











UNC Final Modification Report	At what stage is this document in the process?
<h1>UNC 0678C:</h1> <h2>Amendments to Gas Charging Regime (Postage Stamp)</h2>	<div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div>
<p>Purpose of Modification:</p> <p>The purpose of this Modification proposal is to amend the Gas Transmission Charging regime in order to better meet the relevant charging objectives and customer/stakeholder provided objectives for Gas Transmission Transportation charges and to deliver compliance with relevant EU codes (notably the EU Tariff Code). The Modification proposes the implementation of Postage Stamp charging methodology.</p>	
	<p>Panel consideration is due on 23 May 2019.</p>
	<p>High Impact:</p> <p>All parties that pay NTS Transportation Charges and/or have a connection to the NTS, and National Grid NTS</p>
	<p>Medium Impact:</p> <p>N/A</p>
	<p>Low Impact:</p> <p>N/A</p>

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Timetable		Transporter: National Grid
Modification timetable:		Systems Provider: Xoserve
Ofgem decision on urgency	25 January 2019	 commercial.enquiries@xoserve.com
Initial consideration by Workgroup	29 January 2019	
Final consideration by Workgroup	10 April 2019	
Workgroup Report Finalised	10 April 2019	
Publication of Draft Modification Report	12 April 2019	
Draft Modification Report issued for consultation	15 April 2019	
Consultation Close-out for representations	08 May 2019	
Final Modification Report available for Panel	15 May 2019	
Modification Panel decision	23 May 2019	
Final Modification Report issued to Ofgem	29 May 2019	

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1 Summary

What

This Modification proposes to introduce a new Gas Transmission Charging regime that produces stable and predictable transportation charging and is compliant with the forthcoming EU Tariff Code (Regulation 2017/460). This Modification also takes into account the decision to reject Modification 0621¹ and its Alternatives citing areas of non-compliance. This Proposal addresses the areas of compliance identified in this decision. The Modification proposes the implementation of Postage Stamp charging methodology, rather than Capacity Weighted Distance as proposed in Modification 0678.

Why

The Transportation Charging Methodology currently in place for the calculation of Gas Transmission charges, and the methodology to recover Transmission Owner (TO) and System Operator (SO) revenue through Entry and Exit charges, have been in place for a number of years. Whilst there have been some changes in the last ten years, the basic approach to calculating Entry and Exit Capacity charges and the approach to revenue recovery has not substantially changed.

A critique of the current Long Run Marginal Cost (LRMC) methodology (undertaken by the NTSCMF – concluding in January 2017² – with updated analysis presented during development of Modification 0621 in April 2018³) identified that it is too volatile, unpredictable and does not provide stability of charges for Users.

How

This Modification proposes to introduce changes to the charging framework by way of making changes to UNC TPD Section Y. It will also be necessary to make changes to other sections of the UNC TPD (Sections B, E and G) and EID Section B).

At its core, this Modification proposes to move from a Reference Price Methodology (RPM) that calculates the capacity prices using the Long Run Marginal Cost (LRMC) method to one that is based on a Postage Stamp approach. It also proposes an updated approach with changes to capacity pricing multipliers, capacity discounts and interruptible pricing review to better meet the required objectives.

It introduces some terminology from the EU Tariff Code, specifically ‘Transmission Services Revenue’ and ‘Non-Transmission Services Revenue’. The revenues will map across to TO and SO revenues thereby not changing the total revenue to be collected through Transportation charges. The more material change will be the amendments to the charging methodologies in calculating the charges that will be applied to recover the allowed revenues from NTS network Users through the Transportation charges.

¹ See <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

² Material at <https://www.gasgovernance.co.uk/ntscmf/subg1page>

³ Material at <https://www.gasgovernance.co.uk/0621/200418>

This Proposal also introduces, for some aspects of this methodology change, mechanisms to review and refine components of the charging framework, notably the Forecasted Contracted Capacity (FCC), capacity pricing multipliers and interruptible pricing, over time so they continue to better facilitate the relevant methodology objectives⁴ and support the evolution of the GB charging regime.

This Proposal should be treated as an Alternative to National Grid's Modification 0678 as it differs from it in the following key areas:

1. It uses a Postage Stamp RPM.
2. Transmission Services Revenue Recovery Charges will not be applied to Storage capacity contracts in alignment with Ofgem's GTCR decision. However, they will be applied to all non-storage contracts, including pre April 2017 contracts, to minimise distortion between new entrants and existing capacity holders and to comply with Article 35, see QC advice in appendix 2.
3. A Forecasted Contracted Capacity (FCC) methodology will be developed and, via this Modification 0678C, will be included in the UNC. (Modification 0678 seeks to capture the methodology outside of the UNC in a new methodology statement).
4. Only a 1st October Effective date will apply, and charges must be published 4 months in advance of this date. This is to ensure compliance with TAR Article 6.3 to avoid different charging methodologies for IPs and non-IPs that arise from the legal text of NG's 678 solution and to comply with CAM Code.
5. The Proposer recommends that implementation be as soon as possible for legal and compliance purposes but that charges arising from the new methodology take effect from 01 October to avoid distorting the gas market, for example gas storage auctions are due in April and lack of price certainty will have a detrimental impact on bidding behaviour.
6. A discount for storage charges of 80%.

2 Governance

Justification for Consideration as an Alternative to Modification 0678

This Modification 0678C addresses the same issues that have been raised under Modification 0678; if either Modification were to be implemented then it would result in major changes to Section Y of the UNC, effectively introducing a new charging methodology for gas transmission. This Modification has many common features to Modification 0678, but the Proposer believes it improves on the solution being proposed by National Grid's 0678.

The timetable that has been set for finalising the Workgroup Report for Modification 0678 is very aggressive but approved by Ofgem under a request for urgency. Being conscious of the need for urgency and the arguments in support of urgency contained within Modification 0678, this Modification should as far as possible follow the same timetable as Modification 0678 so that both Proposals can be considered by Panel, industry and Ofgem at the same time, making for an efficient governance process. It is the view of the Proposer that raising this Modification as a new Modification, which may or may not be granted urgent status, would result in a different timetable, would require separate workgroup meetings, be consulted on separately, be considered by Panel

⁴ As described in Standard Special Condition A5: 'Obligations as Regard Charging Methodology' of the NTS Licence, paragraph 5.

separately and would therefore make for an unnecessarily complex and inefficient process. This could severely impact the intentions behind the urgency that has been granted for Modification 0678.

In summary, this Modification 0678C has been raised as a valid Alternative solution to the one being proposed under Modification 0678.

Justification for Authority Decision

This Modification proposal is recommended to be sent to the Authority for direction as it is likely to have a material effect on commercial activities relating to the shipping, transportation and supply of gas because, if implemented, it is likely to have a material impact on the allocation of charges across NTS networks Users.

Requested Next Steps

This Modification should:

be treated as an alternative to 0678 and should proceed as such under the same timetable as agreed with the Authority for Modification 0678 as far as practicable.

3 Why Change?

Drivers

- 3.1. The methodology which is currently in place for the calculation of Gas Transmission Transportation charges, and the methodology to recover TO and SO revenue through Entry and Exit charges, has been in place for a number of years. Regulatory drivers for changes to the charging framework are:
 - 3.1.1. **The EU Tariff Code**⁵;
 - 3.1.2. Ofgem's Gas Transmission Charging Review⁶ and decision on Modification 0621 and its Alternatives⁷. In addressing the decision letter to reject Modification 0621 and its Alternatives the Modification proposes changes that ensures compliance with the TAR Network Code and through the postage stamp approach ensures that the historic sunk costs of the NTS are recovered from Users in manner that is fair, proportionate and non-distortive.
- 3.2. Currently, as a result of changing behaviours, such as increased uptake in short term zero-priced capacity, there is an increase in reliance on commodity charges to recover TO revenue. Zero priced capacity has arguably resulted in overbooking of capacity, surplus to User's requirements.

Mapping Revenues

- 3.3. Within the collection of revenue there are some changes to the terminology used to assign the revenue for the purposes of ultimately calculating charges. These changes are required by the EU Tariff Code.

⁵ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.072.01.0029.01.ENG&toc=OJ:L:2017:072:FULL

⁶ <https://www.ofgem.gov.uk/gas/transmission-networks/gas-transmission-charging-review>

⁷ <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

This relates to mapping TO Revenue and SO Revenue to Transmission Services Revenue and Non-Transmission Services Revenue. This does not affect the actual allowed revenue National Grid will be required to recover through the charges.

- 3.4. There are a number of targeted charges in the current methodology and it is necessary to consider which revenue they will contribute towards:
- 3.4.1. The Distribution Network (DN) Pensions Deficit Charge and NTS Meter Maintenance Charge, under the EU Tariff Code (Article 4), do not fall into the specific criteria for Transmission Services. This Modification proposes that these will be classified as Non-Transmission Services charges thereby contributing towards Non-Transmission Services Revenue.
 - 3.4.2. The St. Fergus Compression charge will be a Non-Transmission Services charge.
 - 3.4.3. The methodologies to calculate these charges (DN Pensions Deficit, NTS Meter Maintenance and St. Fergus Compression) are not proposed to be reviewed at this time. Whilst these could be considered as either Transmission Services or Non-Transmission Services, providing it is approved by the National Regulatory Authority (NRA), it is proposed this is a pragmatic way to charge for these items.

Pricing Methodology

- 3.5. The current RPM (including the adjustments applied in order to calculate capacity charges) produces charges that are, in certain locations, volatile and unpredictable. This causes challenges for investment decisions and in predicting operational costs for connected parties year on year and as such, is a key area to be addressed.
- 3.6. Through an assessment of RPMs⁸ an alternative considered from the current method was the CWD model. By design this approach is generally more predictable, less volatile and more stable in nature, provided the FCC is stable, and is more suited to a system that is about use and revenue recovery associated to use rather than linked to investment (marginal pricing). However, the CWD model uses both distance and capacity to allocate the historic sunk costs of the NTS and produces some charges that are counter-intuitive and will be distortionary to the wholesale gas market. For example, entry and exit points that are very close to each other and represent flow routes have the highest charges i.e St Fergus-Peterhead and Mifflord Haven -Pembroke.
- 3.7. The proposed use of a postage stamp methodology (with the CWD model as a counterfactual⁹) in the RPM resolves this issue by narrowing the range of prices and as such making them more predictable. This makes the RPM more relevant to how the NTS allowed revenue is recovered from Users of the

⁸ See <https://www.gasgovernance.co.uk/ntscmf/subg1model>

⁹ The CWD model results in market distortions driven by entirely fictitious “use” of the system derived from the distance element of the CWD model. The CWD approach results in locational diversity in charges which distort market signals and could result in inefficient market entry and exit.

network. It is also a fair, proportionate and non-discriminatory approach to the recovery of the allowed revenue and it is consistent with the approach adopted for the recovery of historic sunk network costs adopted in the Ofgem minded to decision in the Targeted Charging Review for the electricity market¹⁰. The postage stamp approach is not designed to reflect current and future expectations related to the “use” of the NTS and does not seek to influence its use (driven through market behaviour). In developing a postage stamp approach the following Ofgem views are relevant¹¹

- *“cost-reflectivity is more relevant to forward-looking charges than revenue recovery charges”;*
- *“the following principles are relevant for assessing revenue recovery charges: i) reducing harmful distortions, ii) fairness to end consumers and iii) proportionality and practical considerations”*
- *“In making a decision on gas network charges, we will keep these principles in mind, taking account of differences in gas and electricity charging and systems”;*
- The RPM methodology *“has the effect of combining both revenue recovery charges and forward-looking signals into a single capacity-based charge. Given low levels of anticipated new investment in gas network capacity in the near term, we anticipate this type of capacity charge would serve a predominantly revenue recovery function. We also note that in this context, the value of forward-looking signals is likely to be of lesser importance”.*
- *“Only a limited proportion of the costs of a meshed network are directly attributable to particular points, and therefore a substantial proportion of NGGT’s revenue requirement cannot be unambiguously attributed to individual entry and exit points.”*
- *“distance-based allocation of revenue recovery charges (i.e. CWD methodology and variants on CWD) would attribute a greater proportion of network costs to points on the network associated with longer average distances to other points on the network. Our current view is that there are several potential weaknesses with using distance as a factor for setting the reference price:*
 - ☐ *Setting higher charges to those bringing gas onto and taking gas off the system at points which are located further away would increase incentives on those users to reduce their usage of the network, for which there are unlikely to be any short to medium term associated cost savings.*
 - ☐ *The distances used in the CWD methodologies are typically averaged across all points for the purposes of setting prices, and the actual costs of a particular entry point to a particular exit point might not be “real” (i.e. such physical flows may never occur). Shippers book entry and exit capacity independently and nominate flows without specifying specific*

¹⁰ See <https://www.ofgem.gov.uk/publications-and-updates/targeted-charging-review-minded-decision-and-draft-impact-assessment>

¹¹ See <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

routes and therefore it is very difficult to allocate flows to specific assets. This type of treatment of distance is therefore unlikely to generate prices that are accurately cost-reflective of the physical transportation routes actually used. Although as we consider the charges resulting from the RPMs to be largely functioning as revenue recovery charges, cost-reflectivity is less relevant in any case.

