












UNC Modification	At what stage is this document in the process?
<h1>UNC 0636:</h1> <h2>Updating the parameters for the NTS Optional Commodity Charge</h2>	<div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div>
<p>Purpose of Modification:</p> <p>To update the parameters used in the derivation of the Optional Commodity Charge tariff in order to reduce the current level of effective cross subsidy by gas customers who cannot avail of the Optional Commodity Charge.</p>	
	<p>The Workgroup recommends that this modification should be:</p> <ul style="list-style-type: none"> considered a material change and not subject to self-governance be further assessed by a Workgroup <p>The Panel will consider this Workgroup Report on 18 January 2018. The Panel will consider the recommendations and determine the appropriate next steps.</p>
	<p>High Impact:</p> <p>Users opting for the Optional Commodity Charge could expect an increase in the tariff. Note that it is expected that the tariff would still be available as an option to avoid inefficient bypass of the NTS.</p> <p>The Standard Commodity tariff would be consequentially reduced.</p>
	<p>Medium Impact:</p>
	<p>Low Impact:</p>

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Timetable			telephone
			Transporter: National Grid NTS
			Systems Provider: Xoserve
Modification timetable:			
Initial consideration by Workgroup	06 November 2017		commercial.enquiries@xoserve.com
Workgroup Report presented to Panel	18 January 2018		
Draft Modification Report issued for consultation	19 January 2018		
Consultation Close-out for representations	08 February 2018		Other: Debra Hawkin
Final Modification Report available for Panel	12 February 2018		
Modification Panel decision	15 February 2018		debra@tpasolutions.co.uk
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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 the current costs and pipeline utilisation.

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 nearly £195 million in standard commodity charges. This represents a potential cross-subsidy to those OCC Users of about £146 million per annum at the expense of those sites which are unable to benefit from the option of the OCC.

How

It is therefore proposed to give effect to this modification by way of two changes to the UNC TPD, Section Y paragraph 3.5 “NTS Optional Commodity Rate”.

1. Replace the current formula with that proposed in 2015 as Option 2 by National Grid in its discussion document NTS GCD11².
2. Adjust the assumed capacity of the alternative by-pass pipeline against which the OCC charges are calculated. Specifically replace the MNEPOR in the current formula with the average daily flow at the exit point from the previous Gas Year divided by 75%.

It is proposed that the changes arising from this code modification be implemented by 01 April 2018 thereby saving up to £220³ million in cross subsidies relative to the base case of waiting until October 2019⁴.

¹ NTSCMF 26 September 2017

² <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Gas-transmission/Charging-methodology/Gas-Charging-Discussion-papers/>

³ This value assumes an equal load profile throughout the Gas Year.

⁴ It is anticipated that Modification Proposal 0621 will propose changes to the Optional Commodity tariff for implementation from October 2019 for compliance with the EU Tariff Code.

2 Governance

Justification for Authority Direction

National Grid NTS have advised the NTSCMF⁵ 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 £195 million in standard commodity charges. This represents a potential cross-subsidy to those OCC Users of about £146 million per annum at the expense of those sites which are unable to benefit from the option of the OCC. It is proposed that the changes arising from this code modification be implemented by 1 April 2018 thereby saving up to £220⁶ million in cross subsidies relative to the base case of waiting until October 2019⁷.

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.

Requested Next Steps

This modification should:

- be further assessed by a Workgroup.

3 Why Change?

The parameters within the NTS Optional Commodity Charge (OCC) formula need to be updated to be more reflective of the current costs and pipeline utilisation.

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 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. The parameters on which the OCC tariff is predicated are no longer considered to be appropriate as

1. The formula used to calculate the current Optional Commodity rates uses the costs of building and operating a dedicated pipeline at the time of introduction in 1998⁸ and has not been amended

⁵ NTSCMF 26 September 2017

⁶ This value assumes an equal load profile throughout the Gas Year.

⁷ It is anticipated that Modification 0621 will propose changes to the Optional Commodity tariff for implementation from October 2019 for compliance with the EU Tariff Code.

