nationalgrid

DISCUSSION REPORT

Modification Proposal to the Gas Transmission Transportation Charging Methodology

NTS GCD 09R:

NTS Enduring Exit Capacity Charge Setting

4th February 2010

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EXECUTIVE SUMMARY

NTS charging discussion document NTS GCD 09 set out, for discussion, options for revising the Gas Transmission Transportation Charging Methodology (the "Charging Methodology") in respect of the setting of NTS Exit (Flat) Capacity prices applying from 1st October 2012. This document is issued by National Grid in its role as Gas Transporter Licence holder in respect of the NTS ("National Grid").

Through the Gas TCMF, issues associated with the NTS Exit (Flat) Capacity price setting methodology, to be used from 1st October 2012, were raised;

Issue One - Demands vs. Supplies

The first issue identified was that using baseline plus incremental capacity, for the demand flow data, could potentially create a demand level so high that the modelled supplies would not be able to achieve the required supply/demand balance, resulting in an unworkable methodology.

Issue Two - Price Variability

The second issue identified was the variability of NTS Exit Capacity prices in and around the southern Scottish and Northern DN exit zones, and the Moffat exit point.

This variability occurs when the modelled supplies at St. Fergus are insufficient to meet the higher Scottish and Northern DN, and Moffat modelled demand flows. This is a consequence of reduced St Fergus supplies and baselines plus incremental exit capacity being used to model demand flows. As a result, a greater proportion of supply flows are required from the south of the network to meet the demand further north, leading to higher exit prices.

Issue Three - Baseline may no longer be reflective of "connected load"

In developing GCM05, the intention was to better reflect the "connected load", recognising that the concepts of Firm and Interruptible capacity were no longer applicable. The resultant move towards the use of the baseline plus incremental capacity as the demand flow level may now no longer be reflective of the "connected load". For example, in respect of the DN's, some offtakes are not booked up to the baseline level but other offtake bookings have triggered incremental capacity, with the aggregate baseline plus incremental level being in excess of the forecasted 1-in-20 peak day demand. For Moffat, the aggregate booking level has triggered a significant amount of incremental capacity despite the capability of the downstream infrastructure being far less than the amount of capacity booked.

Gas TCMF Discussions & Options

Following discussions at the Gas Transmission Charging Methodologies Forum (TCMF) between May and September 2010, discussion paper GCD09 was issued to seek views on the merits of a number of options for modelling supply and demand flows within National Grid's Transportation Model.

For the avoidance of doubt, the options identified did not relate to the capacity data used in the *Tariff* section of the Transportation Model which uses Baseline (TO) exit capacity data at all exit points in order to ensure that prices are adjusted so that the implied revenue (price multiplied by capacity quantity) equals National Grids target revenue. Revenue from unsold baseline capacity would continue to be collected from a TO Exit Commodity Charge.

In respect of demand flows, the options identified were;

Option One – Annual NTS Exit (Flat) Capacity Bookings

Option Two – Baseline plus Incremental NTS Exit (Flat) Capacity

Option Three – Forecast (process to be defined / agreed)

Option Four – Maximum Supply Point Offtake Rate (MSPOR)

Option Five – Capability of the downstream facility

Option Six – Zero

It was anticipated that a combination of these options could be applied such that each different offtake type might be modelled by a separate data source.

In respect of beach/UKCS supply flows, the options identified were;

Option One – Ten Year Statement forecast supplies (no change from current method)

Option Two – Baseline supply data

Option Three – Average of Ten Year Statement forecast data

Option Four - Ten Year Statement Forecast Supplies (Data from TYS before the first Y+4 Enduring Annual NTS Exit (Flat) Capacity applications for the relevant gas year)

National Grid received 9 responses on NTS GCD 09; 6 respondents expressed support for waiting prior to raising a UNC Modification Proposal, 3 respondents did not support waiting prior to raising a UNC Modification Proposal.

Copies of the responses have been posted on the Gas Charging Section of the National Grid information website;

http://www.nationalgrid.com/uk/Gas/Charges/consultations/CurrentPapers/

Way Forward

National Grid has now raised a UNC Modification Proposal (UNC 0356) which proposes setting NTS Exit (Flat) Capacity prices based on forecast demand data as the flow data within the NTS charge setting transportation model.

Introduction

1.1 This document is issued by National Grid Gas plc ("National Grid") in its role as holder of the Gas Transporter Licence in respect of the NTS (the "Licence").

1.2 NTS charging discussion document GCD09 set out, for discussion, options for revising the Gas Transmission Transportation Charging Methodology (the "Charging Methodology") in respect of the setting of NTS Exit (Flat) Capacity Charges for the Enduring period i.e. from 1st October 2012 onwards.

1.3 NTS Exit (Flat) Capacity Charges will apply from 1st October 2012 to exit capacity procured in relation to NTS offtakes at Distribution Networks (DN's), and to large loads, storage points, and Interconnectors supplied directly from the NTS.

1.4 The relevant capacity products are;

- Enduring Annual NTS Exit (Flat) Capacity
- Annual NTS Exit (Flat) Capacity
- Daily NTS Exit (Flat) Capacity

1.5 Users can also bid for Daily Off-Peak NTS Exit (Flat) Capacity. This will be a pay as bid auction, with reserve prices published annually, although the reserve price under this methodology will be zero.

Background

Prevailing Arrangements

2.1 NTS Transportation Charges are calculated using National Grid's NTS Transportation Model which calculates capacity prices for each Gas Year.

2.2 Under the prevailing arrangements, which will apply up to 30th September 2012, the Transportation Model is populated with the relevant year's 1-in-20 peak base case supply and demand data, and network configuration (i.e. if setting exit capacity prices for Gas Year 2010/11, the base case supply/demand forecast for 2010/11 and the base network model are used).

2.3 The Transportation Model requires a set of inputs representative of peak 1-in-20 conditions on the transmission system:

- Nodal forecast supply and 1-in-20 peak day demand data (GWh)
  - Distribution Network (DN) and Direct Connection (DC) offtake demands
  - Aggregate System Entry Point (ASEP) supplies
- Transmission pipelines between each node (km)
  - Existing pipelines.
  - New pipelines expected to be operational at the beginning of the gas year under analysis.
- Identification of a reference node.

2.4 The nodal forecast supply data for the Transportation Model used in the prevailing charging methodology is derived from the following sources of supply data:

- The Ten Year Statement is used as the source of supply data for beach supply/UKCS components.

- Physical capability is used for all other supply components (i.e. storage, interconnectors and LNG importation).
- ASEP's are capped at the obligated entry capacity level.
- Section 4.6 of the Ten Year Statement is used to identify relevant new storage or entry/importation points and the year that they are due to become operational. New entry/importation points are only included as available supply in future years if they are under construction.

Original GCM05 Proposal

2.5 National Grid raised, and consulted, on GCM05 – NTS Exit (Flat) Capacity & Exit Reform, on 18th July 2008 in light of responses to discussion document GCD01 (which covered NTS Exit (Flat) Capacity prices, Annual and Daily reserve prices, and UNC Modification Proposals 0195 & 0195AV). GCM05 defined the process for the setting of NTS Exit (Flat) Capacity prices applicable from 1st October 2012.

2.6 GCM05 proposed the adjustment of Exit Capacity charges and reserve prices to recover the total TO Exit Capacity target revenue through NTS Exit (Flat) Capacity charges.

2.7 GCM05 proposed that the modelled flow and capacity data would be based on Prevailing/Enduring NTS Exit (Flat) Capacity holdings i.e. bookings. Physically bi-directional system points[1] would be assumed to be in supply mode and hence would have a zero exit flow. Sites where incremental capacity had been released would have the capacity level (but not the flow level[2]) capped at the obligated level as this is the level of capacity that represent TO revenue. Capacity in excess of this level represents SO revenue.

Ofgem's Concerns

Charges Foregone

2.8 In its 19th January 2009 decision on 0195AV, Ofgem observed that due to "charges foregone" becoming part of TO revenues (instead of SO) shippers booking firm exit capacity would bear all the cost of revenue foregone through increased exit charges.

2.9 "Charges Forgone" are defined within the Licence as those NTS Exit Capacity charges that Interruptible supply points would pay if they were Firm.

2.10 Charges Forgone are (up to exit reform) included within the NTS Licence as SO allowed revenue and as TO actual (collected) revenue i.e. an increase in SO allowed revenue is cancelled out by an effective reduction in TO allowed exit revenue.

2.11 Post Exit Reform there would be no Charges Foregone.

- If all 'interruptible' demand converted to firm, in theory this would mean that NTS Exit (Flat) Capacity charges could remain unchanged.
  - In practise there may still be a change in prices as a consequence of the geographical redistribution of costs caused by higher supplies required to meet higher demand within the model.

[1] BBL, which only has interruptible commercial exit services, is modelled as zero exit flow for price setting purposes.

[2] The flow level is used within the Transportation Model to determine the long run marginal cost (LRMC) whereas the capacity level is used in the determination of the revenue adjustment factor which ensures that charges recover the target TO revenue.

- If all 'interruptible' demand utilised off-peak capacity, this could mean that NTS Exit (Flat) Capacity charges would increase.
  - This would be avoided by setting NTS Exit (Flat) Capacity charges to recover TO allowed exit revenue from baseline exit capacity levels, rather than bookings, and recovering the costs associated with unsold baselines through commodity charges, as a baseline was set for all interruptible sites.

Connected Load

2.12 In its decision on 0195AV, Ofgem also observed that the demand flows (used within the *Transport* section of the Transportation model) should be more representative of the "connected load" which bookings, at the time of setting prices, might not be as they would not take into account the potential use of daily products. It should be noted that daily bookings would not be known at the time of setting prices.

Revised GCM05 Proposal

2.13 After discussion with the industry via the Gas TCMF, National Grid raised a re-consultation on GCM05 on 23rd January 2009 containing revised proposals. The revised proposals for GCM05 were to model and adjust exit capacity charges using baseline exit capacity. As a consequence of this revised proposal, if baseline capacity sold out then target revenue would be recovered through exit capacity charges. If baseline capacity did not sell out, revenue associated with unsold baseline capacity would be recovered through a TO Exit (Flat) Commodity charge component, which was also proposed via GCM05. These arrangements aimed to ensure:

- More stable charges in that Baselines were not expected to change significantly or often
- Exit points relying on the off-peak product would attract a more appropriate level of TO costs
- Greater transparency of numbers used for charge setting as a result of baseline capacity being published in the public domain

Revenue associated with unsold exit capacity would be recovered through a TO Exit Commodity charge

2.14 Potential problems have since been identified with the modelled demand flows (the higher of the baseline or baseline plus incremental flow value), as a result of the July 2009 and 2010 exit capacity application windows namely:

- Total modelled demands may be greater than available supplies
- Price variability
- Exit Baselines may no longer reflect "connected load"

Issues

3.1 Through the Gas TCMF, issues associated with the methodology to be used from 1st October 2012 were raised and the TCMF subsequently requested a review of the methodology principles and objectives.

Issue One - Demands vs. Supplies

3.2 The first issue identified was that the use of baseline plus incremental capacity for the demand flow data would create a demand level so high that the modelled supplies would not be able to achieve the required supply/demand balance, resulting in an unworkable methodology.

Issue Two - Price Variability

3.3 The second issue identified was the variability of NTS Exit Capacity prices in the southern Scottish and northern DN exit zones, and the Moffat exit point.

3.4 This variability occurs when the modelled supplies at St. Fergus are insufficient to meet the higher Scottish and Northern DN, and Moffat modelled demand flows. This is a consequence of reduced St Fergus supplies and baselines plus incremental exit capacity being used to model demand flows. As a result, a greater proportion of supply flows are required from the south of the network to meet the demand further north, leading to higher exit prices.

Issue Three - Baseline may no longer be reflective of "connected load"

3.5 In developing GCM05, the intention was to better reflect the "connected load", recognising that the concepts of Firm and Interruptible capacity were no longer applicable. The resultant move towards the use of the baseline plus incremental capacity as the demand flow level may now no longer be reflective of the "connected load". For example, in respect of the DN's, some offtakes are not booked up to the baseline level but other offtake bookings have triggered incremental capacity, with the aggregate baseline plus incremental level being far in excess of the forecasted 1-in-20 peak day demand. For Moffat, the aggregate booking level has triggered a significant amount of incremental capacity despite the capability of the downstream infrastructure being far less than the amount of capacity booked.

Options Identified

Demand Flow Options

4.1 A number of options for the demand flows that could be used in the Transportation Model have been identified.

4.2 For the avoidance of doubt, the options identified do not relate to the capacity data used in the *Tariff* section of the Transportation Model, which uses Baseline (TO) exit capacity data at all exit points in order to ensure that prices are adjusted so that the implied revenue (price multiplied by capacity quantity) equals National Grids target revenue. Revenue from unsold baseline capacity would continue to be collected from a TO Exit Commodity Charge.

Option One – Annual Capacity Bookings

4.3 Shippers and DNO's can apply for additional Enduring Annual NTS Exit (Flat) Capacity in Gas Year Y, via either of two processes, which are detailed in UNC (TPD Section B3.2). These processes allow applications:

- Within the Annual Application Window for Gas Year Y+4 onwards – held in July of each year; and
- Outside of the Annual Application Window (sometimes referred to as "ad-hoc" applications) for Gas Years Y to Y+4 – permitted at any time from 1st October to 30th June in each year.

4.4 Shippers and DNO's can also apply for Annual NTS Exit (Flat) Capacity which is not Enduring Annual NTS Exit (Flat) Capacity for Gas Year Y+1, Y+2 and Y+3 during the Annual Application Window held in July of each year (Gas Year Y).

Option Two – Baseline plus Incremental Capacity

4.5 The Baseline plus Incremental Capacity was implemented as a result of the GCM05 re-consultation. This represents the level of capacity that National Grid is obliged to make available.

Option Three – Forecast

4.6 Forecasted demand is used for the demand flows within the Transportation Model and will remain so until 30th September 2012. There may be issues concerning the source, processing and transparency of forecast data to be used in any change to the Charging Methodology.

Option Four – Maximum Supply Point Offtake Rate (MSPOR)

4.7 The MSPOR is the instantaneous rate of offtake which National Grid NTS has determined to be the maximum instantaneous rate at which it is feasible to make gas available for offtake at the Daily Metered Supply Point Component.

4.8 Where one MSPOR has been provided for a site with multiple supply point components it indicates what can be off-taken in aggregate across all the supply point components at that site. The aggregate MSPOR cannot necessarily be flowed against an individual supply point components in this scenario.

Option Five – "Capability" of the downstream facility

4.9 In trying to identify an option which is in line with the concept of "connected load", it might be possible to define three points of flow "capability".

1. What the NTS can flow i.e. the Baseline.
2. What the offtake can flow i.e. the MSPOR.
3. What the facility, downstream of the offtake, can flow or take.

4.10 It may be that arriving at a figure which is commensurate with the "capability" of the downstream facility is easier for some types of offtake than others.

Option Six – Zero

4.11 Zero is currently used for modelling demand flows at Storage and Bi-directional Interconnectors[3] in order to avoid double-counting of costs when setting entry and exit capacity prices, and because they are expected to operate in entry mode during peak days.

4.12 The option of adopting a combination of these data sources should be considered such that the most appropriate data source is used for each offtake type.

Supply Flow Options

4.13 Options identified for the beach/UKCS supply flows, used in the process of matching supplies to demand, have been identified, and are as follows:

Option One – Ten Year Statement Forecast Supplies

Option Two – Supply at Baseline/Obligated Entry Capacity Levels

Option Three – Average of Ten Year Statement Forecast Supplies

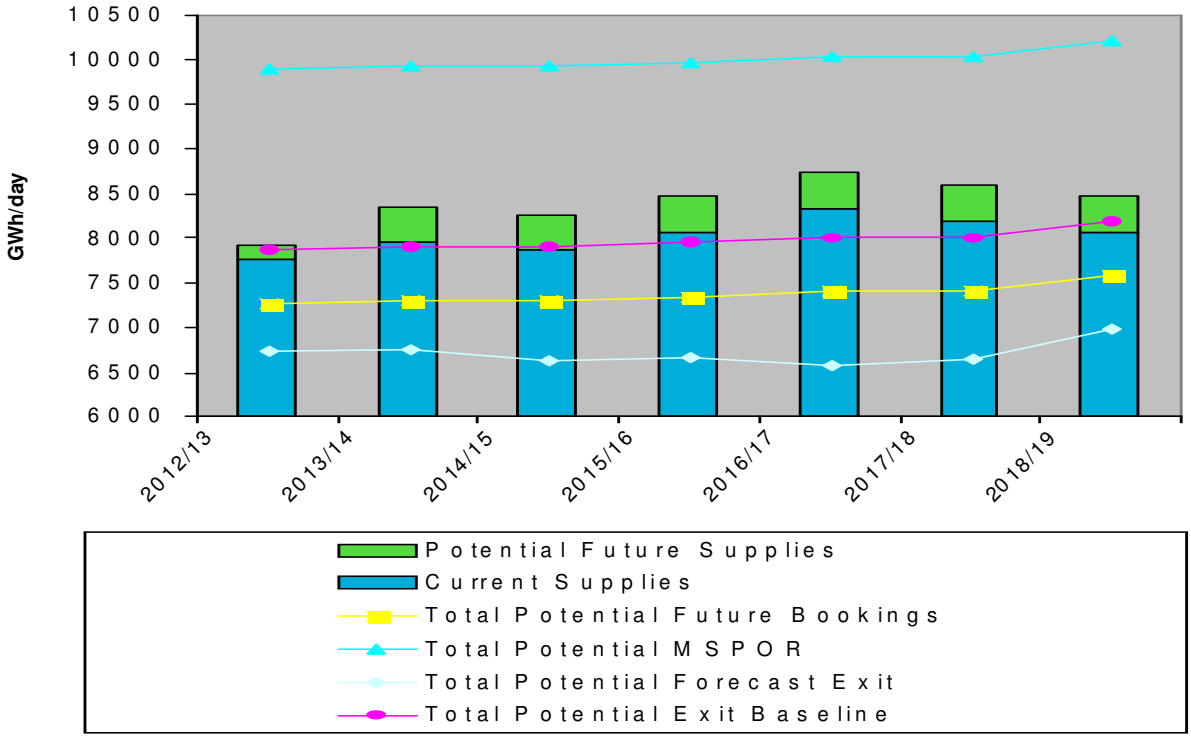
Option Four – Ten Year Statement Forecast Supplies ~ Data from TYS ahead of the first Y+4 Enduring Annual NTS Exit (Flat) Capacity applications for the relevant gas year

[3] Both the ICUK, which is physically bi-directional, and BBL, which only has interruptible commercial exit services, are modelled as zero exit flow for price setting purposes.

Discussion - Initial Assessment of Options

Issue One – Demands vs. Supplies

5.1 The graph below shows the potential aggregate level of each of the demand flow options identified, excluding Zero (Option Six), compared to aggregate current supplies plus any potential additional future supplies for the gas years 2012/13 to 2018/19. Potential supply and demand data is based on forecast new connections and developments consistent with the ten year statement forecast.



5.2 The use of Annual Capacity Bookings (Option One), as the modelled demand flow, reduces the risk of there being insufficient supplies to meet the demand flow level. There may be issues around the use of Daily Firm and Off-Peak capacity as well as the possibility that bookings and reductions of Annual NTS Exit Flat Capacity made in the final application window in July might not be captured in the setting of actual prices for the following gas year.

5.3 The use of the Baseline plus Incremental Capacity (Option Two), as the modelled demand flow, increases the risk of creating an aggregate demand flow level which is in excess of modelled supplies. However, this approach might better reflect the use of Daily Firm and Off-Peak capacity.

5.4 The use of Forecast (Option Three), as the modelled demand flow, creates the lowest aggregate demand flow level of all the options identified so far, and provides the lowest risk of there being insufficient supplies to meet demand. This might be viewed as more reflective of the likely maximum flow.

5.5 The Maximum Supply Point Offtake Rate or “MSPOR” (Option Four) creates the highest aggregate demand flow level of all the options identified so far resulting in insufficient supplies to meet demand, and an unworkable methodology.

5.6 Currently, and for the Enduring exit regime from 1st October 2012, Storage and bi-directional Interconnectors are modelled with zero flow (Option Six) in the Transportation Model. For these sites the capacity data is used in the process of calculating the revenue adjustment factor. These sites are modelled at zero to avoid double-counting of costs when setting entry and exit capacity prices, and because they are expected to operate in entry mode during peak days.

5.7 It could be argued that zero flow for these sites is probably appropriate when setting all other exit prices, however this might need to be reviewed if significant exit costs are identified in relation to firm exit capacity at these sites. An alternative approach may be to have a separate off-peak scenario to model these sites flowing.

5.8 The use of supply baselines would ensure sufficient supply flows in the Transportation Model to meet all of the modelled demand flows, except for those modelled on MSPOR (Option Four). However, it is questionable as to whether increasing supply flows as a result of the use of entry baselines is appropriate as:

- This may not be reflective of physical gas deliverability.
- This may represent a move away from reality in supplies in order to meet a move away from reality in respect of demand i.e. the implied increase in demand flows resulting from the use of bookings or baselines plus incremental capacity as the modelled flow.

Issue Two – Price Variability

5.9 As highlighted in paragraphs 3.3 and 3.4, there has been considerable variability of NTS Exit Capacity prices in the southern Scotland and northern England DN Exit Zones, and the Moffat exit point.

5.10 Appendix B, Graph 1, shows the effect of various modelled demand flows for the Moffat Exit Point and various St. Fergus supply flows on exit capacity prices for the exit point.

5.11 Appendix B, Graphs 2-4, shows the effect of various modelled demand flows for the Moffat Exit Point and various St. Fergus supply flows on the exit capacity prices for the DN Exit Zones.

5.12 Using supply baseline/obligated capacity levels may reduce the variability of exit capacity prices depending on the level of LNG importation required.

5.13 Averaging TYS data may reduce variability by smoothing out peaks and troughs in forecast supply flows for each relevant gas year.

5.14 Using the TYS data prior to the first Y+4 Enduring Annual NTS Exit (Flat) Capacity application for the relevant gas year and continuing to use this for that year should ensure greater price stability and certainty post application.

5.15 Consistency between the entry and exit capacity price setting methodologies would need to be considered.

Issue Three – Exit Baselines may no longer be reflective of "connected load"

5.16 As outlined in paragraph 3.5, the exit Baseline figures may no longer be reflective of the connected load. The following table outlines National Grid's initial view of the merits of each identified option for modelling demand flows by offtake type.

*All figures 2012/13 unless otherwise stated	Zero	Bookings	Highest of Baseline / Incremental	Forecast Demand	MSPOR	Capability
Direct Connects	Deemed to be flowing	Bookings 1675 GWh/d	BL / Inc 1805 GWh/d	Forecast 1633 GWh/d	MSPOR[1] 2175 GWh/d	Unable to arrive at a figure different to MSPOR
Distribution Networks	Deemed to be flowing	Bookings 4997 GWh/d	BL / Inc 5465 GWh/d	Forecast 4344 GWh/d	MSPOR[1] 7299 GWh/d	Unable to arrive at a figure different to MSPOR
Storage	NTS Supply @ peak	NTS Supply @ peak				
Bi-Dir Interconnectors	NTS Supply @ peak	NTS Supply @ peak				
Moffat	Deemed to be flowing	Booking 529 GWh/d	BL / Inc 529 GWh/d	Pk Forecast[2] 381 GWh/d Historical Peak 292 GWh/d	MSPOR	Max Capacity[3] 344 GWh/d Forecast of Tech.Cap[4] 339 GWh/d

Least Viable **Problematic** **Most Viable**

[1] Aggregate MSPOR's as of August 2010.

[2] Peak Forecast Demand of any year up to 2024.

[3] Current estimates of Physical Capacity (into Ireland) under normal operating conditions (GasLink Website).

[4] Forecast of Tech. Capacity = Max capacity that can be made available to Shippers at the point for the first gas day of the gas year (GasLink Website).

5.17 Zero is currently used for modelling demand flows at Storage and Bi-directional Interconnectors in order to avoid double-counting of costs when setting entry and exit capacity prices, and because they are expected to operate in entry mode during peak days; however, as outlined above, this might need to be reviewed if significant exit costs are identified in relation to firm exit capacity at these sites.

5.18 For the Direct Connects, modelling demand flows on bookings might be a possibility although this may present some issues as previously raised by Ofgem in respect of the use of Daily and Off-Peak Capacity. The use of Baseline plus Incremental was chosen in order to address this problem and may still have merit, although the number is so large that it may contribute to the supply / demand modelled flow issues outlined earlier in this discussion document. Forecast demand may also be appropriate in that it could be more consistent with actual system usage as not all power generation plant will be operating at the same time. MSPOR presents problems in that it is an indication of the maximum capability at the point of offtake as well as being a very high number.

