

## **DISCUSSION REPORT**

### **Modification Proposals to the Gas Transmission Transportation Charging Methodology**

#### **NTS GCD 07R: Optional NTS Commodity Tariff**

**20<sup>th</sup> June 2010**

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## Executive Summary

Gas Charging Discussion Document NTS GCD07 set out for discussion options for revising the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the Optional NTS Commodity Tariff. This discussion report NTS GCD07R summarises the responses received to the discussion document and is produced by National Grid in its’ role as Gas Transporter Licence holder in respect of the NTS (“National Grid”). National Grid recommends a way forward in line with the views expressed by the respondents to the discussion document.

This discussion report has been placed on National Grid’s industry information website:

<http://www.nationalgrid.com/uk/Gas/Charges/consultations/>

### The Discussion Paper NTS GCD07

The discussion paper NTS GCD07 took forward the development work and Industry discussion that have taken place at the Gas Transmission Charging Methodology Forum (TCMF). The discussion paper was issued to consider the merits of updating the existing methodology (Option One), or introducing a new methodology based on direct SO cost mapping (Option Two). A number of sub-options have been identified.

Option	Methodology	Detail
1a	Update prevailing methodology, based on annuitised construction costs of alternative pipeline and terminal connection, to reflect latest costs.	10 year annuitisation (unchanged)
1b		45 year annuitisation
2a	Revise methodology to reflect SO costs relating to flows over short distances.	SO costs allocated to Distance
2b	As option 2a plus annuitised construction costs of terminal connection (effectively a hybrid of 1 & 2).	10 year annuitisation
2c		45 year annuitisation
2d	As option 2a	SO costs allocated to Distance and number of offtakes

In addition, consideration has been given to the appropriate application of the charge and the following issues have been identified.

Issue	View
<b>Removal of Application to Storage Injection (NTS Exit)</b>	<p>NTS Storage can apply for short-haul for injection (to save on Entry Commodity) but already avoids all commodity charges and shorthaul is not available for storage withdrawal;</p> <p>There is no risk of storage by-pass as these sites would lose the benefit of avoiding commodity</p>

<b>ASEP Location - Distance from ASEP to exit point</b>	This is currently the straight line distance (km) from the boundary of the exit point to the ASEP, but a number of new ASEPs have multiple entry points e.g. Milford Haven  Currently use the mid point (implied by single ASEP location) but would be more efficient to use the closest entry point
<b>Limit application</b>	Development of the original service implied it should be limited to the nearest ASEP; however, limiting to between the ASEP and upstream of the next compressor is more appropriate
<b>Removal of Alternative Allocation Rules</b>	The default is to prorate when supplies are less than demand for two or more short-haul exit points linked to the same ASEP. Alternative rules can be requested (with NG approval) but would involve systems changes` and would be less equitable as the shorthaul rates assume the same load factor for each site. <sup>1</sup> National Grid believes that this option should be removed on the grounds that it undermines cost reflectivity

Discussion paper NTS GCD07:

1. provided the background to the current methodology,
2. described the reasons for the review of the methodology and considerations for a new methodology,
3. considered two main alternative approaches to cost allocation,
4. discussed application issues, and
5. invited further views on the strengths and weaknesses of the different options, to allow a further proposal to be developed and put forward.

In issuing the discussion paper NTS GCD07, National Grid believed that, in principle, a commodity tariff relating to short distance flows should continue to be available as an option to Users. The review was being undertaken with the aim of reviewing the methodology against the relevant objectives and increasing the clarity and transparency of the methodology and its application.

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<sup>1</sup> The shorthaul rates are based on a load factor of 75% and on this assumption it is appropriate to prorate. Alternatively the load factor of the two or more sites should be used in the rate calculation which would lead to higher rates since at least one site must be below 75% load factor as calculated by the terminal specific to exit point specific peak demand. I.e. on average the flow that comes from the specific entry point is 75% of the peak exit point demand.

NTS GCD07 sought views in the following areas:

Methodology – Cost assignment

- whether respondents considered the cost assignment under methodology option one or option two, to be most consistent with the relevant objectives? Do the methodologies;
  - Reflect the costs incurred by the licensee?
  - Take account of developments in the transportation business?
  - Facilitate effective competition?
- whether respondents had any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option one? Specifically;
  - The connection cost approach?
  - The annuitisation period; 10 years, 45 years or other?
  - The load factor?
- whether respondents had any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option two? Specifically;
  - Whether the minimum cost should be based on a connection cost approach or a proportion of the SO costs related to short-haul?
  - Whether the SO costs associated with short-haul (34% for the indicative charges) should be set on an annual basis or fixed, based on a long term trend?

Issues common to either option

- whether respondents had any views on the application of the methodology? Specific comments on the following were requested:
  - Distance from the exit point to the ASEP – in the case of ASEPs with more than one SEP is it appropriate to measure the distance to the nearest SEP?
  - Load factor – is it appropriate to use a system load factor or an exit point load factor?
  - Minimum charge – should there remain a minimum charge? If so, what level should this be set at? Should this be related to the exit point capacity (EPC)?
  - Annual updating of charge – should the charge be updated in parallel with other transportation tariffs?
  - Application to multiple exit points from a single entry point – do respondents agree that the present default allocation rule should apply when the input allocations are below the output allocations?
  - Application at storage exit points – do respondents agree that the ‘short-haul’ tariff should not be applicable at storage exit points?

- Do respondents agree that the charge should only be applicable to the exit points that are connected between an ASEP and the next downstream compressor?

### Implementation

- whether respondents supported either an implementation date of 1<sup>st</sup> October 2010 or an alternate implementation date?

### Summary of Responses

National Grid received 8 responses to its consultation on NTS GCD 07; none of the responses were marked as confidential, and 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/>

### Conclusions

The respondents raised a number of issues and detailed answers are given within Section 4. There was not unanimous support for either of the two main proposed methodology approaches. Given the varying responses National Grid will further consider the merits of the potential methodologies for determination of the charge rates. Where there has been more agreement, in the application of the charge, National Grid proposes to further the agreed changes. The following points summarise the way forward:

- 1.1 National Grid will as a first priority progress the necessary UNC Modifications that will add clarity to and ease in application of the short-haul tariff. The following areas have received suitable levels of support and so will be progressed
  - Distance from the exit point to the ASEP
  - Application to multiple exit points from a single entry point
  - Application at storage exit points
- 1.2 Given that there has been so many varying views expressed by respondents to the discussion paper, National Grid proposes to give further consideration to the most appropriate methodology for determination of the short-haul rate.

Way Forward

National Grid proposes to progress (as a first step in the review of the short-haul tariff) the UNC Modifications as detailed in the conclusions above. April 2011 is an indicative date for implementation of the UNC modifications. Further consideration will be given to the most appropriate way to update the existing methodology and resulting charge rate. This could be available, subject to approval, by October 2011 and in the meantime the existing tariff methodology will remain. This is consistent with National Grid's Licence objectives and the views expressed within the industry.

National Grid will continue to keep the Charging Methodology under review in compliance with its transportation Licence in respect of the NTS and in light of any further changes that impact on the short-haul tariff.

## 1 Introduction

- 1.1 Gas Charging Discussion document NTS GCD07 set out for discussion options for revising the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the application of an SO Commodity Charge at NTS storage facilities.
- 1.2 This document sets out for discussion options for revising the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the Optional NTS Commodity tariff (otherwise known as the NTS “short-haul” tariff).
- 1.3 The Optional NTS Commodity tariff is available to Users as an alternative to the standard SO commodity tariff (both at entry and exit) and the TO commodity tariff (at entry).
- 1.4 The charge was introduced in 1998 to reflect more accurately the costs of gas transportation from a terminal to a nearby large supply point to seek to avoid inefficient by-pass of the NTS.
- 1.5 An exit connection that by-passes the NTS, which might otherwise have connected to the NTS with no NTS reinforcement costs, may be economic for the relevant shipper based on prevailing standard NTS charges. This form of by-pass would always be uneconomic for the industry as a whole, and hence not in the interest of end consumers, as non by-pass of the NTS would result in lower charges on average for all shippers and hence consumers due to the utilisation of spare capacity. For this reason, the optional commodity charge seeks to make NTS connection economic for the connecting party while still representing a benefit to the industry as a whole.
- 1.6 NTS GCD07 sought views in the following areas:  
Methodology – Cost assignment
  - whether respondents considered the cost assignment under methodology option one or option two, to be most consistent with the relevant objectives? Do the methodologies;
    - Reflect the costs incurred by the licensee?
    - Take account of developments in the transportation business?
    - Facilitate effective competition?
  - whether respondents had any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option one? Specifically;
    - The connection cost approach?
    - The annuitisation period; 10 years, 45 years or other?
    - The load factor?
  - whether respondents had any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option two? Specifically;
    - Whether the minimum cost should be based on a connection cost approach or a proportion of the SO costs related to short-haul?



- Whether the SO costs associated with short-haul (34% for the indicative charges) should be set on an annual basis or fixed, based on a long term trend?

#### Issues common to either option

- whether respondents had any views on the application of the methodology? Specific comments on the following were requested:
  - Distance from the exit point to the ASEP – in the case of ASEPs with more than one SEP is it appropriate to measure the distance to the nearest SEP?
  - Load factor – is it appropriate to use a system load factor or an exit point load factor?
  - Minimum charge – should there remain a minimum charge? If so, what level should this be set at? Should this be related to the exit point capacity (EPC)?
  - Annual updating of charge – should the charge be updated in parallel with other transportation tariffs?
  - Application to multiple exit points from a single entry point – do respondents agree that the present default allocation rule should apply when the input allocations are below the output allocations?
  - Application at storage exit points – do respondents agree that the ‘short-haul’ tariff should not be applicable at storage exit points?
  - Do respondents agree that the charge should only be applicable to the exit points that are connected between an ASEP and the next downstream compressor?

