Assumptions for high-level options for enduring offtake

This assumptions document has been developed to support the pro forma questionnaire on the potential costs arising from implementation of the high-level options outlined in the December 2005 Second Consultation in the Transmission Price Control Review (TPCR) process (the Second Consultation)[1]. It is intended to enable NTS customers directly connected to the NTS and their shippers to develop cost estimates on a consistent basis. The document is structured as follows:

- a **background** section;
- an overview of the **options for offtake arrangements**; and
- a summary of the **key implications for industry participants**.

Background

As part of its January decision to consent conditionally to the sale of four gas distribution networks (GDNs), the Authority concluded that the continued development of the "enduring" offtake arrangements[2] was necessary to protect the interests of customers in a divested industry structure[3].

Prior to the sale, it was envisaged that an "enduring" regime for NTS offtake arrangements would be implemented in September 2005 to apply to capacity released from 1 October 2008 onwards[4]. With this in mind an "interim" regime was implemented, on 1 June 2005, to apply to capacity released up to and including 30 September 2008 and Ofgem issued, in February 2005, its "Initial Thoughts" on the framework for the enduring regime[5].

In June 2005, the Authority decided to delay the implementation of the enduring offtake arrangements until September 2007 for the release of NTS offtake rights from 1 October 2010[6] to allow, amongst other things, the further consideration of potential interactions with the NTS entry capacity regime as part of the TPCR process, and to allow more time for the development of the detail of the offtake arrangements. However, the Authority noted the continued importance of implementing the proposed reforms.

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[1] *Transmission Price Control Review Second Consultation*, Ofgem, December 2005, 277/05
[2] as described in: *National Grid Transco – Potential sale of gas distribution network businesses – Final Impact Assessment*, Ofgem, November 2004
[3] *National Grid Transco – Sale of gas distribution networks: Transco plc applications to dispose of four gas distribution networks*, Authority decision, February 2005.
[4] consistent with typical investment lead times of three years.
[5] *National Grid Transco – Potential sale of gas distribution network businesses: Initial thoughts on enduring incentive schemes supporting the offtake arrangements*, Ofgem, February 2005, 31/05. Responses to this consultation have been attached to this document on the Ofgem web-site: www.ofgem.gov.uk.
[6] 151/05 - Enduring offtake arrangements, 24 June 2005, Ofgem

Given this decision, Ofgem is currently:

- implementing "transitional" incentives to apply to capacity booked in the period from 1 October 2008 to 30 September 2010[7]; and

- considering a number of high level options for the development of the enduring regime.

These high-level options were outlined in the Second Consultation document published in December 2005. It is Ofgem's intention that the Third Consultation document in the TPCR process, due for publication in March 2006 (the Third Consultation), will:

- describe Ofgem's preferred high-level option for enduring offtake arrangements and incentives; and

- present a draft cost benefit analysis, evaluating the NPV impact of the different options presented in the Second Consultation relative to the status quo (which is defined as being the **transitional** offtake arrangements).

Therefore in developing the Third Consultation, Ofgem will need to consider the costs that would be incurred should each of the alternative options be implemented. To this end, Ofgem has developed a pro forma through which information regarding potential customer and shipper costs can be provided to Ofgem.

Ofgem recognises that in order to provide detailed and consistent cost estimates, customers and shippers need to understand the implications of the specific arrangements proposed for their business. To this end, this assumptions document:

- summarises each of the high-level options currently under consideration; and

- outlines likely implications for directly connected customers and their shippers.

Ofgem would reiterate that this cost survey will contribute to an initial impact assessment on the proposed reform of offtake arrangements. It is acknowledged that, as Ofgem's preferred option for the offtake arrangements is refined and understood in more detail, there will be a need to undertake a further impact assessment after March 2006.

It is proposed that the details of the regime should be finalised by December 2006, consistent with the TPCR timetable to allow interactions with the price control determination to be taken into account, and consistent with the timetable for gas entry and electricity incentives.

In issuing this document, it is important to make clear that the information contained in this paper is not binding on the Authority. Nothing in this paper is to be construed as granting any rights or imposing any obligations on the Authority. The Authority's discretion in this matter will not be fettered by any statements made in this paper, and all references to the decisions and conclusions by the Authority are qualified by this statement.