5.19 For the DN's, National Grid believes that the bookings are reflective of their requirement to meet their 1-in-20 peak day obligations. Baseline plus incremental raises issues. In moving their flows from one offtake to another some offtakes have not been booked up to the baseline level and others have seen incremental capacity therefore raising the aggregate level so high that supply / demand flow issues start to arise. Forecast demand may be appropriate, subject to clarifications over the demand forecasting process, in that there may be agreement between the DN's and National Grid NTS over what is actually expected to flow. The MSPOR for the DN's is much higher than any of the other options and will create supply /demand issues in the model.

5.20 The Moffat booking level and the baseline plus incremental are the same. This high level of aggregate bookings may be indicative of a move away from, and therefore, not reflective of, the flow that the Moffat pipeline and/or downstream network can accommodate.

5.21 The prevailing use of TYS forecast supply data most closely reflects the physical gas deliverability of connected supplies; however, as previously discussed in this document, variations in forecast supplies have a significant impact on exit price variability.

Summary of Responses

National Grid received 9 responses on NTS GCD 09; 6 respondents expressed support for waiting prior to raising a UNC Modification Proposal, 3 respondents did not support waiting prior to raising a UNC Modification Proposal.

AEP	Association of Electricity Producers
BGE	Bord Gais Energy
BGT	British Gas Trading Limited
EDF	EDF Energy
EON	EON UK plc
Gaslink	Gaslink Independent Systems Operator Limited
MEL	Mutual Energy Limited
SGN	Scotia Gas Networks Limited
SSE	Scottish & Southern Energy plc

General Responses

MEL – "MEL is of the opinion that the demand inputs to National Grid's Transportation Model in calculating tariffs for the period Gas Year 2012/13 onwards are unrealistic and therefore causing the 150 fold price increase from 0.0001p/pdkWh/day to 0.0154 p/pdkWh/day for exit capacity at Moffat".

MEL – "MEL feels the incremental plus baseline booked capacity values should not be used to feed into the Model for peak flow demand…"

MEL – "The value of 529 GWh/day as the current booked capacity at Moffat from 2012 is due to the NTS Exit Reforms process of allocating enduring rights to current Shippers which wrongly reflects user commitment from 2012 onwards. Shippers who now hold this capacity via the enduring rights may actually relinquish capacity nearer the time due to downstream Shippers switching between NTS Suppliers/Shippers. This means there could be double counting in booked capacity on the NTS at Moffat for the period 2012 onwards."

MEL – "MEL suggests that peak flow demand data at the Moffat Interconnector point should be used which reflects more closely actual gas flows and which therefore provide more price stability. All demand flow information to be used by the Transportation Model for calculation of tariffs should be reflective of forecast flows while taking into consideration capabilities of the downstream system".

MEL – "Forecast flows for the next ten years can be obtained annually from the Joint Capacity Statement for the downstream system at Moffat".

MEL – "MEL supports a target implementation date of May 2011 ahead of the next exit application window to enable a more realistic exit tariff to be realised in Gas Year 2012/13".

SSE – "SSE believe that the change options raised in this consultation paper may lead to future unknown unintended consequences that will require further amendments to the charging methodology. We also have concerns that treating Direct Connect exit points in different ways may be unduly discriminatory".

SSE – "SSE believe that before implementing any of the proposed charging options described in this discussion document, we should wait to allow two things to happen to enable a more accurate

view of exit capacity (demand) requirements. One is that exit substitution should be implemented to enable the transfer of unbooked capacity to incremental points. The second is for the surrender of unwanted exit capacity in July 2011 prior to the commencement of the enduring exit regime in October 2012. If this does not remedy the issues then SSE would welcome a review to consider an alternative charging methodology along the lines described above".

BGE – "…it is evident that using baseline + incremental has led to an over-inflated exit charge due to unrealistic demand signal received".

BGE – "BGE is of the opinion that he most accurate data that should be used is that of forecast peak demand data at Moffat which is published annually each year in the Joint Gas Capacity Statement between the regulatory authorities in Ireland".

BGE – "BGE would strongly support a target implementation date of 1st May 2011 in anticipation of tariffs being revised thereafter to more realistic levels.

Gaslink – "In our view, the regime is not providing capacity demand signals as intended and the baselines and enduring capacity holding are not representative expected peak day flows (certainly in the case of Moffat)".

Gaslink – "As a general rule we believe that the demand and supply data used for exit setting purposes should represent, as closely, as possible the reasonable expectation of peak day flows, as this will be consistent with the overall objective that charges should reflect the costs imposed on the system. For the Moffat exit point, demand data based on forecast flows best meet this criterion".

Gaslink – "We do not believe that the other options for demand data sources set out in the consultation documents are appropriate for Moffat, as they would result in inflated peak day flow assumption. As the consultation document acknowledges…capacity bookings for Moffat (and other multi-shipper sites) under the reformed exit regime are unrealistically high – in our view this rules out approaches based on bookings or baseline plus incremental capacity. Likewise, we believe that figures based on capability of either the NTS or the downstream facilities would result in excessive flow assumption".

Gaslink – "It is important to address these pricing issues ahead of the 2011 application window, as the indicative prices drive user commitment levels and can therefore influence booking behaviour in the window".

Gaslink – "On the supply side, we believe that the Ten Year Statement is the appropriate source of supply flow data for exit capacity price setting and further, we believe it would be appropriate to average supply data from a number of Ten Year Statements to dampen exit price volatility. We think that the alternative, use of baseline or obligate entry capacity data , would not properly reflect expected entry flows".

EON – "E.ON UK believes care must be exercised when considering changing the exit charging arrangements at this time. Whilst we did not support the proposals put forward by National Grid NTS under GCM 05, we consider that the impact of both exit capacity substitution and the potential surrender of exit capacity in 2011 needs to be first taken into account, before considering further changes. In terms of the current arrangements, we believe the current arbitrary nature of baselines is a fundamental problem, since these are simply commercial numbers agreed between NG and Ofgem and do not necessarily reflect physical capability".

EON – "Using forecast demand flows would seem to be the most immediate solution to the demand vs. supply imbalance, but using this would introduce a level of uncertainty for Users, since it relies on the accuracy of National Grid's forecasting".

EON – "In respect of supply, TYS forecast supplies seem appropriate to use as it is an industry accepted and easily accessed data source".

EON – "We do not support the suggestion in the discussion paper that individual exit points could be modelled using different data sources. This is likely to give rise to undue discrimination between Users in the charging arrangements".

EON – "We consider it remains appropriate to continue to set flow to zero for storage offtakes and bi-directional interconnectors since these are expected to be entering gas at the time of peak".

National Grid's View

Some respondents suggested that there may be some benefit in waiting for the 2011 NTS Exit (Flat) Capacity reduction window before raising a charging methodology proposal; however, the level of obligated (baseline plus incremental) capacity would not be reduced as a result of capacity reductions.

Some respondents to GCD09 suggested that there may be some benefit in waiting for the impact of the application of NTS exit capacity substitution following the 2011 NTS Exit (Flat) Capacity application window before raising a charging methodology proposal. The potential benefit could be a reduction in the aggregate demand level which might allow supplies to meet demand. The aggregate level of obligated (baseline plus incremental) NTS Exit (Flat) Capacity would only reduce as a result of unsold NTS Exit (Flat) Capacity being substituted for incremental NTS Exit (Flat) Capacity with a high exchange rate. This seems unlikely to have a significant impact on the aggregate level of obligated NTS Exit (Flat) Capacity given the level of unsold capacity and the potential for incremental NTS Exit (Flat) Capacity. It should be noted that if NTS exit capacity substitution occurred with a one to one ratio then there would be no change in the aggregate obligated NTS Exit (Flat) Capacity level as a result of incremental capacity being met through substitution.

Detailed Responses by Discussion Question

Q1 For each offtake type, which data source do respondents consider to be the most appropriate source of demand data for modelling flows within the Transport section of the Transportation Model?

- DN Offtakes
- DC Offtakes
- Storage Offtakes
- Bi-directional Interconnectors
- Exit only Interconnectors

Respondents Views (Q1)

SGN – "For all the offtake types listed above the most appropriate data source should be the Enduring and Annual Exit (Flat) Capacity Bookings. Using this data source would reflect confirmed capacity flows on the system".

EDF – "At this stage, we do not believe that a case has been made that the current methodology is inappropriate, and so, the baseline plus incremental capacity method provides the most appropriate model at this time". "We would also note those baselines (and any incremental capacity triggered) represent the obligations on National Grid regarding capacity delivery. With the introduction of exit capacity substitution, we believe that baselines will become more reflective of connected load over time. We therefore believe that it is appropriate that National Grid charges on this basis as it represents the assets in the ground and the obligations that National Grid has to meet".

BGT – "We consider forecast demand to be the most appropriate choice for DN and DC offtakes and for Exit only interconnectors. A demand of zero is likely to best fit with likely storage and bi-directional interconnector flows but in the case of the latter it will be necessary to closely monitor flow direction as this may change in the future". "Arguably, every exit point assumed to have a zero demand ought to have a minimum/zero exit capacity charge"

AEP – "The Association would be concerned about supporting any changes to the current arrangements without a more holistic understanding the issues to be addressed a full range of options and possible short and longer term consequences of any changes.

AEP – "We consider it remains appropriate to continue to set flow to zero for storage offtakes and bi-directional interconnectors since these are expected to be entering gas at the time of peak.

AEP – "We feel a robust case is yet to be made for applying different types of flow data to the three other types of offtake and consider that any proposal would have to demonstrate that it is not unduly discriminatory. However given the availability of forecast technical capacity data at the Moffat entry point to the Irish System there may be a case for using a different value which would be reinforced when bundled products need to be made available at this point. The current high level of baseline plus incremental seems to be a manifest of implementation of the enduring regime rather than a genuine requirement for capacity well in excess of that which can be entering into the Irish system".

AEP – "With regard to DC and DN offtakes both have baselines, based on data at a point in time, and bookings which may be at or below the baseline level with some offtakes signalling for incremental capacity. Given that DNs have meshed networks they have been able to move bookings around in response to price signals whilst DCs are less able to do this. However DNs can book annual or daily capacity at any offtake up to the baseline in a similar manner to shippers at DC offtake points. In addition DNs can request to swap flows between offtakes, whereas DC shippers cannot do this. On this basis we feel the case is yet to be made for using different data for flows at these offtake types".

AEP – "The document seems to lean toward the use of forecast data at DN offtakes but GCM05 was implemented to move from forecast data to baselines data to improve cost reflectivity. However it could be argued that forecast data for the peak day better represents connected load at peak than baseline plus incremental, but would this really be more cost reflective of the network in place? The use of forecast data also reduces transparency of process and Users ability to model charges. We consider there need to be further debate over whether network capability or connected load is important in determining cost reflective charges.

AEP – "However if forecast demand were to be used for DN offtakes and / or DC offtakes further thought would need to be given as to how this is allocated between DN offtakes and DC offtakes, for instance would all DC offtake be pro-rated according to bookings as seems to be proposed for DN offtakes in Appendix A".

National Grid's View

The prevailing methodology for setting NTS Exit (Flat) Capacity charges from 1st October 2012 uses baseline plus incremental capacity (obligated capacity), for the demand flow data. It was highlighted that this could create a demand level so high that the modelled supplies would not be able to achieve the required supply/demand balance, resulting in an unworkable NTS charging methodology. This has proved to be the case as a consequence of the level of obligated capacity triggered and the updated 2010 Ten Year Statement supply data.

Bookings data may not be reflective of the connected load as Users may rely on annual capacity booked in the July application window, daily capacity or off-peak capacity, which would not be known at the time of capacity price setting. This may result in Users at those points not paying an appropriate proportion on NTS costs.

National Grid believes that for DN offtakes, Moffat and bi-directional sites, the forecast demand best reflects the connected peak load. In respect of the DN's, some offtakes are not booked up to the baseline level but other offtake bookings have triggered incremental capacity, with the aggregate baseline plus incremental level being in excess of the forecasted 1-in-20 peak day demand. Forecast demand is used within the National Grid planning and investment process and hence is consistent with the requirement that the charging methodology reflects the costs incurred.

For bi-directional sites with physical entry capability (storage, IUK, and BBL) the forecast is zero, as these sites are forecast to be in 'supply mode'.

For other directly connected (DC) offtakes (NTS Power Generation & Industrials) National Grid believes that a forecast based on the obligated (baseline plus incremental) capacity level other than where DC sites have not been commissioned or have been decommissioned would best reflect the connected load due to the nature of the relationship with the end consumer.

Using this forecast data would ensure that a supply and demand match could be achieved for charge setting purposes. Subject to the approval of a Modification Proposal, National Grid could publish an undiversified NTS forecast 1-in-20 peak day demand in the Ten Year Statement from 2011, consistent with the proposal, to match the Charging Methodology.

Q2. Do respondents consider alternative sources of demand data to be more appropriate?

Respondents Views (Q2)

SGN – "No".

EDF – "We believe that National Grid has identified the appropriate sources of demand data, but note that, at this stage, the case has not been made for changing the methodology".

BGT – "We consider the data identified in Q1 to be appropriate".

Q3. For Beach/UKCS, which data sources do respondents consider to be most appropriate to use exit capacity charge setting purposes?

- Obligated Entry Capacity
- Ten Year Statements

Respondents Views (Q3)

SGN – "Consistent with GCM 05 discussions, the Ten Year Statement is more appropriate.

EDF – "We continue to believe that the methodology, implemented by GCM16 in October 2009, remains the appropriate methodology".

BGT – "Of the two options above, we believe that data from the Ten Year Statement would better reflect likely supply patterns; we do not believe that obligated entry capacity would necessarily correlate well with peak supply flows unless Q1 and Q4 bookings were generally very close to baseline levels".

AEP – "The Association recognises that small fluctuations in supply forecasts can on occasion cause large fluctuations in exit charges even in cases where the supply fluctuations are reported to be 'in the noise' so some change to improve stability in charges may be appropriate whilst recognising the difficulties in determining where gas will enter the system on a peak day and to take account of the evolving nature of supplies to the UK".

National Grid's View

National Grid welcomes support for the use of Ten Year Statement (TYS) Supply data but recognises that variation in this data is a potential source of price variability. The TYS data is used within the National Grid planning and investment process and hence is consistent with the requirement that the charging methodology reflects the costs incurred. National Grid will seek to develop further options for limiting the impact of supply data on price variability.

Q4 Do respondents consider averaging supply data from a number of Ten Year Statements to be an appropriate approach to dampening exit price volatility?

Respondents Views (Q4)

SGN – "Yes, the use of several TYS would help to reduce the volatility but this option may require some further discussion to understand fully the implications on the price and the avoidance of any major step changes."

EDF – "We do not believe that averaging Ten Year Statement data is appropriate, as this fails to reflect developments in the Transportation business".

BGT – "We see merit in this approach…"

AEP – "This may help reduce volatility, but more analysis is required to fully appreciate this".

National Grid's View

National Grid will seek to provide further analysis on this issue to support any future consultations on the supply data used within the Charging Methodology.

Q5 Do respondents consider using data from the Ten Year Statement at the time of the first (Y+4) Enduring Annual NTS Exit (Flat) Capacity application for the relevant gas year to be appropriate?

Respondents Views (Q5)

SGN – "This proposal needs more consideration and there needs to be more discussion of the alternatives. The danger is that relative exit charges are based on out-of-date supply and demand patterns and in particular that changing supply flows are not reflected in charges as soon as they could be".

EDF – "We do not believe that this is appropriate, as it fails to take into account developments in the Transportation business".

BGT – "We are not convinced that this will be beneficial in terms of providing a set of adequately cost-reflective charges".

AEP – "The Association considers further thought needs to be given to this approach, particularly with respect to cost-reflectivity. Should this reflect the network at the time of any investment decision by NG or should the charges relate to the network at the time of gas flow. This approach may also risk elements of the TYS forecast which turned out to be at significant variance with outturn, the commissioning of a new ASEP, for example, persisting in the charging methodology".

National Grid's View

National Grid will seek to provide further analysis on this issue to support any future consultations on the supply data used within the Charging Methodology. This option may have the potential to reduce price volatility but further analysis has been requested. Using the data from the time of the relevant investment decisions relating to NTS Exit (Flat) Capacity may be more cost reflective.

Q6. Do respondents consider alternative sources of supply data to be more appropriate?

Respondents Views (Q6)

SGN – "No".

EDF – "We believe that the current data sources, as implemented by GCM16 in October 2009, are appropriate".

BGT – "We have not identified any other sources of data".

AEP – "The Association also considers the approach to supply / demand balancing established by GCM16 should also be considered".

Q7: Do respondents support either a target implementation date of 1st May 2011 (ahead of the next exit application window) or an alternate implementation date?

Respondents Views (Q7)

SGN – "The implementation date seems a little tight given the approval process. A more achievable date may be 1st October 2011".

EDF – "Given the launch of Project TransmiT, we believe that no changes should be progressed until the outcome of this review is known and the implications (if any) for gas charging is understood. This would suggest that an implementation date of 1 October 2011 may be appropriate. This would allow National Grid and the industry to ensure that any changes are co-ordinated and so limit the risk to industry and consumers. Further, as the issues identified by National Grid do not take effect until 2012, this does not need addressing immediately".

BGT – "Our strong preference would be to allow sufficient time for a thorough assessment of alternative approaches in order to address the concerns. Also, it is unclear at this time what influence or impact Ofgem's Project TransmiT might have on exit charging, and charging in general so it is strongly advisable to allow more time for any revision of the methodology. In particular, we believe that the location of new CCGT power stations, and utilisation of existing ones, could possibly be influenced by changes to electricity transmission charges and that there may be consequential impacts on the dynamics of the gas transmission system. It might also be instructive to wait and see how NTS exit capacity bookings "settle down" following the July 2011 capacity reduction window".

AEP – "…this implementation timescale may be premature"

National Grid's View

Through GCD09, National Grid highlighted that the NTS Exit (Flat) Capacity Charging Methodology could become unworkable due to increases in Obligated (baseline plus incremental) NTS Exit (Flat) Capacity, the modelled demand flows, and reductions in Ten Year Statement (TYS) forecast supplies, the modelled supply flows. This has occurred as a result of the capacity application processes and the 2010 TYS data. As a consequence, National Grid will seek to progress development of a revised charging methodology based on the earliest reasonable timescales.

A timescale has been identified which may allow consultation from March 2011. This would allow National Grid to either issue indicative charges on 1st May 2011, based on a charging methodology that had a UNC Panel recommendation, or issue indicative charges on 1st June, based on an approved charging methodology, if approved within the 5 week target decision window. If this timescale could not be met then a timely decision would have to be made on the basis for setting indicative NTS Exit (Flat) Capacity prices from 1st May 2011 ahead of the July 2011 application window. Indicative charges are required as part of the User Commitment process. While indicative prices do not need to be set based on an approved methodology, ideally this would be the case.

Q8: What further analysis would respondents like to be included with any future consultation?

Respondents Views (Q8)

SGN – "In the interest of obtaining a fuller understanding of the proposed changes it would be helpful to describe how the Supply and Demand inputs to the Transportation model are determined at the moment. This would provide help in evaluating the changes which are being proposed".

EDF – "As previously noted, any short listed proposals should be subject to stress testing under different scenarios to ensure that they will not require further modification in the near future. In addition analysis of actual volatility in charges year on year would be beneficial – this should cover all exit points in GB, cover both pre and post GCM16 time periods and show year on year volatility as a percentage".

BGT – "We would be very interested in a further exploration of the averaging approach".

AEP – "It would be helpful if NG could provide a breakdown of revenue recovery from different offtake types for each scenario / year, in absolute or percentage terms. Clearly assumptions would need to be made to achieve this but bookings at baseline or 'expected' bookings could provide two scenarios".

National Grid's View

National Grid will seek to provide further analysis to support future consultations.

Way Forward

National Grid has now raised a UNC Modification Proposal (UNC 0356) which proposes setting NTS Exit (Flat) Capacity prices based on forecast demand data as the flow data within the NTS charge setting transportation model.

A timescale has been identified which may allow consultation from March 2011. This would allow National Grid to either issue indicative charges on 1st May 2011, based on a charging methodology that had a UNC Panel recommendation, or issue indicative charges on 1st June, based on an approved charging methodology, if approved within the 5 week target decision window. If this timescale could not be met then a timely decision would have to be made on the basis for setting indicative NTS Exit (Flat) Capacity prices from 1st May 2011 ahead of the July 2011 application window. Indicative charges are required as part of the User Commitment process. While indicative prices do not need to be set based on an approved methodology, ideally this would be the case.

Appendix A – Indicative demand flow impact on NTS Exit (Flat) Capacity prices: DN Baseline plus Incremental vs. DN Forecast

These indicative prices have been generated to show the effects of using differing DN demand levels on NTS Exit (Flat) Capacity Prices, and should not be used for any other purpose. The modelled flows for other exit points are at Baseline plus Incremental capacity levels. The tables have been provided on a DN exit zone (for illustrative purposes) and NTS offtake basis.

Demands for the DN's are the NTS 1-in-20 forecast peak day demand from the May 2010 demand statements pro-rated to each offtake as per the OCS statement. Demands for DC's are the Baseline plus any incremental exit capacity for 2012/13 & 2013/14 respectively.

The following Transportation Model inputs have been used:

Input	Value	Value
Network	2012/13	2013/14
Supply	December 2009 Ten Year Statement for 2012/13	December 2009 Ten Year Statement for 2013/14
Demand	**1. 'As-Is'** ~ All Exit @ Baseline plus Incremental **2. 'DN's @ Forecast'** ~ DC & Moffat @ Baseline plus Incremental, Forecast LDZ Demand for 2012/13 No exit flow is modelled for storage, or for IUK	**1. 'As-Is'** ~ All Exit @ Baseline plus Incremental **2. 'DN's @ Forecast'** ~ DC & Moffat @ Baseline plus Incremental, Forecast LDZ Demand for 2013/14 No exit flow is modelled for storage, or for IUK
Balancing S&D	Merit Order	
Expansion Factor	1st October 2009 - £2437/GWhkm	1st October 2009 - £2559/GWhkm
Anuitisation Factor	0.10272	

Indicative NTS Exit (Flat) Capacity prices have been generated as follows:

2012/13 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	All Exit @ Baseline plus Incremental *Total Demand: 7800 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£292.5m
DN's @ Forecast	DC & Moffat @ Baseline plus Incremental DN's @ Total Forecast LDZ Demand for 2012/13 *Total Demand: 6679 GWh*		

2013/14 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	All Exit @ Baseline plus Incremental *Total Demand: 7802 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£326.0m
DN's @ Forecast	DC & Moffat @ Baseline plus Incremental DN's @ Total Forecast LDZ Demand for 2013/14 *Total Demand: 6661 GWh*		

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on DN modelled flows at forecast for 2012/13 & 13/14, by DN Exit Zone

	2012/13			2013/14		
DN Exit Zone	As-Is	DN's @ Forecast	Actual Difference	As-Is	DN's @ Forecast	Actual Difference
EA1	0.0040	0.0033	-0.0007	0.0044	0.0042	-0.0002
EA2	0.0041	0.0033	-0.0008	0.0045	0.0043	-0.0002
EA3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EA4	0.0095	0.0087	-0.0008	0.0102	0.0100	-0.0002
EM1	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EM2	0.0021	0.0020	-0.0001	0.0025	0.0030	0.0005
EM3	0.0125	0.0124	-0.0001	0.0134	0.0139	0.0005
EM4	0.0081	0.0080	-0.0001	0.0087	0.0092	0.0005
NE1	0.0034	0.0033	-0.0001	0.0038	0.0043	0.0005
NE2	0.0001	0.0004	0.0003	0.0005	0.0006	0.0001
NE3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NO1	0.0075	0.0098	0.0023	0.0103	0.0108	0.0005
NO2	0.0133	0.0153	0.0020	0.0158	0.0169	0.0011
NT1	0.0185	0.0177	-0.0008	0.0196	0.0194	-0.0002
NT2	0.0103	0.0091	-0.0012	0.0111	0.0103	-0.0008
NT3	0.0098	0.0090	-0.0008	0.0105	0.0103	-0.0002
NW1	0.0144	0.0143	-0.0001	0.0153	0.0159	0.0006
NW2	0.0184	0.0203	0.0019	0.0196	0.0221	0.0025
SC1	0.0005	0.0009	0.0004	0.0011	0.0012	0.0001
SC2	0.0113	0.0134	0.0021	0.0143	0.0149	0.0006
SC4	0.0095	0.0115	0.0020	0.0124	0.0129	0.0005
SE1	0.0128	0.0080	-0.0048	0.0137	0.0093	-0.0044
SE2	0.0185	0.0177	-0.0008	0.0196	0.0194	-0.0002
SO1	0.0133	0.0125	-0.0008	0.0141	0.0139	-0.0002
SO2	0.0199	0.0192	-0.0007	0.0212	0.0210	-0.0002
SW1	0.0043	0.0041	-0.0002	0.0053	0.0052	-0.0001
SW2	0.0106	0.0118	0.0012	0.0134	0.0133	-0.0001
SW3	0.0224	0.0223	-0.0001	0.0244	0.0242	-0.0002
WN	0.0207	0.0206	-0.0001	0.0218	0.0225	0.0007
WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WM1	0.0165	0.0164	-0.0001	0.0175	0.0180	0.0005
WM2	0.0130	0.0129	-0.0001	0.0141	0.0144	0.0003
WM3	0.0077	0.0076	-0.0001	0.0089	0.0088	-0.0001

Despite the fall in the total DN demand as a result of a move from Baseline + Incremental derived flows to Forecast, it can be seen that the Northern England and Southern Scottish exit prices actually rise.