#### Implementation

- whether respondents supported either an implementation date of 1<sup>st</sup> October 2010 or an alternate implementation date?

## **2 Background**

### **Current Arrangements**

- 2.1 Users can elect to pay the Optional NTS Commodity tariff as an alternative to both the entry and exit NTS commodity charges.
- 2.2 The tariff is derived from the estimated cost of laying and operating a dedicated pipeline of NTS specification (i.e. the cost of by-passing the NTS).
- 2.3 A charging function has been calculated based on flow rate and pipeline distance. The current charge rate is derived from the following function:

$$\text{Rate(p/kWh)} = 1203 \times [(EPC) - 0.834] \times D + 363 \times (EPC) - 0.654$$

**Where**

**D is the distance of the exit point from the elected Aggregate System Entry Point (ASEP), and**

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**EPC is the UNC defined Exit Point Capacity<sup>2</sup> and has been previously referred to as the SOQ (supply point offtake quantity) for the purposes of short-haul.**

## **Reasons for review of the prevailing methodology**

- 2.4 The current methodology and associated rate was introduced in 1998. Since its introduction there have been changes in the underlying costs, with construction costs having increased over that time period. In addition, the assumptions underlying the methodology may no longer be the most appropriate.
- 2.5 There have also been many queries associated with the application of the charge under various scenarios.

## **Considerations for a new methodology**

- 2.6 The aim of the 'short-haul' review is to assess the methodology against the relevant objectives and seek to add clarity and transparency.
- 2.7 Where it would be inefficient for the industry as a whole for Users to by-pass the NTS, the principle of providing an economic signal to deter exit points close to entry points from by-passing the NTS is considered to be appropriate.
- 2.8 A more transparent approach could be of benefit.

## **3 Discussion & Options**

- 3.1 Through the Gas TCMF, the issues associated with the prevailing methodology were raised. At the Gas TCMF held in June, consideration was given to updating the present charge but retaining the same methodology and charge function.
- 3.2 It was suggested that the charges derived from the prevailing methodology were not reflective of the costs incurred by National Grid and that it may be more appropriate to consider the System Operator costs associated with flows over short distances. The subsequent TCMF held in July covered this alternative approach.
- 3.3 This discussion paper covers the two alternative cost assignment methodologies; the prevailing by-pass cost methodology and a direct SO cost allocation methodology. In addition, this paper covers a number of rules of application which are independent of the preferred cost assignment methodology.
- 3.4 Given the potential for the charge to be updated on an annual basis, the annuitisation period for the by-pass costs under option one came into consideration. For this reason, option 1a covers a basic update to the methodology whereas option 1b covers an update with a longer annuitisation period which may be more consistent with annual updating of the charge.

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<sup>2</sup> The Exit Point Capacity will be defined within the UNC as the Baseline Exit Capacity from October 2012.

- 3.5 Option 2a covers the alternative approach of allocating System Operator costs to flows over short distances. Due to concerns over a distance only related charge and the potential for a very small charge where the distance from the exit point to the ASEP was minimal, further options were developed.
- 3.6 Options 2b and 2c include the SO cost allocation approach of option 2a combined with the avoided connection costs included within options 1a and 1b. Option 2d retains the SO cost allocation approach but allocates cost to both distance and the number of connections. Options 2b, 2c and 2d all result in charges that are a function of both distance and exit point capacity (EPC).
- 3.7 Under EU regulations, exclusively distance related charges are prohibited. While there are a number of mitigating factors within the short-haul eligibility criteria, this would suggest that option 2a, which is based on distance only, is not appropriate. Options 1a, 1b, 2b, 2c and 2d lead to charges that are a function of both distance and exit point capacity.

Option	Methodology	Detail
1a	Update prevailing methodology, based on annuitised construction costs of alternative pipeline and terminal connection, to reflect latest costs.	10 year annuitisation (unchanged)
1b		45 year annuitisation
2a	Revise methodology to reflect SO costs relating to flows over short distances.	SO costs allocated to Distance
2b	As option 2a plus annuitised construction costs of terminal connection (effectively a hybrid of 1 & 2).	10 year annuitisation
2c		45 year annuitisation
2d	As option 2a	SO costs allocated to Distance and number of offtakes

### Option One: Update of existing methodology

- 3.8 The current methodology derives the cost function by considering the construction costs associated with pipelines of various diameters and lengths. These costs comprise a fixed element, relating only to the pipe diameter (this can be thought of as the “connection cost” to the NTS), and a further element that is distance related (cost per km) for a range of pipe diameters. These combined capital costs are annuitised over a 10 year period to provide annual costs. Commoditised unit costs (in terms of p/kWh) are determined assuming a standard 75% load factor.

Option one is a simple updating of the construction costs underlying the tariff in order to better reflect the current cost levels. More detail is given below along with specific parameters appropriate to this methodology. Details on parameters common to both this option and the alternate described in section 3.11 are covered in section 3.17 below.

## Parameters specific to Option One

3.9 The following parameters are relevant for option one:

### **1. Costs for a minimal pipe distance**

The latest capital cost estimate for a 'connection' to the NTS is independent of the EPC at approximately £1m per connection (consistent with the Connection Charging Statement) and is lower than the costs underlying the prevailing methodology<sup>3</sup>. If the charge (p/kWh) remained a function of the EPC to recover the annuitised cost, the unit charge (p/kWh) would be lower than at present for typical load sizes on the "short-haul" tariff with minimal distance to the ASEP.

### **2. Costs per km of pipeline.**

Inflating the existing costs per km by the RPI until 2004, and the steel price index for later years, would be consistent with the derivation of the expansion factor used within the transportation model for deriving NTS capacity charges. This would increase the unit charge (p/kWh) by a factor of 2.26.

### **3. Annuitisation factor**

The current annuitisation factor is calculated for a 10 year period. This was based on the view that project approvals have historically used this assumption. A figure of 45 years might be considered more appropriate going forward as it would be consistent with the figure used in the depreciation of NTS pipelines. This would reduce the unit charge by a factor of 0.69.

### **4. Minimum Charge**

The current minimum charge is related to the exit point capacity. Under Option one National Grid's view is that the concept of a minimum charge is appropriate but that a fixed 'connection cost' rather than one which increases with EPC might better reflect the costs in practice.

### **5. Load factor**

The current load factor is 75% and therefore assumes a high utilisation. Actual data suggests that, in some instances, the load factor is significantly lower with the current average load factor for sites on the short-haul tariff being around 50%. Use of this figure in the derivation of the tariff would imply a 50% increase in the tariff.

In considering a change to the load factor it may be useful to examine the impact on potential new connections that might have a higher load factor. Those with a load factor above that assumed within the tariff calculation would still be encouraged to by-pass the system which would not be in the interests of all Users of the NTS.

In order to avoid complexity in the calculation and application of the tariff a single load factor is preferable to site specific load factors. For the purposes of calculating a revised charge under option one, the current load factor of 75% has been assumed.

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<sup>3</sup> Original costs have been updated to reflect recent connections experience.

3.10 Appendix A details the derivation of the rates under option one. Appendix C.1 shows the prevailing charge and indicative rates using methodology one. Appendix D shows the impact on the standard commodity charge.

## Option Two: Revised methodology based on allocation of SO costs

3.11 This option is based on the allocation of SO costs directly to short distances. The following table covers each of the SO cost components and the arguments for inclusion in, or exclusion from, the derivation of the short-haul charge applicable to this approach.

SO Cost Component	Arguments for Inclusion	Arguments for Exclusion
Shrinkage: Own Use Gas (OUG) ~ Compression		Short-haul flows would not require compression provided that the relevant exit point was upstream of the first NTS compressor.
Shrinkage: Un-accounted for Gas (UAG)	UAG is largely driven by meter error. A share of the metering inaccuracies may have arisen from the relevant meters.	
Internal Costs	The administration of the sites is comparable to other NTS sites.	The majority of System Operator costs are fixed and would not change with a change in short-haul flows.
Operating Margins & Constrained LNG (CLNG)		Short-haul flows, based on their proximity to supply points, do not receive a benefit from these services which are anticipated to be used at times of high system demand to support the system extremities.
Deemed Interruption	These costs are linked to the exit charges that interruptible supply points would otherwise pay.	Acknowledged that NTS Exit Reform will replace this term and associated foregone revenue. This is the cost of having an interruptible service. At times of high demand (when interruption may be necessary) short-haul flows, due to their proximity to entry points, do not benefit from the service.

SO Cost Component	Arguments for Inclusion	Arguments for Exclusion
Outcome of Incentive Schemes	It could be argued that each component of the incentive scheme should be considered to be included/excluded on an individual basis; however, if the optional commodity charge is expressed as a percentage of the standard SO commodity then the outcome of the incentive schemes will automatically be included but only in proportion to those costs included in the composition of the optional commodity rate.	
Under or over-recovery from previous year ('K')	If the optional commodity charge is expressed as a percentage of the standard SO commodity then this will automatically be included but only in relation to those costs included in the composition of the optional commodity rate.	

3.12 The SO cost component proportions for 2007/8, used for the purposes of generating indicative charges, are shown in the table below. If this option were to be adopted, either annual forecast SO costs could be utilised, or a long term trend could be used.

SO Cost Component (2007/8)	Cost Proportion	National Grid Initial View	Cost Proportion
Shrinkage: Own Use Gas (OUG) ~ Compression	26.4%	Exclude	
Shrinkage: Un-accounted for Gas (UAG)	8.0%	Include	8.0%
Internal Costs	26.6%	Include	26.6%
Operating Margins & Constrained LNG (CLNG)	14.8%	Exclude	
Deemed Interruption	24.2%	Exclude	
Total	100%	-	34.6%

3.13 SO Costs (£m) can be divided by the total length of the NTS (km) to generate a unit cost based on length (£m/km); however, this creates a problem in terms of which flow to use to convert this number (£m/km) into a price (p/kWh).

