

For NTS TO revenue, the target is to recover 50% from exit capacity and 50% from entry capacity. Exit capacity charges reflect the estimated long run marginal cost (LRMC) of developing the system to meet a sustained increase in demand and are determined by the exit zone to which a particular offtake point belongs. Charges for entry capacity are not fixed but are determined by auctions which apply to all system entry points. For system entry capacity, the reserve prices for the auctions are based GCM01 Methodology for Determination of NTS Entry and Exit Capacity Prices, which uses a new Transportation Model. For further details of GCM01 please see our web site at [www.nationalgrid.com/uk/gas/](http://www.nationalgrid.com/uk/gas/) under Charging, Pricing Consultations.

The unpredictability of entry auction revenue means that the TO revenue 50 / 50 split between entry and exit may not be achieved in practice. In the event of a forecast under-recovery of entry auction revenue against the entry target level, a TO commodity charge may be levied on entry flows.

SO revenue is recovered through the NTS SO commodity charge. This is a uniform charge, independent of entry and exit points, and is levied on both NTS entry and NTS exit flows. A distance-related commodity tariff, the optional NTS commodity charge, is also available as an alternative to both the SO and TO commodity charges.

## 1.6 DN Pensions Deficit

The DN Pensions Deficit Charge is a new charge levied on the Distribution Network Operators. It is designed to collect specific annual cost allowances for the part-funding of the deficit in the National Grid UK Pension Scheme. This deficit relates to the pension costs of former employees of the DNs. The allowance has been included in the NTS' TO Price Control Formulae for the period April 2007 to March 2012. It is recovered via the application of a DN Pensions Deficit Charge which is levied on each of the DNs on a monthly basis in accordance with National Grid's GT Licence and the DN Gas Transporters Licence. The charges can be found in Section 7.

## 1.7 Firm Transportation

Firm transportation charges for the NTS comprise capacity and commodity charges.

## 1.8 Interruptible Transportation

Interruptible transportation is available for supply points with Annual Quantities (AQs) of over 5,860 MWh per annum.

For supply points which have been nominated by a shipper as interruptible, the shipper will not pay the NTS (TO) exit capacity charge or the capacity element of the relevant LDZ charge. Where National Grid NTS nominates a supply point to be interrupted for more than 15 days in a particular year (measured from 1 April to 31 March) there is a transportation charge credit. For each day of interruption over 15 days, a transportation charge credit, equivalent to 1/15 of the annual NTS exit capacity and the relevant LDZ capacity charges avoided by having interruptible rather than firm transportation, is payable to the shipper. National Grid NTS has the right to interrupt these supply points for up to 45 days each year. The business rules for interruptible supply points are detailed in **The Statement of the Gas Transmission Transportation Charging Methodology**.

To help National Grid NTS run the network safely and securely the UNC defines two special types of interruptible supply points. These are Network Sensitive Load (NSL) and Transporter Nominated Interruptible (TNI).

NSLs are supply points where specific interruption may be required to maintain the supply of gas to firm supply points in the same area.

TNIs are supply points where National Grid NTS reserves the right to interrupt for more than 45 days each year.

National Grid NTS offers a number of services related to interruptible supply points:

- Allocation arrangements allow more than one shipper / supplier to supply interruptible gas to sites with AQs in excess of 58,600 MWh per annum. This flexibility of supplier enables the end user to make greater use of the competitive market and allows for alternative provision of gas during commercial interruption. Further details of this service are given in Section 8.2.

- The Partial Interruption service is designed to allow shippers to reduce offtake rates at supply points (to predetermined levels agreed between the shipper and the end user) where capacity exists, so that the site remains on a part-load, where otherwise it would have been fully interrupted.

- The Interruptible Supply Point Firm Allowance (IFA) is available to all interruptible supply points. It allows a guaranteed supply of 14,600 kWh per day (this figure can be higher if the capacity is available), where this allowance is subject to normal firm transportation charges. This enables end users to maintain their critical processes when their supply is interrupted.

- Transfer of Firm Offtake Capability. This allows a shipper to release capacity allocated to a firm supply point in order to meet the requirements of an interruptible supply point during an interruption notice. This is subject to system constraints and other eligibility criteria.

Details of all the above interruption services are available from gas suppliers / shippers or from National Grid Operations and Trading on **01455 893147**.

## 1.9 Theft of Gas

The licensing regime places incentives on transporters, shippers and suppliers to take action in respect of suspected theft of gas. Certain costs associated with individual cases of theft are recovered through transportation charges. National Grid NTS's charges reflect these requirements, with National Grid NTS remaining cash neutral in the process.

## 2 NTS TO Entry Capacity

National Grid is obliged to make available for sale system entry capacity by means of five related auction mechanisms. For each of the system entry points, capacity is made available on a firm and interruptible basis. All entry capacity is offered on a pence per kWh per day basis where the quantity is measured in terms of an end of day entitlement.

Interruptible capacity is limited to being offered on a daily basis in an auction that is conducted on the day ahead of the intended day of use.

Firm Entry Capacity is offered in bundles of quarters, months and days.

For further information on system entry capacity please refer to **The Statement of the Gas Transmission Charging Methodology**.

### 2.1 Quarterly System Entry Capacity

Entry capacity can be obtained through the Quarterly System Entry Capacity (QSEC) auction process up to 17 years ahead of the intended year of use. National Grid NTS has an obligation to make available a core baseline quantity which is calculated in accordance with paragraph 14(5)(g) of part 2 of Special Condition C8B of National Grid NTS's GT Licence. The baseline quantity from which National Grid NTS's obligation is derived is set out in Appendix B of the current **Transmission Transportation Charging Statement**. The minimum quantities to be offered in the Annual System Entry Capacity auctions, after taking into account a GT Licence requirement to hold back some capacity for short term allocation, is detailed in Appendix C(ii).

For each of the system entry points National Grid NTS has determined a baseline price and an additional 20 price steps for increments of capacity that may be demanded above the baseline quantity, as set out in

the **Statement of the Gas Transmission Transportation Charging Methodology** and the **Incremental Entry Capacity Release (IECR) Statement**. The step prices that are applicable for QSEC allocations are set out in Appendix D of the current **Transmission Transportation Charging Statement**. Prices are published for each system entry point and are applicable for all periods in which QSEC is offered. Allocation of capacity will be conducted in accordance with the provisions set out in National Grid NTS's **Incremental Entry Capacity Release (IECR) Statement**.