In this scenario, the Glenmavis LNG supply flows are no longer required, as per the supply merit order, to balance the total system; however, the reduction in Glenmavis LNG supply flows is greater than the demand flow reduction in the Southern Scottish DN exit zones. This means that gas is flowing North in the system to meet the demand.

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on DN modelled flows at forecast for 2012/13 & 13/14, by NTS Offtake

		2012/13			2013/14		
NTS Exit Point	DC/DN	As-Is	DN's @ Forecast	Actual Difference	As-Is	DN's @ Forecast	Actual Difference
AM_PAPER	DC	0.0153	0.0174	0.0021	0.0163	0.0191	0.0028
AVONMOUTH_LNG	DC	0.0090	0.0124	0.0034	0.0140	0.0139	-0.0001
BACTON INTERCONNECTOR	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BACTON_BAIRD	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BAGLAN_BAY_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BARKING_PG	DC	0.0101	0.0071	-0.0030	0.0109	0.0083	-0.0026
BARROW_BAINS	DC	0.0059	0.0080	0.0021	0.0064	0.0093	0.0029
BARROW_BS	DC	0.0059	0.0080	0.0021	0.0064	0.0093	0.0029
BARROW_GATEWAY	DC	0.0059	0.0080	0.0021	0.0064	0.0093	0.0029
BARTON_STACEY_(MRS)	DC	0.0205	0.0197	-0.0008	0.0217	0.0215	-0.0002
BILLINGHAM_ICI	DC	0.0032	0.0068	0.0036	0.0058	0.0063	0.0005
BP_GRANGEMOUTH	DC	0.0082	0.0102	0.0020	0.0110	0.0115	0.0005
BP_SALTEND_HP	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRIDGEWATER_PAPER	DC	0.0201	0.0221	0.0020	0.0212	0.0240	0.0028
BRIGG_PG	DC	0.0029	0.0028	-0.0001	0.0033	0.0038	0.0005
BRIMSDOWN_PG	DC	0.0106	0.0098	-0.0008	0.0114	0.0112	-0.0002
BRINE_FIELD_PS	DC	0.0026	0.0062	0.0036	0.0051	0.0056	0.0005
BRUNNER_MOND	DC	0.0171	0.0191	0.0020	0.0180	0.0209	0.0029
CARRINGTON_PS	DC	0.0176	0.0201	0.0025	0.0191	0.0219	0.0028
CAYTHORPE_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
CENTRAX	DC	0.0216	0.0215	-0.0001	0.0236	0.0235	-0.0001
CHESHIRE_(MRS)	DC	0.0164	0.0184	0.0020	0.0173	0.0202	0.0029
CONNAHS_QUAY_PS	DC	0.0205	0.0224	0.0019	0.0216	0.0244	0.0028
CORBY_PS	DC	0.0079	0.0078	-0.0001	0.0085	0.0090	0.0005
CORYTON_PG	DC	0.0104	0.0068	-0.0036	0.0111	0.0080	-0.0031
CORYTON_PG_2	DC	0.0104	0.0068	-0.0036	0.0111	0.0080	-0.0031
COTTAM_PG	DC	0.0019	0.0018	-0.0001	0.0023	0.0028	0.0005
DAMHEAD_CREEK	DC	0.0097	0.0049	-0.0048	0.0104	0.0060	-0.0044
DEESIDE_PS	DC	0.0202	0.0221	0.0019	0.0212	0.0240	0.0028
DIDCOT_A	DC	0.0168	0.0161	-0.0007	0.0179	0.0177	-0.0002
DIDCOT_PS	DC	0.0168	0.0160	-0.0008	0.0178	0.0176	-0.0002
DRAKELOW_PS	DC	0.0129	0.0128	-0.0001	0.0138	0.0143	0.0005
DYNEVOR_ARMS_LNG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EASINGTON&ROUGH_TERMINAL	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ENRON_(BILLINGHAM)	DC	0.0032	0.0068	0.0036	0.0058	0.0063	0.0005
GARTON_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
GLENMAVIS	DC	0.0107	0.0128	0.0021	0.0137	0.0142	0.0005
GLENMAVIS_LNG	DC	0.0107	0.0128	0.0021	0.0137	0.0142	0.0005
GOOLE_GLASS	DC	0.0006	0.0005	-0.0001	0.0009	0.0014	0.0005
GRAIN_GAS	DC	0.0097	0.0049	-0.0048	0.0104	0.0060	-0.0044
GREAT_YARMOUTH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
HATFIELD_MOOR_(MRS)	DC	0.0011	0.0010	-0.0001	0.0014	0.0019	0.0005
HAYS_CHEMICALS	DC	0.0170	0.0190	0.0020	0.0180	0.0208	0.0028
HOLEHOUSE_FARM_(MRS)	DC	0.0172	0.0191	0.0019	0.0182	0.0209	0.0027
HORNSEA_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Forecast**	**Actual Difference**	**As-Is**	**DN's @ Forecast**	**Actual Difference**
ICI_RUNCORN	DC	0.0202	0.0222	0.0020	0.0213	0.0241	0.0028
IMMINGHAM_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
KEADBY_BS	DC	0.0018	0.0017	-0.0001	0.0021	0.0026	0.0005
KEADBY_PS	DC	0.0018	0.0017	-0.0001	0.0021	0.0026	0.0005
KEMIRAINCE_CHP	DC	0.0199	0.0218	0.0019	0.0209	0.0237	0.0028
KINGS_LYNN_PS	DC	0.0029	0.0022	-0.0007	0.0033	0.0031	-0.0002
LANGAGE_PG	DC	0.0246	0.0244	-0.0002	0.0267	0.0265	-0.0002
LITTLE_BARFORD_PS	DC	0.0094	0.0086	-0.0008	0.0101	0.0099	-0.0002
LONGANNET	DC	0.0075	0.0095	0.0020	0.0103	0.0108	0.0005
MARCHWOOD	DC	0.0216	0.0215	-0.0001	0.0236	0.0234	-0.0002
MEDWAY_PS	DC	0.0098	0.0050	-0.0048	0.0105	0.0061	-0.0044
MILFORD_HAVEN_REFINERY	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
MOFFAT	DC	0.0154	0.0174	0.0020	0.0186	0.0191	0.0005
PARTINGTON_LNG	DC	0.0176	0.0201	0.0025	0.0191	0.0219	0.0028
PEMBROKE_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PETERBOROUGH_PS	DC	0.0060	0.0052	-0.0008	0.0065	0.0063	-0.0002
PETERHEAD_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PHILLIPS_SEAL_SANDS	DC	0.0026	0.0062	0.0036	0.0051	0.0056	0.0005
ROCKSAVAGE_PG	DC	0.0202	0.0222	0.0020	0.0213	0.0241	0.0028
ROOSECOTE_PS	DC	0.0059	0.0080	0.0021	0.0064	0.0093	0.0029
RYE_HOUSE_PS	DC	0.0111	0.0103	-0.0008	0.0118	0.0116	-0.0002
SALTEND	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
SAPPIPAPERMILLCHP	DC	0.0142	0.0141	-0.0001	0.0151	0.0156	0.0005
SEABANK_POWER_phase_II	DC	0.0091	0.0125	0.0034	0.0141	0.0139	-0.0002
SEABANK_POWER_phase1	DC	0.0108	0.0107	-0.0001	0.0122	0.0121	-0.0001
SELLAFIELD_PS	DC	0.0099	0.0120	0.0021	0.0106	0.0135	0.0029
SEVERNSIDE_ICI	DC	0.0091	0.0123	0.0032	0.0140	0.0138	-0.0002
SHOTTON_PAPER	DC	0.0204	0.0223	0.0019	0.0215	0.0243	0.0028
SPALDING_PG	DC	0.0033	0.0032	-0.0001	0.0037	0.0042	0.0005
SPALDING_PG_2	DC	0.0033	0.0032	-0.0001	0.0037	0.0042	0.0005
ST_FERGUS_BS	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STALLINGBOROUGH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STAYTHORPE	DC	0.0049	0.0048	-0.0001	0.0053	0.0058	0.0005
STUBLACH	DC	0.0164	0.0184	0.0020	0.0173	0.0202	0.0029
SUTTON_BRIDGE_PS	DC	0.0043	0.0035	-0.0008	0.0047	0.0045	-0.0002
TEESSIDE_BASF	DC	0.0026	0.0062	0.0036	0.0051	0.0056	0.0005
TEESSIDE_HYDROGEN	DC	0.0026	0.0062	0.0036	0.0052	0.0057	0.0005
THORNTON_CURTIS_(KILLINGHOLME)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WEST_BURTON_PS	DC	0.0019	0.0018	-0.0001	0.0022	0.0027	0.0005
WYRE_PS	DC	0.0131	0.0152	0.0021	0.0139	0.0168	0.0029
ZENECA	DC	0.0032	0.0068	0.0036	0.0058	0.0063	0.0005
BACTON_OT	EA	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRISLEY	EA	0.0003	0.0001	-0.0002	0.0005	0.0003	-0.0002
CAMBRIDGE	EA	0.0066	0.0058	-0.0008	0.0071	0.0069	-0.0002
EYE	EA	0.0056	0.0048	-0.0008	0.0061	0.0059	-0.0002

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Forecast**	**Actual Difference**	**As-Is**	**DN's @ Forecast**	**Actual Difference**
GREAT_WILBRAHAM	EA	0.0056	0.0048	-0.0008	0.0061	0.0059	-0.0002
MATCHING_GREEN	EA	0.0097	0.0089	-0.0008	0.0104	0.0102	-0.0002
ROUDHAM_HEATH	EA	0.0019	0.0011	-0.0008	0.0022	0.0020	-0.0002
ROYSTON	EA	0.0075	0.0067	-0.0008	0.0080	0.0078	-0.0002
WEST_WINCH	EA	0.0027	0.0019	-0.0008	0.0030	0.0028	-0.0002
WHITWELL	EA	0.0094	0.0086	-0.0008	0.0101	0.0099	-0.0002
YELVERTON	EA	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ALREWAS_EM	EM	0.0134	0.0133	-0.0001	0.0143	0.0148	0.0005
BLABY	EM	0.0099	0.0098	-0.0001	0.0106	0.0111	0.0005
BLYBOROUGH	EM	0.0019	0.0018	-0.0001	0.0023	0.0028	0.0005
CALDECOTT	EM	0.0076	0.0074	-0.0002	0.0081	0.0087	0.0006
DROINTON_OT	EM	0.0145	0.0144	-0.0001	0.0155	0.0160	0.0005
GOSBERTON	EM	0.0030	0.0029	-0.0001	0.0034	0.0039	0.0005
KIRKSTEAD	EM	0.0010	0.0009	-0.0001	0.0012	0.0017	0.0005
MARKET_HARBOROUGH	EM	0.0087	0.0086	-0.0001	0.0093	0.0098	0.0005
SILK_WILLOUGHBY	EM	0.0022	0.0021	-0.0001	0.0025	0.0030	0.0005
SUTTON_BRIDGE	EM	0.0044	0.0036	-0.0008	0.0049	0.0047	-0.0002
THORNTON_CURTIS_LDZ	EM	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
TUR_LANGTON	EM	0.0089	0.0088	-0.0001	0.0095	0.0100	0.0005
WALESBY	EM	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ASSELBY	NE	0.0001	0.0001	0.0000	0.0003	0.0008	0.0005
BALDERSBY	NE	0.0052	0.0051	-0.0001	0.0057	0.0062	0.0005
BURLEY_BANK	NE	0.0045	0.0044	-0.0001	0.0049	0.0054	0.0005
GANSTEAD	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PANNAL	NE	0.0040	0.0039	-0.0001	0.0044	0.0050	0.0006
PAULL	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PICKERING	NE	0.0001	0.0011	0.0010	0.0015	0.0020	0.0005
RAWCLIFFE	NE	0.0003	0.0002	-0.0001	0.0005	0.0010	0.0005
TOWTON	NE	0.0023	0.0022	-0.0001	0.0026	0.0031	0.0005
BISHOP_AUCKLAND	NO	0.0050	0.0070	0.0020	0.0076	0.0082	0.0006
BISHOP_AUCKLAND_TEST_FACILITY	NO	0.0050	0.0070	0.0020	0.0076	0.0082	0.0006
COLDSTREAM	NO	0.0118	0.0139	0.0021	0.0149	0.0154	0.0005
CORBRIDGE	NO	0.0094	0.0115	0.0021	0.0124	0.0129	0.0005
COWPEN_BEWLEY	NO	0.0030	0.0066	0.0036	0.0056	0.0061	0.0005
ELTON	NO	0.0034	0.0055	0.0021	0.0061	0.0066	0.0005
GUYZANCE	NO	0.0120	0.0140	0.0020	0.0150	0.0155	0.0005
HUMBLETON	NO	0.0113	0.0134	0.0021	0.0143	0.0149	0.0006
KELD	NO	0.0120	0.0142	0.0022	0.0129	0.0157	0.0028
LITTLE_BURDON	NO	0.0039	0.0059	0.0020	0.0065	0.0070	0.0005
MELKINTHORPE	NO	0.0127	0.0148	0.0021	0.0136	0.0164	0.0028
SALTWICK_PC	NO	0.0152	0.0172	0.0020	0.0184	0.0189	0.0005
SALTWICK_VC	NO	0.0152	0.0172	0.0020	0.0184	0.0189	0.0005
THRINTOFT	NO	0.0055	0.0070	0.0015	0.0077	0.0082	0.0005
TOW_LAW	NO	0.0069	0.0089	0.0020	0.0097	0.0102	0.0005
WETHERAL	NO	0.0135	0.0155	0.0020	0.0162	0.0171	0.0009

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Forecast**	**Actual Difference**	**As-Is**	**DN's @ Forecast**	**Actual Difference**
HORNDON	NT	0.0101	0.0071	-0.0030	0.0109	0.0083	-0.0026
LUXBOROUGH_LANE	NT	0.0104	0.0096	-0.0008	0.0111	0.0109	-0.0002
PETERS_GREEN	NT	0.0098	0.0090	-0.0008	0.0105	0.0103	-0.0002
PETERS_GREEN_SOUTH_MIMMS	NT	0.0098	0.0090	-0.0008	0.0105	0.0103	-0.0002
WINKFIELD_NT	NT	0.0185	0.0177	-0.0008	0.0196	0.0194	-0.0002
AUDLEY_NW	NW	0.0180	0.0179	-0.0001	0.0190	0.0197	0.0007
BLACKROD	NW	0.0152	0.0151	-0.0001	0.0162	0.0167	0.0005
ECCLESTON	NW	0.0200	0.0212	0.0012	0.0210	0.0231	0.0021
HOLMES_CHAPEL	NW	0.0193	0.0192	-0.0001	0.0203	0.0209	0.0006
LUPTON	NW	0.0094	0.0115	0.0021	0.0101	0.0129	0.0028
MALPAS	NW	0.0199	0.0198	-0.0001	0.0210	0.0216	0.0006
MICKLE_TRAFFORD	NW	0.0193	0.0212	0.0019	0.0203	0.0231	0.0028
PARTINGTON	NW	0.0176	0.0201	0.0025	0.0191	0.0219	0.0028
SAMLESBURY	NW	0.0138	0.0136	-0.0002	0.0147	0.0152	0.0005
WARBURTON	NW	0.0178	0.0199	0.0021	0.0189	0.0217	0.0028
WESTON_POINT	NW	0.0202	0.0222	0.0020	0.0213	0.0241	0.0028
ABERDEEN	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ARMADALE	SC	0.0099	0.0119	0.0020	0.0128	0.0134	0.0006
BALGRAY	SC	0.0016	0.0037	0.0021	0.0042	0.0047	0.0005
BATHGATE	SC	0.0095	0.0115	0.0020	0.0124	0.0129	0.0005
BROXBURN	SC	0.0110	0.0131	0.0021	0.0140	0.0146	0.0006
CARESTON	SC	0.0001	0.0016	0.0015	0.0020	0.0025	0.0005
DRUM	SC	0.0067	0.0087	0.0020	0.0095	0.0100	0.0005
HUME	SC	0.0128	0.0148	0.0020	0.0159	0.0164	0.0005
KINKNOCKIE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
LANGHOLM	SC	0.0134	0.0154	0.0020	0.0165	0.0170	0.0005
LAUDERHILL	SC	0.0144	0.0160	0.0016	0.0176	0.0176	0.0000
LOCKERBIE	SC	0.0144	0.0164	0.0020	0.0176	0.0181	0.0005
MOSSIDE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NETHER_HOWCLEUGH	SC	0.0147	0.0167	0.0020	0.0178	0.0183	0.0005
PITCAIRNGREEN	SC	0.0039	0.0060	0.0021	0.0066	0.0071	0.0005
SOUTRA	SC	0.0145	0.0165	0.0020	0.0177	0.0182	0.0005
ST_FERGUS_OT	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STRANRAER	SC	0.0154	0.0174	0.0020	0.0186	0.0191	0.0005
FARNINGHAM	SE	0.0120	0.0072	-0.0048	0.0128	0.0084	-0.0044
FARNINGHAM_B	SE	0.0120	0.0072	-0.0048	0.0128	0.0084	-0.0044
SHORNE	SE	0.0110	0.0062	-0.0048	0.0118	0.0074	-0.0044
TATSFIELD	SE	0.0137	0.0089	-0.0048	0.0146	0.0102	-0.0044
WINKFIELD_SE	SE	0.0185	0.0177	-0.0008	0.0196	0.0194	-0.0002
BRAISHFIELD_A	SO	0.0220	0.0212	-0.0008	0.0233	0.0231	-0.0002
BRAISHFIELD_B	SO	0.0220	0.0212	-0.0008	0.0233	0.0231	-0.0002
CRAWLEY_DOWN	SO	0.0202	0.0200	-0.0002	0.0220	0.0218	-0.0002
HARDWICK	SO	0.0133	0.0125	-0.0008	0.0141	0.0139	-0.0002
IPSDEN	SO	0.0165	0.0157	-0.0008	0.0175	0.0173	-0.0002
IPSDEN_2	SO	0.0165	0.0157	-0.0008	0.0175	0.0173	-0.0002

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Forecast**	**Actual Difference**	**As-Is**	**DN's @ Forecast**	**Actual Difference**
MAPPOWDER	SO	0.0170	0.0169	-0.0001	0.0188	0.0186	-0.0002
WINKFIELD_SO	SO	0.0185	0.0177	-0.0008	0.0196	0.0194	-0.0002
AYLESBEARE	SW	0.0192	0.0191	-0.0001	0.0210	0.0209	-0.0001
CHOAKFORD	SW	0.0246	0.0244	-0.0002	0.0267	0.0265	-0.0002
CIRENCESTER	SW	0.0086	0.0085	-0.0001	0.0099	0.0098	-0.0001
COFFINSWELL	SW	0.0218	0.0217	-0.0001	0.0238	0.0237	-0.0001
EASTON_GREY	SW	0.0091	0.0090	-0.0001	0.0105	0.0103	-0.0002
EVESHAM	SW	0.0056	0.0055	-0.0001	0.0068	0.0066	-0.0002
FIDDINGTON	SW	0.0044	0.0042	-0.0002	0.0054	0.0053	-0.0001
ILCHESTER	SW	0.0149	0.0148	-0.0001	0.0166	0.0164	-0.0002
KENN_SOUTH	SW	0.0203	0.0202	-0.0001	0.0222	0.0220	-0.0002
LITTLETON_DREW	SW	0.0099	0.0098	-0.0001	0.0113	0.0112	-0.0001
PUCKLECHURCH	SW	0.0108	0.0107	-0.0001	0.0122	0.0120	-0.0002
ROSS_SW	SW	0.0016	0.0015	-0.0001	0.0025	0.0024	-0.0001
SEABANK_LDZ	SW	0.0092	0.0126	0.0034	0.0142	0.0140	-0.0002
ALREWAS_WM	WM	0.0134	0.0133	-0.0001	0.0143	0.0148	0.0005
ASPLEY	WM	0.0164	0.0163	-0.0001	0.0174	0.0179	0.0005
AUDLEY_WM	WM	0.0180	0.0179	-0.0001	0.0190	0.0197	0.0007
AUSTREY	WM	0.0122	0.0121	-0.0001	0.0135	0.0135	0.0000
LEAMINGTON_SPA	WM	0.0082	0.0081	-0.0001	0.0095	0.0093	-0.0002
LOWER_QUINTON	WM	0.0067	0.0066	-0.0001	0.0079	0.0078	-0.0001
MILWICH	WM	0.0152	0.0150	-0.0002	0.0161	0.0166	0.0005
ROSS_WM	WM	0.0016	0.0015	-0.0001	0.0025	0.0024	-0.0001
RUGBY	WM	0.0093	0.0092	-0.0001	0.0106	0.0105	-0.0001
SHUSTOKE	WM	0.0134	0.0133	-0.0001	0.0148	0.0148	0.0000
STRATFORD_UPON_AVON	WM	0.0068	0.0067	-0.0001	0.0081	0.0079	-0.0002
MAELOR	WN	0.0207	0.0206	-0.0001	0.0218	0.0225	0.0007
DOWLAIS	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
DYFFRYN_CLYDACH	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
GILWERN	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000

Appendix B – Indicative demand and supply flow impact on NTS Exit (Flat) Capacity prices: The effect of Moffat Demands and St. Fergus Supplies

Graph 1 was presented to the Gas Transmission Charging Methodology Forum on 2nd September 2010. It shows how NTS Exit Capacity price for the Moffat exit point depends on the modelled demand flow and St. Fergus supply flow used. For this Appendix B, St. Fergus has been modelled as per the 2009 Ten Year Statement with flows increased and decreased in 50 GWh/d steps.

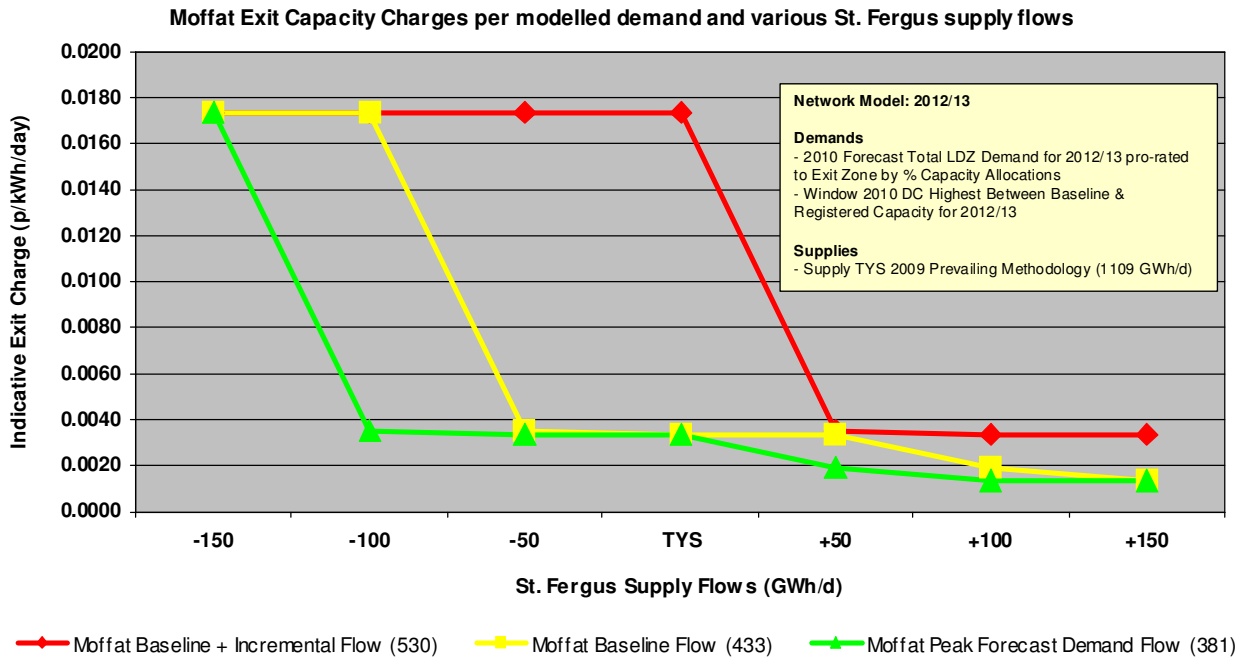
As per the 2012/13 scenario in Appendix A, Demands for the DN's are the 1-in-20 forecast peak day demand from the May 2010 demand statement pro-rated to each offtake as per the OCS statement. DC demand flows are modelled on Baseline plus any incremental exit capacity.

