

UNC Final Modification Report	At what stage is this document in the process?
<p>UNC 0636 0636A 0636B 0636C 0636D: Updating the parameters for the NTS Optional Commodity Charge</p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 10px;"> 01 Modification </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 10px;"> 02 Workgroup Report </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 10px;"> 03 Draft Modification Report </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 10px;"> 04 Final Modification Report </div> </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>To update the parameters used in the derivation of the Optional Commodity Charge tariff in order to limit the distance against which Users may apply the Optional Commodity Charge.</p> <p>To update the parameters used in the derivation of the Optional Commodity Charge tariff with RPI.</p> <p>0636C & 0636D: To update the parameters used in the derivation of the Optional Commodity Charge tariff but with the provision for an exemption for interconnector points from the updated parameters used in the derivation of the OCC until an enduring solution recognising the European Tariff Network Code requirements have been implemented.</p>	
	<p>The Panel did not recommend implementation of Modification 0636</p> <p>The Panel did not recommend implementation of Modification 0636A</p> <p>The Panel did not recommend implementation of Modification 0636B</p> <p>The Panel did not recommend implementation of Modification 0636C</p> <p>The Panel did not recommend implementation of Modification 0636D</p>
	<p>High Impact:</p> <p>Users opting for the Optional Commodity Charge could expect an increase in the tariff.</p> <p>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.</p> <p>0636C & 0636D: Users opting for the Optional Commodity Charge could expect an increase in the tariff but these changes would not apply to interconnector points until an enduring solution is implemented that recognises the European Tariff Network Code requirements.</p> <p>Note that it is expected that the tariff would still be available as an option to avoid inefficient bypass of the NTS.</p> <p>Users opting for the Optional Commodity Charge for longer distances will no longer be able to benefit from the OCC following implementation.</p> <p>The Standard Commodity tariff would be consequentially reduced under all proposals.</p>

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Timetable			
Modification timetable:			
Initial consideration by Workgroup	06 November 2017		
Workgroup Report presented to Panel	23 May 2018 (extraordinary meeting)		
Draft Modification Report issued for consultation	23 May 2018		
Consultation Close-out for representations	14 June 2018		
Final Modification Report available for Panel	18 June 2018		
Modification Panel decision	21 June 2018 (<i>short notice</i>)		

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1 Summary

NOTE: please note that the information contained in sections 1 to 4 of this report is a consolidation of the latest versions of the 0636 Modifications (0636 0636A 0636B 0636C 0636D) and aims to show the main differences between the proposals. Colour coding has been used to do this and has also been used in other sections of the report (where appropriate). Due to the workgroup development timescales, some of the dates and financial information may now have been superseded and/or the baseline may have changed.

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.

UNC 0636C would update the OCC tariff formula as proposed in Modification 0636 but it would exempt all Interconnector Points (Entry and Exit) (“IPs”) from these changes on the following grounds:

- Requires an enduring solution that recognises the European Tariff Network Code requirements that would allow adequate consideration by all relevant parties, avoids short-term disruption, is more rational and was foreseen previously under GCD11².
- Such a process is expected to be delivered under Modification 0621.
- IPs, would be exempted from the proposed changes to the parameters used in the derivation of the OCC tariff until this solution is implemented and this approach would mitigate any potential impacts in neighbouring markets, including security of supply.

UNC0636D would update the OCC tariff formula to ensure that it remains fit for purpose in today’s cost environment but it would exempt all Interconnection exit points (“IPs”) from these changes on the following grounds:

- IPs require an enduring solution that recognises the European Tariff Network Code requirements, has been given due consideration by all relevant parties, and avoids short-term disruption. This is consistent with the approach set out previously under GCD11³, and more recently in Modification Proposal 621.
- Such a process is expected to be delivered under Modification 0621.
- IPs would be exempted from the proposed changes to the parameters used in the derivation of the OCC tariff until this solution is implemented and this approach would mitigate any potential impacts in neighbouring markets, including security of supply.

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 NTSCMF 26 September 2017

² <https://www.nationalgrid.com/uk/gas/charging-and-methodologies>

³ <https://www.nationalgrid.com/uk/gas/charging-and-methodologies>

1. Replace the current formula with that proposed in 2015 as Option 2 by National Grid in its discussion document NTS GCD11⁴.
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 £220⁵ million in cross subsidies relative to the base case of waiting until October 2019⁶.

UNC 0636A proposes 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”.

Introduction of a distance cap, which will be applied in the application of the term “D” in the NTS Optional Commodity Charge Rate formula. Where the distance from the relevant offtake and the specified entry point exceeds this cap, the Optional Commodity Rate cannot be applied. It is proposed that the distance cap is set at 115km.

It is proposed that the changes arising from this code modification be implemented on 01 October 2018.

UNC 0636B proposes 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 (if possible).

UNC 0636C proposes that all Interconnector Points to be exempt from these changes until an enduring solution recognising the European Tariff Network Code requirements is implemented as anticipated under Modification Proposal 0621.

UNC 0636D proposes to give effect to this modification by way of changing UNC TPD, Section Y paragraph 3.5 “NTS Optional Commodity Rate”.

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 October 2018.

All Interconnection Exit Points to be exempt from these changes until an enduring solution, recognising the European Tariff Network Code requirements, is implemented as anticipated under Modification Proposal 0621 or any of its alternatives.

⁴ <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Gas-transmission/Charging-methodology/Gas-Charging-Discussion-papers/>

⁵ This value assumes an equal load profile throughout the Gas Year.

⁶ 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 NTSCMF⁷ 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 2018⁸ thereby saving up to £220⁹ million in cross subsidies relative to the base case of waiting until October 2019¹⁰.

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

Requested Next Steps

This modification should:

- be considered a material change and not subject to self-governance; and
- proceed to Consultation

Workgroup participants agreed that the report was suitable for consultation and direction by the Authority.

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.

UNC 0636B - 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.

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

⁷ NTSCMF 26 September 2017

⁸ Due to the workgroup development timescales implementation for April 2018 is no longer possible and the cost saving figures may no longer be relevant

⁹ This value assumes an equal load profile throughout the Gas Year.

¹⁰ 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.

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 1998¹¹ and has not been amended since. The Transco Consultation Report on PC9A (December 1997) provided the opportunity to update the costs although this has, so far, not been affected.¹² 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 NTSCMF¹³ 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.

It was noted 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.

¹¹ Using 1997 construction and operational costs, annuitized over a ten year project life using a 10% project discount rate.

¹²

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 a suitable escalator.

¹³ NTSCMF 26 September 2017

A view was noted that there is no desire 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 GCD11¹⁴.

1. UNC 0636 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. UNC 0636 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.

UNC 0636A

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 £195 million in charges transferred to Users unable to benefit from the OCC (largely within the Distribution Networks) in the period between October 2018 and October 2019.

¹⁴ <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Gas-transmission/Charging-methodology/Gas-Charging-Discussion-papers/>

It was noted that National Grid is planning to address this transfer of costs from October 2019 as part of Modification 0621. It is expected that this proposal will be replaced by the OCC arrangements set out on Modification 0621 or any of its alternatives. The inclusion of a distance cap in the OCC formula will remove any routes which exceed this distance from operating under the OCC.

The distance of 115 km has been selected on the basis of the analysis provided by National Grid to NTS Charging Methodology Forum on 6 May 2015. It reported that if the top 25% of OCC users (by distance) were not on OCC, and on a recalculated normal commodity rate, the revenue from that group would increase from £14m to £71m and revenue from shippers not on OCC would decrease from £624m to £569m. Since this meeting National Grid has informed the proposer that the average distance (in terms of route) of the top 25% (by distance) of OCC users is 115 km (based on April 2014 flows).

UNC 0636C

However, all Interconnector Points (entry and exit) should be exempted from the changes to the derivation of the OCC on the following grounds:

- GCD11 foresaw that methodology change to the charging system in order to comply with the EU Regulation TAR would impact the OCC. It concluded that a review and any change to the OCC should take place at a later date with the intention to produce an enduring, compliant solution. Such a process is taking place under Modification UNC 0621 with the recommended solution being subject to a full review by ACER, neighbouring NRAs and other interested parties via consultation (subject to Brexit transitional arrangements being agreed), as prescribed under TAR.¹⁵
- While TAR compliance is not required until October 2019, the Regulation has been in place since April 2017 and most of the gas markets have already taken steps to adjust charging methodologies in line with TAR. As the TAR content and required process is published and known, it would be prudent to take it into account when making any changes to the charging system in order to avoid unnecessary disruption and inefficiency (i.e. due to an interim change, followed by a transition phase to the enduring solution).

This approach to minimise duplication of work was recognised by Ofgem in its consultation¹⁶ on proposals to implement aspects of the Regulation (EU) 2017/460, the European Network Code on harmonised transmission tariff structures for gas (TAR NC) which closed on 6 November 2017 in the consultation, Ofgem proposed to align the stakeholder consultations required for UNC0621 and TAR NC by using a single consultation document that satisfies the requirements of both. Ofgem's proposal is

"...to facilitate alignment of the consultation processes, we propose that the UNC0621 industry consultation, which is required under UNC modification rules, and the extended final article 26 consultation, are carried out using a single consultation document. We propose that this document shall be the UNC0621 draft modification report ("DMR"), including any alternative modification proposals that may arise."

Ofgem published its Decision on 8th March 2018¹⁷ in which they directed National Grid Gas plc (NGG) to undertake specific tasks which arise under TAR NC

¹⁵ Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, Art. 26 - 28.

¹⁶ <https://www.ofgem.gov.uk/publications-and-updates/consultation-proposals-implement-aspects-regulation-eu-2017460-european-network-code-harmonised-transmission-tariff-structures-gas-tar-nc>

¹⁷ Decision to direct National Grid Gas plc (NGG) to undertake specific tasks to implement aspects of Regulation (EU) 2017/460, the European Network Code on harmonised transmission tariff structures for gas (TAR NC)

By Ofgem extending the scope of UNC 0621 to include the matters required under TAR NC, the impact of changes to the OCC tariff on all IPs would be addressed under UNC 0621 and therefore IPs should be exempt from any changes to the OCC tariff until a decision is made and implemented under UNC 0621.

- Modification UNC 0621 discussions include transitional arrangements to avoid step change impacts on Shippers and consumers. No transitional arrangements for interconnector points exist under the proposed UNC 0636 Modification or any of the alternatives which conflicts with Ofgem's Decision to direct NGG to undertake specific tasks which arise under TAR NC. In consideration specifically of the Moffat exit point, which is critical for security of supply to the island of Ireland, an isolated gas system, considerable material impact will be caused by the changes suggested under this proposal. Approval of Modification UNC 0621 is subject to neighbouring NRA involvement under TAR NC as part of the enduring methodology change. The short-term disruptive impact of UNC 0636 to security of supply to Ireland will not be fully assessed or understood in the timescale and process available. TAR NC permits differential treatment of IPs as a homogenous group of points used for a specific purpose, and further differential treatment of IPs to and from isolated gas networks, for security of supply purposes.¹⁸

UNC 0636D notes the parameters within the NTS Optional Commodity Charge (OCC) formula should be updated to ensure that the formula remains fit for purpose in the current cost environment.

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 is justified on the basis of avoiding inefficient bypass of the NTS. Given that the tariff has not been updated since inception, however, it should now be updated by indexing the formula to RPI.

1. The proposal requires a change to the OCC charging formula contained within Section Y of the UNC.
2. This modification ensures that the robust principle of the OCC calculation remains intact yet also ensures that the formula remains robust in today's cost environment and that the share of revenue to be recovered from OCC and non-OCC users is appropriate.

However, all Interconnection Points (exit) should be exempted from the changes to the derivation of the OCC on the following grounds:

- GCD11 foresaw that methodology change to the charging system in order to comply with the EU Regulation TAR would impact the OCC. It concluded that a review and any change to the OCC should take place at a later date with the intention to produce an enduring, compliant solution. Such a process is taking place under Modification UNC 0621 with the recommended solution being subject to a full review by ACER, neighboring NRAs and other interested parties via consultation (subject to Brexit transitional arrangements being agreed), as prescribed under TAR.¹⁹
- While TAR compliance is not required until October 2019, the Regulation has been in place since April 2017 and most of the gas markets have already taken steps to adjust charging methodologies in line with TAR. As the TAR content and required process is published and known, it would be

¹⁸ For example, Preamble (5) and Art. 9.2.

¹⁹ Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, Art. 26 - 28.

prudent to take it into account when making any changes to the charging system in order to avoid unnecessary disruption and inefficiency (i.e. due to an interim change, followed by a transition phase to the enduring solution).

This approach to minimise duplication of work was recognised by Ofgem in its consultation²⁰ on proposals to implement aspects of the Regulation (EU) 2017/460, the European Network Code on harmonised transmission tariff structures for gas (TAR NC) which closed on 6 November 2017. In the consultation, Ofgem proposed to align the stakeholder consultations required for UNC0621 and TAR NC by using a single consultation document that satisfies the requirements of both. Ofgem's proposal is

"...to facilitate alignment of the consultation processes, we propose that the UNC0621 industry consultation, which is required under UNC modification rules, and the extended final article 26 consultation, are carried out using a single consultation document. We propose that this document shall be the UNC0621 draft modification report ("DMR"), including any alternative modification proposals that may arise."

Ofgem published its Decision on 8th March 2018²¹ in which they directed National Grid Gas plc (NGG) to undertake specific tasks which arise under TAR NC

By Ofgem extending the scope of UNC 0621 to include the matters required under EU TAR NC, the impact of changes to the OCC tariff on all IPs would be addressed under UNC 0621 and therefore IPs should be exempt from any changes to the OCC tariff until a decision is made and implemented under UNC 0621.

- Modification UNC 0621 discussions include transitional arrangements to avoid step change impacts on Shippers and consumers. No transitional arrangements for Interconnection Points exist under the proposed UNC 0636 Modification or any of the alternatives which conflicts with Ofgem's Decision to direct NGG to undertake specific tasks which arise under TAR NC.

4 Code Specific Matters

Reference Documents

1. 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>
2. Proposed Modification UNC 0621 and associated alternative modifications.
3. Ofgem Decision to direct National Grid Gas plc (NGG) to undertake specific tasks to implement aspects of Regulation (EU) 2017/460, the European Network Code on harmonised transmission tariff structures for gas (TAR NC)

Knowledge/Skills

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

²⁰ <https://www.ofgem.gov.uk/publications-and-updates/consultation-proposals-implement-aspects-regulation-eu-2017460-european-network-code-harmonised-transmission-tariff-structures-gas-tar-nc>

²¹ Decision to direct National Grid Gas plc (NGG) to undertake specific tasks to implement aspects of Regulation (EU) 2017/460, the European Network Code on harmonised transmission tariff structures for gas (TAR NC)

5 Solution

0636 - Updating the parameters for the NTS Optional Commodity Charge

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.
- (iii) Where M is zero or less M will be deemed to be equal to 1 kWh/day

^ 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 $\sum E$.

0636A - Updating the parameters for the NTS Optional Commodity Charge

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:

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

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 change to the formula is to insert a distance cap in relation to the D function of 115 km. 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, where D must be equal to or less than 115 km

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

^ means 'to the power of.'

The update to the definition of D would be effective for all sites availing of the OCC from the time of the effective date of the Mod.

Interim phase

Following receipt of the ROM proposal, it is apparent that the full system solution cannot be delivered on the effective date of this proposal. On this basis, a workaround transition has been developed to ensure the new OCC arrangements can be implemented without disruption to Users. The following sets out some rules to be applied, in the event that the modification proposal is directed for implementation prior to the delivery of a fully automated solution.

1. A minimum of 2 months prior to the effective date of the change, National Grid will write to all Users registered at the relevant Supply Points that the application of the OCC will not be valid from the implementation date (where the relevant Supply Points are those points which are greater than 115km from the nominated Entry Point and subject to the OCC)
2. Users will be instructed to withdraw the Supply Points from the OCC and re-register as the Registered User in accordance with UNC Section B2. The Supply Point Offer made by the CDSP in this instance will reflect non-OCC charges. Registered “ownership” of the Supply Point under non-OCC terms will commence on the effective date of this modification proposal
3. National Grid will monitor the deployment of OCC on a daily basis on the day after each Gas Day commencing on D+1, where D is the effective date of this Modification Proposal:
 - a. The CDSP will provide National Grid with a daily report setting out those sites which are subject to OCC rates and the distances pertaining to each designated route. This will be provided on D+1.
 - b. National Grid will identify any sites where the Distance exceeds 115km and therefore, non-compliant with the application of the OCC
4. For those Supply Points which are non-compliant, National Grid, in conjunction with the CDSP will withdraw the OCC and re-register as Supply Points subject to the standard transportation charges.
5. National Grid will write to those registered Users which have been impacted by Step 4 and removed from the OCC rates.

0636B - Updating the parameters for the NTS Optional Commodity Charge

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:

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

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 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:

$$p/kWh = w \times (M^x) \times D + y \times (M^z)$$

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;

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 \wedge 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:

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

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.

0636C - Updating the parameters for the NTS Optional Commodity Charge

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:

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

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** change to the 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.
- (iii) Where M is zero or less M will be deemed to be equal to 1 kWh/day

^ 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 $\sum E$.

Where an OCC route contains an Interconnector Point (either entry or exit) it will continue to use the current formula ($p/kWh = 1203 \times M^{-0.834} \times D + 363 \times M^{-0.654}$) and will be exempt from the change to the formula as outlined above.

For avoidance of doubt:

- **the revised rate as proposed would only apply where both the entry and exit point are Non IPs.**
- **no changes are being proposed to the current application process for the OCC.**

0636D - Updating the parameters for the NTS Optional Commodity Charge while complying with the EU Tariff Code

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:

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

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 revision to the calculation of the NTS Optional Charge will be to update the above formula by indexing the relevant parts of the formula to reflect inflation at a rate of RPI over the period since inception to today. 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. These fundamental assumptions remain valid.

The revised formula is based on the principles set out in Option 1 of National Grid's GCD11 Report²². The formula has been updated to reflect more recent RPI levels in accordance with the update provided by National Grid as part of the Modification UNC 0621 development.

The **proposed** change to the formula is as follows for non-IP Exit Points:

The Non-IP Exit Point OCC:

$$2077 \times M^{-0.835} \times D + 608 \times M^{-0.654}$$

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

Note that the OCC only applies to IP Exit Points as the OCC product is designed on the basis of the direct route of a nominated exit point from the selected entry point and not vice versa. Where a nominated non-IP Exit Point selects an IP Entry Point as the relevant Entry Point for the purposes of OCC, then the Non-IP Exit Point OCC formula will apply.

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 contained in the formula; whilst remaining a valid principle, should be 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:

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

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).

Where an OCC Exit Point route contains an Interconnection Point it will continue to use the current formula, as follows:

²² National Grid GCD11, June 2015: <https://www.nationalgrid.com/uk/gas/charging-and-methodologies/gas-charging-discussion-gcd-papers>

The IP Exit Point OCC:

$$1203 \times M^{-0.834} \times D + 363 \times M^{-0.654}$$

For avoidance of doubt:

- The revised Non-IP Exit Point OCC rate as proposed would only apply where the exit point is a Non-IP.
- The Non-IP Exit Point OCC rate will always apply when the Exit Point is a non-IP, including in the event that the specified Entry Point is an IP.
- The indexation of the costs underpinning the OCC formula will not apply to the IP Exit Point formula.
- No changes are being proposed to the current application process for the OCC.

6 Impacts & Other Considerations

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

None of these modifications would have an impact on a current SCR.

Some workgroup participants suggest there is an impact on the current charging review that is due for implementation in 2019 for compliance with the EU Tariff Code. However, short haul/OCC for the longer term is being considered as part of the NTS Charging Review/Modification 0621 assessment, with some participants being concerned that Modifications 0636/A/B/C/D would have major implications on this project and the ability to meet legal obligations to fully implement TAR.

Consumer Impacts

The following is a summary of the workgroup assessment and it is included here to complete this consumer impacts section. The reader is recommended to read the workgroup assessment below for full details of the analysis conducted and the views of the workgroup.

Many of the workgroup participants recommended that Ofgem conduct a Regulatory Impact Assessment²³ (RIA) on these proposals as they should be considered as a material impact and of significant importance in line with Ofgem's guidelines on RIA, due to the large redistribution of costs and impacts on consumers – some of who will no longer be able to benefit from OCC.

If implemented, these modifications will lead to a redistribution of transportation costs amongst the shippers:

- An increase in costs by those shippers that are currently using the OCC
- A reduction in costs by those shippers that are currently using the Standard Commodity Charge

The impacts of the above redistribution of costs are summarised below.

²³ The basic timeframe for an RIA is circa 8 weeks for a non-urgent modification, or circa 4 weeks for urgent modifications. <https://www.ofgem.gov.uk/publications-and-updates/impact-assessment-guidance>.

A reduction in costs by those that are currently using the Standard Commodity Charge

It was noted that the information provided during the development of Modification 0621 (raised by National Grid NTS) included an analysis of the level of the redistribution of transportation costs arising through the current OCC.

The Proposer of UNC 0636 has analysed this data to determine the impacts, including those on consumers. The Standard Commodity charges are estimated to fall by 15% as a larger proportion of flows will be applicable to these charges rather than the OCC. It is expected that consumers within the distribution networks and sites directly connected to the NTS which are currently not availing of the OCC will see corresponding reductions in charges in due course (assuming flows on the system do not change). However, this analysis and assumptions were challenged by other Workgroup participants.

Consumer Impact Assessment

Criteria	Extent of Impact
Which Consumer groups are affected?	A reduction in costs could be seen by those shippers supplying consumers connected to the NTS or Distribution Networks that are currently incurring charges based on the standard commodity rates. It is assumed that these savings will be passed on to these consumers for the purpose of this analysis.
What costs or benefits will pass through to them?	<p>The load analysis conducted by the proposer for UNC 0636 suggests the following potential savings (approx..72m) could be passed on to customers through a 15% reduction in the standard Commodity charge (per annum):</p> <ul style="list-style-type: none"> • Domestic Consumers - £1 to £3 • Small non-domestic Consumers - £11 • Large non-domestic Consumers - £40 to £4K • Very Large Consumers - £40K to £160K <p>For UNC 0636A the overall reduction in the amount “re-distributed” is £36.5m compared to £72m for UNC 0636. Therefore, the estimated savings for UNC 0636A is around 51% of the above.</p> <p>For UNC 0636B the overall reduction in the amount “re-distributed” is £12.8m compared to £72m for UNC 0636. Therefore, the estimated savings for UNC 0636B is around 18% of the above.</p> <p>For UNC 0636C the overall reduction in the amount “re-distributed” is £44.8m compared to £72m for UNC 0636. Therefore, the estimated savings for UNC 0636C is around 62% of the above.</p> <p>For UNC 0636D the overall reduction in the amount “re-distributed” is £10.8m compared to £72m for UNC 0636. Therefore, the estimated savings for UNC 0636D is around 15% of the above.</p>
When will these costs/benefits impact upon consumers?	The above benefits could be seen from the date the new commodity rates are applied on an annual basis (assuming these are passed on at the same time to consumers). It was noted by some workgroup members that any part year benefit may not be passed on, as any contract would likely to be in place until the end of the relevant gas year.

<p>Which Consumer groups are affected?</p>	<p>The above cost savings could be offset by an increase in costs to those shippers connected to the NTS that are currently incurring charges based on the OCC. For this analysis it is assumed that these costs will be passed on to their customers; NTS direct connects within GB and other actors downstream of the interconnectors, including those in other countries.</p>
<p>What costs or benefits will pass through to them?</p>	<p>The analysis conducted suggests the following potential increases (approx.) to Shippers, which could then be passed on to consumers:</p> <ul style="list-style-type: none"> • Very Large Consumers – currently 49 contracted routes (45 Exit Points, including interconnectors) that utilise the OCC and the analysis conducted implies that this would reduce to 27 under UNC 0636, 38 for UNC 0636A, 47 for UNC 0636B, 30 for UNC 0636C and 47 for 0636D. • Currently £48.3m of revenue is received from all OCC users. • The analysis concludes that the revenue received from OCC flows changes to: <ul style="list-style-type: none"> • £54.6m for UNC 0636 • £26.2m for UNC 0636A (no increase in charges to those remaining on OCC) • £60.9m for UNC 0636B • £51.4m for UNC 0636C • £58.7m for UNC 0636D • The analysis also highlights that for those leaving OCC (see above for numbers of contracted routes) the following revenue will also be received (through the standard commodity charge): <ul style="list-style-type: none"> • £75.5m for UNC 0636 • £71.7m for UNC 0636A • £0.3m for UNC 0636B • £50.7m for UNC 0636C • £0.3m for UNC 0636D
<p>When will these costs/benefits impact upon consumers?</p>	<p>The above increase could be seen from the date the new commodity rates are applied on an annual basis (assuming these are passed on at the same time to consumers). It was noted by some workgroup participants that any part year cost may not be passed on, as any contract would likely to be in place until the end of the relevant gas year.</p>
<p>Are there any other Consumer Impacts?</p>	<p>See above for details of the potential benefits to those consumers whose shippers are currently incurring charges based on the standard commodity rates.</p>
<p>General Market Assumptions as at December 2016 (to underpin the Costs analysis)</p>	
<p>Number of Domestic consumers</p>	<p>21 million</p>
<p>Number of non-domestic consumers <73,200 kWh/annum</p>	<p>500,000</p>

<i>Number of consumers between 73,200 and 732,000 kWh/annum</i>	<i>250,000</i>
<i>Number of very large consumers >732,000 kWh/annum</i>	<i>26,000</i>

Cross Code Impacts

There were no impacts identified.

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. It is anticipated that the wider charging review will include a more comprehensive update of the OCC.

However, should the OCC remain unchanged as part of the charging methodology under the Modification 0621 Proposals, compliance with the TAR Code will need to be checked. The potential interactions between UNC 0636 & 0621 and their associated alternatives are covered further in the workgroup assessment section of this report.

Central Systems Impacts

See section 6 of the workgroup impact assessment for details of the implementation costs and system impacts.

Workgroup Impact Assessment

Summary of Workgroup Impact Assessment

The Workgroup sought clarification of several matters referred from Panel, identified within initial representations (submitted by Gazprom, Petronas and Energy UK) and relating to this change proposal. These can be summarised as below:

- Understanding the objective
- Consider the links, relationship and impacts with the relevant elements of modification 0621 – Amendments to Gas Transmission Charging Regime.
- Assessment of alternative means to achieve objective
- Development of Solution (including business rules if appropriate)
- Assessment of potential impacts of the modification
- Assessment of implementation costs
- Assessment of legal text.
- Consider the distance Cap specified in UNC 0636A and how many Supply Points are impacted

The workgroup assessment considers each of the above points in turn.

1. Understanding the objective

Background and context around GCD11

In July 2015, National Grid NTS published an NTS Gas Charging Discussion Document “NTS GCD11 - Updating the Cost Inputs to the NTS Optional Commodity Charge Function” (GCD11) and the document can be found in Appendix 1 of this report. GCD11 set out for discussion options for updating The Statement of Gas Transmission Transportation Charges, in respect of the NTS Optional Commodity charge (known as the NTS “Shorthaul” rate). The table below includes details of the 2 options.

Options	Option Details
Option One	Using pipe sizes and unit costs that were provided under the RIIO-GT1 Price Control.
Option Two	Updating the current portfolio of unit costs using publicly available indices and including the pipe sizes and unit costs that were provided for under the RIIO-GT1 Price Control.

The intention was to update the cost inputs and consequently the NTS Optional Commodity charge rate. It was highlighted that all NTS Optional Commodity rates would change as a result of updating the formula and they will apply to all those shippers currently on or who may request the NTS Optional Commodity charge in the future.

The NTS Optional Commodity charging product was introduced in 1998 to seek to avoid inefficient by-pass of the NTS by large sites located near to entry terminals. As the charge is an alternative to investment, the formula to calculate individual NTS Optional Commodity charge rates are derived from an estimated cost of laying and operating a dedicated pipeline of NTS specification (i.e. the estimated cost of by-passing the NTS). Shippers can elect to pay the NTS Optional Commodity charge as an alternative to the NTS SO and TO, Entry and Exit Commodity charges.

Since its introduction in 1998 the function used to calculate the Optional Commodity rates has not been amended and so is based on the costs used in 1998. National Grid’s view at the time was that a review of the cost inputs to the NTS Optional Commodity charge function was required.

In December 2015, National Grid NTS published “NTS GCD11R - Updating the Cost Inputs to the NTS Optional Commodity Charge Function” (GCD11R). A copy of GCD11R can be found in Appendix 2 to this workgroup report. National Grid NTS decided not to proceed with either of the proposed options given under NTS GCD11, to allow the UNC Modification process for UNC 0563S²⁴ to conclude before making any further proposals for potential changes to the NTS Optional Commodity charge, which could include any EU TAR NC / GTCR impacts or issues.

[Governance around the current methodology for the OCC](#)

Currently there is no detailed methodology to describe how the NTS Optional Commodity Charge Formula is derived within the UNC. However, it is contained in Charging methodology documentation which preceded the inclusion of Section Y within the UNC. The Proposer of UNC 0636 believes that this Modification contains sufficient information to support the revised formula.

