

NTS Transportation Statement

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nationalgrid

The Statement of Gas Transmission
Transportation Charges

From 1 April 2015



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Introduction

This publication sets out the transportation charges which apply from 1 April 2015 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 Uniform Network Code (UNC) – Transportation Principal Document, Section Y – Charging Methodologies. A copy of the UNC can be found at www.gasgovernance.co.uk/TPD.

Details of National Grid and its activities can be found on the National Grid Internet site at www.nationalgrid.com. An electronic version of this publication can be found on our web site at www.nationalgrid.com/uk/Gas/Charges/state-ments/. For more information on the charges set out below, please contact Colin Williams on 01926 655916 or Karin Elmhirst on 01926 655540 or email box.transmissioncapacityandcharging@nationalgrid.com.

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; www.nationalgrid.com/uk/Gas/Charges/indicativecharges/ and www.nationalgrid.com/uk/Gas/Charges/NoticeofChange/.

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 the definitive rates 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. For details of such charges and liabilities, reference should be made to the UNC, which is modified from time to time, and not discussed further in this document.

Units

Charges are expressed and billed as follows:

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

All charge rates are rounded to 4 decimal places.

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 in this document.

For more information on invoicing, please contact the Xoserve invoicing team via email at xo_css_billing@xoserve.com.

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 determine 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 will be made in the relevant future year as described in the NTS Licence. Where a significant over or under-recovery is anticipated within a year an adjustment to charges may be made during the year.

The price control for the NTS is 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 bookings and 50% from Entry Capacity auctions. Both Entry and Exit Capacity charges reflect the estimated long run marginal cost (LRMC) of developing the system to meet a sustained increase in demand and supplies and are based on GCM01 'Methodology for Determination of NTS Entry and Exit Capacity Prices', which uses a Transportation Model. For further details of GCM01 please see our web site at www.nationalgrid.com/uk/Gas/Charges/consultations/.

Charges for Entry Capacity are determined by auctions which apply to all system Entry points. Exit Capacity charges are administered and set so as to recover the TO target Exit revenue.

The unpredictability of Entry auction revenue and Exit Capacity bookings means that the 50 / 50 TO revenue split between Entry and Exit may not be achieved in practice. In the event of a forecast under-recovery of auction revenue

against the Entry target level, a TO Entry commodity charge may be levied on entry flows and a TO Exit commodity charge may be levied on Exit flows where revenue from Exit Capacity bookings is forecast to be under-recovered. The TO commodity charges are the same at all Entry and Exit points.

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.

DN Pensions Deficit

The DN Pensions Deficit Charge is a charge levied on the Distribution Network (DN) 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 DN's. The allowance has been included in the NTS TO Price Control Formulae RIIO-T1 effective from 1 April 2013. It is recovered via the application of a DN Pensions Deficit Charge which is levied on each of the DN's on a monthly basis in accordance with National Grid's NTS Licence and the DN's Gas Transporters Licence.

NTS Exit Reform

From the 1 October 2012 the NTS Exit Capacity regime moved from its 'Transitional' to the 'Enduring' period. NTS Exit Reform changes have been approved via UNC Modification 0195AV which introduced Enduring Annual, Annual, Daily Firm and Off-Peak sales of NTS Exit Flat Capacity through Application and Auction based mechanisms. The primary business drivers for the Enduring Offtake arrangements are to provide market signals for NTS investment and to facilitate fair competition.

The terms on which the capacity is sold are set out in the UNC Section B.

Firm transportation charges for the NTS comprise Capacity and Commodity charges.

Details of Exit Capacity applications and auctions can be obtained from National Grid Market Operation on **01926 654058** and via email at nts.exitcapacity@nationalgrid.com.

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's NTS charges reflect these requirements, with National Grid NTS remaining cash neutral in the process.

NTS Capacity Charges

Capacity charges consist of charges for Entry, Exit and credits payable for constrained Liquefied Natural Gas (LNG).

Entry and Exit Capacity charges are payable when a right to flow gas is purchased irrespective of whether or not the right is exercised.

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 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 charging please refer to **Uniform Network Code (UNC) – Transportation Principal Document, Section Y – Charging Methodologies**.

National Grid's Transportation Model is used to determine prices for Entry and Exit Capacity. The Transportation Model is available to parties that have signed the licence agreement for the model. Details of how to obtain the model can be found on the charging section of our website under Tools and Supporting Information at www.nationalgrid.com/uk/Gas/Charges/Tools/.

Quarterly System Entry Capacity

Entry Capacity can be obtained through the Quarterly (firm) 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 baseline quantity

which is calculated in accordance with paragraph 14(5)(g) of part 2 of Special Condition 2A National Grid NTS's Licence. The baseline quantity from which National Grid NTS's obligation is derived is set out in Appendix A 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 requirement to hold back some Capacity for short term allocation, is detailed in Appendix C.

For each of the system Entry points National Grid NTS has determined a baseline price and up to an additional 20 price steps for increments of Capacity that may be demanded above the baseline quantity, as set out in the **Uniform Network Code (UNC) – Transportation Principal Document, Section Y – Charging Methodologies** and the **Entry Capacity Release (ECR) 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 **Entry Capacity Release (ECR) Statement**.

QSEC auctions take place annually in March.

NTS Entry Capacity Retention Charges

The establishment of Entry Capacity Substitution (ECS), a process by which National Grid Gas 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 unsold Capacity. When 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 QSEC 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 in subsequent QSEC or AMSEC auctions, as detailed by the **Entry Capacity Substitution (ECS) Methodology Statement** (available on the National Grid website via the following link www.nationalgrid.com/uk/Gas/Charges/statements/).