The lines show how the exit capacity prices stay low with lower Moffat demand flows and higher St. Fergus supplies. The exit capacity prices rise as the Moffat demand flows rise and St. Fergus supplies start to fall. This is the point at which flows on the NTS start to move north.

The following Transportation Model inputs have been used for this Appendix B:

Input	Value
Network	2012/13
Supply	December 2009 Ten Year Statement for 2012/13 +/- 150 GWh/d (in steps of 50 GWh/d)
Demand	DC's @ Baseline plus Incremental, DN's @ Forecast LDZ Demand for 2012/13 & either … Moffat @ Baseline + Incremental (530 GWh/d) or, Moffat @ Baseline (433 GWh/d) or, Moffat @ Peak Forecast Demand (381 GWh/d) No exit flow is modelled for storage, or for IUK
Balancing S&D	Merit Order
Expansion Factor	1st October 2009 - £2437/GWhkm
Anuitisation Factor	0.10272

Graph 1



The indicative prices below have been generated to show the effects of using differing Moffat demand flows on NTS Exit (Flat) Capacity Prices for the DN Exit Zones, and should not be used for any other purpose.

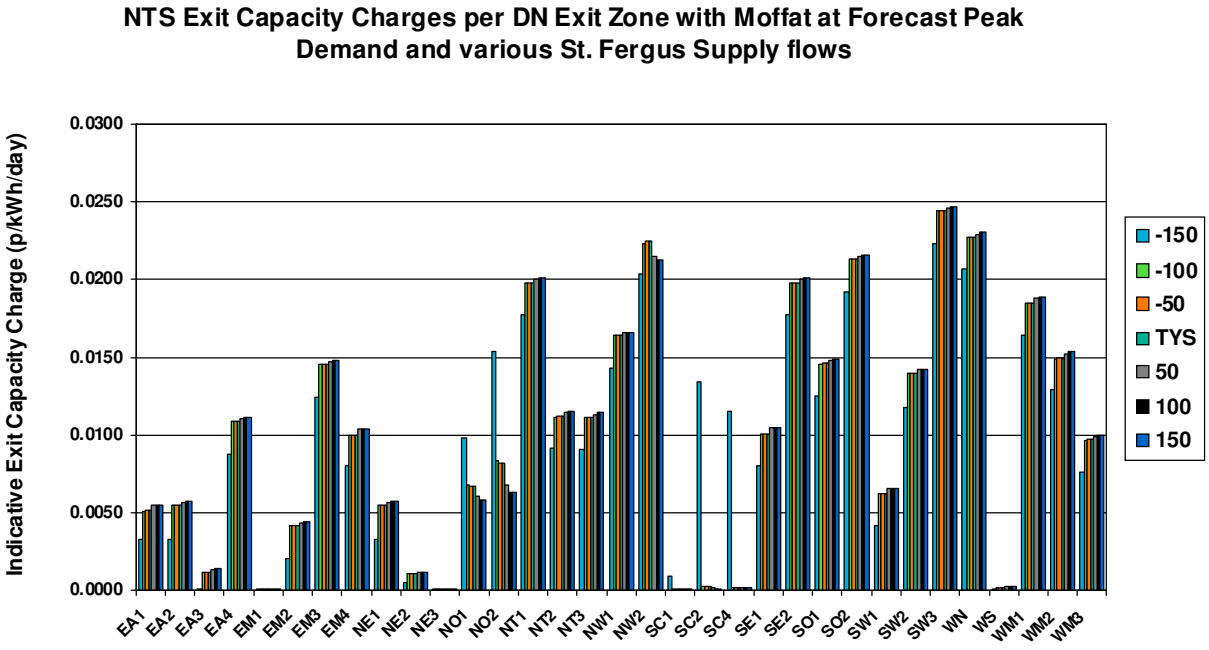
For clarity, it can be seen that the "Moffat @ Baseline + Incremental" prices are the same as the 2012/13 "DN's @ Forecast" prices (as shown in Appendix A) i.e. they use the same modelled inputs - Demands for the DN's are the NTS 1-in-20 forecast peak day demand from the May 2010 demand statements pro-rated to each offtake as per the OCS statement. Demands for DC's and Moffat are the Baseline plus any incremental exit capacity for 2012/13. Supplies have been kept at the 2009 Ten Year Statement level.

For comparison, the next two columns show the effect on DN Exit Zone prices by changing the Moffat demand flows to Baseline and peak 1-in-20 Forecasts respectively.

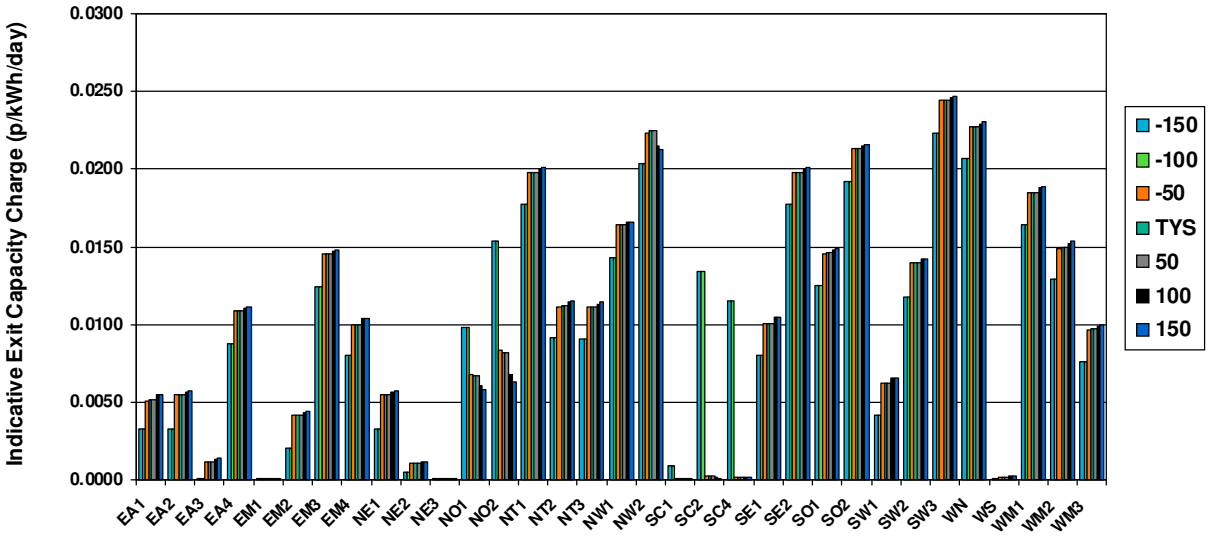
DN Exit Zone	Moffat @ Baseline + Incremental (same as 2012/13 "DN's @ Forecast" Column in Appendix A)	**Moffat @ Baseline**	**Moffat @ Peak**
EA1	0.0033	0.0052	0.0052
EA2	0.0033	0.0054	0.0054
EA3	0.0001	0.0011	0.0011
EA4	0.0087	0.0108	0.0108
EM1	0.0001	0.0001	0.0001
EM2	0.0020	0.0041	0.0041
EM3	0.0124	0.0145	0.0145
EM4	0.0080	0.0100	0.0100
NE1	0.0033	0.0054	0.0054
NE2	0.0004	0.0010	0.0010
NE3	0.0001	0.0001	0.0001
NO1	0.0098	0.0067	0.0067
NO2	0.0153	0.0082	0.0082
NT1	0.0177	0.0198	0.0198
NT2	0.0091	0.0112	0.0112
NT3	0.0090	0.0111	0.0111
NW1	0.0143	0.0164	0.0164
NW2	0.0203	0.0224	0.0224
SC1	0.0009	0.0001	0.0001
SC2	0.0134	0.0003	0.0003
SC4	0.0115	0.0002	0.0002
SE1	0.0080	0.0101	0.0101
SE2	0.0177	0.0198	0.0198
SO1	0.0125	0.0146	0.0146
SO2	0.0192	0.0213	0.0213
SW1	0.0041	0.0062	0.0062
SW2	0.0118	0.0139	0.0139
SW3	0.0223	0.0244	0.0244
WN	0.0206	0.0227	0.0227
WS	0.0001	0.0002	0.0002
WM1	0.0164	0.0185	0.0185
WM2	0.0129	0.0150	0.0150
WM3	0.0076	0.0097	0.0097

Graphs 2-4 show the effects of different modelled demand flows at Moffat combined with varying St. Fergus supply flows taken from the 2009 Ten Year Statement (TYS), on the exit capacity prices of the DN Exit Zones. Flows are added and subtracted in 50 GWh/d steps. The graphs have been provided on an exit zone basis for illustrative purposes, and a Direct Connect in the vicinity of a particular exit zone will exhibit similar behaviours in exit price.

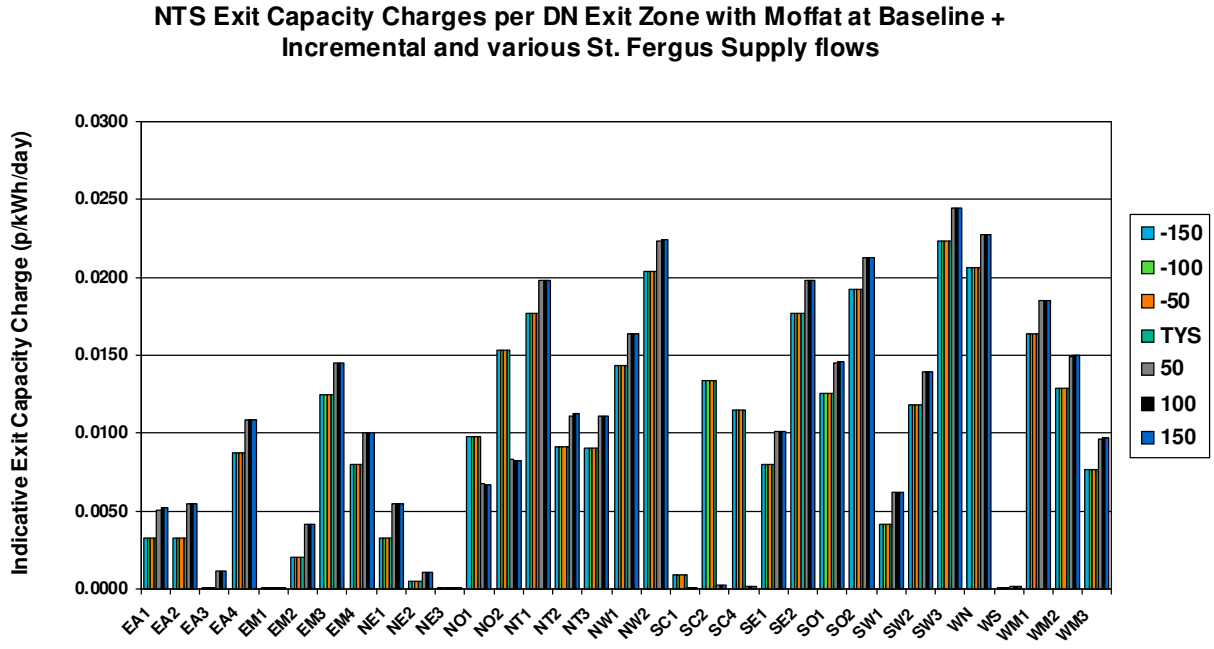
Graph 2



Graph 3



Graph 4


NTS Exit Capacity Charges per DN Exit Zone with Moffat at Baseline + Incremental and various St. Fergus Supply flows
Indicative Exit Capacity Charge (p/kWh/day)
0.0300
0.0250
0.0200
0.0150
0.0100
0.0050
0.0000
EA1 EA2 EA3 EA4 EM1 EM2 EM3 EM4 NE1 NE2 NE3 NO1 NO2 NT1 NT2 NT3 NW1 NW2 SC1 SC2 SC4 SE1 SE2 SO1 SO2 SW1 SW2 SW3 WN WS WM1 WM2 WM3
-150
-100
-50
TYS
50
100
150

Appendix C – Indicative demand flow impact on NTS Exit (Flat) Capacity prices: DN Baseline plus Incremental vs. DN Bookings

These indicative prices have been generated to show the effects of using differing DN demand levels on NTS Exit (Flat) Capacity Prices, and should not be used for any other purpose. The modelled flows for other exit points are at Baseline plus Incremental capacity levels. The tables have been provided on a DN exit zone (for illustrative purposes) and NTS offtake basis.

Demands for the DN's are at the booked capacity level and demands for DC's are the Baseline plus any incremental exit capacity for 2012/13 & 2013/14 respectively.

The following Transportation Model inputs have been used:

Input	Value	Value
Network	2012/13	2013/14
Supply	December 2009 Ten Year Statement for 2012/13	December 2009 Ten Year Statement for 2013/14
Demand	**1. 'As-Is'** ~ All Exit @ Baseline plus Incremental **2. 'DN's @ Booked'** ~ DC & Moffat @ Baseline plus Incremental, DN's at Booked Capacity for 2012/13 No exit flow is modelled for storage, or for IUK	**1. 'As-Is'** ~ All Exit @ Baseline plus Incremental **2. 'DN's @ Booked'** ~ DC & Moffat @ Baseline plus Incremental, DN's at Booked Capacity for 2013/14 No exit flow is modelled for storage, or for IUK
Balancing S&D	Merit Order	
Expansion Factor	1st October 2009 - £2437/GWhkm	1st October 2009 - £2559/GWhkm
Anuitisation Factor	0.10272	

Indicative NTS Exit (Flat) Capacity prices have been generated as follows:

2012/13 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	All Exit @ Baseline plus Incremental *Total Demand: 7800 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£292.5m
DN's @ Forecast	DC & Moffat @ Baseline plus Incremental DN's @ Booked Capacity Level 2012/13 *Total Demand: 7331 GWh*		

2013/14 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	All Exit @ Baseline plus Incremental *Total Demand: 7802 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£326.0m
DN's @ Forecast	DC & Moffat @ Baseline plus Incremental DN's @ Booked Capacity Level 2013/14 *Total Demand: 7328 GWh*		

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on DN modelled flows at the booked level for 2012/13 & 13/14, by DN Exit Zone

	2012/13			2013/14		
DN Exit Zone	As-Is	DN's @ Booked	Actual Difference	As-Is	DN's @ Booked	Actual Difference
EA1	0.0040	0.0031	-0.0009	0.0044	0.0041	-0.0003
EA2	0.0041	0.0031	-0.0010	0.0045	0.0042	-0.0003
EA3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EA4	0.0095	0.0085	-0.0010	0.0102	0.0099	-0.0003
EM1	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EM2	0.0021	0.0018	-0.0003	0.0025	0.0029	0.0004
EM3	0.0125	0.0122	-0.0003	0.0134	0.0138	0.0004
EM4	0.0081	0.0077	-0.0004	0.0087	0.0092	0.0005
NE1	0.0034	0.0031	-0.0003	0.0038	0.0043	0.0005
NE2	0.0001	0.0003	0.0002	0.0005	0.0006	0.0001
NE3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NO1	0.0075	0.0096	0.0021	0.0103	0.0107	0.0004
NO2	0.0133	0.0151	0.0018	0.0158	0.0166	0.0008
NT1	0.0185	0.0175	-0.0010	0.0196	0.0194	-0.0002
NT2	0.0103	0.0093	-0.0010	0.0111	0.0108	-0.0003
NT3	0.0098	0.0088	-0.0010	0.0105	0.0102	-0.0003
NW1	0.0144	0.0141	-0.0003	0.0153	0.0157	0.0004
NW2	0.0184	0.0200	0.0016	0.0196	0.0204	0.0008
SC1	0.0005	0.0009	0.0004	0.0011	0.0012	0.0001
SC2	0.0113	0.0131	0.0018	0.0143	0.0148	0.0005
SC4	0.0095	0.0113	0.0018	0.0124	0.0129	0.0005
SE1	0.0128	0.0100	-0.0028	0.0137	0.0116	-0.0021
SE2	0.0185	0.0175	-0.0010	0.0196	0.0194	-0.0002
SO1	0.0133	0.0122	-0.0011	0.0141	0.0139	-0.0002
SO2	0.0199	0.0190	-0.0009	0.0212	0.0210	-0.0002
SW1	0.0043	0.0039	-0.0004	0.0053	0.0051	-0.0002
SW2	0.0106	0.0116	0.0010	0.0134	0.0132	-0.0002
SW3	0.0224	0.0221	-0.0003	0.0244	0.0242	-0.0002
WN	0.0207	0.0204	-0.0003	0.0218	0.0224	0.0006
WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WM1	0.0165	0.0162	-0.0003	0.0175	0.0180	0.0005
WM2	0.0130	0.0126	-0.0004	0.0141	0.0143	0.0002

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on DN modelled flows at the booked level for 2012/13 & 13/14, by NTS Offtake

		2012/13			2013/14		
NTS Exit Point	DC/DN	As-Is	DN's @ Booked	Actual Difference	As-Is	DN's @ Booked	Actual Difference
AM_PAPER	DC	0.0153	0.0171	0.0018	0.0163	0.0172	0.0009
AVONMOUTH_LNG	DC	0.0090	0.0122	0.0032	0.0140	0.0138	-0.0002
BACTON INTERCONNECTOR	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BACTON_BAIRD	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BAGLAN_BAY_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BARKING_PG	DC	0.0101	0.0091	-0.0010	0.0109	0.0106	-0.0003
BARROW_BAINS	DC	0.0059	0.0077	0.0018	0.0064	0.0073	0.0009
BARROW_BS	DC	0.0059	0.0077	0.0018	0.0064	0.0073	0.0009
BARROW_GATEWAY	DC	0.0059	0.0077	0.0018	0.0064	0.0073	0.0009
BARTON_STACEY_(MRS)	DC	0.0205	0.0195	-0.0010	0.0217	0.0215	-0.0002
BILLINGHAM_ICI	DC	0.0032	0.0066	0.0034	0.0058	0.0062	0.0004
BP_GRANGEMOUTH	DC	0.0082	0.0099	0.0017	0.0110	0.0114	0.0004
BP_SALTEND_HP	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRIDGEWATER_PAPER	DC	0.0201	0.0218	0.0017	0.0212	0.0221	0.0009
BRIGG_PG	DC	0.0029	0.0026	-0.0003	0.0033	0.0037	0.0004
BRIMSDOWN_PG	DC	0.0106	0.0096	-0.0010	0.0114	0.0111	-0.0003
BRINE_FIELD_PS	DC	0.0026	0.0059	0.0033	0.0051	0.0056	0.0005
BRUNNER_MOND	DC	0.0171	0.0188	0.0017	0.0180	0.0189	0.0009
CARRINGTON_PS	DC	0.0176	0.0198	0.0022	0.0191	0.0200	0.0009
CAYTHORPE_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
CENTRAX	DC	0.0216	0.0213	-0.0003	0.0236	0.0234	-0.0002
CHESHIRE_(MRS)	DC	0.0164	0.0181	0.0017	0.0173	0.0182	0.0009
CONNAHS_QUAY_PS	DC	0.0205	0.0222	0.0017	0.0216	0.0225	0.0009
CORBY_PS	DC	0.0079	0.0076	-0.0003	0.0085	0.0090	0.0005
CORYTON_PG	DC	0.0104	0.0088	-0.0016	0.0111	0.0103	-0.0008
CORYTON_PG_2	DC	0.0104	0.0088	-0.0016	0.0111	0.0103	-0.0008
COTTAM_PG	DC	0.0019	0.0016	-0.0003	0.0023	0.0027	0.0004
DAMHEAD_CREEK	DC	0.0097	0.0069	-0.0028	0.0104	0.0082	-0.0022
DEESIDE_PS	DC	0.0202	0.0218	0.0016	0.0212	0.0221	0.0009
DIDCOT_A	DC	0.0168	0.0158	-0.0010	0.0179	0.0176	-0.0003
DIDCOT_PS	DC	0.0168	0.0158	-0.0010	0.0178	0.0176	-0.0002
DRAKELOW_PS	DC	0.0129	0.0126	-0.0003	0.0138	0.0142	0.0004
DYNEVOR_ARMS_LNG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EASINGTON&ROUGH_TERMINAL	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ENRON_(BILLINGHAM)	DC	0.0032	0.0066	0.0034	0.0058	0.0063	0.0005
GARTON_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
GLENMAVIS	DC	0.0107	0.0125	0.0018	0.0137	0.0142	0.0005
GLENMAVIS_LNG	DC	0.0107	0.0125	0.0018	0.0137	0.0142	0.0005
GOOLE_GLASS	DC	0.0006	0.0003	-0.0003	0.0009	0.0013	0.0004
GRAIN_GAS	DC	0.0097	0.0069	-0.0028	0.0104	0.0082	-0.0022
GREAT_YARMOUTH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
HATFIELD_MOOR_(MRS)	DC	0.0011	0.0008	-0.0003	0.0014	0.0018	0.0004
HAYS_CHEMICALS	DC	0.0170	0.0187	0.0017	0.0180	0.0188	0.0008
HOLEHOUSE_FARM_(MRS)	DC	0.0172	0.0189	0.0017	0.0182	0.0190	0.0008
HORNSEA_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Booked**	**Actual Difference**	**As-Is**	**DN's @ Booked**	**Actual Difference**
ICI_RUNCORN	DC	0.0202	0.0219	0.0017	0.0213	0.0222	0.0009
IMMINGHAM_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
KEADBY_BS	DC	0.0018	0.0014	-0.0004	0.0021	0.0025	0.0004
KEADBY_PS	DC	0.0018	0.0014	-0.0004	0.0021	0.0025	0.0004
KEMIRAINCE_CHP	DC	0.0199	0.0216	0.0017	0.0209	0.0218	0.0009
KINGS_LYNN_PS	DC	0.0029	0.0019	-0.0010	0.0033	0.0030	-0.0003
LANGAGE_PG	DC	0.0246	0.0242	-0.0004	0.0267	0.0264	-0.0003
LITTLE_BARFORD_PS	DC	0.0094	0.0084	-0.0010	0.0101	0.0098	-0.0003
LONGANNET	DC	0.0075	0.0093	0.0018	0.0103	0.0108	0.0005
MARCHWOOD	DC	0.0216	0.0212	-0.0004	0.0236	0.0233	-0.0003
MEDWAY_PS	DC	0.0098	0.0070	-0.0028	0.0105	0.0083	-0.0022
MILFORD_HAVEN_REFINERY	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
MOFFAT	DC	0.0154	0.0172	0.0018	0.0186	0.0191	0.0005
PARTINGTON_LNG	DC	0.0176	0.0198	0.0022	0.0191	0.0199	0.0008
PEMBROKE_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PETERBOROUGH_PS	DC	0.0060	0.0049	-0.0011	0.0065	0.0062	-0.0003
PETERHEAD_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PHILLIPS_SEAL_SANDS	DC	0.0026	0.0059	0.0033	0.0051	0.0056	0.0005
ROCKSAVAGE_PG	DC	0.0202	0.0219	0.0017	0.0213	0.0222	0.0009
ROOSECOTE_PS	DC	0.0059	0.0077	0.0018	0.0064	0.0073	0.0009
RYE_HOUSE_PS	DC	0.0111	0.0101	-0.0010	0.0118	0.0116	-0.0002
SALTEND	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
SAPPIPAPERMILLCHP	DC	0.0142	0.0138	-0.0004	0.0151	0.0155	0.0004
SEABANK_POWER_phase_II	DC	0.0091	0.0122	0.0031	0.0141	0.0139	-0.0002
SEABANK_POWER_phase1	DC	0.0108	0.0105	-0.0003	0.0122	0.0120	-0.0002
SELLAFIELD_PS	DC	0.0099	0.0117	0.0018	0.0106	0.0115	0.0009
SEVERNSIDE_ICI	DC	0.0091	0.0121	0.0030	0.0140	0.0137	-0.0003
SHOTTON_PAPER	DC	0.0204	0.0221	0.0017	0.0215	0.0224	0.0009
SPALDING_PG	DC	0.0033	0.0030	-0.0003	0.0037	0.0042	0.0005
SPALDING_PG_2	DC	0.0033	0.0030	-0.0003	0.0037	0.0042	0.0005
ST_FERGUS_BS	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STALLINGBOROUGH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STAYTHORPE	DC	0.0049	0.0045	-0.0004	0.0053	0.0058	0.0005
STUBLACH	DC	0.0164	0.0181	0.0017	0.0173	0.0182	0.0009
SUTTON_BRIDGE_PS	DC	0.0043	0.0033	-0.0010	0.0047	0.0045	-0.0002
TEESSIDE_BASF	DC	0.0026	0.0059	0.0033	0.0051	0.0056	0.0005
TEESSIDE_HYDROGEN	DC	0.0026	0.0059	0.0033	0.0052	0.0056	0.0004
THORNTON_CURTIS_(KILLINGHOLME)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WEST_BURTON_PS	DC	0.0019	0.0015	-0.0004	0.0022	0.0026	0.0004
WYRE_PS	DC	0.0131	0.0149	0.0018	0.0139	0.0148	0.0009
ZENECA	DC	0.0032	0.0066	0.0034	0.0058	0.0062	0.0004
BACTON_OT	EA	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRISLEY	EA	0.0003	0.0001	-0.0002	0.0005	0.0003	-0.0002
CAMBRIDGE	EA	0.0066	0.0055	-0.0011	0.0071	0.0068	-0.0003
EYE	EA	0.0056	0.0046	-0.0010	0.0061	0.0058	-0.0003