3.14 This can be overcome by dividing the SO Cost by the peak flow distance (GWhkm) i.e. the sum of (the flow in each pipe multiplied by the length of the pipe) to give a cost in terms of £m/GWhkm which can be converted into a distance based commodity price function (p/kWh/km) based on an assumption of the load factor.

- 3.15 Appendix B details the derivation of the rates under option two and Appendix C.2 shows indicative rates under option two. Appendix D shows the impact on the standard commodity charge.

## Parameters specific to Option Two

- 3.16 The following parameters are relevant for option two:

### ***1. Costs for a minimal pipe distance***

The minimum pipeline distance is 0.1km. Using this distance to calculate the minimal price implies a zero price for option 2a. This provides no benefit to the industry in terms of avoiding inefficient by-pass as the impact on the industry is exactly the same as if the loads in question had by-passed the NTS. Options 2b and 2c seek to overcome this issue by applying a minimum cost that equates to the avoided connection costs at a terminal, making these options effectively a hybrid of option 1 and 2a. Option 2d seeks to overcome this issue by allocating a proportion of the SO costs to distance and the remainder to the number of connections.

### ***2. SO Costs Associated with Shorthaul***

The SO costs associated with short-haul have been estimated as 34% of total SO costs, excluding incentive performance and 'K' (under or over recovery), for the purposes of calculating the indicative charges. This proportion could be set on an annual basis or fixed, based on a long term trend.

### ***3. Load factor***

There are two potential options for the load factor considered so far: either the site specific load factor of 75% or the system average load factor of 40%. National Grid believes that the system average load factor is most appropriate when deriving a charge based on system operator costs as these are total system costs. The rate derived from using the system average load factor of 40% is shown in Appendix B.

## Issues common to both Options

- 3.17 The following parameters are relevant to either option one or option two:

### ***1. Distance from ASEP to exit point***

Within the existing methodology this is the straight line distance (km) from the ASEP to the boundary of the exit point. This has been appropriate when all SEPs within an ASEP were effectively at the same location. Recently the situation has arisen where an application for short-haul has been made at an ASEP with more than one SEP, where the SEPs are located some distance apart. A pragmatic approach has been to use the mid point which is consistent with the UNC. This approach does not reflect reality and a risk exists that sites may by-pass when it is not economic or efficient to do so.



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National Grid's initial view is that using the closest SEP in such a situation mitigates the risk of inefficient bypass. A UNC change is anticipated to be required to facilitate a change in this area.

### ***2. Minimum charge***

National Grid's view is to retain the concept of a minimum charge since, under both methodology options; a zero charge would provide no benefit to other system Users through lower overall transportation charges.

### ***3. Annual Updating of charge***

There have been no updates to the charge since it was first introduced. National Grid's initial view is that annual updating of the charge is appropriate going forward.

### ***4. Application to multiple exit points from a single entry point***

The present methodology allows for application of the short-haul tariff to more than one exit point from a single entry point. In this situation the default allocation, where there is insufficient entry flow to meet the required exit flow, is to pro rate. This is the most equitable approach. There have been shipper requests to define an alternative allocation in this situation which although potentially allowed under the UNC would require significant system changes. Given that the load factor is used in either option as a parameter to determine the rate, National Grid's initial view is that the present default allocation is most appropriate and allowing alternate allocation rules may undermine the cost reflectivity of the charge.

### ***5. Application at storage exit points***

Storage points are not eligible entry points for 'short-haul'; however, storage points are eligible exit points. This may have been an oversight given that 'short-haul' was introduced when commodity only applied to exit.

Storage points currently avoid NTS commodity charges since storage is deemed to be part of the wider system and the charges have already been applied at beach entry and will be applied on exit to the end consumer. In allowing the short-haul rate for storage exit, a unit of gas flowing via a storage site can avoid paying the full entry commodity rate at the beach which might be significantly higher than the short-haul rate. Since this would seem to be undermining the principle that gas travelling via storage would ultimately pay the full commodity charges, National Grid's view is that, going forward, storage exit points should no longer be eligible for the short-haul tariff and that this is consistent with storage sites avoiding commodity charges. A UNC change would be required to facilitate a change in this area.

If storage sites by-passed the NTS (i.e. injected directly from offshore supplies) this would not increase commodity costs for other users. If a storage site by-passed the NTS it would no longer be treated as an NTS storage site and withdrawal flows from this 'storage' entry point to the NTS would then attract the full NTS entry commodity charge rate on that flow rather than on the entry flow from beach to storage site. For this reason it would not be economic for a storage site to partially by-pass the NTS as there would be no avoided NTS costs.

### **6. Capacity or commodity charge**

It has been suggested that the 'short-haul' commodity could be replaced with a capacity charge as it is attempting to reflect fixed costs. This would require system and invoice changes which would add significant cost and complexity for little apparent benefit, therefore, National Grid's view is that the charge should remain a commodity charge.

### **7. Limits on applicable exit points**

Since one of the underlying assumptions in the first approach is that only pipe costs are considered, and in the second approach that there are no compression costs, it may be appropriate that the tariff would only be available for exit points downstream of an entry point and not further than the next NTS compressor<sup>4</sup>.

### **8. Timeline for potential changes to the methodology and future rate updates**

Following this discussion consultation and the responses received, a further consultation will be necessary to cover firm proposals for changes to the existing methodology. National Grid will as a first priority progress the necessary UNC Modifications that will add clarity to and ease in application of the short-haul tariff as detailed in Section 5 below. It is National Grid's view that any revised charging methodology, subject to approval, could be available by 1 October 2011 at the earliest (to allow for further discussion at TCMF meetings and to provide sufficient time for Users to negotiate any necessary contracts ahead of proposed changes) and in the meantime the existing tariff methodology will remain. The table below shows an indicative timeline for the UNC Modifications which could be progressed by 1 April 2011.

<b>Milestone</b>	<b>Date</b>
Charging Methodology Discussion Document issued	Oct/Nov 2009
Discussion Consultation Ends	Nov/Dec 2009
Discussion Report	May 2010
Raise associated UNC Proposals	Aug/Sept 2010
Consultation Ends	Oct 2010
UNC Final Modification Report	Nov 2010

<sup>4</sup> Appendix E gives information on the location of offtakes relative to compressor stations.

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Ofgem decision	Dec 2010
UNC changes effective from	April 2011

3.18 Following any revision to the methodology, the tariff could be updated in line with other commodity updates, which normally occur in April and October of each year. The original timescales considered an implementation date of October 2010 to allow for further discussion at TCMF meetings and to provide sufficient time for Users to negotiate any necessary contracts ahead of proposed changes. An April 2010 implementation date, which had previously been discussed at gas TCMF meetings, is not practicable given the notice periods and the commitment to cover each stage of the development and consultation process within a gas TCMF meeting. Following the responses to the discussion paper and the request for further analysis of the options these timelines are no longer appropriate and 3.17 above gives a suggested timeline for UNC modifications only.

## 4 Summary of Responses

National Grid NTS received 8 responses to its consultation on NTS GCD 07; As regards Option 1, one respondent (EON) supported it specifically. For Option 2, three respondents (AEP, BGT, EDF) specifically supported it and one (GDF) specifically supported Option 2a, one (EON) specifically did not support Option 2 and one (GDF) specifically did not support Option 2a. Two respondents (RWE, SSE) generally supported both options, whilst one respondent (COP) did not express a specific view for either Option 1 or Option 2. None of the responses were marked as confidential, and 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/>

### Support for the Proposal

Respondent	View – Option 1	View – Option 2	Note
Association of Electricity Producers (AEP)		Support	
British Gas Trading (BGT)		Support	
ConocoPhillips (COP)	No specific support	No specific support	Option 1 is most cost reflective
EDF Energy (EDF)		Support	
E.ON UK plc (EON)	Support Option 1b	Not in support of Option 2	
GDF SUEZ Energy UK (GDF)		Support Option 2a	
RWE npower (RWE)	General support.	General support. Not in support of Option 2a	
Scottish and Southern Energy (SSE)	General support	General support	Requested full development of both options

## Detailed Responses

Responses by discussion question:

Questions 1 to 3 cover methodology – cost assignment questions 4 and 5 cover issues common to either option and question 6 covers implementation.

### Methodology – Cost assignment

**Q1. Do respondents consider the cost assignment under methodology option one or option two, to be most consistent with the relevant objectives? Do the methodologies;**

- Reflect the costs incurred by the licensee?
- Take account of developments in the transportation business?
- Facilitate effective competition?

### Reflect the costs incurred by the licensee

There was a mixed response to this question. One respondent (EON) stated that Option 1 was most cost reflective whereas three respondents (BGT, EDF, SSE) stated that Option 2 was most cost reflective. One respondent (COP) felt neither was cost reflective and one respondent (RWE) commented both could be considered so. More detail follows below on the debate.

BGT stated 'We believe that option two is most cost reflective takes account of developments in the transportation business and better facilitates effective competition'.

One respondent COP 'can understand the reasons why the tariff is being reviewed but the result of the review still needs to meet the underlining principle that short haul exists to avoid inefficient bypass of the NTS. Whilst neither option is directly cost reflective, option 1 is at least reflective of someone's costs.'