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

Table 1

Invoice	Charge Code
ADK	QUC

Charge per unit of Entry Capacity retained	0.2922 pence per KWh of Entry Capacity retained (equates to 0.0001 p/kWh/d for 32 quarters).
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Monthly System Entry Capacity

National Grid NTS offers two monthly Capacity products – Monthly System Entry Capacity (firm) (MSEC) and the Rolling Monthly (firm) Trade & Transfer System Entry Capacity (RMTNTSEC) auction.

For each of the System Entry points MSEC is allocated by auction for a period no more than 18 months ahead of the period of use. The maximum quantities to be offered in MSEC allocations are also set out in Appendix B. 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.

Annual Monthly System Entry Capacity (AMSEC) auctions take place annually in February for Capacity from the April of that year for 18 months.

Following the final AMSEC auction in which Capacity is offered for the Capacity year any remaining quantities of Entry Capacity can be purchased in the RMTNTSEC auction. The RMTNTSEC 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 3rd 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 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**.

The lowest price that can be accepted in an MSEC allocation is the reserve price as set out in Table 3.

Daily System Entry Capacity

National Grid NTS offers two daily Capacity products – a firm Daily System Entry Capacity service (DSEC) and a Daily Interruptible System Entry Capacity service (DISEC). Both services are offered through an auction 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 defined in the UNC as the amount by which System Entry Capacity exceeds firm System Entry Capacity held by shippers plus any additional Daily NTS Entry Capacity that National Grid NTS may choose to make available for the Day.

DISEC is allocated by means of a single auction 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 firm booked 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 necessary, National Grid NTS may scale back DISEC entitlements.

Additional Discretionary Release Mechanism for NTS Entry Capacity (DRSEC)

There is an additional Capacity release mechanism which allows National Grid to invite applications for monthly (up to a maximum of 12 months) or, daily (up to a maximum of seven consecutive days) Entry Capacity outside of the existing auction mechanisms. The timing of such invitations and the quantities of Entry Capacity offered are at the sole discretion of National Grid. This would be mainly for discretionary Entry Capacity (in addition to baselines) but under certain circumstances may involve small amounts of unsold obligated Capacity. Discretionary Release System Entry Capacity (DRSEC) released via auction is subject to the prevailing MSEC reserve price and available for a period of no more than one Capacity year.

Entry Capacity Reserve Prices

All System Entry Capacity auctions are subject to reserve prices.

Daily reserve prices are calculated by applying the following discounts to the MSEC Capacity prices: Day Ahead Daily System Entry Capacity (DADSEC) 33.3%, Within Day Daily System Entry Capacity (WDDSEC) 100%, Daily Interruptible System Entry Capacity (DISEC) 100%.

The invoice codes and reserve prices applicable to QSEC, MSEC and DSEC sold before the day are shown in Table 2 and Table 3, respectively.

For DSEC sold on the day and DISEC the reserve price is zero.

Table 2

Service	Invoice	Charge Code
QSEC	NTE	LTC
MSEC	NTE	MEC
DSEC	NTE	DFC
DISEC	NTE	DIC

Table 3 Entry Capacity Reserve Prices for Capacity for use from 1 October 2014

MSEC Reserve Prices Pence per kWh per day		
Entry Point	Y	Y+1
Coastal Terminals & LNG Importation	From 1 Oct 14 to 30 Sep 15	From 1 Oct 15 to 30 Sep 16
Bacton	0.0091	0.0086
Barrow	0.0001	0.0001
Easington & Rough	0.0120	0.0120
Isle of Grain	0.0007	0.0003
Milford Haven	0.0208	0.0210
St Fergus	0.0440	0.0440
Teesside	0.0085	0.0080
Theddlethorpe & Saltfleetby	0.0120	0.0115
Onshore Fields and Connections		
Burton Point	0.0001	0.0001
Hatfield Moor	0.0040	0.0039
Hole House Farm	0.0001	0.0001
Wytch Farm	0.0001	0.0001
Storage		
Barton Stacey	0.0001	0.0001
Canonbie	0.0003	0.0024
Caythorpe	0.0130	0.0124
Cheshire	0.0001	0.0001
Dynevor Arms	0.0081	0.0081
Fleetwood	0.0025	0.0020
Garton	0.0133	0.0129
Glenmavis	0.0127	0.0127
Hatfield Moor	0.0040	0.0039
Hornsea	0.0123	0.0117
Partington	0.0001	0.0001
Constrained LNG		
Avonmouth	0.0001	0.0001
Moffat¹		
Moffat ¹	0.0037	0.0057

¹ The Moffat reserve price is for use in overrun calculations only, no firm Capacity will be released.

Table 3 continued

<u>DSEC Reserve Prices, Pence per kWh per day</u>	
Entry Point	from 1 Oct 14 to 30 Sep 15
Coastal Terminals & LNG Importation	
Bacton	0.0061
Barrow	0.0001
Easington&Rough	0.0080
Isle of Grain	0.0005
Milford Haven	0.0139
St Fergus	0.0293
Teesside	0.0057
Theddlethorpe	0.0080
Onshore Fields and Connections	
Burton Point	0.0001
Hatfield Moor	0.0027
Hole House Farm	0.0001
Wytch Farm	0.0001
Storage	
Barton Stacey	0.0001
Canonbie	0.0002
Caythorpe	0.0087
Cheshire	0.0001
Dynevor Arms	0.0054
Fleetwood	0.0017
Garton	0.0089
Glenmavis	0.0085
Hatfield Moor	0.0027
Hornsea	0.0082
Partington	0.0001
Constrained LNG	
Avonmouth	0.0001
Moffat	0.0025

Constrained LNG

Shippers that book the constrained Liquefied Natural Gas (LNG) storage service, available from the LNG storage site at 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 4**, is deducted from the charge for the storage service.