### 2.1.1 NTS Entry Capacity Retention Charges

The establishment of entry capacity substitution (ECS), a process by which NGG moves unsold non-incremental obligated entry capacity from one Aggregated System Entry Point (ASEP) to meet the demand for incremental obligated entry capacity at a different ASEP has introduced a "retainer" as an annual product which can be taken out at any entry point with substitutable capacity. When it is requested ahead of the Quarterly System Entry Capacity (QSEC) auction, the retainer allows the specified volume of capacity to be excluded from the substitution process during the QSEC or in any other quarterly system entry capacity auction during the next twelve months.

The costs of taking out a retainer on entry capacity may be refunded to the party that takes out a retainer if that capacity is subsequently purchased by any user subsequent QSEC or AMSEC auctions, as detailed by the **ECS methodology statement** (available on the National Grid website via the following link [www.nationalgrid.com/uk/gas/statements/](http://www.nationalgrid.com/uk/gas/statements/))

The retainer charge is given in Table 1 and is applicable to all ASEPs.

**Table 1**

<b>Invoice</b>	<b>Charge Code</b>
ADK	QUC
<b>Charge per unit of entry capacity retained</b>	0.2922 pence per kWh of entry capacity retained (equates to 0.0001 p/kWh/d for 32 quarters).

## 2.2 Monthly System Entry Capacity

For each of the system entry points Monthly System Entry Capacity (MSEC) is allocated by auction for a period no more than two years ahead of the period of use. The maximum quantities to be offered in MSEC allocations are also set out in Appendix C(i). MSEC auctions offer monthly tranches of firm capacity and are held in respect of each Aggregate System Entry Point (ASEP). Capacity is allocated in respect of each bid in descending price order starting at the highest bid until all monthly system entry capacity has been allocated or all valid bids have been considered. Successful bidders are liable to pay the bid price of each accepted or part accepted bid.

Following the final annual Monthly System Entry Capacity (AMSEC) auction in which capacity is offered for two capacity years any remaining quantities of entry capacity can be purchased in the Rolling Monthly System Entry Capacity (RMSEC) auction. The RMSEC Auction has been altered to accommodate a mechanism for Transfer and Trade of entry Capacity between ASEPs, this auction is now the RMTTSEC. The method that National Grid will use to facilitate the transfer of unsold, or the trade of sold, NTS Firm Entry Capacity from one ASEP to another is set out in the **Entry Capacity Transfer and Trades Methodology Statement**.

This auction is conducted within the capacity year and also facilitates trade and transfer of entry capacity. The quantities offered are any unsold baseline capacity carried over from the AMSEC allocations and any capacity surrendered during the rolling monthly surrender process. Allocations will be completed by the 3<sup>rd</sup> business day proceeding the last business day of each calendar month. The capacity offered and subsequently allocated will be applicable for the following month. For unsold and surrendered capacity sold, allocations are based on a pay as bid basis but for specific allocations rules please refer to section B2.3 of the UNC.

The lowest price that can be accepted in an MSEC allocation is the reserve price as set out in Table 2 in Section 2.5.

### 2.3 Daily System Entry Capacity

National Grid NTS offers two daily capacity services – a firm Daily System Entry Capacity service (DSEC) and a Daily Interruptible System Entry Capacity service (DISEC). Both services are offered through a tender process and are subject to minimum reserve prices. Successful bidders are liable to pay the bid price of each accepted or part accepted bid. Capacity is allocated, in respect of each bid, in descending price order until all capacity has been allocated or all valid bids have been considered.

The allocation of DSEC is initiated before the gas day and is repeated at intervals through to 02:00 hours on the gas day. Shippers may have up to 20 bids on the system at any one time. DSEC availability is presently defined in the UNC as the amount, determined by National Grid NTS, by which system entry capacity exceeds firm system entry capacity held by shippers.

DISEC is allocated by means of a single tender that is held on the day before the gas day. Shippers may submit up to 20 applications for this capacity in respect of each ASEP.

DISEC consists of any unutilised booked monthly capacity on a day. National Grid NTS determines the availability of capacity after consideration of the daily allocation levels at each ASEP on the day before the gas day. If, on a day, nominations from primary holders of firm capacity increase so that gas flow exceeds booked levels at an entry point, any DISEC service entitlements would be scaled back.

The lowest price that can be accepted in an DSEC allocation is the reserve price as set out in Table 2 in Section 2.5.

### 2.4 Additional Discretionary Release Mechanism for NTS Entry Capacity (DRSEC)

An additional capacity release mechanism which allows National Grid to invite applications for quarterly, monthly, daily or daily interruptible entry capacity outside of the existing auction mechanisms has been introduced. The timing of such invitations and the quantities of entry capacity offered are at the sole discretion of NGG NTS. This would be mainly for discretionary entry capacity (in addition to baselines) but under certain circumstances may involve unsold obligated capacity. The entry capacity offered by NGG NTS is subject to the prevailing reserve price and available for a period of no more than one capacity year.

### 2.5 Entry Capacity Reserve Prices

To date all system entry capacity auctions have been subject to reserve prices.

The invoice codes and reserve prices applicable to MSEC and DSEC sold before the day are shown in Table 2 and Table 2, respectively. For DSEC sold on the day the reserve price has been set to zero since 1 October 2003. Reserve prices for DISEC are set at zero.

**Table 2**

<b>Service</b>	<b>Invoice</b>	<b>Charge Code</b>
<b>MSEC</b>	NTE	LTF
<b>DSEC</b>	NTE	DFC
<b>DISEC</b>	NTE	DIC



**Table 3 Entry Capacity Reserve Prices for Capacity for use from 1 October 2009**

Entry Point	MSEC Reserve Prices Pence per kWh per day		
	Y	Y+1	Y+2
	from 1 Oct 09 to 30 Sep 10	from 1 Oct 10 to 30 Sep 11	from 1 Oct 11 to 31 Mar 12
<b>Coastal Terminals &amp; LNG Importation</b>			
Bacton	0.0089	0.0087	0.0089
Barrow	0.0044	0.0044	0.0018
Easington&Rough	0.0111	0.0110	0.0112
Isle of Grain	0.0001	0.0029	0.0026
Milford Haven	0.0199	0.0199	0.0204
St Fergus	0.0385	0.0397	0.0383
Teesside	0.0103	0.0106	0.0103
Theddlethorpe	0.0091	0.0102	0.0115
<b>Onshore Fields and Connections</b>			
Burton Point	0.0001	0.0001	0.0001
Hatfield Moor	0.0045	0.0043	0.0045
Hole House Farm	0.0001	0.0001	0.0001
Wytch Farm	0.0001	0.0001	0.0001
<b>Storage</b>			
Barton Stacey	0.0001	0.0001	0.0001
Caythorpe	0.0070	0.0068	0.0104
Cheshire	0.0001	0.0001	0.0001
Fleetwood	0.0001	0.0031	0.0024
Garton	0.0120	0.0114	0.0127
Glenmavis	0.0138	0.0140	0.0120
Hatfield Moor	0.0045	0.0043	0.0045
Hornsea	0.0110	0.0109	0.0108
Partington	0.0001	0.0001	0.0001
<b>Constrained LNG</b>			
Avonmouth	0.0001	0.0001	0.0001
Dynevor Arms	0.0001	0.0001	0.0001