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Booked**	**Actual Difference**	**As-Is**	**DN's @ Booked**	**Actual Difference**
GREAT_WILBRAHAM	EA	0.0056	0.0046	-0.0010	0.0061	0.0058	-0.0003
MATCHING_GREEN	EA	0.0097	0.0087	-0.0010	0.0104	0.0101	-0.0003
ROUDHAM_HEATH	EA	0.0019	0.0009	-0.0010	0.0022	0.0020	-0.0002
ROYSTON	EA	0.0075	0.0064	-0.0011	0.0080	0.0078	-0.0002
WEST_WINCH	EA	0.0027	0.0016	-0.0011	0.0030	0.0027	-0.0003
WHITWELL	EA	0.0094	0.0084	-0.0010	0.0101	0.0098	-0.0003
YELVERTON	EA	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ALREWAS_EM	EM	0.0134	0.0131	-0.0003	0.0143	0.0147	0.0004
BLABY	EM	0.0099	0.0096	-0.0003	0.0106	0.0111	0.0005
BLYBOROUGH	EM	0.0019	0.0016	-0.0003	0.0023	0.0027	0.0004
CALDECOTT	EM	0.0076	0.0072	-0.0004	0.0081	0.0086	0.0005
DROINTON_OT	EM	0.0145	0.0142	-0.0003	0.0155	0.0159	0.0004
GOSBERTON	EM	0.0030	0.0027	-0.0003	0.0034	0.0038	0.0004
KIRKSTEAD	EM	0.0010	0.0006	-0.0004	0.0012	0.0017	0.0005
MARKET_HARBOROUGH	EM	0.0087	0.0083	-0.0004	0.0093	0.0098	0.0005
SILK_WILLOUGHBY	EM	0.0022	0.0019	-0.0003	0.0025	0.0030	0.0005
SUTTON_BRIDGE	EM	0.0044	0.0034	-0.0010	0.0049	0.0046	-0.0003
THORNTON_CURTIS_LDZ	EM	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
TUR_LANGTON	EM	0.0089	0.0085	-0.0004	0.0095	0.0100	0.0005
WALESBY	EM	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ASSELBY	NE	0.0001	0.0001	0.0000	0.0003	0.0008	0.0005
BALDERSBY	NE	0.0052	0.0049	-0.0003	0.0057	0.0062	0.0005
BURLEY_BANK	NE	0.0045	0.0041	-0.0004	0.0049	0.0053	0.0004
GANSTEAD	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PANNAL	NE	0.0040	0.0037	-0.0003	0.0044	0.0049	0.0005
PAULL	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PICKERING	NE	0.0001	0.0009	0.0008	0.0015	0.0019	0.0004
RAWCLIFFE	NE	0.0003	0.0001	-0.0002	0.0005	0.0010	0.0005
TOWTON	NE	0.0023	0.0020	-0.0003	0.0026	0.0031	0.0005
BISHOP_AUCKLAND	NO	0.0050	0.0067	0.0017	0.0076	0.0081	0.0005
BISHOP_AUCKLAND_TEST_FACILITY	NO	0.0050	0.0067	0.0017	0.0076	0.0081	0.0005
COLDSTREAM	NO	0.0118	0.0136	0.0018	0.0149	0.0153	0.0004
CORBRIDGE	NO	0.0094	0.0112	0.0018	0.0124	0.0128	0.0004
COWPEN_BEWLEY	NO	0.0030	0.0064	0.0034	0.0056	0.0060	0.0004
ELTON	NO	0.0034	0.0052	0.0018	0.0061	0.0065	0.0004
GUYZANCE	NO	0.0120	0.0137	0.0017	0.0150	0.0154	0.0004
HUMBLETON	NO	0.0113	0.0131	0.0018	0.0143	0.0148	0.0005
KELD	NO	0.0120	0.0139	0.0019	0.0129	0.0137	0.0008
LITTLE_BURDON	NO	0.0039	0.0056	0.0017	0.0065	0.0069	0.0004
MELKINTHORPE	NO	0.0127	0.0145	0.0018	0.0136	0.0144	0.0008
SALTWICK_PC	NO	0.0152	0.0170	0.0018	0.0184	0.0188	0.0004
SALTWICK_VC	NO	0.0152	0.0170	0.0018	0.0184	0.0188	0.0004
THRINTOFT	NO	0.0055	0.0068	0.0013	0.0077	0.0082	0.0005
TOW_LAW	NO	0.0069	0.0087	0.0018	0.0097	0.0101	0.0004
WETHERAL	NO	0.0135	0.0153	0.0018	0.0162	0.0171	0.0009

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Booked**	**Actual Difference**	**As-Is**	**DN's @ Booked**	**Actual Difference**
HORNDON	NT	0.0101	0.0091	-0.0010	0.0109	0.0106	-0.0003
LUXBOROUGH_LANE	NT	0.0104	0.0093	-0.0011	0.0111	0.0108	-0.0003
PETERS_GREEN	NT	0.0098	0.0088	-0.0010	0.0105	0.0102	-0.0003
PETERS_GREEN_SOUTH_MIMMS	NT	0.0098	0.0088	-0.0010	0.0105	0.0102	-0.0003
WINKFIELD_NT	NT	0.0185	0.0175	-0.0010	0.0196	0.0194	-0.0002
AUDLEY_NW	NW	0.0180	0.0177	-0.0003	0.0190	0.0196	0.0006
BLACKROD	NW	0.0152	0.0149	-0.0003	0.0162	0.0166	0.0004
ECCLESTON	NW	0.0200	0.0209	0.0009	0.0210	0.0219	0.0009
HOLMES_CHAPEL	NW	0.0193	0.0189	-0.0004	0.0203	0.0209	0.0006
LUPTON	NW	0.0094	0.0112	0.0018	0.0101	0.0110	0.0009
MALPAS	NW	0.0199	0.0196	-0.0003	0.0210	0.0216	0.0006
MICKLE_TRAFFORD	NW	0.0193	0.0210	0.0017	0.0203	0.0212	0.0009
PARTINGTON	NW	0.0176	0.0198	0.0022	0.0191	0.0200	0.0009
SAMLESBURY	NW	0.0138	0.0134	-0.0004	0.0147	0.0151	0.0004
WARBURTON	NW	0.0178	0.0196	0.0018	0.0189	0.0197	0.0008
WESTON_POINT	NW	0.0202	0.0219	0.0017	0.0213	0.0222	0.0009
ABERDEEN	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ARMADALE	SC	0.0099	0.0117	0.0018	0.0128	0.0133	0.0005
BALGRAY	SC	0.0016	0.0034	0.0018	0.0042	0.0046	0.0004
BATHGATE	SC	0.0095	0.0113	0.0018	0.0124	0.0129	0.0005
BROXBURN	SC	0.0110	0.0128	0.0018	0.0140	0.0145	0.0005
CARESTON	SC	0.0001	0.0014	0.0013	0.0020	0.0025	0.0005
DRUM	SC	0.0067	0.0085	0.0018	0.0095	0.0100	0.0005
HUME	SC	0.0128	0.0146	0.0018	0.0159	0.0163	0.0004
KINKNOCKIE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
LANGHOLM	SC	0.0134	0.0151	0.0017	0.0165	0.0169	0.0004
LAUDERHILL	SC	0.0144	0.0158	0.0014	0.0176	0.0176	0.0000
LOCKERBIE	SC	0.0144	0.0162	0.0018	0.0176	0.0180	0.0004
MOSSIDE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NETHER_HOWCLEUGH	SC	0.0147	0.0164	0.0017	0.0178	0.0183	0.0005
PITCAIRNGREEN	SC	0.0039	0.0057	0.0018	0.0066	0.0070	0.0004
SOUTRA	SC	0.0145	0.0163	0.0018	0.0177	0.0181	0.0004
ST_FERGUS_OT	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STRANRAER	SC	0.0154	0.0172	0.0018	0.0186	0.0191	0.0005
FARNINGHAM	SE	0.0120	0.0092	-0.0028	0.0128	0.0107	-0.0021
FARNINGHAM_B	SE	0.0120	0.0092	-0.0028	0.0128	0.0107	-0.0021
SHORNE	SE	0.0110	0.0082	-0.0028	0.0118	0.0096	-0.0022
TATSFIELD	SE	0.0137	0.0109	-0.0028	0.0146	0.0125	-0.0021
WINKFIELD_SE	SE	0.0185	0.0175	-0.0010	0.0196	0.0194	-0.0002
BRAISHFIELD_A	SO	0.0220	0.0210	-0.0010	0.0233	0.0231	-0.0002
BRAISHFIELD_B	SO	0.0220	0.0210	-0.0010	0.0233	0.0231	-0.0002
CRAWLEY_DOWN	SO	0.0202	0.0198	-0.0004	0.0220	0.0218	-0.0002
HARDWICK	SO	0.0133	0.0122	-0.0011	0.0141	0.0139	-0.0002
IPSDEN	SO	0.0165	0.0155	-0.0010	0.0175	0.0172	-0.0003
IPSDEN_2	SO	0.0165	0.0155	-0.0010	0.0175	0.0172	-0.0003

		2012/13			2013/14		
NTS Exit Point	**DC/DN**	**As-Is**	**DN's @ Booked**	**Actual Difference**	**As-Is**	**DN's @ Booked**	**Actual Difference**
MAPPOWDER	SO	0.0170	0.0167	-0.0003	0.0188	0.0185	-0.0003
WINKFIELD_SO	SO	0.0185	0.0175	-0.0010	0.0196	0.0194	-0.0002
AYLESBEARE	SW	0.0192	0.0189	-0.0003	0.0210	0.0208	-0.0002
CHOAKFORD	SW	0.0246	0.0242	-0.0004	0.0267	0.0264	-0.0003
CIRENCESTER	SW	0.0086	0.0083	-0.0003	0.0099	0.0097	-0.0002
COFFINSWELL	SW	0.0218	0.0215	-0.0003	0.0238	0.0236	-0.0002
EASTON_GREY	SW	0.0091	0.0088	-0.0003	0.0105	0.0103	-0.0002
EVESHAM	SW	0.0056	0.0053	-0.0003	0.0068	0.0066	-0.0002
FIDDINGTON	SW	0.0044	0.0040	-0.0004	0.0054	0.0052	-0.0002
ILCHESTER	SW	0.0149	0.0146	-0.0003	0.0166	0.0164	-0.0002
KENN_SOUTH	SW	0.0203	0.0199	-0.0004	0.0222	0.0220	-0.0002
LITTLETON_DREW	SW	0.0099	0.0096	-0.0003	0.0113	0.0111	-0.0002
PUCKLECHURCH	SW	0.0108	0.0104	-0.0004	0.0122	0.0120	-0.0002
ROSS_SW	SW	0.0016	0.0012	-0.0004	0.0025	0.0023	-0.0002
SEABANK_LDZ	SW	0.0092	0.0124	0.0032	0.0142	0.0140	-0.0002
ALREWAS_WM	WM	0.0134	0.0131	-0.0003	0.0143	0.0147	0.0004
ASPLEY	WM	0.0164	0.0161	-0.0003	0.0174	0.0179	0.0005
AUDLEY_WM	WM	0.0180	0.0177	-0.0003	0.0190	0.0196	0.0006
AUSTREY	WM	0.0122	0.0118	-0.0004	0.0135	0.0134	-0.0001
LEAMINGTON_SPA	WM	0.0082	0.0079	-0.0003	0.0095	0.0093	-0.0002
LOWER_QUINTON	WM	0.0067	0.0064	-0.0003	0.0079	0.0077	-0.0002
MILWICH	WM	0.0152	0.0148	-0.0004	0.0161	0.0166	0.0005
ROSS_WM	WM	0.0016	0.0012	-0.0004	0.0025	0.0023	-0.0002
RUGBY	WM	0.0093	0.0089	-0.0004	0.0106	0.0104	-0.0002
SHUSTOKE	WM	0.0134	0.0130	-0.0004	0.0148	0.0147	-0.0001
STRATFORD_UPON_AVON	WM	0.0068	0.0065	-0.0003	0.0081	0.0078	-0.0003
MAELOR	WN	0.0207	0.0204	-0.0003	0.0218	0.0224	0.0006
DOWLAIS	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
DYFFRYN_CLYDACH	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
GILWERN	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000

Appendix D – Indicative supply flow impact on NTS Exit (Flat) Capacity prices: TYS Forecast Supply vs. Beach Entry at Baseline/Obligated Level

These indicative prices have been generated to show the effects of using differing supply flow levels based on the methodology for the Enduring period (i.e. TYS Forecast Supplies for the relevant year) vs. supply flow levels based on the Licence entry baselines (i.e. the obligated entry capacity level), and should not be used for any other purpose. The tables have been provided on a DN exit zone (for illustrative purposes) and NTS offtake basis.

The following Transportation Models inputs have been used:

Input	Value	Value
Network	2012/13	2013/14
Supply	**1. 'As-is'** ~ December 2009 Ten Year Statement for 2012/13 **2. 'Supply @ Baseline'** ~ Beach/UKCS @ Licence Entry Baselines, Storage Entry @ Physical Capability	**1. 'As-is'** ~ December 2009 Ten Year Statement for 2013/14 **2. 'Supply @ Baseline'** ~ Beach/UKCS @ Licence Entry Baselines, Storage Entry @ Physical Capability
Demand	Baseline plus Incremental modelled flow No exit flow is modelled for storage, or for IUK	
Balancing S&D	Merit Order	
Expansion Factor	1st October 2009 - £2437/GWhkm	1st October 2009 - £2559/GWhkm
Anuitisation Factor	0.10272	

Indicative NTS Exit (Flat) Capacity prices have been generated as follows:

2012/13 Scenario	Supply in Node Data Table in Transportation Model	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	December 2009 Ten Year Statement for 2012/13	Exit Baseline plus Incremental capacity *Total Demand: 7800 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£292.5m
Supply@ Baseline	Beach/UKCS @ Licence Entry Baselines Storage Entry @ Physical Capability			

2013/14 Scenario	Supply in Node Data Table in Transportation Model	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	December 2009 Ten Year Statement for 2013/14	Exit Baseline plus Incremental capacity *Total Demand: 7802 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£326.0m
Supply@ Baseline	Beach/UKCS @ Licence Entry Baselines Storage Entry @ Physical Capability			

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on beach supplies at Baseline/Obligation for 2012/13 & 2013/14, by DN Exit Zone

	2012/13	2013/14		2012/13	2013/14	
DN Exit Zone	As-Is'	As-Is'	Actual Difference	Supply @ Baseline	Supply @ Baseline	Actual Difference
EA1	0.0040	0.0044	0.0004	0.0050	0.0060	0.0010
EA2	0.0041	0.0045	0.0004	0.0052	0.0064	0.0012
EA3	0.0001	0.0001	0.0000	0.0009	0.0018	0.0009
EA4	0.0095	0.0102	0.0007	0.0106	0.0120	0.0014
EM1	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EM2	0.0021	0.0025	0.0004	0.0033	0.0043	0.0010
EM3	0.0125	0.0134	0.0009	0.0136	0.0152	0.0016
EM4	0.0081	0.0087	0.0006	0.0092	0.0105	0.0013
NE1	0.0034	0.0038	0.0004	0.0045	0.0056	0.0011
NE2	0.0001	0.0005	0.0004	0.0008	0.0010	0.0002
NE3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NO1	0.0075	0.0103	0.0028	0.0003	0.0008	0.0005
NO2	0.0133	0.0158	0.0025	0.0043	0.0054	0.0011
NT1	0.0185	0.0196	0.0011	0.0196	0.0215	0.0019
NT2	0.0103	0.0111	0.0008	0.0115	0.0129	0.0014
NT3	0.0098	0.0105	0.0007	0.0109	0.0123	0.0014
NW1	0.0144	0.0153	0.0009	0.0147	0.0163	0.0016
NW2	0.0184	0.0196	0.0012	0.0196	0.0214	0.0018
SC1	0.0005	0.0011	0.0006	0.0001	0.0001	0.0000
SC2	0.0113	0.0143	0.0030	0.0001	0.0001	0.0000
SC4	0.0095	0.0124	0.0029	0.0001	0.0001	0.0000
SE1	0.0128	0.0137	0.0009	0.0140	0.0156	0.0016
SE2	0.0185	0.0196	0.0011	0.0196	0.0215	0.0019
SO1	0.0133	0.0141	0.0008	0.0144	0.0160	0.0016
SO2	0.0199	0.0212	0.0013	0.0225	0.0245	0.0020
SW1	0.0043	0.0053	0.0010	0.0147	0.0163	0.0016
SW2	0.0106	0.0134	0.0028	0.0225	0.0244	0.0019
SW3	0.0224	0.0244	0.0020	0.0329	0.0354	0.0025
WN	0.0207	0.0218	0.0011	0.0218	0.0238	0.0020
WS	0.0001	0.0001	0.0000	0.0078	0.0091	0.0013
WM1	0.0165	0.0175	0.0010	0.0176	0.0194	0.0018
WM2	0.0130	0.0141	0.0011	0.0144	0.0160	0.0016
WM3	0.0077	0.0089	0.0012	0.0127	0.0142	0.0015

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on beach supplies at Baseline/Obligation for 2012/13 & 2013/14, by NTS Offtake

		2012/13	2013/14		2012/13	2013/14	
Exit Point	DC/DN	As-Is	As-Is	Actual Difference	Supply @ Baseline	Supply @ Baseline	Actual Difference
AM_PAPER	DC	0.0153	0.0163	0.0010	0.0157	0.0174	0.0017
AVONMOUTH_LNG	DC	0.0090	0.0140	0.0050	0.0231	0.0251	0.0020
BACTON INTERCONNECTOR	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BACTON_BAIRD	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BAGLAN_BAY_PG	DC	0.0001	0.0001	0.0000	0.0057	0.0069	0.0012
BARKING_PG	DC	0.0101	0.0109	0.0008	0.0113	0.0127	0.0014
BARROW_BAINS	DC	0.0059	0.0064	0.0005	0.0063	0.0075	0.0012
BARROW_BS	DC	0.0059	0.0064	0.0005	0.0063	0.0075	0.0012
BARROW_GATEWAY	DC	0.0059	0.0064	0.0005	0.0063	0.0075	0.0012
BARTON_STACEY_(MRS)	DC	0.0205	0.0217	0.0012	0.0216	0.0236	0.0020
BILLINGHAM_ICI	DC	0.0032	0.0058	0.0026	0.0001	0.0001	0.0000
BP_GRANGEMOUTH	DC	0.0082	0.0110	0.0028	0.0001	0.0001	0.0000
BP_SALTEND_HP	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRIDGEWATER_PAPER	DC	0.0201	0.0212	0.0011	0.0233	0.0253	0.0020
BRIGG_PG	DC	0.0029	0.0033	0.0004	0.0040	0.0051	0.0011
BRIMSDOWN_PG	DC	0.0106	0.0114	0.0008	0.0118	0.0132	0.0014
BRINE_FIELD_PS	DC	0.0026	0.0051	0.0025	0.0001	0.0001	0.0000
BRUNNER_MOND	DC	0.0171	0.0180	0.0009	0.0189	0.0208	0.0019
CARRINGTON_PS	DC	0.0176	0.0191	0.0015	0.0184	0.0202	0.0018
CAYTHORPE_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0005	0.0004
CENTRAX	DC	0.0216	0.0236	0.0020	0.0322	0.0346	0.0024
CHESHIRE_(MRS)	DC	0.0164	0.0173	0.0009	0.0196	0.0214	0.0018
CONNAHS_QUAY_PS	DC	0.0205	0.0216	0.0011	0.0235	0.0255	0.0020
CORBY_PS	DC	0.0079	0.0085	0.0006	0.0090	0.0103	0.0013
CORYTON_PG	DC	0.0104	0.0111	0.0007	0.0115	0.0130	0.0015
CORYTON_PG_2	DC	0.0104	0.0111	0.0007	0.0115	0.0130	0.0015
COTTAM_PG	DC	0.0019	0.0023	0.0004	0.0031	0.0041	0.0010
DAMHEAD_CREEK	DC	0.0097	0.0104	0.0007	0.0108	0.0122	0.0014
DEESIDE_PS	DC	0.0202	0.0212	0.0010	0.0233	0.0253	0.0020
DIDCOT_A	DC	0.0168	0.0179	0.0011	0.0180	0.0197	0.0017
DIDCOT_PS	DC	0.0168	0.0178	0.0010	0.0179	0.0197	0.0018
DRAKELOW_PS	DC	0.0129	0.0138	0.0009	0.0141	0.0156	0.0015
DYNEVOR_ARMS_LNG	DC	0.0001	0.0001	0.0000	0.0074	0.0087	0.0013
EASINGTON&ROUGH_TERMINAL	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ENRON_(BILLINGHAM)	DC	0.0032	0.0058	0.0026	0.0001	0.0001	0.0000
GARTON_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
GLENMAVIS	DC	0.0107	0.0137	0.0030	0.0001	0.0001	0.0000
GLENMAVIS_LNG	DC	0.0107	0.0137	0.0030	0.0001	0.0001	0.0000
GOOLE_GLASS	DC	0.0006	0.0009	0.0003	0.0018	0.0027	0.0009
GRAIN_GAS	DC	0.0097	0.0104	0.0007	0.0108	0.0122	0.0014
GREAT_YARMOUTH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
HATFIELD_MOOR_(MRS)	DC	0.0011	0.0014	0.0003	0.0022	0.0032	0.0010
HAYS_CHEMICALS	DC	0.0170	0.0180	0.0010	0.0202	0.0221	0.0019
HOLEHOUSE_FARM_(MRS)	DC	0.0172	0.0182	0.0010	0.0204	0.0223	0.0019
HORNSEA_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000