[7] *Final proposals on transitional incentive schemes and formal licence consultation under section 23 of the Gas Act 1986 and paragraph 3(a) of Standard Special Condition A2*, Ofgem, November 2005.

Options for offtake arrangements

The pro forma asks respondents to evaluate the cost of each of the user commitment models defined in the December 2005 consultation document, in comparison to a "status quo" set of arrangements. In this section we describe in turn:

- the definition of the **status quo** offtake arrangements;
- each of the **user commitment models** defined in the December document; and
- additional assumptions to be made by respondents regarding **product definition**.

Status Quo arrangements

The status quo (model Option Ex1 in the December 2005 document) is defined as being the arrangements and associated incentives in place in relation to capacity released between 1 October 2008 and 30 September 2010 (the "transitional" arrangements)[8].

Under the status quo, only Gas Distribution Networks (GDNs) are required to make requests for capacity at the three year ahead stage. Shippers representing transmission connected customers (TCC shippers), in contrast, are effectively guaranteed "grandfathered" rights to a maximum daily offtake quantity without the need to commit to buy in the long term. In addition, TCCs are required to comply with a specified set of restrictions regarding the way in which their offtake is profiled through the day (as outlined in their individual Network Exit Agreements – NExAs).

Furthermore, where incremental capacity requests from NTS connectees are judged by National Grid NTS to trigger additional investment, connectees (i.e. both TCCs and GDNs) must enter into an Advance Reservation of Capacity Agreement (ARCA) with National Grid NTS. The terms of this agreement are a result of bilateral negotiations between National Grid NTS and the relevant connectee. However, Ofgem has an important role in settling any disputes that may arise on the terms of the ARCAs.

TCC shippers purchase a combined "NTS exit capacity" product on behalf of their customers rather than separate products for NTS exit flat capacity and NTS exit flexibility capacity. Furthermore, NTS interruptible status continues to be available to TCC shippers on request, consistent with current arrangements.

The costs of the other options for offtake arrangements should be assessed against this status quo set of arrangements.

User commitment models

The December document outlines four user commitment models for which we are requesting cost information. These are:

- **Option Ex2**: Model consistent with February Initial Thoughts document[9] i.e. a nodal model with a substitution incentive;

[8] See *Final proposals on transitional incentive schemes and formal licence consultation under section 23 of the Gas Act 1986 and paragraph 3(a) of Standard Special Condition A2*, Ofgem, November 2005.

- **Option Ex3**: Nodal product with zonal baselines;
- **Option Ex3A**: Nodal product with global/network wide baselines; and
- **Option Ex4**: Zonal product with zonal baselines.

Each of these models is outlined in Table 1 below (compared to the Status Quo arrangements described above).

Table 1: Overview of options for offtake arrangements

	Status Quo	**Long term user commitment models**			
	Option Ex1	Option Ex2	Option Ex3	Option Ex3A	Option Ex4
Product definition	Nodal	Nodal	Nodal	Nodal	Zonal
Baseline	(LDZ)	Nodal	Zonal	Global	Zonal
Substitution	No	Yes	No	No	No

As outlined in the Second Consultation, it is Ofgem's current assumption that each of the long term user commitment models would have the following characteristics:

- a consistent framework of firm access products for all parties offtaking gas from the NTS, including two separate exit capacity products (NTS offtake (flat) capacity and NTS offtake (flexibility) capacity – as currently defined for DNs within the UNC);
- capacity made available on a non-discriminatory basis between all classes of network users;
- appropriate overrun arrangements for both firm access products, designed to ensure connectees offtake in a manner consistent with their holding of rights;
- NTS offtake capacity submissions by both DNs and NTS direct connects would be submitted consistent with investment planning timescales. Under this approach, any existing (or new) connectee to National Grid NTS's network would be able to purchase long term firm capacity rights to exit capacity at regulated prices;
- allocation mechanisms that provide for the efficient allocation (and pricing) of access products in the event that the supply of such products is insufficient to meet demand for such products in the short term; and
- interruption being managed by National Grid NTS through the sale of a day-ahead interruptible product on a non-discriminatory basis, and through the buying back of firm offtake rights in all timescales.

[9] *National Grid Transco – Potential sale of gas distribution network businesses: Initial thoughts on enduring incentive schemes supporting the offtake arrangements*, Ofgem, February 2005, 31/05.