Table 2 continued

<b>Reserve Prices</b>	
<b>Pence per kWh per day</b>	
<b>Entry Point</b>	<b>DSEC</b>
	<b>from 1 Oct 09 to 30 Sep 10</b>
<b>Coastal Terminals &amp; LNG Importation</b>	
Bacton	0.0059
Barrow	0.0029
Easington&Rough	0.0074
Isle of Grain	0.0001
Milford Haven	0.0133
St Fergus	0.0257
Teesside	0.0069
Theddlethorpe	0.0061
<b>Onshore Fields and Connections</b>	
Burton Point	0.0001
Hatfield Moor	0.0030
Hole House Farm	0.0001
Wytch Farm	0.0001
<b>Storage</b>	
Barton Stacey	0.0001
Caythorpe	0.0047
Cheshire	0.0001
Fleetwood	0.0001
Garton	0.0080
Glenmavis	0.0092
Hatfield Moor	0.0030
Hornsea	0.0073
Partington	0.0001
<b>Constrained LNG</b>	
Avonmouth	0.0001
Dynevor Arms	0.0001

### 3 Constrained LNG

Shippers that book the constrained Liquefied Natural Gas (LNG) storage service, available from the LNG storage sites at Dynevor Arms and Avonmouth, undertake an obligation to provide transmission support gas to National Grid NTS on days of very high demand. In recognition of this, shippers receive a credit in respect of minimum booked storage deliverability. Full details of associated rules are available on request from National Grid NTS's LNG business unit. The credit, shown in Table 3, is deducted from the charge for the storage service.

**Table 4 Constrained LNG Credit**

	From 1 May 2009	
	Credit Rate based on Capacity	Credit Rate based on Annual Shipper Storage Space Volume
	Pence per registered kWh per day	p/kWh
Avonmouth LNG	0.0041	0.3213

### 4 NTS TO Exit Capacity Charges

NTS TO exit capacity charges apply to loads supplied through existing NTS offtakes into Distribution Networks (DNs) and to large loads and interconnectors supplied directly from the NTS. The exit zone for a DN supply point is determined by its postcode.

For new loads supplied directly from the NTS, the exit zone charges provide an indication of the likely level of charges. However, in general, an individual exit zone will be created with its own charge for new NTS offtakes.

At present, National Grid NTS makes no charge for NTS exit capacity at storage points. This is on the basis that the transportation service to the storage points is interruptible. If a firm transportation service to storage were provided, a TO exit capacity charge would be payable.

There are four small towns in Scotland where LNG needs to be transported by road tanker to supply end users on distribution systems which are not physically connected to the main gas network. For these locations, NTS TO exit charges will be calculated on the basis that they are allocated to exit zone SC4, the location of the LNG storage site which supplies them.

The map at the beginning of this document gives the locations of the exit zones. Exit zones SC3, EA5, EA6 and EA7 have no offtakes.

The NTS TO Exit Capacity charges are given in Table 5.

Please note the **indicative charges** for 2010/11 and 2011/12 are now available on our web site in a separate document under Gas Charges / Indicative Charge Changes.

**Table 5 NTS TO Exit Capacity Charges**

<b>Invoice</b>	<b>Charge Codes</b>
CAP	NDX (DM) / NNX (NDM)

<b>Network</b>	<b>Exit Zone</b>	<b>Pence per peak day kWh per day</b>
<b>East of England</b>	EA1	0.0054
	EA2	0.0061
	EA3	0.0013
	EA4	0.0114
	EM1	0.0001
	EM2	0.0044
	EM3	0.0148
	EM4	0.0103
<b>North of England</b>	NE1	0.0057
	NE2	0.0010
	NE3	0.0001
	NO1	0.0046
	NO2	0.0054
<b>London</b>	NT1	0.0201
	NT2	0.0119
	NT3	0.0114
<b>North West</b>	NW1	0.0158
	NW2	0.0202
<b>Scotland</b>	SC1	0.0001
	SC2	0.0001
	SC4	0.0002
<b>South of England</b>	SE1	0.0144
	SE2	0.0201
	SO1	0.0148
	SO2	0.0230
<b>Wales &amp; the West</b>	SW1	0.0158
	SW2	0.0235
	SW3	0.0341
	WA1	0.0229
	WA2	0.0090
<b>West Midlands</b>	WM1	0.0187
	WM2	0.0154
	WM3	0.0139

**Table 5 NTS TO Exit Capacity Charges continued**

Invoice	Charge Codes
CAP	NDX (DM) / NNX (NDM)

NTS Sites	Pence per peak day kWh per day
Baglan Bay PG	0.0068
Barking PG	0.0117
Teesside BASF	0.0054
BP Grangemouth	0.0001
BP Saltend HP	0.0001
Bridgewater Paper	0.0227
Brigg PG	0.0032
Brimsgate PG	0.0131
Brunner Mond	0.0200
Centrax	0.0333
Connahs Quay PS	0.0224
Corby PS	0.0101
Coryton PG	0.0120
Cottam PG	0.0042
Deeside PS	0.0227
Didcot PS	0.0183
Goole Glass	0.0029
Grain Gas	0.0112
Great Yarmouth	0.0001
Hays Chemicals	0.0211
ICI Runcorn	0.0245
Immingham PG	0.0001
Keadby PS	0.0040
KemiraInce CHP	0.0241
Kings Lynn PS	0.0045
Damhead Creek	0.0112
Langage PG	0.0362
Little Barford PS	0.0110
Longannet	0.0001
Marchwood	0.0238
Medway PS	0.0111
Milford Haven Refinery	0.0001
Peterborough PS	0.0065
Peterhead PG	0.0001
Phillips Seal Sands	0.0054
Rocksavage PG	0.0245
Roosecote PS	0.0073
Rye House PS	0.0136
Saltend	0.0001
Sappi Paper Mill	0.0156
SEABANK_POWER_phase1	0.0224
SEABANK_POWER_phase_II	0.0242
Sellafield PS	0.0114
Shotton Paper	0.0224
Spalding PG	0.0056
Stallingborough PS	0.0001