EDF stated 'Option 1 appears to utilise a methodology based on the costs avoided by the exit connection. And so is inconsistent with the relevant objectives. Option 2 appears to be more cost reflective as it relates to the costs incurred by the System Operator. However we are not convinced that the SO costs identified and attributed to short haul are related to distance. We believe it is more appropriate to develop a p/kWh charge and limit application to exit points between the entry point and next NTS compressor.'

E.ON UK's preferred Option is 1b. 'This builds on the existing, familiar methodology, whilst updating certain key parameters. We believe this option best facilitates the objective of ensuring the methodology reflects latest costs whilst seeking to avoid inefficient bypass of the NTS by Shippers. We note that Appendix D in the discussion paper also confirms that Option 1b is likely to have no overall effect on the standard commodity rate, minimising potential for cross-subsidy.'

GDF stated '...out of the options under consideration we'd like to state an initial preference for option 2a where SO costs are allocated to distance. We support on the basis of simplicity and that this option clearly distinguishes between SO and TO charges.'

RWE stated 'Both Options 1 & 2 could reasonably be argued to be consistent with the relevant objectives. Under Option 1 the basis for cost reflectivity is assessed against the cost of building a dedicated pipeline of NTS specification between an entry and exit point, whereas under Option 2 it is assessed against the costs the system operator incurs in making gas available at the exit point.'

SSE stated 'At a high level, we think elements of the second option are more cost reflective; however, this view comes with important caveats.'

#### Take account of developments in the transportation business

AEP stated 'The Association considers it is appropriate to review this tariff methodology to take account of developments in the transportation business. Since this tariff structure was established the TO and SO elements of the price control have been separated and also new EU legislation has come into force which will prohibit network charges being calculated on the basis on contract paths (Article 13.1 Regulation 715/2009). Since this charge is primarily an SO charge then option two would seem to be more consistent with the relevant objectives.'

EDF stated 'The current short haul charge has not been reviewed since 1998. Therefore Option 1 and Option 2 meet this relevant objective as developments in the Transportation Business will be accommodated in this review. However Option 2 better meets this objective as it takes account of the implementation of GCM01, whereas Option 1 appears to replicate the outcomes of GCM01.'

RWE stated 'Both options, and the issues common to both options, take account of developments in the transportation business. However, it could be said that following the introduction of separate TO and SO price controls in 2002, Option 2 best takes account of developments in the transportation business.'

#### Facilitate effective competition

EDF Energy 'believes that effective competition is facilitated by ensuring that costs are correctly targeted. This ensures that there is no cross subsidises between market sectors. Therefore as Option 2 is cost reflective, it will also facilitate effective competition.'

EON stated 'We do not support any of the Option 2 alternatives. Although the methodology is distance-related, the methodology under Option 2 is only barely so and as a result, would seem to benefit large sites only. On this basis, Option 2 cannot be considered to facilitate effective competition. It also relies on lots of arbitrary decisions on which SO costs should be allocated where and in what proportion, and in our view, adds unnecessary complexity for Shippers trying to get to grips with the methodology – particularly new entrants.'

RWE stated 'In both cases effective competition is facilitated by discouraging NTS bypass thus ensuring greater network efficiency, utilisation of any spare cost and the potential for greater supply flexibility through increased sources of demand side response.'

### National Grid's view

On balance National Grid believes more support, in terms of meeting the Licence objectives has been shown for Option 2.

Since there have been some mixed views from respondents it may be more appropriate to concentrate initially on updating the application of the charge via the UNC process, on which there has been a more unanimous response, rather than the derivation of the rate.

### **Q2. Do respondents have any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option one? Specifically;**

- The connection cost approach?
- The annuitisation period; 10 years, 45 years or other?
- The load factor?

### The connection cost approach

Four respondents (BGT, EDF, EON, SSE) specifically stated that they did not agree with the connection cost approach for Option 1.

BGT states 'We are not convinced that it is appropriate to use a connection cost in a commodity charge.'

EDF states 'We do not believe that Option 1 is cost reflective, and our response to these questions should not be seen as providing support for implementation of this option.'

EDF states 'An exit point will have to fund the connection costs regardless of whether it bypasses the NTS or not. By including connection costs the methodology appears to assume that these will not be incurred if it connects to the NTS. It therefore does not appear to be appropriate to include these costs as they will be funded by the exit point regardless of whether it connects to a terminal or the NTS.'

EON stated 'We do not understand the rationale for including the connection cost for the purpose of this methodology. This is usually paid as a lump sum by the connecting party. If a minimum charge is desirable then this should be made explicit rather than justified on the basis of a connection charge.'

RWE stated 'Whilst the capital cost estimate of £1m per connection used in Option 1 may be consistent with the Connection Charging Statement we believe this over estimates the typical cost of land, labour and materials costs we would expect to be incurred in establishing and ROV connection. It is noticeable that most of the connecting pipelines between the NTS and new exit points have been built by the developer as opposed to National Grid, which suggests National Grid's connection costs are "a typical" when compared to those faced by developers/shippers.'

SSE stated 'We do not support the connection cost approach for a minimum charge as this is not cost reflective.'

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### National Grid's view

National Grid accepts the comments made by respondents and agrees that no exit connection cost should be included within the costs; however, there is still an avoided entry connection cost that would be associated with by-passing the system. If Option 1 is to be used there would only be an entry connection cost element.

### The annuitisation period; 10 years, 45 years or other

Seven respondents (AEP, BGT, CON, EDF, EON, RWE, SSE) supported 45 years.

AEP states 'We consider if this approach is favoured then an annuitisation period of 45 years should be used consistent with other NTS pipelines.'

### National Grid's view

Given the overwhelming support for an annuitisation period of 45 years if Option 1 is progressed, this figure would be used in derivation of the charge.

### The load factor

AEP states 'Also a load factor consistent with that likely to be used for assessment of an alternative pipeline rather than system load factor would seem appropriate.' AEP also states 'It would also be appropriate for more detail to be provided on the steel price index to be used so parties can predict the volatility in the charge.'

BGT states 'The most appropriate load factor would be site specific but we can understand the reasons for wanting to use a common load factor for all optional commodity charges. We do, however, consider that this should be more reflective of these loads rather than using the system load factor.'

CON states 'We believe that the load factor for current sites is being lowered by storage users so a higher load factor should be maintained once the storage sites are removed from the tariff.'

EDF states 'NGG has rules out the ability to apply a site specific load factor, and so an industry load factor has not been applied, on the grounds that site specific is too complex. However we would note that for large GDN sites their capacity and commodity charges are a function of SOQ which is derived from their load factor. Given that there are significantly more GDN sites that fall into this category than NTS, we are surprised NTS can not utilise a site specific load factor.'

EDF goes on to say 'It appears that NGG is proposing to use a 75% load factor as if a 50% load factor is used; there is a risk that new connections with a higher load factor will continue to bypass the system as they will be "over charged". We do not believe that the objective to avoid bypass is consistent with NGG's Licence. In addition whilst some sites with higher load factors may be "over charged", the proposed load factor would result in the majority of short haul sites being "under charged". If a national load factor is to be used then it would appear more appropriate to utilise an average load factor. This will ensure that as a "sector" short haul sites pay an appropriate charge, although there will be winners and losers at a site specific level. We would note that this is also consistent with the GDN proposed methodology for interruptible sites under DNPC03, whereby as a sector interruptible sites would continue to pay the same level of distribution charges, but there were winners and losers at a site specific level depending on their load factors.'



EON stated 'We agree that the current 75% load factor should be retained.'

RWE stated 'In order to avoid undue complexity in the shorthaul charging methodology it is necessary to base charges on a single load factor. We agree that such a load factor should be high to reflect the fact that sites which have an economic incentive to bypass are likely to derive this incentive partly from having a load factor significantly higher than the NTS system average load factor. In this respect the current 75% load factor still seems appropriate.'

SSE stated 'SSE support the 75% load factor.'

### National Grid's view

There was a mixed response to the load factor issue. Three respondents (EON, RWE, SSE) supported the suggested 75% load factor figure as used at present. EDF stated 'We do not believe that the objective to avoid bypass is consistent with NGG's Licence.' National Grid believes that as sites use the NTS rather than bypassing there is a contribution towards costs which results in lower charges overall and so is more efficient. This efficiency facilitates effective competition. Given, that there was no strong support for an alternative to the 75% figure, if this option is chosen the figure would remain.

In terms of potential utilisation of a specific load factor it is not the AQ of the exit point as used by the GDNs to derive the SOQ for their charge calculations that is relevant. It is the flow between the specific entry point and the exit point that is required rather than the total flow from various entry points to the exit point as used in the calculation of the SOQ.

Under Option 1 National Grid is assuming that Users would not consider building a dedicated pipeline if the utilisation of that pipeline were expected to be low and is assuming that on average 75% of the total flow would use that dedicated pipeline.

### **Q3.Do respondents have any views on the appropriateness of the costs and parameters used in the derivation of the tariff under option two? Specifically;**

- Whether the minimum cost should be based on a connection cost approach or a proportion of the SO costs related to short-haul?
- Whether the SO costs associated with short-haul (34% for the indicative charges) should be set on an annual basis or fixed, based on a long term trend?

### Minimum Cost

AEP stated 'We do not understand the rationale for including the connection cost as part of this charge, since it is our understanding that is usually paid as a lump sum by the connecting party. If a minimum charge is desirable then this should be made explicit rather than justified on the basis of a connection charge.'

BGT stated 'We believe that optional commodity charges should be related to distance, size of load and load factor rather than connection cost. Hence the minimum charge could be very low for short distance, large load with a high load factor.'

CON stated 'The costs and parameters all seem a bit arbitrary.'