Table 4 Constrained LNG Credit

	Credit Rate based on Capacity	Credit Rate based on Annual Shipper Storage Space Volume
	Pence per registered kWh per day	p/kWh
	From 1 April 15 to 30 April 2016	
Avonmouth LNG	0.0000	0.0000

NTS TO Exit Capacity Charges

There are four Capacity products available – Enduring Annual NTS Exit (Flat) Capacity, Annual NTS Exit (Flat) Capacity,

Daily Firm NTS Exit (Flat) Capacity and Daily Off-Peak NTS Exit (Flat) Capacity. The Enduring and Enduring Annual products will be released by means of application windows, whilst the Daily Firm and Off-Peak products will be released through auctions. Details of Exit Capacity applications and auctions can be obtained from National Grid Market Operation on **01926 654058** and via email at nts.exitcapacity@nationalgrid.com.

Reserve prices for the Daily Firm Capacity auctions are equal to the Enduring Annual/Annual Capacity charges. The reserve price for Off-Peak Daily Capacity, which is auctioned on a daily day ahead basis, is zero.

The NTS TO Exit (Flat) Capacity invoice codes and charges are given in **Table 5** and **Table 6** respectively .

Please note the **indicative NTS Exit (Flat) Capacity charges** for 2015/16 to 2017/18 are available on our web site in a separate document under Gas Charges / Indicative Charge Changes.

Table 5 Invoice Codes NTS TO Exit Capacity

Service	Invoice	Charge Code
Enduring Annual	NXC	NXA
Annual	NXC	NXA
Daily Firm	NXC	NXD
Daily Off-Peak	NXC	NXO

Table 6 NTS TO Exit (Flat) Capacity Charges from 1 October 2014, p/kWh/d

	Type of Offtake	2014/15 at 1 Oct-14
Bacton	GDN (EA)	0.0003
Brisley	GDN (EA)	0.0034
Cambridge	GDN (EA)	0.0102
Great Wilbraham	GDN (EA)	0.0092
Matching Green	GDN (EA)	0.0137
Peterborough Eye (Tee)	GDN (EA)	0.0092
Roudham Heath	GDN (EA)	0.0052
Royston	GDN (EA)	0.0112
Whitwell	GDN (EA)	0.0133
West Winch	GDN (EA)	0.0060
Yelverton	GDN (EA)	0.0028
Alrewas (EM)	GDN (EM)	0.0185
Blaby	GDN (EM)	0.0147
Blyborough	GDN (EM)	0.0059
Caldecott	GDN (EM)	0.0121
Thornton Curtis (DN)	GDN (EM)	0.0004
Drointon	GDN (EM)	0.0197
Gosberton	GDN (EM)	0.0071
Kirkstead	GDN (EM)	0.0048
Market Harborough	GDN (EM)	0.0134
Silk Willoughby	GDN (EM)	0.0062
Sutton Bridge	GDN (EM)	0.0079
Tur Langton	GDN (EM)	0.0135
Walesby	GDN (EM)	0.0022
Asselby	GDN (NE)	0.0039
Baldersby	GDN (NE)	0.0055
Burley Bank	GDN (NE)	0.0077
Ganstead	GDN (NE)	0.0001
Pannal	GDN (NE)	0.0082
Paull	GDN (NE)	0.0001
Pickering	GDN (NE)	0.0052
Rawcliffe	GDN (NE)	0.0041
Towton	GDN (NE)	0.0063
Bishop Auckland	GDN (NO)	0.0034
Coldstream	GDN (NO)	0.0014
Corbridge	GDN (NO)	0.0065
Cowpen Bewley	GDN (NO)	0.0013
Elton	GDN (NO)	0.0025
Guyzance	GDN (NO)	0.0038
Humbleton	GDN (NO)	0.0009
Keld	GDN (NO)	0.0138
Little Burdon	GDN (NO)	0.0030
Melkinton	GDN (NO)	0.0129

	Type of Offtake	2014/15 at 1 Oct-14
Saltwick Pressure Controlled	GDN (NO)	0.0051
Saltwick Volumetric Controlled	GDN (NO)	0.0051
Thrintoft	GDN (NO)	0.0048
Towlaw	GDN (NO)	0.0055
Wetheral	GDN (NO)	0.0102
Horndon	GDN (NT)	0.0142
Luxborough Lane	GDN (NT)	0.0144
Peters Green	GDN (NT)	0.0138
Peters Green South Mimms	GDN (NT)	0.0138
Winkfield (NT)	GDN (NT)	0.0232
Audley (NW)	GDN (NW)	0.0236
Blackrod	GDN (NW)	0.0204
Ecclestone	GDN (NW)	0.0271
Holmes Chapel	GDN (NW)	0.0249
Lupton	GDN (NW)	0.0166
Malpas	GDN (NW)	0.0257
Mickle Trafford	GDN (NW)	0.0270
Partington	GDN (NW)	0.0260
Samlesbury	GDN (NW)	0.0189
Warburton	GDN (NW)	0.0257
Weston Point	GDN (NW)	0.0280
Aberdeen	GDN (SC)	0.0001
Armadale	GDN (SC)	0.0001
Balgray	GDN (SC)	0.0001
Bathgate	GDN (SC)	0.0001
Burnervie	GDN (SC)	0.0001
Broxburn	GDN (SC)	0.0005
Careston	GDN (SC)	0.0001
Drum	GDN (SC)	0.0001
St Fergus	GDN (SC)	0.0001
Glenmavis	GDN (SC)	0.0002
Hume	GDN (SC)	0.0025
Kinknockie	GDN (SC)	0.0001
Langholm	GDN (SC)	0.0076
Lauderhill	GDN (SC)	0.0037
Lockerbie	GDN (SC)	0.0066
Netherhowcleugh	GDN (SC)	0.0046
Pitcairngreen	GDN (SC)	0.0001
Soutra	GDN (SC)	0.0043
Stranraer	GDN (SC)	0.0054
Farningham	GDN (SE)	0.0143
Farningham B	GDN (SE)	0.0143
Shorne	GDN (SE)	0.0132
Tatsfield	GDN (SE)	0.0162
Winkfield (SE)	GDN (SE)	0.0232