Continued on next page

**Table 5 NTS TO Exit Capacity Charges (continued)**

<b>NTS Sites</b>	<b>Pence per peak day kWh per day</b>
Staythorpe	0.0071
St. Fergus Site	0.0001
Sutton Bridge PS	0.0058
Teesside Hydrogen	0.0054
Teesside PS	0.0061
Terra Billingham	0.0060
Thornton Curtis PG	0.0001
Zeneca	0.0060

<b>Interconnectors</b>	
Bacton Interconnector	0.0001
Moffat	0.0006

<b>Storage Sites</b>	
Avonmouth LNG	0.0242
Barton Stacey	0.0221
Caythorpe	0.0008
Cheshire (MRS)	0.0207
Dynevor Arms LNG	0.0085
Fleetwood	0.0145
Garton (MRS)	0.0001
Glenmavis	0.0001
Hatfield Moor (MRS)	0.0036
Holehouse Farm (MRS)	0.0214
Hornsea (MRS)	0.0001
Partington	0.0194
Rough	0.0001

## 5 NTS Commodity Charges

### 5.1 NTS TO Commodity Charge

The NTS TO commodity charge may be levied where an under-recovery of TO entry revenue against the entry target level is forecast. The charge is levied on entry flows only at entry terminals (but not storage facilities) and would address only a forecast TO revenue under-recovery that does not arise from NTS exit capacity charging.

The rate is identified in the commodity schedule given in Table 6. For the avoidance of doubt, the TO commodity rate would be set to zero where forecast entry TO revenue is at, or above, the entry revenue target level.

### 5.2 NTS SO Commodity Charge

The NTS SO commodity charge is a uniform rate, independent of entry and exit points, and is levied on both NTS entry and NTS exit flows. The rate is identified in Table 6 below.

**Table 6 NTS Commodity Charges**

Invoice	Charge Code
ECO	NCE
<b>Pence per kWh</b>	
<b>TO Entry</b>	0.0249
<b>SO Entry</b>	0.0181
<b>Combined Rate</b>	0.0430
Invoice	Charge Code
COM	NCO
<b>Pence per kWh</b>	
<b>SO Exit</b>	0.0181

NTS entry commodity (NCE) will be invoiced using the combined rate.

### 5.3 NTS Optional Commodity Charge

The optional NTS commodity tariff is available as an alternative to both the entry / exit NTS SO commodity charges and the NTS TO commodity charge. It may be attractive for large daily metered sites located near to entry terminals, since the NTS SO and TO commodity tariffs are not distance-related and can result in a relatively high charge for short distance transportation. This could give perverse economic incentives to build dedicated pipelines bypassing the NTS, resulting in an inefficient outcome for all system users.

The optional tariff applies in respect of gas delivered from the local specified terminal. The charge is site specific and is calculated by the function shown in Table 7 below.

**Table 7 NTS Optional Commodity Charge**

Invoice	Charge Code
ADU	880
<b>Pence per kWh</b>	
$1203 \times [(SOQ)^{-0.834}] \times D + 363 \times (SOQ)^{-0.654}$	

where **D** is the direct distance from the site or non-National Grid NTS pipeline to the elected terminal in km and **SOQ** is the registered supply point capacity in kWh. Note that ^ means “to the power of ...”

Further information on the NTS Optional Commodity tariff can be obtained from our UK Transmission Charging team on **01926 654633**.

## 6 Compression Charge

An additional charge is payable where gas is delivered into the National Grid NTS system at a lower pressure than that required, reflecting the need for additional compression. For gas delivered at the Total Oil Marine sub-terminal at St. Fergus, a compression charge is payable at the rate identified in Table 8 below.

**Table 8 St. Fergus Compression Charge**

<b>Invoice</b>	<b>Charge Code</b>
ADZ	900
	<b>Pence per kWh</b>
<b>Compression</b>	0.0062

## 7 DN Pensions Deficit Charge

The share of the pension deficit cost allowance associated with former employees of the DNs is recovered via the DN Pension Deficit Charges levied on each of the DNs on a monthly basis. The monthly charges for the financial year 2009/10 are shown in Table 9 DN Pension Deficit Charge below.

**Table 9 DN Pension Deficit Charge**

<b>Invoice</b>	<b>Charge Code</b>	
ADN	N23	
<b>DN</b>	<b>Monthly Charge</b>	<b>Per Annum, £m</b>
<b>East of England</b>	404,104	4.85
<b>London</b>	235,587	2.83
<b>North West</b>	277,507	3.33
<b>West Midlands</b>	200,375	2.40
<b>North of England</b>	257,386	3.09
<b>Scotland</b>	177,739	2.13
<b>South of England</b>	411,649	4.94
<b>Wales and the West</b>	246,487	2.96

## 8 Other Charges

Other Charges include administration charges at Connected System Exit Points, Shared Supply Meter Points and Interconnectors.

### 8.1 Connected System Exit Points (CSEPs)

A CSEP is a system point comprising one or more individual exit points which are not supply meter points. Separate administration processes are required to manage the daily operations and invoicing associated with CSEPs, including interconnectors, for which an administration charge is made.

The administration charge which applies to CSEPs containing NDM and DM sites is given in Table 10 .

**Table 10 CSEP Administration Charge**

<b>Invoice</b>	<b>Charge Code</b>
ADU	884
<b>Charge per supply point</b>	0.1185 pence per day (£0.43 per annum)



## 8.2 Shared Supply Meter Point Allocation Arrangements

National Grid NTS offers an allocation service for daily metered supply points with AQs of more than 58,600 MWh per annum. This allows up to four (six for VLDMCs) shippers / suppliers to supply gas through a shared supply meter point.

The allocation of daily gas flows between the shippers / suppliers can be done either by an appointed agent or by National Grid NTS.

The administration charges which relate to these arrangements are shown in Table 11. Individual charges depend on the type of allocation service nominated and whether the site is telemetered or non-telemetered.

**Table 11 Shared Supply Meter Point Administration Charges (£ per shipper per supply point)**

Invoice	Charge Code
ADU	884

### Agent Service

	Telemetered	Non-telemetered
<b>Set-up charge</b>	£107.00	£183.00
<b>Shipper-shipper transfer charge</b>	£126.00	£210.00
<b>Daily charge</b>	£2.55	£2.96

### National Grid NTS Service

	Telemetered	Non-telemetered
<b>Set-up charge</b>	£107.00	£202.00
<b>Shipper-shipper transfer charge</b>	£126.00	£210.00
<b>Daily charge</b>	£2.55	£3.05

## 8.3 Interconnector

### 8.3.1 Allocation Arrangements at Interconnectors

The allocation charges that apply at interconnectors (GB-Ireland and UK-Continent) and apply for each supply point are shown in Table 12. Allocating daily gas flows between shippers / suppliers can be done either by an appointed agent or by National Grid NTS. The same set up charge applies in either case. The daily charge depends on whether the service is provided through an agent or not.