Note: that the existing formula was included in the UNC as a result of UNC 0563S and was considered robust enough to justify the underlying methodology.

Notwithstanding the above, some workgroup members felt that a standalone methodology was required in the UNC to help Shippers understand how the NTS Optional Commodity Charge Formula is derived.

[Issues with GCD11 incl. GCD11 Formula not subject to full stakeholder review](#)

²⁴ UNC Modification 0563S – Moving the NTS Optional Commodity Charge Formula into the UNC (UNC 0563S) was subsequently implemented in January 2016 and moved the existing NTS Optional Commodity charge formula which is specified in the NTS Transportation Charging Statement (The Statement of Gas Transmission Transportation Charges) into TPD Section Y (Charging Methodologies) of the UNC.

Some workgroup participants were concerned that the GCD11Formula was not subject to a full stakeholder review. The spreadsheet provided to help industry to understand the derivation of the formula was only published after consultation on GCD11 had closed and includes dummy values.

The proposer of UNC 0636 has undertaken a thorough review of the spreadsheet provided to support the current underlying methodology and believes it is robust. This spreadsheet is available at <https://www.gasgovernance.co.uk/0636>. In addition, Appendix 6 provides a summary of the steps in the process (in a more compact form) to aid understanding of the methodology.

For sensitivity and transparency of the National Grid cost information, see below regarding pipeline costs. The proposer of UNC 0636 indicated that for the formula to remain credible it must be updated and believes NG have used the best available data in GCD11. Appendix 3 provides a comparison of pipeline construction costs provided during the Modification 0621 Workgroup meetings as part of the recent and ongoing charging review. Those views that have been provided to date are consistent with GCD11 outcomes.

UNC 0636B went a step further and proposed that a methodology that supports the OCC formula and its parameters be developed and published. The Workgroup participants believed the information to be incorporated with the Methodology Statement was the right level and aided understanding of how the formula was derived.

Pipeline Sizes: Inclusion of larger and smaller sizes

The current NTS Optional Commodity Charge calculation used in determining the formula, was completed based on the pipe sizes available and utilised in 1998 (specific flow rates and diameters are allocated to a specific pipeline size).

Maximum flow in the 1998 formula was 15 mcmd and maximum distance was 50 km. Small pipes were necessary for shorter distances and lower flows. Large pipes are necessary to cater for unlimited distance and 60 mcmd flows. The table below shows the current and proposed portfolio of pipe sizes.

1998 – Original Portfolio (Current)	GCD11 Option Two (proposed)
50 mm	50 mm
100 mm	100 mm
150 mm	150 mm
200 mm	200 mm
300 mm	300 mm
450 mm	450 mm
600 mm	600 mm
	610 mm
	915 mm
	1220 mm ²⁵

²⁵ Although this pipe-size is one of the three pipe-sizes where costs have been approved as part of the RIIO Price Control and included in Option 2 it is in fact not actually used in the derivation of the formula as it is too large for the assumed maximum flow rate and distance of 50km.

GCD11 highlighted that option 2 reflects the pipes NTS or providers of by-pass pipes would have to construct and these have changed significantly from those anticipated in 1998 as take-up of the OCC has increased.

Some workgroup participants felt the costs for pipeline diameters are included when these are far beyond the pipe size that would be required for most sites (CCGT) that would consider by-pass. A 600mm pipe would be more than sufficient for a 2GWe CCGT.

The proposer of UNC 0636 believes that the pipeline data set used in the regression analysis should be consistent with the range over which the formula is applicable and National Grid NTS confirmed that the pipe sizes were approved as part of RIIO T1.

An Initial Rep also asked the Transparency of Maximum NTS Exit Point Offtake Rate (MNEPOR) values needs to be considered. The Proposer believes there is no lack of transparency, although National Grid NTS do not publish MNEPOR values per site, they are available to the specific Shipper or DN.

Cost Data

Actual values for costings of three pipe-sizes in GCD11 are commercially sensitive and therefore dummy values are in the Excel spreadsheet supporting GCD11. The consequences of this are that the formula used does not match exactly that derived in the spreadsheet. However, the individual steps in the process are well documented and National Grid NTS are able to share the commercially sensitive material with Ofgem if required.

a) Use of Steel Index and RPI

The three Initial Reps sought for further clarification on the use of the Steel Index (a major cost component of pipelines) and RPI.

The GCD11 report indicates that the steel index is only used to uplift costs from 1998 to 2009/10 and this is consistent with the National Grid Price Control RIIO-GT1. From 2009/10 to 2015/16 RPI has been used similarly for consistency with the RIIO-GT1 approach. In the absence of recent real cost data, the Proposer of UNC 0636 believes this is a pragmatic way to update the costs.

Note: allowed revenues increase with indices derived from the price control. Standard commodity rates increase (assuming stable flows). Shortfalls in capacity revenues are also recovered by standard commodity charges.

UNC 0636B and 0636D proposes that the estimated costs (of laying and operating a dedicated pipeline of NTS specification) which underpin the formula calculation be 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 annually using publicly published RPI figures from the previous completed formula year.

b) Cost of Building Pipeline

Source	https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/chaw/mm23											
1998 APR	1998 MAY	1998 JUN	1998 JUL	1998 AUG	1998 SEP	1998 OCT	1998 NOV	1998 DEC	1999 JAN	1999 FEB	1999 MAR	Average
162.6	163.5	163.4	163	163.7	164.4	164.5	164.4	164.4	163.4	163.7	164.1	163.76
2017 APR	2017 MAY	2017 JUN	2017 JUL	2017 AUG	2017 SEP	2017 OCT	2017 NOV	2017 DEC	2018 JAN	2018 FEB	2018 MAR	Average
270.6	271.7	272.3	272.9	274.7	275.1	275.3	275.8	278.1	276.0			274.25
												Indexation Applied
												167%

The workgroup asked if the proposed charge still an appropriate alternative to investment?

The proposer of UNC 0636 believes the answer is yes but highlighted that there is no long term commitment in terms of recoverable revenue and routes can be switched with a very short notice period. The proposer was also not aware of any Users considering building a by-pass pipe and encouraged any that were to provide the details to National Grid or Ofgem (if details are confidential and could not be provided within this Workgroup Report).

The proposer indicated that the OCC charge should be sufficient to prevent a real threat of by-pass but not so low as to raise accusations of predatory pricing and highlighted that Transco commented on this in the PC9a Consultation Report at the time of introduction of the OCC:

- *“We recognise that, depending on economic circumstances, bypasses may still occur. Indeed, if we were to set prices on an individual site basis to prevent all bypasses we might be accused of predatory pricing. The intention of this tariff is to offer an alternative commodity charge which is more cost-reflective than the current NTS charge and can be assessed alongside other options available to users.*
- *The level of the tariff also reflects the benefits of being connected to the NTS, which users will wish to consider when deciding which option to pursue. Users may of course choose to accept an interruptible supply and hence avoid incurring exit capacity charges.”*

2. Consider the links, relationship and impacts with the relevant elements of modification 0621 – Amendments to Gas Transmission Charging Regime.

The core objective of UNC 0636 is to update the parameters for the NTS Optional Commodity Charge, whereas the NTS Optional Charge is a part of a larger modification looking at making significant and far reaching changes to the Gas Transmission Charging regime.

UNC 0636 is intended to be an interim step forward in the period prior to October 2019, as it will update the underlying costs to 2015. There will be no restriction in terms of distance and eligibility for the OCC however, it was noted that this is a feature of UNC 0636A. It will continue to be an optional replacement for both the TO and SO standard commodity charges.

National Grid NTS had confirmed (January 2018) that UNC 0621 will update whatever code is in place at the time. In March 2018, some workgroup participants became concerned that UNC 0621 would become constrained by UNC 0636 and its alternatives as it was unlikely this change would now be implemented before UNC 0621 and its alternatives were issued for consultation. It was noted that Workgroup 0621 have asked that the Code Administrator to seek a View from the Authority on the matter (in accordance with Mod Rule 12.8) and the Authority could express a View as to how Modification 0621 (and its alternates) or UNC 0636 should proceed. Ofgem then asked UNC Panel for both the 0636 and 0621 Workgroups to further consider the interactions between the proposals and an assessment has now been contained in the UNC 0621 workgroup report²⁶.

Some workgroup participants were also concerned that if UNC 0621 does not propose changes to the OCC, the updated formula will continue to operate at the same levels introduced by on of UNC

²⁶ <https://www.gasgovernance.co.uk/sites/default/files/ggf/page/2018-05/Part%20I%20Workgroup%20Report%200621%20ABCDEFHJKL%20v1.0.pdf>

0636/A/B/C/D. It is currently expected that UNC 0621 will reflect updated underlying costs for the OCC. It is also anticipated that there will be a distance restriction of 60 Km for eligibility for the OCC.

Some other workgroup participants expected National Grid NTS to raise a further proposal in the unlikely event that UNC 0621 or none of its Alternatives was implemented, so that the UNC was compliant from May 2019.

Some workgroup participants questioned the wisdom of implementing a solution that they believe would not be compliant with aspects of the EU Law changes that came in to force in April 2017 and will need to be fully implemented in May 2019 where the charges would be applicable from October 2019.

Some participants contested this view on the grounds that they believe that the proposed solutions place the 'industry' in a better position than it currently occupies and that UNC 0621 or one of its alternatives (or another National Grid NTS Modification) would ensure a non-compliance position was not faced in October 2019.

A consequential discriminatory/equitable treatment concern was also raised; the new commodity charge at IPs that will come into effect when the EU TAR Code changes are implemented in October 2019 and this will mean that the TO Commodity Charges would still apply at Non IPs creating a potentially different treatment when compared to the IPs.

A workgroup participant felt the Ofgem stance with regards to P229 was relevant and suggested that to be consistent with this decision Ofgem may reject all of the UNC 0636/A/B/C/D Modifications.

The workgroup sought the views of Ofgem on this matter but Ofgem were not able to offer any confirmed view point or clarification on whether the modifications needed to be compliant or not with the charges that would be applicable from October 2019, and that any views or opinions would only be proposed at the Final Modification Report (FMR) stage.

3. Assessment of alternative means to achieve objective

Some Workgroup participants felt the current formula for deriving the OCC should remain in place for existing off-takes utilising short-haul; shippers and consumers should not be penalised for having made historical decisions to use the OCC rather than invest in alternative transportation arrangements at historical cost levels.

The proposer of UNC 0636 believes this would not achieve the objective. There has been no commitment made by Users of the OCC tariff to contribute a level of revenue consistent with the costs of building such alternative pipelines. Analysis of the likely contributions made by OCC users has been provided during recent meetings of NTSCMF which highlights the relatively low contribution to revenue made by OCC Users. Appendix 4 is an extract from a document provided to the NTSCMF which estimates that sites using the OCC pay around 10% of the annuitised capital and operating costs. This is less than 50% of what it would cost just to operate the by-pass pipelines. The introduction of revenue commitments is something that could be considered within the UNC 0621 proposals but is not part of the UNC 0636 proposal.

4. Development of Solution (including business rules if appropriate)

The Proposers of all the Modifications have undertaken minor developments to improve the clarity of the solution during the Workgroup and/or following meetings with National Grid NTS and Xoserve. The Amended Modifications incorporates the clarifications that were necessary.

5. Assessment of potential impacts of the modifications

Timing of changes to the OCC

Some participants of the workgroup highlighted that parties thought OCC would be static until October 2019 as GCD11R indicated that any proposal could consider the EU TAR Network Code and this is due to take effect from this date. Any changes before then could have an impact on investment.

In response, the proposer of UNC 0636 highlighted that Standard Commodity charges change at least twice a year and capacity charges change on an annual basis. There are many considerations for investment decision making which typically have long lead times and necessarily include suitable scenario analyses. The Workgroup has not been made aware of any current investment decisions that would be impacted in the period prior to 2019.

On the subject of Interconnectors, one Workgroup participants stated that the current formula has no benefits for IPs from 2019 because of provisions of the EU tariff code which meant the revenue needed to be recovered by capacity charges and not commodity charges at IPs. One Workgroup participants also suggested that when considering the merits of the modification proposal, the EU gas network access regulations should be taken into account, which stipulate that ‘tariffs shall neither restrict market liquidity nor distort trade across borders of different transmission systems’.

The proposer of UNC 0636 anticipates that UNC 0621 will also address the OCC. In the unlikely event Mod 621 does not address the OCC, the OCC rate under UNC 0636 will remain available as an alternative to any standard commodity charges in effect at the time. Post 2019, there will remain a “non-transmission services” commodity charge applicable at IPs of a similar magnitude to the SO commodity.

Notification of changes to the OCC

Given the materiality of these proposals, the workgroup sought clarification of the notice periods that affected parties would receive and the following information was provided by National Grid NTS.

The following is a summary of the process employed by National Grid NTS in relation to the notification of changes to transportation charges:

- Ahead of the two months period typically given for notice of changes to transportation charges, National Grid would require at least one month to calculate: new OCC rates for any approved Modification (636 or any alternate); and updated TO and SO Entry and Exit Commodity rates.
- Ideally any change would take effect from 1st of the month. Current processes for commodity and NTS OCC reconciliation work on a monthly process and billing cycle.

With the above in mind, three months post decision to implement is preferable to allow the appropriate notice to be provided. For example:

- If the implementation date was to be 01 April or 01 October then this would mean certainty needed by end of December or end of June respectively.
- If the implementation was to be 01 December, certainty would be needed by end of August.

NTS OCC Notification - at the same time as the two months’ notice is given for updated commodity and OCC it is anticipated a process would be followed to advise all registered OCC users of any change to OCC rates and the dates they would become effective. This would be to allow these parties to change their nomination regarding OCC in the relevant systems with Xoserve.

Updated Commodity notification - updated commodity charges would be notified by usual channels with updated charges issued via the Joint Office and updated Transportation Charging Statement.

Some workgroup participants felt that the 150 business day indicative notice period should apply, as they believe that unwinding any contractual aspects might prove extremely difficult. The concern was acknowledged but it was pointed out that the 150 business days notification requirement is discharged on a 'reasonable endeavours' basis.

Traders have also pointed out that the annual gas tenders for the upcoming gas year (from October 2018) have already started, the majority normally conclude around June/July and that certainty over transportation charges is required to ensure parties are not discouraged from taking part. The reason for this timescale is that time is required ahead of the commencement of the gas year to finalise contractual, operational and regulatory arrangements between parties.

Traders also highlighted that parties will be subject to legally binding fixed term contracts (that usually run from 1 October to 30 September), they will be based on the transportation charges that parties thought would be applicable at the time of entering these agreements and therefore changes after the 1st October would not be conducive to an efficient and well-functioning market. Others highlighted that a mid-year change has a higher impact than a change undertaken in October (start of the Gas Year) and that any post October change potentially has a significant impact on contractual arrangements (i.e. unwinding trade hedges for a mid-year change etc.).

Determination of cost recovery redistributed to Non-OCC Users from OCC Users [cross-subsidy]

Current OCC rates are significantly below the costs of building the required pipeline. Some workgroup participants felt that the current OCC arrangements had led to a two tier system. The choice of OCC is not available for most DN connected load since the commodity charge is applied at Supply Point level rather than the DN offtake. However, there is no difference in the NTS service (covered by Commodity Charges) at the DN Offtake as compared to NTS Direct Connects.

If true costs of pipe-building were known then a more accurate value for the level of redistributed costs to Non-OCC Users from OCC Users could be determined but it is unlikely parties will share information about potential investment decisions.

Analysis of OCC utilisation and OCC rates

Data²⁷ has been provided by National Grid NTS to enable the proposers (UNC 0636, 0636A, 0636B, 0636C and 0636D) and the workgroup to identify the key impacts of the proposals. Some workgroup members requested that the analysis provided by NTS should be updated to reflect the latest M values and provided supporting Plant Load, Demand and Efficiency Analysis²⁸ was provided to justify this concern and NTS indicated will be provided prior to the consultation.

The proposer of UNC 0636 undertook the initial analysis with regards to OCC utilisation and OCC rates and a comparison with the standard commodity rates and this now forms Appendix 5.

Points to note about the analysis are as follows:

- Current OCC rates are used in the analysis but are anonymised
- Historic exit flows have been used for Gas Year 2015/6 for "M"

²⁷ The information provided by National Grid NTS to support the analysis of 0636, 0636A, 0636B, 0636C and 0636D can be found on the following page: <https://www.gasgovernance.co.uk/0636>

²⁸ <https://www.gasgovernance.co.uk/0636/090518>

- Average 17/18 commodity rates, flows and revenues and the short-haul data (volumes and revenues) are as included in the October Final charge setting process.

a) Impact on number of sites (UNC 0636, 0636A, 0636B, 0636C and 0636D)

The table below was provided by National Grid NTS to clarify the current usage of OCC (including by category) in terms of Exit Points and Contracted Routes and the revised position under UNC 0636 and the alternatives (assuming shippers choose the cheapest option).

Category	Exit Points						(Unique) Contracted Routes					
	Current	636	636a	636b	636c	636d	Current	636	636a	636b	636c	636d
Industrial	10	5	10	10	6	10	10	5	10	10	6	10
Power Station	32	17	26	30	17	30	32	17	26	30	17	30
Interconnector	3	3	2	3	3	3	7	5	2	7	7	7
Totals	45	25	38	43	26	43	49	27	38	47	30	47

The analysis confirms that there are currently 49 unique contracted routes where the OCC is being utilised. The analysis conducted implies that this would reduce to 27 (or less) under UNC 0636, 38 under Modification 0636A, 47 for Modification 0636B, 30 for 0636C and 47 for 0636D.

b) Impact on distances (UNC 0636 and 0636A)

The average distance for OCC routes is at present 89km with a maximum distance of 274 km. Under UNC 0636 this reduces to an average distance of 30km but retains a maximum distance of 262km if Users choose the cheapest option under UNC 0636. For UNC 0636A this reduces to an average distance of 23km and a maximum distance of 90km.

c) Impacts of the distance cap specified in UNC 0636A

The inclusion of a distance cap in the OCC formula will remove any routes which exceed this distance from operating under the OCC. The distance of 115 km has been selected on the basis of the analysis provided by National Grid to NTS Charging Methodology Forum on 06 May 2015. National Grid NTS had informed the proposer that the average distance (in terms of route) of the top 25% (by distance) of OCC users is 115 km (based on April 2014 flows). National Grid NTS were not able to provide any more detailed distance related information over and above what has already been provided on the grounds that the 115km figure allows for sufficient distance between any two reference points.

Some workgroup participants raised concerns around the justification for the chosen distance cap and highlighted bypass lengths above 115km and therefore they thought the cap was subjective. The proposer of UNC 0636A felt that the 115km was a transitional step until Modification 0621 was implemented (60km is currently being proposed).

d) Impacts on OCC from UNC 0636

As mentioned earlier, analysis was provided by the proposer specifically for UNC 0636 and this can be found in Appendix 5. The following is an extract of the data provided by National Grid NTS on the impacts of UNC 0636.

	Flow on OCC	Flow no longer on OCC	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users
Current	280,562.15	-	£ 48,307,149.72	£ -	£ 198,430,184.39	£ 150,123,034.67
636	187,952.15	92,610.01	£ 54,600,229.74	£ 75,451,232.67	£ 132,930,899.45	£ 78,330,669.71

In summary the impacts of UNC 0636 are:

- Flows on OCC reduce by 33% and revenue from these remaining OCC flows increases to £54.6m.
- Those no longer on OCC (“leavers”) would pay £75.5m
- Overall the amount “re-distributed” reduces by £71.8m and the remaining OCC flows save £78.3m compared to if they were on Standard Commodity rates.

e) Impact of UNC 0636 on Non-OCC Users by Annual Load Size per Annum

The following table was calculated by the Proposer of UNC 0636 and shows the annual impact (where negative values represent a saving) for Non-OCC Users split by annual load size. This relates primarily to DN connected loads, both Domestic and I & C, but may also include some loads directly connected to the NTS. The impact assumes that there is no change in the flow levels as a result of UNC 0636. This analysis was not replicated for the other Modifications but the difference in reduction in the amount redistributed to Non-OCC users, compared to UNC 0636 is used to estimate the savings for consumers from 0636A, 0636B, 0636C and 0636D (see Consumer Impacts section).

	Annual Load MWh	Impact £ per annum
Domestic²⁹		
Low	8	-£1.19
Medium	12	-£1.78
High	17	-£2.52
Non-Dom Retail³⁰	73.2	-£10.85
Industrial³¹		
I1	< 277.8	-£41.19
I2	277.8 - 2,778	-£412

²⁹ Source: <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/typical-domestic-consumption-values>

³⁰ Source: <https://www.ofgem.gov.uk/publications-and-updates/retail-energy-markets-2016>

³¹ Source: <https://ec.europa.eu/energy/en/data-analysis/market-analysis>

13	2,778 - 27,780	-£4,119
14	27,780 - 277,800	-£41,192
15	277,800 - 1,111,200	-£164,769

f) Impact on OCC from UNC 0636A

The following data was provided by National Grid NTS on the impacts of 0636A.

	Flow on OCC	Flow no longer on OCC	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users
Current	280,562.15	-	£ 48,307,149.72	£ -	£ 198,430,184.39	£ 150,123,034.67
636a	197,736.10	82,826.05	£ 26,213,137.98	£ 71,667,571.77	£ 139,850,692.93	£ 113,637,554.95

In summary the impacts of UNC 0636A are:

- Flows on OCC reduce by 30% and revenue from these remaining OCC flows reduces to £26.2m
- Those no longer on OCC (“leavers”) would pay £71.7m (an additional 49.6m)
- Overall the amount “re-distributed” reduces by £36.5m and the remaining OCC flows save £113.6m compared to if they were on Standard Commodity rates.

g) Impacts on OCC of UNC 0636B

The following data was provided by National Grid NTS on the impacts of UNC 0636B.

	Flow on OCC	Flow no longer on OCC	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users
Current	280,562.15	-	£ 48,307,149.72	£ -	£ 198,430,184.39	£ 150,123,034.67
636b	280,271.80	290.36	£ 60,929,550.18	£ 267,976.80	£ 198,224,828.04	£ 137,295,277.85

In summary the impacts of UNC 0636B are:

- Flows on OCC reduce by a minimal amount but the revenue from these remaining OCC flows increases to £60.9m (additional £12.62m)
- Those no longer on OCC (“leavers”) would pay £0.27m
- Overall the amount “re-distributed” reduces by £12.8m and the remaining OCC flows save £137.3m compared to if they were on Standard Commodity rates.

h) Impacts on OCC of Modification 0636C

The following data was provided by National Grid NTS on the impacts of UNC 0636C.

	Flow on OCC	Flow no longer on OCC	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users
Current	280,562.15	-	£ 48,307,149.72	£ -	£ 198,430,184.39	£ 150,123,034.67
636c	221,576.80	58,985.36	£ 51,398,976.17	£ 50,652,147.63	£ 156,712,245.26	£ 105,313,269.08

In summary the impacts of UNC 0636C are:

- Flows on OCC reduces by 21% and the revenue from these remaining OCC flows increases to £51.3m (additional £3.1m)
- Those no longer on OCC (“leavers”) would pay £50.7m
- Overall the amount “re-distributed” reduces by £45.2m and the remaining OCC flows save £105.3m compared to if they were on Standard Commodity rates.

i) Impacts on OCC of UNC 0636D

The following data was provided by National Grid NTS on the impacts of UNC 0636D.

	Flow on OCC	Flow no longer on OCC	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users
Current	280,562.15	-	£ 48,307,149.72	£ -	£ 198,430,184.39	£ 150,123,034.67
636d	280,271.80	290.36	£ 58,688,927.64	£ 268,998.75	£ 198,224,828.04	£ 139,535,900.40

In summary the impacts of UNC 0636D are:

- Flows on OCC reduce by a minimal amount but the revenue from these remaining OCC flows increases to £58.7m.
- Those no longer on OCC (“leavers”) would pay £0.27m
- Overall the amount “re-distributed” reduces by £10.6m and the remaining OCC flows save £139.5m compared to if they were on Standard Commodity rates.

Resulting Impacts on OCC Users from changes to the OCC

Some workgroup participants felt that the proposed changes will have significant distributional impacts; a small number of parties seeing a large increase in transportation charges, whilst others will see a small decrease. In all of the Modifications (with the exception of UNC 0636A for sites <115km and UNC 0636C/D for IPs) the OCC rate will increase. The analysis conducted suggests the following potential increases (approx.) to Shippers that could then be passed on to consumers:

- Very Large Consumers – currently 49 contracted routes utilise the OCC and the analysis conducted implies that this would reduce to 27 under UNC 0636, 38 for UNC 0636A, 47 for UNC 0636B & UNC 0636D and 30 for UNC 0636C. There contracted routes relate to 45 exit points which represents a significant proportion of the direct NTS offtakes, which are operational. The

direct connects will be combination of I&C and power generation offtakes, as well as the three interconnectors.

- The analysis also concludes that the UNC 0636 modifications increases the amount charged significantly to these consumers (with 0636 proposing the largest increase).

Views on the impacts of the redistribution of charges is as follows:

- Some workgroup participants felt that the increased OCC could put some of those **NTS direct connect consumers (large I&C)** out of business;
- If demand fell on the **Interconnection Points** because the OCC is too high, increased costs (gas and electricity) could be picked up by consumers;
- **Electricity generation** - increased electricity costs could be passed on to consumers, as a result of an increase in the OCC.
- **Attracting gas to GB** – a concern was raised that if the OCC is too high, then flows could be diverted to other markets.
- **Trading** – future trading would carry on with regards to flows remaining on the OCC, although there would be a need to a sufficient notice period to reduce the impact on trading. The following information was provided by a workgroup participant to support the above views:
 - In the case of non-interconnectors, the offtakes will be involved in secondary markets e.g. global widget market or UK power market. On the assumption that the increase in gas transmission costs are able to be passed through via inflated prices in these secondary markets e.g. the power station is the marginal power supplier (setting the marginal price) then the impact would be felt by the purchasers of the secondary product in that market e.g. higher power price. More likely is that the offtake will have to absorb the additional transmission cost and either face reduced margins, or potentially reduce production, in order to reduce other related costs, to the point where marginal costs = marginal revenues. In some cases, this may result in complete shutdown of an offtake, where other efficiencies cannot be achieved and the marginal costs always exceed marginal revenues at all levels of production.
 - Industrial offtakes will be more price sensitive (more price elastic) than many other consumers on the system and given the cost increases are likely to be of a magnitude higher than the price reductions experienced by non-OCC users (resulting reductions in commodity charges), it should be expected that overall system demand will at best, stay at the same level, or fall (compared to current demand). Any reduction in demand will reduce the benefit of the reduced non-OCC commodity charges, by virtue of the fact that the allowed revenue will be recovered over a lower level of throughput.

The proposer of UNC 0636 suggested that although OCC Users will see increases in their charges, that these are to be more reflective of the costs underlying a by-pass pipeline that they would have to build if they did not want to avail of the NTS. The Proposer also considers the costings in UNC 0636 to be conservative in nature as the assumed pipe-size is lower that may be necessary to meet peak consumption levels and believes there are still considerable benefits to Users availing of the OCC (such as the flexibility to change routes, no requirement for up-front investment costs and access to the NBP).

An Initial Rep highlighted that the GCD11 Option 2 (proposal) results in a greater contribution towards SO costs by shorthaulers and felt the validity of this outcome needs to be investigated if the charges are to be deemed to be cost reflective.

The proposer of UNC 0636 indicated that standard commodity charges are levied as a combined commodity rate. The OCC rate is defined as a SO charge for National Grid reporting purposes only. The proposer of UNC 0636 also suggested that if this is an important issue National Grid could re- apportion/allocate. This will have no impact on the underlying cost reflectivity of the costs of pipe-building.

Contractual arrangements

The workgroup considered contracts in relation to the timing of the proposed change. Although standard commodity charges are changed in April & October each year, there was an expectation amongst some Workgroup participants that the current formula would remain ASIS until October 2019.

Some workgroup participants indicated that some contracts are in place that will be impacted by these proposals; some are multiple year, and some were struck based on view that no changes were expected before October 2019. As mentioned earlier, Traders have also pointed out that the annual gas tenders for the upcoming gas year (from October 2018) have already started and that the majority normally conclude around June/July and that the legally binding fixed term contracts (that usually run from 1 October to 30 September) will be based on the transportation charges that parties thought would be applicable at the time of entering these agreements.

A discussion was had by the workgroup on the value of including a specific question in the consultation to gather supporting evidence for the workgroup report or whether it needed to be provided to Ofgem direct. In conclusion it was assumed that contracts and specific investment projects will be confidential and therefore parties would be best to share details with Ofgem.

6. Assessment of implementation costs

The UNC 0636 solution will cost at least £4,000, but probably not more than £7,000 to develop.

For UNC 0636A:

- The System solution will cost at least £135k, but probably not more than £190k to develop
- The Report Only Solution would cost at least £4k but probably not more than £6.5k to develop
- The Manual Interim Solution would cost at least £5k but probably not more than £10k to develop.

For UNC 0636B no system development costs are expected as a result of this proposal.

For UNC 0636C

- The System solution will cost at least £100k, but probably not more than £115k to develop
- An offline interim solution has been considered, however the costs are likely to more than the online system solution and could not be delivered any sooner.