	Type of Offtake	2014/15 at 1 Oct-14
Braishfield A	GDN (SO)	0.0271
Braishfield B	GDN (SO)	0.0271
Crawley Down	GDN (SO)	0.0257
Hardwick	GDN (SO)	0.0175
Ipsden	GDN (SO)	0.0210
Ipsden 2	GDN (SO)	0.0210
Mappowder	GDN (SO)	0.0242
Winkfield (SO)	GDN (SO)	0.0232
Aylesbeare	GDN (SW)	0.0265
Cirencester	GDN (SW)	0.0150
Coffinswell	GDN (SW)	0.0294
Easton Grey	GDN (SW)	0.0155
Evesham	GDN (SW)	0.0117
Fiddington	GDN (SW)	0.0104
Ilchester	GDN (SW)	0.0219
Kenn	GDN (SW)	0.0277
Littleton Drew	GDN (SW)	0.0164
Lyneham (Choakford)	GDN (SW)	0.0324
Pucklechurch	GDN (SW)	0.0173
Ross (SW)	GDN (SW)	0.0073
Seabank (DN)	GDN (SW)	0.0194
Alrewas (WM)	GDN (WM)	0.0185
Aspley	GDN (WM)	0.0218
Audley (WM)	GDN (WM)	0.0236
Austrey	GDN (WM)	0.0178
Leamington	GDN (WM)	0.0146
Lower Quinton	GDN (WM)	0.0129
Milwich	GDN (WM)	0.0204
Ross (WM)	GDN (WM)	0.0073
Rugby	GDN (WM)	0.0157
Shustoke	GDN (WM)	0.0191
Stratford-upon-Avon	GDN (WM)	0.0131
Maelor	GDN (WN)	0.0265
Dowlais	GDN (WS)	0.0028
Dyffryn Clydach	GDN (WS)	0.0002
Gilwern	GDN (WS)	0.0040
Ferny Knoll (AM Paper)	DC	0.0230
Tonna (Baglan Bay)	DC	0.0002
Barking (Horndon)	DC	0.0142
Barrow (Black Start)	DC	0.0127
Billingham ICI (Terra Billingham)	DC	0.0015
Bishop Auckland (test facility)	DC	0.0034
Blackness (BP Grangemouth)	DC	0.0001
Saltend BPHP (BP Saltend HP)	DC	0.0001

	Type of Offtake	2014/15 at 1 Oct-14
Shotwick (Bridgewater Paper)	DC	0.0279
Blyborough (Brigg)	DC	0.0069
Epping Green (Enfield Energy, aka Brimsdown)	DC	0.0147
Brine Field (Teesside) Power Station	DC	0.0008
Pickmere (Winnington Power, aka Brunner Mond)	DC	0.0260
Carrington (Partington) Power Station	DC	0.0260
Centrax Industrial	DC	0.0292
Cockenzie Power Station	DC	0.0001
Burton Point (Connahs Quay)	DC	0.0283
Caldecott (Corby Power Station)	DC	0.0125
Stanford Le Hope (Coryton)	DC	0.0139
Coryton 2 (Thames Haven) Power Station	DC	0.0139
Blyborough (Cottam)	DC	0.0059
Middle Stoke (Damhead Creek, aka Kingsnorth Power Station)	DC	0.0117
Deeside	DC	0.0283
Didcot PS	DC	0.0213
Drakelow Power Station	DC	0.0180
Enron Billingham	DC	0.0015
Goole (Guardian Glass)	DC	0.0045
Grain Power Station	DC	0.0117
Bacton (Great Yarmouth)	DC	0.0003
Hatfield Power Station	DC	0.0042
Hollingsgreen (Hays Chemicals)	DC	0.0248
Weston Point (Castner Kelner, aka ICI Runcorn)	DC	0.0280
Thornton Curtis (Humber Refinery, aka Immingham)	DC	0.0004
Eastoft (Keadby Blackstart)	DC	0.0058
Eastoft (Keadby)	DC	0.0058
Shellstar (aka Kemira, not Kemira CHP)	DC	0.0276
Saddle Bow (Kings Lynn)	DC	0.0059
Langage Power Station	DC	0.0324
St. Neots (Little Barford)	DC	0.0134
Gowkhall (Longannet)	DC	0.0001
Marchwood Power Station	DC	0.0274
Medway (aka Isle of Grain Power Station, NOT Grain Power)	DC	0.0118
Upper Neeston (Milford Haven Refinery)	DC	0.0001
Blackbridge (Pembroke PS)	DC	0.0001
Peterborough (Peterborough Power Station)	DC	0.0096
St. Fergus (Peterhead)	DC	0.0001
Phillips Petroleum, Teeside	DC	0.0008
Weston Point (Rocksavage)	DC	0.0280
Glasgowforest	DC	0.0001