□ *Using distance in setting transmission entry and exit charges would mean those consumers who are located in more remote locations would pay higher transmission charges for entry and exit (other things being equal). This may not be considered a fair outcome as those consumers are not driving significant additional costs from their use of a shared network that is already built and that has spare capacity available."*

- *"Incentives for a party to choose a particular location to benefit from lower transmission charges are likely to be lower under all proposals compared to the status quo, but higher under the CWD options compared to the PS option, which has no locational incentives"*

- 3.8. As a result of changing the RPM, any adjustments, discounts and other charges must be reviewed in order to avoid unintended consequences and to ensure that a clear impact assessment (including any Ofgem Impact Assessment) can be carried out on the total impact of these adjustments, discounts and other charges to NTS customers and to the end consumer.
- 3.9. This Proposal considers EU compliance with the EU Tariff Code which has a deadline to implement the changes of 31 May 2019. Price changes would apply from 01 October. A 01 October date for the application of new charges is necessary to accommodate the commercial and contractual planning cycle of gas industry participants: commercial contracts are structured around the Gas Year (01 October to 30 September) and rely on having good foreknowledge of what transmission charging arrangements are likely to be. For example, contracts for gas storage services, supply contracts and contracts based on the existence of "short-haul" arrangements. Conversely, other contracts will depend on counterparties having a good understanding of the basic charging components such as how any revenue under-recovery will be treated by National Grid. Mid-year changes to the structure of the charges or the rules on how they will apply would promote uncertainty and undermine trading activity that is necessary to help promote GB market liquidity.
- 3.10. This Proposal also seeks to establish a framework for review and update of key inputs to the newly established RPM which will further the objectives of the RPM.
- 3.11. This Proposal aims to simplify the charging methodology, limiting aspects of the methodology whereby some charges can materially impact other charges and also eliminating the influence between Transmission and Non-Transmission Services. In conclusion, the Postage Stamp RPM meets the criteria under the TAR Network Code including Recital (3) (see also the views on the proposer on compliance with the TAR Network Code). In this context we note that distance is not a "cost driver" in relation to historic sunk costs. In addition, we are concerned that the use of distance in relation to the RPM distorts some locational signals and does not reflect actual use of the NTS.

Forecasted Contracted Capacity (FCC)

- 3.12. The proposed changes to the charging regime may result in changes to commercial behaviours in the procurement of capacity rights. The proposal for a forecast of contractual capacity (FCC) will be a key input into the reference price calculation.
- 3.13. The FCC will be a forecast of capacity bookings at each Entry and Exit Point. The value will be determined in accordance with a methodology that will form part of Section Y of the UNC. The methodology is proposed to be linked to a forecast of GB demand on the NTS for the tariff year for which reference prices are being produced. It will also review the historical capacity bookings where capacity has been allocated at a price greater than zero at each Entry and Exit Point, Stage 2 PARCA commitments and forecast flow levels, to determine a value that will inform the proportion of capacity bookings for each specific Entry and Exit Point.
- 3.14. The FCC will be reviewed annually and updates considered in line with a methodology, would be subject to a new UNC modification proposal and subsequently updated in the appropriate transportation charging statement and charging models. This review of FCC values will, at an appropriate point, take account of any behavioural changes in capacity procurement observed under the revised charging regime with the aim of aligning the FCC to actual bookings. At the same time the FCC is reviewed and updated, there will be an additional adjustment to the reserve prices in order to account for the anticipated under collection driven by the application of any discounts (e.g. interruptible and specific capacity discounts).
- 3.15. The FCC will be reviewed ahead of each tariff year and updates will be communicated to industry as part of the publication of charges. The methodology will be kept under review as part of these updates and any changes to the methodology would be subject to a new UNC modification proposal. This will ensure a proper Governance process to ensure that customers have certainty of the process that determines charges.

Multipliers

- 3.16. Adjustments or separate charges can be applied in the calculation of the Entry and Exit Capacity Reserve Prices. These can serve a number of functions such as to acknowledge any potential risk associated with the type of Entry or Exit Capacity, to facilitate the recovery of revenues where relevant or beneficial to do so, and to encourage behaviours along with ensuring that the TSO fulfils any relevant obligations.
- 3.17. Multipliers are applied to the Reference Price to produce the Reserve Price. Under the EU Tariff code (Article 13), the Multipliers for Interconnection Point (IP) quarterly standard capacity products and for IP monthly standard capacity products should be no less than 1 and no more than 1.5. For IP daily standard capacity products and IP within-day standard capacity products, the Multipliers should be no less than 1 and no more than 3. For the IP daily standard capacity products and IP within-day standard capacity products, the multipliers may be less than 1 but higher than 0 or higher than 3, where duly justified.
- 3.18. Beyond 30 September 2020, or in line with the implementation of this Modification, Multipliers for IPs need to be consulted on each year (as per Article 28 of the EU Tariff code). Multipliers applicable to all Entry and Exit Points from implementation of this Modification are provided in the relevant part of section 5 (Reserve Prices produced from Reference Prices).

Discounts

- 3.19. The pricing of Interruptible (Entry) / Off-peak (Exit) capacity will change from the current pricing approach. It will be consistent with the EU Tariff Code Article 16 and applied to all points. The changes proposed permit an adjustment to the relevant firm entry or exit Reserve Price in the calculation of a non-zero Reserve Price and the calculation of that Reserve Price for interruptible products.
- 3.20. The adjustment applied will be proportional to the probability of interruption and will be forward looking based upon an expectation of interruption over the coming year. An adjustment factor ('A' factor) may also be applied to reflect the estimated economic value of the product which will be factored into the assessment. Together, the probability of interruption and the 'A' factor make up the adjustment to be applied to the Reserve Price of the equivalent standard firm capacity product. The interruptible adjustment applicable to all Entry and Exit Points from implementation of this Modification are provided in the relevant part of section 5 (Interruptible (Entry) and Off-peak (Exit) Capacity). A 10 % discount is proposed and this will be reviewed on a regular basis in light of experience.
- 3.21. Within the EU Tariff Code there are requirements to apply further discounts for storage capacity, where that discount must be at least 50%. This minimum discount is specific to storage in order to avoid double charging and in recognition of the general contribution to system flexibility and security of supply of such infrastructure. An enduring storage discount value is proposed of 80% and it is recognised that EU Tariff Code requirements for the charging regime will be reviewed, as a whole, at least every 5 years.
- 3.22. Any specific 'site type' discounts contemplated by the EU Tariff Code (Article 9) are applied to the Reserve Price to produce a final Reserve Price for the particular Firm Entry or Exit Capacity product at that particular point. The adjustment for Entry Points and Exit Points will be based on the values specified in the Transportation Statement. The specific capacity discount applicable to all Entry and Exit Storage Points from implementation of this Modification are provided in the relevant part of section 5 (Specific Capacity Discounts).

Revenue Recovery

- 3.23. The Modification incorporates a mechanism to manage the consequence of under or over recovery of revenues from Transmission Services Capacity Charges. The approach advocated is a capacity-based charge on an enduring basis.
- 3.24. From implementation, the charging framework would be expected to move towards dependency on a capacity forecast and a significantly reduced revenue recovery charge that would be capacity based achieving 100% capacity basis for recovery of Transmission Services revenue.
- 3.24.1. The calculation of the capacity prices will, at the time of calculation, take into account the revenue shortfall from any discounts referred to in paragraphs 3.17 to 3.20 of Section 3, in order to adjust the reserve prices such that the amount forecast to be under collected as a result of these discounts is reduced.
- 3.24.2. The approach in 3.22 means that less revenue will be required to be collected from the Transmission Services Revenue Recovery charges than if it were not carried out managing inefficient bypass of the NTS (known as "Shorthaul")

- 3.25. The Modification does not propose to retain a charge that discourages inefficient bypass of the NTS. National Grid has initiated a review under UNC governance (Request Group 0670R 'Review of the charging methodology to avoid the inefficient bypass of the NTS'¹²). It is therefore inappropriate at this point to include provision for such under this Proposal and thereby pre-empt the outcome of this work. A comprehensive assessment of any charging arrangements to manage discouraging inefficient bypass of the NTS within the charging framework, including compliance with EU Codes and the charges that would be in place as part of this Modification, will be a feature of UNC 0670R.

Existing Contracts

- 3.26. It is proposed that the provisions will apply for Entry Capacity for 01 October allocated up to 06 April 2017.

3.26.1. This will include Existing Contracts, as outlined in Article 35 in EU Tariff Code where the “contract or capacity booking concluded before the entry into force of the EU Tariff Code – 06 April 2017, such contracts or capacity bookings foresee no change in the levels of capacity and/or commodity based transmission tariffs except for indexation, if any”.

3.26.2. The capacity procured under these contracts impact the application of the Postage Stamp (PS) charging model (specifically when determining Reference Prices at Entry Points) and calculation of Transmission Services Revenue Recovery Charges.

EU Tariff Code Article 17 requires that “...the level of transmission tariffs shall ensure that the transmission services revenue is recovered by the transmission system operator in a timely manner...” and that “...the under- or over-recovery of the transmission services revenue shall be minimised...”.

To ensure that the Reference Prices determined by the proposed Postage Stamp RPM provide a level of revenue recovery as close to target as possible (thereby minimising amounts needing to be collected via revenue recovery mechanisms), the capacity already booked, and revenue levels already ‘set’ in respect of Existing Contracts are netted off the aggregate capacity and aggregate revenue figures entered into the Postage Stamp RPM. Consistent with this aspiration, an additional scaling factor (as described in para 3.17) is applied to Reference Prices to account for the anticipated under collection driven by the application of any discounts (e.g. interruptible and specific capacity discounts).

The alternative approach of inclusion of capacity already booked and revenue levels already ‘set’ via Existing Contracts in the Postage Stamp RPM effectively ‘double counts’ any capacity and revenue for the relevant Entry Points and would have the consequence of setting Reference Prices at Entry Points too low to recover the target revenue. Inclusion of these elements in the Postage Stamp RPM would therefore be inconsistent, and arguably non-compliant, with Article 17. 3.26D Recognising that Article 6(3) of the EU Tariff Code requires that “...the same reference price methodology shall be applied to

¹² See <http://www.gasgovernance.co.uk/0670>

all entry and exit points...” it is nevertheless the case in GB that Existing Contracts only occur at Entry Points. Should Existing Contracts have additionally existed at Exit Points it would have been necessary for the equivalent netting off to take place in respect of Exit Point to ensure compliance. Given the GB position, application of this at Entry Points only is not in conflict with Article 6(3).

Effective Date for the charges driven by this proposal

The effective date of this proposal is to take effect from 1st October in a specified year with charges published 4 months prior to this. This is to avoid distortion of the gas market and to ensure compliance with TAR Article 6 that requires the same charging RPM to be applied to all points at the same time and to comply with CAM Article 9.

Aspects of the GB Charging Regime where there are no proposals for change:

The following is a list of items for which changes are not being proposed at this time but could be the next steps in the evolution of the GB charging regime.

- Auction Structure – All timings for auctions will be as per prevailing terms (including any changes implemented to comply with CAM).
- Entry/Exit Split – No change is proposed to the current 50:50 split.
- Gas Year/Formula Year – the Formula Year (April to March) and Gas Year (October to September) will be retained.
- DN Pensions Deficit Charge – No change to the calculation or the application of the charge.
- St. Fergus Compression Charge – No change is proposed to the calculation or the application of the charge.
- NTS Metering Charge - No change is proposed to the calculation or the application of the charge
- Shared Supply Meter Point Administration Charges - No change is proposed to the calculation or the application of the charge
- Allocation Charges at Interconnectors - No change is proposed to the calculation or the application of the charge
- Categorisation of Entry and Exit Points – Maintain the link to the Licence for categorisation.
- Seasonal Factors – Not used in current methodology and propose not to introduce.
- Fixed Pricing – As per Modification 0611, Amendments to the firm capacity payable price at IPs.
- Allowed Revenue – No change as per the Licence.
- Principles and application of Interruptible – As per prevailing terms. In respect of IPs, the terms implemented pursuant to Modification 0500, EU Capacity Regulations - Capacity Allocation Mechanisms with Congestion Management Procedures.

4 Code Specific Matters

Reference Documents

There are summary documents available on each of the topics (mentioned in the solution section of the Modification proposal) which have been discussed at NTSCMF and sub-groups related to the gas charging review, which are available at: <http://www.gasgovernance.co.uk/ntscmf/subg1page> and

<http://www.gasgovernance.co.uk/ntscmf/subg1model>.

Uniform Network Code (UNC) Section Y:

<https://www.gasgovernance.co.uk/TPD>

UNC European Interconnection Document (EID):

<http://www.gasgovernance.co.uk/EID>

EU Tariff Code:

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.072.01.0029.01.ENG&toc=OJ:L:2017:072:FULL

Implementation Document for the Network Code on Harmonised Transmission Tariff Structures for Gas (Second Edition)

https://www.entsog.eu/public/uploads/files/publications/Tariffs/2017/TAR1000_170928_2nd%20Implementation%20Document_Low-Res.pdf

Uniform Network Code (UNC) Section B:

<https://www.gasgovernance.co.uk/TPD>

NTS Transportation Statements:

<http://www.gasgovernance.co.uk/ntschargingstatements>

Customer and Stakeholder Objectives:

<http://www.gasgovernance.co.uk/ntscmf/060916>

Gas Transmission Charging Review (GTCR) and associated update letters:

<https://www.ofgem.gov.uk/gas/transmission-networks/gas-transmission-charging-review>

Ofgem Modification 0621 Decision Letter:

<https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

Knowledge/Skills

An understanding of the Section Y Part A within the UNC, NTS Transportation Statements, the EID within the UNC, Section B within the UNC, the EU Tariff code, GTCR documentation and the customer / stakeholder objectives developed within NTSCMF would be beneficial.

Definitions

Table 1 gives a definition of terms used in this Modification.