⁸ Using 1997 construction and operational costs, annuitized over a ten year project life using a 10% project discount rate.

since. The Transco Consultation Report on PC9A (December 1997) provided the opportunity to update the costs although this has, so far, not been effected.⁹ National Grid sought to update the cost inputs in 2015. While Code Modification 0563S facilitated the inclusion of the formula into the UNC TPD, Section Y from the NTS Transportation Statement, the update to the original OCC formula is still outstanding as National Grid decided to wait until there was more clarity on the EU Tariff Code rather than any suggestion that it was inappropriate to update the charging formula.

2. Load factors at exit points are very low in relation to the design capacity assumption embedded within the OCC charge – nowhere near the 75% assumption, meaning that the OCC is too low. National Grid NTS advised at a recent NTSCMF (17 July) that the average load factor of short-hauled gas has declined to about 20% during the 16/17 Gas Year.

National Grid NTS have advised the NTSCMF¹⁰ 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 £195 million in standard commodity charges. This represents a potential cross-subsidy to those OCC Users of about £146 million per annum at the expense of those sites which are unable to benefit from the option of the OCC.

1. Users opting for the OCC during the current Gas Year will pay an estimated £48.5 million in optional commodity charges but, in doing so, will avoid paying nearly £195 million in standard commodity charges. This represents a potential cross-subsidy to those OCC Users of about £146 million per annum at the expense of those sites unable to benefit from the option of the OCC.

2. The proposal requires a change to the charging methodology contained within Section Y of the UNC and Section B3.12.10 (b).

3. If the change is not made there will be up to £220 million in cross subsidies by 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 cross-subsidisation from October 2019 as part of Modification 0621 but is concerned that this will not address the on-going cross-subsidisation in the interim. The proposer doesn't wish to burden National Grid unduly in the administration of an amended OCC and also appreciates the need to develop a fairly simple solution that can be implemented relatively quickly and which will materially address the cross-subsidisation in the period to October 2019. Use of "Option 2" as proposed by National Grid in its discussion document NTS GCD11¹¹.

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Secondly, in the interests of keeping the level of the tariff in line with current pipeline costs, we propose that the function should be reviewed at the same time as the annual review of general transportation charges, and uprated in line with an suitable escalator.

¹⁰ NTSCMF 26 September 2017

¹¹ <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Gas-transmission/Charging-methodology/Gas-Charging-Discussion-papers/>

1. This Modification is seeking to use pipes that are more reflective of those that may be built as alternatives to the NTS and to use more up-to-date costs that would be more cost reflective.
2. This proposal proposes the use of Option 2 as detailed by National Grid in 2015 in its discussion document NTS GCD11. In summary, this option retains the underlying assumptions of the current OCC charge and maintains the same structure in the formula. The update inflates the current portfolio of unit costs using publicly available indices and also adds in those larger pipe sizes for which National Grid received target efficient unit costs. The application of a combination of steel and RPI indices are applied so as to result in a consistent set of cost data. The topic was discussed during NTSCMF meetings leading up to the GCD11 paper and has been further discussed as part of the wider charging review in 2017. Alternative cost data for pipe building has been requested as part of both these processes. The response has been limited potentially because of commercial confidentiality. The data underlying Option 2 therefore represents a pragmatic estimate to facilitate the calculation of an OCC rate that could be applied across all distances and load sizes.
3. The following is an extract from NTS GCD11 listing the steps NG used in the derivation of the original “short-haul” tariff and their review as detailed in NTS GCD11.

The NTS Optional Commodity charge function was produced using the following steps:

- a) Uses a pipeline portfolio that, through using flow rates and distances, allocates a specific pipe size from the portfolio to a certain distance and flow rate combination;
- b) Produce a cost for each distance/flow rate combination by using a fixed element, relating only to the pipe diameter (this can be thought of as the “connection cost” to the NTS) and a distance related (cost per km) element which applies to a range of pipe diameters;
- c) Produce an annual capital cost based on an annuity period of 10 years;
- d) Produce commoditised unit costs (in terms of p/kWh) determined assuming a standard 75% load factor.
- e) Measure the average p/kWh using a comparison between the costs at 0km and 50km.