	Type of Offtake	2014/15 at 1 Oct-14
Rosecote (Rosecote Power Station)	DC	0.0127
Ryehouse	DC	0.0152
Rosehill (Saltend Power Station)	DC	0.0001
Sandy Lane (Blackburn CHP, aka Sappi Paper Mill)	DC	0.0193
Seabank (Seabank Power Station phase II)	DC	0.0193
Abson (Seabank Power Station phase I)	DC	0.0173
Sellafield Power Station	DC	0.0171
Terra Nitrogen (aka ICI, Terra Severnside)	DC	0.0192
Harwarden (Shotton, aka Shotton Paper)	DC	0.0282
Wragg Marsh (Spalding)	DC	0.0074
Spalding 2 (South Holland) Power Station	DC	0.0074
St. Fergus (Shell Blackstart)	DC	0.0001
Stallingborough (phase 1 and 2)	DC	0.0013
Staythorpe PH1 and PH2	DC	0.0091
Sutton Bridge Power Station	DC	0.0078
Teesside (BASF, aka BASF Teesside)	DC	0.0008
Teesside Hydrogen	DC	0.0008
Thornton Curtis (Killingholme)	DC	0.0004
Tilbury Power Station	DC	0.0135
West Burton PS	DC	0.0060
Willington Power Station	DC	0.0196
Wyre Power Station	DC	0.0206
Zeneca (ICI Avecia, aka 'Zenica')	DC	0.0015
Bacton IUK	INTERCONNECTOR	0.0003
Bacton BBL	INTERCONNECTOR	0.0003
Moffat (Irish Interconnector)	INTERCONNECTOR - FIRM, EXIT ONLY	0.0054
Avonmouth Max Refill	STORAGE SITE	0.0192
Bacton (Baird)	STORAGE SITE	0.0003
Deborah Storage (Bacton)	STORAGE SITE	0.0003
Barrow (Bains)	STORAGE SITE	0.0127
Barrow (Gateway)	STORAGE SITE	0.0127
Barton Stacey Max Refill (Humbly Grove)	STORAGE SITE	0.0254
Caythorpe	STORAGE SITE	0.0022
Cheshire (Holford)	STORAGE SITE	0.0253
Dynevor Max Refill	STORAGE SITE	0.0022
Rough Max Refill	STORAGE SITE	0.0001
Garton Max Refill (Aldbrough)	STORAGE SITE	0.0001
Glenmavis Max Refill	STORAGE SITE	0.0002
Hatfield Moor Max Refill	STORAGE SITE	0.0050
Hole House Max Refill	STORAGE SITE	0.0247
Hornsea Max Refill	STORAGE SITE	0.0009
Partington Max Refill	STORAGE SITE	0.0260

	Type of Offtake	2014/15 at 1 Oct-14
Stublach (Cheshire)	STORAGE SITE	0.0253
Saltfleetby Storage (Theddlethorpe)	STORAGE SITE	0.0009
Hill Top Farm (Hole House Farm)	STORAGE SITE	0.0247

NTS Commodity Charges

NTS Commodity charges are payable on gas allocated to shippers at Exit and Entry. Commodity charges on gas flows at NTS Storage facilities, other than on the amount of gas utilised as part of the operation of any NTS Storage facility, known as storage “own use” gas are zero. The NTS Commodity charges are uniform rates, independent of Entry or Exit points.

NTS TO Entry Commodity Charge

The NTS TO Entry 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. For the avoidance of doubt, the TO Entry Commodity rate would be set to zero where forecast Entry TO revenue is at, or above, the Entry revenue target level.

The rate is identified in the Commodity schedule given in **Table 7**.

NTS TO Entry Commodity Charge Rebate

The TO Entry Commodity rebate mechanism has been introduced to reduce any TO over-recovery resulting from NTS Entry Capacity auctions. The process may be triggered at the end of the formula year based on the outcome of all NTS Entry Capacity auctions that represent a TO revenue stream. This mechanism will only be triggered if there remains a residual over-recovery amount after taking into account any revenue redistributed by the buy-back offset mechanism (as defined in 2.3.2 of Section Y (Charging Methodologies) in the Uniform Network Code (UNC) if this residual over-recovery is in excess of £1m (this equates to the minimum TO Entry Commodity charge of 0.0001 p/kWh).

NTS TO Entry Commodity Charge Credit

The TO Entry Commodity credit mechanism, which represents a retrospective negative TO

Entry Commodity charge, will be used if there remains a residual over-recovery amount after taking into account any revenue redistributed via the TO Entry Commodity rebate mechanism. Credits will be paid following the end of the formula year.

NTS TO Exit Commodity Charge

A TO Exit (Flat) Commodity charge has been introduced to offset any under recovery arising from a shortfall between NTS Exit (Flat) capacity charges and TO Exit allowed revenue. Any TO Exit over-recovery will be dealt with through the k mechanism for TO Exit.

The rate is identified in the Commodity schedule given in **Table 7**.

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 7** below.

Table 7 NTS Commodity Charges

Invoice	Charge Code
ECO	NCE

Pence per kWh	
TO Entry	0.0451
SO Entry	0.0169
Combined Entry Rate	0.0620

Invoice	Charge Code
COM	NCO

Pence per kWh	
TO Exit	0.0198
SO Exit	0.0169
Combined Exit Rate	0.0367

Both the NTS Entry Commodity (NCE) and NTS Exit Commodity (NCO) will be invoiced using the combined rates.

NTS Optional Commodity Charge

The Optional NTS Commodity charge (known as the shorthaul rate) is available as an alternative to both the Entry / Exit NTS SO and TO Commodity charges. It may be attractive for large daily metered sites located near to Entry terminals, since the NTS SO and TO Commodity charges 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 Commodity charge 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 8**.

Table 8 NTS Optional Commodity Charge

Invoice	Charge Code
ADU	880

Pence per kWh
$1203 \times [(SOQ)^{-0.834}] \times D + 363 \times (SOQ)^{-0.654}$

where **D** is the direct distance from the site or non-National Grid NTS pipeline to the elected terminal in km and **SOQ** is Maximum NTS Exit Point Offtake Rate (MNEPOR) converted into

kWh/day at the site. Note that ^ means “to the power of ...”