Table 1: Definitions used in the Modification

Term (Abbreviation)	Description
Postage Stamp (PS)	<ul style="list-style-type: none">A capacity value for each Entry and Exit point that will be the Forecasted Contracted Capacity (FCC) (which is mentioned later in this section). <p>The PS model produces the Transmission Services Reference Prices and with additional adjustments produces the Transmission Services Reserve Prices.</p>

Effective Date	<p>The later of:</p> <ul style="list-style-type: none"> • 1st October of any year and charges are published 4 months in advance; and • 31 May 2019
Existing Contracts (ECs) (for the purposes of this Modification)	Arrangements relating to Long Term Entry capacity allocated before 06 April 2017 (Entry into Force of EU Tariff Code)
Forecasted Contracted Capacity (FCC)	The capacity input to the RPM that will be used in the Transmission Services capacity charges calculation that will be determined via a PS methodology. An FCC value is required for every Entry and Exit point.
Long Run Marginal Costs (LRMC) Model	The current underlying RPM used in the calculation of the Entry and Exit Capacity Prices. Whilst there are different approaches in Entry and Exit as to how secondary adjustments are applied, the underlying LRMC principles are there in both. The LRMC approach is an investment focused methodology where the intention is to have strong locational signals to facilitate decision making. More information is available in TPD Section Y of the UNC.
Multipliers	The factor applied to the respective proportion (runtime) of the Reference Price in order to calculate the Reserve Price for non-yearly standard capacity product
Non-Transmission Services	The regulated services other than transmission services and other than services regulated by Regulation (EU) No 312/2014 that are provided by the transmission system operator;
Non-Transmission Services Revenue	The part of the allowed or target revenue which is recovered by non-transmission tariffs
Reference Price	Price for a capacity product for firm capacity with a duration of one year, which is applicable at entry and exit points and which is used to set capacity based transmission tariffs. This will be produced in p/kWh/a (pence per kWh per annum).
Reference Price Methodology (RPM)	<p>The methodology applied to the part of the transmission service revenue to be recovered from capacity based transmission tariffs with the aim of deriving Reference Prices. Applied to all entry and exit points in a system.</p> <p>The RPM therefore is the framework to spread certain costs / revenues (relevant to the methodology in place) to the Entry and Exit points and thereby on to network users.</p>
Reserve Price	Reserve Price for Yearly standard capacity = the Reference Price

	<p>Reserve Price for Non- yearly standard capacity is calculated by applying any Multipliers (if applicable).</p> <p>This will be produced in p/kWh/d (pence per kWh per day).</p>
Target Revenue	This is the revenue required to be recovered from a particular set of charges.
Transmission Services	The regulated services that are provided by the transmission system operator within the entry-exit system for the purpose of transmission.
Transmission Services Revenue	The part of the allowed or target revenue which is recovered by transmission tariffs.
Transportation Statement	The Transportation Statement containing the Gas Transmission Transportation Charges

5 Solution

This Modification proposal seeks to amend TPD Section Y, Part A (The Gas Transmission Transportation Charging Methodology) of the UNC, by changing the methodology for the calculation of gas transmission transportation charges. Changes to TPD Sections B (System Use and Capacity), E (Daily Quantities, Imbalances and Reconciliation), G (Supply Points) and European Interconnection Document (EID) Section B (Capacity) are also required.

Mapping of the revenue to Transmission Services revenue and Non-Transmission Services revenue (see paras 3.3 and 3.4 in section 3)

Transmission Services Charges

It is proposed that Transmission Services charges will be collected via:

- Transmission Services Capacity charges made up of;
 - Transmission Entry Capacity charges (including NTS Transmission Services Entry Capacity Retention Charge);
 - Transmission Exit Capacity charges;
- Transmission Services Entry Revenue Recovery charges;
- Transmission Services Exit Revenue Recovery charges; and
- NTS Transmission Services Entry Charge Rebate.

Non-Transmission Services Charges

It is proposed that Non-Transmission Services charges will be collected via:

- General Non-Transmission Services Entry and Exit Charges;

- St Fergus Compression Charges;
- NTS Metering Charges;
- DN Pensions Deficit charges;
- Shared Supply Meter Point Administration charges; and
- Allocation Charges at Interconnectors

Transmission Services Charges

Reference Price Methodology (see paras 3.5 to 3.11 in section 3)

It is proposed that a Postage Stamp (PS) approach is used in the RPM.

One RPM will be used for the calculation of Reference Prices for all Entry Points and Exit Points on the system. The RPM produces Entry and Exit Capacity Reference Prices for the applicable gas year which in turn through the relevant adjustments and calculation steps will determine the Entry and Exit Capacity Reserve Prices.

Final Reference Prices

It is proposed that the calculation of the final Reference Price for a given Entry Point or Exit point cannot be less than zero.

Calculations within the PS Model

Proposed Postage Stamp Model for calculating Entry and Exit Capacity Base Reference Prices:

The proposed Postage Stamp approach fundamentally requires two main inputs:

- Target Entry or Exit Transmission Services Revenue - Revenue which is Allowed Revenue net of known Existing Contracts (EC) revenue. Where Allowed Revenue is required to be determined in respect of a period of less than 12 months and that period is not 1 April to 31 March (National Grid's Regulatory Year), a profiling factor will be applied to Entry and Exit annual Allowed Revenue in order to determine appropriate values (respectively for Entry and Exit) for the relevant period. The target Entry and Exit revenue profiling factors will operate in such a way that within any Regulatory Year (1 April to 31 March) the tariffs will be set to minimise any under or over recovery.; and
- Capacity (FCC) - FCC (by point) net of Existing Contracts (EC) capacity booked to recover the target Entry or Exit Transmission Services revenue.

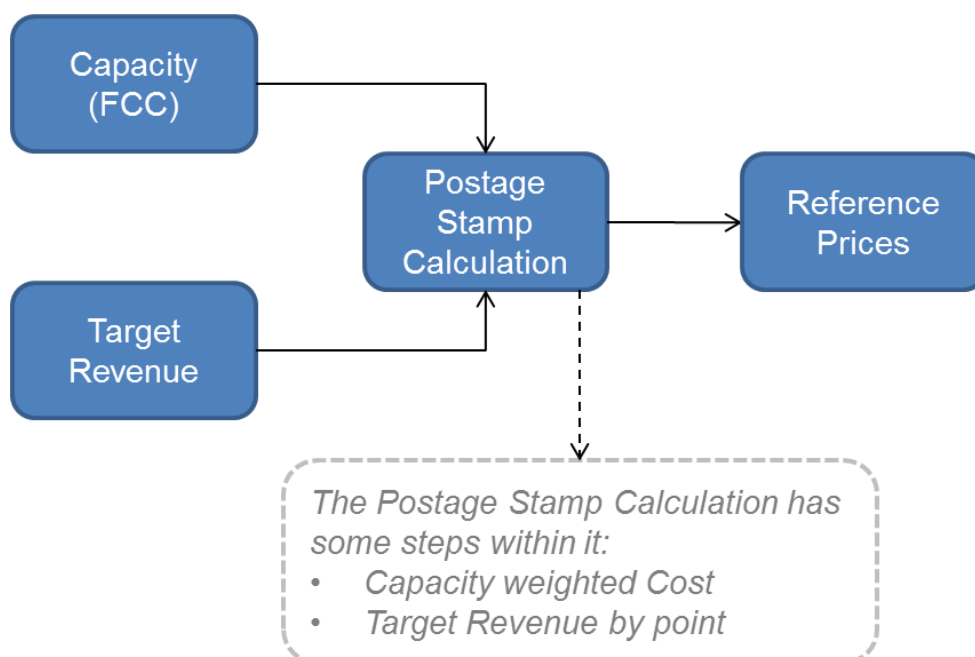


Figure 1: Proposed Postage Stamp Model for calculation of Entry and Exit Capacity Base Reference Prices

Key steps in the PS calculations see Table 1.

Table 2: Key steps in the PS calculations

	Entry Capacity Calculation	Exist Capacity Calculation
Capacity Weightings (CW)	Entry Point FCC / Gross FCC	Exit Point FCC /Gross FCC
Target Revenue by Point (TRP)	Entry Target Revenue * CW	Exit Point Revenue * CW
Reference Price (RefP)	Entry TRP / Entry Point FCC	Exit TRP / Entry Point FCC

Note that the proposed FCC calculation takes into account the treatment of capacity associated with Existing Contracts (see below)

Entry Point Reference Prices are calculated in the following steps in the Postage Stamp model, see figure 2.

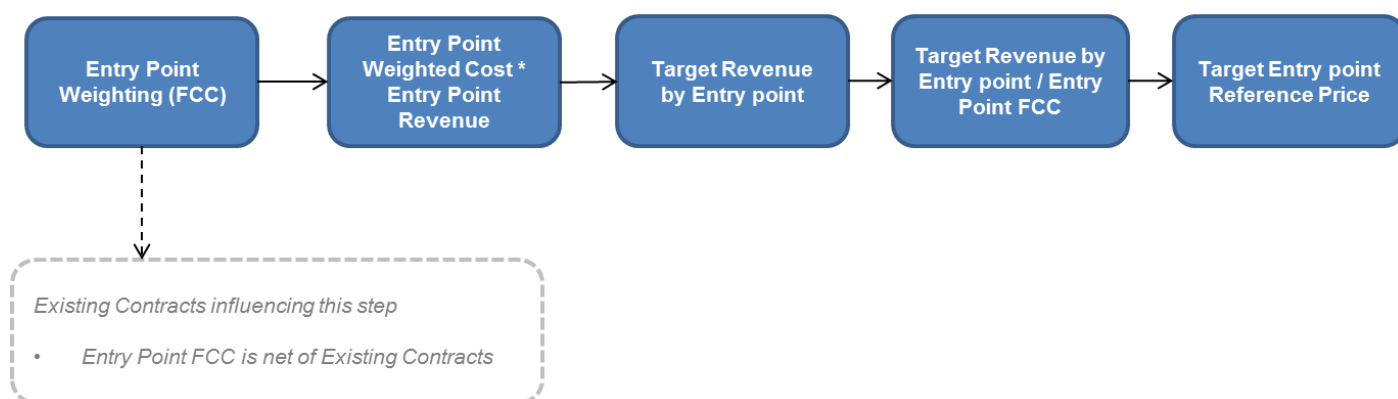


Figure 2: Entry Point Reference Prices calculation model

Exit Point Reference Prices are calculated in the following steps in the Postage Stamp model, see Figure 3.



Figure 3: Exit Point Reference Prices calculation model

Forecasted Contracted Capacity (FCC) (see paras 3.12 and 3.13 in section 3)

It is proposed that the FCC for an Entry Point or an Exit Point will be equal to a forecasted value determined by National Grid. The methodology will be part of the UNC in section Y and is included below. The FCC values will be reviewed ahead of each tariff year and updates to FCC values in line with the methodology in the UNC will be communicated to industry as part of the publication of charges.

Entry Points

All Entry Points utilise the same process in the calculation of the FCC, which for the relevant Gas Year is the greater of the elements outlined in (a), (b), (c), (d) and (e) below:

(a) Existing Contracts for the relevant Gas Year:

- i. Capacity value booked under an Existing Contract for the relevant Gas Year for which the FCC is being produced
- ii. This value is then converted to an average capacity (kWh/d) booked per day over the Gas Year

(b) Non-zero priced Historical Capacity Sold for previous available Gas Year (average kWh/d) Y-2:

- i. This input is the same for the calculation of the FCC for Y, Y+1, Y+2, Y+3 and Y+4
- ii. Historical sold non-zero priced capacity value for the Gas Year Y-2
- iii. The values from steps 18 (b) (i) and (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

(c) Historical Flow for previous available Gas Year (average kWh/d) Y-2:

- i. This input is the same for the calculation of the FCC for Y, Y+1, Y+2, Y+3 and Y+4
- ii. Historical annual flow value for the Gas Year Y-2
- iii. The values from steps 18 (c) (i) and (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

(d) Latest Updated Forecast from data in the Gas Ten Year Statement (GTYS) for Gas Year Y:

- i. Value used for the relevant Gas Year for which the FCC is being produced
- ii. Exact value within the Updated Forecast used for all sites except Bacton and Onshore:

- For Bacton, sold capacity in the previous Gas Year is used as a proxy for the forecast to split to Bacton IP and Bacton UKCS
- For Onshore, sold capacity in the previous Gas Year used as a proxy for the forecast to split to all Onshore sites

iii. The values from steps 18 (d) (i) and (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year.

(e) PARCA Capacity Value if progressed to Stage 2 of the PARCA at the time of producing the FCC for Gas Year Y:

- i. PARCA reserved capacity for the relevant Gas Year for which the FCC is being produced
- ii. PARCA reserved capacity taken from start date of when capacity is required
- iii. PARCA reserved capacity multiplied by the number of days the PARCA is applicable for in the Gas Year
- iv. The value from step 18 (e) (iii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

Exit Points

For GDN Exit Points, the booked capacity will be used as the FCC:

(a) For Gas Year Y, the latest available non zero priced capacity booked for Gas Year Y-1 will be used

i. e.g. the FCC for Gas year 2019/20 will be equal to the latest non-zero priced capacity booked for gas year 2018/19

(b) For Gas Years Y+1, Y+2, Y+3, Y+4, the capacity booked at the time of production of the FCC, will determine the FCC for the relevant Gas Year

i. e.g. the FCC for Gas year 2020/21 will be equal to the latest capacity booked for gas year 2020/21

(c) The values from steps (19) (a) and (b) will be divided by the number of days in the relevant Gas Year to obtain an average daily (kWh/d) value for relevant Gas Year

For all other Exit Points the same process will be used in the calculation of the FCC, which for the applicable Gas Year the FCC is produced, is the greater of the following:

(a) Non-zero priced Historical Capacity Sold for previous available Gas Year (average kWh/d) Y-2

i. This input is the same for the calculation of the FCC for Y, Y+1, Y+2, Y+3 and Y+4

ii. Historical sold non-zero priced capacity value for the Gas Year Y-2

iii. The values from steps 20 (a) (i) and (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

(b) Historical Flow for previous available Gas Year (average kWh/d) Y-2

i. This input is the same for the calculation of the FCC for Y, Y+1, Y+2, Y+3 and Y+4

ii. Historical annual flow value for the Gas Year Y-2

iii. The values from steps 20 (b) (i) and (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

(c) Latest Updated Forecast from data in the Gas Ten Year Statement (GTYS) for Gas Year Y

i. Value used for the relevant Gas Year producing for which the FCC is being produced

ii. Exact value within the Updated Forecast used for sites

iii. The values from steps 20 (c) (i) or (ii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

(d) PARCA Reserved Capacity if progressed to Stage 2 of the PARCA at the time of producing the FCC for Gas Year Y

i. PARCA reserved capacity for the relevant Gas Year for which the FCC is being produced

ii. PARCA reserved capacity taken from start date of when capacity is required

iii. PARCA reserved capacity multiplied by the number of days the PARCA is applicable for in the Gas Year

iv. The value from step 20 (d) (iii) divided by the number of days in the relevant Gas Year to obtain an average daily value (kWh/d) for the relevant Gas Year

v. Information for the applicable PARCA sites is available on National Grid's website

Exceptions

In the first instance, this FCC methodology will be applied. In exceptional circumstances, it may be necessary for National Grid to apply different principles to determine an FCC for a specific Entry or Exit point. This would be required to ensure reference prices and reserve prices can be generated so as not to inhibit the operation of the RPM. Examples may include, and are not limited to: i. If an Entry or Exit Point no longer has capacity to be made available for an auction or allocation process however it remains in the Licence;

ii. If an Entry or Exit Point is not realistically expected to yield any capacity bookings due to known circumstances such as closure of a site and / or capacity cannot be made available;

iii. Other situations whereby alternative approaches are required in order to derive an FCC value for the Entry or Exit Point for which a price will be required in the given year.