Exit Point	DC/DN	2012/13 As-Is	2013/14 As-Is	Actual Difference	2012/13 Supply @ Baseline	2013/14 Supply @ Baseline	Actual Difference
ICI_RUNCORN	DC	0.0202	0.0213	0.0011	0.0234	0.0254	0.0020
IMMINGHAM_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
KEADBY_BS	DC	0.0018	0.0021	0.0003	0.0029	0.0039	0.0010
KEADBY_PS	DC	0.0018	0.0021	0.0003	0.0029	0.0039	0.0010
KEMIRAINCE_CHP	DC	0.0199	0.0209	0.0010	0.0230	0.0250	0.0020
KINGS_LYNN_PS	DC	0.0029	0.0033	0.0004	0.0041	0.0051	0.0010
LANGAGE_PG	DC	0.0246	0.0267	0.0021	0.0351	0.0377	0.0026
LITTLE_BARFORD_PS	DC	0.0094	0.0101	0.0007	0.0106	0.0120	0.0014
LONGANNET	DC	0.0075	0.0103	0.0028	0.0001	0.0001	0.0000
MARCHWOOD	DC	0.0216	0.0236	0.0020	0.0234	0.0254	0.0020
MEDWAY_PS	DC	0.0098	0.0105	0.0007	0.0109	0.0123	0.0014
MILFORD_HAVEN_REFINERY	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
MOFFAT	DC	0.0154	0.0186	0.0032	0.0001	0.0004	0.0003
PARTINGTON_LNG	DC	0.0176	0.0191	0.0015	0.0183	0.0201	0.0018
PEMBROKE_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PETERBOROUGH_PS	DC	0.0060	0.0065	0.0005	0.0071	0.0083	0.0012
PETERHEAD_PG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PHILLIPS_SEAL_SANDS	DC	0.0026	0.0051	0.0025	0.0001	0.0001	0.0000
ROCKSAVAGE_PG	DC	0.0202	0.0213	0.0011	0.0234	0.0254	0.0020
ROOSECOTE_PS	DC	0.0059	0.0064	0.0005	0.0063	0.0075	0.0012
RYE_HOUSE_PS	DC	0.0111	0.0118	0.0007	0.0122	0.0137	0.0015
SALTEND	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
SAPPIPAPERMILLCHP	DC	0.0142	0.0151	0.0009	0.0145	0.0161	0.0016
SEABANK_POWER_phase_II	DC	0.0091	0.0141	0.0050	0.0231	0.0251	0.0020
SEABANK_POWER_phase1	DC	0.0108	0.0122	0.0014	0.0213	0.0232	0.0019
SELLAFIELD_PS	DC	0.0099	0.0106	0.0007	0.0103	0.0117	0.0014
SEVERNSIDE_ICI	DC	0.0091	0.0140	0.0049	0.0230	0.0250	0.0020
SHOTTON_PAPER	DC	0.0204	0.0215	0.0011	0.0236	0.0256	0.0020
SPALDING_PG	DC	0.0033	0.0037	0.0004	0.0045	0.0056	0.0011
SPALDING_PG_2	DC	0.0033	0.0037	0.0004	0.0045	0.0056	0.0011
ST_FERGUS_BS	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STALLINGBOROUGH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STAYTHORPE	DC	0.0049	0.0053	0.0004	0.0060	0.0072	0.0012
STUBLACH	DC	0.0164	0.0173	0.0009	0.0196	0.0214	0.0018
SUTTON_BRIDGE_PS	DC	0.0043	0.0047	0.0004	0.0054	0.0066	0.0012
TEESSIDE_BASF	DC	0.0026	0.0051	0.0025	0.0001	0.0001	0.0000
TEESSIDE_HYDROGEN	DC	0.0026	0.0052	0.0026	0.0001	0.0001	0.0000
THORNTON_CURTIS_(KILLINGHOLME)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WEST_BURTON_PS	DC	0.0019	0.0022	0.0003	0.0030	0.0042	0.0012
WYRE_PS	DC	0.0131	0.0139	0.0008	0.0134	0.0150	0.0016
ZENECA	DC	0.0032	0.0058	0.0026	0.0001	0.0001	0.0000
BACTON_OT	EA	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BRISLEY	EA	0.0003	0.0005	0.0002	0.0014	0.0024	0.0010
CAMBRIDGE	EA	0.0066	0.0071	0.0005	0.0077	0.0089	0.0012
EYE	EA	0.0056	0.0061	0.0005	0.0067	0.0079	0.0012

		2012/13	2013/14		2012/13	2013/14	
Exit Point	**DC/DN**	**As-Is**	**As-Is**	**Actual Difference**	**Supply @ Baseline**	**Supply @ Baseline**	**Actual Difference**
GREAT_WILBRAHAM	EA	0.0056	0.0061	0.0005	0.0067	0.0080	0.0013
MATCHING_GREEN	EA	0.0097	0.0104	0.0007	0.0108	0.0122	0.0014
ROUDHAM_HEATH	EA	0.0019	0.0022	0.0003	0.0031	0.0041	0.0010
ROYSTON	EA	0.0075	0.0080	0.0005	0.0086	0.0099	0.0013
WEST_WINCH	EA	0.0027	0.0030	0.0003	0.0038	0.0048	0.0010
WHITWELL	EA	0.0094	0.0101	0.0007	0.0105	0.0119	0.0014
YELVERTON	EA	0.0001	0.0001	0.0000	0.0009	0.0018	0.0009
ALREWAS_EM	EM	0.0134	0.0143	0.0009	0.0145	0.0161	0.0016
BLABY	EM	0.0099	0.0106	0.0007	0.0110	0.0125	0.0015
BLYBOROUGH	EM	0.0019	0.0023	0.0004	0.0031	0.0041	0.0010
CALDECOTT	EM	0.0076	0.0081	0.0005	0.0087	0.0100	0.0013
DROINTON_OT	EM	0.0145	0.0155	0.0010	0.0156	0.0173	0.0017
GOSBERTON	EM	0.0030	0.0034	0.0004	0.0041	0.0052	0.0011
KIRKSTEAD	EM	0.0010	0.0012	0.0002	0.0021	0.0031	0.0010
MARKET_HARBOROUGH	EM	0.0087	0.0093	0.0006	0.0098	0.0111	0.0013
SILK_WILLOUGHBY	EM	0.0022	0.0025	0.0003	0.0033	0.0044	0.0011
SUTTON_BRIDGE	EM	0.0044	0.0049	0.0005	0.0056	0.0067	0.0011
THORNTON_CURTIS_LDZ	EM	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
TUR_LANGTON	EM	0.0089	0.0095	0.0006	0.0100	0.0114	0.0014
WALESBY	EM	0.0001	0.0001	0.0000	0.0001	0.0005	0.0004
ASSELBY	NE	0.0001	0.0003	0.0002	0.0012	0.0022	0.0010
BALDERSBY	NE	0.0052	0.0057	0.0005	0.0027	0.0037	0.0010
BURLEY_BANK	NE	0.0045	0.0049	0.0004	0.0047	0.0058	0.0011
GANSTEAD	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PANNAL	NE	0.0040	0.0044	0.0004	0.0052	0.0063	0.0011
PAULL	NE	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
PICKERING	NE	0.0001	0.0015	0.0014	0.0024	0.0033	0.0009
RAWCLIFFE	NE	0.0003	0.0005	0.0002	0.0014	0.0024	0.0010
TOWTON	NE	0.0023	0.0026	0.0003	0.0034	0.0045	0.0011
BISHOP_AUCKLAND	NO	0.0050	0.0076	0.0026	0.0008	0.0017	0.0009
BISHOP_AUCKLAND_TEST_FACILITY	NO	0.0050	0.0076	0.0026	0.0008	0.0017	0.0009
COLDSTREAM	NO	0.0118	0.0149	0.0031	0.0001	0.0001	0.0000
CORBRIDGE	NO	0.0094	0.0124	0.0030	0.0006	0.0015	0.0009
COWPEN_BEWLEY	NO	0.0030	0.0056	0.0026	0.0001	0.0001	0.0000
ELTON	NO	0.0034	0.0061	0.0027	0.0001	0.0008	0.0007
GUYZANCE	NO	0.0120	0.0150	0.0030	0.0001	0.0001	0.0000
HUMBLETON	NO	0.0113	0.0143	0.0030	0.0001	0.0001	0.0000
KELD	NO	0.0120	0.0129	0.0009	0.0072	0.0085	0.0013
LITTLE_BURDON	NO	0.0039	0.0065	0.0026	0.0003	0.0012	0.0009
MELKINTHORPE	NO	0.0127	0.0136	0.0009	0.0065	0.0077	0.0012
SALTWICK_PC	NO	0.0152	0.0184	0.0032	0.0001	0.0002	0.0001
SALTWICK_VC	NO	0.0152	0.0184	0.0032	0.0001	0.0002	0.0001
THRINTOFT	NO	0.0055	0.0077	0.0022	0.0020	0.0030	0.0010
TOW_LAW	NO	0.0069	0.0097	0.0028	0.0027	0.0037	0.0010
WETHERAL	NO	0.0135	0.0162	0.0027	0.0040	0.0051	0.0011

		2012/13	2013/14		2012/13	2013/14	
Exit Point	**DC/DN**	**As-Is**	**As-Is**	**Actual Difference**	**Supply @ Baseline**	**Supply @ Baseline**	**Actual Difference**
HORNDON	NT	0.0101	0.0109	0.0008	0.0113	0.0127	0.0014
LUXBOROUGH_LANE	NT	0.0104	0.0111	0.0007	0.0115	0.0129	0.0014
PETERS_GREEN	NT	0.0098	0.0105	0.0007	0.0109	0.0123	0.0014
PETERS_GREEN_SOUTH_MIMMS	NT	0.0098	0.0105	0.0007	0.0109	0.0123	0.0014
WINKFIELD_NT	NT	0.0185	0.0196	0.0011	0.0196	0.0215	0.0019
AUDLEY_NW	NW	0.0180	0.0190	0.0010	0.0192	0.0210	0.0018
BLACKROD	NW	0.0152	0.0162	0.0010	0.0156	0.0172	0.0016
ECCLESTON	NW	0.0200	0.0210	0.0010	0.0224	0.0244	0.0020
HOLMES_CHAPEL	NW	0.0193	0.0203	0.0010	0.0197	0.0216	0.0019
LUPTON	NW	0.0094	0.0101	0.0007	0.0098	0.0112	0.0014
MALPAS	NW	0.0199	0.0210	0.0011	0.0210	0.0230	0.0020
MICKLE_TRAFFORD	NW	0.0193	0.0203	0.0010	0.0225	0.0244	0.0019
PARTINGTON	NW	0.0176	0.0191	0.0015	0.0184	0.0202	0.0018
SAMLESBURY	NW	0.0138	0.0147	0.0009	0.0141	0.0157	0.0016
WARBURTON	NW	0.0178	0.0189	0.0011	0.0181	0.0199	0.0018
WESTON_POINT	NW	0.0202	0.0213	0.0011	0.0234	0.0254	0.0020
ABERDEEN	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
ARMADALE	SC	0.0099	0.0128	0.0029	0.0001	0.0001	0.0000
BALGRAY	SC	0.0016	0.0042	0.0026	0.0001	0.0001	0.0000
BATHGATE	SC	0.0095	0.0124	0.0029	0.0001	0.0001	0.0000
BROXBURN	SC	0.0110	0.0140	0.0030	0.0001	0.0001	0.0000
CARESTON	SC	0.0001	0.0020	0.0019	0.0001	0.0001	0.0000
DRUM	SC	0.0067	0.0095	0.0028	0.0001	0.0001	0.0000
HUME	SC	0.0128	0.0159	0.0031	0.0001	0.0001	0.0000
KINKNOCKIE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
LANGHOLM	SC	0.0134	0.0165	0.0031	0.0016	0.0025	0.0009
LAUDERHILL	SC	0.0144	0.0176	0.0032	0.0001	0.0001	0.0000
LOCKERBIE	SC	0.0144	0.0176	0.0032	0.0007	0.0016	0.0009
MOSSIDE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NETHER_HOWCLEUGH	SC	0.0147	0.0178	0.0031	0.0001	0.0001	0.0000
PITCAIRNGREEN	SC	0.0039	0.0066	0.0027	0.0001	0.0001	0.0000
SOUTRA	SC	0.0145	0.0177	0.0032	0.0001	0.0001	0.0000
ST_FERGUS_OT	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
STRANRAER	SC	0.0154	0.0186	0.0032	0.0001	0.0004	0.0003
FARNINGHAM	SE	0.0120	0.0128	0.0008	0.0131	0.0147	0.0016
FARNINGHAM_B	SE	0.0120	0.0128	0.0008	0.0131	0.0147	0.0016
SHORNE	SE	0.0110	0.0118	0.0008	0.0121	0.0136	0.0015
TATSFIELD	SE	0.0137	0.0146	0.0009	0.0149	0.0165	0.0016
WINKFIELD_SE	SE	0.0185	0.0196	0.0011	0.0196	0.0215	0.0019
BRAISHFIELD_A	SO	0.0220	0.0233	0.0013	0.0231	0.0252	0.0021
BRAISHFIELD_B	SO	0.0220	0.0233	0.0013	0.0231	0.0252	0.0021
CRAWLEY_DOWN	SO	0.0202	0.0220	0.0018	0.0219	0.0239	0.0020
HARDWICK	SO	0.0133	0.0141	0.0008	0.0144	0.0160	0.0016
IPSDEN	SO	0.0165	0.0175	0.0010	0.0176	0.0194	0.0018
IPSDEN_2	SO	0.0165	0.0175	0.0010	0.0176	0.0194	0.0018

		2012/13	2013/14		2012/13	2013/14	
Exit Point	**DC/DN**	**As-Is**	**As-Is**	**Actual Difference**	**Supply @ Baseline**	**Supply @ Baseline**	**Actual Difference**
MAPPOWDER	SO	0.0170	0.0188	0.0018	0.0275	0.0298	0.0023
WINKFIELD_SO	SO	0.0185	0.0196	0.0011	0.0196	0.0215	0.0019
AYLESBEARE	SW	0.0192	0.0210	0.0018	0.0297	0.0321	0.0024
CHOAKFORD	SW	0.0246	0.0267	0.0021	0.0351	0.0377	0.0026
CIRENCESTER	SW	0.0086	0.0099	0.0013	0.0191	0.0209	0.0018
COFFINSWELL	SW	0.0218	0.0238	0.0020	0.0324	0.0348	0.0024
EASTON_GREY	SW	0.0091	0.0105	0.0014	0.0196	0.0215	0.0019
EVESHAM	SW	0.0056	0.0068	0.0012	0.0156	0.0172	0.0016
FIDDINGTON	SW	0.0044	0.0054	0.0010	0.0149	0.0165	0.0016
ILCHESTER	SW	0.0149	0.0166	0.0017	0.0255	0.0276	0.0021
KENN_SOUTH	SW	0.0203	0.0222	0.0019	0.0308	0.0332	0.0024
LITTLETON_DREW	SW	0.0099	0.0113	0.0014	0.0204	0.0223	0.0019
PUCKLECHURCH	SW	0.0108	0.0122	0.0014	0.0213	0.0232	0.0019
ROSS_SW	SW	0.0016	0.0025	0.0009	0.0121	0.0136	0.0015
SEABANK_LDZ	SW	0.0092	0.0142	0.0050	0.0232	0.0252	0.0020
ALREWAS_WM	WM	0.0134	0.0143	0.0009	0.0145	0.0161	0.0016
ASPLEY	WM	0.0164	0.0174	0.0010	0.0175	0.0193	0.0018
AUDLEY_WM	WM	0.0180	0.0190	0.0010	0.0192	0.0210	0.0018
AUSTREY	WM	0.0122	0.0135	0.0013	0.0138	0.0154	0.0016
LEAMINGTON_SPA	WM	0.0082	0.0095	0.0013	0.0130	0.0145	0.0015
LOWER_QUINTON	WM	0.0067	0.0079	0.0012	0.0149	0.0165	0.0016
MILWICH	WM	0.0152	0.0161	0.0009	0.0163	0.0180	0.0017
ROSS_WM	WM	0.0016	0.0025	0.0009	0.0121	0.0136	0.0015
RUGBY	WM	0.0093	0.0106	0.0013	0.0119	0.0134	0.0015
SHUSTOKE	WM	0.0134	0.0148	0.0014	0.0150	0.0166	0.0016
STRATFORD_UPON_AVON	WM	0.0068	0.0081	0.0013	0.0143	0.0159	0.0016
MAELOR	WN	0.0207	0.0218	0.0011	0.0218	0.0238	0.0020
DOWLAIS	WS	0.0001	0.0001	0.0000	0.0080	0.0093	0.0013
DYFFRYN_CLYDACH	WS	0.0001	0.0001	0.0000	0.0057	0.0068	0.0011
GILWERN	WS	0.0001	0.0001	0.0000	0.0091	0.0105	0.0014

Appendix E – Indicative supply flow impact on NTS Exit (Flat) Capacity prices: TYS Forecast Supply vs. Average of TYS ('06 – '09) Forecast Supplies

These indicative prices have been generated to show the effects of using differing supply flow levels based on the methodology for the Enduring period (i.e. TYS Forecast Supplies for the relevant year) vs. an average of the previous 4 years (2006 – 2009) TYS Forecast for each beach terminal respectively, and should not be used for any other purpose. The tables have been provided on a DN exit zone (for illustrative purposes) and NTS offtake basis.

The following Transportation Models inputs have been used:

Input	Value	Value
Network	2012/13	2013/14
Supply	**1. 'As-is'** ~ December 2009 Ten Year Statement for 2012/13 **2. 'Supply @ Ave TYS '06-'09'** ~ Beach/UKCS @ 4-year average, Storage Entry @ Physical Capability	**1. 'As-is'** ~ December 2009 Ten Year Statement for 2013/14 **2. 'Supply @ Ave TYS '06-'09'** ~ Beach/UKCS @ 4-year average, Storage Entry @ Physical Capability
Demand	Baseline plus Incremental modelled flow No exit flow is modelled for storage, or for IUK	
Balancing S&D	Merit Order	
Expansion Factor	1st October 2009 - £2437/GWhkm	1st October 2009 - £2559/GWhkm
Anuitisation Factor	0.10272	

Indicative NTS Exit (Flat) Capacity prices have been generated as follows:

2012/13 Scenario	Supply in Node Data Table in Transportation Model	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	December 2009 Ten Year Statement for 2012/13	Exit Baseline plus Incremental capacity *Total Demand: 7800 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£292.5m
Supply@ Baseline	Beach/UKCS @ 4-year average Storage Entry @ Physical Capability			

2013/14 Scenario	Supply in Node Data Table in Transportation Model	Demand in Node Data Table in Transportation Model	Exit Capacity in Administered Exit Charges Table in Transportation Model	Target TO Exit Revenue
As-Is	December 2009 Ten Year Statement for 2013/14	Exit Baseline plus Incremental capacity *Total Demand: 7802 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£326.0m
Supply@ Baseline	Beach/UKCS @ 4-year average Storage Entry @ Physical Capability			

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on beach supplies at average of 2006-2009 TYS Forecast for 2012/13 & 2013/14, by DN Exit Zone

	2012/13	2013/14		2012/13	2013/14	
DN Exit Zone	As-Is'	As-Is'	Actual Difference	Supply @ Ave TYS06-09	Supply @ Ave TYS06-09	Actual Difference
EA1	0.0040	0.0044	0.0004	0.0048	0.0048	0.0000
EA2	0.0041	0.0045	0.0004	0.0050	0.0050	0.0000
EA3	0.0001	0.0001	0.0000	0.0007	0.0004	-0.0003
EA4	0.0095	0.0102	0.0007	0.0103	0.0106	0.0003
EM1	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EM2	0.0021	0.0025	0.0004	0.0030	0.0029	-0.0001
EM3	0.0125	0.0134	0.0009	0.0134	0.0138	0.0004
EM4	0.0081	0.0087	0.0006	0.0089	0.0092	0.0003
NE1	0.0034	0.0038	0.0004	0.0043	0.0043	0.0000
NE2	0.0001	0.0005	0.0004	0.0001	0.0001	0.0000
NE3	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
NO1	0.0075	0.0103	0.0028	0.0063	0.0085	0.0022
NO2	0.0133	0.0158	0.0025	0.0142	0.0146	0.0004
NT1	0.0185	0.0196	0.0011	0.0194	0.0201	0.0007
NT2	0.0103	0.0111	0.0008	0.0112	0.0115	0.0003
NT3	0.0098	0.0105	0.0007	0.0107	0.0110	0.0003
NW1	0.0144	0.0153	0.0009	0.0152	0.0157	0.0005
NW2	0.0184	0.0196	0.0012	0.0192	0.0200	0.0008
SC1	0.0005	0.0011	0.0006	0.0001	0.0006	0.0005
SC2	0.0113	0.0143	0.0030	0.0059	0.0126	0.0067
SC4	0.0095	0.0124	0.0029	0.0041	0.0106	0.0065
SE1	0.0128	0.0137	0.0009	0.0137	0.0142	0.0005
SE2	0.0185	0.0196	0.0011	0.0194	0.0201	0.0007
SO1	0.0133	0.0141	0.0008	0.0141	0.0146	0.0005
SO2	0.0199	0.0212	0.0013	0.0208	0.0217	0.0009
SW1	0.0043	0.0053	0.0010	0.0051	0.0057	0.0006
SW2	0.0106	0.0134	0.0028	0.0115	0.0137	0.0022
SW3	0.0224	0.0244	0.0020	0.0233	0.0247	0.0014
WN	0.0207	0.0218	0.0011	0.0216	0.0223	0.0007
WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
WM1	0.0165	0.0175	0.0010	0.0174	0.0180	0.0006
WM2	0.0130	0.0141	0.0011	0.0138	0.0146	0.0008
WM3	0.0077	0.0089	0.0012	0.0085	0.0092	0.0007

Indicative NTS Exit (Flat) Capacity prices (p/kWh/day) based on beach supplies at average of 2006-2009 TYS Forecast for 2012/13 & 2013/14, by NTS Offtake

		2012/13	2013/14		2012/13	2013/14	
Exit Point	DC/DN	As-Is	As-Is	Actual Difference	Supply @ Ave TYS06-09	Supply @ Ave TYS06-09	Actual Difference
AM_PAPER	DC	0.0001	0.0001	0.0000	0.0162	0.0168	0.0006
AVONMOUTH_LNG	DC	0.0032	0.0058	0.0026	0.0099	0.0144	0.0045
BACTON INTERCONNECTOR	DC	0.0153	0.0163	0.0010	0.0001	0.0001	0.0000
BACTON_BAIRD	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
BAGLAN_BAY_PG	DC	0.0029	0.0033	0.0004	0.0001	0.0001	0.0000
BARKING_PG	DC	0.0171	0.0180	0.0009	0.0110	0.0113	0.0003
BARROW_BAINS	DC	0.0001	0.0001	0.0000	0.0068	0.0069	0.0001
BARROW_BS	DC	0.0176	0.0191	0.0015	0.0068	0.0069	0.0001
BARROW_GATEWAY	DC	0.0216	0.0236	0.0020	0.0068	0.0069	0.0001
BARTON_STACEY_(MRS)	DC	0.0001	0.0001	0.0000	0.0214	0.0222	0.0008
BILLINGHAM_ICI	DC	0.0205	0.0216	0.0011	0.0041	0.0040	-0.0001
BP_GRANGEMOUTH	DC	0.0202	0.0212	0.0010	0.0027	0.0092	0.0065
BP_SALTEND_HP	DC	0.0168	0.0179	0.0011	0.0001	0.0001	0.0000
BRIDGEWATER_PAPER	DC	0.0001	0.0001	0.0000	0.0210	0.0217	0.0007
BRIGG_PG	DC	0.0001	0.0001	0.0000	0.0038	0.0037	-0.0001
BRIMSDOWN_PG	DC	0.0032	0.0058	0.0026	0.0115	0.0118	0.0003
BRINE_FIELD_PS	DC	0.0001	0.0001	0.0000	0.0034	0.0033	-0.0001
BRUNNER_MOND	DC	0.0006	0.0009	0.0003	0.0180	0.0185	0.0005
CARRINGTON_PS	DC	0.0172	0.0182	0.0010	0.0185	0.0196	0.0011
CAYTHORPE_(MRS)	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
CENTRAX	DC	0.0068	0.0081	0.0013	0.0225	0.0239	0.0014
CHESHIRE_(MRS)	DC	0.0202	0.0213	0.0011	0.0173	0.0178	0.0005
CONNAHS_QUAY_PS	DC	0.0199	0.0209	0.0010	0.0214	0.0221	0.0007
CORBY_PS	DC	0.0246	0.0267	0.0021	0.0088	0.0090	0.0002
CORYTON_PG	DC	0.0094	0.0101	0.0007	0.0113	0.0116	0.0003
CORYTON_PG_2	DC	0.0075	0.0103	0.0028	0.0113	0.0116	0.0003
COTTAM_PG	DC	0.0216	0.0236	0.0020	0.0028	0.0027	-0.0001
DAMHEAD_CREEK	DC	0.0154	0.0186	0.0032	0.0105	0.0108	0.0003
DEESIDE_PS	DC	0.0176	0.0191	0.0015	0.0210	0.0217	0.0007
DIDCOT_A	DC	0.0001	0.0001	0.0000	0.0177	0.0183	0.0006
DIDCOT_PS	DC	0.0060	0.0065	0.0005	0.0176	0.0183	0.0007
DRAKELOW_PS	DC	0.0026	0.0051	0.0025	0.0138	0.0142	0.0004
DYNEVOR_ARMS_LNG	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
EASINGTON&ROUGH_TERMINAL	DC	0.0142	0.0151	0.0009	0.0001	0.0001	0.0000
ENRON_(BILLINGHAM)	DC	0.0091	0.0140	0.0049	0.0041	0.0040	-0.0001
GARTON_(MRS)	DC	0.0164	0.0173	0.0009	0.0001	0.0001	0.0000
GLENMAVIS	DC	0.0026	0.0051	0.0025	0.0053	0.0119	0.0066
GLENMAVIS_LNG	DC	0.0026	0.0052	0.0026	0.0053	0.0119	0.0066
GOOLE_GLASS	DC	0.0001	0.0001	0.0000	0.0015	0.0013	-0.0002
GRAIN_GAS	DC	0.0131	0.0139	0.0008	0.0105	0.0108	0.0003
GREAT_YARMOUTH	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
HATFIELD_MOOR_(MRS)	DC	0.0056	0.0061	0.0005	0.0020	0.0018	-0.0002
HAYS_CHEMICALS	DC	0.0056	0.0061	0.0005	0.0179	0.0184	0.0005
HOLEHOUSE_FARM_(MRS)	DC	0.0097	0.0104	0.0007	0.0181	0.0186	0.0005
HORNSEA_(MRS)	DC	0.0027	0.0030	0.0003	0.0001	0.0001	0.0000