Option Ex2

Option Ex2 is, at a high level, consistent with the model outlined in the February Initial Thoughts document on enduring incentive schemes supporting the offtake arrangements.

Option Ex2 is assumed to embody the key characteristics of a long term user commitment model as outlined above (as are Options Ex3, Ex3A and Ex4). However, what differentiates Option Ex2 from the other long term user commitment models is that:

- NTS offtake rights would be available to both GDNs and TCC shippers on an offtake point specific (i.e. nodal) basis;
- baselines would also be determined **for each offtake point** (i.e. by node); and
- a substitution incentive would encourage National Grid NTS to exploit fully any potential to substitute NTS offtake rights between offtake points to satisfy demand before undertaking any investment. This would give National Grid NTS the flexibility to change the allocation of nodal baseline capacities between offtake points at the three-year ahead stage in order to meet network demand efficiently (i.e. where possible opting to substitute capacity between nodes rather than undertaking (more costly) network investment).

Option Ex3

The main difference between Options Ex3/Ex3A and Option Ex2 is that, rather than defining nodal baselines and applying a substitution incentive, **zonal** baselines would be determined that would require National Grid NTS to make a quantity of capacity available across a specified number of offtake points. Under this model, National Grid NTS would choose how to allocate the baseline capacity amongst the offtake points in that zone.

Under Option Ex3A, it is assumed that National Grid NTS would be required to make a single, global baseline available to GDNs and TCC shippers. National Grid NTS would therefore be able to choose how best to allocate the baseline level of NTS offtake rights across the entire network.

Option Ex4

The main difference between Option Ex4 and Option Ex3 is that, as well as defining zonal baselines, the capacity products would also be defined on a zonal basis. GDNs and TCC shippers holding a zonal offtake rights would therefore be able to offtake gas **at any offtake point within that zone,** enabling zonal offtake rights to be traded with other users within that zone, on a one to one basis.

Product definition

Under Options Ex2, Ex3/Ex3A and Ex4, TCC shippers will purchase separate products for NTS exit flat capacity and NTS exit flexibility capacity (rather than a combined "NTS exit capacity" product on behalf of their customers, as in Option Ex1). Although the detail of these products is still subject to further development, we would ask respondents to the spreadsheet pro forma to assume the products would be specified according to the following definitions.

The **NTS offtake (flat) capacity** product will give the holder the right to offtake a volume of gas during the day at a constant hourly rate. In the event that connectees wish to offtake gas

at varying rates through the day, then connectees will be required to supplement their holdings of the flat capacity product with a volume of **NTS offtake (flexible) capacity**. It is therefore anticipated that connectees that offtake gas from the NTS according to a profile that varies significantly across the day will be required to purchase both offtake capacity products.

In completing the pro forma, Ofgem would welcome any additional commentary that respondents may offer on ways in which the definition of the products could be refined to minimise overall cost to connectees. We would ask, however, that the assumptions underlying any such commentary (and associated cost estimates) should be clearly described in the comments field provided.

Key implications for industry participants

In this section, we consider the specific implications for customers and shippers as a result of the long term user commitment models relative to the status quo, as defined within the Second TPCR Consultation document.

It is important to reiterate that the views expressed are done so on an informal basis to aid the completion of the cost survey. For the avoidance of doubt, nothing in this description should be construed as granting any rights or imposing any obligations on the Authority, and the Authority's discretion will not be fettered by any statement made in this document.

The types of industry participants included in this section are:

- **customers directly connected to the NTS** (e.g. gas fired power stations and industrial plants); and
- **interconnectors** and **storage operators**.

Note that it is envisaged the enduring offtake proposals will have no impact on customers directly connected to the GDNs. Instead, DN connectees will solely be responsible for booking a level of DN exit capacity sufficient for their requirements through the current DN exit capacity booking process via shippers.

Customers directly connected to the NTS

All of the long term user commitment models outlined above are likely to have a significant impact on the way in which customers directly connected to the NTS secure offtake rights.