Where exceptions are made, National Grid will outline, along with the publication of charges, where this has been carried out and why.

Reserve Prices produced from Reference Prices (see paras 3.14 to 3.16 in Section 3)

It is proposed that Reserve Prices for capacity will be produced in p/kWh/d. The Reserve Prices will be calculated each year based on the latest available set of inputs and once published, these will be the Reserve Prices applicable for the relevant gas year regardless of when the capacity product is procured.

For example, the price payable for capacity procured in 2019 for a period in October 2025 will be the Reserve Price determined for gas year 2025/26 plus, where applicable, any premium payable. This premium will be equal to either:

- The difference between the allocated price and Reserve Price in the relevant auction when the capacity was initially contracted for ('auction premium'); or

- The amount specified in respect of entry capacity allocated via a PARCA Application as described in TPD B1.14 and the Entry Capacity Release Methodology Statement ('PARCA premium').

It is proposed that the Reserve Price for Firm capacity at an Entry Point or an Exit Point is determined by application of any applicable Multipliers to the relevant Reference Price.

It is proposed that Multipliers:

- Shall not be zero for any capacity type or product;
- Are not to be used for the purposes of managing revenue recovery;
- Shall be calculated on an ex-ante basis ahead of the applicable year.

It is proposed that for the period commencing 01 October the Multiplier applied to the Reference Prices for all Entry Point and Exit Points in order to determine the Reserve Price will be 1 (one).

Interruptible (Entry) and Off-peak (Exit) Capacity (see paras 3.17 to 3.18 in Section 3)

It is proposed that the Reserve Price for Interruptible Capacity at an Entry Point and Off-peak Capacity at an Exit Point is derived by application of an ex-ante discount to the Reserve Prices for the corresponding Firm capacity products (the day ahead firm price at the relevant Entry Point and the daily firm price at the relevant Exit Point).

It is proposed that when determining the level of discount applied in respect of Interruptible and Off-peak Capacity from 01 October, the likelihood of interruption and the estimated economic value of the Interruptible or Off-peak capacity products are used to determine a discount value (as per Article 16 of EU Regulation 2017/460). It is further proposed to adopt a 'banding approach' for the period commencing 01 October and for subsequent years, such that the proposed discount value will be rounded up to the nearest 10%:

It is proposed that for the period commencing 01 October, the discount applied in respect of Interruptible and Off-peak Capacity:

- At Entry Points is 10%; and
- At Exit Points is 10%.

Specific Capacity Discounts (see paras 3.19 to 3.20 in section 3)

It is proposed that Specific Capacity Discounts will be applied to the Reserve Prices in respect of Firm and Interruptible/Off-peak Capacity at the Points detailed below.

This section relies on a definition of storage sites which shall be locations where the type of Entry point/Offtake is designated as a 'Storage Site' in National Grid's Licence (Special Condition 5F Table 4B for Entry Points, and Special Condition 5G Table 8 for Exit Points).

It is proposed that in respect of storage sites as defined above, the applicable Specific Capacity Discount for a given Gas Year will be equal to 80%.

In its decision letter to reject Modification 0621 and its Alternatives, Ofgem recognised the deleterious impact on storage facilities' net revenues of moving away from the current charging methodology. Based on the analysis carried out by Baringa net revenues would likely decrease by between 3% and 31% depending on whether the storage discount is set at 50% or 86%.

Further, Ofgem stated that any discount above 50% would need a clear justification. The derivation of the 80% is based on analysis carried out by WWA as set out in its report to the Gas Storage Operators Group which the Proposer contends provides sufficient evidence to justify the proposed level of discount.

In addition to providing a quantitative basis for establishing a discount of 80% the report sets out numerous benefits of storage which reinforce the case for a discount, which when considered in aggregate, might reasonably result in a level greater than 80%. In summary, these benefits include:

- Storage flows are highly correlated to demand, or changes in demand. The main driver for this is that demand is the primary driver of price (again a very high correlation exists between these variables) and Users employing storage to capture the intrinsic value associated with market price spreads over various durations (commonly known as time shifting the value of gas). Both National Grid and customers benefit from this interaction between storage flows and demand/price as it provides assistance in balancing the network while dampening price volatility and delivering positive externalities, or societal benefits, by reducing price spreads across a range of time periods.
- Storage delivers transmission benefits in terms of avoided investment in additional capacity. The fact that it is embedded in the network, close to demand, and operates in harmony with changes in demand means that storage delivers significant cost savings to the NTS and ultimately customers.
- Security of supply is enhanced by gas storage. Gas stored in the facilities provides cost effective and reliable insurance against supply disruptions and demand spikes. The benefits will be twofold: delivering gas to the market in which it is located; and dampening the price of gas by adding volume to the available supply.

It is proposed that in respect of Liquefied Natural Gas (LNG) sites, (locations where the type of Entry point is designated as a 'LNG Importation Terminal' in National Grid's Licence (Special Condition 5F Table 4B)) for the period commencing 01 October, the applicable Specific Capacity Discount for a given Gas Year will be equal to 0% (zero %).

It is proposed that no other Specific Capacity Discounts are applied at this time.

Additional Calculation Step under PS for Reference / Reserve Prices (see para 3.22 in section 3)

It is proposed that the following step is applicable for Capacity Reference Prices on an enduring basis. Once the Reserve Prices have been calculated taking into account all the required Multipliers, Specific Capacity Discounts and Interruptible / Off-peak adjustment, there will be an under recovery driven by the levels of discounts or adjustments (e.g. Interruptible / Off-peak adjustment and Specific Capacity Discounts). This anticipated under recovery will result in the need for an adjustment to be applied to the Postage Stamp calculation in order to recalculate Reference Prices, and therefore Reserve Prices, such that the under recovery is estimated to be zero or close to zero. This will be applied to the Entry and Exit Capacity calculations to recalculate the Entry and Exit Capacity Reference Prices and Reserve Prices for all Entry and Exit points and in doing so will minimise the size of the Transmission Services Entry and Exit Revenue Recovery charges.

This step within the calculation is incorporated within the RPM. This is required in order to manage the tariffs such that they are being set to recover the target revenue. Without this step tariffs, would be set such that they would under-recover or not be set in a manner to aim to recover the target revenue. This impact of this step is the same for all points within the RPM as the revenue additive is input as a feature of the RPM calculation in the PS approach. This limits any potential distortions as proportionally all points pick up an uplift within the RPM proportionate the PS reference price they receive.

For clarity this process calculates a reserve price. An additional separate revenue recovery charge may be required if actual booking of capacity differs from that in the FCC. It is this separate revenue recovery charge that will be applied to all capacity bookings, with the exception of storage, to collect the allowed revenue. This

maintains the intent of TAR code which protects fixed price reserve price bookings but allows a separate revenue recovery charge.

Minimum Reserve Price

It is proposed that Reserve Prices for Firm and Interruptible / Off-peak capacity (determined following the application of any relevant Multipliers, Specific Capacity Discounts, or Interruptible / Off-peak adjustments) will be subject to a minimum value (collar) of 0.0001p/kWh/d.

Summary of Reserve Price Derivation

The following diagram (see Figure 4) summarises the proposed approach to the derivation of Reserve Prices (from the applicable Reference Price) for both Firm and Interruptible / Off-peak Capacity products (including Capacity at Storage and LNG sites).

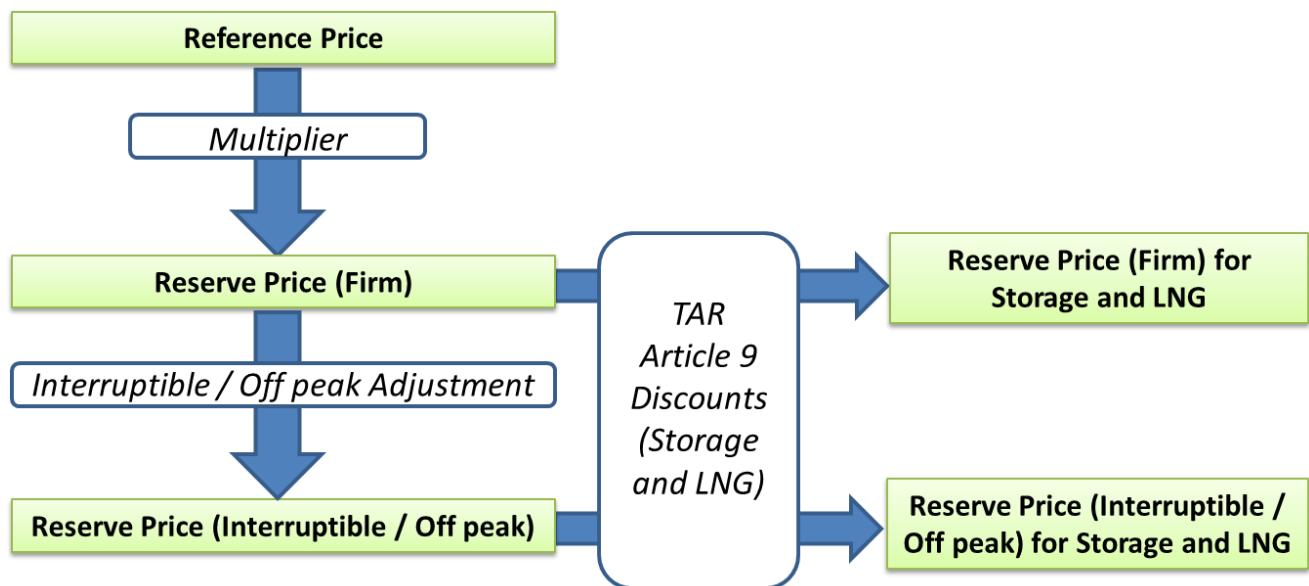


Figure 4: Reserve Price derivation

Capacity Step Prices

For the purposes of capacity step prices used in the QSEC Auction, these will be an additional 5% of the applicable Reserve Price or 0.0001 p/kWh/Day, whichever is the greatest, per step.

Transmission Services Revenue Recovery Charges (see para 3.21 in section 3)

It is proposed that where a proportion of revenue could be under/over recovered (i.e. compared to the target Transmission Services revenues) as a consequence of application of Reserve Prices applicable for the following gas year, a revenue recovery mechanism is applied.

The Transmission Services Revenue Recovery charges (Transmission Services Entry Revenue Recovery charge and Transmission Services Exit Revenue Recovery charge) will be calculated after the Reserve Prices have been determined and will be calculated as follows (see Figure 5) for Entry and Exit in the same way:

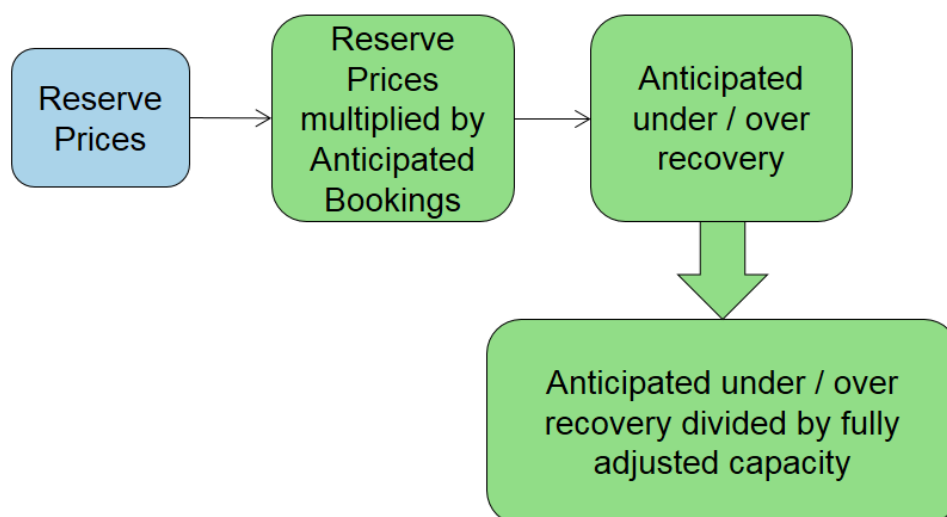


Figure 5: Transmission Services Revenue Recovery Mechanism

It is proposed that the ‘Anticipated Bookings’ value will be based on National Grid’s forecast of capacity bookings and therefore used to forecast the anticipated under or over recovery. It is proposed that the Transmission Services Revenue Recovery charge rate may be adjusted at any point within each Gas Year.

For the avoidance of doubt, such change would be subject to the existing notice requirements for variation of Transportation Charge rates.

It is proposed that the Transmission Services revenue recovery mechanism is capacity based and applied as additional capacity charges to all fully adjusted capacity **except** capacity booked at Storage points, which has not been booked for “own use gas” purposes (for the avoidance of doubt, this includes relevant Existing Contracts for Storage and all subsequent capacity bookings for Storage).. The Transmission Services Entry and Exit revenue recovery charges for this period will be produced in p/kWh/d. For the avoidance of doubt, any Entry Capacity, or Exit Capacity booked for the applicable year, except capacity booked at Storage points which has not been booked for “own use gas” purposes, (irrespective of when this capacity was procured from National Grid) would be subject to Revenue Recovery charges.

The exclusion of capacity booked at Storage points which has not been booked for “own use gas” purposes is consistent with the findings of Ofgem in its Gas Transmission Charging Review on the basis that flows to and from storage (or capacity booked at an entry to deliver gas to, or an exit point to ultimately offtake from) have already made a contribution to historical cost recovery.

Further, this exclusion ensures the charging structure accommodates common practice of storage operators in relation to the acquisition and subsequent release of entry capacity to Users of their facilities. In a number of cases, entry capacity at storage facilities will have been acquired by a nominated shipper user, often to trigger National Grid investment to build and release the required volume of capacity. The sale of storage services by operators is often bundled with the transfer of entry capacity from the nominated shipper holder of entry capacity to the entity acquiring storage services. If a Revenue Recovery Charge is applied to Existing Capacity transferred at any time after the 7th April 2017 “cut-off date” then, in the case of UNC 0678, the acquiring User would be subject to a Revenue Recovery, on the basis that it is not the original holder of the Existing Capacity. This approach will result in the additional costs being incurred by the storage operator and is, quite clearly discriminatory. The charging arrangements should not differentiate between Users, using the same product, but acquiring indirectly via a third party, nominated User instructed to purchase the capacity by virtue, of for example, the storage operator not being a UNC registered User.