Further information on NTS Optional Commodity charge, please contact Colin Williams on **01926 655916** or Karin Elmhirst on **01926 655540** or email box.transmissioncapacityandcharging@nationalgrid.com.

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 9**.

Table 9 St. Fergus Compression Charge

Invoice	Charge Code
ADZ	900

Pence per kWh	
Compression	0.0175

Other Charges

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

DN Pension 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 2015/16 are shown in **Table 10** DN Pension Deficit Charge below.

Table 10 DN Pension Deficit Charge

Invoice	Charge Code
ADN	N23

DN	Monthly Charge, £	Per Annum, £m
East of England	911,521	10.94
London	531,406	6.38
North West	625,962	7.51
West Midlands	451,978	5.42
North of England	580,575	6.97
Scotland	400,918	4.81
South of England	928,541	11.14
Wales and the West	555,990	6.67

Metering Charges

Table 11 below shows a schedule of National Grid NTS's metering charges to apply from 1 April 2015. National Grid NTS provides metering charges for those services that it is obliged to offer under its Gas Transporter Licence coupled with those services that are currently offered for historical / legacy purposes i.e. where a Datalogger or Converter has been fitted at an NTS Site or there is a maintenance requirement for an NTS High Pressure Meter Installation.

Table 11 Annual Rental Charges

High Pressure Metering Installations (>7 barg)

Capacity (scmh)	< 10,192	>=10,192<14,906	>=14,906<25,878	>=25,878<36,866	>=36,866<63,524	>=63,524
£ per annum Maintenance	£13,709.31	£14,546.20	£16,451.95	£17,123.37	£18,798.22	£24,280.85
Pence per day Maintenance	3,755.98	3,985.26	4,507.38	4,691.33	5,150.20	6,652.29

Rotary and Turbine meters

Capacity (scmh)	Rotary ≥28 <57	Turbine <283
£ per annum Maintenance	£350.52	£843.02
Pence per day Maintenance	96.0320	230.9656

Volume converters (Correctors)

	Pence per day	£ per annum
Provision	44.4919	£162.40
Installation	17.9352	£65.46
Maintenance	40.4250	£147.55

Charges are only applied only where a Volume Converter has been installed. Any requests for a Volume Converter to be fitted will be treated in accordance with National Grid's GT Licence and will be quoted on an individual basis.

Dataloggers

	Pence per day	£ per annum
Provision	11.0657	40.39
Installation	49.3699	180.20
Maintenance	74.6795	272.58
Total	135.1151	493.17

The above charges are only applied where a Datalogger has been installed.

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 for which an administration charge is made.

The administration charge which applies to CSEPs containing NDM and DM sites is given in **Table 12**.

Table 12 CSEP Administration Charge

Invoice	Charge Code
ADU	884

Charge per supply point	0.0910 pence per day (£0.33 per annum)
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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 13**. Individual charges depend on the type of allocation service nominated and whether the site is telemetered or non-telemetered.

Table 13 Shared Supply Meter Point Administration Charges (£ per shipper per supply point)

Invoice	Charge Code
ADU	884

Agent Service	Telemetered	Non-telemetered
Set-up charge	£107.00	£183.00
Shipper-shipper transfer charge	£126.00	£210.00
Daily charge	£2.55	£2.96

National Grid NTS Service	Telemetered	Non-telemetered
Set-up charge	£107.00	£202.00
Shipper-shipper transfer charge	£126.00	£210.00
Daily charge	£2.55	£3.05

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 14**. 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 14 Allocation Charges at Interconnectors

Invoice	Charge Code
ADU	884

	Set up charge per shipper	Daily charge per shipper
Agent service	£141.70	£1.62
National Grid NTS service	£141.70	£2.46

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 15** below.

Table 15 Administration Charges for Moffat

Invoice	Charge Code
ADU	884

	Daily charge per shipper
Agent service	£0.00
National Grid NTS service	£0.00

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 [£0.00](#).

Appendix A

NTS Non-Incremental Obligated Entry Capacity

Non-incremental Obligated Entry capacity is the sum of the Licence Baseline capacity adjusted for substitution and legacy TO Entry capacity as shown in the tables below.

Table 16 below details the Licence baseline obligated Entry capacity GWh/day identified in National Grid NTS's Transporters Licence and used as the basis for determination of minimum annual quantities to be offered after 1 April 2013.

Table 17 and Table 18 show Entry capacity Substitution and Legacy TO Entry Capacity, respectively.

Table 16 Licence Baseline Entry Capacity (GWh/day)

Terminal	Baseline Capacity
Bacton	1,783.4
Barrow	309.1
Easington/Rough	1,062.0
Isle of Grain	218.0
Milford Haven	0
St Fergus	1,670.7
Teesside	476.0
Theddlethorpe	610.7
Burton Point	73.5
Hatfield Moor (onshore)	0.3
Hole House Farm	131.6
Wytch Farm	3.3
Barton Stacey	172.6
Cheshire	285.9
Fleetwood	0
Garton	420.0
Glenmavis	99.0
Hatfield Moor (storage)	25.0
Hornsea	175.0
Partington	215.0
Avonmouth	179.3

Terminal	Baseline Capacity
Dynevor Arms	49.0
Burton Agnes (Caythorpe)	0
Winkfield	0
Blyborough (Welton)	0
Tatsfield	0
Albury	0
Palmers Wood	0
Portland	0
Canonbie	0
Moffat	0

Table 17 Entry Capacity Substitution

Terminal	Date when substitution applies	Entry Capacity Substitution GWh/d
Barrow	January 2015	30.91
Teesside	January 2015	-30.91

Table 18 Legacy TO Entry Capacity

Terminal	Date applicable	Capacity GWh/d
Milford Haven	April 2017	650
Milford Haven	April 2017	300
Isle of Grain	April 2017	235.4
Easington	April 2017	345
Hornsea	April 2017	58.1
Fleetwood	April 2017	650
Cheshire	April 2017	64.2
Cheshire	April 2017	192.6
Isle of Grain	October 2015	246.24
Caythorpe	October 2016	90
Hole House Farm	October 2016	165

Appendix B

AMSEC Entry Capacity

Obligated system Entry capacity offered in Annual System Entry Capacity auctions is determined in accordance with National Grid NTS's Transporters Licence.