**Table 12 Allocation Charges at Interconnectors**

Invoice	Charge Code	
ADU	884	

	Set up charge per shipper	Daily charge per shipper
<b>Agent service</b>	£141.70	£1.62
<b>National Grid NTS service</b>	£141.70	£2.46

**8.3.2 Administration Charges at Moffat**

The following administration charges apply only to the GB-Ireland interconnector at Moffat. The charges, which vary if the service is provided via an agent or National Grid NTS, are detailed in Table 13.

**Table 13 Administration Charges for Moffat**

<b>Invoice</b>	<b>Charge Code</b>
ADU	884
	<b>Daily charge per shipper</b>
<b>Agent service</b>	<b>£15.08</b>
<b>National Grid NTS service</b>	<b>£30.16</b>

The charges, with or without an agent, cover the operation of the flow control valve. In addition the National Grid NTS service provides the Exit Flow Profile Notice (EPN).

In the event that the appointed agent fails to provide an EPN to National Grid NTS, the following additional charge will apply:

EPN Default Charge per shipper per event is **£0.63**

## 9 Appendix A Estimation of Peak Daily Load for Non-Daily Metered Supply Points

For non-daily metered (NDM) supply points, the peak daily load is estimated using a set of End User Categories (EUCs). Each NDM supply point is allocated to an EUC. In each LDZ each EUC has an associated load factor, as listed in Table 15 and Table 16. The data in these tables applies for the gas year 1 October 2009 to 30 September 2010.

In the tables 'XX' refers to the LDZ Code (e.g. EA).

These EUCs depend upon the annual quantity (AQ) of the supply point and, in the case of monthly read sites, the ratio of winter to annual consumption where available.

### 9.1 Monthly Read Sites

It is mandatory for supply points with an annual consumption greater than 293 MWh to be monthly read. However, at the shipper's request, sites below this consumption may also be classified as monthly read.

For monthly read sites where the relevant meter reading history is available, the winter: annual ratio is the consumption from December to March divided by the annual quantity. If the required meter reading information is not available, the supply point is allocated to an EUC simply on the basis of its annual quantity.

The peak load for an NDM supply point may then be calculated as:

$$\frac{AQ \times 100}{365 \times LoadFactor}$$

For example,

For a supply point in Eastern LDZ with an annual consumption of 1,000 MWh per annum.

Assume consumption December to March inclusive is 550 MWh.

Winter annual ratio =  $550 \div 1000 = 0.55$

For a site with an annual consumption of 1,000 MWh, a ratio of 0.55 falls within winter annual ratio band W03 as shown in Table 14 and the site is thus within End User Category EA:E0904W03.

For a site in this category, the load factor is 29.8% and the peak daily load is therefore,

$$\frac{1000 \times 100}{365 \times 29.8} = 9.19 \text{ MWh}$$

If the required meter reading information is not available to calculate the winter annual ratio, the supply point is allocated to an EUC simply on the basis of its annual quantity, in this case EA:E0904B.

For a site in this category, the load factor is 32.7.0% and the peak daily load is therefore,

$$\frac{1000 \times 100}{365 \times 32.7} = 8.38 \text{ MWh}$$

### 9.2 Six monthly read sites

In the case of six monthly read sites, the supply point is allocated to an EUC simply on the basis of its annual quantity.

For example, for a supply point in Eastern LDZ with an annual consumption of 200 MWh per annum, the EUC will be EA:E0902B.

For a site in this category, the load factor is 30.3% and the peak daily load is therefore

$$\frac{200 \times 100}{365 \times 30.3} = 1.81 \text{ MWh}$$

### 9.3 Notes

The term LDZ is applied in the context of its usage with reference to the Uniform Network Code (UNC) daily balancing regime. This is not precisely the same as the term LDZ when it is used in the context of National Grid NTS's organisation structure.

For supply points whose consumption is over 73,200 kWh and which include one or more NDM supply meter points, an end user category code can be found in the supply point offer generated by UK Link. This code may be correlated with the end user category code shown opposite by means of a lookup table issued separately to shippers. Copies are available from the xoserve Supply Point Administration Management team on **0121 713 5569**.

For additional information regarding the demand estimation process, please contact xoserve on **0121 623 2695**.

### 9.4 Daily metered supply points

The SOQ of daily metered sites is known and hence no load factor is required.

Supply points with annual consumptions greater than 58,600 MWh should be daily metered. However, a handful of sites remain as non-daily metered as a result of difficulties installing the daily read equipment. In such cases the end user category code XX:E0909B is used.

Firm supply points with an AQ above 73.2 MWh pa may, at the shipper's request, be classified as daily metered. All interruptible supply points are daily metered.

### 9.5 Consultation on end user categories

Section H of the Uniform Network Code requires the transporter to publish its demand estimation proposals for the forthcoming supply year (NDM Profiling and Capacity Estimation Algorithms for 2009/10, August 2009), by the end of June each year. These proposals comprise end user category definitions, NDM profiling parameters (ALPs and DAFs), and capacity estimation parameters (EUC load factors). Analysis is presented to users and the Demand Estimation Sub-Committee (a sub-committee of the UNC Committee) is consulted before publication of its proposals.

The following tables define the end user category for particular LDZs by reference to annual consumption and winter annual ratio, applicable from 1 October 2009 to 30 September 2010.

**Table 14 Definition of End User Categories**

EUC Code	Annual Load (MWh)	Winter Annual Ratios (WAR)			
		W01	W02	W03	W04
<a href="#">xx:E0901B</a>	< 73.2	-	-	-	-
<a href="#">xx:E0902B</a>	73.2 - 293	-	-	-	-
<a href="#">xx:E0903B</a>	293 - 732	0.00 - 0.45	0.45 - 0.52	0.52 - 0.60	0.60 - 1.00
<a href="#">xx:E0904B</a>	732 - 2,196	0.00 - 0.45	0.45 - 0.52	0.52 - 0.60	0.60 - 1.00
<a href="#">xx:E0905B</a>	2,196 - 5,860	0.00 - 0.41	0.41 - 0.48	0.48 - 0.56	0.56 - 1.00
<a href="#">xx:E0906B</a>	5,860 - 14,650	0.00 - 0.34	0.34 - 0.45	0.45 - 0.54	0.54 - 1.00
<a href="#">xx:E0907B</a>	14,650 - 29,300	0.00 - 0.34	0.34 - 0.41	0.41 - 0.53	0.53 - 1.00
<a href="#">xx:E0908B</a>	29,300 - 58,600	0.00 - 0.33	0.33 - 0.37	0.37 - 0.48	0.48 - 1.00
<a href="#">xx:E0909B</a>	> 58,600	-	-	-	-