In short, the exclusion of Revenue Recovery Charges on adjusted Capacity at Storage will ensure that storage owners are able to offer storage services to the third party Users on an equivalent basis to Users who acquired capacity prior to and including 05 April 2017. For clarity, this separate revenue recovery charge that will be applied to all capacity bookings, with the exception of storage, to collect the allowed revenue. This maintains the intent of TAR code which protects fixed price reserve price bookings but allows for a separate revenue recovery charge.

NTS Optional Charge (see para 3.23 in Section 3)

It is proposed that the existing NTS Optional Commodity Rate (OCR) is removed.

Communication of Charge Cessation

The existing OCR will no longer be available from the Modification Effective Date.

It is proposed that National Grid will use reasonable endeavours to provide (after a decision has been made and affording as much notice as is practicable prior to the Modification Effective Date of implementation), notification to each User at a Point with an existing OCR of the cessation of the OCR with effect from the Modification Effective Date. Any User nominating the OCR after the decision date and before the effective date will be informed as part of the confirmation of the OCR applicable that it will no longer be available after the effective date and any current nomination will end from that effective date.

NTS Transmission Services Entry Charge Rebate

The charge mechanism reduces any Transmission Services entry over recovery. The process may be triggered at the end of the formula year. It is proposed that this will be applied as a Transmission Services entry capacity credit.

NTS Transmission Services Entry Capacity Retention Charge

NTS Entry Capacity Substitution is where National Grid moves unsold non-incremental Obligated Entry Capacity from one (donor) ASEP to meet the demand for incremental Obligated Entry Capacity at a different (recipient) ASEP. It is proposed that where a User elects to exclude capacity at potential donor ASEPs from being treated as substitutable capacity without having to buy and be allocated the capacity, it is required to take out a “retainer”.

The retainer is valid for one year, covering all QSEC auctions (including ad-hoc auctions) held in this period. It is proposed that National Grid will exclude the relevant quantity from the substitution process, but the retainer will not create any rights to the User to be allocated or to use the capacity. The retainer will not prevent Users (including the User taking out the retainer) from buying that capacity at the ASEP in question in the period covered by the retainer.

The retainer is subject to a one-off charge which is payable via an ad hoc invoice raised within 2 months of the QSEC auction allocations being confirmed. If a User wishes to protect capacity for more than one year then a further retainer must be obtained each year and a charge will be payable each year for which a retainer is taken out.

Where any capacity covered by a retainer is allocated, a refund of the retention fee may be made; for example, for a retainer taken out for Gas Year 2013/14 in January 2010, a refund can be triggered by an allocation at the relevant ASEP made during a QSEC auction in 2010, 2011 and 2012, and an AMSEC auction in 2013 and 2014.

NTS Entry Capacity Retention Charges, in regard to non-incremental Obligated Entry Capacity, are calculated based on the minimal capacity charge rate of 0.0001 pence per kWh per day applying over a time period of 32 quarters; this equates to 0.2922 p/kWh of Entry Capacity retained.

NTS Entry Capacity Retention Charges and refunds in regard to non-incremental Obligated Entry Capacity are treated as Transmission Services.

Non-Transmission Services Charging

It is proposed that revenue due for collection via General Non-Transmission Services Entry and Exit Charges will be equal to the Non-Transmission Services revenue minus the DN Pensions Charges, NTS Meter Maintenance Charges, St. Fergus Compressor Charges, Shared Supply Meter Point Administration Charges and Allocation Charges at Interconnectors.

The revenue due for collection via General Non-Transmission Services Entry and Exit Charges will be recovered through a flow based charge as a flat unit price for all Entry Points and Exit Points. It is proposed that the St. Fergus Compressor Charges and General Non-Transmission Services Entry and Exit Charge rates may be adjusted at any point within the gas year.

It is proposed that this is applied to all flows excluding Storage flows unless it is flowed as “own use” gas at the Storage point.

The General Non-Transmission Services charge will be produced in p/kWh.

Treatment of under/over recovery (K) – after each formula year

It is proposed that a separate under or over revenue recovery (otherwise known as the “K” value) will be calculated for Transmission Services and Non-Transmission Services for the formula year. This will be different to the TO and SO “K” values however the principle of reconciling Transmission Entry and Exit revenues separately will remain.

It is proposed that the approach and calculation will be specified in the UNC, to be approved by Ofgem. In addition to Transmission and Non-Transmission being reconciled this Modification also proposes to have reconciliation between Entry and Exit under Transmission Services.

Transmission Services Revenue:

It is proposed to maintain 50/50 split between Entry and Exit (for the purposes of allocating revenues to the charges to recover Transmission Services Entry and Exit Revenues). It is also proposed to maintain the reconciliation of Entry and Exit for Transmission Services, as per the current approach for TO charges. This would continue to mean that Entry and Exit, under Transmission Services, when reconciled would not result in Entry impacting Exit or vice versa.

The applicable years Transmission Service Revenue will be split 50:50 between revenue to collect on Entry Capacity charges and revenue to collect on Exit Capacity charges. This value will then be added to any under/over recovery (Transmission Services K value) which was calculated in y-2 (two years ago) and split between Entry and Exit in the correct proportion, to make the applicable revenue which will be used in the CWD model to calculate the capacity charges.

Non-Transmission Services Revenue:

It is proposed that all those charges in respect of Non-Transmission Services shall contribute towards Non-Transmission Services revenue recovery. All charges are set on an ex-ante basis.

It is proposed that any under or over recovery attributed to the charges other than the Non-Transmission Services Entry and Exit Charge shall not be subject to reconciliation with any K value (Non-Transmission Services K value) adjusting the Non-Transmission Services Revenue recovery charge. Non-Transmission Services revenue charge will be added to the Non-Transmission Services K value which was calculated in y-2 (two years ago) which will be used to calculate the applicable years Non-Transmission Services Revenue which will be used for calculation of the Non-Transmission Services Charges.

Effective Date for the charges driven by this proposal

The effective date will be on the 1st of October with charges published 4 months before.

It maybe necessary to take into consideration actual and anticipated revenues to be collected up the effective date to determine the target revenue to be applied for the remainder of the regulatory year.

The charges would change the payable prices for the effective date, except for any charges that would be explicitly exempt in any such decision, or any charges for which payable prices are not permissible to be updated under the EU Tariff Code.

Reconciliations are undertaken under the current regime, such as reconciling commodity charges, updating flow values and incorporating the OCC and reconciliation of commodity charges to account for eligible flows. These will continue to ensure that charges for the applicable period up to the effective date are accurately charged.

Transportation Charges: Information Publication

Only a 1st October Effective date will apply. This is to ensure compliance with TAR Article 6.3 to avoid different charging methodologies for IPs and non-IPs and to comply with CAM Code Article 9.

It is proposed that information in respect of Transportation Charges will be published in accordance with the table below.

Figure 6: Publication dates for Transportation Charges For Charges to be effective from 1st October, charges must be published 4 months in advance i.e. 1st June to comply with CAM code and Article 6 in TAR code. (Please change “Issued by” 01 August to 01 June.)

	Data Item	Publication	Issued by*:
Transmission Services	Forecasted Contracted Capacity	Charging Model	01 August
	CWD Distances	Charging Model	01 August
	Capacity Reference Prices	Transportation Statement	01 August
	Multipliers	Transportation Statement	01 August
	Capacity Reserve Prices	Transportation Statement	01 August
	Interruptible Adjustment (Entry)	Transportation Statement	01 August
	Interruptible Adjustment (Exit)	Transportation Statement	01 August
	Specific Capacity Discounts (Storage)	Transportation Statement	01 August
	Specific Capacity Discounts (LNG)	Transportation Statement	01 August
	Revenue Recovery Charge (Entry)	Transportation Statement	01 August
	Revenue Recovery Charge (Exit)	Transportation Statement	01 August
Non-Transmission Services	Non-Transmission Services Charges	Transportation Statement	01 August
	DN Pension Deficit Charges	Transportation Statement	01 August
	NTS Metering Charges	Transportation Statement	01 August
	St Fergus Compression Charges	Transportation Statement	01 August
	SSMP Administration Charges	Transportation Statement	01 August
	Allocation Charges at Interconnectors	Transportation Statement	01 August

The CWD distances will be calculated and published for the purpose of undertaking analysis of a Counterfactual CWD Model

* Issued by means the date by which the listed information will be consolidated and published in the relevant publication. The information in this table will be published and made available in steps via the relevant notice and supporting material which may be before the date listed.

Impacts & Other Considerations

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

N/A

Consumer Impacts

There will be impact on different consumer groups and the wholesale market prices for both gas and electricity but the allowed revenue collected by National Grid NTS will not change.

Cross Code Impacts

None

EU Code Impacts

EU Tariff Code compliance is considered as part of this Proposal.

Central Systems Impacts

There will be impacts on Gemini and UK Link invoicing systems.

6 Relevant Objectives

Table 3: Impact of the Modification on the Relevant Objectives

Impact of the Modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Positive
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.	Positive
c) Efficient discharge of the licensee's obligations.	Positive
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.	Positive
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.	Positive

Demonstration of how the Relevant Objectives are furthered:

a) Efficient and economic operation of the pipe-line system

Based on analysis carried out by Storengy and WWA there is a clear relationship between the physical operation of storage facilities and the pipe-line system. The strong, positive correlation between aggregate gas demand and storage withdrawals/injections means that National Grid, in its role as SO, benefits from gas storage, at no cost. The flexibility provided by gas storage provides direct support to National Grid in its role as system balancer through; contributing to linepack management and reduced activity and costs associated with National Grid's participation in the balancing market (OCM) or any other contractual arrangements it may choose to enter into as part of its network balancing toolbox.

By setting that storage discount at the minimum permissible level of 50%, analysis performed by the proposer based on models and data provided by NG on 15th March indicates that in the absence of any other changes to the determination of NTS charges that the aggregate costs incurred by storage owners would escalate significantly, from £1m/yr now, to over £13 m/yr and £17m/yr under 678 and 678A respectively. By implementing an 80 % discount costs are lowered to £5 and £7 m/yr under 678 E and 678 C respectively.

The impact of these cost increases will lead to reduced storage cycling as the variable costs incurred by storage owners will diminish opportunities for capturing value in shorter term spreads. In turn, system balancing costs will increase, as storage will less frequently make a positive contribution to the overall balance of the network and limit access to an essential balancing tool for shippers and National Grid as the balancer of last resort. The impact on storage profitability is highlighted in the Ofgem Modification 0621 Decision Letter and the accompanying Baringa analytical report, which states:

“Although the largest share of costs of storage facilities relate to CAPEX and is therefore sunk, a reduction in net revenues of 20-30% or more would significantly impact the profitability of storage facilities. If operating costs are sufficiently low, storage facilities are likely to remain open, but revenues may not be sufficiently high to justify any significant further investment, including refurbishment costs. Hence, under a number of alternative tariff methodologies, storage facilities may encounter challenges in continuing operations in the medium-to longer-run.”

In addition, Baringa understands that any changes to tariffs will be considered differently to shifts in market conditions and as a result will be “burdened” by the storage operator in terms of service offerings *“The impact of changes in the tariff methodology would be seen as permanent and would therefore not be assessed in the same way.”*

The level of discount should be consistent with the contribution to system flexibility (EU Tariff Code) and the proposer believes that the application of the minimum permissible discount does not fulfil this requirement. The minimum, according to the EU Tariff Code simply avoids storage users being “double charged” for the use of the system, reflecting the “parking service” unique to storage located within a national network. On this basis, the proposer contends that a discount of 80% not only better reflects the contribution made by storage facilities in relation to the efficient and economic operation of the pipe-line system, but also preserves the ability for gas storage to provide an economic means for balancing the pipeline system. The additional costs imposed on storage users through the application of the minimum discount, and in particular the related significant escalation in the cost of off peak capacity, would result in undesirable market impacts, such as increased between day and within day price volatility. These market impacts conflict with this objective by inflating the costs associated with balancing the system.

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

Storage provides support to the entire network. Its proximity to demand and flow response to changes in aggregate demand levels ensures that overall system pressures are supported, benefiting the NTS and connected networks. In the absence of storage, marginal gas supplies would be more distant from demand which in turn may result in operational issues for DNs, in the absence of additional investment in the NTS.

c) Efficient discharge of the licensee's obligations.

The proposed changes to TPD B and EID B (where applicable) support the implementation of the new charging methodology and arrangements. Standard Special Condition A5(5) of the NTS Licence sets out the relevant methodology objectives and that these objectives are better facilitated for the reasons detailed below in Table 5 ('Impact of the Modification on the Relevant Charging Methodology Objectives').

d) Securing of effective competition between relevant shippers;

CWD results in charges which on average are higher at beach terminals than other entry point groups. This might be distortionary and result in higher priced NBP gas as charges are incrementally passed through on a marginal basis or cheaper sources of gas being frozen out of the market.

Existing contracts have significantly lower charges than new entrants and this might be discriminatory.

Scotland has higher DN charges than other points, this is not cost reflective given that most gas used to supply Scotland will enter at St Fergus and this may be politically sensitive.

St Fergus has higher entry costs under CWD than PS, given that Norway is a marginal supplier to GB this has the potential to increase NBP gas price and therefore costs to customers by up to £10/year /customer or £190 M/YR.

Peterhead has higher exit costs under CWD than PS, given that it may set the marginal clearing price in a future Capacity Mechanism auction this has the potential to impact customer levies therefore costs to customers by up to £5/year /customer or £117 M/YR.

Supporting information to the above statements is provided in UNC modification 678C appendix 4

Promoting Efficiency and Economic principles associated with network charging

There are a number of economic principles which are typically associated with the appropriate determination of network charges. These are largely focused on ensuring efficient market outcomes. First, it is typically argued that network charges should be cost reflective. This means that they should reflect the (forward looking) costs which users impose on the network through a change in their use. This is important to achieve an economically efficient outcome: if charges are cost reflective, users will internalise the network costs which they cause when making a decision about how to use the network. This, in turn, will ensure that overall value chain costs are optimised.