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%202017%20.pdf>

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 methodology contained within Section Y (3.5 NTS Optional Commodity Rate) and Section B3.12.10(b) of the UNC.

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:

$$p/kWh = 1203 \times M^{-0.834} \times D + 363 \times M^{-0.654}$$

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 proposed formula is as follows:

$$p/kWh = 1247 \times M^{-0.78} \times D + 1422 \times M^{-0.708}$$

Where:

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

M is the aggregate of the allocated daily energy in kWh/day at the exit point from the previous Gas Year divided by the number of days in the previous Gas Year and further divided by 75% except:

- (i) where the site is new and hence there is no flow history, retain the existing formula for M of 24 times the Maximum NTS Exit Point Offtake Rate
- (ii) for an NTS Exit Point in respect of a pipeline interconnector having no physical exit capability, M is the aggregate of the allocated daily energy in kWh/day from the previous Gas Year divided by the number of days in the Gas Year and further divided by 75% to the NTS at the System Entry Point associated with such Connected Delivery Facility.

^ means 'to the power of..'

The update to the parameters would be effective for all sites availing of the OCC from the time of implementation of the Mod and no further updates are envisaged prior to October 2019.

Thereafter, an annual process would update M each April commencing April 2019 for effect from the following October in the event that this Mod is not superseded by code changes necessary for EU TAR compliance.

For the avoidance of doubt:

- (i) At the time of calculation of the charge rates (which will be subject to the 2 months' notice of charges), the average aggregate allocated daily energy will take the latest gas year for which data is available – For example implementation anytime between 1 April and 1 October 18 will use data from the Gas Year October 16 to September 17.
- (ii) $M = (\sum E) / N \times 100 / 75$ where E is the allocated daily energy for each day of the relevant Gas Year at the exit point and N is the number of days in the relevant Gas Year

- (iii) The 75% divisor converts an annual daily load to a notional peak day load which determines an appropriate pipe building cost estimate which is then used to derive the unit rate. The value of 75% is consistent with the assumption embedded in the current OCC formula.
- (iv) A new site ceases to be new if at the annual update it has at least a full Gas Year's allocation history (even though some allocations could be zero)
- (v) M for a seasonal site will have its value calculated in the same way as a non-seasonal site and zero allocation values will be included in the calculation of ΣE .

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. The proposer believes there is no impact on the current charging review that is due for implementation in 2019 for compliance with the EU Tariff Code

Consumer Impacts

Consumer Impact Assessment	
Criteria	Extent of Impact
Which Consumer groups are affected?	<p><i>Please consider each group and delete if not applicable.</i></p> <ul style="list-style-type: none"> Domestic Consumers Small non-domestic Consumers Large non-domestic Consumers Very Large Consumers
What costs or benefits will pass through to them?	<p><i>Please explain what costs will ultimately flow through to each Consumer group. If no costs pass through to Consumers, please explain why. Use the General Market Assumptions approved by Panel to express as 'cost per consumer'.</i></p> <p>Insert text here</p>
When will these costs/benefits impact upon consumers?	<p><i>Unless this is 'immediately on implementation', please explain any deferred impact.</i></p> <p>Insert text here</p>
Are there any other Consumer Impacts?	<p><i>Prompts:</i></p> <p><i>Are there any impacts on switching?</i></p> <p><i>Is the provision of information affected?</i></p> <p><i>Are Product Classes affected?</i></p> <p>Insert text here</p>
General Market Assumptions as at December 2016 (to underpin the Costs analysis)	
Number of Domestic consumers	21 million

Number of non-domestic consumers <73,200 kWh/annum	500,000
Number of consumers between 73,200 and 732,000 kWh/annum	250,000
Number of very large consumers >732,000 kWh/annum	26,000

Cross Code Impacts

There is no impact expected.