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.

Appendix C

QCEC 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 Transporters Licence. For periods that are subject to a QSEC allocation, then supply can be further expanded in accordance with National Grid NTS's ECR 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.

Appendix D

QSEC Step Prices 2015

Below are the Entry capacity reserve prices together with the price steps for each level of incremental capacity for use in the March 2015 auction of Quarterly System Entry Capacity (QSEC).

	Bacton	Barrow	Cheshire	Canonbie	Easington & Rough	Fleetwood	Garton	Isle of Grain	Milford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level	0.0089	0.0006	0.0001	0.0025	0.0122	0.0008	0.0122	0.0001	0.0216	0.0451	0.0082	0.0118
2.5%	0.0095	0.0012	0.0002	0.0026	0.0123	0.0009	0.0123	0.0002	0.0217	0.0469	0.0083	0.0120
5.0%	0.0096	0.0013	0.0015	0.0027	0.0124	0.0010	0.0124	0.0012	0.0218	0.0470	0.0093	0.0121
7.5%	0.0097	0.0014	0.0016	0.0028	0.0125	0.0011	0.0125	0.0013	0.0219	0.0471	0.0094	0.0122
10.0%	0.0099	0.0015	0.0020	0.0029	0.0126	0.0012	0.0126	0.0014	0.0220	0.0473	0.0095	0.0125
12.5%	0.0108	0.0016	0.0021	0.0030	0.0127	0.0013	0.0135	0.0015	0.0221	0.0481	0.0097	0.0126
15.0%	0.0109	0.0017	0.0044	0.0031	0.0136	0.0019	0.0136	0.0016	0.0222	0.0487	0.0098	0.0127
17.5%	0.0110	0.0018	0.0045	0.0035	0.0137	0.0020	0.0137	0.0017	0.0229	0.0488	0.0099	0.0128
20.0%	0.0111	0.0019	0.0051	0.0036	0.0138	0.0026	0.0138	0.0021	0.0230	0.0494	0.0103	0.0133
22.5%	0.0112	0.0020	0.0052	0.0037	0.0139	0.0027	0.0139	0.0024	0.0231	0.0495	0.0106	0.0134
25.0%	0.0122	0.0021	0.0053	0.0038	0.0140	0.0028	0.0140	0.0095	0.0232	0.0518	0.0107	0.0135
27.5%	0.0124	0.0022	0.0054	0.0039	0.0141	0.0029	0.0141	0.0096	0.0233	0.0520	0.0108	0.0136
30.0%	0.0134	0.0023	0.0055	0.0040	0.0150	0.0074	0.0142	0.0097	0.0234	0.0521	0.0117	0.0137
32.5%	0.0135	0.0024	0.0056	0.0041	0.0151	0.0075	0.0143	0.0098	0.0235	0.0522	0.0120	0.0138
35.0%	0.0142	0.0025	0.0057	0.0042	0.0152	0.0077	0.0144	0.0099	0.0236	0.0523	0.0121	0.0139
37.5%	0.0148	0.0026	0.0058	0.0043	0.0157	0.0078	0.0145	0.0100	0.0238	0.0524	0.0122	0.0140
40.0%	0.0153	0.0027	0.0059	0.0044	0.0158	0.0079	0.0146	0.0101	0.0243	0.0525	0.0123	0.0141
42.5%	0.0178	0.0038	0.0082	0.0045	0.0165	0.0080	0.0147	0.0102	0.0244	0.0526	0.0124	0.0142
45.0%	0.0181	0.0039	0.0083	0.0046	0.0166	0.0081	0.0148	0.0103	0.0245	0.0527	0.0130	0.0143
47.5%	0.0199	0.0040	0.0084	0.0047	0.0167	0.0082	0.0149	0.0104	0.0250	0.0528	0.0131	0.0144
50.0%	0.0200	0.0041	0.0086	0.0048	0.0168	0.0083	0.0150	0.0110	0.0251	0.0529	0.0132	0.0145
Obligated Level (GWh/d)	1783.4	340.0	542.7	0	1407.15	650	420	699.68	950	1670.7	445.09	610.7

Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level	0.0001	Obligated Level	0.0125	Obligated Level	0.0001	Obligated Level	0.0001	Obligated Level	0.0001
5.1%	0.0002	6.4%	0.0127	7.0%	0.0002	8.4%	0.0002	8.7%	0.0090
10.1%	0.0003	12.9%	0.0128	14.0%	0.0017	16.7%	0.0003	17.4%	0.0091
15.2%	0.0007	19.3%	0.0130	20.9%	0.0020	25.1%	0.0004	26.1%	0.0098
20.2%	0.0008	25.7%	0.0131	27.9%	0.0029	33.5%	0.0005	34.8%	0.0105
25.3%	0.0009	32.2%	0.0132	34.9%	0.0030	41.8%	0.0006	43.5%	0.0108
30.3%	0.0010	38.6%	0.0133	41.9%	0.0031	50.2%	0.0011	52.1%	0.0109
35.4%	0.0011	45.0%	0.0134	48.8%	0.0032				
40.5%	0.0012	51.5%	0.0135	55.8%	0.0033				
45.5%	0.0013								
50.6%	0.0024								
Obligated Level (GWh/d)	296.6	Obligated Level (GWh/d)	233.1	Obligated Level (GWh/d)	215	Obligated Level (GWh/d)	179.3	Obligated Level (GWh/d)	172.6