EDF stated 'As previously noted EDF Energy believes that the short haul tariff should be related to a proportion of SO costs as this is the most cost reflective. However we do not understand why this charge also has to be distance related. NGG has identified in the discussion document that the SO costs that should be included for short haul are Un-accounted for Gas (UAG), and internal costs. This provides a 34.6% cost proportion which would also cover a fair share of "K" and incentive costs. These costs do not appear to alter with distance, and so it is questionable why a distance related charge should be applied. If SO charges are cost reflective with a p/kWh charge, then it would appear that a short haul p/kWh charge would also be cost reflective.'

RWE made the following statements 'When considering the shorthaul tariff from the perspective of the relevant SO costs incurred whilst it seems logical to derive a distance based commodity price function using the NTS peak flow distance (Option 2a) we do not believe this is a credible option in its own right. Option 2a will significantly reduce the benefits to the industry resulting from incentivising NTS connection (rather than bypass) and could disproportionately affect the NTS SO Exit Commodity Charge by comparison with other options. It may also potentially breach EU Regulations.'

'In our opinion the shorthaul tariff should be based either on the avoided costs of NTS bypass or the relevant SO costs, not on a hybrid of both these approaches. To this extent we favour Option 2d over Options 2B and 2C.'

SSE stated 'We cannot accept under option 2 that Shrinkage: Unaccounted for gas is included in the Shorthaul cost. Nor do we support a 40% load factor. A 75% load factor should be used in option 2. This will then treat option 1 and 2 in an equal, way, the charge being based on the gas throughput at the individual exit point. We do not support the connection cost approach for a minimum charge as this is not cost reflective.'

#### National Grid's view

There has been no support for the inclusion of a connection cost element within Option 2. This element will therefore not be taken forward. This means that Option 2b and Option 2c can be removed from further consideration.

If there were no distance related element to the charge, sites that were close to a terminal would be likely to choose to bypass and therefore not contribute to the costs of the network whereas those furthest away would be incentivised to use the system rather than bypass but not contribute an cost reflective amount for doing so. This would not appear to generate the most efficient outcome/ would not incentivise Users not to pass the NTS.

A 40% load factor is used in the calculation under Option 2 to be consistent with the total system costs.

### SO Costs set annually or fixed

AEP stated 'If the SO cost approach is adopted we consider more consideration is required to determine whether the charges should be set annually or on a longer term trend say averaging historic 3 or 5 years worth of data. The information presented at the October TCMF meeting seemed to show that the percentage of total SO costs could vary quite significantly year on year. We are not sure whether such volatility and uncertainty is appropriate in this case. It would also be sensible to project costs forward and consider whether there is any impact of the removal of deemed interruption costs or whether new costs form part of the SO commodity charge once exit reform has been implemented.'

BGT stated 'We believe that the SO costs associated with short-haul should be set for the duration of a price control (5 years) rather than varying annually.'

EDF stated 'Varying the proportion year on year would create issues with predictability of charges, and potentially require additional reporting by NGG to the TCMF. Our preferred approach would be to base the split on a long term trend (e.g. 5 years) and review this split at the start of each price control period. This would aid predictability for Shippers, whilst also ensuring that the charge remained cost reflective.'

RWE commented 'We agree that the unaccounted for gas and internal cost elements of SO costs are appropriate for deriving shorthaul. We had hoped National Grid would provide historic information on what percentage of SO costs were associated with these two elements over the years, and in the absence of such data we are unable to say whether the SO costs associated with shorthaul should be set annually or fixed based on a long term trend. However from a pure cost reflectivity perspective an annual review seems most appropriate.'

### National Grid's view

The response from those that specifically replied to this question has been mixed. Given, the concern regarding uncertainty and volatility associated with the charge National Grid will consider the setting of a charge based on SO costs that could be applied throughout a price control.

### Issues common to either option

#### **Q4.Do respondents have any views on the application of the methodology? Specific comments on the following are requested:**

- Distance from the exit point to the ASEP – in the case of ASEPs with more than one SEP is it appropriate to measure the distance to the nearest SEP?
- Load factor – is it appropriate to use a system load factor or an exit point load factor?
- Minimum charge – should there remain a minimum charge? If so, what level should this be set at? Should this be related to the exit point capacity (EPC)?

- Annual updating of charge – should the charge be updated in parallel with other transportation tariffs?
- Application to multiple exit points from a single entry point – do respondents agree that the present default allocation rule should apply when the input allocations are below the output allocations?
- Application at storage exit points – do respondents agree that the ‘short-haul’ tariff should not be applicable at storage exit points?
- Do respondents agree that the charge should only be applicable to the exit points that are connected between an ASEP and the next downstream compressor?

#### Distance from the exit point to the ASEP

Six respondents (AEP, BGT, CON, EON, RWE, SSE) agreed that in the case of ASEPs with more than one SEP, it is appropriate to measure the distance to the nearest SEP.

The following comment was received from a respondent who did not agree. ‘As previously noted EDF Energy does not believe that a distance related charge should be applied to the cost reflective option. We are also not convinced on basing the distance from the nearest SEP. In particular we would note that were gas is flowing from the furthest SEP and not the closes then the distance will be (potentially significantly) underestimated and so the short haul rate too low. The current methodology of using the mid-point therefore appears the most appropriate as on average this should be the most reflective of distance travelled (provided that the load factors of the SEPs are the same.’

#### National Grid’s view

Since six of those respondents that specifically replied to this question agreed that measuring to the nearest SEP is appropriate, National Grid will progress this in order to clarify the situation. A UNC Modification will be necessary to implement this change.

#### Load factor

AEP stated ‘For option two the system load factor may be more appropriate.’

BGT states ‘It would be more appropriate to use an exit point load factor but we can understand the reasons for using a system load factor’

CON states ‘Exit point load factor would be most reflective, but to avoid complexity the load factor of 75% is probably acceptable.’

EDF states ‘As previously noted given that the GDNs can apply charges based on SOQs which are derived from load factors, we believe that the NTS should also apply an exit point load factor. The number of sites that would be impacted by this is significantly less than those on the GDNs and so this should be simpler. However if NGG does not wish to use a site specific load factor than an average load factor would be more appropriate, either at a system or short haul level depending on the methodology adopted.’

EON stated ‘A system load factor would seem to be more representative of the diversity of load factors of affected points. However, in the absence of data to demonstrate the effect of varying the load factor, we reserve our judgement on this matter.’

RWE stated 'Were the shorthaul tariff to be based on an approximation of NTS bypass costs we believe it would be appropriate to adopt a standard approximation of the likely NTS load factor (rather than an individual exit point load factor) to determine the shorthaul tariff. However, if the shorthaul tariff were to be based on an allocation of SO costs we believe it would be appropriate to use a system average load factor.'

RWE made the following additional comment 'We note that National Grid state in a footnote on page 3 that the Exit Point Capacity will be defined within the UNC as the Baseline Exit Capacity once the enduring exit regime takes effect. This raises the question of how new exit points that do not have a baseline but which secure Enduring NTS Exit Capacity will be treated and what capacity figure is used at common DC exit points serving multiple sites e.g. St Fergus, Teesside, Thornton Curtis.'

SSE stated 'In option 1, a 75% loadfactor has been proposed, we support this. This is a simplification as using the actual load factors which would be difficult to administer. In option 2, a 40 % load factor has been proposed for the individual exit points. We believe this unequal treatment does not allow a fair comparison of options 1 and 2. A 75% load factor should be used in option 2 as this will be equally as reflective of the gas throughput at the individual exit point as in option 1. This will have the benefit of incentivising the continued use of Shorthaul and an efficient network, which the 40% load factor will not.'

#### National Grid's view

There has been some desire to use an exit point load factor but also some acknowledgement of the problems with this approach. National Grid continues to believe that using a specific load factor (which may be different for Option 1 or Option 2) is the most appropriate way forward.

In terms of potential utilisation of a specific load factor it is not the AQ of the exit point as used by the GDNs to derive the SOQ for their charge calculations that is relevant. It is the flow between the specific entry point and the exit point that is required rather than the total flow from various entry points to the exit point as used in the calculation of the SOQ.

Whilst the traditional SOQ is available, information on which to derive the appropriate exit point specific load factor for the short-haul calculation is only available after the event. Use of an average load factor might encourage high load factor sites to bypass and those below the average to use the system but make a less than cost reflective contribution to revenues. National Grid continues to believe that for Option1 the use of a low load factor encourages the high load factor sites to bypass and in the absence of any additional data believes that the 75% load factor encourages less bypass of the system. National Grid also continues to believe that the use of a system average load factor in determination of the rate is appropriate under Option 2 as this option is considering total system SO costs.

The exit point capacity at common or shared exit points to be used in the determination of the short-haul rate would be the sum of the individual baselines at that exit point. New exit points would have an EPC as part of the capacity/connection process.

### Minimum charge

Four respondents (AEP, BGT, CON, RWE) agreed that there should be a minimum charge. EON gave qualified support – see below. SSE did not agree with a minimum charge.

AEP stated 'There probably should be a minimum charge but it is difficult to see how this can be determined in a cost reflective way.'

BGT states 'We agree that there should be a minimum charge and suggest 0.0001 p/kWh'

EDF stated 'EDF Energy believes that a minimum charge should be applied, as otherwise this would imply that there are no costs incurred. We believe that setting the short haul charge at 34.6% of the full SO commodity charge would resolve this issue.'

EON stated 'Provided that it is also cost-reflective, then we would not object in principle to a minimum charge.'

RWE stated 'National Grid's systems already incorporate a minimum capacity and commodity charge of 0.0001 p/kWh and this will act as default minimum charge in the event either methodology were to derive a charge lower than this. As previously stated we do not believe that Option 2a, which could result in charges at or below this minimum system imposed level, is credible.'

SSE stated 'A minimum charge is not necessary. The cost reflectivity of the charge should be a higher priority. We do not support the use of the connection charge for setting a minimum charge as this bears no relation to the cost of shorthaul charges and is not cost reflective.'

