Joint Office of Gas Transporters

UNC Modification	At what stage is this document in the process?
# UNC 0636B: ## Updating the parameters for the NTS Optional Commodity Charge	01 Modification 02 Workgroup Report 03 Draft Modification Report 04 Final Modification Report

Purpose of Modification:

To update the parameters used in the derivation of the Optional Commodity Charge tariff with RPI.

	The Proposer recommends that this modification should be: • considered a material change and not subject to self-governance • assessed by a Workgroup. This modification will be presented by the Proposer to the Panel on 15 February 2018. The Panel will consider the Proposer's recommendation and determine the appropriate route.
	High Impact: Users opting for the Optional Commodity Charge will no longer be able to benefit as much as the existing formula from the OCC following implementation. Note that it is expected that the tariff would still be available as an option to avoid inefficient bypass of the NTS. The Standard Commodity tariff would be consequentially reduced.
	Medium Impact:
	Low Impact:

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Contents

Timetable

The Proposer recommends the following timetable:

Initial consideration by Workgroup	19 January 2018
Workgroup Report presented to Panel	15 February 2018
Draft Modification Report issued for consultation	[16 February 2018
Consultation Close-out for representations	01 March 2018
Final Modification Report available for Panel	06 March 2018
Modification Panel decision	15 March 2018]

Any questions?

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1 Summary

What

The NTS Optional Commodity Charge (OCC) was introduced in 1998 and the tariff has not been updated for nearly 20 years. Therefore, it is proposed that the parameters within the NTS OCC formula need to be updated to be more reflective of its original intention to avoid inefficient bypass of the NTS.

Why

The OCC was introduced in 1998 with the express intention of providing a mitigating option for shippers seeking short distance transportation, and was justified on the basis of avoiding inefficient bypass of the NTS. Given that the tariff has not been updated in nearly 20 years whilst standard commodity charges have risen significantly over the same period, the OCC has become a very attractive option even for exit points that are increasingly distant from an associated entry point.

National Grid NTS have advised the NTSCMF1 that Users opting to avail of the OCC during the current Gas Year (17/18) will pay an estimated £48.5 million in optional commodity charges but, in doing so, will avoid paying up to £195 million in standard commodity charges.

How

It is proposed to give effect to this modification by way of a single change to the UNC TPD, Section Y paragraph 3.5 "NTS Optional Commodity Rate" and the insertion of a methodology into the same Section Y.

Updating of the cost components of the NTS Optional Commodity Charge Rate formula by indexing to RPI.

It is proposed that the changes arising from this code modification be implemented by [01 April 2018.]

2 Governance

Justification for Authority Direction

National Grid NTS have advised the NTSCMF[2] that Users opting to avail of the OCC during the current Gas Year (17/18) will pay an estimated £48.5 million in optional commodity charges but, in doing so, will avoid paying nearly £198 million in standard commodity charges. It is proposed that the changes arising from this code modification be implemented once sufficiently developed and it will increase the OCC contribution to £61m.

This Modification should be considered likely to have a material on competition in, or commercial activities related to, the shipping, transportation or supply of gas. It therefore should be sent to the Authority for decision.

[1] NTSCMF 26 September 2017

[2] NTSCMF 26 September 2017

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Requested Next Steps

This modification should:

- be considered a material change and not subject to self-governance; and
- be assessed by a Workgroup.

3 Why Change?

The parameters within the NTS Optional Commodity Charge (OCC) formula need to be updated to better reflect the original intention of the Charge to avoid inefficient bypass of the NTS.

The OCC is available as an alternative (instead of the Standard Commodity Charges) to Users nominating a "point to point" path for transportation from an NTS entry point to an NTS offtake point. If a User elects for the OCC, all NTS Entry and Exit (SO & TO) Commodity Charges are avoided. The NTS OCC is derived from the estimated cost of laying and operating a dedicated pipeline of NTS specification. This is defined in UNC TPD Section Y. The OCC was introduced in 1998 with the express intention of providing a mitigating option for shippers seeking short distance transportation, and was justified on the basis of avoiding inefficient bypass of the NTS. Given that the tariff has not been updated in nearly 20 years it is appropriate to adjust the cost components to ensure compliance with the Relevant Charging Methodology Objectives.

National Grid NTS have advised the NTSCMF[3] that Users opting to avail of the OCC during the current Gas Year (17/18) will pay an estimated £48.5 million in optional commodity charges but, in doing so, will avoid paying nearly £198 million in standard commodity charges.