Exit Point	DC/DN	2012/13 As-Is	2013/14 As-Is	Actual Difference	2012/13 Supply @ Ave TYS06-09	2013/14 Supply @ Ave TYS06-09	Actual Difference
ICI_RUNCORN	DC	0.0099	0.0106	0.0007	0.0211	0.0218	0.0007
IMMINGHAM_PG	DC	0.0076	0.0081	0.0005	0.0001	0.0001	0.0000
KEADBY_BS	DC	0.0010	0.0012	0.0002	0.0026	0.0025	-0.0001
KEADBY_PS	DC	0.0087	0.0093	0.0006	0.0026	0.0025	-0.0001
KEMIRAINCE_CHP	DC	0.0044	0.0049	0.0005	0.0207	0.0214	0.0007
KINGS_LYNN_PS	DC	0.0089	0.0095	0.0006	0.0038	0.0038	0.0000
LANGAGE_PG	DC	0.0052	0.0057	0.0005	0.0254	0.0270	0.0016
LITTLE_BARFORD_PS	DC	0.0001	0.0001	0.0000	0.0103	0.0106	0.0003
LONGANNET	DC	0.0050	0.0076	0.0026	0.0020	0.0085	0.0065
MARCHWOOD	DC	0.0113	0.0143	0.0030	0.0225	0.0239	0.0014
MEDWAY_PS	DC	0.0127	0.0136	0.0009	0.0106	0.0109	0.0003
MILFORD_HAVEN_REFINERY	DC	0.0055	0.0077	0.0022	0.0001	0.0001	0.0000
MOFFAT	DC	0.0135	0.0162	0.0027	0.0099	0.0168	0.0069
PARTINGTON_LNG	DC	0.0185	0.0196	0.0011	0.0184	0.0195	0.0011
PEMBROKE_PG	DC	0.0152	0.0162	0.0010	0.0001	0.0001	0.0000
PETERBOROUGH_PS	DC	0.0200	0.0210	0.0010	0.0068	0.0069	0.0001
PETERHEAD_PG	DC	0.0193	0.0203	0.0010	0.0001	0.0001	0.0000
PHILLIPS_SEAL_SANDS	DC	0.0193	0.0203	0.0010	0.0034	0.0033	-0.0001
ROCKSAVAGE_PG	DC	0.0001	0.0001	0.0000	0.0211	0.0218	0.0007
ROOSECOTE_PS	DC	0.0099	0.0128	0.0029	0.0068	0.0069	0.0001
RYE_HOUSE_PS	DC	0.0128	0.0159	0.0031	0.0119	0.0123	0.0004
SALTEND	DC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
SAPPIPAPERMILLCHP	DC	0.0001	0.0001	0.0000	0.0150	0.0155	0.0005
SEABANK_POWER_phase_II	DC	0.0145	0.0177	0.0032	0.0099	0.0144	0.0045
SEABANK_POWER_phase1	DC	0.0039	0.0066	0.0027	0.0117	0.0125	0.0008
SELLAFIELD_PS	DC	0.0001	0.0001	0.0000	0.0108	0.0111	0.0003
SEVERNSIDE_ICI	DC	0.0001	0.0001	0.0000	0.0100	0.0143	0.0043
SHOTTON_PAPER	DC	0.0120	0.0128	0.0008	0.0213	0.0220	0.0007
SPALDING_PG	DC	0.0185	0.0196	0.0011	0.0042	0.0042	0.0000
SPALDING_PG_2	DC	0.0220	0.0233	0.0013	0.0042	0.0042	0.0000
ST_FERGUS_BS	DC	0.0202	0.0220	0.0018	0.0001	0.0001	0.0000
STALLINGBOROUGH	DC	0.0165	0.0175	0.0010	0.0001	0.0001	0.0000
STAYTHORPE	DC	0.0220	0.0233	0.0013	0.0057	0.0058	0.0001
STUBLACH	DC	0.0185	0.0196	0.0011	0.0173	0.0178	0.0005
SUTTON_BRIDGE_PS	DC	0.0246	0.0267	0.0021	0.0052	0.0052	0.0000
TEESSIDE_BASF	DC	0.0218	0.0238	0.0020	0.0034	0.0034	0.0000
TEESSIDE_HYDROGEN	DC	0.0091	0.0105	0.0014	0.0034	0.0034	0.0000
THORNTON_CURTIS_(KILLINGHOLME)	DC	0.0044	0.0054	0.0010	0.0001	0.0001	0.0000
WEST_BURTON_PS	DC	0.0001	0.0001	0.0000	0.0027	0.0026	-0.0001
WYRE_PS	DC	0.0016	0.0025	0.0009	0.0139	0.0144	0.0005
ZENECA	DC	0.0134	0.0148	0.0014	0.0041	0.0040	-0.0001
BACTON_OT	EA	0.0201	0.0212	0.0011	0.0001	0.0001	0.0000
BRISLEY	EA	0.0107	0.0137	0.0030	0.0012	0.0010	-0.0002
CAMBRIDGE	EA	0.0011	0.0014	0.0003	0.0074	0.0076	0.0002
EYE	EA	0.0033	0.0037	0.0004	0.0065	0.0065	0.0000

Exit Point	DC/DN	2012/13 As-Is	2013/14 As-Is	Actual Difference	2012/13 Supply @ Ave TYS06-09	2013/14 Supply @ Ave TYS06-09	Actual Difference
GREAT_WILBRAHAM	EA	0.0032	0.0058	0.0026	0.0065	0.0066	0.0001
MATCHING_GREEN	EA	0.0039	0.0065	0.0026	0.0106	0.0108	0.0002
ROUDHAM_HEATH	EA	0.0110	0.0140	0.0030	0.0028	0.0027	-0.0001
ROYSTON	EA	0.0001	0.0020	0.0019	0.0083	0.0085	0.0002
WEST_WINCH	EA	0.0134	0.0143	0.0009	0.0035	0.0035	0.0000
WHITWELL	EA	0.0122	0.0135	0.0013	0.0102	0.0105	0.0003
YELVERTON	EA	0.0093	0.0106	0.0013	0.0007	0.0004	-0.0003
ALREWAS_EM	EM	0.0001	0.0001	0.0000	0.0143	0.0147	0.0004
BLABY	EM	0.0104	0.0111	0.0007	0.0108	0.0111	0.0003
BLYBOROUGH	EM	0.0097	0.0104	0.0007	0.0028	0.0027	-0.0001
CALDECOTT	EM	0.0001	0.0001	0.0000	0.0084	0.0086	0.0002
DROINTON_OT	EM	0.0202	0.0213	0.0011	0.0154	0.0159	0.0005
GOSBERTON	EM	0.0019	0.0022	0.0003	0.0039	0.0038	-0.0001
KIRKSTEAD	EM	0.0001	0.0003	0.0002	0.0018	0.0017	-0.0001
MARKET_HARBOROUGH	EM	0.0120	0.0129	0.0009	0.0095	0.0098	0.0003
SILK_WILLOUGHBY	EM	0.0110	0.0118	0.0008	0.0031	0.0030	-0.0001
SUTTON_BRIDGE	EM	0.0192	0.0210	0.0018	0.0053	0.0053	0.0000
THORNTON_CURTIS_LDZ	EM	0.0056	0.0068	0.0012	0.0001	0.0001	0.0000
TUR_LANGTON	EM	0.0108	0.0122	0.0014	0.0097	0.0100	0.0003
WALESBY	EM	0.0016	0.0025	0.0009	0.0001	0.0001	0.0000
ASSELBY	NE	0.0059	0.0064	0.0005	0.0010	0.0008	-0.0002
BALDERSBY	NE	0.0106	0.0114	0.0008	0.0061	0.0062	0.0001
BURLEY_BANK	NE	0.0097	0.0104	0.0007	0.0053	0.0053	0.0000
GANSTEAD	NE	0.0049	0.0053	0.0004	0.0001	0.0001	0.0000
PANNAL	NE	0.0098	0.0105	0.0007	0.0049	0.0049	0.0000
PAULL	NE	0.0180	0.0190	0.0010	0.0001	0.0001	0.0000
PICKERING	NE	0.0176	0.0191	0.0015	0.0001	0.0001	0.0000
RAWCLIFFE	NE	0.0202	0.0213	0.0011	0.0012	0.0010	-0.0002
TOWTON	NE	0.0099	0.0113	0.0014	0.0032	0.0031	-0.0001
BISHOP_AUCKLAND	NO	0.0079	0.0085	0.0006	0.0058	0.0059	0.0001
BISHOP_AUCKLAND_TEST_FACILITY	NO	0.0104	0.0111	0.0007	0.0058	0.0059	0.0001
COLDSTREAM	NO	0.0018	0.0021	0.0003	0.0064	0.0131	0.0067
CORBRIDGE	NO	0.0029	0.0033	0.0004	0.0103	0.0106	0.0003
COWPEN_BEWLEY	NO	0.0098	0.0105	0.0007	0.0039	0.0038	-0.0001
ELTON	NO	0.0099	0.0106	0.0007	0.0043	0.0043	0.0000
GUYZANCE	NO	0.0003	0.0005	0.0002	0.0085	0.0132	0.0047
HUMBLETON	NO	0.0094	0.0101	0.0007	0.0059	0.0126	0.0067
KELD	NO	0.0022	0.0025	0.0003	0.0129	0.0133	0.0004
LITTLE_BURDON	NO	0.0001	0.0015	0.0014	0.0047	0.0047	0.0000
MELKINTHORPE	NO	0.0152	0.0184	0.0032	0.0136	0.0140	0.0004
SALTWICK_PC	NO	0.0134	0.0165	0.0031	0.0097	0.0166	0.0069
SALTWICK_VC	NO	0.0144	0.0176	0.0032	0.0097	0.0166	0.0069
THRINTOFT	NO	0.0149	0.0166	0.0017	0.0064	0.0065	0.0001
TOW_LAW	NO	0.0203	0.0222	0.0019	0.0078	0.0079	0.0001
WETHERAL	NO	0.0180	0.0190	0.0010	0.0144	0.0148	0.0004

Exit Point	DC/DN	2012/13 As-Is	2013/14 As-Is	Actual Difference	2012/13 Supply @ Ave TYS06-09	2013/14 Supply @ Ave TYS06-09	Actual Difference
HORNDON	NT	0.0075	0.0080	0.0005	0.0110	0.0113	0.0003
LUXBOROUGH_LANE	NT	0.0094	0.0124	0.0030	0.0112	0.0115	0.0003
PETERS_GREEN	NT	0.0094	0.0101	0.0007	0.0107	0.0110	0.0003
PETERS_GREEN_SOUTH_MIMMS	NT	0.0199	0.0210	0.0011	0.0107	0.0110	0.0003
WINKFIELD_NT	NT	0.0082	0.0095	0.0013	0.0194	0.0201	0.0007
AUDLEY_NW	NW	0.0059	0.0064	0.0005	0.0189	0.0195	0.0006
BLACKROD	NW	0.0019	0.0023	0.0004	0.0161	0.0166	0.0005
ECCLESTON	NW	0.0108	0.0122	0.0014	0.0208	0.0215	0.0007
HOLMES_CHAPEL	NW	0.0019	0.0022	0.0003	0.0201	0.0207	0.0006
LUPTON	NW	0.0118	0.0149	0.0031	0.0103	0.0106	0.0003
MALPAS	NW	0.0034	0.0061	0.0027	0.0208	0.0214	0.0006
MICKLE_TRAFFORD	NW	0.0152	0.0184	0.0032	0.0202	0.0208	0.0006
PARTINGTON	NW	0.0098	0.0105	0.0007	0.0185	0.0196	0.0011
SAMLESBURY	NW	0.0144	0.0176	0.0032	0.0146	0.0151	0.0005
WARBURTON	NW	0.0092	0.0142	0.0050	0.0186	0.0193	0.0007
WESTON_POINT	NW	0.0164	0.0174	0.0010	0.0211	0.0218	0.0007
ABERDEEN	SC	0.0090	0.0140	0.0050	0.0001	0.0001	0.0000
ARMADALE	SC	0.0001	0.0001	0.0000	0.0044	0.0111	0.0067
BALGRAY	SC	0.0026	0.0051	0.0025	0.0001	0.0024	0.0023
BATHGATE	SC	0.0164	0.0173	0.0009	0.0040	0.0106	0.0066
BROXBURN	SC	0.0107	0.0137	0.0030	0.0056	0.0123	0.0067
CARESTON	SC	0.0170	0.0180	0.0010	0.0001	0.0002	0.0001
DRUM	SC	0.0059	0.0064	0.0005	0.0013	0.0077	0.0064
HUME	SC	0.0134	0.0143	0.0009	0.0073	0.0141	0.0068
KINKNOCKIE	SC	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
LANGHOLM	SC	0.0045	0.0049	0.0004	0.0120	0.0147	0.0027
LAUDERHILL	SC	0.0001	0.0001	0.0000	0.0089	0.0158	0.0069
LOCKERBIE	SC	0.0023	0.0026	0.0003	0.0110	0.0158	0.0048
MOSSIDE	SC	0.0101	0.0109	0.0008	0.0001	0.0001	0.0000
NETHER_HOWCLEUGH	SC	0.0104	0.0111	0.0007	0.0092	0.0161	0.0069
PITCAIRNGREEN	SC	0.0138	0.0147	0.0009	0.0001	0.0048	0.0047
SOUTRA	SC	0.0137	0.0146	0.0009	0.0091	0.0159	0.0068
ST_FERGUS_OT	SC	0.0133	0.0141	0.0008	0.0001	0.0001	0.0000
STRANRAER	SC	0.0165	0.0175	0.0010	0.0099	0.0168	0.0069
FARNINGHAM	SE	0.0033	0.0037	0.0004	0.0129	0.0133	0.0004
FARNINGHAM_B	SE	0.0001	0.0001	0.0000	0.0129	0.0133	0.0004
SHORNE	SE	0.0154	0.0186	0.0032	0.0119	0.0122	0.0003
TATSFIELD	SE	0.0086	0.0099	0.0013	0.0146	0.0151	0.0005
WINKFIELD_SE	SE	0.0067	0.0079	0.0012	0.0194	0.0201	0.0007
BRAISHFIELD_A	SO	0.0168	0.0178	0.0010	0.0229	0.0238	0.0009
BRAISHFIELD_B	SO	0.0129	0.0138	0.0009	0.0229	0.0238	0.0009
CRAWLEY_DOWN	SO	0.0001	0.0001	0.0000	0.0210	0.0224	0.0014
HARDWICK	SO	0.0066	0.0071	0.0005	0.0141	0.0146	0.0005
IPSDEN	SO	0.0145	0.0155	0.0010	0.0173	0.0180	0.0007
IPSDEN_2	SO	0.0030	0.0034	0.0004	0.0173	0.0180	0.0007

Exit Point	DC/DN	2012/13 As-Is	2013/14 As-Is	Actual Difference	2012/13 Supply @ Ave TYS06-09	2013/14 Supply @ Ave TYS06-09	Actual Difference
MAPPOWDER	SO	0.0120	0.0150	0.0030	0.0179	0.0191	0.0012
WINKFIELD_SO	SO	0.0152	0.0161	0.0009	0.0194	0.0201	0.0007
AYLESBEARE	SW	0.0082	0.0110	0.0028	0.0201	0.0214	0.0013
CHOAKFORD	SW	0.0207	0.0218	0.0011	0.0254	0.0270	0.0016
CIRENCESTER	SW	0.0001	0.0001	0.0000	0.0095	0.0102	0.0007
COFFINSWELL	SW	0.0018	0.0021	0.0003	0.0227	0.0241	0.0014
EASTON_GREY	SW	0.0091	0.0141	0.0050	0.0100	0.0108	0.0008
EVESHAM	SW	0.0204	0.0215	0.0011	0.0065	0.0071	0.0006
FIDDINGTON	SW	0.0001	0.0001	0.0000	0.0052	0.0058	0.0006
ILCHESTER	SW	0.0019	0.0023	0.0004	0.0158	0.0169	0.0011
KENN_SOUTH	SW	0.0001	0.0001	0.0000	0.0211	0.0225	0.0014
LITTLETON_DREW	SW	0.0003	0.0005	0.0002	0.0108	0.0116	0.0008
PUCKLECHURCH	SW	0.0178	0.0189	0.0011	0.0117	0.0125	0.0008
ROSS_SW	SW	0.0016	0.0042	0.0026	0.0025	0.0029	0.0004
SEABANK_LDZ	SW	0.0147	0.0178	0.0031	0.0100	0.0145	0.0045
ALREWAS_WM	WM	0.0001	0.0001	0.0000	0.0143	0.0147	0.0004
ASPLEY	WM	0.0101	0.0109	0.0008	0.0173	0.0179	0.0006
AUDLEY_WM	WM	0.0059	0.0064	0.0005	0.0189	0.0195	0.0006
AUSTREY	WM	0.0205	0.0217	0.0012	0.0130	0.0140	0.0010
LEAMINGTON_SPA	WM	0.0040	0.0044	0.0004	0.0091	0.0098	0.0007
LOWER_QUINTON	WM	0.0050	0.0076	0.0026	0.0076	0.0082	0.0006
MILWICH	WM	0.0069	0.0097	0.0028	0.0160	0.0166	0.0006
ROSS_WM	WM	0.0095	0.0124	0.0029	0.0025	0.0029	0.0004
RUGBY	WM	0.0067	0.0095	0.0028	0.0101	0.0109	0.0008
SHUSTOKE	WM	0.0120	0.0128	0.0008	0.0142	0.0152	0.0010
STRATFORD_UPON_AVON	WM	0.0170	0.0188	0.0018	0.0077	0.0084	0.0007
MAELOR	WN	0.0030	0.0056	0.0026	0.0216	0.0223	0.0007
DOWLAIS	WS	0.0001	0.0001	0.0000	0.0001	0.0001	0.0000
DYFFRYN_CLYDACH	WS	0.0111	0.0118	0.0007	0.0001	0.0001	0.0000
GILWERN	WS	0.0043	0.0047	0.0004	0.0001	0.0001	0.0000

Appendix F – Relevant Charging Objectives

The National Grid Gas plc Gas Transporter Licence in respect of the NTS requires that proposed changes to the Charging Methodology shall achieve the relevant methodology objectives. Respondents are therefore asked to consider how the use of the identified options within the charging methodology would best satisfy the relevant objectives as part of their responses to this Consultation Document.

The relevant charging objectives are as follows;

- 1) (a) Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should reflect the costs incurred by the licensee in its transportation business;
- 1) (bb) Where prices are established by auction, either
  - no reserve price is applied, or
  - that reserve price is set at a level best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and]
  - best calculated to promote competition between gas suppliers and between gas shippers;
- 2) So far as is consistent with (1) properly take account of developments in the transportation business;
- 3) So far as is consistent with (1) and (2) facilitate effective competition between gas shippers and between gas suppliers.

EC Regulation 1775/2005 on conditions for access to the natural gas transmission networks (binding from 1 July 2006) is summarised as follows; the principles for network access tariffs or the methodologies used to calculate them shall:

- Be transparent
- Take into account the need for system integrity and its improvement
- Reflect actual costs incurred for an efficient and structurally comparable network operator
- Be applied in a non-discriminatory manner
- Facilitate efficient gas trade and competition
- Avoid cross-subsidies between network users
- Provide incentives for investment and maintaining or creating interoperability for transmission networks
- Not restrict market liquidity
- Not distort trade across borders of different transmission systems.

The options identified by National Grid were compared to the relevant charging and Licence objectives and National Grid's interpretation of the objectives.

The following table covers each of the demand side options (except Zero modelled flows), and National Grids initial views on the extent to which each option satisfies the Licence and relevant charging objectives.

Objectives	Interpretation	Bookings	Baseline plus Incremental	Forecast Demand	MSPOR	Capability (where different from others)
Reflect Costs	**Consistent with Planning / Network Investment Process?**	Maybe (but issues with multi-shipper sites & DN's)	Maybe (but issues with multi-shipper sites & DN's)	Yes	No	Maybe
Promote Efficiency						
Developments in Business	**Reflective of changing supply & demand patterns?**	Maybe	Maybe	Yes	No	Maybe
Facilitate / Promote Competition	**Is the data clear, transparent, consistent?**	Yes	Yes	Maybe	No	Maybe

Bookings could be deemed to be consistent with the Planning and Network Investment process particularly for Directly Connected sites which book in line with their requirements; however, there may be issues with multi-shipper sites and, particularly, the DN offtakes which may book capacity to meet their 1-in-20 peak day obligations but are not likely to flow up to the booked capacity at every offtake at the same time on a given day. Booking data is publicly available, clear and transparent and meets the Licence objective of facilitating or promoting competition.

The Baseline plus Incremental may, to some extent, be deemed to be consistent with the Planning and Network Investment process; however, with multi-shipper sites and the DN's, incremental capacity has been signalled at certain offtakes and other offtakes have been booked below the baseline level.

Forecast demand is used by National Grid within its Planning and Network Investment process and is reflective of changing supply & demand patterns on the network; however, there may be issues as to the transparency and consistency of data and assumptions driving the demand forecasts. Data may fluctuate between years.

The Maximum Supply Point Offtake Rate or MSPOR is not used by National Grid in the Planning and Network Investment process but may be used in the calculation of the amount of Off-Peak capacity that National Grid NTS may make available. The MSPOR is not reflective of changing supply and demand patterns, and there are also issues with data transparency and consistency.

The following table covers each of the supply side options, and National Grid's initial views on the extent to which each option satisfies the Licence and relevant charging objectives.

Objectives	Interpretation	TYS forecast supplies	Baseline supply data	Average of TYS forecast data	TYS Forecast Supplies (Data from TYS before the first enduring (38 month) application)
Reflect Costs	**Consistent with Planning / Network Investment Process?**	Yes	Maybe	Maybe	Maybe (more reflective of costs at time of investment decision)
Promote Efficiency					
Developments in Business	**Reflective of changing supply & demand patterns?**	Yes	Maybe (more stable but not reflective of physical gas deliverability and may be affected by entry substitution)	Maybe (maybe less reflective than forecast due to smoothing)	Maybe (more reflective of supply & demand at time of investment decision)
Facilitate / Promote Competition	**Is the data clear, transparent, consistent?**	Maybe	Yes	Maybe (smoothing of forecast will promote greater consistency)	Yes

The use of TYS forecast supplies is consistent with the planning and network investment process, and is reflective of changing supply & demand patterns. TYS data can also be regarded as clear and transparent, but forecasts can and do change.

Supply baselines are, to some extent consistent, with the planning and network investment process. Baselines may be regarded as more stable but their reflectivity of changing supply & demand patterns is open to question although entry capacity substitution would be reflected.

Averaging TYS forecast data is not used in the planning and network investment process but has merit in that it is an average of the same TYS data. Averaging arguably may be less reflective than the single forecasting approach due to data smoothing; however, the averaging approach may create a greater level of consistency than a single forecast.

Using the TYS data before the first Enduring Annual NTS Exit (Flat) Capacity application window for the relevant gas year may be more reflective of costs and supply & demand flows at the time that investment decisions are made. This approach will not take account of changing supply & demand patterns post initial application and up to the point of capacity release but each year's charges would be based on the most up to date TYS forecast at the time of the relevant investment decision.