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level	0.0001	0.0128	0.0078	0.0131	0.0036	0.0001
10%	0.0031	0.0129	0.0079	0.0169	0.0037	0.0002
20%	0.0032	0.0130	0.0080	0.0170	0.0038	0.0003
30%	0.0033	0.0131	0.0081	0.0171	0.0039	0.0004
40%	0.0034	0.0132	0.0083	0.0172	0.0040	0.0005
50%	0.0035	0.0133	0.0084	0.0173	0.0041	0.0006
Obligated Level (GWh/d)	73.5	90	49	99	25.3	3.3

Appendix E

Estimated Project Values (£m)

	Bacton	Barrow	Cheshire	Canonbie	Easington &Rough	Fleetwood	Carton	Isle of Grain	Millford Haven	St Fergus	Teesside	Theddlethorpe
Obligated Level												
2.5%	15.05	0.36	0.05	0.44	15.38	0.46	4.55	0.06	18.23	69.61	3.24	6.51
5.0%	30.10	0.73	1.45	0.89	30.75	0.92	9.10	1.49	36.46	139.21	7.35	13.02
7.5%	45.15	1.09	2.17	1.33	46.13	1.73	13.88	2.24	54.69	209.71	11.03	19.53
10.0%	62.74	1.45	3.86	1.78	61.50	2.31	18.51	2.98	72.92	280.80	14.71	27.13
12.5%	85.55	1.81	4.82	2.22	79.38	2.89	25.18	3.73	91.14	356.94	19.18	33.91
15.0%	102.66	2.18	12.73	2.67	102.00	6.58	30.45	4.48	111.40	433.67	23.01	40.69
17.5%	119.77	2.54	14.85	4.35	119.00	7.68	35.52	6.53	135.28	505.95	26.85	47.47
20.0%	136.88	3.38	19.67	5.12	136.00	12.01	40.59	10.44	154.61	586.53	32.58	57.72
22.5%	156.84	3.81	22.13	5.76	153.00	13.51	45.67	13.43	173.93	661.19	37.72	64.94
25.0%	193.28	4.23	24.59	6.40	170.00	15.01	50.74	59.05	193.26	768.79	41.91	72.15
27.5%	216.09	4.65	27.05	7.04	189.75	16.51	55.82	64.95	212.58	848.93	46.10	79.37
30.0%	254.75	5.07	30.08	7.68	225.00	51.28	61.79	70.86	231.91	927.89	55.51	86.58
32.5%	278.04	5.50	32.59	8.32	245.38	55.55	66.93	76.76	251.24	1007.14	61.68	93.80
35.0%	314.95	5.92	35.10	9.95	266.01	62.25	72.08	82.67	271.74	1084.61	66.43	105.57
37.5%	351.71	6.34	37.60	10.66	294.38	67.56	77.23	88.57	301.28	1162.09	71.17	113.11
40.0%	387.83	6.77	40.11	11.37	314.01	72.06	85.37	94.48	328.12	1239.56	75.92	120.65
42.5%	479.40	19.51	67.21	12.38	350.63	76.57	90.70	100.38	348.62	1317.03	80.66	128.20
45.0%	516.15	20.66	71.16	13.11	371.26	81.07	96.04	106.29	369.13	1394.50	92.52	135.74
47.5%	599.01	21.81	75.11	13.84	391.88	85.57	101.37	114.55	400.86	1471.98	97.66	143.28
50.0%	630.54	23.56	82.92	14.57	412.51	90.08	106.71	136.74	421.96	1549.45	102.80	152.99
Obligated level (GWh/d)	1783.4	340.0	542.7	0	1407.2	650.0	420.0	699.7	950.0	1670.7	445.09	610.7

Hole House Farm		Hornsea		Partington		Avonmouth		Barton Stacey	
Obligated Level		Obligated Level		Obligated Level		Obligated Level		Obligated Level	
5.1%	0.05	6.4%	6.77	7.0%	0.11	8.37%	0.05	8.7%	4.80
10.1%	0.11	12.9%	13.54	14.0%	1.81	16.73%	0.11	17.4%	9.59
15.2%	1.12	19.3%	20.79	20.9%	3.20	25.10%	0.16	26.1%	15.67
20.2%	1.49	25.7%	27.72	27.9%	6.18	33.46%	0.21	34.8%	22.39
25.3%	1.87	32.2%	34.65	34.9%	7.73	41.83%	1.33	43.5%	28.78
30.3%	2.24	38.6%	41.57	41.9%	9.27	50.20%	3.52	52.1%	34.54
35.4%	2.61	45.0%	48.50	48.8%	10.82				
40.5%	2.99	51.5%	56.29	55.8%	12.37				
45.5%	3.36								
50.6%	12.79								
Obligated Level (GWh/d)	296.6	Obligated Level (GWh/d)	233.1	Obligated Level (GWh/d)	215.0	Obligated Level (GWh/d)	179.3	Obligated Level (GWh/d)	172.6

	Burton Point	Caythorpe	Dynevor Arms	Glenmavis	Hatfield Moor	Wytch Farm
Obligated Level						
10%	0.81	4.09	1.36	5.95	0.32	0.001
20%	1.62	8.19	2.72	11.89	0.65	0.002
30%	2.43	12.38	4.07	17.84	0.97	0.004
40%	3.24	16.50	5.78	23.78	1.30	0.005
50%	4.05	20.63	7.23	29.73	1.80	0.006
Obligated Level (GWh/d)	73.5	90.0	49.0	99.0	25.3	3.3

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