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1. The proposal requires a change to the OCC charging formula contained within Section Y of the UNC).
2. If the change is not made there will be up to £220 million in charges transferred to Users unable to benefit from the OCC (largely within the Distribution Networks) in the interim period between April 2018 and October 2019 before Modification 0621 could be expected to address the issue.

The proposer is aware that National Grid is planning to address this transfer of costs from October 2019 as part of Modification 0621 (For further information please see https://www.gasgovernance.co.uk/0621). This proposal is intended to be an interim solution to remedy the ongoing transfer of costs during the period up to the adoption of the enduring solution, prescribed in Mod 621, or its alternates.

4 Code Specific Matters

Reference Documents

The Statement of Gas Transmission Transportation Charges
https://www.gasgovernance.co.uk/sites/default/files/ggf/book/2017-09/Transportation%20statement%20October%2017%20.pdf

[3] NTSCMF 26 September 2017

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Knowledge/Skills

Understanding of the NTS charging methodology in respect of the Optional Commodity Charge.

5 Solution

The proposal requires a change to the charging formula contained within Section Y (3.5 NTS Optional Commodity Rate).

The parameters of the NTS Optional Commodity charge formula are derived from flow rates, pipeline distances and underlying costs. The **current** formula is as follows:

p/kWh = 1203 x M ^-0.834 x D + 363 x M ^-0.654

Where:

D is the direct distance of the site or non-National Grid NTS Pipeline to the elected Entry Terminal

M is the Maximum NTS Exit Point Offtake Rate (MNEPOR) at the site, converted into kWh/day

^ means 'to the power of..'

The method of determining the NTS Optional Charge for the relevant years will be to follow the following formula structure and indexation approach to provide an updated formula to be applicable in the relevant year. The formula is designed to take into account the estimated costs of laying and operating a dedicated pipeline of an appropriate specification and also takes into account a range of flow rates and pipeline distances.

The **proposed change** to the formula is as follows:

p/kWh = w*(M^x)*D + y*(M^z)

where:

w means a value derived from the estimated costs (of laying and operating a dedicated pipeline of NTS specification) between the relevant points and the latest indicative value for the 12 month period commencing 01 October 2018 is equal to 2077;

M means the Maximum NTS Exit Point Offtake Rate (MNEPOR) converted into kWh/day at the site as specified in the relevant Network Exit Agreement;

x means a value derived from the estimated costs (of laying and operating a dedicated pipeline of NTS specification) between the relevant points and the latest indicative value for the 12 month period commencing 01 October 2018 is equal to -0.835;

D means the direct ('as the crow flies') distance from the site or non-National Grid NTS pipeline to the Specified Entry Point in km;

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Deleted: ***2086.59*** x M ^-**0.835** x D + ***610.70*** x M ^-**0.654**

Deleted: Where: ¶
D is the direct distance of the site or non-National Grid NTS Pipeline to the elected Entry Terminal.¶
M is the Maximum NTS Exit Point Offtake Rate (MNEPOR) at the site, converted into kWh/day.¶
^ means 'to the power of'.¶
Indexation approach: ¶
It is proposed that the estimated costs (of laying and operating a dedicated pipeline of NTS specification) which underpin the calculation that derives the four numeric values in bold above (which are based on costs for the gas Year commencing 1st October 2017) are subject to indexation to the Retail Prices Index for the relevant charge period consistent with RIIO-T1 Licence RPI calculations. It is proposed that the updated formula for the relevant year (within the period for which the NTS Optional charge is applicable as an alternative to the flow based Transmission Services Revenue Recovery charges i.e. up to 30 September 2021) are specified in the Transportation Statement

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y means a value derived from the estimated costs (of laying and operating a dedicated pipeline of NTS specification) between the relevant points and the latest indicative value for the 12 month period commencing 01 October 2018 is equal to 608;

z means a value derived from the estimated costs (of laying and operating a dedicated pipeline of NTS specification) between the relevant points and the latest indicative value for the 12 month period commencing 01 October 2018 is equal to -0.654;

and ^ means to the power of Indexation.

For each year of application, the arithmetic average monthly RPI value for the previous formula year will be used to index the cost base used to derive these values. The values specified are based on RPI data available to date in the current formula year (April 2017 to January 2018).