For UNC 0636D

- The solution will cost at least £100k, but probably not more than £115k to develop.
- An offline interim solution has been considered, however the costs are likely to more than the online system solution and could not be delivered any sooner.

7. Assessment of legal text.

The Workgroup has considered the Legal Text for 0636, 0636A, 0636B, 0636C and 0636D and have indicated that it meets the intent of the relevant Solutions.

Rough Order of Magnitude (ROM) Assessment

The ROM responses for Modification 0636, 0636A, 0636B, 0636C and 0636D has been published under change proposal (XRN 4543A).

The workgroup noted that the implementation timescales highlighted in the ROM for 0636C and 0636D suggest that implementation for October 2018 would be challenging but this would need to be confirmed as part of the Detailed Cost Assessment (DCA).

UNC 0636

- **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.

UNC 0636A

Three options are highlighted in the ROM response:

- **System Solution Option** - this option would require an additional validation when NOM and SPC files are received by Xoserve and reject where the Distance is greater than 115km and new rejection code is required. The System solution will cost at least £135k, but probably not more than £190k to develop. Due to the current change programme it is unlikely that an implementation of the System Solution Option for UNC Modification 0636A is possible before October 2018.
- **Additional consideration (CDSP Forced Confirmation (>115 km) Solution Option)** - Where the Shipper User fails to act, then the CDSP are often required to act to (re)confirm Supply Meter Points (SMP). This option would mean any sites outside the distance parameter are excluded at the right time. However, no CDSP functionality exists to (re) confirm Class 1 SMPs and the process would be complicated and have large impacts on CDSP operational teams. This is due to the expected complexity for Class1 SMPs and because of the time allowed for analysis, no costs are available at this time for this process.
- **Manual Interim Solution Option** - this Option involves the CDSP Operational teams amending data via system screens and manually creating Gemini work items. Support would also be required to update SAP tables and analysis for potential system impacts. The Manual Interim Solution would cost at least £5k but probably not more than £10k to develop. The manual interim

solution also has ongoing costs that are likely to be at least £7k but probably not more than £13k per annum.

- **Report only Solution** - this solution provides a report to National Grid Transmission where SMPs that have requested OCC and 'D' is greater than the distance parameter specified (i.e. 115km). The Report Only Solution would cost at least £4k but probably not more than £6.5k to develop.

UNC 0636B

- No system development costs are expected as a result of this proposal. However, it is expected that it would be prudent to undertake a short testing phase / validation checks in advance of configuration change.
- No new Service charges are expected and any future and any on-going costs are likely to be negligible.

UNC 0636C

- **Change Costs (implementation):** The solution will cost at least £100k, but probably not more than £115k to develop.
- An offline interim solution has been considered, however the costs are likely to more than the online system solution and could not be delivered any sooner.
- **Change Costs (on-going):** There are annual on-going costs, but these are likely to less than ½ day for 1 FTE per annum.
- The strategy adopted for Post Nexus change is a Release strategy (changes grouped and implemented together at a set date) and it is expected that this change would form part of a major Release. Consideration for inclusion in a Release will be made when the Change Proposal is submitted to the Change Management Committee (ChMC).
- **Constraints:** A Price change notification would be required.

UNC 0636D

- The solution will cost at least £100k, but probably not more than £115k to develop.
- An offline interim solution has been considered, however the costs are likely to more than the online system solution and could not be delivered any sooner.
- **Change Costs (on-going):** There are annual on-going costs, but these are likely to less than ½ day for 1 FTE per annum.
- The strategy adopted for Post Nexus change is a Release strategy (changes grouped and implemented together at a set date) and it is expected that this change would form part of a major Release. Consideration for inclusion in a Release will be made when the Change Proposal is submitted to the Change Management Committee (ChMC).

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.	0636C, 0636D - impacted
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;	0636, 0636A, 0636C and 0636D - impacted
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;	All - impacted
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	All - impacted
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	None

of Assets).	
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.	All - impacted

Impact of the modification on the Charging Methodology Relevant Objectives and Code Relevant Objective g):

The workgroup noted that the current OCC rates were too low and not reflective of the costs of building a new pipeline. The standard commodity charges as a consequence are too high. Increasing the OCC rates towards a more cost reflective level therefore better facilitates the Relevant Objectives.

UNC0636, 0636A and 0636C: Adjustments to the OCC rate will reduce the Standard Commodity rates (all other things being equal) and improve its cost reflectivity – **relevant objective (a)**.

UNC0636D: Adjustments to the OCC rate will ensure that the OCC formula is robust to the current cost environment and that charges to OCC and non-OCC Users are more reflective of current cost – **relevant objective (a)**.

Some workgroup participants considered that UNC 0636 better facilitates relevant objective a) as the reduction in the Standard Commodity rates is greater for UNC 0636 than 0636A, 0636B, 0636C and 0636D. However, a workgroup participant felt that there was no impact on charging methodologies should one of these modifications be implemented, because a Charging Methodology in respect of OCC does not exist.

UNC 0636, 0636A, and 0636C: Increasing take-up of the OCC over longer distances has led to a need to review the parameters with the OCC rate calculation – **relevant objective (b)**.

UNC 0636B and 0636D: 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.

UNC 0636, 0636A, 0636C and 0636D: 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.

UNC 0636B: 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)**

However, some workgroup participants disagreed with this view, since true cost reflective charges should be set on forward looking marginal costs for capacity charges and the residuals covered by a non-distortive charge (usually a commodity charge) and these proposals argue reducing commodity charges improve cost reflectivity. In addition, some participants felt that reducing costs for all parties would not enhance competition as it would not introduce a differential in charges.

UNC 0636B: **code relevant objective (g) and relevant objective e)** - Ensuring that a documented Methodology Statement is available for the UNC Panel before the modifications go to consultation will ensure that UNC 0636B 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...”

UNC 0636C and 0636D: code relevant objective (g) and charging relevant objective e) - excluding Interconnection Points (IPs) facilitates compliance with the TAR NC intention of full consultation with affected adjacent markets and ACER. The TAR NC specifically refers to consideration and treatment of IPs and exit points to infrastructure with the purpose of ending isolation of Member States' gas systems; Northern Ireland and the Republic of Ireland constitute isolated systems. Full consultation as described for TAR NC compliance is already planned to take place under UNC 0621, where any change at IPs shall be assessed by relevant parties in affected adjacent markets and TAR NC compliance is better served.

Workgroup noted that UNC 0636, 0636A and 0636B do not take account of the changes required by the EU Tariff code which must be implemented by the end of May 2019 and which will require different charging arrangements at IPs from 01 October 19. Some workgroup participants suggested this will have a material economic impact in terms of how the OCC will apply at IPs from that date, so these modifications are discriminating against these system interconnection points and therefore detrimental to **relevant objective (e) and (g)**.

Workgroup participants clarified that 0636, 0636A and 0636B are compliant with the existing EU Regulation and UNC 0621 is expected to follow from October 2019 to comply with EU TAR NC 2017/460.

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 proposers would like to implement the modification proposal on 1 October 2018.
- 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.

9 Legal Text

The legal text and commentary for Modifications 0636, 0636A, 0636B, 0636C and 0636D has been reviewed and the final text will be published alongside this report prior to consultation.

10 Consultation

Panel invited representations from interested parties on 21 June 2018. The summaries in the following table are provided for reference on a reasonable endeavours basis only. We recommend that all representations are read in full when considering this Report. Representations are published alongside this Final Modification Report.

Modification 0636

Of the 32 representations received 5 supported implementation, 3 offered qualified support, 2 provided comments and 22 were not in support

Modification **0636A**

Of the 32 representations received 2 supported implementation, 2 offered qualified support, 1 provided comments, 1 no view was provided and 26 were not in support

Modification **0636B**

Of the 32 representations received none supported implementation, 3 offered qualified support, 2 provided comments, 1 no view was provided and 26 were not in support

Modification **0636C**

Of the 32 representations received 1 supported implementation, 5 offered qualified support, 1 provided comments, 1 no view was provided and 24 were not in support

Modification **0636D**

Of the 32 representations received 1 supported implementation, 3 offered qualified support, 1 provided comments, 1 no view was provided and 26 were not in support

Preference expressed

Of the 32 representations received 5 expressed a preference for 0636, 3 expressed a preference for **0636A**, none expressed a preference for **0636B**, 1 expressed a preference for **0636C**, 3 expressed a preference for **0636D** and 20 remained neutral or did not express a clear defined position (*i.e. no preference expressed and/or a clear preference was not expressed for a single modification*).

1. Summary Table of Support and Preferences

	0636	0636A	0636B	0636C	0636D	Preference
Aughinish Alumina Limited	Oppose	Oppose	Oppose	Qualified Support	Qualified Support	0636C or 0636D
BP Gas Marketing	Oppose	Oppose	Oppose	Oppose	Oppose	None
Cadent Gas Ltd	Support	Oppose	Oppose	Oppose	Oppose	0636
Centrica	Oppose	Oppose	Oppose	Oppose	Oppose	None
Ceres Energy	Qualified Support	Oppose	Oppose	Qualified Support	Oppose	0636 or 0636C
ConocoPhillips (UK) Ltd	Oppose	Oppose	Oppose	Oppose	Oppose	N/A
Corona Energy	Oppose	Oppose	Oppose	Support	Oppose	0636C
Domestic Consumer – Nigel Sisman	Support					
EDF Energy	Comments	Oppose	Oppose	Oppose	Oppose	0636
EDF Trading	Oppose	Oppose	Oppose	Oppose	Oppose	0636B or 0636D

Energy UK	Oppose	Oppose	Oppose	Oppose	Oppose	None
ENI Trading and Shipping SPA	Oppose	Oppose	Oppose	Oppose	Oppose	N/A
EP UK Investments	Oppose	Oppose	Oppose	Oppose	Oppose	0636A
ESB	Oppose	Oppose	Oppose	Qualified Support	Qualified Support	0636C or 0636D
Floglas Britain Ltd	Qualified Support	Oppose	Oppose	Qualified Support	Oppose	0636 or 0636C
Gazprom Marketing and Trading	Oppose	Oppose	Qualified Support	Oppose	Support	0636D
Interconnector IUK Ltd	Oppose	Oppose	Oppose	Oppose	Oppose	0636D
InterGen	Oppose	Oppose	Oppose	Oppose	Oppose	None
National Grid	Comments	Comments	Comments	Comments	Comments	None
Nephin Energy	Qualified Support	Oppose	Oppose	Qualified Support	Oppose	0636 or 0636C
Petronas Energy Ltd	Oppose	Oppose	Oppose	Oppose	Oppose	0636D
RWE Trading & Supply Gmbh	Oppose	Oppose	Oppose	Oppose	Oppose	None
ScottishPower Energy Management Ltd	Oppose	Oppose	Oppose	Oppose	Oppose	None
SGN	Support	Oppose	Oppose	Oppose	Oppose	0636
Shell Energy Europe	Oppose	Oppose	Oppose	Oppose	Oppose	None
South Hook Gas	Oppose	Oppose	Qualified Support	Oppose	Qualified Support	0636B, 636D
SSE	Oppose	Oppose	Comments	Oppose	Oppose	None
Triton Power	Oppose	Support	Oppose	Oppose	Oppose	0636A
Uniper	Oppose	Oppose	Oppose	Oppose	Oppose	None
Vermilion	Support	Qualified Support	Qualified Support	Oppose	Oppose	0636
VPI Immingham LLP	Oppose	Support	Oppose	Oppose	Oppose	0636A
Wales & West Utilities	Support	Qualified Support	Oppose	Oppose	Oppose	0636

The following tables summarise the representations provided to support the above positions.

Representations were received from the following parties with regards to 0636:

Organisation & Response	Key Points
<p>Aughinish Alumina Limited - Oppose</p>	<ul style="list-style-type: none"> GCD11 foresaw that methodology change to the charging system in order to comply with the EU Regulation TAR would impact the OCC. It concluded that a review and any change to the OCC should take place at a later date with the intention to produce an enduring, compliant solution. Such a process is taking place under Modification UNC 0621 with the recommended solution being subject to a full review by ACER, neighbouring NRAs and other interested parties via consultation (subject to Brexit transitional arrangements being agreed), as prescribed under TAR. This Modification 0636 does not take into account the EU regulation TAR impact on neighbouring NRAs and other affected parties hence why Aughinish Alumina (“Aughinish”) raised alternative 0636C to allow for IPs to be exempt from this modification until 0621 is implemented which will comply with the EU TAR. Note: 0636C is presented in support of 0636 subject to the exemption of IPs, however due to the structure and restrictions of the modification process, Aughinish could only support the original modification (0636) in our alternative modification proposal. Therefore, in our submission response to this Consultation we ask Ofgem to note that if 0636 and its alternatives are not rejected in favour of Mod 0621 (our preferred option), Aughinish could also support 0636D as this also excludes IPs from the changes to the OCC.
<p>BP Gas Marketing - Oppose</p>	<ul style="list-style-type: none"> This proposal updates the OCC formula using the Option 2 formula from the National Grid discussion document GD11. It should be noted that National Grid decided not to implement this formula after consultation with the industry. If this modification were to be implemented users of the OCC tariff will see significant increase in their transportation costs to an extent that some customers will lose all the benefits of the OCC rate. This solution would also discriminate against IP’s if this were to become an enduring solution from Oct 2019.
<p>Cadent Gas Ltd - Support</p>	<ul style="list-style-type: none"> General point raised that NTS Optional Commodity Charge is thought to provide an effective cross subsidy to those customers that make use of it. We believe that this is unjustified and therefore, do not support the principle of the charge. This proposal updates the cost parameters of a formula which was introduced nearly 20 years ago and thus, we believe is outdated. It reduces and addresses the issue of possible cross subsidy, and out of all of the proposals, we believe that 0636 provides the most appropriate and beneficial method of updating the charges. 0636 has forecasted the largest reduction in cross

	<p>subsidy, at £72m, so clearly produces the greatest benefit to those customers not able to make use of it.</p> <ul style="list-style-type: none"> Note that there is no link to RPI and therefore, the cost parameters may become outdated. This solution is not enduring, but this could be addressed if Modification 0621 (or any of the alternates) were to be implemented.
<p>Centrica - Oppose</p>	<ul style="list-style-type: none"> Highlight seven reasons for opposition: <ul style="list-style-type: none"> The proposal discriminates against Interconnection Points If implemented, the proposal would adversely affect existing and prospective commercial agreements and consumers The proposal fails to take account of requirements of the EU Regulation 715/2009 and the EU Tariff network code. Implementation would significantly impact GB’s ability to implement the TAR NC by 31 May 2019 The proposal does not provide a methodology for inclusion in the UNC, a poor outcome from a governance perspective. The consumer impact assessment in the Draft Workgroup Report makes some bold assumptions The basis for establishing the peak daily offtake in the OCC formula is logically flawed Please see the representation for full details/explanation of each of the above points.
<p>ConocoPhillips (UK) Ltd - Oppose</p>	<ul style="list-style-type: none"> Do not believe that the implementation of any of these proposals will enhance the current framework and are more likely to cause instability and disruption in the market. The timing and timeframe of this mod that is closely followed by 0621 (transitional reform proposal) and 0653 (an enduring solution from 2019) are creating a lot of unnecessary uncertainty and does not enable a comprehensive understanding of the relevant charges when negotiating contracts. Feel that the proposals are being rushed through without due consideration as to what the impact will be and that the Optional Commodity Charge cannot be looked at in isolation from the whole charging regime.
<p>Ceres Energy – Qualified support</p>	<ul style="list-style-type: none"> Has a preference for this option. It is a more considered reform and best meets the requirement to reduce the TO cross-subsidy. In general we think that the proliferation of options has stood in the way of optimising this option and so an ongoing process needs to be in place to keep it in line with market

	developments.
Corona Energy - Oppose	<ul style="list-style-type: none"> • General point raised that the principle of the NTS Optional Commodity Charge allows Shippers an alternative charging option to the NTS and allows Shippers to make commercial decisions to facilitate a competitive market. • From a cost saving point of view we support 0636 over the alternatives as it reduces the cross-subsidy over non-OCC users considerably, however it is our opinion that the chosen solution should be the enduring solution and which should be TAR NC compliant.
Domestic Consumer, Nigel Sisman - Comments	<ul style="list-style-type: none"> • Writes as a domestic consumer having observed that domestic consumers do not appear to have been adequately considered, or represented, in the development process of Modification Proposal 636 (“636”). Provides background to the Optional Commodity Charge. • National Grid’s data confirms that the OCC is creating a cross-subsidy of approximately £150 million per annum at the expense of domestic, industrial and commercial users. The beneficiaries are larger loads, particularly power stations connected direct to the NTS and to consumers in other countries, including Ireland and other mainland Europe countries. Furthermore, the continued operation of the OCC distorts gas trading. During the late 90s trading migrated from the beach to the NBP. However, in recent years the advantages of the OCC to some has increased beach trading as a result of the anomalous transportation charging arrangements. The discrimination associated with access to the OCC confers advantage to some consumers and their shippers at the expense of those that can’t. • The problems associated with the OCC have been known for more than two years. However, the industry resisted suggestions to quickly address the anomalies preferring, instead, to support changes to bring transportation charging arrangements within the scope of the Unified Network Code (UNC).
EDF Energy - Comments	<ul style="list-style-type: none"> • Provides background to the Optional Commodity Charge (OCC or Shorthall) – please see full representation for further information.
EDF Trading - Oppose	<ul style="list-style-type: none"> • Provided background to the Optional Commodity Charge (OCC or Shorthall) – please see full representation for further information. • Feels both of these proposals adopt the key aspects of Option 1 of GCD11 for the purposes of establishing a pipeline portfolio and the application of a steel index (Mod 636C in relation to non- IP related OCC routes). This approach is based on the assumption that there is a direct read across between the wider distribution of pipeline diameters and their related RIIO-T1 costs and the construction of private pipeline systems. There is no evidence to support this

	<p>assumption.</p> <ul style="list-style-type: none"> In addition, this radical approach will undermine historical investment decisions made by developers when assessing the option of building a private pipeline or using the NTS i.e. whether or not to bypass the NTS. Those who elected to use the NTS may no longer be in a position to change this view and respond to the changing cost differentials. This could be due to practical reasons such as land availability, plant location, lifespan of existing offtake facility. For this reason, it can be argued that any significant change to OCC arrangements would discriminate against existing users of the service In addition, both proposals include an M function which is related to the previous year’s consumption at the offtake. This is counterintuitive when considered in parallel with the overriding justification for the inclusion of an OCC service. The OCC service was developed to ensure efficiency in the use of the NTS, specifically designed to discourage inefficient bypass. As such, the cost of using OCC should align with the cost of constructing and operating a private pipeline. We are not aware that any customer/developer would construct a pipeline system based on anything but expected peak day utilisation i.e. the size and costs associated with building, operating and maintaining a pipeline would be assessed on the basis of reasonable expectation of peak utilisation. Where the OCC rate is determined by reference to historical, and in the vast majority of cases significantly lower flows than peak, the subsequent reference price will in no way provide a suitable benchmark for assessing the options of bypassing or using the NTS. On the basis of the above, it is clear that these proposals will not facilitate the achievement of Relevant Charging Objectives a, b and c.
<p>ENI Trading and Shipping SPA - Oppose</p>	<ul style="list-style-type: none"> Discriminating against IPs.
<p>EP UK Investments - Oppose</p>	<ul style="list-style-type: none"> Has the following concerns about the 0636 modifications: The rationale for change has not been sufficiently justified: does not consider that the rationale for change has been sufficiently justified for any of these modification proposals. Considers that there should be a suitable ongoing incentive to avoid inefficient bypass of the NTS and the current Optional Commodity Charge (OCC) is effective in achieving this. Although the OCC results in some “redistribution” of cost from OCC users to non-OCC users, this may be an efficient outcome, provided the redistribution is at an appropriate level. Feels the proposals suggest that ‘the OCC has become a very attractive option even for exit points that are increasingly distant from an associated entry point’.

The OCC formula is already linked to distance and this means that in general there is little benefit to utilising the OCC for long distance routes. However, as commodity charges have grown, there may be an increased incentive to utilise the OCC as an alternative on some routes. In these circumstances, it is likely to be other factors leading to under-recovery which are driving the increase in standard commodity charges and therefore increased utilisation of the OCC. Any change to the OCC would not address these underlying drivers of high commodity charges.

- Understands the current OCC formula uses pipeline cost data from 1998 and the proposals suggest that this should be updated to reflect the current cost of investment in a bypass pipeline. As the alternative to utilising the OCC may be to invest in a bypass, it is important that the calculation of the OCC is predictable and transparent so that users can reach a robust decision on whether to invest in a private pipeline at that point in time. We are concerned that a one-off update to the OCC formula after 20 years without any transitional provisions may undermine decisions which users took when they originally began to utilise the OCC. The case for investment in a bypass may be different today for these users given, for example, the remaining lifetime of an offtake.
- Suggests any changes to the OCC therefore need to be carefully considered in the context of the charging arrangements as a whole and a proper analysis of the potential impacts on different parties should undertaken, taking account of potential unintended consequences. Does not consider that this has been sufficiently undertaken in the draft Modification Report and we would therefore expect Ofgem to undertake a full Impact Assessment before reaching a decision on this modification.
- The proposed OCC formulae may not be cost reflective: are not convinced that the proposed OCC formulae are necessarily reflective of the costs users would incur in developing a bypass pipeline. 0636 and 0636C would utilise an expanded portfolio of pipeline diameters when setting the OCC. These pipeline sizes are larger than would realistically be required by most offtakes. Furthermore, some cost data for the portfolio is claimed to be confidential and it is therefore not transparent how the OCC formula has been derived.
- Feels these proposals also base the M value in the formula on the previous year's average flows adjusted for load factor. This approach cannot be considered to be cost reflective as pipelines would be built to accommodate peak flows over the lifetime of the asset. The proposed formula suggests that the costs of building the pipeline would vary year on year, which is clearly not the case.
- The proposals discriminate between different users: understands that there are concerns that proposals 0636, 0636A and 0636B would not comply with the

	<p>TAR code from 2019 in their treatment of IPs. However, 0636C and 0636D propose updating the OCC for non-IPs but retaining the current formula for routes including an IP. We consider that such an approach would unduly discriminate between IPs and non-IPs in contravention of the non-discrimination requirements of Regulation 715/2009.</p> <ul style="list-style-type: none"> • Inclusion of a distance cap: 0636A proposes including a distance cap in the shorthaul formula. We consider that the introduction of a distance cap may help address concerns that the OCC is increasingly being used by routes where there is no realistic possibility of economic bypass of the NTS. We note that a distance cap is a feature of some of the UNC0621 proposals and the 115 km cap proposed in 0636A may therefore be a sensible transitional step. However, the choice of distance cap must be properly justified. • Interaction with NTS charging reform: It is clear that the OCC must be considered holistically in the context of the charging landscape. However, proposals for reform of NTS charges from 2019 are currently out for consultation (UNC0621). The 0636 proposals are not consistent with those under 0621 and it is therefore possible that they could be implemented for only a very short period before being superseded. In fact, the justification for the 0636 proposals assumes that it is a short-term fix until 0621 is implemented, but it is possible that 0621 may not be implemented at all and it is therefore crucial that 0636 is a robust enduring solution that ensures compliance with the relevant requirements (eg. the TAR code). We do not consider that the proposals meet this test and we therefore oppose their implementation.
<p>ESB - Oppose</p>	<ul style="list-style-type: none"> • The GCD11 process specified that the Optional Commodity Charge should be reviewed as part of the methodology changes required for compliance with EU Regulation TAR. The aim was for development of a coherent, enduring solution, which would receive the full consultation process by all relevant parties, neighbouring NRAs and ACER. This methodological review process is ongoing under UNC 0621. TAR has been in place since April 2017 and many Member States have already implemented changes to their tariff systems in line with TAR. It would be prudent to take TAR into account in order to avoid unnecessary disruption and inefficiency (due to an interim change, followed by a transition phase to an enduring solution). Given all of the above, 0636 and all connected alternatives should be rejected. It is clearly in the spirit of TAR that any changes affecting neighbouring markets should be subject to full consultation by stakeholders in those markets and have ACER oversight. As a least worst case, exemption of IPs would mitigate this concern. • Use of flows rather than capacity in the calculation for the cost of a pseudo alternative pipeline investment is counter-intuitive, as it suggests that the

	<p>pipeline can change size year on year.</p>
<p>Floglas Britain Ltd - Qualified Support</p>	<ul style="list-style-type: none"> • Prefers options which make a real reduction in the level of cross-subsidy being taken from the domestic and commercial customer through the TO charge. Reducing the benefit of OCC through a more cost-reflective charge keeps the costs in the appropriate market. Domestic gas suppliers operate in a market where consumers are I general angry and suspicious with suppliers typified by the Big SIX. The continual delay in not addressing a problem which keeps getting worse as the tariff remains in 1998 further discredits the industry. • Notes that the option of straight abolition was not considered. As Modification 621 notes this is not an expanding network and we question whether it is necessary to influence new investment. • Prefers this option. It is a more extensive update for the formula and it makes real inroads into the cross-subsidy in the TO charge which is unduly attributed to the domestic and small-commercial market.
<p>Gazprom - Oppose</p>	<ul style="list-style-type: none"> • As the industry seeks to make comprehensive changes to UK gas market design, proper consideration is needed for IPs given the significance and severity of the proposals being discussed under Mod 621. IPs require an enduring solution that recognises the European Tariff Network Code requirements and avoids short-term disruption. Therefore close consideration must be given to the impacts on cross border trade, market liquidity and security of supply of the neighbouring countries (including Ireland, which is highly dependent on the gas exports from GB). The impact analysis for 636 fails to quantify these risks, which should be deemed as fundamental, when considering such a change in the OCC. • National Grid, Ofgem and industry stakeholders are hard at work consulting and preparing for a new charging methodology that will take effect from October 2019. The requirement to add further tension to current activities seems unnecessary at this time.
<p>Interconnector IUK Ltd - Oppose</p>	<ul style="list-style-type: none"> • Believes the NTS Optional Commodity Charge (Short haul) has proven to be important in attracting gas to the GB market and encouraging greater use of the NTS by avoiding inefficient by-pass. It is an important driver of flows over the Interconnector (IUK) and with the end of IUK's original long term bookings from October 2018, changes to this tariff or uncertainty around it will have an influence on IUK's market prospects and bookings. We therefore feel compelled to respond to this consultation. • Feels Tariff stability and predictability are key agreed objectives of the current GB NTS charging review and reflect the aims of Tariff reforms as set out in the European Tariff Network Code. It is recognised by industry that the NTS

	<p>Optional Commodity Charge needs to be reformed, in particular due to commodity charges at IPs only being permitted for the cost of flowing gas and not revenue recovery.</p> <ul style="list-style-type: none"> Feels there is unfortunately considerable uncertainty at the moment. NGG has proposed a transitional reform of Shorthaul in Mod 621 from October 2019 but nothing on an enduring solution apart from suggesting that this would need to be reviewed. Despite the GB Charging Review and the Mod 621 process considering future charging reforms, Mod 636 has also been proposed and allowed to proceed. It seeks earlier changes to the short haul tariff in 2018. This has resulted in a number of alternatives. Mod 653 has also been proposed seeking to establish an enduring solution from 2019. The process has, in short, become chaotic. There are now potentially 3 changes to short haul within four years. This does not create tariff stability and predictability. It is commercially disruptive to the market, harmful to flows/bookings prospects across IUK and does not facilitate cross border trade.
<p>InterGen - Oppose</p>	<ul style="list-style-type: none"> Feels although a review of the NTS Optional Commodity Charge may be appropriate, given the lack of consideration in nearly 20 years, the timing is somewhat impractical, particularly considering another modification proposal currently under consideration – 0621. This raises the question about the value of introducing changes for potentially only a short period. Do not consider any of the proposals to further or address compliance with EU Regulations. Whilst 0636, 06363A, and 0636B fail to consider EU Regulation 2017/460 (TAR code), 0636C and 0636D may lead to non-compliance with Regulation 715/2009, which requires non-discriminatory access to networks and tariffs. However, despite the work group’s endeavour, insufficient analysis is included in the modification report to allow for a full assessment of potential impacts following implementation.
<p>National Grid - Comments</p>	<ul style="list-style-type: none"> Modification 0636 seeks to introduce changes to the current OCC arrangements; however National Grid has proposed a new OCC regime as part of the wider charging review modification 0621 wef 1st October 2019. National Grid has been engaging with the industry for a number of years and raised this proposal in June 2017. Furthermore, National Grid also intends to develop enduring OCC (shorthaul) arrangements from 2021 via a UNC Review Group. Highlights that National Grid has certain Licence obligations in relation to implementing some aspects of Regulation (EU) 2017/460 (TAR code) and wider aspects of (EU) 715/2009. National Grid continues to focus on aspects relating to the charging review via 0621 (and its alternatives).