### National Grid's view

National Grid continues to believe that a minimum charge is necessary for the short-haul tariff as applies for all other Transportation charges. A zero charge does not reflect the costs of any alternative bypass arrangement which is unlikely to be available at zero cost. Under Option 1 the minimum cost would be related to the cost of connection at the entry terminal whereas under Option 2 a minimal distance should relate to a minimal charge and reflect the costs incurred. National Grid also believes that Users should not be incentivised to flow more than is required and a non zero cost is consistent with this. A minimal charge should not discourage use of the system but it should be as cost reflective as possible.

### Annual updating of charge

AEP stated 'See comments in response to Q4, further thought needs to be given to this.'

BGT stated 'Yes. This will ensure that charges remain cost reflective, and expose short haul sites to the same risk faced by all other NTS Exit points. We would note that if short haul sites were provided with the ability to lock in their charges, then it would appear unduly discriminatory to not provide the same option to other NTS Exit Points. However this in turn could create issues with under recovery of revenue.'

EON stated 'As noted in the consultation paper, an annual updating of the charge is probably more consistent with the move to an annuitisation period of 45 years, which, as outlined above, is our preferred approach (Option 1b). It is also important that if the charge is updated annually, that the change in charge levels should be as predictable as possible.'

RWE stated 'If the methodology for the shorthaul charge is based on a proxy for the avoided cost of building a dedicated pipeline then in order to ensure it remains cost reflective it would seem reasonable to update the tariff in line with changes in the price of steel and of National Grid's connection costs. If the methodology is based on relevant SO costs then updating it to ensure it remains cost reflective also seems appropriate. However whilst NTS SO and TO charges may change more frequently than once a year we do not think the shorthaul charge should be updated more frequently than annually. Also it is probably appropriate that all the variable elements of this methodology that determine the charge (SO Costs Components, SO Target Costs, Peak Flow Distance, System Load Factor and Number of Offtakes) should be updated, as applying a fixed percentage of SO Costs based on a snapshot in time of costs and network characteristics is as cost unreflective as not updating the charge annually.'

SSE stated 'There is an obligation to review the charge every year, this should be undertaken.'

#### National Grid's view

Of those respondents that replied to this issue there was support for the charge to be reviewed on an annual basis. National Grid will further consider the most appropriate way to do this which will be dependent on the Option chosen. National Grid will endeavour to provide as much certainty as possible regarding charge changes and to minimise non essential variation.

#### Application to multiple exit points from a single entry point

Three respondents (AEP, CON, SSE) agree with present default option.

Three respondents (BGT, EON, RWE) expressed a wish to retain a right to request an alternative option

BGT states 'We do not agree with this. Either the default should be changed to use a priority order working from the lowest applicable charge upwards or else users should be free to choose their own priority order, with the current default retained as an option. Users should also have the ability to change priority at short notice.'

EDF stated 'EDF Energy recognises that currently system limitations prevent the application of alternative arrangements. However another potential solution would be to allow the application of alternative arrangements as a User Pays service.'

EON stated 'The existing rules on this should be retained, including the possibility for a shipper to request an alternative allocation method. However, we would not necessarily object to the default rule being applied universally.'

RWE stated 'With regard to short-haul's applicability at multiple exit points we believe it is legitimate for shippers to apportion entry flows across multiple exit points on a basis other than pro rata, as under both methodologies the benefit to the exit point of bypass will be greater the lower the shorthaul charge applying at the site. National Grid state that introducing a non pro rata default would require significant system changes. Whilst we have no reason to doubt this it may be relatively simple to provide for non default allocation through the use of ad hoc credit notes, which bearing in mind the limited number of sites where shorthaul applies does not sound too administratively onerous.'

#### National Grid's view

The short-haul tariff was introduced originally to discourage inefficient by-pass of the system through the building of dedicated pipelines by Users when capacity already existed on the system. The concept of building a dedicated pipeline is only economic when there are high load factors. The prorating is only an issue when there are variable utilisations of more than one exit point in relation to a single entry point. In practise a dedicated pipeline would only be built when high utilisation is expected. In such cases there are negligible cost differences in terms of transportation costs for pro-rating rather than choosing an alternative approach. Given that potentially expensive system changes would be required in order to move away from the present default of prorating when there is more than one eligible exit point National Grid does not propose to progress such a change which would be of benefit to relatively few Users and not likely to be cost justifiable. Since this is defined within the UNC, a 'user pays' Modification could be raised by any User who wishes to implement alternative allocations in the future.

#### Application at storage exit points

Seven respondents (AEP, BGT, CON, EDF, EON, RWE, SSE) agree that the short-haul tariff should not be applicable at storage exit points

BGT commented 'In principle this is a sensible restriction.'

RWE commented '...we agree that it is perverse to continue to allow storage sites to be treated as eligible exit points for shorthaul. Doing so will allow gas in store to avoid paying the full commodity rate on entry which undermines the principle behind the recent decision not to introduce commodity charges on storage entry/exit flows.'

#### National Grid's view

There was unanimous support for this element of the discussion paper by the seven respondents who specifically commented. There was no comment from the eighth respondent. Therefore, National Grid is supported in recommending that, following an appropriate UNC Modification, the charge should no longer be available to storage exit points. This is consistent with storage sites avoiding standard commodity charges.

#### Applicable to the exit points that are connected between an ASEP and the next downstream compressor

Four respondents (AEP, BGT, EDF, SSE) agreed. Three respondents (CON, EON, RWE) did not agree



AEP stated 'This rule is consistent with excluding compression costs for the tariff we therefore support it. In addition NG has advised that introducing this rule would not make any parties that currently use the optional tariff ineligible.'

BGT commented 'In principle this is a sensible restriction. There are cases, however, where there are a number of entry points which may be considered as upstream of the same compressor. The charge should then be applicable from any entry point to any exit point within the zone created.'

CON stated 'For option 1 the location of the first compressor has no significance, the location is based on the historical development of the NG system rather than particular physical limits when considering a bypassing pipeline. For example, there is no inherent reason why someone would consider bypassing the NG network by building a 102km pipeline from Burton Point but only consider a 24.8km bypass from Teesside. The KIPS pipeline from Theddlethorpe to Killingholme demonstrates that someone would consider creating a bypass that would not be catered for by the proposal.'

For option 2, using the first compressor limits, which are essentially arbitrary for each entry point, does not seem to facilitate effective competition or to be non-discriminatory as some locations are winners and others losers.'

EDF stated 'This solution would appear most compatible with implementation of Option2 based on a discounted SO commodity charge without a distance related element. The methodology for Option 2 excludes compression costs and so any site past a compressor would benefit from this service but not pay the costs associated with this. In addition by implementing this limitation it removes the requirement to have a distance related charge, and so ensure compliance with EU Regulations.'

EON stated 'No, we see this as an arbitrary cut-off point. Since NG has advised that introducing this rule would not make any parties that currently use the optional tariff ineligible, we do not see the point in adding extra complexity to the methodology if there is no impact in practice.'

RWE stated 'We are not convinced that the shorthaul charge should only be applicable to exit points that are connected between an ASEP and the next downstream compressor. This argument seems to be based on the premise that as compression costs are not factored into the shorthaul methodology an exit upstream of the compressor will have no effect on compression costs whereas an exit downstream of the compressor will. However we do not believe it will always be the case that connecting downstream of a compressor will require National Grid to increase the use of that compressor to meet the capacity requirements of the connecting exit point whilst maintaining those of other exit points in the vicinity. Nor do we believe that connecting up stream of a compressor could not result in an increase in the use of the compressor to maintain the capacity requirements of downstream exits points, thus incurring greater costs to the community. To this extent we think the shorthaul methodology should disregard compression and pressure effects completely.'

SSE stated 'This is consistent with excluding compression costs from the Shorthaul tariff under option 2. As such we support it, particularly as NG have advised that none of the sites that currently make use of Shorthaul will become ineligible in the future should this rule be introduced.'

### National Grid's view

There was a mixed response to the suggestion that sites downstream of a compressor should be ineligible for the short-haul rate. National Grid continues to believe that where compression costs are not factored into the determination of the charge rate this would be a sensible restriction.

If sites were to be eligible for the short-haul tariff downstream of existing compressors it would be appropriate to include the costs of compression within the rate calculation. This has not been included in the suggested rate calculation and therefore the restriction on eligibility is consistent with the rate calculation.

National Grid will review the possible restriction for offtakes downstream of existing compressors in the light of comments received. Alternative approaches will be considered including alternative forms of the short-haul rate calculation formula which might not require sites to be explicitly excluded.

### Implementation

#### **Q5. Do respondents support either an implementation date of 1<sup>st</sup> October 2010 or an alternate implementation date?**

Five respondents (AEP, BGT, EDF, EON, RWE) support an implementation date of 1st October.

EON stated 'This seems reasonable, however we should be mindful that a further consultation stage is likely to be required in addition to any UNC change proposals required, and therefore this proposed implementation date should be flexible. However, it is useful to see the indicative timescales that National Grid is intending to work to.'

SSE stated 'Early implementation should be sought where practicable.'

### National Grid's view

Of those respondents that replied to this question there was unanimous support for an implementation date of 1 October. National Grid will work towards as early an implementation date as is possible with regards to any proposals that it brings forward. Given that there is still some debate in particular regarding the most appropriate method by which to set the charge rate the original time frame cannot be achieved. There is more agreement on improvements which would provide more clarity and ease the application of the charge and therefore it may be more appropriate to concentrate on those areas as a first priority. These changes would require UNC Modifications, as a first step in the review of the short-haul. It is anticipated that these changes could be progressed for implementation by 1 April 2011.