Rough Order of Magnitude (ROM) Assessment

The ROM response has been published under change proposals (XRN 4543A) and a summary is as follows:

- Change Costs (implementation): The solution will cost at least £4,000, but probably not more than £7,000 to develop This change will only Impact DSC BCM Service area 7.
- Change Costs (on-going): The on-going costs are likely to be negligible and have not been included.
- Timescales: The development of the change could start early 2018 and is likely to take 10 to 15 business days to deliver.
- Assumptions: The numeric parameters in the formula have never been changed so it is assumed but not yet confirmed that these can be changed through normal price change procedures and the formula work as required thereafter.

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	None

secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	
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
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;	Positive
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.	None

Adjustments to the OCC rate will reduce the Standard Commodity rates (all other things being equal) and improve its cost reflectivity – relevant objective (a).

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) and specifically, help reduce transportation costs to domestic gas customers.

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).

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 a “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. Similarly, National Grid will be asked to give 2 months’ notice of the actual charges should the Modification be approved.

9 Legal Text

Text Commentary

None

Text [proposer suggested text]

Uniform Network Code – Transportation Principal Document Section B

3.12.10 For the purposes of paragraphs 3.12.9 to 3.12.14 (inclusive), the capacity of the Specified Exit Point shall be the Supply Point Capacity, provided:

- (a) in the case of an LDZ Supply Point the capacity shall be determined in accordance with Section G5.4.1, except for a LDZ Shared Supply Point in which case the capacity shall be determined in accordance with Section G1.7.17;
 - (i) for an LDZ CSEP the capacity shall be determined in accordance with paragraph 4.5.2;
- (b) in the case of an NTS Exit Point the capacity shall be equal to ~~24 times the Maximum NTS Exit Point Offtake Rate~~ the aggregate of the allocated daily energy (where this value is positive) in kWh/day at the exit point from the previous Gas Year divided by the number of days in the previous Gas Year and further divided by 75%, except:
 - (i) where an NTS Exit Point has no flow history then equal to 24 times the Maximum NTS Exit Point Offtake Rate
 - (ii) for an NTS Exit Point in respect of a pipeline interconnector having no physical exit capability which is both a Connected Offtake System and a Connected Delivery Facility, the capacity shall be equal to ~~24 times the amount (where positive) determined as the instantaneous rate (in kWh/Hour) which the Transporter determines to be the maximum instantaneous rate at which it is feasible to deliver gas~~ the aggregate of the allocated daily energy in kWh/day from the previous Gas Year divided by the number of days in the previous Gas Year and further divided by 75% to the NTS at the System Entry Point associated with such Connected Delivery Facility.

Uniform Network Code – Transportation Principal Document Section Y (3.5 NTS Optional Commodity Rate)

The NTS Optional Commodity Rate (in pence per kWh) is site specific and is calculated by the following equation:

$$\frac{1203 - 1247}{1000} \times [(M)^{-0.834 - 0.78}] \times D + \frac{363 - 1422}{1000} (M)^{-0.654 - 0.708}$$

Where:

D = the direct distance from the site or non-National Grid NTS pipeline to the Specified Entry Point in km;

M = ~~Maximum NTS Exit Point Offtake Rate (MNEPOR) converted into kWh/day at the site~~ the aggregate of the allocated daily energy in kWh/day at the NTS Exit Point from the previous Gas Year divided by the number of days in the previous Gas Year and further divided by 75% except:

- (i) where the NTS Exit Point has no flow history, M = 24 times the Maximum NTS Exit Point Offtake Rate
- (ii) for an NTS Exit Point in respect of a pipeline interconnector having no physical exit capability which is both a Connected Offtake System and a Connected Delivery Facility, then M shall be equal to the aggregate of the allocated daily energy in kWh/day from the previous Gas Year divided by the number of days in the previous Gas Year and further divided by 75% to the NTS at the System Entry Point associated with such Connected Delivery Facility; and

^ = to the power of

10 Recommendations

Workgroup's Recommendation to Panel

The Workgroup invites the Panel to:

- Agree that this modification should be returned to workgroup for further assessment.

The workgroup concluded that an additional 2 months assessment is required to finalise the Workgroup Report.