<p>Nephin Energy – Qualified Support</p>	<ul style="list-style-type: none"> • General point raised about now being the time to take action, the status quo is the least acceptable option and this change should not be pushed back into the 621 timetable. • This option is both a review and update of the methodology, which improves its cost reflectivity and an adjustment of M to try to increase the cost recovery when the site has moved to low load factor usage - a fundamental problem in its current structure as a commodity charge. It has the most impact on the level of cross-subsidy which is being passed between markets through the TO charge. • It would be helpful to make explicit the process by which the charge methodology will be updated and include the process to bring it into compliance with Mod 621 in October 2019.
<p>Petronas Energy Ltd - Oppose</p>	<ul style="list-style-type: none"> • The change to the definition of the “M” component in the formula is flawed given historical flows at an exit point are in no way a certain indicator of future flows. This is particularly true of CCGTs, where changes in the relative price of competing fuels for example can have a significant impact upon running regimes from one year to the next. • Furthermore, changes to the definition of “M” within the formula undermine the fundamental principle of the Optional Commodity Charge (“OCC”) being a key factor for developers in determining the investment cost of connecting to the NTS rather than bypassing it by building a private pipeline. We consider any amendment to the formula to be discriminatory against those who made historical investment decisions based on the information at the time and are no longer in a position to undo or adjust those decisions. • Additionally, the proposal contains an update to the OCC formula previously considered within National Grid discussion document GDC11. It should be noted that National Grid did not implement this change after consultation with industry.
<p>RWE Supply & Trading GmbH - Oppose</p>	<ul style="list-style-type: none"> • Fundamentally disagree with the use of historic flow data as a proxy for Load Factor in the NTS Optional Commodity Charge formula. Replacing the capacity-based M (Maximum NTS Exit Point Offtake Rate (MNEPOR)) at the site with a commodity-based M based on average allocated daily energy makes no sense. A pipeline would be designed to meet anticipated peak (capacity) not average flow requirements and the derivation of the Optional Commodity Charge needs to reflect this. • Justification for the change is based on out of date analysis that has already been rejected by the industry (GCD 11, 2015). Flows used to derive the projected benefits are assumed to be unchanged, implying no response to a

	<p>significant change in costs by users of the Optional Commodity Charge. This assumption is not credible. Together, these factors undermine the overall benefits case which, in any case, has not been updated to reflect a later implementation date than that originally envisaged.</p> <ul style="list-style-type: none"> • The cost redistribution from recalculation of commodity rates will create significant distributional impacts at an individual customer site level. These impacts have not been fully analysed or evaluated. We believe that Ofgem is best placed to consider these on a confidential basis. These, together with the gaps identified in the Workgroup Report itself should be addressed by Ofgem as part of a Regulatory Impact Assessment. • For the avoidance of doubt, we agree with the views expressed in the workgroup report that Ofgem should undertake a Regulatory Impact Assessment in line with its own guidance given the materiality of the cost redistribution and impact on consumers. Analysis of the costs and benefits needs to be robust and based on current data.
<p>ScottishPower Energy Management Ltd - Oppose</p>	<p>General comments provided for all of the proposals:</p> <ul style="list-style-type: none"> • It is recognised that since first implemented, utilisation of the Optional Commodity Charge (OCC) has expanded beyond how it was initially envisaged, largely as a result of a greater proportion of revenue now being recovered via commodity charges. That allied to the lack of a review of the design of the charge or input elements to the charge calculation have resulted in a persuasive case for a fundamental examination and potentially overhaul of the OCC. • However, that need for review needs to be considered in the current context and as ever with any issue relating to charging, a wider assessment should be conducted to try to identify and quantify resultant impacts elsewhere in the charging regime and beyond to shipper commercial operations. • Currently the ongoing charging review under MOD0621 Amendments to the Gas Transmission Charging Regime and its Alternatives (MOD0621) have attempted to adopt a holistic approach to reform of the overall charging regime. The OCC and its impacts have been a central factor in the analysis of the current arrangements whilst it has also been recognised that there is a need for a comprehensive review of the structure and design of any such similar charge as part of the future enduring arrangements. • The timing of this proposal, and any of the consequential Alternatives, is such that it risks undermining a significant part of that work, in that it will substantially impact the baseline against which MOD0621 will have been

	<p>assessed. There appears to be no clear governance process that would allow the re-opening of that supporting analysis in the event of any of these proposals being implemented and even if there were the time delays occasioned would seriously jeopardise timeous implementation of MOD621, with potential for EU Tariff Network Code non-compliance as a consequence.</p> <ul style="list-style-type: none"> • In terms of timing: if implemented at its earliest the charge will be applicable for no more than 1 year assuming that either MOD0621 or any of its Alternatives is in turn implemented as at 1st October 2019. Shippers will have been faced with significant change for only a comparatively short period and in some instances with the potential for yet further significant change to enduring arrangements beyond the transitional period. • Shippers will all but inevitably have been left with little or no time to make appropriate contractual provision incorporating the revised charges in the conventional contract round for Gas Year 2018/19, as highlighted in representations by Petronas and ESB during the development of the proposals.
<p>Scotland and Southern Gas Networks - Support</p>	<ul style="list-style-type: none"> • Supports Mod 0636 as it is an appropriate means of updating the Optional Commodity Charge (OCC) formula that was introduced nearly 20 years ago. This mod aims to reduce the current levels of cross subsidy that is being experienced by those sites who are unable to benefit from the option of the OCC. We believe that 0636 would provide the largest reduction in cross subsidy and therefore should be implemented ahead of the alternatives.
<p>Shell Energy Europe - Oppose</p>	<ul style="list-style-type: none"> • Adjusting the assumed capacity of the alternative by-pass pipeline against which the OCC charges are calculated by replacing the MNEPOR in the current formula with the average daily flow at the exit point from the previous Gas Year divided by 75% does not reflect the costs associated with avoiding inefficient bypass of the NTS as pipelines are not built to facilitate average flow rates but built to facilitate the maximum offtake rate, which is captured by the current calculation.
<p>South Hook Gas – Oppose</p>	<ul style="list-style-type: none"> • With the UK gas network already facing a highly changeable environment due to the approaching deadline for defining and implementing the UK charging review we view the implementation of Mod 636 as a distraction which will only increase market uncertainty. The proposed timeline for Mod 636 would add an administrative burden in the form of contractual administration, revisions to operational procedures and additional requirements for employee training simply for a temporary change and at a time where the focus should be on the long term regulatory framework for the UK Gas Network. Further given the proposed limited lead times set out in the proposals, there will be no

	<p>opportunity for the market to reflect the new charges in offerings to customers. In most cases contracts will have been struck and will not allow for “price reopeners” for the upcoming Gas Year.</p> <ul style="list-style-type: none"> • Suggests the proposal is unsound for a number of reasons: <ul style="list-style-type: none"> - The application of the RIIO-T1 portfolio of pipeline sizes, as set out in Option 1 of GCD11 has not been tested for its suitability when used as a proxy for private pipelines. There is no evidence to suggest that routes which use OCC incorporate these pipeline diameters. This is one of the reasons why Option 1 was not pursued by National Grid, nor in its subsequent OCC methodology set out in Mod 621 - In addition to the above, the application of a broader portfolio of pipeline diameters is combined with cost assessments which are contained in RIIO-T1, but not subject to public scrutiny. There is no evidence to suggest that the costs associated with these pipelines are a reasonable proxy for the construction of private pipeline systems. Given OCC is based on the principle that it should provide a reasonably priced alternative for a system bypass, any misapplication of costs will result in inaccurate cost references and ill-informed investment decisions by customers - The use of a M-factor based on historical flow date is flawed. Historical flows are a poor indicator of future flows, particularly where demand is likely to be volatile and unpredictable (such as power generation) and to construct a transmission fee on such a variable will lead to widely differing charges (across years and across offtakes). It is erroneous to charge a single plant a different charge each year where the same pipeline infrastructure is being used. This equally applies to similar offtakes, similar distances from an entry point, but with differing flows in the previous year. • As OCC is intended to provide an indicator of costs to bypass the NTS, these costs should reflect the infrastructure put in place to support flows and as a result should be largely fixed. Ongoing annual variations in charges must mean that they are not cost reflective (costs are predominately fixed) and will prohibit customers from making economic assessments of the relative costs of using or bypassing the NTS.
<p>SSE - Oppose</p>	<ul style="list-style-type: none"> • The formula for determining the optional commodity charge uses an M value derived from the previous year’s gas flows whilst suggesting that the formula itself would be more cost reflective. It is incorrect to suggest that the costs of building a pipeline fluctuate year-on-year subject to the previous year flow. Therefore the resulting optional charge cannot be cost reflective - hence is negative against charging RO a. • As the charge is not considered cost reflective it cannot be positive for

	<p>competition and charging RO c, the impact will therefore be negative.</p>
<p>Triton Power Limited - Oppose</p>	<ul style="list-style-type: none"> • All modification proposals are unsuitable to address compliance with EU Regulations. The proposals either fail to address the TAR code or introduce discrimination between IPs and non-IPs in their attempt to comply. Triton Power concurs with the Aughinish Alumina and Gazprom Marketing & Trading interpretations that any proposed changes to charges should reflect the process set out in the EU Tariff Code Regulation, however, as these mods result in discrimination between OCC Users then they fail on all of the other objectives, in particular cost reflectivity and competition • Unable to accurately assess the extent to which the proposed modifications better facilitate the Charging Methodology Objectives due to the lack of analysis contained in the Modification report. An argument can be made that all of the modifications have a negative effect on objectives, and it could also be argued that 0636B & D have a positive impact on charging methodology objectives a & c however for a limited period of time. It is essential that Ofgem carry out full regulatory impact assessment prior to making any decision on proposals so clarity can be provided to the industry. Without this analysis any modification could lead to unintended changes of behaviour which later undermines the decision.
<p>Uniper - Oppose</p>	<ul style="list-style-type: none"> • One of the key aspects of this Modification Proposal is to revise the current shorthaul formula using an “M” value based on the previous year’s gas flows. The proposer argues that the shorthaul formula would, as a result, be more cost reflective. Shorthaul is designed to be an alternative to the cost of building a pipeline, but these costs do not fluctuate year to year in the same manner as gas consumption. Therefore, the resulting optional charge cannot be considered any more ‘cost reflective’ than the current formula. • Any annual fluctuation in gas consumption would also give rise to uncertainty about the following year’s shorthaul rate. As noted elsewhere in this response, contracts involving shorthaul are often concluded many months ahead of the new gas year and some will cover multiple gas years. The current arrangements, on the other hand, provide an enduring rate that is known and fixed until the Shipper cancels it. This provides the required certainty for contracting purposes. Thus, we fail to see how this proposal improves on the current arrangements, in terms of market efficiency.
<p>Vermilion Energy Ireland Ltd – Support</p>	<ul style="list-style-type: none"> • Restores some credibility to the cost reflectivity of the OCC charge: The OCC charge has been in existence for over 20 years and the rates which were

	<p>intended to represent the underlying cost of alternative “by-pass” pipelines have not been updated since the charge was introduced. Current OCC rates do not even cover the operating costs of pipelines let alone the capital costs³² (see Appendix 4 of workgroup report). Mod 636 is distinctly different from the alternative proposals in its use of a capacity value that is consistent with the assumed utilisation of 75%. It is unlikely that users could justify such considerable investment in a pipeline with lower utilisation. All other alternatives neglect this and thereby the resulting OCC tariffs do not reflect the actual cost per kWh of a by-pass pipeline.</p> <ul style="list-style-type: none"> • National Grid Gas have estimated that the potential cross-subsidy could be up to £150m per annum. OCC flows are around 30% of total chargeable flows but only contribute 7% of total commodity revenues. • Reduces undue discrimination: The current OCC rates lead to a two tier commodity charging arrangement even though all end-users are using the same transmission system. The OCC is only available to large loads (primarily connected to the NTS) and Interconnectors and is not generally available to load further downstream within the DNs, nor indeed to the DNOs acting on behalf of such loads. This is particularly relevant when considering that flows leaving GB at Interconnection Points are eligible for the OCC rate irrespective of their final downstream customer. Setting a more cost reflective charge that is just sufficient to prevent a real threat of by-pass but not so low as to be inefficient could be considered due discrimination. • Reduces the risk of non-compliance: Cost reflectivity and non-discrimination are the underlying principles of both EU 2009/715 and EC 460/2017 • Is an important stepping stone to a longer term solution: This proposal halves the potential cross-subsidy and allows time for further consideration of the most suitable approach for the longer-term. • Still retains the option of an attractive OCC: The OCC is still an attractive option. The costs used in the charge rate are still understated as Users pay the same OCC for any amount of flow even if this is above the inferred maximum; distance is assumed to be in a straight line; there is a benefit of aggregation at Interconnectors; there is no commitment to pay a minimum level of charges and there is flexibility to opt in and out of the short-haul option
VPI Immingham LLP -	<ul style="list-style-type: none"> • Does not agree that 0636 is more cost reflective for short haul users. 0636

³² Appendix 3 of the workgroup report highlights that National Grid derived pipeline costs from the GCD11 formula are consistent with other published data.

<p>Oppose</p>	<p>calculates M values (Maximum NTS Exit Point Offtake Rate) using a user's previous year's gas flows which will vary year on year. This is not consistent with our interpretation of the OCC - the cost of which should be linked to a user's historic decision not build a private pipeline to bypass the NTS. 0636 may result in the OCC becoming a variable tariff which means that is also assumed that the cost of building physical pipelines could dramatically change year-on-year. The GB energy market is undergoing a significant period of change so it also remains unclear – if 0636 was an enduring solution - what impact increased/decreased OCC tariffs would have on lower/higher consumption.</p> <ul style="list-style-type: none"> • Believe that the calculation of OCC tariff for genuine shorthaul users should be independent of cost recovery mechanisms for new gas transmission investment.
<p>Wales & West Utilities - Support</p>	<ul style="list-style-type: none"> • Does not support the principle of the NTS Optional Commodity Charge because it provides an unjustified cross subsidy to those customers that make use of it (therefore the NTS Optional Commodity Charge has not been demonstrated to satisfy charging relevant objective (b)) and our comments below are made in this context. • Support Modification 0636 and prefer it over the alternatives. • Notwithstanding the comments above, given that the NTS Optional Commodity Charge exists it is clearly appropriate for the charges to be updated and we believe that 0636 provides an appropriate means of doing this. This proposal provides a proportionate response to the issue bearing in mind that the NTS charges will undergo a major change in October 2019 as a result of one of Modification 0621 or its alternatives being implemented. 0636 also results in the greatest reduction of the cross subsidy which we believe is intuitively the correct approach (an additional £75.5M of commodity revenue paid by those no longer on the Optional Commodity Charge).

Representations were received from the following parties with regards to 0636A:

<p>Organisation & Response</p>	<p>Key Points</p>
<p>Aughinish Alumina Limited - Oppose</p>	<ul style="list-style-type: none"> • As per our comments for 0636.
<p>BP Gas Marketing -Oppose</p>	<ul style="list-style-type: none"> • This modification is intended to be an interim solution. This assumes that modification 0621 or any of its alternatives or 0653 are implemented. If none of these proposals are implemented this proposal would become the

	<p>enduring solution. However, this would then discriminate against Interconnection Points once the TAR network code has been implemented within the GB market.</p>
<p>Cadent Gas Ltd - Oppose</p>	<ul style="list-style-type: none"> • 0636A differs from 0636 in that it retains the existing charges, but imposes a 'distance cap' at 115km. Although this results in Users at a distance greater than this becoming ineligible for the charge, many within the threshold still are. This results in a potential reduction in cross subsidy limited to £36.5m. • With the cost parameters remaining outdated, the sites that are eligible will continue to pay the OCC under the same methodology as today. This proposal is therefore, not supported.
<p>Centrica - Oppose</p>	<ul style="list-style-type: none"> • Highlight that the issues raised in respect of proposal 0636 also apply to proposal 0636A, apart from concerns around the basis for establishing the peak daily offtake in the OCC formula. • There is no objective justification for implementing a distance cap or for setting such a cap at 115km. Such an arbitrary restriction on the optional charge would have the effect of distorting competition in the marketplace. • Understand that the economics of developing an NTS by-pass pipeline are likely to deteriorate with increasing pipeline length, there is no sound logic in terms of cost-reflectivity for an arbitrary cut-off as envisaged in proposal 0636A, whether at 115 km or any other specific distance. There is also at least one NTS by-pass precedent (the SEAL offshore pipeline from Elgin/Shearwater to Bacton) which is very substantially longer than 115 km.
<p>Ceres Energy – Oppose</p>	<ul style="list-style-type: none"> • Oppose this option. The distance is arbitrary and there is no change to the methodology.
<p>ConocoPhillips (UK) Ltd - Oppose</p>	<ul style="list-style-type: none"> • See comments under 0636.
<p>Corona Energy - Oppose</p>	<ul style="list-style-type: none"> • Do not support 0636A as it is our opinion that the chosen solution should be the enduring solution and which should be TAR NC compliant.
<p>EDF Energy - Oppose</p>	<ul style="list-style-type: none"> • Feels this modification has some merit as it updates the formula components to reflect today's cost of steel and laying pipe however it restricts its use by applying an arbitrary distance cap of 115km which has no economic basis behind it. Therefore, while it reduces the amount of discrimination above 115km and reduces the level of cross subsidy in line with improving competition under Charging RO c it cannot be considered cost reflective and does not meet Charging RO a. However, due to the short notice for change it would be detrimental to competition.

<p>EDF Trading - Oppose</p>	<ul style="list-style-type: none"> Feels this inclusion of a distance cap which has been derived by excluding a fixed proportion of OCC flows from being able to access the product is entirely arbitrary and without proper justification. For this reason it fails to facilitate any of the Relevant Charging Objectives and will actively discriminate across customers
<p>ENI Trading and Shipping SPA - Oppose</p>	<ul style="list-style-type: none"> Discriminating against IPs
<p>EP UK Investments - Oppose</p>	<ul style="list-style-type: none"> See comments under 0636.
<p>ESB - Oppose</p>	<ul style="list-style-type: none"> As overall comment above. An arbitrary distance cap does not further cost reflectivity or competition.
<p>Floglas Britain Ltd - Oppose</p>	<ul style="list-style-type: none"> Opposes this option. Although it seems to be recognising the original intention of the tariff, any distance cap is simply arbitrary if the formula is not updated. The level of improvement in cost-recovery is low.
<p>Interconnector IUK Ltd Oppose</p>	<ul style="list-style-type: none"> See comments within 0636
<p>InterGen Oppose</p>	<ul style="list-style-type: none"> See comments under 0636.
<p>National Grid - Comments</p>	<ul style="list-style-type: none"> Modification 0636A seeks to introduce changes to the current OCC arrangements; however National Grid has proposed a new OCC regime as part of the wider charging review modification 0621 wef 1st October 2019. National Grid has been engaging with the industry for a number of years and raised this proposal in June 2017. Furthermore, National Grid also intends to develop enduring OCC (shorthaul) arrangements from 2021 via a UNC Review Group. Highlights National Grid has certain Licence obligations in relation to implementing some aspects of Regulation (EU) 2017/460 (TAR code) and wider aspects of (EU) 715/2009. National Grid continues to focus on aspects relating to the charging review via 0621 (and its alternatives).
<p>Nephin Energy – Oppose</p>	<ul style="list-style-type: none"> Oppose the introduction of a distance-cap for the OCC. Although it ostensibly addresses disparity between the original intention of a shorthaul tariff to avoid by-pass and its current use, it is arbitrary and creates additional undue discrimination between exit points.

<p>Petronas Energy Ltd - Oppose</p>	<ul style="list-style-type: none"> Given the ongoing work and analysis around Modification 621, which will include changes to the OCC from Oct-2019 (most of which conflict with Modification 636), any interim arrangements are not conducive to a stable charging environment. This has a detrimental effect upon Customers for whom it would be extremely difficult to contract in such an unstable environment, as well as negatively impacting upon investment decisions by Shippers. Please see further detail below. Implementation of Modification 636 (or any of its variants) would invalidate the analysis currently being undertaken as part of Modification 621 which has been based and calculated upon the current status of the OCC. Any change would therefore require a review of this analysis as it would clearly have an influence on responses to that Modification.
<p>RWE Supply & Trading GmbH - Oppose</p>	<ul style="list-style-type: none"> Proposals 0636A, 0636B and 0636D either include an update to the cost base used to determine the Optional Charge or introduce a distance cap. While these are consistent with Modification Proposal 0621 and its Alternatives (except 0621C and 0621D) which will implement an update to the Optional Commodity Charge from October 2019, we do not support making changes in October 2018, for the 2018/19 gas year, even if that date was achievable. Implementing a change in October 2018 will expose Users of the Optional Commodity Charge to commercial risk in respect to contracts already agreed and give little time for the market to react before another change is made. Frequent changes the Optional Commodity Charge in a relatively short space of time is unwelcome and disruptive and we believe changes should only be made as part of the comprehensive reforms to the charging regime from October 2019.
<p>ScottishPower Energy Management Ltd - Oppose</p>	<ul style="list-style-type: none"> See comments under 0636.
<p>Scotland and Southern Gas Networks - Oppose</p>	<ul style="list-style-type: none"> Unable to support 0636A as it keeps the existing charges. The key variance in this mod is that it would introduce a distance cap of 115km. Sites situated at a distance greater than 115km would therefore no longer benefit from the NTS Optional Commodity Charge. 0636A would have the effect of smearing costs over the remaining population of sites which we believe is not cost reflective and does nothing to update the formula that is currently used.
<p>Shell Energy Europe - Oppose</p>	<ul style="list-style-type: none"> Introducing an arbitrary distance cap is not cost-reflective and whilst we accept that the optional commodity tariff was envisaged to capture entry and exit sites in close proximity to each other, the limiting factor should be

	<p>inherent in the calculation, rather than imposing an arbitrary limit, which does not reflect alternative costs of bypassing the system.</p>
<p>South Hook Gas – Oppose</p>	<ul style="list-style-type: none"> The imposition of what appears to be an arbitrary distance cap, based on an exclusion of fixed proportion of flows from qualifying from use of the OCC (25% by distance). Their exclusion cannot be viewed as adopting cost reflective principles as costs are not a consideration when drawing up the distance cap.
<p>Triton Power Limited - Support</p>	<ul style="list-style-type: none"> See comments under 0636. Supports modification alternative 0636A as the least worst option of a set of modifications which do not comply with EU Regs. 0636A limits the amount of change, and therefore retains a level of regulatory stability, whilst addressing a key concern that users located far from an entry point are accessing OCC which is designed to avoid inefficient bypass of the NTS by users close to an entry point building and operating private pipelines. This concept remains valid and 0636A retains the fair discount to users where a private pipeline is a realistic alternative whilst excluding those users with no economic justification to bypass the NTS.
<p>Uniper - Oppose</p>	<ul style="list-style-type: none"> Applying an arbitrary distance limit may limit the availability of shorthaul, but in our view, such a limit demonstrates a weakness in the underlying formula which should be self-limiting. As any distance limit for shorthaul is essentially, arbitrary, the proposal cannot be considered any more cost reflective than the current arrangements.
<p>Vermilion Energy Ireland Ltd – Qualified Support</p>	<ul style="list-style-type: none"> Reduces discrimination for distances above 115km Does not affect discrimination nor improve cost reflectivity for distances equal to or below 115km Is a small stepping stone to a longer term solution: It reduces the potential cross-subsidy by a quarter.
<p>VPI Immingham LLP - Support</p>	<ul style="list-style-type: none"> 0636A is a practical approach which seeks to address the concern that large users and shippers are entering into shorthaul commercial contracts over ever increasing distances. Following engagement with National Grid, a distance cap of 115km was proposed as an interim solution before 0621/0653 could be implemented on the 1st October 2019 (see comments in 1.5.) VPI note that several 0621 modifications recommend a 60km distance cap between 2019 and 2021. Believes that 0636A presents a transitional solution which will result in minimal disruption to commercial agreements struck by the market whilst

	<p>also addressing concerns that some longhaul offtakers are able to utilise shorthaul tariffs at the expense of all other users. It is not clear at this stage - without the necessary impact analysis - what the impact will be on all end consumers.</p> <ul style="list-style-type: none"> Notes that 0636A and 0636B do not take account of EU Regulation 2017/460 which requires different arrangements at interconnection points from the 1st October 2019. As stated previously, VPI recommends that a more limited charging solution is implemented from the 1st October 2019 which is compliant with EU Regulations. Although VPI agrees that a modification is either “compliant” or “not compliant” we do not agree that these practical proposals discriminate against interconnection points as there will be further changes to gas charging frameworks ahead of the stated deadline for EU compliance.
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Representations were received from the following parties with regards to 0636B:	
Organisation & Response	Key Points
Aughinish Alumina Limited - Oppose	<ul style="list-style-type: none"> As per our comments for 0636.
BP Gas Marketing - Oppose	<ul style="list-style-type: none"> This modification is intended to be an interim solution. This assumes that modification 0621 or any of its alternatives or 0653 are implemented. If none of these proposals are implemented this proposal would become the enduring solution. However, this would then discriminate against Interconnection Points once the TAR network code has been implemented within the GB market.
Cadent Gas Ltd - Oppose	<ul style="list-style-type: none"> This updates the cost parameters by indexing to RPI. However, this only increases the contribution to £61m (from £48.4m in 2017/18) and does not increase the amount collected through the Standard Commodity charges. 0636B has a potential reduction of £12.8m in cross subsidy. Compared to 0636, this has a minimal impact and is therefore, not supported
Centrica - Oppose	<ul style="list-style-type: none"> Highlight that the issues raised in respect of proposal 0636 also apply to proposal 0636A, apart from concerns around the basis for establishing the peak daily offtake in the OCC formula.
Ceres Energy – Oppose	<ul style="list-style-type: none"> Opinion that simply updating the parameters for 20 years inflation is insufficient response to the problem of the mismatch between the intention of the optional shorthaul charge and its extensive utilisation across the network. It is a weak solution in terms of the redistribution of the TO charge. It is also proposed as an

	enduring solution perpetuating the disconnect between network economics and the tariff.
ConocoPhillips (UK) Ltd - Oppose	<ul style="list-style-type: none"> See comments under 0636.
Corona Energy - Oppose	<ul style="list-style-type: none"> Do not support 0636B as it is our opinion that the chosen solution should be the enduring solution and which should be TAR NC compliant.
EDF Energy - Oppose	<ul style="list-style-type: none"> Feels that while UNC636B updates the formula with RPI indexation it still doesn't address the size of pipe that would be built nor the distance over which it is being used and is therefore not sufficiently cost reflective and doesn't better the Charging RO a. Given it is a small improvement in the formula and the fact that the level of reduction in cross-subsidy is also very small it doesn't better facilitate competition under Charging RO c. Also, due to the short notice for change it would be detrimental to competition.
EDF Trading - Oppose	<ul style="list-style-type: none"> Feels this proposals has some merit as it limits the changes to the formula to an uplift on underlying costs to RPI. Unlike Mods 0636 and 0636C, the proposal ensures that the OCC tariff is updated in line with price inflation and does not attempt to undermine existing OCC arrangements by falsely applying costs. It should also be noted that the proposal is consistent with the majority of Mod 0621 proposals, absent a distance cap and therefore, could be considered as a reasonable transition towards a likely enduring solution. We believe 0636B may have some positive effect with regards to RO a and c in that cost reflective charges can facilitate competition. However, we would like to reiterate that the positive effect would be short-lived since as of 1st October 2019 commodity charges would not be allowed at IPs according to TAR network code. Notwithstanding the possible positive effect with regards to RO a and c, we do not believe for reasons expressed at the beginning of the response that this proposal, or any of the other proposals should be implemented.
ENI Trading and Shipping SPA - Oppose	<ul style="list-style-type: none"> Discriminating against IPs
EP UK Investments - Oppose	<ul style="list-style-type: none"> See comments within 0636
ESB - Oppose	<ul style="list-style-type: none"> As above for 0636.
Floglas Britain Ltd Oppose	<ul style="list-style-type: none"> Feels when nothing has been done with the level of charge for 20 years a simple escalation of the linear coefficients by RPI is not sufficient.