The fact that it is forward looking costs which should be reflected is important. If there is an historic cost which exists, but cannot be changed in any way going forward by different use of the network by shippers, there is no value in terms of economic efficiency in sending a signal to shippers about that cost. Cost reflectivity should therefore only relate to new costs which would be created in the future or existing costs which can be avoided in the future as a result of a particular change in use.

This argument points to network prices being set predominantly according to forward looking marginal costs, as these are the costs incurred or avoided by incremental use.

However, it is important that marginal cost as a concept is interpreted correctly. First, when there is an excess of capacity as a result of reduction in network use over time, then the marginal cost of use may be close to or at zero. Second, it is obviously important that network companies can recover their allowed revenue. It is also clear that efficient cost reflective charges, as defined above, may not recover all costs which have been incurred. Therefore, additional charges are required to recover the full range of permissible costs.

It is typically argued that such charges should have as an objective creating minimal changes in behaviour relative to a set of efficient charges. This is because, as previously established, there is no efficiency related reason to target historic costs at a particular set of users. By definition, they cannot be “un-incurred” and so there is no point in targeting them at a certain set of users as to do so will change behaviour in a way which reduces efficiency.

Ofgem states in their Targeted Charging Review (TCR) document in electricity, <https://www.ofgem.gov.uk/system/files/docs/2017/03/tcr-consultation-final-13-march-2017.pdf>

that: “Cost-reflectivity is less directly relevant for residual charges; however, it is important that residual charges do not unduly distort the signals provided by the forward-looking charges which are intended to be cost-reflective... residual charges do not relate to specific costs that any user imposes”.

In the TCR debate, Ofgem is similarly clear that cost reflectivity is not a valid objective when considering charges which recover residual revenue. Instead, Ofgem proposes three different principles for assessing approaches to residual charging: “reducing distortions, fairness and proportionality and practicality considerations”.

Therefore in a network where there is spare capacity, incremental signals are not required and the network costs can be treated as sunk revenue to be recovered in the least distortive way. Postage stamp capacity charges achieve this.

CWD and Market Distortion

Economic theory suggests it is always relevant to set marginal cost related prices unless there is spare capacity. The charges from the 678 CWD modifications lack cost reflectivity and subsequently risk distortion to competition and wholesale market price. These are discussed below:

1. 678 moves cost recovery from commodity to a capacity basis. This may distort flows if some shippers (with supplies at higher cost entry points) no longer purchase entry capacity to supply gas or if very high capacity costs are passed through to the NBP prices.

Postage Stamp capacity charges are less distortive because they are equitable and fair and since they are passed through uniformly to customers, they do not affect competition in gas supply or Cap Mech Auctions.

2. Charges derived from the CWD methodology will only be stable and predictable if the FCC values are stable. Postage Stamp charges exhibit less variance and more predictable and stable charges will facilitate competition because, all else being equal, greater cost certainty will lower risk and will result in lower cost of capital for Shippers which will reduce barriers to entry and facilitate competition.
3. There are unintended consequences of the CWD methodology which affect the distribution of charges to NTS customers and to end consumers. For example, regardless of how the FCC is calculated, the methodology does not demonstrate cost reflectivity for Exit points that are physically close to Entry points, i.e. Peterhead and St Fergus, Pembroke and Milford Haven. This lack of cost reflectivity is a concern given the material impact on customers.
4. The CWD methodology also generates high charges for exit and entry capacity in Scotland where there is spare capacity, but has relatively lower charges for exit in the South of England where there is relatively less spare capacity.

Storage and Revenue Recovery Charges

Where the treatment of storage better reflects the costs/benefits of it on the system, it improves the overall cost reflectivity of charges and as such better facilitates competition through diminished cross-subsidisation. The exclusion of capacity booked at Storage points which has not been booked for “own use gas” purposes is consistent with the findings of Ofgem in its Gas Transmission Charging Review on the basis that flows to and from storage (or capacity booked at an entry to deliver gas to, or an exit point to ultimately offtake from) have already made a contribution to historical cost recovery.

Further, this exclusion ensures the charging structure accommodates common practice of storage operators in relation to the acquisition and subsequent release of entry capacity to Users of their facilities. In a number of cases, entry capacity at storage facilities will have been acquired by a nominated shipper user, often to trigger National Grid investment to build and release the required volume of capacity. The sale of storage services by operators is often bundled with the transfer of entry capacity from the nominated shipper holder of entry capacity to the entity acquiring storage services. If a Revenue Recovery Charge is applied to Existing Capacity transferred at any time after the 7th April 2017 “cut-off date” then, in the case of UNC 0678, the acquiring User would be subject to a Revenue Recovery, on the basis that it is not the original holder of the Existing Capacity. This approach will result in the additional costs being incurred by the storage operator and is, quite clearly discriminatory. The charging arrangements should not differentiate between Users, using the same product, but acquiring indirectly via a third party, nominated User instructed to purchase the capacity by virtue of, for example, the storage operator not being a UNC registered User.

Failure to exempt storage from revenue recovery charges would ultimately result in the premature closure of Hornsea Storage which has been loss making in the last 3 years. For gas storage operators it is a question of how long assets can be maintained without the prospect of making economic returns. The loss of further GB storage would have a detrimental impact on supply competition and increase costs to customers through increased NBP gas costs and price volatility feeding into supplier risk premiums.

All other contracts are exposed to revenue recovery charges, including pre April 2017 contracts. This is permitted because the separate revenue recovery charge is not a reserve price fixed at the time of booking. (This is similar to the existing charging regime where a fixed capacity price is paid and a floating commodity price applied to recover all of the transporter's allowed revenue.). Failure to apply a revenue recovery charge to these existing contracts will result in distortion and discrimination between existing contract holders and new entrants which will have a negative impact on competition, as noted in Ofgem's 621 decision letter.

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.

The proposed changes to TPD B and EID B (where applicable) support the implementation of the new charging methodology and arrangements including those elements required to comply with the EU Tariff Code. The decision to reject Modification 0621 and its Alternatives highlighted three areas of compliance that needed to be addressed (Interim Contracts, Transition Period and Shorthaul). This Modification proposes changes that will address these, and other articles are addressed in a separate compliance report for 678C, included in appendix 1. In order to provide a compliant proposal to address these areas, the Modification proposes,

- Not to propose the creation of Interim Contracts;
 - Not to use a transition period for the introduction of the methodology changes; and
 - The removal of the charge to manage avoidance of inefficient bypass (as highlighted in this proposal, National Grid has raised a separate review group (UNC0670R) to address this aspect of charging.).
- Appropriate treatment of storage with a discount of 80% more properly reflects the contribution to system flexibility and security of supply of such infrastructure. It should be noted that in other Member States; Belgium will apply a discount of 50% on capacity held at storage Entry points and a 100% discount on associated Exit capacity; Germany will apply a 75% discount on all storage related capacity products and France currently applies a discount at an average level of 85%.
- Appropriate treatment of storage with a discount more properly reflecting the contribution to system flexibility and security of supply of such infrastructure. In addition, the exclusion of capacity booked at Storage points which has not been booked for "own use" operational gas purposes from the Revenue Recovery Charge is consistent with the requirement of EU TAR Article 9 to avoid double charging at Storage Points, as confirmed by Ofgem in its GTCR Confirmation of policy view in November 2015.
 - All other contracts are exposed to revenue recovery charges including pre April 2017 contracts. This is permitted because the separate revenue recovery charge was not a reserve price fixed at the time of booking. (See QC advice in appendix 2.) (This is similar to the existing charging regime where a fixed capacity price is paid and a floating commodity price applied to recover all of the transporter's allowed revenue.). Failure to apply a revenue recovery charge to these existing contracts will result in distortion and discrimination between existing contract holders and

new entrants which will have a negative impact on competition, as noted in Ofgem's 621 decision letter.

Only a 1st October implementation date will apply. This is to ensure compliance with TAR Article 6.3 to avoid different charging methodologies for IPs and non-IPs and compliance with CAM Article 9. CAM Article 9.2 defines yearly standard capacity product as for a gas year starting on 1st October. UNC GTC 2.2 defines gas year and capacity year as from 1st October.

However, proposed legal text Annex C 25 contradicts this. EU law takes precedent and therefore what is proposed in 678 is not compliant with CAM code.

Further, EU TAR NC Article 12.3 states prices published according to article 29 are binding for the gas year. Indeed EU law for chapters VI and VIII of EU TAR are already in force and define the gas year consistent with CAM. The reference is listed below for slides 23 & 24 which state GB is already compliant with publication requirements of chapter VIII Art 29-32.:

<https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2017-09/Tx%20WG%20September%202017.pdf>

Article 32 states Article 29 information must be published 30 days before the annual yearly capacity auction, so early June for July auction and Article 30 no later than 30 days before the tariff period.

As stated Article 29 a (i) includes reserve prices until at least the end of the gas year beginning after the annual capacity auctions, for standard capacity products for firm capacity.

Standard capacity products in CAM article 9 includes yearly, quarterly monthly daily and within day.

Therefore, once these are set for IPs, they cannot be changed within year – which legal text for 678 appears to suggest can be done.

In addition, if IPs and non-IPs were to be treated differently by having different effective dates and therefore different charging RPMs this would not be compliant with Article 6 of EU TAR NC. To be compliant with CAM and TAR only an effective date of 1st October is permissible.

Table 4: Impact of the Modification on the Relevant Charging Methodology Objectives

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

This Modification proposal does not conflict with:

- (i) Paragraphs 8, 9, 10 and 11 of Standard Condition 4B of the Transporter's Licence; or
 - (ii) Paragraphs 2, 2A and 3 of Standard Special Condition A4 of the Transporter's Licence;
- as the charges will be changed at the required times and to the required notice periods.

Demonstration of how the Relevant Objectives are furthered:

- 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;**

The Proposer believes that the proposal better reflects the costs incurred by the licensee. In particular, in relation to gas storage the application of an 80% better facilitates this objective. The requirement for a minimum 50% discount for storage related capacity in the EU Tariff Code insulates storage users from double charging and nothing more, however, given that storage facilities are embedded in the network its application fails to appreciate the relative costs of delivering gas directly to offtakes compared to those incurred by routing gas via storage.

As set out in the WWA paper the fact that flows to and from offtakes located close to storage facilities are cheaper, in terms of transportation costs, than the cost of flowing gas to the same offtakes, but via storage (including a 50% discount), suggests that a 50% discount is not cost reflective. The application of an 80% discount ensures that the costs incurred under these two flow scenarios are equivalent, and that the costs of transporting gas to and from storage are as cost reflective as the costs of transporting gas directly between non-storage entry points and non-storage exit points.

Further, the application of an 80% discount ensures that the benefits, or negative costs which are delivered by storage in terms of investment savings attributable to the transmission owner are to some degree represented in the cost of using storage.

The fact that the benefits of embedded entry points located within DN networks receive discounted DN transportation costs, or even credits, suggests that a discount which is set to singularly to remove double charging is inconsistent with the approach taken in other pipeline networks. The additional level of discount provides a mechanism for recognising the benefits afforded by embedded entry points (and exit points) and is in line with the cost reflective charging methodologies approved and employed at the DN level.

Finally, in relation to the application of Revenue Recovery Charges, the proposal recommends that no charges are applied to storage (note that Modification 0678 proposes that such charges should be applied to non-Existing Capacity holdings on a capacity top-up basis). Currently, storage flows are exempt from the application of TO Commodity Charges (the mechanism employed to recover revenues not recovered from the sale of capacity products). On the basis that it is accepted that storage flows and indeed storage related capacity bookings should not be double charged then it must be the case that whatever Revenue Recovery Charge mechanism is employed that storage users should be exempt from its application. This approach is consistent with the findings of Ofgem in its Gas Transmission Charging Review on the basis that flows to and from storage (or capacity booked at an entry to deliver gas to, or an exit point to ultimately offtake from) have already made a contribution to historical cost recovery.

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; and:

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

The update to the Transmission Services methodology proposal takes into account developments which have taken place in the transportation business, in particular that the network is no longer expanding.

Considering the lead time required for the development of such assets, assumptions on Postage Stamp as a suitable RPM and storage flows for the modelling of the impact of a discount of 80% are robust for 5 years.

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

CWD results in charges which on average are higher at beach terminals than other entry point groups. This might be distortionary and result in higher priced NBP gas as charges are incrementally passed through on a marginal basis or cheaper sources of gas being frozen out of the market.

Existing contracts have significantly lower charges than new entrants and this might be discriminatory.

Scotland has higher DN charges than other points, this is not cost reflective given that most gas used to supply Scotland will enter at St Fergus and this may be politically sensitive.

St Fergus has higher entry costs under CWD than PS, given that Norway is a marginal supplier to GB this has the potential to increase NBP gas price and therefore costs to customers by up to £10/year /customer or £190 M/YR.

Peterhead has higher exit costs under CWD than PS, given that it may set the marginal clearing price in a future Capacity Mechanism auction this has the potential to impact customer levies therefore costs to customers by up to £5/year /customer or £117 M/YR.

Supporting information to the above statements is provided in UNC modification 678C appendix 4

Promoting Efficiency and Economic principles associated with network charging

There are a number of economic principles which are typically associated with the appropriate determination of network charges. These are largely focused on ensuring efficient market outcomes. First, it is typically argued that network charges should be cost reflective. This means that they should reflect the (forward looking) costs which users impose on the network through a change in their use. This is important to achieve an economically efficient outcome: if charges are cost reflective, users will internalise the network costs which they cause when making a decision about how to use the network. This, in turn, will ensure that overall value chain costs are optimised.

The fact that it is forward looking costs which should be reflected is important. If there is an historic cost which exists, but cannot be changed in any way going forward by different use of the network by shippers, there is no value in terms of economic efficiency in sending a signal to shippers about that cost. Cost reflectivity should therefore only relate to new costs which would be created in the future or existing costs which can be avoided in the future as a result of a particular change in use.

This argument points to network prices being set predominantly according to forward looking marginal costs, as these are the costs incurred or avoided by incremental use.

However, it is important that marginal cost as a concept is interpreted correctly. First, when there is an excess of capacity as a result of reduction in network use over time, then the marginal cost of use may be close to or at zero. Second, it is obviously important that network companies can recover their allowed revenue. It is also clear that efficient cost reflective charges, as defined above, may not recover all costs which have been incurred. Therefore, additional charges are required to recover the full range of permissible costs.