## Other Comments

EDF made the following comments:

In the past the current methodology appears to have been accepted on the grounds that avoiding system bypass benefits consumers in general as sites that opt to take short haul rather than bypassing the system will end up paying charges and so reducing the burden placed on the industry in general. However we would note that it becomes important to differentiate between TO and SO costs and charges. In particular all firm sites have to pay TO capacity charges and there is no availability to reduce these charges through a short haul TO capacity charge. Implementation of the Transportation model through GCM01 helped to ensure that exit points close to entry points received a more cost reflective charge, normally set to the minimum of 0.0001p/kWh/day. We would note that any revenues from these sites will provide a benefit to consumers in general by reducing the burden of NTS TO revenue they are required to cover, whilst also providing an attractive alternative to bypassing the system as rather than having a large upfront capex expenditure this cost is spread over the lifetime of the plant and is sufficiently low so as to represent a “cheaper” alternative. We believe this in itself provides the incentive not to bypass and in instances where the connecting party can bypass the system at a lower NPV cost then this would represent an economic and efficient development.

The short haul charge also provides a benefit to consumers in general, however EDF Energy believes that this is not accurately targeting costs as customers are receiving a benefit from reduced SO costs, based on the allocation of TO costs. It would appear that if there is a benefit of offtaking gas close to an entry point, this would also come from the perspective of reduced system operator costs, as arguably costs are reduced as the NTS does not have to Transport the gas as far in its system, thereby reducing compressor usage etc. It would appear that the short haul charge should be developed to reflect the reduced system operator costs from connecting close to an entry point.

EDF Energy therefore believes that NGG should develop the Optional NTS Commodity Tariff so that it is more closely related to the SO charges and costs, and reflects the system operator costs avoided by connecting close to an entry point. We therefore support Option 2 in the Discussion Document. In relation to this option, EDF Energy would make the following high level observations:

1. It is not clear why the proposed reform and charge should continue to be influenced by distance. This may have been appropriate when the short haul charge was based on TO costs, which vary with distance; however it is not clear how the costs that NGG are attributing to the short haul charge under Option 2 are influenced by distance. It would therefore appear appropriate to move to a p/kWh charge. This would meet the EU regulations requirements and appear to be more cost reflective. Further by combining this with the rule that only sites between the entry point and the next NTS compressor could qualify would ensure that only truly short haul sites could qualify for this discount.

2. EDF Energy is unclear why connection costs have been included in the methodology. It appears that NGG is basing this on the assumption that the exit points avoided terminal connection costs. We would note that this does not appear as a relevant objective in NGG's Licence. In addition whilst the exit point may avoid the terminal connection cost they will however have to fund the NTS connection cost, which are funded outside of transportation charges.

3. The load factor is only required as NGG is attempting to convert fixed connection costs to a p/kWh/km charge. We are not convinced that a distance based charge is cost reflective, and removing the distance and connection based charges would avoid this requirement. This would therefore lend itself to a short haul charge at 34.6% of the SO commodity charge.

### National Grid's view

National Grid welcomes the additional comments expressed. There is some merit in having a very simple short-haul charge function which is independent of distance and is clearly set in relation to the alternative standard charge; however, there was no support for this simple approach by other respondents. On average this might be a cost reflective charge for those who choose short-haul. National Grid is concerned that if this method were to be adopted then many sites would see a significant increase in their charges and may consider by-pass of the system.

## **5 Way Forward**

- 5.1 National Grid will as a first priority progress the necessary UNC Modifications that will add clarity to and ease in application of the short-haul tariff. The following areas have received suitable levels of support and so will be progressed
- Distance from the exit point to the ASEP
  - Application to multiple exit points from a single entry point
  - Application at storage exit points
- 5.2 Given that there has been so many varying views expressed by respondents to the discussion paper, National Grid proposes to give further consideration to the most appropriate methodology for determination of the short-haul rate.
- 5.3 The present short-haul tariffs will remain for the near future.
- 5.4 The recently experienced high levels of the TO commodity charge have been a concern to shippers and may have further encouraged application for the short-haul tariff. The recent Entry Charging Review has sought to address the issue of the level of the TO commodity charge and developments in this area should go some way towards improving the situation. A higher take-up of the short-haul tariff will lead to a higher standard commodity tariff and this has provided some concern. The interaction between the commodity charges will continue to be kept under review.

## Appendix A – Option One

### Assumptions used in updating under option one.

Inflation for Steel price and RPI changes costs by factor of 2.26

Annuity over 45 years changes costs by factor of 0.69

Combined factor for cost inflation and annuity over 45 years 1.56

Load factor remains at 75%

Minimum connection cost approximately £1m per connection (capital costs excluding uplifts)

The tariff function is made up of two components; a distance related element and an element relating to the connection cost. The tables below detail the formulae under the various updating scenarios. Note that the appropriate distance related element (in Table 1) and the appropriate connection related element (in Table 2) need to be added together to derive the final tariff.

Table 1: distance related element

Distance (pipe) related element	Rate (p/kWh)
Original formula	1203 * (EPC) <sup>-0.834</sup>
1a) Update costs Factor 2.26	2719 * (EPC) <sup>-0.834</sup>
1b) plus annuity over 45 years Factor 1.56	1876 * (EPC) <sup>-0.834</sup>

Table 2 :connection related element

Connection cost element	Rate (p/kWh)
Original formula	(EPC <sup>-0.654</sup> ) *363
1a) Update costs & annuity over 10 years	(EPC <sup>-0.9094</sup> ) *16648.91
1b) Update costs & annuity over 45 years	(EPC <sup>-0.8836</sup> ) *8430.404

## Appendix B – Option Two

### Assumptions used in generating prices under option two.

System load factor of 40%

Minimum connection cost approximately £1m per connection (capital costs excluding uplifts) for 2b & 2c equal to the figures used for 1a & 1b

The tariff function, other than for 2a, is made up of two components; a distance related element and an element relating to the connection cost. The tables below detail the formulae. Note that the appropriate distance related element (in Table 1) and the appropriate connection related element (in Table 2) need to be added together to derive the final tariff.

Table 1: distance related element

Distance related element	Rate (p/kWh)
2a) Short-haul proportion of SO Costs (34.6%)	0.000056
2b) Short-haul proportion of SO Costs (34.6%)	0.000056
2c) Short-haul proportion of SO Costs (34.6%)	0.000056
2d) 50% of Short-haul proportion of SO Costs (34.6%)	0.000029

Table 2 :connection related element

Connection cost element	Rate (p/kWh)
2a) none	0
2b) Connection cost annuitised over 10 years	$(EPC^{-0.9094}) * 16648.91$
2c) Connection cost annuitised over 45 years	$(EPC^{-0.8836}) * 8430.404$
2d) 50% of Short-haul proportion of SO Costs (34.6%)	$(EPC^{-1}) * 185578$

The following table shows the calculation of the option 2a charging function which also represents the distance element of the function for options 2b and 2c. For options 2b & 2c the connection element is the same as options 1a & 1b. The row numbering within this table is consistent with the row numbering in the later table for option 2d.

SO Target Costs	£300.7	million	1	
Short-haul Proportion	34.6%		2	
Cost	£104.04	£m/annum	3	=1 x 2
Peak Flow Distance*	1,242,921	GWhkm/day	4	
Cost per unit peak flow distance	£0.000000	£m/GWhkm	6	= (3/365)/4
Cost per unit peak flow	0.000023	p/kWhkm	7	= 6 x 100

distance				
System Load Factor	40%	-	12	
Cost per unit distance	0.000056	p/kWhkm	13	= 6/12

The following table shows the calculation of the option 2d charging function. Rows 5 and 9 show a fifty-fifty split of costs between distance and number of connections.

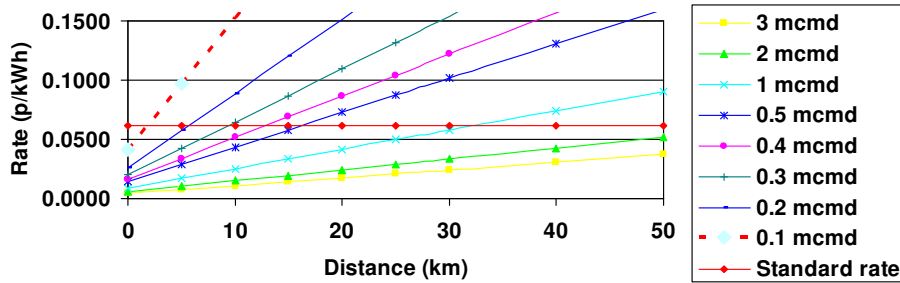
SO Target Costs	£300.7	million	1	
Short-haul Proportion	34.6%		2	
Cost	£104.04	£m/annum	3	= 1 x 2
Peak Flow Distance*	1,242,921	GWhkm/day	4	
Distance Proportion	50%		5	
Cost per unit peak flow distance	£0.000000	£m/GWhkm	6	= $\frac{5}{(3/365)/4}$ x
Cost per unit peak flow distance	0.000011	p/kWhkm	7	= 6 x 100
No of Offtakes	192	-	8	
Connection Proportion	50%		9	= 1 - 5
Cost per offtake	£0.000742	£m/day	10	= $\frac{9}{(1/365)/8}$ x
Cost per offtake	74,231.02	p/day	11	= 10 x 10 <sup>8</sup>
System Load Factor	40%	-	12	
Cost per unit distance	0.000029	p/kWhkm	13	= 6/12
Cost per unit SOQ-1	185,578	p/kWh(SOQ)/kWh	14	= 11/12