<p>Interconnector IUK Ltd</p> <p>Oppose</p>	<ul style="list-style-type: none"> • See comments within 0636
<p>InterGen</p> <p>Oppose</p>	<ul style="list-style-type: none"> • See comments under 0636.
<p>Nephin Energy –</p> <p>Oppose</p>	<ul style="list-style-type: none"> • Implementing a simple uprating of the multipliers in the formula by RPI since 1998 (after twenty years) is not more cost- reflective than the, albeit less transparent, updating under 636 and 636C. Since this option has low impact on the under-recovery and makes almost no impact on the volume of gas flowing under the OCC rather than standard tariff, it is insufficiently addressing the problem.
<p>Petronas Energy Ltd -</p> <p>Oppose</p>	<ul style="list-style-type: none"> • See comments under 0636A.
<p>RWE Supply & Trading GmbH -</p> <p>Oppose</p>	<ul style="list-style-type: none"> • See comments under 0636A.
<p>ScottishPower Energy Management Ltd -</p> <p>Oppose</p>	<ul style="list-style-type: none"> • See comments under 0636.
<p>Scotland and Southern Gas Networks -</p> <p>Oppose</p>	<ul style="list-style-type: none"> • Not supportive of Mod 0636B as it does little to address the issue of cross subsidy furthermore it is our view that the benefits of making this change would be outweighed by the costs experienced by industry parties of implementing it.
<p>Shell Energy Europe -</p> <p>Oppose</p>	<ul style="list-style-type: none"> • Whilst it is anticipated that these proposals will work in the interim, prior to implementation of 0621, the proposals have to be evaluated on an enduring basis as there are no guarantees that the proposals under 0621 will be implemented. On this basis, this proposal fails to meet the requirements under the EU tariff network code (NC TAR), which must be in place for May 2019, as it would discriminate against Interconnection Points (IPs), where commodity charges will no longer apply.
<p>South Hook Gas –</p> <p>Qualified Support</p>	<ul style="list-style-type: none"> • The proposal builds on Option 2 presented in GCD11 and is consistent with Mod 621, except for a distance cap. It could be viewed as sensible transition towards the likely implementation of Mod 621 (and virtually all of the alternatives), notwithstanding our general opposition to any premature and disjointed changes to the charging regime at this juncture. • The application of RPI on the underlying OCC costs is an appropriate method

	<p>for scaling those cost elements which have been deemed appropriate since the inception of OCC.</p> <ul style="list-style-type: none"> Where customers have made investment decisions in the past, whether to use or bypass the NTS, the assessments were made based on a reference cost underpinned by the existing OCC formula. Given the NTS or the alternative pipeline is a fixed asset, going forward it is reasonable that the reference cost is uplifted by RPI and not, as proposed in 636 and 636C by a steel index.
Triton Power Limited - Oppose	<ul style="list-style-type: none"> See comments under 0636.
Uniper - Oppose	<ul style="list-style-type: none"> 0636B does not properly take account of EU Regulation 2017/460 (NC TAR), which requires different arrangements at interconnection points (IPs) from 1 October 2019, on the basis that commodity charges are not allowed at IPs.
Vermilion Energy Ireland Ltd – Qualified Support	<ul style="list-style-type: none"> Partially addresses cost reflectivity: as it uplifts the OCC charges by RPI but no account is taken of the assumed load factor and so the RPI inflated rate is still well below a cost reflective rate. Does not improve discrimination: there is minimal change to the OCC tariffs and hence minimal change to flows or eligible routes. Is only a very small stepping stone to a longer term solution: Only reduces the potential cross-subsidy by 10%.
VPI Immingham LLP - Oppose	<ul style="list-style-type: none"> Continues to believe that the OCC tariff should reflect historic investment decisions to not bypass the NTS.
Wales & West Utilities - Oppose	<ul style="list-style-type: none"> Does not support 0636B as it has a minimal effect on the cross subsidy. Feels Modification 0636B introduces a methodology into the UNC. This could have been done by a separate modification. Modification 0636B makes some changes to the formula but the net result is only an extra £0.3M collected by means of standard commodity charges. It thus has a minimal effect on the cross subsidy.

Representations were received from the following parties with regards to 0636C:

Organisation & Response	Key Points
Aughinish Alumina Limited - Qualified Support	<ul style="list-style-type: none"> Aughinish proposal to exempt IPs from Mod 0636.

<p>BP Gas Marketing - Oppose</p>	<ul style="list-style-type: none"> This proposal exempts Interconnection points until an enduring solution recognising the European Tariff Network Code requirements is implemented. Different treatment of IP's compared to domestic entry/exit points is discriminatory. The proposal sights the anticipated implementation on modification proposal 0621. 0621 an it's alternatives are out to consultation at present. There is no guarantee that any of those modification proposals will eventually be implemented.
<p>Cadent Gas Ltd - Oppose</p>	<ul style="list-style-type: none"> This proposal differs in that the updated formula would only apply to those Exit and Entry Points that were not Interconnector Points. 0636C has a more favourable forecasted reduction to the cross subsidy of £44.8m. In our opinion though, this benefit is outweighed by the potentially discriminatory nature of the proposals as they would apply to non-interconnector points only. This is therefore, not supported.
<p>Centrica - Oppose</p>	<ul style="list-style-type: none"> Highlight that the issues raised in respect of proposal 0636 also apply to proposal 0636C, apart from concerns the proposal discriminates against Interconnection Points and those around the basis for establishing the peak daily offtake in the OCC formula. Proposal 0636C does take some account of the changing legal landscape with respect to setting gas transportation charges but in doing so it wants to make a case for special treatment, if either the entry or exit point in an optional charge pairing is an IP. This would result in a dual optional charge regime that discriminates in favour of IPs. Whilst this would help to encourage cross border flows of gas, consistent with the EU Regulation, a more holistic approach to setting optional charges is preferable. The level of discrimination proposed is significant and is undue.
<p>Ceres Energy – Qualified support</p>	<ul style="list-style-type: none"> Offer qualified support to this option. It is best in terms of a reform which relates to the pipeline economics and redistribution of TO back across most system users. Ceres recognises the issues with EU compliance but this needs only to apply to cross border trade and so exemptions should be limited to true transit routes.
<p>ConocoPhillips (UK) Ltd - Oppose</p>	<ul style="list-style-type: none"> See comments under 0636.
<p>Corona Energy - Support</p>	<ul style="list-style-type: none"> Support 0636C as this solution reduces the cross-subsidy over non-OCC users from approx. £150m to approx. £105m based on the National Grid NTS impact assessment, while ensuring that the solution is enduring and

	TAR NC compliant.
EDF Energy - Oppose	<ul style="list-style-type: none"> Appreciates there is some significant merit in UNC636c as it supports the updating of OCC charges for non-IPs as per the original UNC636 mod and thus better facilitates Charging RO a cost reflective charges. However, due to the short notice for change it would be detrimental to competition. Also, by excluding Interconnectors from this updating of the charge it provides special treatment for Interconnection Points (IPs) without proper justification. It could therefore be considered discriminatory and thus is negative under Charging RO e as EU regulations prohibit discriminatory charges. In terms of EU TAR, it does confer some differences for IPs by removing Commodity charges from them but a) this is not needed until October 2019 and b) its about removing Commodity charges not conferring special treatment regarding a specific tariff. However, given it does reduce the amount of cross-subsidisation by using a more cost reflective method as per UNC636 we consider it is the next best modification after UNC636 which would see some benefits for consumers at some point but not from October 2018.
EDF Trading - Oppose	<ul style="list-style-type: none"> See comments under 0636.
ENI Trading and Shipping SPA - Oppose	<ul style="list-style-type: none"> Discriminating against domestic points
EP UK Investments - Oppose	<ul style="list-style-type: none"> See comments within 0636
ESB – Qualified Support	<ul style="list-style-type: none"> As above for 0636. Exemption of IPs from any change outside of the full methodology review under 0621 would serve to mitigate our concerns with TAR and impact on neighbouring markets.
Floglas Britain Ltd - Qualified Support	<ul style="list-style-type: none"> Is not in a position to comment in detail on the arguments on harmonising compliance. However if exclusion of the interconnectors is necessary to get an early implementation, Flogas would be content to see routes truly connecting trade across countries being excluded from the change; this would be only between entry and exit points connected to another country.
Interconnector IUK Ltd - Oppose	<ul style="list-style-type: none"> See comments within 0636
InterGen - Oppose	<ul style="list-style-type: none"> See comments under 0636.
National Grid - Comments	<ul style="list-style-type: none"> Modification 0636C seeks to introduce changes to the current OCC arrangements; however National Grid has proposed a new OCC regime as

	<p>part of the wider charging review modification 0621 wef 1st October 2019. National Grid has been engaging with the industry for a number of years and raised this proposal in June 2017. Furthermore National Grid also intends to develop enduring OCC (shorthaul) arrangements from 2021 via a UNC Review Group.</p> <ul style="list-style-type: none"> Highlights National Grid has certain Licence obligations in relation to implementing some aspects of Regulation (EU) 2017/460 (TAR code) and wider aspects of (EU) 715/2009. National Grid continues to focus on aspects relating to the charging review via 0621 (and its alternatives).
Nephin Energy – Qualified Support	<ul style="list-style-type: none"> Recognise the fundamental problem from October 2019, that for cross-border trade, the Optional Commodity Charge, as a commodity charge will not be compliant with the EU Tariff Code. Nothing in this consultation addresses that problem. If it is expedient to delay changes that would affect cross-border trade in order to get an early improvement in the OCC, Nephin would support this. However the exclusion of IPs should be restricted to those which are truly cross-border.
Petronas Energy Ltd - Oppose	<ul style="list-style-type: none"> See comments under 0636A. Highlight that with regards to 636C, the OCC is an exit service so we are surprised to see an entry element introduced into the formula for the value of “M”.
RWE Supply & Trading GmbH - Oppose	<ul style="list-style-type: none"> See comments under 0636.
ScottishPower Energy Management Ltd - Oppose	<ul style="list-style-type: none"> See comments under 0636.
Scotland and Southern Gas Networks - Oppose	<ul style="list-style-type: none"> Mod 0636C would introduce a level of discrimination into NTS Optional Commodity Charges that we would not be able to support. This modification would also require Xoserve Systems changes that would not be delivered in time for the modification implementation date of the 1st October 2018 therefore this is not a viable option.
Shell Energy Europe - Oppose	<ul style="list-style-type: none"> See response under 0636 regarding MNEPOR.
South Hook Gas – Oppose	<ul style="list-style-type: none"> Do not agree that the IPs merit individual treatment due to the EU Tariff Code. The provisions of the Tariff Code need only apply after May 2019, and in the case of GB, at the next charging setting period of October 2019.

	<p>Where any provisions in the UNC do not comply with the EU Tariff Code, including any changes made as a result of the implementation of changes to OCC prior to this date, then future changes could and should be made.</p> <ul style="list-style-type: none"> • Also, do not agree that IPs should qualify based on entry and exit capacity. This is at odds with the current application of OCC and no arguments have been presented as to why an entry point should qualify as a nominated point for the purposes of identifying an OCC route. • In terms of the treatment of non-IP offtakes, the proposal mirrors the methodology changes set out in Mod 636, which as we described earlier are deeply flawed.
SSE - Oppose	<ul style="list-style-type: none"> • See comments under 0636 in relation to M value.
Triton Power Limited - Oppose	<ul style="list-style-type: none"> • See comments under 0636.
Uniper - Oppose	<ul style="list-style-type: none"> • See comments under 0636 in relation to M value.
Vermilion Energy Ireland Ltd - Oppose	<ul style="list-style-type: none"> • Proposes the same updated charge rates as 636 but only for non-IPs. • Seeks a special arrangement at Interconnector Points (entry and exit) and is neither compliant with current EU legislation (EU 715/2009) nor future NC Tar legislation (EC 2017/460). • Is discriminatory and does not introduce fair competition: It would effectively introduce a third tier commodity charge. Building alternative pipes will not cost any less if the input or offtake is an IP (and size of pipe is already accounted for in the formula). It is unclear why an overseas large user offtake should get cheaper transport than in GB nor why an overseas distribution network user should get <i>any</i> discount when a GB one gets none?
VPI Immingham LLP - Oppose	<ul style="list-style-type: none"> • 636C uses the same annual flow based calculation as 0636. We do not believe calculating variable tariffs using the previous year's annual flows is the appropriate way to reflect foregone costs of building private gas network infrastructure. • Note that there are challenges delivering 0636C within the timescales available.
Wales & West Utilities - Oppose	<ul style="list-style-type: none"> • Does not support Modification 0636C as we do not support the discrimination it introduces and because the proposal cannot be implemented in the time available. • Feels the main feature of Modification 0636C is that the updated formula

	<p>would only apply where both the exit point and entry point were not Interconnector Points. Those that did include Interconnector Point at either entry or exit point would continue to benefit from the current charges that are more beneficial to them. We do not find the arguments put forward in favour of this discrimination compelling. We note the point about EU Tariff Code compliance but observe that although in principle the 0636 series of changes are enduring, in practice they will be overwritten by on of the Modification 0621 series. A further major difficulty is that the proposal would require a significant change to Xoserve systems and therefore there is no likelihood of this being implemented for October 2018 meaning that the benefits of the reduced cross subsidy will be lost for at least a year. The consequence of raising 0636C (which was raised late in the process) has therefore been to extend the workgroup discussions thereby reducing the notice period available should one of the other proposals be implemented.</p>
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Representations were received from the following parties with regards to 0636D:

Organisation & Response	Key Points
Aughinish Alumina Limited - Qualified Support	<ul style="list-style-type: none"> This alternative exempts IPs hence Aughinish could support 0636D
BP Gas Marketing - Oppose	<ul style="list-style-type: none"> As with modification 0636C there is an element of discrimination in this proposal by exempting IP's.
Cadent Gas Ltd - Oppose	<ul style="list-style-type: none"> This proposal is similar to that in 0636C in that an updated formula would apply to non- Interconnector Points only but uses a different formula. Compared to 0636, 0636D is another proposal that has minimal impact with a potential reduction in cross subsidy of £10.8m. In our opinion, this also introduces possible discrimination as the changes would apply to non-interconnector points only, and is therefore, not supported.
Centrica - Oppose	<ul style="list-style-type: none"> Highlight that the issues raised in respect of proposal 0636 also apply to proposal 0636D, apart from concerns the proposal discriminates against Interconnection Points and those around the basis for establishing the peak daily offtake in the OCC formula. Proposal 0636D does take some account of the changing legal landscape with respect to setting gas transportation charges but in doing so it wants to make a case for special treatment if the exit point in an optional charge pairing is an IP. This would result in a dual optional charge regime that discriminates

	<p>in favour of IPs. Whilst this would help to encourage cross border flows of gas, consistent with the EU Regulation, a more holistic approach to setting optional charges is preferable. The level of discrimination proposed is significant and is undue.</p>
<p>Ceres Energy – Oppose</p>	<ul style="list-style-type: none"> As with option 636B consider that RPI escalation is inadequate as a reform and that this option has too little impact on the cross-subsidy through the TO charge.
<p>ConocoPhillips (UK) Ltd - Oppose</p>	<ul style="list-style-type: none"> See comments under 0636.
<p>Corona Energy - Oppose</p>	<ul style="list-style-type: none"> Support 0636C over 0636D due to 0636C reducing the cross-subsidy to a greater extent than 0636D.
<p>EDF Energy - Oppose</p>	<ul style="list-style-type: none"> UNC636D updates the formula as per GDC11 option 1 it still doesn't address the size of pipe that would be built nor the distance over which it is being used and is therefore not sufficiently cost reflective and doesn't better the Charging RO a. Given it is a small improvement in the formula and the fact that the level of reduction in cross-subsidy is also very small it is unlikely to better facilitate competition under Charging RO c. It also provides special treatment for OCC at IPs by excluding IP Exit points and thus is considered discriminatory and negative under Charging RO e as EU regulations require non-discriminatory charges. Also, due to the short notice for change it would be detrimental to competition.
<p>EDF Trading - Oppose</p>	<ul style="list-style-type: none"> Believes Similar arguments in favour of this response can be presented to support the progression of this proposal, however, we are not convinced that the interpretation of the requirements under the EU Tariff Code are valid and are sufficient to recommend individual treatment of IPs.
<p>ENI Trading and Shipping SPA - Oppose</p>	<ul style="list-style-type: none"> Discriminating against domestic points
<p>EP UK Investments - Oppose</p>	<ul style="list-style-type: none"> See comments within 0636
<p>ESB – Qualified Support</p>	<ul style="list-style-type: none"> As above for 0636C.
<p>Floglas Britain Ltd - Oppose</p>	<ul style="list-style-type: none"> The same objections apply as to 636B.
<p>Gazprom - Support</p>	<ul style="list-style-type: none"> Although we do not really believe that this is the right time to implement

	<p>isolated change, we believe our proposal 0636D is the most pragmatic solution. This has to be the case as it seeks to minimise the erosion of cross border flows. We are concerned that proposals 636, 636A, 636C do not give sufficient consideration to the impact they will have at UK borders.</p>
Interconnector IUK Ltd - Qualified Support	<ul style="list-style-type: none"> • See comments within 0636
InterGen - Oppose	<ul style="list-style-type: none"> • See comments under 0636.
National Grid - Comments	<ul style="list-style-type: none"> • Modification 0636D seeks to introduce changes to the current OCC arrangements; however National Grid has proposed a new OCC regime as part of the wider charging review modification 0621 wef 1st October 2019. National Grid has been engaging with the industry for a number of years and raised this proposal in June 2017. Furthermore, National Grid also intends to develop enduring OCC (shorthaul) arrangements from 2021 via a UNC Review Group. • Highlights National Grid has certain Licence obligations in relation to implementing some aspects of Regulation (EU) 2017/460 (TAR code) and wider aspects of (EU) 715/2009. National Grid continues to focus on aspects relating to the charging review via 0621 (and its alternatives).
Nephin Energy – Oppose	<ul style="list-style-type: none"> • Do not think this proposal is significantly robust in addressing the over-extensive use of the OCC and the consequent cross-subsidy in TO. The amendment to exclude IPs does not change Nephin’s lack of support for this option.
Petronas Energy Ltd - Oppose	<ul style="list-style-type: none"> • See comments under 0636A.
RWE Supply & Trading GmbH - Oppose	<ul style="list-style-type: none"> • See comments under 0636A.
ScottishPower Energy Management Ltd - Oppose	<ul style="list-style-type: none"> • See comments under 0636.
Scotland and Southern Gas Networks - Oppose	<ul style="list-style-type: none"> • Do not support 0636D, like 0636C it will discrimination against segments of the market furthermore the Xoserve system changes could not be implemented in the time available.
Shell Energy	<ul style="list-style-type: none"> • See response to 0636B.

Europe - Oppose	
South Hook Gas – Qualified Support	<ul style="list-style-type: none"> As set out for Mod 636C we do not agree with the special treatment of IPs, however, we note that the wider approach in relation to non-IP offtakes is consistent with Mod 636B. For this reason, we are able to provide qualified support, notwithstanding our overall opposition to the implementation of any change before Oct 2019.
Triton Power Limited - Oppose	<ul style="list-style-type: none"> See comments under 0636.
Uniper - Oppose	<ul style="list-style-type: none"> See comments under 0636B, in relation to EU compliance at IPs.
Vermilion Energy Ireland Ltd - Oppose	<ul style="list-style-type: none"> As 636C it seeks a special arrangement at Interconnector Points but only at Exit. It is similarly neither compliant with current EU legislation (EU 715/2009) nor future NC Tar legislation (EC 2017/460) As 636C it is also discriminatory and does not introduce fair competition. The same detailed points apply.
VPI Immingham LLP - Oppose	<ul style="list-style-type: none"> Continues to believe that the OCC tariff should reflect historic investment decisions to not bypass the NTS. Note that there are challenges delivering 0636D within the timescales available.
Wales & West Utilities - Oppose	<ul style="list-style-type: none"> Does do not support Modification 0636D as does not support the discrimination it introduces, the effect on the cross subsidy is minimal and the proposal cannot be implemented in the time available. Feels the main feature of Modification 0636D is that the updated formula (different from 0636C) would only apply where the exit point was not an Interconnector Point. Where the exit point was an Interconnector Point the route would continue to benefit from the existing charges which are more beneficial to them. We do not find the arguments put forward in favour of this discrimination compelling. Notes that the additional revenue receive from standard commodity charges is very small compared to other options and therefore the effect of this proposal is minimal in addressing the problems of the Optional Commodity Charge. Notes the point about EU Tariff Code compliance but observe that although in principle the 0636 series of changes are enduring, in practice they will be overwritten by one of the Modification 0621 series. A further major difficulty is that the proposal would require a significant change to Xoserve systems and

	<p>therefore there is no likelihood of this being implemented for October 2018 meaning that the therefore the very small benefits of the reduced cross subsidy will be lost for at least a year. The consequence of raising 0636D (which was raised very late in the process) has therefore been to extend the workgroup discussions thereby reducing the notice period available should one of the other proposals be implemented.</p>
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2. Summary Table of Relevant Objectives

Relevant Objectives:

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.

Relevant Charging Methodology Objectives:

- 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;
- b)** That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;
- 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
- 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.

Organisation	0636	0636A	0636B	0636C	0636D
Aughinish Alumina Limited	g) Negative a) Negative b) Negative c) Negative e) Negative				
BP Gas Marketing	g) None a) Negative b) Negative c) Negative e) Negative	g) None a) Negative b) Negative c) Negative e) Negative	g) None a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative
Cadent Gas Ltd	a) Positive b) Positive c) Positive	a) None b) None c) None	a) None b) None c) None	a) Negative b) Negative c) Negative	a) Negative b) Negative c) Negative
Centrica	g) Negative a) Negative b) Negative c) Negative e) Negative				
Ceres Energy	g) None a) Positive	g) None a) Negative	g) None a) None	g) Positive a) Positive	g) Positive a) None

	b) Positive c) Positive e) None	b) Positive c) Negative e) None	b) Negative c) Negative e) None	b) Positive c) Positive e) Positive	b) Negative c) Negative e) Positive
ConocoPhillips (UK) Ltd	g) Negative a) Negative b) Negative c) Negative e) Negative				
Corona Energy	g) Negative a) Positive b) Negative c) Positive e) Negative	g) Negative a) Positive b) Negative c) Positive e) Negative	g) Negative a) Positive b) Negative c) Positive e) Negative	g) Positive a) Positive b) Positive c) Positive e) Positive	g) Negative a) Positive b) Negative c) Positive e) Positive
EDF Energy	g) Positive a) Positive b) Positive c) Negative e) Positive	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Positive b) Positive c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative
EDF Trading	g) None a) Negative b) Negative c) Negative e) None	g) None a) Negative b) Negative c) Negative e) None	g) None a) Positive b) None c) Positive e) None	g) None a) Negative b) Negative c) Negative e) None	g) None a) Positive b) None c) None e) None
Energy UK	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Positive b) Negative c) Positive e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Positive b) Negative c) Positive e) Negative
ENI Trading and Shipping SPA	g) Negative a) Negative b) Negative c) Negative e) Negative				
EP UK Investments	g) Negative a) Negative b) Negative c) Negative e) Negative				
ESB	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Positive a) Negative b) Negative c) Negative e) Positive	g) Positive a) Negative b) Negative c) Negative e) Positive
Flogas Britain Ltd	g) None a) Positive b) Positive c) Positive e) None	g) None a) Negative b) Positive c) Negative e) None	g) None a) None b) Negative c) Negative e) None	g) None a) Positive b) Positive c) Positive e) None	g) None a) None b) Negative c) Negative e) Positive

Gazprom	a) Negative b) Negative c) Negative	a) Negative b) Negative c) Negative	a) Positive b) Positive c) Positive	a) Negative b) Negative c) Negative	a) Positive b) Positive c) Positive
Interconnector UK Ltd	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Positive a) Negative b) Negative c) Negative e) Positive			
InterGen	g) Negative a) Negative b) Negative c) Negative e) Negative				
National Grid	g) None a) Positive b) None c) Positive e) None	g) None a) Positive b) None c) Positive e) None	g) None a) Positive b) None c) Positive e) None	g) None a) Positive b) None c) Negative e) None	g) None a) Positive b) None c) Negative e) None
Nephtin Energy	g) None a) Positive b) Positive c) Positive e) None	g) None a) Negative b) Positive c) Negative e) None	g) None a) None b) Negative c) Negative e) None	g) Positive a) Positive b) Positive c) Positive e) Positive	g) Positive a) None b) Negative c) Negative e) Positive
Petronas Energy Ltd	g) Negative a) Negative b) Negative c) Negative e) Negative				
RWE Supply & Trading GmbH	g) Negative a) Negative b) Negative c) Negative e) Negative				
ScottishPower Energy Management Ltd	g) Negative a) Negative b) Negative c) Negative e) Negative				
Scotland and Southern Gas Networks	g) None a) Positive b) Positive c) Positive e) Positive	g) None a) Positive b) Positive c) None e) None	g) None a) None b) None c) None e) None	g) None a) Negative b) Negative c) Negative e) Negative	g) None a) Negative b) Negative c) Negative e) Negative
Shell Energy Europe	g) Negative a) Negative b) Negative c) Negative e) Negative				

South Hook Gas	g) None a) Negative b) Negative c) Negative e) None	g) None a) Negative b) Negative c) Negative e) None	g) None a) None b) None c) None e) None	g) None a) Negative b) Negative c) Negative e) None	g) None a) None b) None c) None e) None
SSE	a) Negative b) Negative c) Negative e) None		a) Positive b) Negative c) Positive	a) Negative b) Negative c) Negative	a) Positive b) Negative c) Positive
Triton Power Limited	g) Negative	g) Negative	g) Negative	g) Negative	g) Negative
Uniper	Do not believe any of the proposals further the relevant objectives or relevant charging methodology objectives.				
Vermilion Energy Ireland Ltd	g) Positive a) Positive b) Positive c) Positive e) Positive	g) Positive a) Positive b) Positive c) None e) Positive	g) Positive a) Positive b) Positive c) Positive e) Positive	g) Negative a) Positive b) Negative c) Negative e) Negative	g) Negative a) Positive b) Negative c) Negative e) Negative
VPI Immingham LLP	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Positive a) Positive b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative	g) Negative a) Negative b) Negative c) Negative e) Negative
Wales & West Utilities	g) None a) Positive b) Positive c) Positive	g) None a) Positive b) Positive c) None	g) None a) None b) None c) None	g) None a) Negative b) Negative c) Negative	g) None a) Negative b) Negative c) Negative

The following tables summarise the representations provided to support the above views on the Relevant Objectives. Specific comments were not provided in all cases and the reader should refer to the earlier general comments.

Representations were received from the following parties with regards to 0636:	
Organisation	Key Points
Ceres Energy	<ul style="list-style-type: none"> Reform of this charge is urgently necessary. It has been neglected since its introduction in 1998 and the creeping extension of the favourable rates has led to two tier pricing of exit points on the basis of type of customer. This is not good for an effective energy market. The balance between beginning the process of reform for the OCC and achieving compliance in 2019 has shifted too far simply to meet objective g). This is a distortion of the costs of transportation for different types of customers and has an unjustifiably large effect on the relation between gas prices in GB and Ireland

<p>Domestic Consumer – Nigel Sisman</p>	<ul style="list-style-type: none"> • 636 should be approved because it furthers the Relevant Objectives of the Charging Methodology. Specifically, it will better ensure that the charges faced by network users better reflect the costs incurred in the provision of transportation service. Additionally, the charging arrangements will need to be compliant with binding decisions of the European Commission, namely the EU Tariff Code. A decision to implement would be a step in that direction.
<p>EDF Energy</p>	<ul style="list-style-type: none"> • If any of these modifications were to be implemented in October 2018 our preference would be Vermilion’s original UNC636 modification as it meets many of the following Licencee’s and Relevant Charging Objectives (ROs): • a) Cost reflectivity - given that the formula has been updated to today’s costs of laying and operating a pipeline, it a better proxy for the use of the NTS and therefore will lead to more efficient and economic operation of the NTS/ outcomes. It also further improves Charging RO a) that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business. • b) Neutral given it doesn’t change the fact that DNs cannot use NTS Shorthaul, but in this respect, it could currently be considered discriminatory between different NTS users. • c) Licencee’s obligations - it will improve the efficient discharge of National Grid’s licence obligation to keep its charges up to date to minimise the risk of any breach as stated. For the same reason, an updated OCC also improves Charging RO b) charging methodology properly takes account of developments in the transportation business. • d) Competition-notclearitwouldleadto better competition given the very short timescales for implementation. • e) GB Security of supply in the interest of consumers - by reducing this artificial discount it would disincentivise the amount of gas exported to neighbouring markets at an artificially discounted price which is being subsidised by GB consumers. Indeed it would be reasonable to assume that in raising this modification, Vermillion may well have been concerned about its ability to compete effectively with subsidised exports from GB, given the distorting effects of this outdated formula. • f) Neutral – in the Promotion of efficiency in the implementation and administration of the Code • g) And Charging RO E - there has been much discussion over whether these modifications are compliant with EU Regulations, particularly the EU Tariffs code (EU TAR). While it has been implemented, it has been made clear that EU TAR doesn’t take effect until “the charging period after May 2019” and thus this means

	<p>nothing is required before October 2019 in GB. UNC636 therefore does not need to reflect EU TAR, notwithstanding the fact that EU Tariffs code has no mention of any type of Optional Commodity charge and indeed gets rid of many discounts. But in terms of EU Regulations that are currently in play, this modification does comply with the EU Regulation 715/2009 which states charges should be harmonised to “<i>neither restrict market liquidity nor distort trade across borders of different transmission systems</i>” (Art.13.2) and <i>avoid cross-subsidies between network users, and must be reflective of costs</i> (Art.13.1).</p>
<p>Energy UK</p>	<ul style="list-style-type: none"> • Energy UK considers that none of the proposals further compliance with EU Regulations RO g and Charging RO e for a number of reasons: 0636, 0636A and 0636B do not take account of EU Regulation 2017/460 (TAR code) which entered into force in April 2017 and requires different arrangements at interconnection points (IPs) from 1 October 2019. These proposals seek to perpetuate a framework that will discriminate against these points from that date. 0636C and 636D whilst trying to seek to comply with the TAR code by avoiding change at IPs from the modification implementation date, actually lead to undue discrimination between IPs and non-IPs in the application of the optional charge. The Regulation 715/2009 requires non-discriminatory access to networks and tariffs. • Regulation 715/2009 has the overarching objective of achieving proper functioning of an internal market for natural gas across the EU, but the proposals have not been assessed against this criterion. Rather it seems likely that the proposals 0636, 0636A and 0636B may reduce the optional commodity charge benefits on routes to Moffatt and then to customers in Ireland and the Isle of Man, but this has not been assessed. • All proposals could be considered positive for charging RO b – since a review is appropriate however the timing and interaction with 0621 mods has made full assessment of the options difficult and raises questions about the value of implementing any of the proposals for a short period. However none of the proposals are time limited and must therefore be considered enduring solutions in their own right. This leads to a negative assessment overall since no account is taken of commodity charges not being allowed at IPs from October 2019. • Understands the formula for determining the optional commodity charge uses an M value derived from the previous year’s gas flows whilst suggesting that the formula itself would be more cost reflective. It is illogical to suggest that the costs of building a pipeline fluctuate year-on-year subject to the previous year flow. Therefore the resulting optional charge cannot be cost reflective - hence is negative against charging RO a. • Feels there are also issues about how the level of the optional charge would fluctuate year on year and therefore be reflected in contracts, and how sites

	<p>would manage this variation in their cost base. There is also a positive feedback that could impact the merit order in the electricity market. High flows in one year leading to a lower optional charge the following year that enables more in merit dispatch and additional flows which further reduce the optional charge the following year. The opposite also applies.</p> <ul style="list-style-type: none"> • Believes in addition there are issues as to how a site that has previously benefitted from the optional charge but has been mothballed might return from being mothballed. The proposal does not seem to make a provision for an M value for such a site so that the optional charge may not apply until a year after recommissioning. Similarly there is no provision for adjusting the M value when there have only been flows for part of a gas year. • Feels as the charge is not considered cost reflective it cannot be positive for competition and charging RO c, the impact will therefore be negative.
<p>Gazprom Marketing & Trading Limited</p>	<ul style="list-style-type: none"> • Relevant Objective A): 636 and 636C – Negative. These proposals extend the pipeline portfolio to include larger pipeline sizes as set out in GCD11 Option 1. In our view there is a lack of evidence that private pipeline systems are built using the larger pipeline diameters and therefore their inclusion does not accurately replicate the cost of construction (this being the principle behind the application of an OCC). Pipeline construction should be recognised as a sunk cost, therefore in our view it's erroneous to refer to updated pipeline and steel costs. It's highly unlikely the investment economics at the time of construction would have been used in this way. • The M factor proposed in these mods is not cost reflective. Its method of deriving the future load factor is deficient as it assumes that historical flows are a sound indicator of future flows. This is incorrect particularly in the example of power generation demand, which varies depending on spark spreads derived in the power market. National Grid, for example, does not make CAPEX decisions purely based on annual flow changes. Instead they invest on the basis of operational peak flow expectations, which will allow flows to be accommodated at all levels of demand. • Relevant Objective B): Mod 636 – Negative. Believe this proposal is not cost reflective, unstable and will not generate charges that reflect the economics of building and operating private pipelines. Its application could result in inefficiencies in investment decisions and use of the NTS. • Relevant Objective C): Mod 636,636A and 636C – Negative. These proposals are not cost reflective and do not effectively promote use of the NTS, as described above. On this basis, we do not believe it promotes effective competition.