It is typically argued that such charges should have as an objective creating minimal changes in behaviour relative to a set of efficient charges. This is because, as previously established, there is no efficiency related reason to target historic costs at a particular set of users. By definition, they cannot be “un-incurred” and so there is no point in targeting them at a certain set of users as to do so will change behaviour in a way which reduces efficiency.

Ofgem states in their Targeted Charging Review (TCR) document in electricity, <https://www.ofgem.gov.uk/system/files/docs/2017/03/tcr-consultation-final-13-march-2017.pdf>

that: “Cost-reflectivity is less directly relevant for residual charges; however, it is important that residual charges do not unduly distort the signals provided by the forward-looking charges which are intended to be cost-reflective... residual charges do not relate to specific costs that any user imposes”.

In the TCR debate, Ofgem is similarly clear that cost reflectivity is not a valid objective when considering charges which recover residual revenue. Instead, Ofgem proposes three different principles for assessing approaches to residual charging: “reducing distortions, fairness and proportionality and practicality considerations”.

Therefore in a network where there is spare capacity, incremental signals are not required and the network costs can be treated as sunk revenue to be recovered in the least distortive way. Postage stamp capacity charges achieve this.

CWD and Market Distortion

Economic theory suggests it is always relevant to set marginal cost related prices unless there is spare capacity. The charges from the 678 CWD modifications lack cost reflectivity and subsequently risk distortion to competition and wholesale market price. These are discussed below:

1. 678 moves cost recovery from commodity to a capacity basis. This may distort flows if some shippers (with supplies at higher cost entry points) no longer purchase entry capacity to supply gas or if very high capacity costs are passed through to the NBP prices.

Postage Stamp capacity charges are less distortive because they are equitable and fair and since they are passed through uniformly to customers, they do not affect competition in gas supply or Cap Mech Auctions. Whereas, CWD modifications, apply a capacity uplift not on an additive basis as in the current LRMC model but on a “scaling” CWD basis to compound the error of distortion.

2. Charges derived from the CWD methodology will only be stable and predictable if the FCC values are stable. Postage Stamp charges exhibit less variance and more predictable and stable charges will facilitate competition because, all else being equal, greater cost certainty will lower risk and will result in lower cost of capital for Shippers which will reduce barriers to entry and facilitate competition.
3. There are unintended consequences of the CWD methodology which affect the distribution of charges to NTS customers and to end consumers. For example, regardless of how the FCC is calculated, the methodology does not demonstrate cost reflectivity for Exit points that are physically close to Entry points, i.e. Peterhead and St Fergus, Pembroke and Milford Haven. This lack of cost reflectivity is a concern given the material impact on customers.
4. The CWD methodology also generates high charges for exit and entry capacity in Scotland where there is spare capacity, but has relatively lower charges for exit in the South of England where there is relatively less spare capacity.

Storage

The application of an 80% discount better achieves this objective. Firstly, as described in the Storengy and WWA reports gas storage provides shippers with access to physical flexibility to manage any physical portfolio imbalances which occur for a variety of reasons. Gas storage is an essential tool for a large number of shippers which contract directly with storage operators, but also provides wider benefits to all shippers as a result of enhanced security of supply and well-understood, significant positive externalities. These wider benefits dampen price volatility and reduce the likelihood of network constraints, gas deficit issues and cost escalation.

Based on the outputs from NG's UNC 0678 model and data published on 15 March 2019, a 50% discount would result in £13m 1.9% of total allowed revenue being recovered from non-storage users.

On this basis, there is negligible cross-subsidy between storage and non-storage users, beyond perhaps that as a result of the security of supply and broader societal benefits (externalities) non-storage Users are net beneficiaries of the 80% discount.

In the event that storage is not given a discount, storage assets can be expected to close prematurely as highlighted in the Frontier Economics report, commissioned for EUK for 621 and the Baringa report for Ofgem. In this event other non-Storage users will pay for the missing revenue no longer paid by storage users and will have less security of supply, higher wholesale gas costs and higher system operating costs.

Revenue Recovery Charges

Storage is exempt from Revenue Recovery charges in line with Ofgem's GTCR position. All other contracts are exposed to revenue recovery charges including pre April 2017 contracts. This is permitted because the separate revenue recovery charge is not a reserve price fixed at the time of booking. (This is similar to the existing charging regime where a fixed capacity price is paid and a floating commodity price applied to recovery all of the transporter's allowed revenue.). Failure to apply a revenue recovery

charge to these existing contracts will result in distortion and discrimination between existing contract holders and new entrants which will have a negative impact on competition, as noted in Ofgem's 621 decision letter.

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.

This Modification proposes changes that address the issues raised in Ofgem's 621 rejection letter. These and other articles are addressed in a separate compliance report for 678C, included in appendix 1. In order to provide a compliant proposal to address these areas, the Modification proposes,

- Not to propose the creation of Interim Contracts;
- Not to use a transition period for the introduction of the methodology changes; and
- The removal of the charge to manage avoidance of inefficient bypass (as highlighted in this proposal, National Grid has raised a separate review group (UNC0670R) to address this aspect of charging.).
Appropriate treatment of storage with a discount of 80% more properly reflects the contribution to system flexibility and security of supply of such infrastructure. It should be noted that in other Member States; Belgium will apply a discount of 50% on capacity held at storage Entry points and a 100% discount on associated Exit capacity; Germany will apply a 75% discount on all storage related capacity products and France currently applies a discount at an average level of 85%.
- Appropriate treatment of storage with a discount more properly reflecting the contribution to system flexibility and security of supply of such infrastructure. In addition, the exclusion of capacity booked at Storage points which has not been booked for "own use" operational gas purposes from the Revenue Recovery Charge is consistent with the requirement of EU TAR Article 9 to avoid double charging at Storage Points, as confirmed by Ofgem in its GTCR Confirmation of policy view in November 2015.
- All other contracts are exposed to revenue recovery charges including pre April 2017 contracts. This is permitted because the separate revenue recovery charge was not a reserve price fixed at the time of booking. (See QC advice in appendix 2.) (This is similar to the existing charging regime where a fixed capacity price is paid and a floating commodity price applied to recovery all of the transporter's allowed revenue.). Failure to apply a revenue recovery charge to these existing contracts will result in distortion and discrimination between existing contract holders and new entrants which will have a negative impact on competition, as noted in Ofgem's 621 decision letter.
- Only a 1st October implementation date will apply. This is to ensure compliance with TAR Article 6.3 to avoid different charging methodologies for IPs and non-IPs and compliance with CAM Article 9 as would arise in the current solution defined in legal text for 678.

CAM Article 9.2 defines yearly standard capacity product as for a gas year starting on 1st October. UNC GTC 2.2 defines gas year and capacity year as from 1st October.

However, proposed legal text Annex C 25 contradicts this. EU law takes precedent and therefore what is proposed in 678 is not compliant with CAM code.

Further, EU TAR NC Article 12.3 states prices published according to article 29 are binding for the gas year. Indeed EU law for chapters VI and VIII of EU TAR are already in force and define the gas year consistent with CAM. The reference is listed below for slides 23 & 24 which state GB is already compliant with publication requirements of chapter VIII Art 29-32.

<https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2017-09/Tx%20WG%20September%202017.pdf>

Article 32 states Article 29 information must be published 30 days before the annual yearly capacity auction, so early June for July auction and Article 30 no later than 30 days before the tariff period.

As stated Article 29 a (i) includes reserve prices until at least the end of the gas year beginning after the annual capacity auctions, for standard capacity products for firm capacity.

Standard capacity products in CAM article 9 includes yearly, quarterly monthly daily and within day. Therefore, once these are set for IPs, they cannot be changed within year – which legal text for 678 appears to suggest can be done.

In addition, if IPs and non-IPs were to be treated differently by having different effective dates and therefore different charging RPMs this would not be compliant with Article 6 of EU TAR NC. To be compliant with CAM and TAR only an effective date of 1st October is permissible.

7 Implementation

This Modification and the resulting RPM change will take effect for prices from 01 October of a gas year. Charges must be published at least 4 months before this date to meet notice periods as required in CAM for IP annual auctions. To do otherwise would result in the application of different RPMs for IPs and non-IPs and not be compliant with EU TAR Article 6.

A 01 October start date for new charges to take effect will provide sufficient notice to enable shippers and traders to efficiently plan and establish contractual arrangements with their counterparties without undue regulatory risk. Whereby, avoiding market distortion and increased costs to customers. For example, the auction of storage services is required by Licence and takes place in April 2018, but the transmission service costs are still not known.

8 Appendix 1 Compliance Report

Views of the Proposer of 0678C on Compliance with COMMISSION REGULATION (EU) 2017/460 of 16th March 2017 establishing a network code on harmonised transmission tariff structures for gas

Modification 678C incorporates proposals that mitigate the compliance concerns raised by Ofgem in the decision letter of 621 dated 20th December 2018. Specifically, 678C does not include a transition period, interim contracts nor an NTS Optional Charge.

For clarity, SSE's modification differs from 0678 in the following way:

- **Postage stamp as the RPM.**
- **A discount of 80% applied to storage.**
- **No revenue recovery charges to be applied to any Storage capacity bookings.**
- **Revenue recovery charges to be applied to all other non-storage sites, including pre April 2017 bookings.**
- **The FCC calculation to be included in the UNC.**
- **Charges to be effective from the 1st October**

Jeff Chandler

12 March 2019

Views of the Proposer of 0678C on Compliance with COMMISSION REGULATION (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

Article 4. Transmission and non-transmission services and tariffs

1.A given service shall be considered a transmission services where both of the following criteria are met:

This Clause requires that for a service to be considered a transmission service¹³ the service must meet the criteria that are related to cost drivers of both technical or forecasted contracted capacity and distance set out in Article 4(1)(a) and that those services must relate to investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services as set out in Article 4(1)(b).

(a) the costs of such service are caused by the cost drivers of both technical or forecasted contracted capacity and distance;

Under 0678C the cost drivers defined transmission services (i.e. services related to investment in and maintenance of the regulated transmission assets) are defined under Article 4(1)(a) in relation to the “cost drivers” of both technical or forecasted contracted capacity and distance as follows:

- 0678C recognises that forecasted contracted capacity is a cost driver¹⁴ for GB transmission services where these costs relate to investment in and maintenance of the regulated transmission assets. These costs are historical sunk costs that are related to a shared network that is already built and that has spare capacity.
- The postage stamp reference price methodology under 0678C recognises forecasted contracted capacity is a cost driver by weighting the historical costs to the forecasted contracted capacity at each entry and exit point. This results in reference prices that are fair, proportionate and applied in a non-distortive manner.
- 0678C recognises that distance is not a “cost driver” for GB transmission services. There is no basis for “correlating” historical sunk costs of the transmission system operator with distance as required under the definition of cost drivers under Regulation 2017/460. 0678C notes that *“there are several potential weaknesses with using distance as a factor for setting the reference price”* (Ofgem decision letter Modification 0621¹⁵). These include potential for
 - distortive locational signals;
 - that the simple “distance” in the methodology does not reflect “real” flows on the gas network; and
 - outcomes of a reference price methodology using distance may not be “fair” particularly in relation to users in more remote locations pay higher charges but do not drive significant additional costs from their use of a shared network that is already built and that has spare capacity (as set out in Modification 0621 decision letter)

0678C requires the retention of the capacity weighted distance reference price methodology as a counterfactual to the postage stamp reference price methodology in accordance with Recital 3 and Article 26 1(a)(vi) of Regulation 2017/460.

¹³ Regulation 2017/460 ‘transmission services’ means the regulated services that are provided by the transmission system operator within the entry-exit system for the purpose of transmission

¹⁴ Regulation 2017/460: ‘cost driver’ means a key determinant of the transmission system operator's activity which is correlated to the costs of that transmission system operator, such as distance or technical capacity

¹⁵ Ofgem decision letter on Modification Proposal Modification 0621 can be found at: <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

Forecasted contracted capacity is the sole cost driver that is related to the definition of transmission services under Article 4 where such services relate to historical sunk costs of a shared network that is already built and that has spare capacity. The reference price methodology under 0678C is compliant with Article 4 (1)(a).

(b) the costs of such service are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

The costs of the transmission services defined under 0678C relate to investment in and operation of the revenue which is part of the regulated asset base for the provision of transmission services. The reference price methodology under 0678C is compliant with Article 4 1(b).

Where any of the criteria set out in points (a) and (b) are not complied with, a given service may be attributed to either transmission or non-transmission services subject to the findings of the periodic consultation by the transmission system operator(s) or the national regulatory authority and decision by the national regulatory authority, as set out in Articles 26 and 27.

0678C identifies transmission services and separately defines non-transmission services. 0678C complies with the criteria set out in points 4 (1)(a) and 4(1)(b). Prior to implementation 0678C will be subject to a consultation process under the UNC and Regulation 2017/460. It is not envisaged that there is a requirement for further consideration of this issue in the periodic consultation by the transmission system operator(s) or the national regulatory authority and decision by the national regulatory authority, as envisaged under Articles 26 and 27.

2. Transmission tariffs may be set in a manner as to take into account the conditions for firm capacity products.

0678C *"takes into account the conditions for firm capacity tariffs"* by applying postage stamp tariffs to firm capacity products (with discounts for interruptible/off peak entry, interruptible/off peak exit and storage capacity) together with a capacity-based revenue recovery charge. 0678C is compliant with Article 4(2).

3. The transmission services revenue shall be recovered by capacity-based transmission tariffs.

0678C is compliant with Article 4(3). 0678C proposes to recover historic sunk costs using capacity based transmission tariffs. 0678C do not include any proposals for commodity-based tariffs.

As an exception, subject to the approval of the national regulatory authority, a part of the transmission services revenue may be recovered only by the following commodity-based transmission tariffs which are set separately from each other:

(a) a flow-based charge, which shall comply with all of the following criteria:

- (i) levied for the purpose of covering the costs mainly driven by the quantity of the gas flow;**
- (ii) calculated on the basis of forecasted or historical flows, or both, and set in such a way that it is the same at all entry points and the same at all exit points;**
- (iii) expressed in monetary terms or in kind.**

0678C does not propose any commodity based transmission tariffs that are required for approval by the NRA as an exception.