Indexation Approach

It is proposed that the estimated costs (of laying and operating a dedicated pipeline of NTS specification) which underpin the calculation that derives the values w, x, y and z above are subject to indexation to the Retail Prices Index (RPI) for the relevant charge period consistent with RIIO-T1 Licence RPI calculations. The cost base will be updated using publicly published RPI figures from the previous completed formula year (i.e. October 2019 will be updated using April 2018 to March 2019 data) and the formula for determine the RPI will be as follows:

$RPI_t = RPI_{t-1} / RPIt_{1998/99}$

RPI_t means the arithmetic average of the monthly Retail Price Index published or determined with respect to each of the twelve months from 1 April to 31 March in formula Year t.

It is proposed that the NTS Optional Charge rate (in place for an individual Supply Point Registration) will be subject to change annually (as a consequence of the indexation described above).

The methodology that supports the derivation of the above formula and its parameters will be included in a separate Methodology Statement.

Note: it is intended that the Methodology Statement will be presented to Panel at the same time as completion of the Draft Workgroup Report. This will provide transparency as required under EU regulation. Creation of a Methodology Statement is seen as a more pragmatic way of achieving transparency than insertion into the UNC given the significant legal interpretation required with the latter approach.

6 Impacts & Other Considerations

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

There is no impact on an SCR. There is no impact on the current charging review that is due for implementation in 2019 for compliance with the EU Tariff Code.

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Deleted: The price function is made up of two elements, both related to load size. The first element is based on those costs which do not vary with distance (e.g. metering, telemetry, terminal connection, volumetric control). The second element is related to the geographical distance from the local terminal to the site.¶
There are 11 steps followed in producing the equation for calculating the current NTS Optional Commodity Charge formula. The steps below are either establishing necessary source information or calculations and the descriptions below highlight what is taking place. The steps outlined below relate to the corresponding numbered sections in the applicable tabs within this spreadsheet.[the text].is text.¶
We have aThere are a number of estimated embedded costs in the model. In aggregate these costs are meant to cover maintenance and they are estimated based on the pipe size and distance.¶
The NTS GCD11 Option Two worksheet follows the same 11 steps outlined in the Original Formula worksheet. However a few changes have been made to accommodate the update on the cost inputs. As outlined in NTS GCD11 the flow rates range has been increased from 0.1 - 15mcmd to 0.1 - 60mcmd. We have also included three extra pipe sizes and we have calculated the ratio between the distance and non-distance cost element for the added pipe sizes. We specified any indexation that was done in the various steps and specified the indexation method used e.g. Steel index or RPI.
N.B. For the extra pipe sizes we have not included the actual values for commercial sensitivity reasons and included random values for illustrative purposes for the benefit of showing how the formula is updated.¶
To calculate the Formula¶
¶
1.Pipeline Diameters for a range of distances and peak-day flowrates¶
This table shows the pipe diameters in mm required to meet a range of typical peak day flowrates for a range of pipeline distances. ¶
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2. Pipelaying Unit Costs¶
This table contains the unit costs per km based on historical planning and design specification for the different pipe sizes based on values used to produce the NTS Optional Commodity Charge formula in 1998. These costs are updated for RPI.¶
3) Maintenance cost¶
This table contains a total value of some of the non-distance related costs for each of the peak day flowrates. These costs are updated for RPI.¶
4) Total Capital Costs for a range of distances and peak-day flowrates¶
This table calculates the total capital cost for a range of distances and peak day flowrates. This is done by multiplying the pipe laying unit cost from step 2 by the distance and adding the non-distance related cost from step 3. Additional costs are included for pipeline distances at 25km and over (£100k) with an extra increment (£100k) at 50km as an estimate of ... [1]

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Consumer Impacts

If implemented, the modification will reduce the overall level of Transportation Owner (TO) and System Operator (SO) commodity charges to be applied to non-OCC Users.

Cross Code Impacts

There is no impact expected.

EU Code Impacts

None – this change is for the interim period until the charging review is implemented in 2019 for compliance with the EU Tariff Network Code. The proposer anticipates that the wider charging review will include a more comprehensive update of the OCC.

Central Systems Impacts

Changes to systems will be assessed as part of the Modification development.

7 Relevant Objectives

Impact of the modification on the Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None
c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	None
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards… are satisfied as respects the availability of gas to their domestic customers.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

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Impact of the modification on the Relevant Charging Methodology Objectives:	
Relevant Objective	Identified impact
a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;	None
aa) That, in so far as prices in respect of transportation arrangements are established by auction, either: (i) no reserve price is applied, or (ii) that reserve price is set at a level - (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and (II) best calculated to promote competition between gas suppliers and between gas shippers;	None
b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;	Positive
c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and	Positive
d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets).	None
e) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	Positive

An OCC rate that better reflects the underlying costs of appropriately sized alternative by-pass pipelines will better facilitate effective competition between shippers and suppliers – relevant objective (c).