<p>Shell Energy Europe</p>	<ul style="list-style-type: none"> • Moreover, the costs of building a pipeline do not fluctuate based on the previous year's average flow rate. A change to the definition of 'M' within the Optional commodity tariff formula, is, not, therefore, cost-reflective and is in conflict with the Relevant Charging Objective (a), which is to ensure tariffs are best calculated to reflect costs incurred. As referenced in the Draft Modification Report, there is no provision for adjusting the M value when there have only been flows for part of a gas year, which further exacerbates the issue. • In addition, charges based on fluctuating parameters further increases the risk in existing contracts and ongoing contracts negotiations ahead of Gas Year 2018, which reference a fixed enduring rate. This leaves buyers exposed in particular, where they may have already tied in their end users on a fixed price for the year. This could have a negative impact on Relevant Charging Objective (c) securing effective competition between shippers and suppliers.
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Representations were received from the following parties with regards to 0636A:

Organisation	Key Points
<p>Energy UK</p>	<ul style="list-style-type: none"> • See comments under 0636. • Feels there may be merits in applying a distance limit, as a practical approach to limiting the applicability of the optional charge, but it is arbitrary and cannot be considered cost reflective and is therefore negative for charging RO a. • Believes as the charge is not considered cost reflective it cannot be positive for competition and charging RO c, the impact will therefore be negative
<p>Gazprom Marketing & Trading Limited</p>	<ul style="list-style-type: none"> • Relevant Objective A): 636A – Negative. The imposition of an arbitrary distance cap to the OCC formula is not borne from cost reflective principles. • Relevant Objective B) and Relevant Objective C: see comments under 0636.

Representations were received from the following parties with regards to 0636B:

Organisation	Key Points
<p>Energy UK</p>	<ul style="list-style-type: none"> • See comments under 0636. • The use of RPI for indexation would seem to be positive for charging RO a, and as cost reflective charges are consistent with furthering competition this is also positive for charging RO c. However this only applies until the TAR

	NC is implemented from 1 October 2019 as commodity charges are not allowed at IPs.
Gazprom Marketing & Trading Limited	<ul style="list-style-type: none"> • Relevant Objective A): 636B – Positive. This proposal is consistent with GCD11 Option 2 and also Mod 621 and a number of its alternatives (noting that these proposals include a distance cap). The use of RPI to update costs, coupled with the inclusion of the methodology in the UNC, is an appropriate method for ensuring that the OCC remains cost reflective. We believe these proposals are more cost reflective than Mod 636 as it recognises that investments which have been made are correctly cost escalated and not exposed to pipeline costs that are not relevant to existing infrastructure. • Relevant Objective B): Mod 636B – Positive. This proposal gives consideration to Mod 0621 and therefore takes account of the evolving transportation business. • Relevant Objective C): Mod 636B – Positive. This proposal is cost reflective and therefore ensure that charges paid by all Users are equitable. In this case, competition is facilitated, however amending the application of the OCC at IPs at this time may cause further disruption to IPs in the transition to the enduring regime under consideration in Mod 621.
SSE	<ul style="list-style-type: none"> • The use of RPI for indexation would seem to be positive for charging RO a, and as cost reflective charges are consistent with furthering competition this is also positive for charging RO c

Representations were received from the following parties with regards to 0636C:

Organisation & Response	Key Points
Energy UK	<ul style="list-style-type: none"> • See comments under 0636 in relation to M value • As the charge is not considered cost reflective it cannot be positive for competition and charging RO c, the impact will therefore be negative.
Gazprom Marketing & Trading Limited	<ul style="list-style-type: none"> • See comments under 0636 for Relevant Objective A) and Relevant Objective C). • Relevant Objective B): Mod 636C – Negative. This proposal incorrectly applies OCC to entry and exit points at IPs. As outlined in UNC TPD Section Y, paragraph 3.5 the OCC service is intended to limit charges relating to a direct route between a nominated exit point and a selected entry point, and not the inverse.

SSE	<ul style="list-style-type: none"> As the charge is not considered cost reflective it cannot be positive for competition and charging RO c, the impact will therefore be negative.
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Representations were received from the following parties with regards to 0636D:

Organisation & Response	Key Points
Energy UK	<ul style="list-style-type: none"> See comments under 0636. Feels the use of RPI for indexation would seem to be positive for charging RO a, and as cost reflective charges are consistent with furthering competition this is also positive for charging RO c. However this only applies until the TAR NC is implemented from 1 October 2019 as commodity charges are not allowed at IPs.
Gazprom Marketing & Trading Limited	<ul style="list-style-type: none"> Relevant Objective A): 636D – Positive. The same arguments regarding cost reflectivity apply to this proposal as stated for Mod 636B. Additionally, this proposal recognises the limitations imposed on tariff changes by the EU Tariff Code and adopts RPI escalation on those non-IP routes which the UK is able to apply. Relevant Objective B): Mod 636D – Positive. These proposals furthers the relevant objective as it protects the OCC methodology applicable at cross border points until further analysis is made in 621. Relevant Objective C): Mod 636D – Positive. This proposal is cost reflective for the same reasons at 636B however furthers the relevant objective by facilitating continuous trade as cross border points.
SSE	<ul style="list-style-type: none"> The use of RPI for indexation would seem to be positive for charging RO a, and as cost reflective charges are consistent with furthering competition this is also positive for charging RO c.

3. Summary of other comments

The following table summarises the representations provided on implementation, impacts and costs, legal text, errors or omissions within the report and any additional analysis or information to support the representation.

Representations were received from the following parties:

Organisation & Response	Key Points
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<p>Aughinish Alumina Limited</p>	<ul style="list-style-type: none"> • Aughinish believes that if IPs are not excluded then the implementation lead time should be as long as possible to allow gas contracts to reflect any proposed changes in the OCC tariff. We believe under this situation no changes should apply before 1st October 2019 and the overlap with modification 0621 should be reflected in any decision Ofgem considers appropriate. • If IPs are not excluded from the proposed changes to the OCC tariff then this would adversely impact our contractual arrangements for procuring gas for our alumina plant. The OCC tariff goes back years and ambitions by the proposer to reform it urgently for short-term commercial advantage runs contrary to the basic principle of contract certainty for all participants using the OCC. • Satisfied that the legal text will deliver the intent of the Solution. • Aughinish are not suitably qualified to comment on possible errors within the report suffice to say that such a significant change to the OCC needs to be considered in conjunction with Modification 0621 (irrespective of IP exemption) due to the EC Tar legislation requirements. This was recognised in GCD11 and subsequently noted by Ofgem in its Decision on 8 March 2018 to direct NGG to undertake specific tasks to implement Regulation (EU) 2017/460 i.e. TAR NC. Ofgem also recognised in its decision on 9 May 2018 that this modification does not require “urgent” modification procedures and to avoid duplication with 0621 Aughinish believes that Ofgem should conduct an Impact Assessment on this proposed modification and its alternatives. • The OCC tariff goes back years and ambitions by the proposer to reform it urgently for short-term commercial advantage runs contrary to the basic principle of contract certainty for all participants using the OCC. Through 0621, market participants are building together a reformed OCC tariff with detailed analysis taking into account the many concerns of all operating in and around the UK NBP including EU TAR requirements. Importantly the market expects a reformed tariff from October 2019, not earlier. Ofgem recognised this overlap between 0621 and 0636 and requested this to be considered in the 0621 report. • Summing up it seems obvious that 0621 is the proper forum for review of the OCC tariff and neighbouring NRA’s and Shippers should have sufficient time to engage in the process thus allowing all participants to have ample notice of any proposed changes and adequate time to prepare.
<p>BP Gas Marketing</p>	<ul style="list-style-type: none"> • 0636 analysis states that there would be £220m uplift in revenue between April 2018 and October 2019, if the modification had been implemented in April 2018. BPGM would argue that this is a totally arbitrary figure as the calculation has be done assuming all sites and offtakes using the OCC rate have a flat load

	<p>profile throughout the year. As this is clearly not the case, power plants and interconnectors are not flat loads, BPGM would suggest that figure would have been substantially lower than £220m. More analysis is required using realistic load profiles before a more reliable figure could be reached. Additionally, there has been no analysis into the effect these proposals would have on power stations that are using the OCC rate. For some power stations the margins are extremely tight so any increase in transportation tariffs is going to have a material effect on the viability of that plant.</p> <ul style="list-style-type: none"> • There has been no analysis looking at the effect this proposed change to the OCC rate would have on flows from Norway which have the choice to come to the GB market or go straight to main land Europe. These modification proposals do not consider any drop off in volumes if there was a substantial increase in tariffs. • Concerned that Ofgem have decided not to carry out an Impact Assessment for these proposals. Especially after Ofgem confirmed in the workgroup meeting 4 January 2018 that an Impact Assessment would be undertaken once Ofgem had received the Final Modification Report. Ofgem have a duty to carry out an Impact Assessment if there is a material impact. BPGM would argue that implementation of any one of these modifications would have a material impact on prices for customers and shippers. • As Ofgem have already stated that they will carry out an Impact Assessment for modification 0621, and within that proposal there is a change to the OCC rate. BPGM would suggest that Ofgem should hold off on making a decision on implementation of these modifications until that IA has been completed. • Modification 0621 or any of the alternatives are due to be effective from 1 October 2019. Within the majority of the modification proposals there will be a change to the OCC rate. By implementing 0636 before 0621 there will be significant disruption for OCC users who will see two major changes in tariff in a year. Most contracts will have a start date of October. The uncertainty that these proposals have caused is already hindering the renewal of these contracts. • Notes that modification 0653 is also looking to amend the OCC rate from 2019.
<p>Cadent Gas Ltd</p>	<ul style="list-style-type: none"> • In the event of an Ofgem direction, implementation should take place as soon as possible. • Satisfied that the Legal Text provided meets the intent of the solution.
<p>Centrica</p>	<ul style="list-style-type: none"> • Implementation should provide at least 150 days' notice of indicative transportation charges and 2 months' notice of final charges with a 1 October

	<p>commencement date.</p> <ul style="list-style-type: none"> All proposals would require a reassessment of existing commercial contracts that include terms related to the optional charge. This would incur time and effort for commercial colleagues and legal advisors. Administration effort would also be required to ensure a timely transition to the new arrangements. Given the scale of the redistribution of transportation costs likely to arise if any of these proposals were implemented, and the discrimination and legal compliance issues we have identified above, we expect Ofgem to conduct a rigorous Impact Assessment before making a final decision on whether any of these proposals should be implemented. We would like Ofgem to consider wider issues such as the possible impact on security of supply or security of price. All consumers, large as well as domestic, are likely to be impacted. Consideration should be given to the impacts on the broad spectrum of consumers in terms of both gas and electricity since the optional charge is used to support the economic supply of gas to power stations. The assessment should consider what effect the proposals will have on future gas flows. So, for example, if gas is sourced differently and if gas consumption is chocked off at some exit points, then what will be the net impact on consumers if there are consequential changes in gas market prices? As mentioned, the assessment should also explicitly consider how prices in the power sector may be affected and what this will mean for consumers. Believe that the interaction with the 0621 modification proposals is significant and that the UNC Panel and Ofgem should carefully reflect on this before making any recommendation or decision. This should include an informed assessment of what further work would need to be undertaken to review, revise and re-consult on the Draft Workgroup Report for the 0621 proposals. The end-to-end timeline for ensuring timely implementation of the TAR NC would also need to be reviewed and revised as part of the assessment. Remain of the view that Centrica’s 0653 modification proposal is a de facto alternative to the 0636 proposals and that it should be assessed as part of the same Impact Assessment for the 0636 proposals.
Ceres Energy	<ul style="list-style-type: none"> It is important to start shifting system users away from the Optional Commodity Charge, therefore it should be implemented as soon as possible.
Corona Energy	<ul style="list-style-type: none"> Implementation should be as soon as possible on the basis of the cost savings to non-OCC users. Corona Energy will face negligible implementation costs and impacts. Satisfied that the Legal Text provided meets the intent of the solution.

<p>Domestic Consumer – Nigel Sisman</p>	<ul style="list-style-type: none"> • Vested interests have opposed and frustrated the progress of 636. A series of alternative proposals have been raised, which have effectively filibustered the debate in the UNC Working Group. Only after many months of slow and protracted objections has it been possible to progress 636 and its alternates to public consultation. • These delays represent a failure of the governance process. That transportation charging matters should be addressed via the UNC change process needs to be revisited in the light of the 636 debacle and the challenges now apparent that have been associated with the development of GB’s response to the Commission Regulation (EU) 2017/460 (“EU Tariff Code”) within the Modification Proposal 621 process (“621”). • It is imperative that a timely decision on 636 is made. It is essential that the continued failure to deliver cost-reflective charging, giving rise to cross-subsidies of approximately £150m per annum, is addressed as a matter of urgency. • It is therefore important that Ofgem gives urgent consideration to 636 so that it can be implemented as soon as possible, and certainly by October 2018, with a view that such non-compliant tariff charging can be completely removed from October 2019 when a fully EU Tariff Code should be implemented.
<p>EDF Energy</p>	<ul style="list-style-type: none"> • Believes that predictability and stability of charges is important for market participants and that there should be a sufficient notice period for changes which are material such as this one. A minimum notice of 6 months should be given. • Satisfied that the legal text will deliver the intent of the Solution.
<p>EDF Trading</p>	<ul style="list-style-type: none"> • Feels the lead time for implementation should be 6 months, as an absolute minimum. Any shorter lead time will undermine contractual arrangements between suppliers and customers and potentially beach trades entered into to optimise transmission charges. • Believes where notice is limited, or the date of implementation does not fall on the 1 October there would be costs related to business agreement already entered into (or in the process of being structured) whose contractual terms take as a reference the current availability of OCC; such terms are not necessarily amendable at a later stage. • Feels when reopening of contracts is possible, a shipper would face costs associated with both the commercial and legal aspects of unwinding trading positions and structuring new alternatives (when/if possible) The Report is very high level and the analysis presented is both generic and static. • Suggests Industry is unable to properly assess the impacts of the proposals as

	<p>the analysis does not attempt to take into account any possible changes in consumption behaviour e.g. in response to higher OCC rates, nor does it focus on the impacts on individual customers (for commercially sensitive reasons).</p> <ul style="list-style-type: none"> • As a result, an Impact Assessment is essential if Ofgem is to take an informed decision and properly identify the impact on customers (both those using OCC and the subsequent costs/benefits to non-OCC customers). • Beyond the cost implications for individual customers, including an appreciation of their ability to pass through costs into secondary markets, such as the UK power market. An IA should also focus on security of supply and the ability of GB to attract gas supplies (existing and new) as well as the potential impacts on GB market gas prices where the cost of “landing” gas become more expensive. • Finally, the IA should consider any ramifications for the market in general of introducing changes to the OCC at relatively short notice e.g. impacts on contractual relationship between suppliers and customers and gas producers and shippers. Consideration should be extended to trading impacts, in particular at beach level where most trading is carried out to optimise gas entry costs • Believes that changes proposed by 0636 and its alternatives are likely to have significant distributional impacts with a number of parties seeing a large increase in transportation charges whilst others see a small decrease. For such reasons the wider consequences of this proposals need to be appropriately examined by means of an IA capable of considering impacts on the generation sector, import and exports.
Energy UK	<ul style="list-style-type: none"> • Believes the sufficient lead time needs to be provided to enable parties to reflect revised charges in contracts from October 2018, which is when most contracts start or are renewed. That process is underway at the time of writing this response in May/June 2018. • However it may be that it is already too late to ensure revised prices are included in such contracts from October this year. • It is not clear whether an implementation date other than October is feasible, without unintended commercial consequences for certain parties, it is our understanding that these contracts have very limited contract re-opening provisions. • Considers that Ofgem should undertake a regulatory impact assessment to more fully consider the wide ranging impacts of implementing any of these proposals, including customer contracts from October 2018, the impact on domestic customers, cross border trade, wholesale gas prices and electricity prices.

	<ul style="list-style-type: none"> • Believes Ofgem should also consider the merits of implementing any of these proposals if it plans to approve any of the 621 proposals, as this would mean that any benefits would only be valid for a maximum of a year. Ofgem will also need to consider the interactions with mod 0621 and all its variants from a governance perspective. The Joint Office outlined in its request for a 'View' that there is a governance vacuum in some scenarios as the 621 proposals would need to be amended, analysis rerun and justification re-written, and there is no provision for this once an FMR is submitted to Ofgem. • Acknowledges that a review of the optional charge is appropriate but the timing of these proposals is unfortunate given the 621 proposals, which are seen as necessary to achieve compliance with TAR NC, have absorbed a lot of industry time. There are merits in some aspects of the proposals, but we consider it would be more useful to consider these as part of a more general review of 'shorthaul' arrangements once a 621 option has been implemented. This should include mod 0653 too as there has been insufficient time to fully consider this and it may provide a suitable enduring solution, but more work is needed to examine this. Energy UK would therefore recommend rejecting or suspending consideration of 0636 and its variants.
<p>ENI Trading and Shipping SPA</p>	<ul style="list-style-type: none"> • Feels the report does not supply sufficient evidence on what impact the five proposed options will have on the users and redistribution of the revenue. Therefore it is absolutely necessary to conduct an Impact Assessment before any decisions are delivered. • Does not support any of the five proposals to change the Optional Commodity Charge (OCC) because we believe that the underlying issue is not with how the NTS OCC is calculated but with how the current charging regime is set to work. For example, the current regime offers a price discount of up to 100% for short-term entry capacity. As a consequence, the current regime provides all gas shippers with a large incentive to secure their capacity on a short-term basis, mostly at zero price. Because large quantities of short-term capacity are sold at zero price, this results in a large TO capacity revenue shortfall. This shortfall is then resolved by the application of the very high TO commodity charge and it is precisely this latter point that makes the NTS OCC viable for use over even greater distances than originally expected. • Does not believe that the NTS OCC formula needs to be updated. Historical records show that the current Optional Commodity Tariff is adequate for a regime with moderate commodity charge. • Feels if any of the five proposals is implemented, there will be a significant impact on the value to be obtained from the NTS OCC from 1 October 2018 and, consequently, on how the revenue is redistributed between the users. The

	<p>market will have hardly any time to adjust to this significant change before it is superseded with even more significant changes on 1 October 2019 when the New Charging Regime is implemented. Two significant charging changes in one year will not only increase tariff uncertainty for NTS users but will also make it more difficult to conduct any commercial agreements between NTS users.</p> <ul style="list-style-type: none"> • Proposes all five proposals will result in material changes in the transportation tariffs and will have significant impacts on commercial relationships and consumers. Additionally, the analysis provided is not sufficient to properly quantify the impacts on: <ul style="list-style-type: none"> ○ Individual customers and sectors ○ The UK economy and security of supply ○ Contractual and trading disruptions ○ Real impacts on all customers (the analysis provided does not assume any variations in demand by OCC users if the new charges are implemented; hence there is a significant potential that benefits to domestic customers may be overestimated). • Necessary that an Impact Assessment be conducted before any of the Mods are implemented.
<p>EP UK Investments</p>	<ul style="list-style-type: none"> • To date, users have had certainty about the level of the OCC as the formula for calculating this has been fixed. A defined shorthaul tariff may therefore be reflected in business plans and commercial agreements with third parties. The UNC 0636 modifications could lead to shorthaul tariffs increasing substantially or, for some routes, being removed as an option altogether. Given the potential magnitude of this impact, it is imperative that Ofgem undertakes an Impact Assessment of the changes. We do not consider that there will be sufficient notice of implementation after this process ahead of 1 October 2018 to allow parties to factor in the impact to their business activities and a mid-year change to the shorthaul arrangements could be very disruptive. • Although EPUKI opposes the implementation of this modification, we consider that if any change to the shorthaul arrangements is made, the earliest that it should be implemented is 1 October 2019. However, it would then be appropriate for the new arrangements to reflect UNC 0621. The proposals under 0636 are not consistent with those put forward under 0621 and it would be perverse to implement a change of this magnitude for one year only.
<p>ESB</p>	<ul style="list-style-type: none"> • Need to implement any change to the OCC on 1 October, as the start of a Gas Year, or not at all due to contractual and hedging reasons, as well as all related

back office and systems updates required.

- Would appreciate as much notice as possible would be required for Shippers. National Grid has a requirement for 3 months' notice prior to implementation of any 0636 related Mod. It is hard to see how this will be possible for 1 October 2018.
- Feels even with a 3 month lead time, the 0636 proposer's suggestion that cost benefits will be passed through to consumers is somewhat implausible: contracting for GY2018 is already underway for larger users; for small and domestic users, given their contracting patterns and terms, any pass-through of benefits will not be felt for many months if at all.
- Believes GB Shippers need to review their contractual portfolios and assess the impact of any change, undertaking any required redrafting or renegotiation, and related administrative changes, all of which incur cost.
- As a generator, any pass through of increased transmission costs to the price of gas will be a potential ongoing direct cost, which could impact competitiveness and thus have broader analytical and cost consequences. Cost impacts will therefore be felt by electricity consumers in GB.
- 0636, 0636A, 0636B: As the price of gas in Ireland and Northern Ireland is chiefly based on the GB wholesale price plus transportation, the impact of any change in transmission costs via Moffat will impact all gas consumers on the island of Ireland. This will also likely be passed through to the electricity sector and electricity consumers. As ESB's operations in Ireland involve power generation and retail gas and power, there will be a requirement for fundamental analysis throughout the business due to wholesale gas price changes and any subsequent related costs.
- Concern of insufficient notice being allowed for in Legal Text, inconsistent with National Grid's requirement for 3 months' notice from decision to implement.
- The Modification Report is clear in the timing basis of the analysis, however indicative commodity charges for Oct 2018 have been published and are not included in the analysis. We understand that the pressures of the concurrent 0621 Modification process have affected the capacity for analysis within National Grid and the Workgroup, but it would be helpful to have an indication of the impact of 0636 taking into account standard commodity charges for the period the Modification is intended to apply.
- It has also not been possible due to access to information for the Workgroup to undertake full quantitative analysis of the whole market impacts of the 0636 and alternatives. Qualitative statements have been provided but an RIA is clearly required to assess the consequences in more depth. We highlight here that Ofgem's impact assessment guidance includes consideration of cross-border

	<p>effects.</p> <ul style="list-style-type: none"> • Strongly believes that a RIA must be conducted for this material change to gas charging, and that this must be a whole market assessment for the entire UK. • Within the process for 0621, Ofgem requested the Workgroup to consider the linkage between 0621 and 0636; applying symmetry to that request, in our view: Industry and authority focus should be placed on 0621 as the overarching, fundamental change to the charging methodology in GB. • In this context in particular, rejection or suspension of 0636 and alternatives appears the best solution to prevent further inefficiency and uncertainty in addition to that caused by 0621, while supporting the facilitation of the best outcome for 0621 itself.
<p>Floglas Britain Ltd</p>	<ul style="list-style-type: none"> • Proposes the change should be implemented as soon as possible.
<p>Gazprom Marketing & Trading Limited</p>	<ul style="list-style-type: none"> • We must also consider that the consultation process for these proposals is taking place during a crucial time of transition ahead of the new gas year, where supply contracts are being renewed and concluded. Typically the standard provisions within gas contracts that allow for re-negotiation or termination in the case of fundamental changes in the regulatory environment, require notice of between 6-12 months. With this in mind, we believe our proposal Mod 0636D is the least disruptive to these commercial activities. Due to the sensitivity of such arrangements, they have not been quantified in the impact analysis. We would like to emphasise that the 636 Workgroup Report is designed to be high level and does not sufficiently assess and validate the impacts on industrial and commercial customers, in addition to UKCS producers that are striving to maximise the economic recovery of remaining reserves, in line with the government’s MER strategy. An unnecessary change in the OCC in line with mods 636, 636A or 636C could erode the value of qualifying UKCS gas supply contracts. • The impact analysis misses key information on the secondary impacts such as, industrial and commercial customers, power prices, cross border flows and neighbouring markets such as Ireland. Given the materiality of these impacts, we suggest that Ofgem conducts an Impact Assessment prior to making a decision on these proposal. • In the instance that Ofgem has to consent to a shorter notice period for publication of 2018/19 Optional Commodity Charge, we hope that consideration will be given to the commercial deadlines that typically occur ahead of the new gas year (1st October 2018) as described above. We do not believe it is the right time for this change but if industry disagrees, we believe our proposal Mod

	<p>636D is the least disruptive solution to current activities in the gas industry.</p>
<p>Interconnector UK Ltd</p>	<ul style="list-style-type: none"> • Suggests none of the Modifications 0636 proposals are taken forward to implementation and that Modification 0621 and Modification 0653 and considered for the appropriate short haul reforms. • Proposes if Ofgem think it is sensible to make reforms earlier than October 2019 through Modification 0636, then we give qualified support to Modification 0636D. Given commodity charges can no longer be applied to revenue recovery at the IPs, an enduring EU-compliant solution has to be found. Modification 636D ensures compliance with the European Tariff Network code rules by avoiding making interim changes at the IPs to a tariff post the European Tariff Code coming into effect. It also avoids short term changes that would be disruptive to cross border trade. • Supports as requested by industry in the working group discussions, that Ofgem do an impact assessment on these changes as part of its determination given it is a material change to tariffs and current commercial arrangements. • Feels Short haul is an important driver of flows over the Interconnector and with the end of IUK’s original long term bookings from October 2018, changes to this tariff or uncertainty around it will have an influence on IUK’s market prospects and bookings. We are already in a far from perfect situation given we will be offering CAM products very soon for the gas year 2018/19 within an environment of considerable uncertainty about NGG’s future charges. This uncertainty and short lead times for change are not helpful for facilitating cross border trade. We therefore believe there should be at least a six month lead time prior to implementation. • The uncertainty or multiple changes to short haul tariffs in a short time period harm IUK’s prospects of selling capacity at the Bacton IP. There is therefore a potential revenue implication for IUK and harm to the market more generally through frequent changes or uncertainty not facilitating cross border trade.
<p>InterGen</p>	<ul style="list-style-type: none"> • Encourages Ofgem to perform an extensive impact assessment of implementing 0636, fully considering interaction with other modification proposals, particularly 0621. • Do not support implementation of any of the modification proposals. Nevertheless, if any of the options were implemented, as with any material changes, it is essential to give market participants sufficient notice. We do not believe that this is the case for 0636. Due to commercial arrangements and forward looking activities we believe that a minimum of 6 months from decision to implementation is reasonable.