**Table 15 Small NDM Supply Points (Up to 2,196 MWh per annum)**

xx: = LDZ =	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WA1	WA2
xx:E0901B	33.1%	35.6%	36.2%	33.6%	33.0%	36.5%	39.7%	32.1%	29.4%	31.6%	32.6%	36.5%	34.0%
xx:E0902B	30.3%	32.1%	28.9%	29.9%	33.5%	33.4%	40.9%	31.1%	31.0%	30.0%	29.9%	33.4%	29.3%
xx:E0903B	32.0%	32.3%	31.3%	32.3%	32.0%	31.8%	39.6%	31.8%	28.1%	29.9%	25.8%	31.8%	29.3%
xx:E0903W01	54.9%	54.4%	53.1%	51.0%	57.2%	54.1%	57.4%	55.3%	48.6%	56.8%	50.1%	54.1%	54.3%
xx:E0903W02	42.7%	40.9%	40.7%	36.3%	42.5%	41.2%	42.8%	42.9%	38.1%	41.6%	36.6%	41.2%	39.9%
xx:E0903W03	29.8%	30.0%	29.6%	26.6%	30.9%	28.6%	32.2%	30.3%	26.9%	28.8%	26.2%	28.6%	27.2%
xx:E0903W04	22.9%	23.3%	22.6%	21.8%	23.6%	23.4%	26.6%	22.7%	20.4%	22.5%	20.3%	23.4%	21.2%
xx:E0904B	32.7%	33.4%	34.4%	31.2%	36.0%	35.8%	40.9%	34.3%	30.8%	33.8%	30.4%	35.8%	30.4%
xx:E0904W01	54.9%	54.4%	53.1%	51.0%	57.2%	54.1%	57.4%	55.3%	48.6%	56.8%	50.1%	54.1%	54.3%
xx:E0904W02	42.7%	40.9%	40.7%	36.3%	42.5%	41.2%	42.8%	42.9%	38.1%	41.6%	36.6%	41.2%	39.9%
xx:E0904W03	29.8%	30.0%	29.6%	26.6%	30.9%	28.6%	32.2%	30.3%	26.9%	28.8%	26.2%	28.6%	27.2%
xx:E0904W04	22.9%	23.3%	22.6%	21.8%	23.6%	23.4%	26.6%	22.7%	20.4%	22.5%	20.3%	23.4%	21.2%

**Table 16 Large NDM Supply Points ( 2,196 and above MWh per annum)**

xx: = LDZ =	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WA1	WA2
xx:E0905B	37.3%	39.9%	37.4%	36.4%	40.0%	39.7%	42.7%	37.4%	34.0%	38.8%	35.9%	39.7%	38.7%
xx:E0905W01	65.0%	61.0%	60.8%	58.1%	64.7%	60.3%	64.9%	64.3%	62.1%	63.9%	59.5%	60.2%	64.1%
xx:E0905W02	48.2%	45.6%	45.3%	44.8%	48.0%	48.0%	48.9%	48.8%	42.2%	44.9%	42.9%	47.9%	45.4%
xx:E0905W03	38.2%	35.4%	34.7%	31.5%	37.9%	34.9%	37.6%	37.5%	33.6%	35.8%	33.0%	34.8%	35.0%
xx:E0905W04	25.7%	24.9%	24.6%	22.7%	25.4%	25.4%	28.2%	25.3%	22.5%	24.3%	22.9%	25.3%	23.8%
xx:E0906B	41.2%	45.9%	46.4%	41.7%	43.6%	46.4%	46.7%	43.7%	36.6%	43.3%	42.9%	46.4%	43.7%
xx:E0906W01	76.1%	75.6%	75.6%	73.8%	76.0%	75.4%	74.9%	76.0%	75.7%	76.1%	75.4%	75.3%	76.1%
xx:E0906W02	57.2%	54.6%	54.4%	52.0%	56.9%	54.7%	55.9%	56.4%	54.0%	56.5%	52.6%	54.7%	56.9%
xx:E0906W03	41.0%	39.8%	39.4%	37.9%	40.7%	42.1%	42.5%	40.3%	38.2%	40.7%	37.2%	42.0%	39.8%
xx:E0906W04	28.3%	27.3%	27.0%	24.6%	28.0%	27.5%	28.3%	27.7%	26.3%	28.3%	25.2%	27.4%	27.3%
xx:E0907B	46.0%	53.4%	53.2%	48.1%	45.8%	51.3%	52.0%	45.2%	43.9%	45.0%	51.2%	51.3%	45.4%
xx:E0907W01	82.0%	81.9%	81.9%	81.9%	81.9%	82.0%	82.0%	82.0%	82.0%	82.1%	81.9%	82.0%	82.0%
xx:E0907W02	62.7%	63.9%	63.7%	61.6%	62.5%	63.8%	64.7%	62.1%	60.3%	62.2%	62.2%	63.7%	62.4%
xx:E0907W03	45.1%	47.1%	46.9%	43.9%	44.8%	46.9%	48.3%	44.2%	41.7%	44.4%	44.5%	46.9%	44.8%
xx:E0907W04	30.5%	31.7%	31.3%	28.2%	30.2%	31.2%	32.2%	29.9%	28.1%	30.1%	29.4%	31.2%	29.6%
xx:E0908B	52.2%	62.2%	62.0%	59.4%	51.9%	62.2%	63.4%	51.3%	48.7%	51.5%	60.2%	62.2%	51.1%
xx:E0908W01	91.2%	90.6%	90.5%	90.4%	91.1%	90.9%	90.6%	91.2%	91.4%	91.1%	90.7%	90.9%	91.2%
xx:E0908W02	73.5%	74.2%	74.1%	72.5%	73.3%	74.2%	74.7%	73.0%	71.8%	73.1%	73.0%	74.1%	73.3%
xx:E0908W03	57.2%	58.6%	58.3%	55.2%	56.6%	58.0%	59.3%	56.5%	54.0%	56.7%	56.2%	57.9%	56.5%
xx:E0908W04	33.6%	35.0%	34.3%	31.1%	32.9%	34.4%	35.5%	32.9%	31.0%	33.2%	32.6%	34.3%	32.4%
xx:E0909B	64.8%	66.3%	66.1%	63.4%	64.6%	66.1%	67.4%	64.1%	61.9%	64.2%	64.2%	66.1%	64.6%

## 10 Appendix B Initial NTS SO Baseline Obligated Entry Capacity

Table 17 below details the NTS SO baseline obligated entry capacity GWh/day identified in National Grid NTS's GT Licence and used as the basis for determination of minimum annual quantities to be offered after 1 April 2007.