Appendix G – Exit Price Impact of Modification Proposal 0356: 2012/13, 2013/14 & 2014/15

These indicative prices have been generated to show the impact of National Grid's UNC Modification 0356 – "Demand Data for the NTS Exit (Flat) Capacity Charges Methodology" on NTS Exit (Flat) Capacity Prices compared to the indicative prices published on 01st May 2010, and should not be used for any other purpose. Modification 0356 proposes that:

- For bi-directional sites the modelled demand will be the undiversified NTS forecast 1-in-20 peak day demand.
  - For bi-directional sites with physical entry capability (storage, IUK, & BBL) the forecast is zero.
  - For bi-directional sites with no physical entry capability (Moffat) the forecast is the undiversified NTS forecast 1-in-20 peak day demand.
- For DN offtakes, the modelled demand will be the undiversified NTS forecast 1-in-20 peak day demand for the DN prorated to the relevant DN offtakes based on the booked NTS Exit (Flat) Capacity.
- For other directly connected (DC) offtakes (NTS Power Generation & Industrials) the forecast will be the obligated (baseline plus incremental) capacity level other than where DC sites have not been commissioned or have been decommissioned.

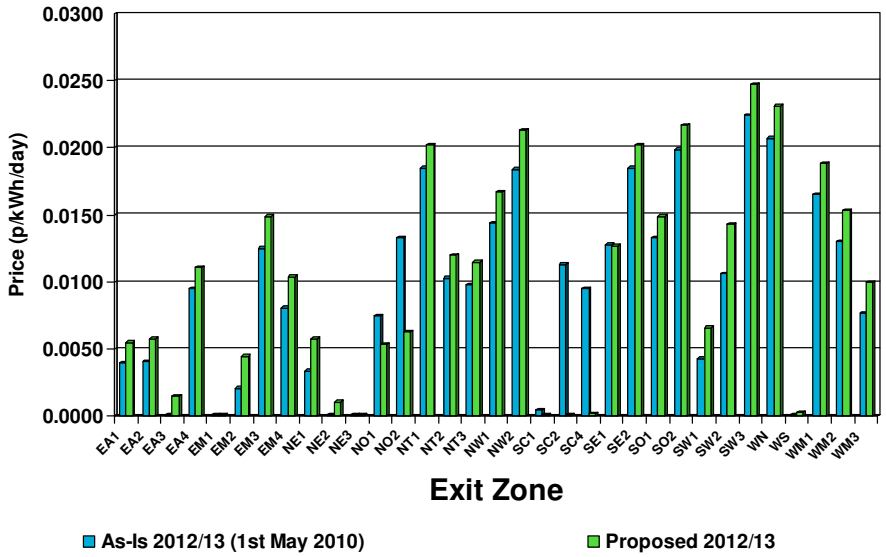
Indicative NTS Exit (Flat) Capacity prices have been generated as follows:

2012/13 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity used in adjusting raw prices to TO target exit revenue	Target TO Exit Revenue
As at May 2010	All Exit @ Baseline plus Incremental *Total Demand: 7800 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£292.5m
NG Mod Proposal 0356	DC's @ Baseline plus Incremental DN's/Moffat@1-in20 Peak Day Demand *Total Demand: 6410 GWh*		£297.6m

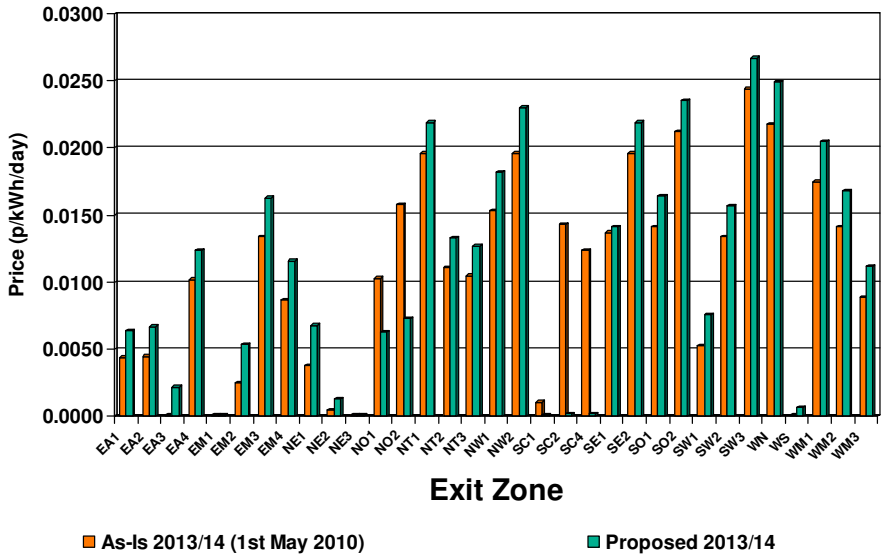
2013/14 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity used in adjusting raw prices to TO target exit revenue	Target TO Exit Revenue
As at May 2010	All Exit @ Baseline plus Incremental *Total Demand: 7802 GWh*	Baseline Capacity *Total TO Capacity: 8626 GWh*	£315m
NG Mod Proposal 0356	DC's @ Baseline plus Incremental DN's/Moffat@1-in20 Peak Day Demand *Total Demand: 6375 GWh*		£329m

2014/15 Scenario	Demand in Node Data Table in Transportation Model	Exit Capacity used in adjusting raw prices to TO target exit revenue	Target TO Exit Revenue
As at May 2010	n/a	Baseline Capacity *Total TO Capacity: 8626 GWh*	n/a
NG Mod Proposal 0356	DC's @ Baseline plus Incremental DN's/Moffat@1-in20 Peak Day Demand *Total Demand: 6342 GWh*		£315m

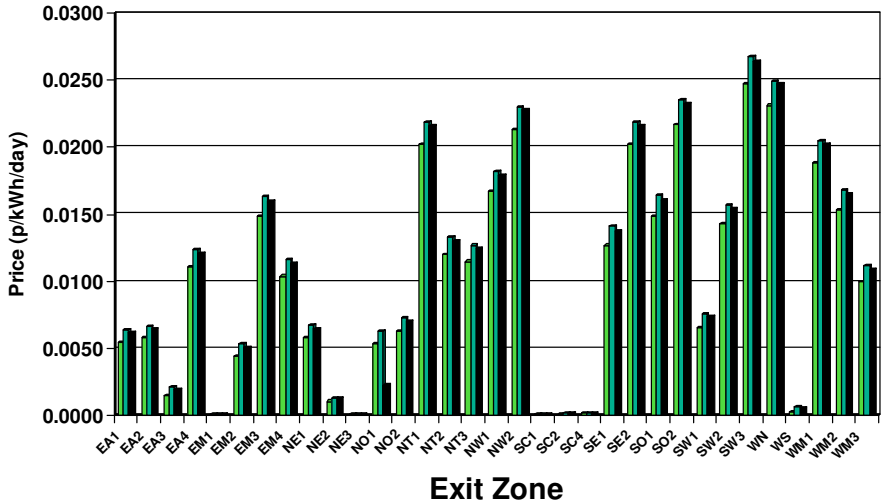
2012/13 Indicative Exit Zone prices: produced to give an indication of the geographic impact



2013/14 Indicative Exit Zone prices: produced to give an indication of the geographic impact



2012/13, 13/14 & 14/15 Indicative Exit zone prices: produced to give an indication of the geographic impact

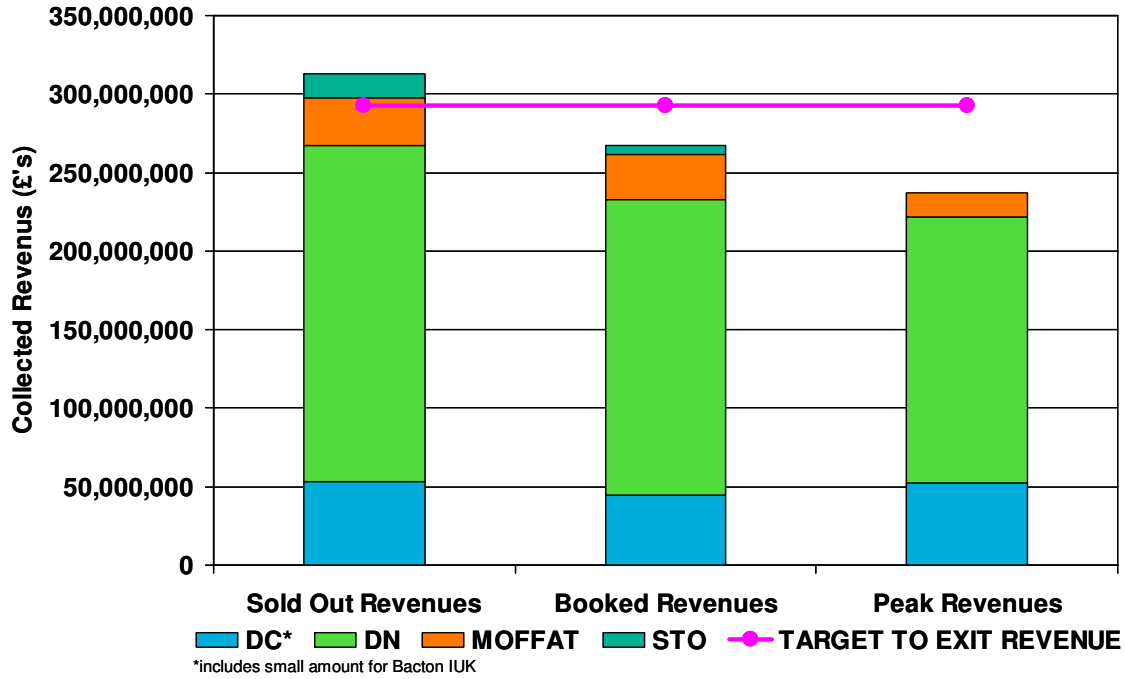


Appendix H – Revenue Recovery Impact by Offtake Type

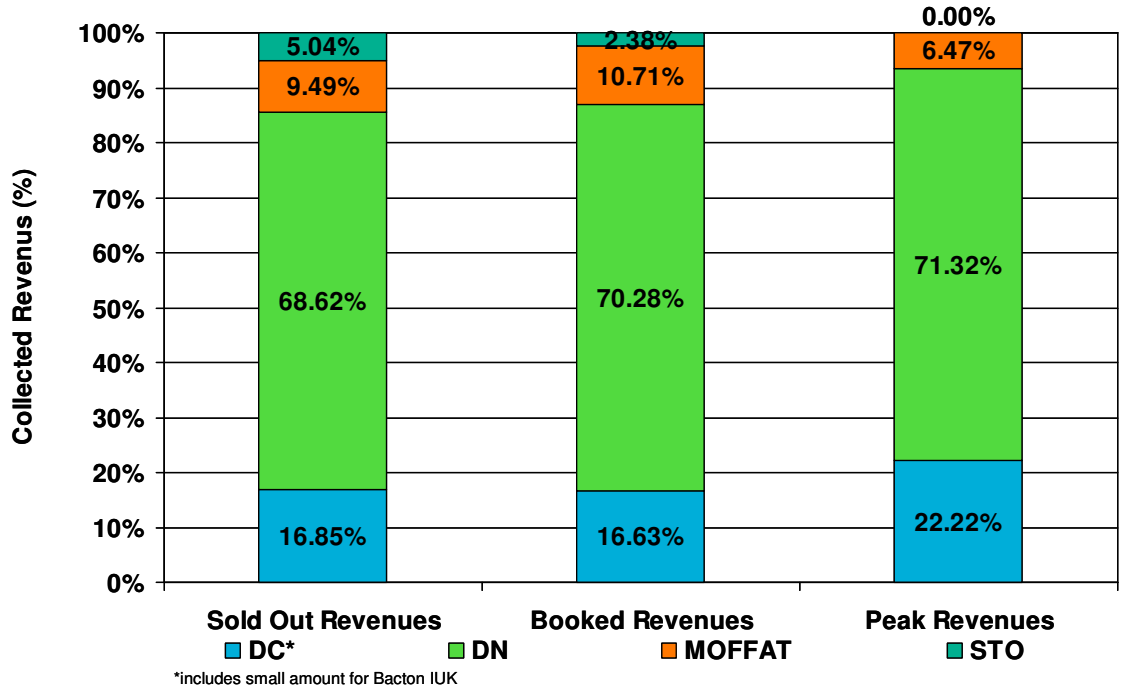
The following graphs show the potential impact by class of NTS Exit Point

- The "Sold Out" scenario assumes all baseline and incremental capacity is booked
- The "Booked" scenario represents the prevailing NTS Exit (Flat) Capacity bookings. Note this is subject to change due to the capacity reduction windows
- The "Peak" scenario represents bookings at peak forecast levels

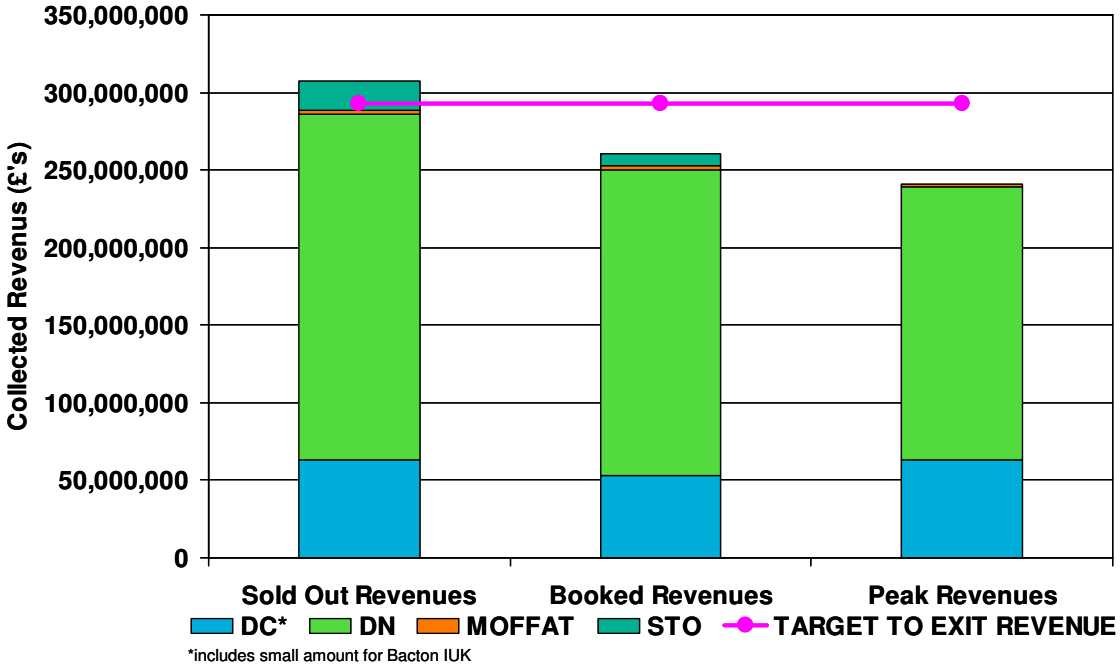
TYS 2009: Prevailing Methodology (Baseline + Incremental Prices) 2012/13



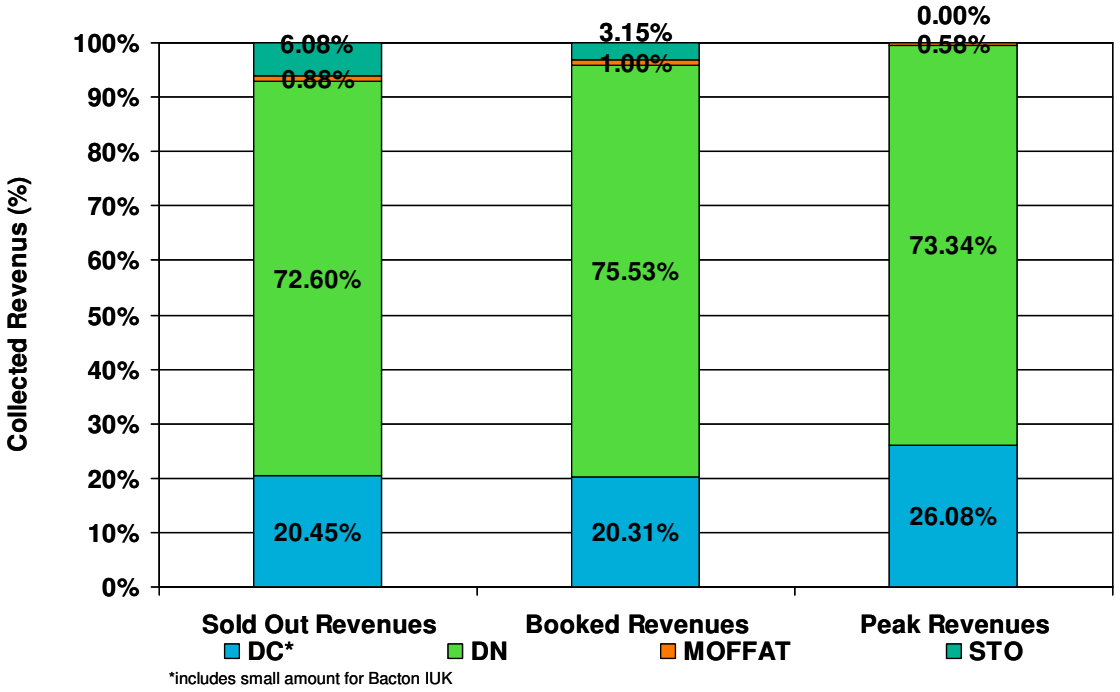
TYS 2009: Prevailing Methodology (Baseline + Incremental Prices) 2012/13



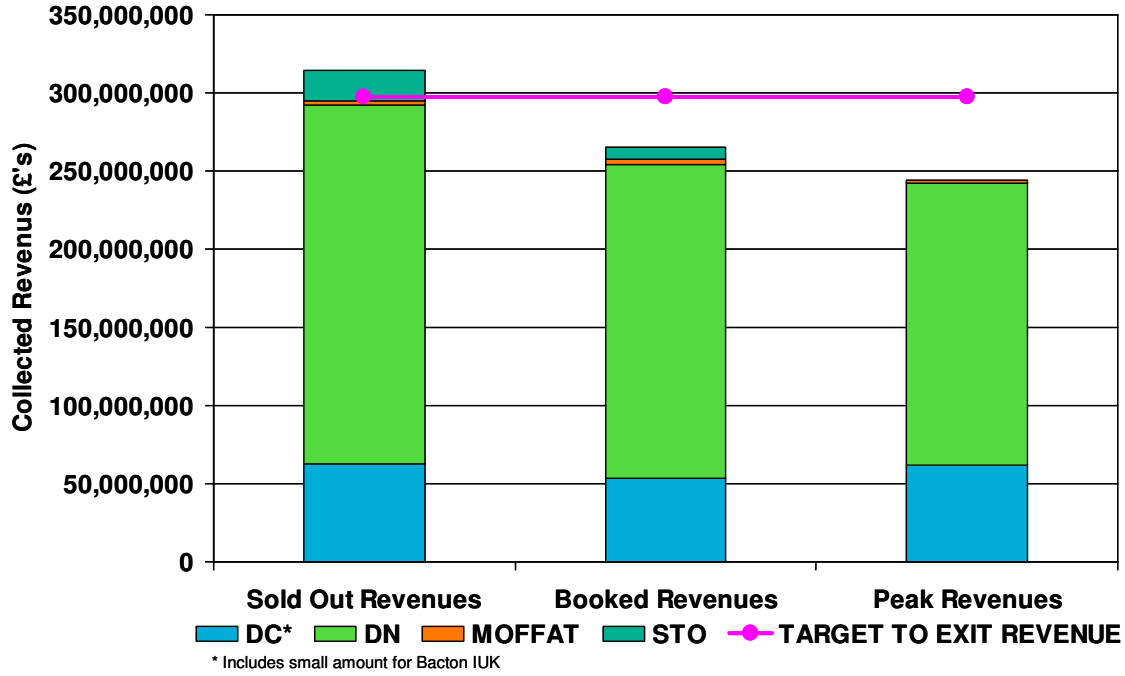
TYS 2009: Proposed Methodology (Peak Prices) 2012/13



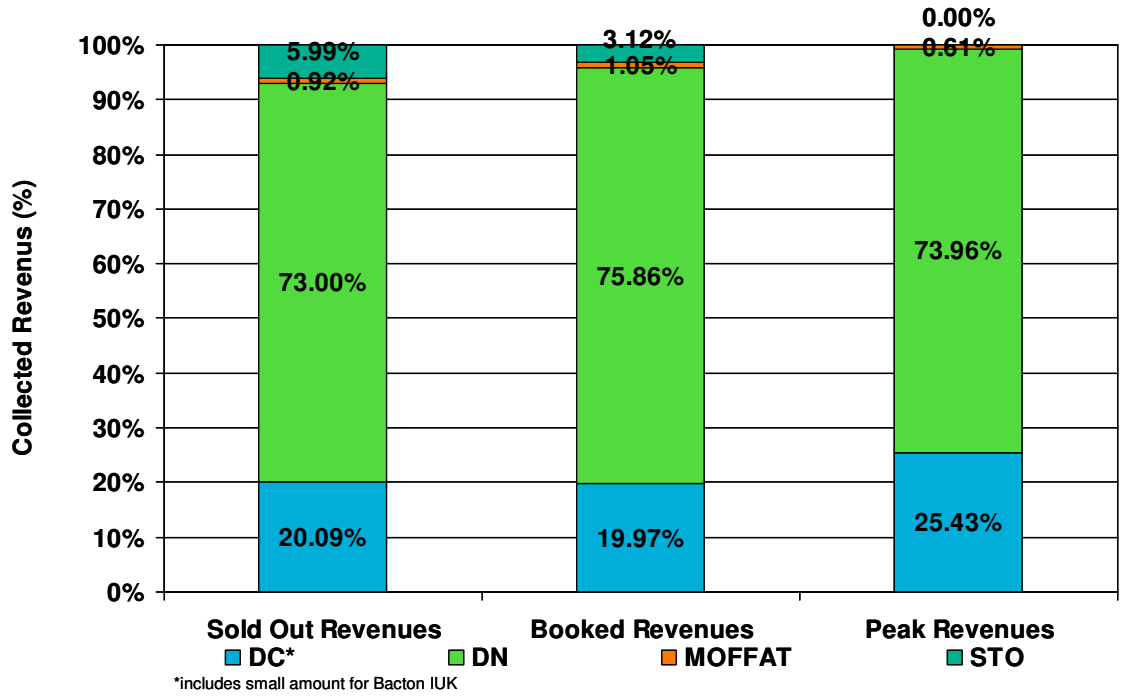
TYS 2009: Proposed Methodology (Peak Prices) 2012/13



TYS 2010: Proposed Methodology (Peak Prices) 2012/13



TYS 2010: Proposed Methodology (Peak Prices) 2012/13



Indicative Impact on the TO Exit (Flat) Commodity Charge

NTS Exit (Flat) Capacity prices are set through the Transportation Model such that the target for exit capacity revenue would be recovered if baseline (TO) Exit (Flat) Capacity was fully sold. Any shortfall in TO Exit (Flat) Capacity revenue will be collected through the TO Exit (Flat) Commodity charge. The following table shows the indicative impact on the TO Exit (Flat) Commodity Charge of the three revenue scenarios.

The "Sold Out" scenario is based on all baseline and incremental capacity being booked. While this is a scenario that is unlikely to happen, it represents the maximum TO capacity revenue. As all baseline capacity is sold out, in this scenario, there would be no revenue to collect via the TO Exit (Flat) Commodity Charge and this is reflected as a zero rate.

The "Booked" scenario represents the prevailing NTS Exit (Flat) Capacity Booking but may be subject to change due to the capacity reduction windows. Booked levels are below the current TO exit baseline resulting in an under-recovery of (TO) exit revenue. The shortfall would be recovered through the TO (Exit) Flat Commodity charge as indicated.

The "Peak" scenario represents bookings at undiversified peak forecast levels including DC demands at obligated (baseline plus incremental) capacity level. Booking levels consistent with peak forecast data would also result in an under-recovery of (TO) exit revenue with the remainder similarly being recovered through the TO (Exit) Flat Commodity charge as indicated.

TO (Exit) Flat Commodity charge

All values in p/kWh	"Sold Out"	"Booked"	"Peak"
TYS 2009 Supply Data: Prevailing Charging Methodology (Baseline + Incremental Prices) 2012/13	0.0000	0.0027	0.0061
TYS 2009 S&D* Data: Proposed Charging Methodology (Peak Prices) 2012/13	0.0000	0.0035	0.0057
TYS 2010 S&D* Data: Proposed Charging Methodology (Peak Prices) 2012/13	0.0000	0.0035	0.0058

*** DC demands at obligated (baseline plus incremental) capacity level.**