	<ul style="list-style-type: none"> • Has been unable to perform a full assessment of impacts of a potential implementation of 0636 due to the lack of information as well as the interaction with modification proposal 0621. However, all proposals would increase ongoing costs and would incur a cost in terms of reassessing existing commercial contracts. We believe these costs will be disproportionate given the expected short period that 0636 would be in place, following a potential implementation of 0621. • Has not fully reviewed the legal text.
National Grid	<ul style="list-style-type: none"> • National Grid would need to calculate, validate and publish new OCC rates which would need a lead time of three months. • 636 and 636A would need Xoserve to develop new reporting capability to support National Grid in operation of the new changes in the short term, moving to a more systemised solution if a proposal were to become enduring. 636C and 636D would need a system solution from the outset and Xoserve expressed a view that these could not be delivered during this year. • Any of these changes (if approved) would need to be assessed by the DSC Change Committee to schedule any change (report or otherwise) in the prioritisation process. • Any implementation dates would need to consider an appropriate lead time for revised charges and system changes. • Xoserve have provided a ROM for each proposal. It would be difficult to quantify ongoing business costs at this stage as depending on which proposal is approved, whether it is enduring or not and how to manage such changes to current arrangements. • National Grid would also need to further understand whether there are any impacts (or not) to the current in-flight project with Xoserve to deliver requirements from the gas charging review from modification 0621 and its alternatives. • National Grid has provided the text on behalf of the proposers. All proposers have agreed with the relevant legal text. • Assuming one of the proposals is approved for implementation into the UNC and therefore enduring (unless another separate modification is subsequently approved wef 1st October 2019) then an assessment would be needed against the EU TAR code.
Nephin Energy	<ul style="list-style-type: none"> • The change should be implemented as soon as possible. Current contractual negotiations are being undertaken in the full awareness of the consultation timetable and buyers and sellers should not be assuming yet further delay.

	<p>National Grid have pointed out that there is potential for further supply points to migrate to the OCC and therefore exacerbate the problem.</p>
<p>Petronas Energy Ltd</p>	<ul style="list-style-type: none"> • Essential that, if any changes are made, this are only implemented at the start of the relevant gas year (i.e. 1 October). • Industry standard contracts for supply and offtake are typically aligned with the gas year and do not permit mid-gas year changes to terms, particularly pricing. They also do not typically have termination or amendment rights associated with change in laws or regulation. • Negotiation of these contracts, renewals and tenders have already commenced (and, in some cases, completed) and the majority of such will have been finalised by August 2018. All such contracts will be based on the existing charging arrangements and it is critical that Shippers and Customers have certainty on the charging regime in determining pricing. Changes during the gas year would have a significant impact on Customers and it is difficult to see how adequate notice can now be given. • Any change to the OCC at this stage would have a significant detrimental commercial impact. We already have contracts in place with customers for the coming gas year, which have been agreed based upon the current charging regime. We will not be able to amend or terminate these contracts until the following gas year (October 2019). • We consider the analysis conducted to date to be insufficient to adequately assess such a significant change to the charging arrangements. It is vital that the impact upon individual customers/consumers is determined. An assessment of what this will mean for specific CCGTs, industrial customers and imports into the UK by offshore producers is essential as any change to their gas transportation costs could have a serious impact upon their ability to continue business. • The impact upon security of supply has not been adequately considered. Flexible supplies which are currently utilising the OCC may be diverted to other markets due to increased transportation charges in the UK. Investment decisions on marginal projects could also be impacted. • Additionally, the analysis is too static. It assumes that there will be no change in consumption behaviour thereby ignoring any price elasticity of demand as a result of these changes. Benefits to non-OCC customers are therefore overstated as assuming the consumption of current OCC customers will remain completely unchanged is unrealistic. • Due to the material impact that this Modification will have on Customers and Shippers and the potential for it to impact upon security of supply for the UK, we

	<p>believe that Ofgem needs to conduct a full impact assessment. Ofgem should determine the impact upon individual market participants and not make a decision based upon the high level and flawed analysis that we have so far.</p> <ul style="list-style-type: none"> Consider the timing to be deeply at odds with the commercial timetable for negotiating supply and offtake agreements with customers for the 2018-2019 gas year.
<p>RWE Supply & Trading GmbH</p>	<ul style="list-style-type: none"> Analysis in the Workgroup Report is too limited to make an informed assessment of costs and impacts.
<p>ScottishPower Energy Management Ltd</p>	<ul style="list-style-type: none"> Allowing for the potential impacts of implementation of any of these proposals it is critical to ensure that adequate advance notice of changes in charges can be provided to allow parties to make appropriate provision within their commercial arrangements. Should Ofgem determine that an Impact Assessment is also necessary (see below) then it is difficult to envisage how any such adequate notice of change could be provided ahead of 1st October to take effect for Gas Year 2018/19. Consider that the proposals are “important” as defined by Section 5A of the Utilities Act 2000 and Ofgem’s Impact Assessment Guidance. In determining importance and relevant applicable criteria we would contend that the proposed changes will lead to significant additional costs for certain industry participants who utilise the current OCC arrangements, as evidenced by the analysis conducted during the development of the proposals. Believe that Ofgem should carry out an Impact Assessment to determine the extent of those impacts and to inform its decision making against its wider statutory objectives.
<p>Scotland and Southern Gas Networks</p>	<ul style="list-style-type: none"> Implementation should be as soon as possible.
<p>Shell Energy Europe</p>	<ul style="list-style-type: none"> The full impact of the proposals on consumers, cross border trade and liquidity, wholesale gas prices and the power market have not been fully assessed. All proposals will have a significant impact on persons engaged in the shipping and supply of gas and in the generation of electricity, yet there has been limited analysis to enable these parties to understand the magnitude of the impact. Impact Assessments provide a structured framework for understanding the impacts associated with important proposals and as per Ofgem’s guidance, should be proportionate and transparent with a view to promoting a competitive, secure and environmentally sustainable internal European energy market, as required by the Third Package. 0636 and the associated

alternatives will impact competition, security of supply and cross-border trade but there has been no analysis to enable network users to understand how or the extent to which these areas will be impacted.

- No assessment has been made of the effect of the proposals on gas flows to the GB market but if the economics for directing gas to GB changes as the result of proposed changes to the optional commodity tariff then this could have a material impact on gas prices and market liquidity. In light of this, it seems there is a clear need for an Impact Assessment to ensure that a fully informed, transparent and impartial decision can be made, which takes into account a review of the wider impact of the proposals and its interactions with EU regulation.
- In the event that 0636 or any of the alternatives are implemented prior to implementation of modification proposal 0621, 0621 will need to be amended as the proposed changes to the optional commodity tariff will no longer reflect the prevailing regulation, which will have been changed to reflect implementation of 0636. Changes to 0621 will likely be required to the proposal, solution, relevant objectives and supporting analysis and customer impacts sections. There is no defined governance route to amend 0621 once the Final Modification Report has been published but amendments will be required, which will likely unduly delay implementation of 0621 and therefore, NC TAR compliance by May 2019.
- Proposing changes to the GB tariff methodology, which impact existing contracts and ongoing contract negotiations and with insufficient time to take account of the proposed changes, increases costs and risks for network users, not only in GB but also in Ireland, and in other neighbouring markets, often without recourse to amend those contracts to reflect any amendments to the optional commodity tariff.
- Ireland in particular, could be exposed to a material impact as it relies on gas flows through the Moffat Interconnector. The impact is exacerbated if there are any field issues for Irish domestic gas production, as it would lead to increased flows through Moffat and potentially high and unpredictable tariffs brought about by the changes proposed in 0636 and the associated alternatives. There has been no assessment to understand the extent of this risk. We question whether this is line with the EU network access regulation, which stipulates that tariffs must not restrict liquidity nor distort trade across borders.
- Tariff certainty and stability is paramount to a well-functioning gas system. As part of the GCD11 process, there was a preference to defer reviewing the broader objectives of the NTS Optional Commodity Charge until there was more certainty regarding GTCR and EU TAR NC. Furthermore, in Ofgem's decision not to grant urgent status to the proposal, Ofgem saw benefit in these

	<p>issues (i.e. TAR NC) being considered in the round as 0621 may have an effect on the issues covered by this modification. Whilst we welcome the fact that the proposal was not processed as urgent, it has still not been possible to assess the proposed changes to the optional commodity tariff as part of a broader review of charging regime and as such, 0636 and the associated alternatives have not been fully assessed in the context of EU regulation nor provided sufficient time for formulating and enduring solution for avoiding inefficient bypass of the NTS, which the optional commodity charge was initially put in place to achieve.</p> <ul style="list-style-type: none"> Given these uncertainties and the timing of these proposals, we suggest that Ofgem either rejects or suspends consideration of 0636 and the associated alternatives so a more workable and enduring solution can be found and the impacts fully understood, with sufficient time for network users to incorporate those changes into their internal strategies. Highlight National Grid's reasonable endeavour's licence obligation to give 150 days notice of changes to charging methodology should apply, given the material impact of the proposed changes the methodology for calculating the optional commodity tariff.
<p>South Hook Gas</p>	<ul style="list-style-type: none"> Practically, the minimum lead time should be 6 months. This will enable the market to enter into contracts which reflect the future OCC prices and not be exposed to regulatory and commercial risks. Certainly, implementation can only occur at the commencement of a Gas Year i.e. the earliest being 1 Oct 2018. A non 1 October date would undermine contractual arrangements and trading positions taken to optimise and minimise the costs of gas supplies to customers. Where notice is limited, or the date of implementation does not fall on the 1 October there would be costs related to exposures to customers, producers and/or suppliers who have entered into contractual arrangements for the upcoming Gas Year. Material changes such as those which impact OCC can only be made with sufficient lead time and at the start of a Gas Year if industry is to properly align contractual commitments and trading positions. Satisfied that the Legal Text provided meets the intent of the solution. The Modification Report refers to a number of impacts which are not quantified or explored in any meaningful way. These include: Impacts on customers: the analysis provided in the report assumes a “no change in demand” scenario in order to ascertain the broad costs and benefits to consumers. This includes any modelled re- distribution of charges across OCC and non-OCC customers, including those which move from one

	<p>categorisation to another. This is highly simplistic and misleading. Further analysis must be carried out, at least at sector if not at individual customer level to understand the sensitivity of demand to change in price (elasticity of demand). It will be the case that some existing OCC customers will reduce, or discontinue demand which will result in a number of primary and secondary impacts e.g. increase the standard SO and TO commodity rates, impact power prices/competitiveness of customer in its primary market etc.</p> <ul style="list-style-type: none"> • Impacts on gas supplies and GB security of supply: OCC is used extensively in the upstream market to optimise flows to customers. Where these rates are increased, it is possible that gas will be delivered to other global destinations, or at higher prices to UK customers. Proper consideration needs to be given to the costs of delivering gas from UK production fields and other importation routes compared with other European import destinations e.g. Norwegian pipeline routes to Germany and LNG regas terminals in Western and Southern Europe. • Impacts on supply contracts and beach trading: as stated above a full and proper assessment of the impacts on contracts between suppliers and customers and between producers and shippers needs to be carried out. In particular, consideration should be given to the length and the pricing structures of these contracts which may be undermined by a premature implementation of a change to OCC. In addition, beach trading could be greatly impacted by any changes to OCC and again a proper assessment of the potential to undermine any forward contracts should be undertaken. • In short, we believe that Ofgem must carry out an Impact Assessment if it is to properly assess the impacts of implementing any of these proposals. It is unable to make an informed decision on the basis of the analysis presented in the workgroup report. Certainly, the workgroup report is absent of any meaningful assessment of the impacts on customers, both domestic and non-domestic.
SSE	<ul style="list-style-type: none"> • Sufficient lead time needs to be provided to enable parties to reflect revised charges in contracts from October 2018, which is when most contracts start or are renewed. • Considers that Ofgem should undertake a regulatory impact assessment to more fully consider the wide ranging impacts of implementing any of these proposals, including customer contracts from October 2018, the impact on domestic customers, cross border trade, wholesale gas prices and electricity prices. • Ofgem should also consider the merits of implementing any of these proposals if it plans to approve any of the 621 proposals. • A review of the optional charge is appropriate but the timing of these proposals

	<p>is unfortunate given the 621 proposals. The Joint Office outlined in its request for a 'View' that there is a governance vacuum in some scenarios as the 621 proposals would need to be amended, analysis rerun and justification re-written, and there is no provision for this once an FMR is submitted to Ofgem.</p> <ul style="list-style-type: none"> • There are merits in some aspects of the proposals, but we consider it would be more useful to consider these as part of a more general review of 'shorthaul' arrangements once 621 option has been implemented. SSE recommends suspending consideration of 636.
<p>Triton Power Limited</p>	<ul style="list-style-type: none"> • Triton power requires a lead time of 150 days prior to implementation of any changes which have a significant financial impact i.e. 0636 & 0636B-D. Triton Power is a small organisation and accurate financial planning is critical for cash flow management. The proposed date of Oct 18 would adversely affect the current year budgets without sufficient time to put cash flow mitigations in place. • Only Modification 0636A does not impact on Triton Power assets. Implementation of Mods 0636B & 0636D would have a 7-figure impact on Triton Power's cost base and Mods 0636 & 0636C would have roughly double said impact. • During any periods where Saltend Power Station is the marginal power producer on the UK system, then an increase in cost base would result in an increase to the UK power price. This would certainly be passed on to Triton's direct customer but could also be passed on by suppliers to domestic customers through increased electricity bills. • The report is very weak on analysis to back up the multiple assumptions made throughout the document. The current analysis lacks an appreciation of price elasticity of demand therefore is likely to overstate the perceived cost saving to non-OCC users. The report is too generic and additional analysis of a quantitative nature is required to determine the direct variations to costs and associated impacts on specific customer groups, particularly the power sector for Triton Power's interests but also for manufacturing. A full impact assessment should be carried out by Ofgem before any proposals are implemented to fully understand the impacts and changes of behaviour in the market place which could be caused. • Ofgem should consider the merits of implementing any change for the short period until further changes likely to be brought in by Mod 0621 (or the various alternatives). Any changes that are implemented should be complimentary to the likely 0621 changes otherwise the impact on the gas market will be heightened by the frequency and magnitude of change and the markets ability to strike deals in what is already perceived as an uncertain and volatile regulatory environment. Triton Power does not believe the proposed 0636 (and

	<p>alternatives’) changes better facilitates objectives and only supports 0636A as a least worst option should Ofgem deem it appropriate to implement any change at all prior to the more substantial changes likely in October 2019 through 0621 and alternatives. Our firm view remains that no change should be made.</p>
<p>Uniper</p>	<ul style="list-style-type: none"> • Do not consider that <u>any</u> of these proposals provide sufficient lead time for implementation in October 2018. Many Shippers are either currently in the midst of negotiating, or have already struck contracts involving shorthaul for Gas Year 2018-19. Assuming such contracts can be re-opened (which is far from certain), the cost of unwinding them and the disruption that this could cause would have a significant adverse impact on the gas Shipper community and many large end consumers. • For the avoidance of doubt, we completely oppose implementation of any of these proposals outside of the October-September Gas Year timing (e.g. a November 2018 implementation). This would introduce unacceptable levels of contractual risk to the market, as it is a very material change outside of the established contracting period. • Affected Shippers would need to consider each contract to examine the implications. If re-opening of the contract is possible, there are costs associated with unwinding trading positions because of the contracts, which will increase inefficiency and add costs into the wholesale market, more generally. • The complete legal text for all Modifications was not provided before the workgroup concluded and therefore was not assessed. As a single party, we do not have the resources to analyse the full, detailed legal text. • Modification Proposals provide little or no evidence of an increase in market efficiency, but will, if implemented have large distributional effects, reallocating costs amongst market participants. As such, these proposals could be viewed as “special pleading”. • Proposals are seeking to address a relatively small part of the overall charging regime, without fully considering the interaction with all other aspects. It has clearly been the intention of the Mod 0621 charging review that all issues should be considered in the round to ensure the impacts can be carefully understood. We would observe that trying to address a perceived market failure through a change to the shorthaul formula is little more than a “sticking plaster” and fails to address more fundamental, underlying issues. Because of the complex interactions with other aspects of the charging regime and the significant reallocation of costs amongst market participants, we firmly believe that Ofgem must now carry out a full Regulatory Impact Assessment on these proposals.

- In its decision letter on National Grid's charging proposal GCM 19 (which similarly attempted to change certain aspects of the charging regime, Ofgem (in rejecting the proposal) noted that:

*"Given the significant uncertainty around the level of change that could be brought about by this proposal, we do not have confidence that implementing this proposal would achieve the intended aims or bring about the behavioural changes that its supporters hoped for."*³³
- As the benefits of these proposals are predicated on National Grid analysis, it is clear to us that these 0636 proposals present the same challenge in terms of actual vs. perceived benefits. It is important that the purported benefits presented by the Proposers are fully tested to ensure they are realistic, genuinely achievable and more importantly, not offset by additional costs. For instance, we are concerned that the impact on UK gas and electricity consumers (in terms of increased wholesale market prices) has not been adequately addressed through the workgroup phase (although we accept that this is difficult for Shippers to perform in a workgroup setting).
- In terms of gas consumers, a loss of shorthaul could be expected to increase NBP prices as it will directly impact the price complex between gas imports and exports. This could ultimately lead to less competitively priced gas coming to the UK. Furthermore, many gas-fired generators currently rely on shorthaul to help deliver competitively priced electricity in the wholesale market, thereby benefitting electricity consumers. The complete or partial loss of shorthaul benefits will expose some generators to a high TO/SO commodity charge, which will ultimately feed through into electricity wholesale market prices. Consequently, it would not be unreasonable to suggest that increases to wholesale gas and electricity prices may wipe out the purported "benefits" in terms of a reallocation of transportation costs amongst users of the network.
- In terms of the overall governance process, we are concerned that industry has had limited time and resources to analyse and develop all of these proposals, given the extensive demands of Modification Proposal 0621 and the ten alternatives. Had Mod 0621 not been on the table, we believe the level of industry engagement on this important issue would have been higher and the standard of Mod development and analysis more rigorous. We note, however, that some good work has begun on the issue of shorthaul and given National Grid's proposal to effectively end this product in the "enduring" period under

³³ https://www.ofgem.gov.uk/sites/default/files/docs/2010/08/gcm019_decision_signed_0.pdf

	<p>Mod 0621, there is clearly a need to develop a shorthaul solution that is fit for purpose in the long-term – not just for a year or two. In our view, these proposals would be better considered as part of a more fundamental review of shorthaul, once the future UK charging arrangements are known. Until this point is reached, there is risk of implementing a change to the charging arrangements which conflicts with future arrangements, thereby necessitating further disruptive change.</p>
<p>Vermilion Energy Ireland Ltd</p>	<ul style="list-style-type: none"> • Ideally a decision should be made as soon as possible to provide the maximum notice period for Users. National Grid’s indicative charges letter for October 2018 charges have indicated that the OCC rates may change. • Users have requested October as the preferred implementation date. • Satisfied that the Legal Text provided meets the intent of the solution. • Provides additional analysis and information to support your representation in relation to the following (see representation for full details): <ul style="list-style-type: none"> ○ What is the risk of increased by-pass? ○ Is there Discrimination in Scotland as compared to the Island of Ireland? ○ Is it economic to build by-pass pipes? ○ Why Now? ○ Other Points.
<p>VPI Immingham LLP</p>	<ul style="list-style-type: none"> • Agrees with sentiment expressed in the recent 0636 letter from Petronas Energy Trading Limited (dated 28th March 2018.) This letter accurately highlights the current level of uncertainty as well as challenges face by shorthaul users ahead of the next gas year. By this, the timing of 0636 has severely impacted counterparty’s ability to enter into new firm commercial arrangements from 1st October 2019 onwards. • Strongly believes that 0636 should have reached a decision/ timed out well ahead of the timescales required by National Grid to publish NTS charges for the next gas year. Timescales around 0636 are now unacceptably short with many counterparties requiring at least a six month lead time to manage positions and the impact on cash flow. • Does not believe 0636 implementation after the 1st October 2018 is appropriate as this would immediately impact any firm OCC contracts struck in the market – which due to the physical delivery requirement, allow for very limited contract re- opening provisions. • Support Ofgem, as a minimum, deferring implementation of any changes to the

	<p>short haul tariff until at least the 1st October 2019. We remain concerned that Ofgem will be asked to make a determination around 0636 without the necessary comprehensive, quantified analysis and impact assessments (e.g. for all customers, UK plc and security of supply, markets/ existing agreements.)</p> <ul style="list-style-type: none"> • Believe that Ofgem should provide clarity around ongoing interactions between modifications 0636, 0621 and 0653 – the impacts of which should be fully considered. Given the complexity around comparing modifications and suggested alternatives, VPI supports an alternative route from the 1st October 2019 which restricts the scope of changes to compliance with EU TAR NC. This approach would allow time for incremental evidence led changes accompanied by thorough analysis to be implemented over a longer period.
<p>Wales & West Utilities</p>	<ul style="list-style-type: none"> • Notes concerns have been raised about the limited time available between an Ofgem decision and the date on which the changes would come into effect which is presumably 1st October 2018. We recognise this concern but are not able to comment on it. We note that the original proposal was raised in good time to avoid this issue and that the process has been delayed by the raising of Alternatives. The proposer of 0636 proposed an implementation date of 1st April 2018. Parties are of course fully entitled to raise Alternatives; by raising Alternatives, proposers are indicating that they support changes to the NTS Optional Commodity Charge. We observe that raising modifications late in the process may be seen by some as an attempt to delay proposals or other Alternatives. It is however difficult to think of changes to the modification rules that would address the issue of late Alternatives without creating other problems. For example preventing Alternatives being raised a certain time after the original modification was raised would run into problems if the original proposal was materially modified close to or after that deadline. To get around this Panel may have to have a test as to whether the modification was material or not. We note that the governance workgroup is intending to discuss this in September. • Lists the dates on which each proposal was first considered by Panel. <ul style="list-style-type: none"> • 0636 - 19 October 2017 • 0636A – 18 January 2018 • 0636B – 15 February 2018 • 0636C – 15 March 2018 • 0636D - 19 April 2018

- Implementation should be as soon as possible to provide as much notice as possible
- WWU would not face any costs.
- Is satisfied the Legal Text will deliver the solution.

Please note that late submitted representations will not be included or referred to in this Final Modification Report. However, all representations received in response to this consultation (including late submissions) are published in full alongside this Report and will be taken into account when the UNC Modification Panel makes its assessment and recommendation.

11 Panel Discussions

Discussion

The Panel Chair summarised that Modification **0636** **0636A** **0636B** **0636C** and **0636D** would 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.

Panel was pleased to see the participation of a large number of parties (32) to the Consultation.

Panel Members discussed whether respondents' queries on the quality of the analysis constituted a 'new issue'. It was noted that there is a focus on savings but not a focus on cross border flows, for example.

Panel considered whether the Workgroup could do further analysis; the Workgroup Chair confirmed that some issues were confidential. If the Report were to be returned to the Workgroup it should be sent with very clear instructions and questions.

Panel Members noted that this is an issue which has been addressed previously relating to other Modifications. Panel Members noted that it had voted by majority to send the Draft Modification Report out to Consultation at the previous UNC Panel on 19 April 2018.

Panel clarified whether Ofgem could confirm it would carry out a Regulatory Impact Assessment; Ofgem could not provide confirmation at this stage.

Panel Members confirmed its unanimous view that a Regulatory Impact Assessment (RIA) should be carried out by Ofgem. This should also include compliance issues (including NTS licence obligations, EU Compliance). National Grid's Panel Member confirmed National Grid deems itself currently compliant with its licence.

Some Panel Members noted that the short notice nature of the potential changes was detrimental to competition.

A Panel Member noted that none of the Modifications were in the interest of the consumer and that resource should not be diverted towards these Modifications. Instead those resources should be concentrated on, for example UNC 0621.

Panel Members considered each Modification in turn.

For 0636:

- Those who did not vote for implementation considered the Modification would not be compliant with current EU regulation. Some considered on balance that the Modification did not further the relevant objectives. Some considered the negative risk on commercial and contractual positions outweighed the potential cost reflective improvements; the number resulting was more cost reflective but the method by which it was reached was not.
- Those who voted for implementation considered on balance this Modification would improve competition across the total system.

For 0636A:

- Those who did not vote for implementation considered the Modification would not be compliant with current EU regulation. Some considered the arbitrary distance cap was not cost reflective. Some considered on balance that the Modification did not further the relevant objectives.
- The Panel Member who voted for implementation considered on balance this Modification would improve competition across the total system, though the arbitrary distance cap somewhat diminishes that.

For 0636B:

- Those who did not vote for implementation considered the Modification would not be compliant with current EU regulation. Some considered on balance that the Modification did not further the relevant objectives.
- The Panel Member who voted for implementation considered on balance this Modification would provide a marginal benefit for competition across the total system.

For 0636C:

- Those who did not vote for implementation noted that the CDSP indicated this Modification could not be implemented in a reasonable period (before October 2019). Some Panel Members noted this Modification includes measures that could lead to discrimination between IPs and non-IPs (potentially due or undue discrimination). Some considered on balance that the Modification did not further the relevant objectives.
- The Panel Member who voted for implementation considered the Modification would be compliant with current EU regulation.

For 0636D:

- Those who did not vote for implementation noted that the CDSP indicated this Modification could not be implemented in a reasonable period (before October 2019). Some Panel Members noted that the short notice nature of the potential changes was detrimental to competition. Some considered on balance that the Modification did not further the relevant objectives.
- The Panel Member who voted for implementation considered the Modification would be compliant with current EU regulation.

Panel Determinations

Panel determined by majority that no new issues were identified.

Panel Members voted and, with 5 in favour (out of a possible 13), did not recommend implementation of **0636**.

Panel Members voted and, with 1 in favour (out of a possible 13), did not recommend implementation of **0636A**.

Panel Members voted and, with 1 in favour (out of a possible 13), did not recommend implementation of **0636B**.

Panel Members voted and, with 1 in favour (out of a possible 13), did not recommend implementation of **0636C**.

Panel Members voted and, with 1 in favour (out of a possible 13), did not recommend implementation of **0636D**.

Members determined, should one of the modifications be implemented, which one would better facilitate achievement of the Relevant Objectives:

Panel members voted and with 4 votes in favour proposed Modification **0636** better facilitates the Relevant Objectives than proposed Modifications **0636A** **0636B** **0636C** and **0636D**

Panel members voted and with 0 votes in favour proposed Modification **0636A** better facilitates the Relevant Objectives than proposed Modifications **0636** **0636B** **0636C** and **0636D**

Panel members voted and with 0 votes in favour proposed Modification **0636B** better facilitates the Relevant Objectives than proposed Modifications **0636** **0636A** **0636C** and **0636D**

Panel members voted and with 0 votes in favour proposed Modification **0636C** better facilitates the Relevant Objectives than proposed Modifications **0636** **0636A** **0636B** and **0636D**

Panel members voted and with 2 votes in favour proposed Modification **0636D** better facilitates the Relevant Objectives than proposed Modifications **0636** **0636A** **0636B** and **0636C**

12 Recommendations

Panel Recommendation

Members recommended:

- that Modification **0636** should not be implemented.
- that Modification **0636A** should not be implemented.
- that Modification **0636B** should not be implemented.
- that Modification **0636C** should not be implemented.
- that Modification **0636D** should not be implemented.

Should one of the modifications be implemented, the Panel considers:

- that no clear majority view existed on the preference of whether proposed Modifications **0636**, **0636A**, **0636B**, **0636C** and **0636D** better facilitates the Relevant Objectives than the others.

13 Appendix 1

GCD11 document:

“42342-NTS GCD11 - Optional Commodity Charge Change V1.3”

<https://www.gasgovernance.co.uk/sites/default/files/ggf/book/2017-11/42342-NTS%20GCD11%20-%20Optional%20Commodity%20Charge%20Change%20V1.3.pdf>

14 Appendix 2

GCD11 Discussion report:

“NTS GCD11R - Updating the Cost Inputs to the NTS Optional Commodity Charge Function”

<https://www.gasgovernance.co.uk/sites/default/files/ggf/book/2017-11/44428-NTS%20GCD11R%20Discussion%20Report.pdf>

15 Appendix 3 – Comparison of Pipeline Construction Costs

As part of the recent Charging Review work, stakeholders were asked to provide any data that they could share in regard to recent pipe-building costs so as to consider the validity of the underlying costs used within the GCD11 Discussion and hence Modification 0636. There was a limited response to the request potentially because of the confidential nature of pipe-building costs and associated investment decisions amongst the shipper community. The data that has been provided is summarised below and shows consistency between these data sources. In the absence of more comprehensive data (which Workgroup members stated was unlikely to materialise³⁴) these costs are considered by the Proposer to be appropriate for the purposes of bringing the OCC rate to a more realistic value, than those currently underlying the OCC rates.

	Diameter	length	equivalent pipeline capacity	cost	comment
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³⁴ Users have been asked to provide cost data during both the GCD11 development in 2015 and again more recently during the current Charging Review.