**Table 17 NTS SO Baseline Obligated Entry Capacity (GWh/day)**

<b>Terminal</b>	<b>1 April 2007 onwards</b>
<b>Coastal Terminals and LNG Importation</b>	
Bacton	1,783.4
Barrow	309.1
Easington/Rough	1,062.0
Isle of Grain	175.0
Milford Haven	0
St Fergus	1,670.7
Teesside	361.3
Theddlethorpe	610.7
<b>Onshore Fields and Connections</b>	
Burton Point	73.5
Hatfield Moor	0.3
Hole House Farm	131.6
Wytch Farm	3.3
<b>Storage Sites</b>	
Barton Stacey	82.6
Cheshire	285.9
Fleetwood	0
Garton	0
Glenmavis	28.5
Hatfield Moor	14.9
Hornsea	164.1
Partington	174.6
<b>Constrained LNG</b>	
Avonmouth	179.3
Dynevor Arms	8.0
<b>New Entry Points</b>	
Burton Agnes (Caythorpe)	0
Winkfield	0
Blyborough (Welton)	0
Tatsfield	0
Albury	0
Palmers Wood	0

## **11 Appendix C(i) AMSEC Entry Capacity**

Obligated system entry capacity offered in Annual System Entry Capacity auctions is determined in accordance with National Grid NTS's GT Licence. For periods that are subject to a QSEC allocation, then supply can be further expanded in accordance with National Grid NTS's IECR statement.

National Grid will conduct the MSEC auctions and will publish the quantity of System Entry Capacity being offered for each month in the Capacity Period in respect of each Aggregate System Entry Point along with reserve prices in an invitation letter to the community. The letter will also be sent by E-Mail and fax (business hours operational list) and will be posted on the National Grid web site under Gas/Operational Data/Capacity Auctions.

## **12 Appendix C(ii) QSEC Entry Capacity**

Obligated system entry capacity to be offered in the next Annual System Entry Capacity auctions is determined in accordance with National Grid NTS's GT Licence. For periods that are subject to a QSEC allocation, then supply can be further expanded in accordance with National Grid NTS's IECR statement.

National Grid will conduct the QSEC auctions and will publish the quantity of System Entry Capacity being offered for each month in the Capacity Period in respect of each Aggregate System Entry Point along with reserve prices in an invitation letter to the community. The letter will also be sent by E-Mail and fax (business hours operational list) and will be posted on the National Grid web site under Gas/Operational Data/Capacity Auctions.



## 13 Appendix D QSEC Step Prices

Below are the entry capacity reserve prices together with the price steps for each level of incremental capacity for use in the auction of Quarterly System Entry Capacity (QSEC) 2010.

Pence/kWh/day											
	Bacton	Barrow	Cheshire	Easington & Rough	Fleetwood	Garton	Isle of Grain	Milford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level	0.0078	0.0001	0.0001	0.0103	0.0030	0.0114	0.0001	0.0188	0.0373	0.0082	0.0101
2.5%	0.0079	0.0002	0.0002	0.0104	0.0031	0.0115	0.0002	0.0189	0.0375	0.0083	0.0102
5.0%	0.0081	0.0003	0.0006	0.0105	0.0032	0.0116	0.0003	0.0190	0.0376	0.0084	0.0103
7.5%	0.0082	0.0004	0.0007	0.0106	0.0033	0.0117	0.0004	0.0201	0.0395	0.0085	0.0106
10.0%	0.0083	0.0005	0.0026	0.0107	0.0034	0.0118	0.0012	0.0209	0.0396	0.0086	0.0107
12.5%	0.0095	0.0006	0.0027	0.0108	0.0035	0.0119	0.0013	0.0210	0.0397	0.0087	0.0108
15.0%	0.0104	0.0007	0.0028	0.0109	0.0036	0.0120	0.0014	0.0211	0.0413	0.0088	0.0109
17.5%	0.0105	0.0008	0.0033	0.0120	0.0037	0.0121	0.0024	0.0212	0.0414	0.0089	0.0113
20.0%	0.0106	0.0009	0.0034	0.0128	0.0038	0.0122	0.0025	0.0213	0.0415	0.0090	0.0114
22.5%	0.0107	0.0010	0.0035	0.0129	0.0039	0.0123	0.0032	0.0214	0.0416	0.0091	0.0115
25.0%	0.0108	0.0011	0.0036	0.0130	0.0040	0.0124	0.0033	0.0215	0.0417	0.0092	0.0117
27.5%	0.0109	0.0012	0.0043	0.0131	0.0041	0.0125	0.0034	0.0216	0.0426	0.0093	0.0118
30.0%	0.0110	0.0013	0.0044	0.0132	0.0042	0.0126	0.0095	0.0217	0.0427	0.0094	0.0119
32.5%	0.0113	0.0014	0.0045	0.0133	0.0043	0.0127	0.0096	0.0218	0.0428	0.0095	0.0120
35.0%	0.0125	0.0015	0.0046	0.0134	0.0044	0.0128	0.0097	0.0219	0.0432	0.0096	0.0121
37.5%	0.0131	0.0016	0.0066	0.0135	0.0045	0.0129	0.0098	0.0220	0.0435	0.0097	0.0122
40.0%	0.0151	0.0017	0.0067	0.0136	0.0046	0.0130	0.0099	0.0221	0.0436	0.0102	0.0124
42.5%	0.0152	0.0018	0.0068	0.0137	0.0047	0.0131	0.0100	0.0222	0.0437	0.0103	0.0125
45.0%	0.0166	0.0019	0.0069	0.0138	0.0052	0.0132	0.0101	0.0223	0.0456	0.0104	0.0126
47.5%	0.0193	0.0020	0.0075	0.0140	0.0060	0.0133	0.0102	0.0224	0.0457	0.0105	0.0128
50.0%	0.0194	0.0021	0.0076	0.0141	0.0061	0.0134	0.0103	0.0230	0.0458	0.0106	0.0130
Obligated Level (GWh/d)	1783.4	309.1	542.7	1407.15	650	420	699.68	950	1670.7	476	610.7