The most important implication is that, under each of the models, these customers will be able to contract with shippers to secure firm rights to both "flat" and "flexible" offtake capacity into the long term. Specifically:

- in the long term, flat and flexible offtake capacity will be available for sale through an unconstrained allocation process. These products will be made available at regulated prices (as now), and through this allocation, shippers representing NTS connected customers will be able to purchase firm rights from three years ahead into the long term;[10]
- in the medium term (e.g. at two years ahead and one year ahead), the NTS will undertake a constrained allocation of any remaining (unsold) flat and flexible offtake capacity. To the extent that customers have not sufficiently contracted

[10] e.g. for up to fifteen years ahead.

for offtake rights in the long term, they will be able to arrange for shippers to purchase additional rights through these allocations; and

- in shorter timescales (e.g. day ahead), customers will have the opportunity to purchase any offtake rights that remain unsold following the medium term allocations. In addition, it is envisaged that the NTS will offer an interruptible product for sale at this stage. Given that this product may well be expected to be cheaper than firm capacity (potentially being offered for free), some customers may choose to wait until day ahead to request shippers to secure interruptible rights on their behalf. However, should customers follow this approach, there is a risk that rights will not be available (e.g. on "peak" days).

We would anticipate that different classes of customers connected to the NTS will purchase rights to offtake from the NTS in **different timescales**. Those customers that can predict their requirements for offtake rights with some certainty would be most likely to instruct shippers to purchase their full requirement for NTS offtake rights at the long term stage. In contrast, connectees that have more uncertain offtake profiles are more likely to purchase offtake rights in shorter timescales (although this will mean that such connectees will have a greater exposure to short-term price fluctuations).

It is important to note that all of the user commitment models, to varying extents, allow the NTS to allocate baseline volumes across the network in response to signals received at the long term allocation. In model EX3A, baselines are set at a global (network) level. This means that, following the initial allocation of NTS offtake rights (planned to be held in 2007 for the allocation of rights from October 2010), the NTS will allocate this global baseline across the network, according to where demand has been signalled by connectees (hence minimising the requirement for new investment). Model EX2 (nodal baselines with a substitution incentive) should lead to the same result, with the NTS having a positive incentive to allocate baseline volumes between nodes to where long term demand has been signalled.

In models EX3 and EX4, baselines are defined zonally, hence the NTS has some flexibility to allocate baselines across the network, but not to the extent of the other models. In all models, however, connectees that require certainty that firm NTS offtake rights will be available need to purchase offtake rights at the long term allocation, as there is no guarantee that firm volumes of NTS offtake capacity will be available in the medium and short term allocations.

Different classes of customer would also be expected to purchase **different combinations of NTS offtake rights**. Customers that do not have back-up supplies of gas, and who would find it extremely costly to have their offtake of gas interrupted by the NTS are most likely to purchase firm offtake rights. In contrast, customers that have more flexibility regarding the times at which they offtake gas or who typically offtake gas when offtake rights are relatively cheap are more likely to contract for interruptible offtake rights.

Different classes of customers are also likely to have varying **requirements for NTS offtake (flexible) capacity**. All classes of customer that use significant volumes of flexibility will need to contract for NTS offtake flexibility. It is assumed that customers will be able to purchase their flexibility requirements in timescales consistent with the availability of the flat capacity product (i.e. in long, medium and short term allocations).

Interconnectors and storage operators

Under the proposed user commitment models, shippers representing the two interconnectors (connected to the NTS at Bacton for flows to/from the continent and at Moffat for flows to the Republic of Ireland, Northern Ireland and the Isle of Man) and storage operators will obtain rights to NTS offtake (flexible) capacity and NTS offtake (flat) capacity through the same allocation process as all other NTS connectees. This is a change from the status quo set of arrangements, in which interconnectors and storage operators are unable to either purchase offtake rights into the long term, or separately signal their requirements for flat and flexible offtake capacity.

The implications of the proposed "user commitment" models for interconnectors and storage operators will be similar to those outlined above for customers directly connected to the NTS notably that they:

- will be able to secure firm rights to offtake gas from the NTS in different timescales, ranging from the long term, through to day ahead, and through secondary trading;

- will be able to select a combination of firm and interruptible rights that best suits their NTS offtake requirements; and

- will be able to select a combination of "flexible" and "flat" offtake rights that best suits their offtake profile.

Note there is a possibility that agency arrangements may be established to represent requests for NTS offtake capacity rights for parties at each interconnector. The establishment of such agency arrangements may mitigate the costs of the enduring offtake proposals to interconnector parties.