GNI Pipeline Scotland ³⁵	914mm	50km	500 GWh/d	€92.9m	£80m	assumed entry and exit pressures 85bar and 70bar
Germany - Gas TSOs ³⁶	900mm	50km		€90.5m	£78m	
NG - derived cost from GCD11 Formula	915mm	50km			£82m	

16 Appendix 4 – Contribution to Costs

The following is an extract from a larger document presented to the NTSCMF on 2 August 2017³⁷. Table 1 below shows the estimated costs of by-pass pipelines for the likely NTS direct connections that could benefit from the OCC. A major assumption in the calculation of the current OCC rate is the 75% load factor and National Grid have confirmed that this assumption is significantly higher than the typical load factor observed at present. The following conclusion is also an extraction from the document.

³⁵ <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy/projects-by-country/united-kingdom/5.2-0042-uk-p-m-14>

³⁶ <http://www.fnb-gas.de/en/network-development/ndp-2016/nep-2016.html>

³⁷ The full document is available on the JO website at <https://www.gasgovernance.co.uk/sites/default/files/ggf/page/2017-08/Inefficient%20Bypass%20of%20NTS%20-%20KEL%20Paper%20for%202%20Aug%20%2717%20NTSCMF.pdf>

National Grid NTS have advised that only about 60% of gas flows to eligible exit points avail of the NTS Optional Commodity charge. Hence, about £28 million would be paid by these sites by way of the shorthaul tariff as compared to the £298 million that National Grid estimate that the sites would have to pay to fund the construction and operation of the bypass pipelines (NB both figures are on an annual basis). To put this in perspective, the £28 million is less than 50% of what it would cost just to operate the bypass pipelines. The total cost of constructing these bypass pipelines is in excess of £1.6 billion.

Exit Points			Optional Commodity Charge			Cost of Bypass Pipeline				
	Obligated Exit Capacity kWh/day	Historical Flows at Exit kWh/day	Distance to Nearest Entry km	p/kWh	% of TOSO	Amount paid by Users	Option 2 OCC	Annual Cost with Annuitised Pipe	Annual Operating Cost	Cost of Construction
DC1	108,300,000	6,623,287	0	0.0020	2%	£48,823	0.0029	£863,705	£172,741	£4,670,224
DC2	73,210,000	1,057,700	0	0.0026	3%	£10,072	0.0038	£770,386	£154,077	£4,165,630
DC3	121,200,056	72,785,150	7	0.0034	4%	£906,341	0.0070	£2,335,218	£467,044	£12,626,990
DC4	38,120,000	12,697,892	1	0.0047	5%	£219,506	0.0081	£841,680	£168,336	£4,551,134
DC5	28,480,000	2,905,176	1	0.0053	5%	£55,709	0.0086	£669,699	£133,940	£3,621,195
DC6	20,040,000	11,454,140	0	0.0061	6%	£254,519	0.0096	£527,725	£105,545	£2,853,516
DC7	40,940,000	24,029,310	5	0.0064	7%	£557,390	0.0126	£1,410,307	£282,061	£7,625,811
DC8	13,276,800	4,334,319	0	0.0080	8%	£126,072	0.0129	£467,947	£93,589	£2,530,285
DC9	43,540,000	14,946,299	9	0.0081	8%	£449,037	0.0175	£2,085,222	£417,044	£11,275,211
DC10	9,750,000	2,980,266	0	0.0106	11%	£114,817	0.0180	£480,573	£96,115	£2,598,556
DC11	91,000,001	7,732,386	37	0.0125	13%	£352,703	0.0318	£7,930,162	£1,586,032	£42,879,974
DC12	57,830,000	36,749,960	24	0.0128	13%	£1,721,054	0.0312	£4,935,010	£987,002	£26,684,585
DC13	67,000,000	46,408,598	37	0.0160	16%	£2,706,142	0.0403	£7,396,873	£1,479,375	£39,996,369
DC14	3,690,000	258,556	0	0.0184	19%	£17,375	0.0319	£321,977	£64,395	£1,740,996
DC15	38,600,000	5,536,770	29	0.0201	21%	£406,422	0.0490	£5,181,261	£1,036,252	£28,016,116
DC16	68,012,169	12,076,753	50	0.0204	21%	£898,588	0.0525	£9,773,567	£1,954,713	£52,847,632
DC17	40,840,000	17,663,742	32	0.0208	21%	£1,343,647	0.0513	£5,730,910	£1,146,182	£30,988,178
DC18	2,583,336	3,267	0	0.0232	24%	£277	0.0410	£290,142	£58,028	£1,568,856
DC19	66,000,000	33,866,070	67	0.0272	28%	£3,357,465	0.0709	£12,814,427	£2,562,885	£69,290,172
DC20	5,520,000	80,702	6	0.0304	31%	£8,948	0.0629	£950,006	£190,001	£5,136,870
DC21	82,000,000	52,401,011	108	0.0352	36%	£6,726,696	0.0944	£21,180,296	£4,236,059	£114,526,097
DC22	1,000,000	12,345	0	0.0432	44%	£1,948	0.0803	£219,914	£43,983	£1,189,121
DC23	45,000,000	5,502,061	84	0.0455	47%	£913,222	0.1179	£14,520,466	£2,904,093	£78,515,066
DC24	42,020,000	22,596,857	87	0.0496	51%	£4,087,408	0.1282	£14,748,003	£2,949,601	£79,745,404
DC25	137,760,000	29,267,580	265	0.0537	55%	£5,733,502	0.1506	£56,791,478	£11,358,296	£307,082,877
DC26	38,660,000	5,025,400	92	0.0561	58%	£1,029,573	0.1449	£15,340,025	£3,068,005	£82,946,585
DC27	11,700,000	669,969	32	0.0569	58%	£139,215	0.1346	£4,310,496	£862,099	£23,307,712
DC28	36,060,000	3,498,548	92	0.0591	61%	£754,734	0.1521	£15,017,386	£3,003,477	£81,202,008
DC29	9,100,000	3,914,012	27	0.0614	63%	£876,600	0.1428	£3,557,402	£711,480	£19,235,585
DC30	48,650,000	12,027,063	126	0.0621	64%	£2,727,333	0.1634	£21,766,188	£4,353,238	£117,594,133
DC31	37,470,000	7,981,283	101	0.0626	64%	£1,824,141	0.1619	£16,604,167	£3,320,833	£89,782,053
DC32	19,300,000	8,065,992	66	0.0732	75%	£2,155,380	0.1816	£9,596,374	£1,919,275	£51,869,516
DC33	16,890,000	152,750	66	0.0817	84%	£45,528	0.2014	£9,314,022	£1,862,804	£50,362,782
DC34	15,380,000	4,986,083	69	0.0914	94%	£1,663,685	0.2249	£9,466,901	£1,893,380	£51,189,427
DC35	19,600,000	5,288,307	86	0.0917	94%	£1,769,364	0.2292	£12,297,744	£2,459,549	£66,496,361
DC36	12,350,000	6,262,078	59	0.0944	97%	£2,157,438	0.2289	£7,740,107	£1,548,021	£41,852,307
Totals ==>							£46,154,672	£298,247,769	£59,649,554	£1,612,685,337

Table 1: DC Sites for which the Optional Commodity Charge may be practical option

17 Appendix 5 – 0636 Proposer provided additional analysis derived from National Grid Data

Original Data provided by National Grid to Proposer on 20 Nov 2017:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
		Flow on OCC (GWh)	Flow no longer on OCC (GWh)	Revenue from OCC Flows	Commodity revenue from flows no longer on OCC	Amount OCC flows would pay in Commodity Revenue if no OCC	Amount redistributed to non-OCC users	Sites on OCC	Sites off OCC	Average Distance	Max Distance	SO+TO Combined Commodity Rate	TO Combined Commodity Rate	SO Combined Commodity Rate	
1															
2	Current	280,562	0	£ 48.3m	£ -	£ 198.4m	£ 150.1m	62	0	89	274	0.0963	0.0751	0.0212	
3	636	187,952	92,610	£ 54.6m	£ 75.5m	£ 132.9m	£ 78.3m	27	35	30	262	0.0815	0.0643	0.0172	
4															
5	Please note: the amount in E3 represent those flows where OCC rates exceed the recalculated commodity rates under the 636 proposals. Under current OCC rates these flows pay £34,003,711 in OCC Revenue														

Breakdown of revenues from current OCC flows (UNC 0636)

The table below provides a breakdown of the annual revenue from current OCC flows using the source data above that was provided by National Grid. The following information supports the table:

- OCC “Remainers” are flows which are currently using OCC via a particular route which remain on the OCC following Mod 0636
- OCC “Leavers” are flows which are currently using OCC via a particular route which switch to standard rate following Mod 0636
- “Never on OCC” are flows which are currently using Standard Commodity rates.
- *Impact of Mod 0636* is calculated as *Mod 0636 Charges* minus *Current OCC Charges*
- *Retained benefit after Mod 0636* is calculated as *No OCC – Standard Commodity only* minus *Mod 0636 Charges*

Scenario and Impact	Breakdown of Annual Revenue from Current OCC Flows			Amount "re-distributed" to "never on OCC "	Source
	OCC "Remainers"	OCC "Leavers"	Total from OCC flows		
No OCC - Standard Commodity only	£132.93 m	£65.50 m	£198.43 m	-	Column 2 is cell F3 of the NG table; column 4 is cell F2 ; column 3 is the difference
Current	£14.30 m	£34.00 m	£48.31 m	£150.12 m	Column 3 is from the note at the foot of the table. Column 4 is from cell D2; column 5 is the difference in the total from the first row
Mod 0636	£54.60 m	£75.45 m	£130.05 m	£68.38 m	Column 2 is cell D3, column 3 is cell E3, column 4 is the sum of these two. Column 5 is the difference in the total from the first row
Impact of Mod 0636	£40.30 m	£41.45 m	£81.74 m	-£81.74 m	These are the increases in the charges between Current and Mod 0636 rows.
Retained benefit after Mod 0636	£78.33 m	-£9.95 m	£68.38 m		These numbers are the differences between the first row and the third row.

- In conclusion UNC Mod 0636 reduces the amount “re-distributed” to customers “Never on OCC” (primarily in the DNs) by £82m and the remaining OCC flows still save £78m compared to Standard rates.

Note: This value of £82m differs from the £72m in the Consumer Impact Assessment on page 16 above as it relates to the sub-population “Never on OCC”, whereas the £72m is the net impact for those not on OCC under UNC 0636. The difference of £9.95m can be seen in the table above.

[Impact of UNC 0636 on Non-OCC Users by Annual Load Size per Annum](#)

The following table (calculated by the Proposer) shows the annual impact (where negative values represent a saving) for Non-OCC Users split by annual load size. This relates primarily to DN connected loads, both Domestic and I & C, but may also include some loads directly connected to the NTS. The impact assumes that there is no change in the flow levels as a result of UNC 0636.

	Annual Load MWh	Impact £ per annum

Domestic³⁸		
Low	8	-£1.19
Medium	12	-£1.78
High	17	-£2.52
Non-Dom Retail³⁹	73.2	-£10.85
Industrial⁴⁰		
I1	< 277.8	-£41.19
I2	277.8 - 2,778	-£412
I3	2,778 - 27,780	-£4,119
I4	27,780 - 277,800	-£41,192
I5	277,800 - 1,111,200	-£164,769

Note: Where the annual load is a range the impact of the top of the range is shown.

The annual impact is calculated as the annual load times the standard rate under Mod 0636 of 0.0815 p/kWh minus the existing rate of 0.0963 p/kWh

Impact of UNC 0636 on Standard Commodity Charges (Assuming Shippers Choose Cheapest Option)

The table below shows the impact of UNC 0636 on Standard Commodity charges (assuming Shippers choose the cheapest option).

Commodity Charges	Current p/kWh	UNC 0636 p/kWh	Variance	No OCC
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³⁸ Source: <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/typical-domestic-consumption-values>

³⁹ Source: <https://www.ofgem.gov.uk/publications-and-updates/retail-energy-markets-2016>

⁴⁰ Source: <https://ec.europa.eu/energy/en/data-analysis/market-analysis>

TO Combined Commodity Rate	0.0751	0.0643	-14%	-
SO Combined Commodity Rate	0.0212	0.0172	-19%	-
SO+TO Combined Commodity Rate	0.0963	0.0815	-15%	0.0707

In Conclusion:

- Standard Commodity charges will fall by 15% all other things being equal.

Comparison of average rates in p/kWh for OCC versus non-OCC (UNC 0636)

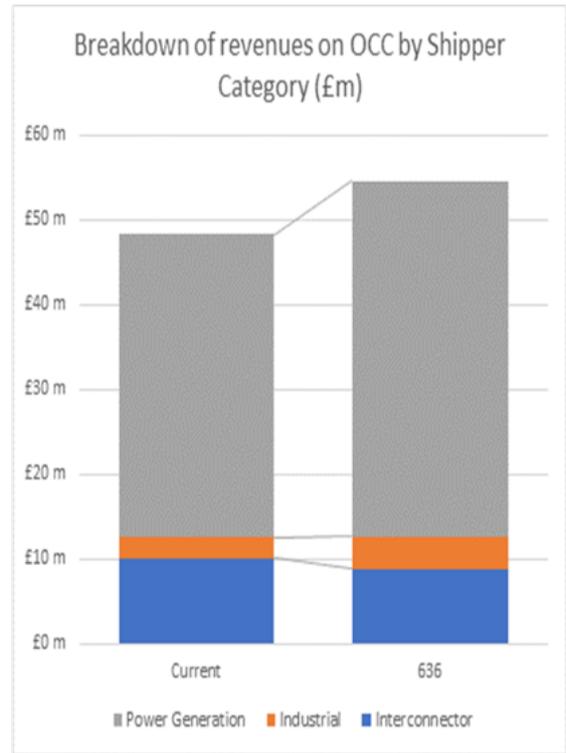
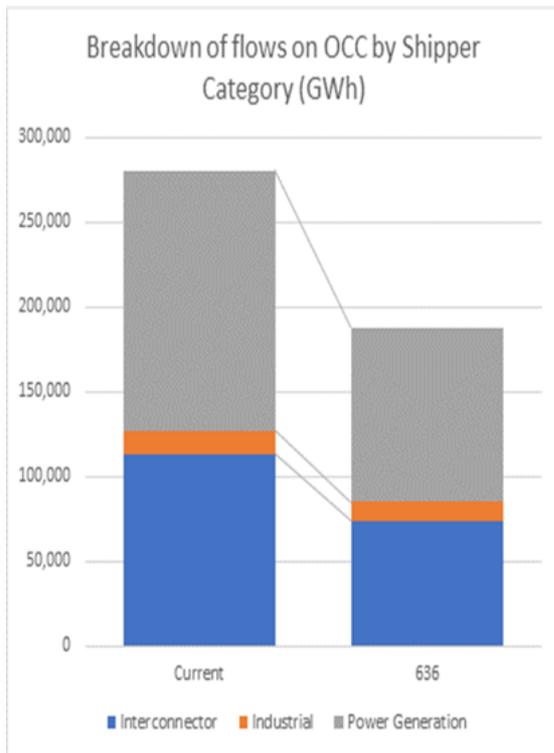
	Current	UNC 0636	Rate with no OCC
OCC users "remainers"	0.0076	0.0291	0.0707
previous OCC "leavers"	0.0367	0.0815	0.0707
Non OCC users	0.0963	0.0815	0.0707

Raised contribution towards SO charges (UNC 0636)

The revenue recovered via the OCC will continue to contribute to the SO allowed revenues.

Distributional effects on charges for OCC Users (UNC 0636)

Comparison of Flows and Revenues for OCC Users by Shipper Category



The following tables provides the data to support the above graphs.

	Current	636
Interconnector	£10 m	£9 m
Industrial	£2 m	£4 m
Power Generation	£36 m	£42 m
Total	£48 m	£55 m

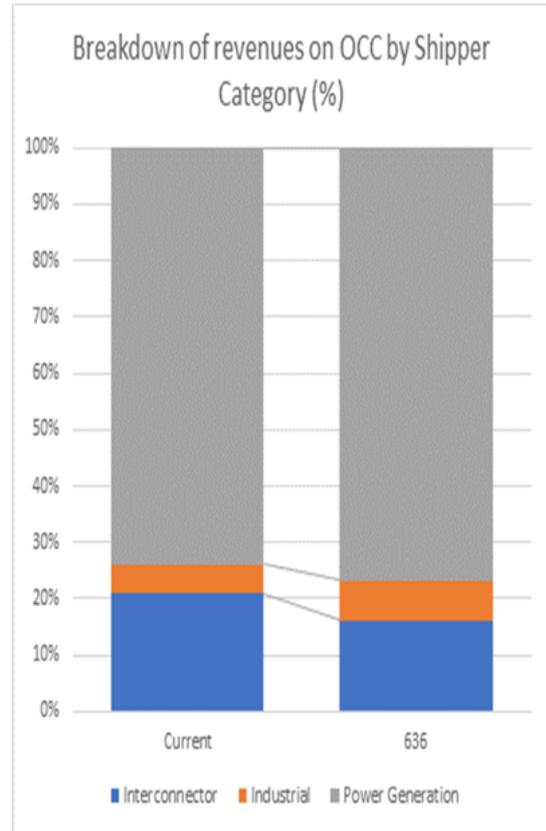
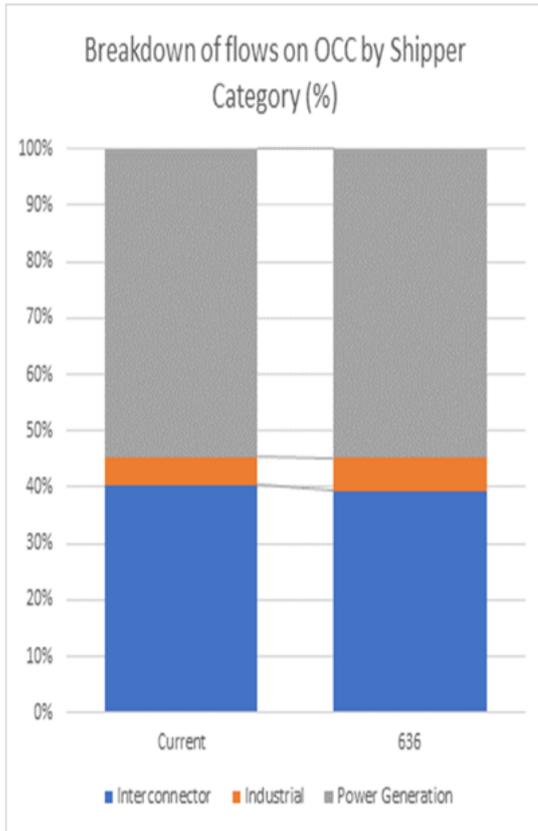
	Current	636
Interconnector	113,277	74,142
Industrial	13,857	10,909
Power Generation	153,429	102,901
Total	280,562	187,952

In conclusion:

- Average rates for flows remaining on OCC increase by a factor of 4 and for flows “leaving” OCC increase by a factor of 2

- OCC flows reduce in absolute terms for all shipper categories although the % split by shipper category hardly changes
- Revenues from OCC flows increase despite lower flows.

Comparison of Flows and Revenues for OCC Users by Shipper Category – percentages



The following tables provides the data to support the above graph.

Breakdown of flows on OCC by Shipper Category (%)		
	Current	636
Interconnector	40.37%	39.45%
Industrial	4.94%	5.80%
Power Generation	54.69%	54.75%

Breakdown of revenues on OCC by Shipper Category (%)		
	Current	636
Interconnector	20.89%	16.23%
Industrial	5.16%	7.01%
Power Generation	73.96%	76.76%

In conclusion:

- Standard Commodity charges may reduce by 15% under UNC0636

18 Appendix 6 - Compact Version of Methodology Spreadsheet

Pipeline Diameters for a range of distances and peak-day flowrates			Step a Pipe Diameters	Step b Connection Costs	Total Capital Costs	Annuitised Capex	Step c Annuitised Capex + Opex	Step d Unit Costs	Step e	
This column 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.			This Column shows the pipe diameters in mm required to meet a range of typical peak day flowrates for a 50km pipeline.	These columns contain a total value of some of the non-distance related costs (e.g. Pipeline connection, Pig traps, Calorimetry, Pressure reduction and volumetric control) for each of the peak day flowrates. Please note these have been indexed to 15/16 prices using RPI.	This column calculates the sum of the connection costs (indexed by RPI) plus pipelaying costs (variable costs indexed by Steel Index and RPI from 2010 onwards, and non-variable costs indexed solely by RPI).	This column calculates the total project cost per annum using the 10 year discount factor calculated in the discount factor table below.	This column calculates the annuitised Capex + Opex costs using the assumptions detailed in the additional costs table.	This column divides the annuitised costs in step c by the annual quantities corresponding to the supply point capacities using an average load factor of 75% to generate a unit cost by supply point capacity, expressed in p/kWh for a range of supply point capacities and for 0 and 50 km.	This column calculates the unit cost per kilometre.	
Load Factor: 75%			RPI Indexation to:			For pipes of length 0 km				
			1998 Prices	2009/10 Prices	2015/16 Prices	Total Capital Costs	Annuitised Capex	Annuitised Capex + Opex	Unit Costs at 75% LF	
SOQ(mcmd)	SOQ (KWh)	AQ (mkWh)	Total €'000's							
60	649,800,000	177,883	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00064	
50	541,500,000	148,236	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00077	
40	433,200,000	118,589	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00097	
30	324,900,000	88,941	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00129	
20	216,600,000	59,294	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00193	
15	162,450,000	44,471	3,525	4,779	5,863	£5,862,713	£867,714	£1,147,336	0.00258	
12	129,960,000	35,577	3,130	4,244	5,206	£5,205,756	£770,480	£1,033,679	0.00291	
10	108,300,000	29,647	2,930	3,973	4,873	£4,873,120	£721,248	£976,131	0.00329	
7	75,810,000	20,753	2,630	3,566	4,374	£4,374,166	£647,401	£889,809	0.00429	
5	54,150,000	14,824	2,630	3,566	4,374	£4,374,166	£647,401	£823,282	0.00555	
4	43,320,000	11,859	2,275	3,085	3,784	£3,783,737	£560,014	£721,134	0.00608	
3	32,490,000	8,894	1,940	2,630	3,227	£3,226,571	£477,550	£624,742	0.00702	
2	21,660,000	5,929	1,905	2,583	3,168	£3,168,360	£468,935	£614,671	0.01037	
1	10,830,000	2,965	1,505	2,041	2,503	£2,503,087	£370,471	£499,575	0.01685	
0.5	5,415,000	1,482	1,095	1,485	1,821	£1,821,183	£269,545	£315,075	0.02125	
0.4	4,332,000	1,186	1,095	1,485	1,821	£1,821,183	£269,545	£315,075	0.02657	
0.3	3,249,000	889	915	1,241	1,522	£1,521,811	£225,236	£263,282	0.02960	
0.2	2,166,000	593	915	1,241	1,522	£1,521,811	£225,236	£263,282	0.04440	
0.1	1,083,000	296	770	1,044	1,281	£1,280,649	£189,543	£221,559	0.07473	
50										
SOQ(mcmd)	SOQ (KWh)	AQ (mkWh)	50 km	For pipes of length 50 km						
60	649,800,000	177,883	915	Total Capital Costs	Annuitised Capex	Annuitised Capex + Opex	Unit Costs at 75% LF	Unit Costs per Km		
50	541,500,000	148,236	915	£61,872,355	£9,157,448	£10,886,968	0.00964	0.00018		
40	433,200,000	118,589	915	£61,872,355	£9,157,448	£10,886,968	0.02448	0.00044		
30	324,900,000	88,941	915	£61,215,398	£9,060,215	£10,773,311	0.03028	0.00055		
20	216,600,000	59,294	600	£60,882,762	£9,010,983	£10,715,763	0.03614	0.00066		
15	162,450,000	44,471	600	£52,449,162	£7,762,764	£9,375,724	0.04518	0.00082		
12	129,960,000	35,577	600	£52,449,162	£7,762,764	£9,309,197	0.06280	0.00114		
10	108,300,000	29,647	600	£51,858,733	£7,675,377	£9,207,049	0.07764	0.00143		
7	75,810,000	20,753	450	£35,667,625	£5,279,004	£6,640,408	0.07466	0.00135		
5	54,150,000	14,824	450	£35,609,414	£5,270,389	£6,630,337	0.11182	0.00203		
4	43,320,000	11,859	450	£30,069,042	£4,450,383	£5,744,949	0.19378	0.00354		
3	32,490,000	8,894	300	£29,387,137	£4,349,458	£5,560,448	0.37511	0.00708		
2	21,660,000	5,929	300	£27,369,855	£4,050,889	£5,241,707	0.44201	0.00831		
1	10,830,000	2,965	200	£27,070,482	£4,006,580	£5,189,914	0.58352	0.01108		
0.5	5,415,000	1,482	200	£27,070,482	£4,006,580	£5,189,914	0.87528	0.01662		
0.4	4,332,000	1,186	150	£21,786,114	£3,224,464	£4,351,337	1.46771	0.02786		

Pipelaying Unit Costs

Pipe size Diam. (mm)	1998 Unit Cost £/km	Steel Index	RPI Indexation	2015/16 Unit Costs £/km
		2009/10 Prices	2015/16 Prices	
		2.192729767	1.226649302	
50	125,000	274,091	336,214	336,214
100	150,000	328,909	403,457	403,457
150	187,500	411,137	504,321	504,321
200	202,500	444,028	544,666	544,666
300	238,750	523,514	642,168	642,168
450	355,000	778,419	954,847	954,847
600	414,000	907,790	1,113,540	1,113,540
610		*****	*****	*****
915		*****	*****	*****
1220		*****	*****	*****

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. **Please note these have been indexed to 9/10 using steel index and then indexed from 9/10 to 15/16 using RPI.**

This section contains the Ofgem provided unit costs in 9/10 prices and these are indexed to 15/16 using RPI. **Please note because of the sensitivity of these costs they have not been published.**

New pipe sizes	Cost	Pipelaying costs contribution (%)
610	*****	90.95
915	*****	94.21
1220	*****	95.86

This table calculates the split between connection and distance-related (pipelaying) costs for the new pipe sizes to maintain consistency with the original data. This is because the cost of the new pipe sizes are only available as composite values. **Please note because of the sensitivity of these costs they have not been published.**

Additional Costs

Expenditure Type	Additional Costs	Original	RPI Indexation	
			2009/10 Price	2015/16 Price
			1.355873179	1.226649302
Opex	Where flow rate is between 1 and 5 mcmd, inclusive	40,000	54,235	66,527
	Where flow rate is between 7 and 60 mcmd, inclusive	80,000	108,470	133,054
	Where distance is greater than 0km	35,000	47,456	58,211
	Cost per km added to all those with a distance greater than 0km	10,000	13,559	16,632
Capex	Non-variable pipelaying costs at 50km and above	200,000	271,175	332,636
Opex	1% of the annuitised pipeline costs	1%		
	2.5% of the annuitised connection cost	2.5%		

This table contains the additional costs forming the Opex estimation, with RPI indexation.

10 year discount factor

1
0.909
0.826281
0.751089429
0.682740291
0.620610924
0.56413533
0.512799015
0.466134305
0.423716083
6.76

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.

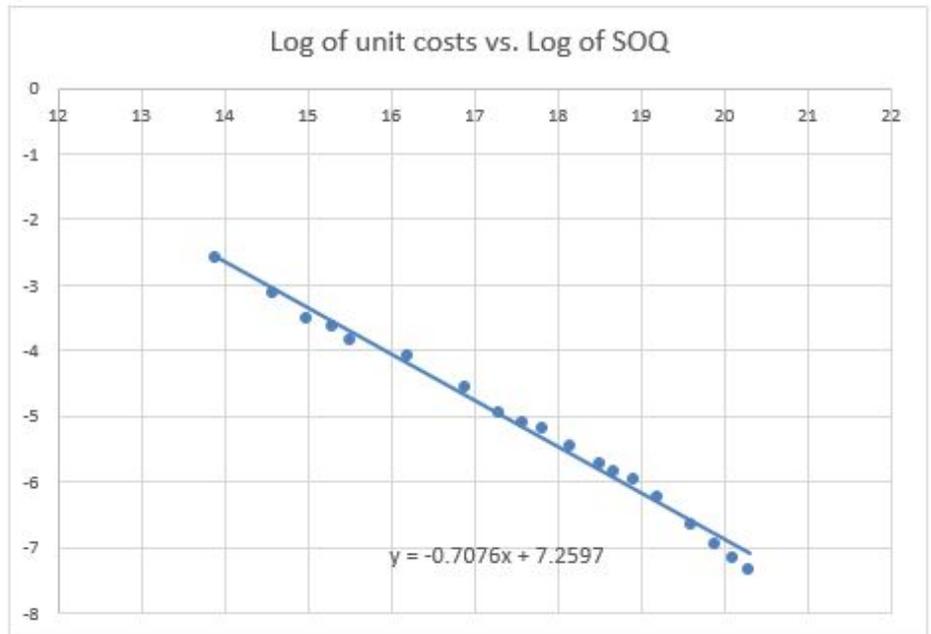
= 10yr discount factor

Parameters for formula

Non-distance:

exponent= -0.708

multiplier= 1422



Distance:

exponent= -0.780

multiplier= 1247