Increasing take-up of the OCC over longer distances has led to a need to review the parameters within the OCC rate calculation – relevant objective (b). Similarly, the rate needs to avoid inefficient bypass of the NTS, failure to do so will increase costs to customers as allowed revenue will be recovered on a smaller charging base.

e) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

Ensuring that a documented Methodology Statement is available for the UNC Panel before the modifications go to consultation will ensure that 621B better meets the transparency requirements of EU Regulation 715/2009 Article 13, than the other alternative modification proposals.

"Tariffs, or the methodologies used to calculate them, applied by the transmission system operators and approved by the regulatory authorities pursuant to Article 41(6) of Directive 2009/73/EC, as well as tariffs published pursuant to Article 32(1) of that Directive, shall be transparent…"

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8 Implementation

- The usual date for charging changes is October or April in any year (but changes can be implemented at other dates subject to Ofgem approval). Ideally the proposer would like to implement the modification proposal as soon as possible.
- If decision to implement is received after 31 July 2018, implementation 2 calendar months following the decision to implement.

Should the proposal proceed, National Grid will be asked to give (on an "all reasonable endeavours" basis) 150 days' indicative notice that the OCC rate may change at exit points availing of the OCC and if possible an indicative rate as per Standard Special Condition A4 of the National Grid NTS Gas Transporter Licence. Similarly, National Grid will be asked to give 2 months' notice of the actual charges should the Modification be approved.

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9 Legal Text

Text Commentary

None

Text

(To be supplied by Transporter)

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Authority Direction should apply; and
- Refer this proposal to a Workgroup for assessment.

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The price function is made up of two elements, both related to load size. The first element is based on those costs which do not vary with distance (e.g. metering, telemetry, terminal connection, volumetric control). The second element is related to the geographical distance from the local terminal to the site.

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5) 10 year discount factor

This table shows how the ten year discount factor used in this model is calculated and this discount factor is used to calculate the annuitised cost.

6) Annuitised Costs

This table calculates the total project cost per annum made up of annuitised capital costs and ongoing (revenue) costs over a ten year project life using the costs from step 4 and the 10 year discount factor from step 5.

7) Ongoing Costs

This table calculates the ongoing costs of the hypothetical pipeline based on a number of assumptions and estimates. The total for including these costs are through a combination of adjustments that in total provide the assumption for the annual maintenance and operation costs associated to the pipeline. These costs increase in steps based on flow rates and distances.
The extra costs included in this table are:
a) 1% of the pipeline annuitised costs is added to all the distance and flow rate combinations
b) 2.5% of the non-distance annuitised cost is added to all the distance and flow rate combinations
c) £10,000 Per km is added to all those with a distance greater than 0km
d) £35,000 is added to all those with a distance greater than 0km
e) £40,000 is added to all those with a flow rate between 1 and 5 mcmd, inclusive
f) £80,000 is added to all those with a flow rate between 7 and 15 mcmd, inclusive

These costs are updated for RPI.

8) Supply point capacities

This table calculates the supply point capacities using an average load factor of 75% of the SOQ. This is used to calculate the Annual Quantity AQ in GWh that will be used to calculate the cost per kWh.

9) Cost per kWh

This table divides the annuitised ongoing costs in step 7 by the annual quantities corresponding to the supply point capacities using an average load factor of 75% to generate a matrix of unit cost in table 8 (supply point capacities), expressed in p/kWh for a range of supply point capacities and distances.

10) Function Calculation

This section calculates the distance and non-distance related parts of the function and this is done by means of regression analysis on the data. The functions are expressed as power relationships. The zero distance p/kWh is from step 9. The distance related average p/kWh is calculated by subtracting the 0km cost per kWh value from the 50 km cost per kWh in step 9 and dividing by 50. These are used to create linear equations that represent the non-distance and distance related elements of the NTS Optional Commodity charge function.

11) Shorthaul formula

This section contains the NTS Optional Commodity Charge formula that is produced from the previous steps. The formula is made up of the gradient and intercepts values from the two linear equations (non-distance and distance related). The first part of the equation covers the distance related element of the equation and the second part is the non-distance related part of the equation.-]