\* Obtained from 2008/9 Transportation Model

## Appendix C.1 Indicative rates under option one

### 'Short-haul' & Standard Commodity Rates - prevailing charges

**Prevailing Methodology**  
(includes a connection element and 10yr depreciation)



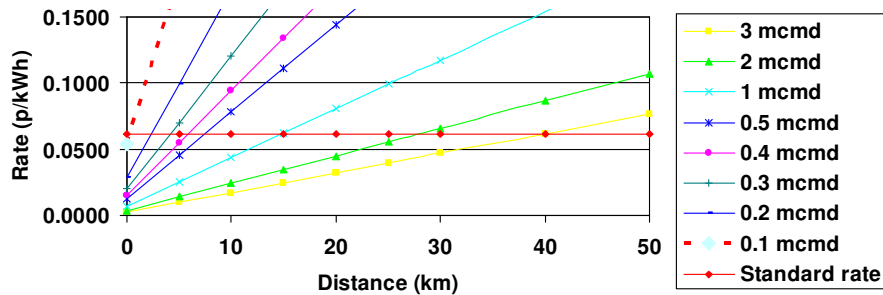
Standard Rate of 0.0611 p/kWh (as at 1/10/09) calculated as follows:

TO Entry Commodity Charge	0.0249 p/kWh
SO Entry Commodity Charge	0.0181 p/kWh
SO Exit Commodity Charge	0.0181 p/kWh
<b>Total Charge</b>	<b>0.0611 p/kWh</b>



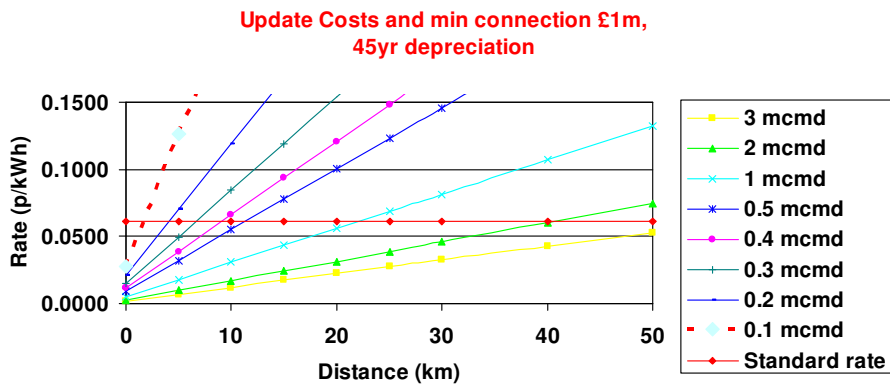
### Standard & 'Short-haul' Commodity Rates by Load Size Option 1a

**Update costs and min connection £1m, 10yr depreciation**





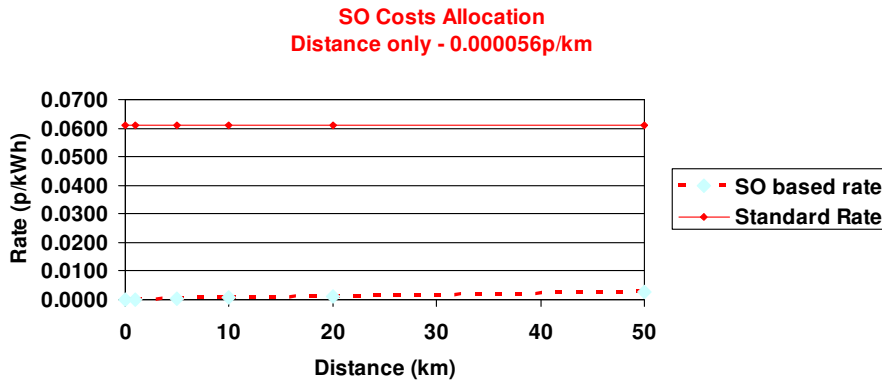
## Standard & 'Short-haul' Commodity Rates by Load Size Option 1b



3

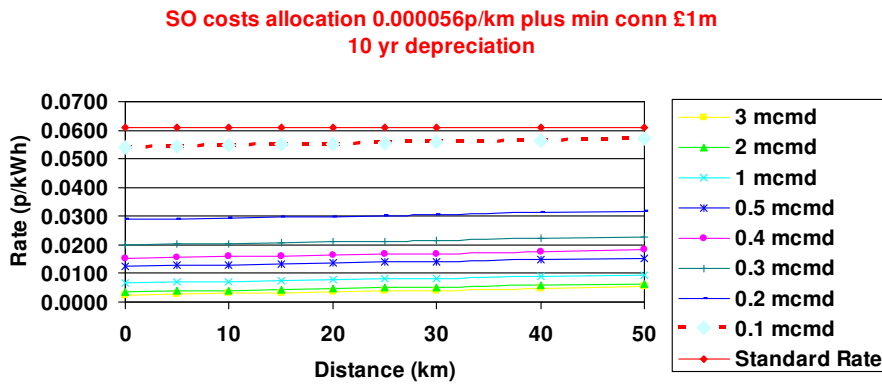
## Appendix C.2 Indicative rates under option two

### Standard & 'Short-haul' Commodity Rates by Load Size Option 2a



4

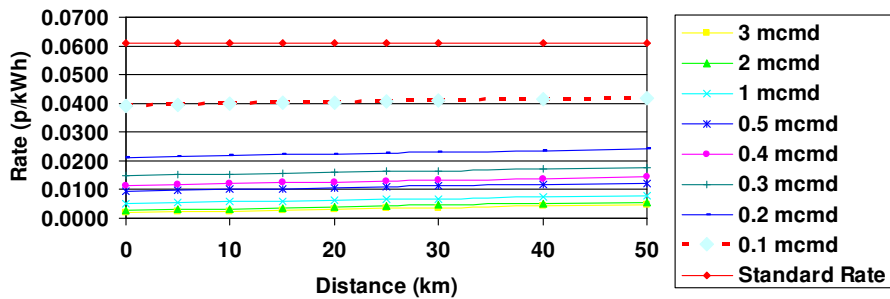
### Standard & 'Short-haul' Commodity Rates by Load Size Option 2b



5

### Standard & 'Short-haul' Commodity Rates by Load Size Option 2c – SO cost apportionment plus min charge

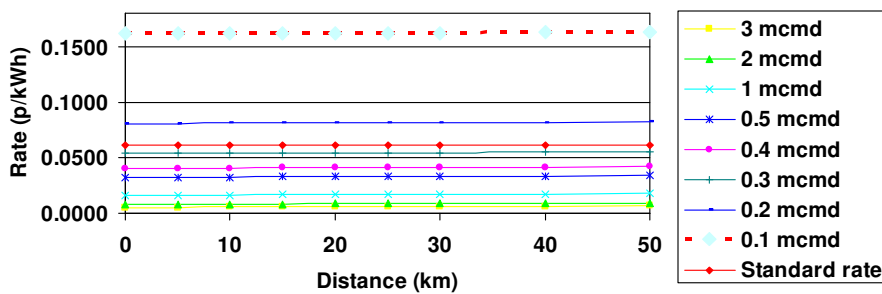
SO costs allocation 0.000056p/km plus min conn £1m  
45 yr depreciation



6

### Standard & 'Short-haul' Commodity Rates by Load Size Option 2d

SO Cost allocation  
Costs allocated to Connections & Distance



7

## Appendix D Impact of Options on Standard Commodity Charge

The following table shows the impact of each of the charge setting options on the standard Commodity charge. The level of target revenue for the standard commodity charge is calculated from the total SO allowed revenue less other SO charge revenue including short-haul. As a consequence, the level of the standard commodity charge increases as the short-haul charge revenue decreases and vice versa. The figures have been calculated based on the sites currently on short-haul and makes no assumptions regarding whether any of the options would lead to more or fewer sites opting for short-haul.

Option	Short-haul Revenue (£M)	Standard Commodity impact (p/kWh)
Prevailing Charge	£6.60	-
Option 1a	£9.56	-0.0002
Option 1b	£6.70	0.0000
Option 2a	£0.54	0.0003
Option 2b	£2.07	0.0002
Option 2c	£1.73	0.0003
Option 2d	£3.62	0.0002

## Appendix E – Location of Offtakes Relative to Compressor Stations

<b>ASEP</b>	<b>Next Compressor</b>	<b>Distance km</b>	<b>Offtakes between terminal and next downstream compressor</b>	<b>Offtakes NOT between terminal and next downstream compressor</b>
Bacton	Diss	62.4	2	0
Bacton	Kings Lynn	63.5		
Bacton	Cambridge	123.2		
Barrow	Carnforth	29.1	2	2
Burton Point	Alrewas	102	7	2
Easington	Hatton	49.3	8	2
Isle of Grain	Cambridge	78.9	6	3
Milford Haven	Felindre	75.2	1	5
St Fergus	Aberdeen	58.7	1	2
Teesside	Bishop Auckland	24.8	6	0
Theddlethorpe	Hatton	33.2	0	6
<b>Total</b>			<b>33</b>	<b>22</b>

Notes: the distance is the straight line distance from the terminal to the compressor station. Each offtake has been considered in relation to the nearest terminal.

## Appendix F: Licence Relevant Objectives and EU Gas Regulations

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.

Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should:

- 1) Reflect the costs incurred by the licensee in its transportation business;
- 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.

Where prices are established by means of auctions, either

- 4) No reserve price is applied or
- 5) Reserve prices are calculated at a level that promotes efficiency, avoids undue preference in the supply of transportation services and promotes competition between gas shippers and between gas suppliers.

National Grid is obliged to keep the NTS Charging Methodology under review at all times for the purposes of ensuring that it achieves the relevant objectives.

National Grid also has an obligation to use all reasonable endeavours to ensure that obligated Entry Capacity is offered for sale in at least one clearing auction providing that this does not contravene wider Licence obligations including methodology objective (5) listed above.

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.