Pence/kWh/day									
Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level	0.0001	Obligated Level	0.0106	Obligated Level	0.0001	Obligated Level	0.0001	Obligated Level	0.0001
5.1%	0.0002	6.44%	0.0107	7.0%	0.0007	8.37%	0.0002	8.7%	0.0002
10.1%	0.0003	12.87%	0.0108	14.0%	0.0010	16.73%	0.0014	17.4%	0.0005
15.2%	0.0004	19.31%	0.0109	20.9%	0.0011	25.10%	0.0020	26.1%	0.0018
20.2%	0.0005	25.74%	0.0110	27.9%	0.0012	33.46%	0.0022	34.8%	0.0024
25.3%	0.0010	32.18%	0.0111	34.9%	0.0013	41.83%	0.0023	43.5%	0.0027
30.3%	0.0014	38.61%	0.0112	41.9%	0.0014	50.20%	0.0024	52.1%	0.0028
35.4%	0.0015	45.05%	0.0113	48.8%	0.0015				
40.5%	0.0016	51.48%	0.0114	55.8%	0.0017				
45.5%	0.0031								
50.6%	0.0032								
Obligated Level (GWh/d)	296.6		233.1		215		179.3		172.6

## QSEC Step Prices 2010

Pence/kWh/day

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level	0.0001	0.0099	0.0074	0.0105	0.0033	0.0001
10%	0.0002	0.0100	0.0080	0.0106	0.0034	0.0002
20%	0.0003	0.0101	0.0081	0.0134	0.0035	0.0003
30%	0.0004	0.0102	0.0082	0.0141	0.0036	0.0004
40%	0.0005	0.0109	0.0083	0.0142	0.0037	0.0005
50%	0.0006	0.0110	0.0084	0.0144	0.0038	0.0006
Obligated Level (GWh/d)	73.5	90	49	99	25.3	3.3

Pence/kWh/day

<b>New Entry Point</b>	
Canonbie	
Obligated Level (GWh)	0.0024
5	0.0025
10	0.0026
15	0.0027
20	0.0028
25	0.0029
30	0.0030
35	0.0031
40	0.0032
45	0.0033
50	0.0034
55	0.0035
60	0.0036
65	0.0037
70	0.0038
75	0.0039
80	0.0040
85	0.0041
90	0.0042
95	0.0043
100	0.0044
Obligated Level (GWh/d)	0

## 14 Appendix E Estimated Project Costs

£m

	Bacton	Barrow	Cheshire	Easington &Rough	Fleetwood	Garton	Isle of Grain	Milford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level											
2.5%	12.52	0.03	0.05	12.88	1.73	4.25	0.12	15.87	55.66	3.47	5.48
5.0%	25.67	0.06	0.58	26.00	3.47	8.51	0.25	31.73	111.61	6.94	10.96
7.5%	38.97	0.08	0.87	39.75	5.20	12.76	0.37	50.89	175.87	10.40	17.25
10.0%	51.96	0.11	5.01	53.50	6.93	17.01	2.98	70.55	234.50	13.87	23.00
12.5%	75.25	0.55	6.27	66.88	8.66	21.27	3.73	88.19	294.60	17.34	28.75
15.0%	98.86	0.99	7.52	80.25	10.74	25.52	4.48	105.83	367.77	20.80	34.50
17.5%	115.33	1.15	11.14	105.00	12.53	29.77	10.44	123.47	429.07	24.27	42.91
20.0%	131.81	1.32	12.73	128.00	14.32	34.03	11.93	141.10	490.36	27.74	49.04
22.5%	148.29	1.48	14.32	144.00	17.15	38.28	17.90	158.74	551.66	31.59	55.17
25.0%	164.76	1.65	15.91	160.00	19.06	42.53	19.89	176.38	612.95	35.10	63.47
27.5%	181.24	1.81	22.80	176.00	20.96	46.79	21.88	194.02	695.47	40.93	70.42
30.0%	205.32	1.98	24.88	192.00	22.87	51.04	70.86	211.66	760.48	44.65	76.82
32.5%	232.73	2.14	26.95	208.00	24.77	55.29	76.76	229.29	823.85	48.37	83.22
35.0%	277.25	2.31	31.05	224.00	26.68	59.55	82.67	246.93	897.61	52.10	89.62
37.5%	311.31	2.47	47.73	240.01	28.58	63.80	88.57	270.90	968.41	55.82	96.02
40.0%	382.76	2.64	50.91	256.01	30.49	71.04	94.48	288.96	1035.34	69.01	107.63
42.5%	406.68	2.80	54.09	282.63	32.39	75.48	100.38	312.76	1100.05	73.32	114.36
45.0%	473.38	2.97	57.27	299.26	54.05	79.92	106.29	331.15	1218.19	77.64	121.09
47.5%	580.95	3.13	68.70	332.51	65.83	84.36	112.19	357.57	1285.86	81.95	131.94
50.0%	614.69	3.30	72.32	350.01	69.29	88.80	118.10	388.20	1353.54	86.26	141.05
Obligated Level (GWh/d)	1783.4	309.1	542.7	1407.15	650	420	699.68	950	1670.7	476	610.7

£m

Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level		Obligated Level		Obligated Level		Obligated Level		Obligated Level	
5.1%	0.05	6.44%	5.65	7.0%	0.37	8.37%	0.05	8.7%	0.05
10.1%	0.11	12.87%	11.30	14.0%	1.07	16.73%	1.49	17.4%	0.53
15.2%	0.16	19.31%	16.95	20.9%	1.60	25.10%	3.20	26.1%	2.88
20.2%	0.21	25.74%	22.60	27.9%	2.13	33.46%	4.69	34.8%	5.12
25.3%	2.67	32.18%	28.25	34.9%	2.67	41.83%	5.86	43.5%	7.20
30.3%	4.48	38.61%	33.90	41.9%	3.20	50.20%	7.04	52.1%	8.64
35.4%	5.22	45.05%	39.55	48.8%	3.73				
40.5%	5.97	51.48%	45.20	55.8%	7.25				
45.5%	14.87								
50.6%	16.52								
Obligated Level (GWh/d)	296.6		233.1		215		179.3		172.6

## Estimated Project Costs, £m

£m

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level						
10%	0.03	3.17	1.39	3.69	0.30	0.001
20%	0.05	6.33	2.79	9.43	0.59	0.002
30%	0.08	9.50	4.18	14.88	0.89	0.004
40%	0.10	13.94	5.57	19.84	1.19	0.005
50%	0.26	17.43	6.97	25.33	1.53	0.006
Obligated Level (GWh/d)	73.5	90	49	99	25.3	3.3

£m

<b>New Entry Point</b>	
Canonbie	
Obligated Level (GWh)	
5	0.43
10	0.85
15	1.28
20	1.71
25	2.13
30	2.56
35	2.99
40	3.41
45	3.84
50	4.26
55	4.69
60	5.54
65	6.01
70	6.47
75	6.93
80	7.39
85	7.85
90	8.32
95	8.78
100	9.24
Obligated Level (GWh/d)	0