(b) a complementary revenue recovery charge, which shall comply with all of the following criteria:

- (i) levied for the purpose of managing revenue under- and over-recovery;**
- (ii) calculated on the basis of forecasted or historical capacity allocations and flows, or both;**
- (iii) applied at points other than interconnection points;**

(iv) applied after the national regulatory authority has made an assessment of its cost-reflectivity and its impact on cross-subsidisation between interconnection points and points other than interconnection points.

0678C does not propose a complementary revenue recovery charge.

4. The non-transmission services revenue shall be recovered by non-transmission tariffs applicable for a given non-transmission service. Such tariffs shall be as follows:

- (a) cost-reflective, non-discriminatory, objective and transparent;**
- (b) charged to the beneficiaries of a given non-transmission service with the aim of minimising cross-subsidisation between network users within or outside a Member State, or both. Where according to the national regulatory authority a given non-transmission service benefits all network users, the costs for such service shall be recovered from all network users.**

0678C proposes that non-transmission services revenue are recovered using cost reflective, non-discriminatory, objective and transparent charges for the following services:

- General Non-Transmission Services Entry and Exit Charges: a flow based charge as a flat unit price for all Entry Points and Exit Points;
- St Fergus Compression Charges;
- NTS Metering Charges;
- DN Pensions Deficit charges;
- Shared Supply Meter Point Administration charges; and
- Allocation Charges at Interconnectors

Non-transmission services revenue will therefore be recovered through non-transmission tariffs that relate to a given non-transmission service and charged to the beneficiaries of the given non-transmission service. 0678C is compliant with Article 4(4).

0678C states that *"It is proposed that revenue due for collection via General Non-Transmission Services Entry and Exit Charges will be equal to the Non-Transmission Services revenue minus the DN Pensions Charges, NTS Meter Maintenance Charges, St. Fergus Compressor Charges, Shared Supply Meter Point Administration Charges and Allocation Charges at Interconnectors"*.

Article 5 Cost allocation assessments

1. The national regulatory authority or the transmission system operator, as decided by the national regulatory authority, shall perform the following assessments and shall publish them as part of the final consultation referred to in Article 26:

It is noted that the cost allocation assessment shall be undertaken by the national regulatory authority or the transmission system operator and that they will be published as part of the final consultation referred to in Article 26. 0678C provides that relevant information that enables the cost assessments to be undertaken and published as envisaged under Article 5(1).

(a) a cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs and based exclusively on the cost drivers of

- (i) technical capacity; or**
- (ii) forecasted contracted capacity; or**
- (iii) technical capacity and distance; or**

(iv) forecasted contracted capacity and distance;

The cost allocation assessment envisaged under Article 5(a) allows for a choice of cost drivers. 0678C will enable the cost assessment under Article 5 (1)(a)(iv) by providing the following information:

- The **forecasted contracted capacity under Article 5(1)(a)(ii)**: The 0678C postage stamp reference price methodology will establish the forecasted contracted capacity through a separate methodology set out in the UNC. This forecasted contracted capacity methodology will be subject to periodic review and consultation in relation to any proposed changes; and
- The **forecasted contracted capacity and distance** (Article 5(1)(a)(iv)) where distance is the “shortest distance of the pipeline routes between an entry point or a cluster of entry points and an exit point or a cluster of exit points” (as set out in Article 8(c)). The forecasted contracted capacity and distance shall be used in the cost assessment of the capacity weighted distance methodology which will be published as a counterfactual alongside the cost assessment of the postage stamp methodology as required under 0678C and Article 26 1(a)(vi).

(b) a cost allocation assessment relating to the transmission services revenue to be recovered by commodity-based transmission tariffs, if any, and based exclusively on the cost drivers of:

(i) the amount of gas flows; or

(ii) the amount of gas flows and distance.

0678C does not propose that transmission services revenue will be recovered by commodity-based transmission tariffs. 0678C does not foresee a cost allocation assessment as required under Article 5(1)(b).

2. The cost allocation assessments shall indicate the degree of cross-subsidisation between intra-system and cross-system network use based on the proposed reference price methodology.

0678C will provide information that will enable a cost allocation assessment of the degree of cross-subsidisation between intra-system and cross-system network use based on the proposed postage stamp reference price methodology. It should be noted that the postage stamp allocation of costs does not envisage any “cross subsidisation”. However, the use of certain multipliers will result in adjustments to tariffs to ensure the recovery of relevant costs in a gas year. These adjustments are included within the methodology.

3. The cost allocation assessment referred to in paragraph 1(a) shall be carried out as follows:

(a) the transmission services capacity revenue to be obtained from intra-system network use at both all entry points and all exit points shall be divided by the value of the relevant capacity cost driver(s) for intra-system network use in order to calculate the intra-system capacity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh/day, in accordance with the following formula:

[Formula]

Where:

0678C will enable the cost allocation assessment envisaged under Article 5(3)(a).

(b) the transmission services capacity revenue to be obtained from cross-system network use at both all entry points and all exit points shall be divided by the value of the relevant capacity cost driver(s) for cross-system network use in order to calculate the cross-system capacity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh/day, in accordance with the following formula:

[Formula]

0678C will enable the cost allocation assessment envisaged under Article 5(3)(b).

(c) the capacity cost allocation comparison index between the ratios referred to in points (a) and (b), which is defined in percentage, shall be calculated in accordance with the following formula:

[Formula]

0678C will enable the cost allocation assessment envisaged under Article 5(3)(c).

4. The cost allocation assessment referred to in paragraph 1(b) shall be carried out as follows:

(a) the transmission services commodity revenue to be obtained from intra-system network use at both all entry points and all exit points shall be divided by the value of the relevant commodity cost driver(s) for intra-system network use in order to calculate the intra-system commodity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh, in accordance with the following formula:

[Formula]

0678C will enable the cost allocation assessment envisaged under Article 5(4)(a).

(b) the transmission services commodity revenue to be obtained from cross-system network use at both all entry points and all exit points shall be divided by the value of the relevant commodity cost driver(s) for cross-system network use in order to calculate the cross-system commodity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh, in accordance with the following formula:

[Formula]

0678C will enable the cost allocation assessment envisaged under Article 5(4)(b).

(c) the commodity cost allocation comparison index between the ratios referred to in points (a) and (b), which is defined in percentage, shall be calculated in accordance with the following formula:

[Formula]

0678C will enable the cost allocation assessment envisaged under Article 5(4)(c).

5. The transmission services revenue to be obtained from intra-system network use at entry points referred to in paragraphs 3(a) and 4(a) shall be calculated as follows:

(a) the amount of allocated capacity or, respectively, flows attributed to the provision of transmission services for cross-system network use at all entry points shall be deemed equal to the amount of capacity or, respectively, flows attributed to the provision of transmission services for cross-system network use at all exit points;

0678C will enable the calculation envisaged under Article 5(5)(a).

(b) the capacity and, respectively, flows, determined as set out in point (a) of this paragraph shall be used to calculate the transmission services revenue to be obtained from cross-system network use at entry points;

0678C will enable the calculation envisaged under Article 5(5)(b).

(c) the difference between the overall transmission services revenue to be obtained at entry points and the resulting value referred to in point (b) of this paragraph shall be equal to the transmission services revenue to be obtained from intra-system network use at entry points.

0678C will enable the calculation envisaged under Article 5(5)(c).

6. Where distance is used as a cost driver in combination with technical or forecasted contracted capacity or flows, the capacity weighted average distance or, respectively, commodity weighted

average distance shall be used. Where the results of the capacity, or respectively commodity cost allocation comparison indexes referred to in paragraph 3(c) or, respectively paragraph 4(c), exceed 10 percent, the national regulatory authority shall provide the justification for such results in the decision referred to in Article 27(4).

It is noted that Article 5(6) allows for a cost allocation comparison for distance where distance is used as a cost driver in combination with technical or forecasted contracted capacity or flows, the capacity weighted average distance or, respectively, commodity weighted average distance.

Under the 0678C postage stamp reference price methodology distance is not a cost driver and it is not used in combination with technical or forecasted contracted capacity or flows, the capacity weighted average distance or, respectively, commodity weighted average distance for the purpose of establishing reference prices and reserve prices.

0678C envisages that the capacity weighted distance methodology will be retained as a counterfactual and for the purpose of comparison with the capacity based postage stamp reference price methodology.

Article 6 Reference price methodology application

1.The reference price methodology shall be set or approved by the national regulatory authority as set out in Article 27. The reference price methodology to be applied shall be subject to the findings of the periodic consultations carried out in accordance with Article 26 by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority.

0678C sets out a postage stamp reference price methodology that enables the approval or consultation envisaged in Article 6(1).

2.The application of the reference price methodology shall provide a reference price.

0678C shall provide a reference price as required under Article 6(2). 0678C is compliant with Article 6(2).

3.The same reference price methodology shall be applied to all entry and exit points in a given entry-exit system subject to the exceptions set out in Articles 10 and 11.

0678C will apply the same reference price methodology to all entry and exit points in GB. 0678C is compliant with Article 6(3).

CAM Article 9.2 defines yearly standard capacity product as for a gas year starting on 1st October.

UNC GTC 2.2 defines gas year and capacity year as from 1st October.

However, proposed legal text Annex C 25.contradicts this. EU law takes precedent and therefore what is proposed in 678 is not compliant with CAM code.

Further, EU TAR NC Article 12.3 states prices published according to article 29 are binding for the gas year. Indeed EU law for chapters VI and VIII of EU TAR are already in force and define the gas year consistent with CAM. The reference is listed below for slides 23 & 24 which state GB is already compliant with publication requirements of chapter VIII Art 29-32.

<https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2017-09/Tx%20WG%20September%202017.pdf>

Article 32 states Article 29 information must be published 30 days before the annual yearly capacity auction, so early June for July auction and Article 30 no later than 30 days before the tariff period.

As stated Article 29 a (i) includes reserve prices until at least the end of the gas year beginning after the annual capacity auctions, for standard capacity products for firm capacity.

Standard capacity products in CAM article 9 includes yearly, quarterly monthly daily and within day.

Therefore, once these are set for IPs, they cannot be changed within year – which legal text for 678 appears to suggest can be done.

In addition, if IPs and non-IPs were to be treated differently by having different effective dates and therefore different charging RPMs this would not be compliant with Article 6 of EU TAR NC. To be compliant with CAM and TAR only an effective date of 1st October is permissible.

4. Adjustments to the application of the reference price methodology to all entry and exit points may only be made in accordance with Article 9 or as a result of one or more of the following:

(a) benchmarking by the national regulatory authority, whereby reference prices at a given entry or exit point are adjusted so that the resulting values meet the competitive level of reference prices;

(b) equalisation by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority, whereby the same reference price is applied to some or all points within a homogeneous group of points;

(c) rescaling by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority, whereby the reference prices at all entry or all exit points, or both, are adjusted either by multiplying their values by a constant or by adding to or subtracting from their values a constant.

The postage stamp reference price methodology under 0678C will be set out in the UNC. Article 4(6) permits adjustments to this reference price methodology under the circumstances specified. 0678C will enable such adjustments (if any) to take place through modifications to the UNC.

Article 7 Choice of a reference price methodology

The reference price methodology shall comply with Article 13 of Regulation (EC) No 715/2009 and with the following requirements.

The postage stamp reference price methodology under 0678C will comply with Article 13 of Regulation (EC) No 715/2009.

As required under Regulation **715/2009** Article 13 (1) the 0678C will be compliant with the following

- The 0678C tariffs will be *“transparent, take into account the need for system integrity and its improvement and reflect the actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable network operator and are transparent, whilst including an appropriate return on investments, and, where appropriate, taking account of the benchmarking of tariffs by the regulatory authorities”*.
- The 0678C tariffs, *“or the methodologies used to calculate them, shall be applied in a non-discriminatory manner”*.
- The 0678C tariffs *“or the methodologies used to calculate them, shall facilitate efficient gas trade and competition, while at the same time avoiding cross-subsidies between network users and providing incentives for investment and maintaining or creating interoperability for transmission networks”*.
- The 0678C tariffs *“for network users shall be non-discriminatory and set separately for every entry point into or exit point out of the transmission system”*.

The 0678C proposals allows for *“Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points” to be “approved by the national regulatory authorities”*.

As required under Regulation **715/2009** Article 13 (2) the 0678C tariffs for network access *“shall neither restrict market liquidity nor distort trade across borders of different transmission systems”*.

We note that Regulation **715/2009** Article 13 (2) requires that *“Where differences in tariff structures or balancing mechanisms would hamper trade across transmission systems, and notwithstanding Article 41(6) of Directive 2009/73/EC, transmission system operators shall, in close cooperation with the relevant national*

authorities, actively pursue convergence of tariff structures and charging principles, including in relation to balancing”.

It [the Reference Price Methodology] shall aim at:

(a) enabling network users to reproduce the calculation of reference prices and their accurate forecast;

Under 0678C the key parameters of the postage stamp reference price methodology will be open and transparent. The key elements for the calculation and forecasting the tariffs are:

- the forecasted contracted capacity: a methodology under the UNC will set out the arrangements for setting the forecasted contracted capacity for the relevant gas year. The data required to establish the inputs for the tariffs for each gas year will be published alongside the tariffs. This will include historic data for each entry and exit point as required under the methodology and any forecast of capacity required for DN offtakes for the relevant gas year;
- the transmission service allowed revenue: This is the revenue to be recovered in the relevant gas year. It is envisaged that the forecasts of allowed revenue for future gas years will be published to enable users to forecast tariffs. The information will be provided by the transmission system operator;
- a distance matrix for all entry and exit points to enable the counterfactual capacity weighted distance tariffs to be calculated and forecasted;
- the relevant storage entry and exit points and the associated discounts based on the relevant multipliers;
- and other information relevant to the setting of the tariffs under the reference price methodology (e.g. assumptions relating to the treatment of new entry and exit points in the reference price methodology).

It is envisaged that the transmission system operator will publish a model which enables the calculation of postage stamp reference prices and the counterfactual capacity weighted distance reference prices.

0678C will be compliant with Article 7(a).

(b) taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network;

0678C postage stamp reference price methodology will enable the recovery of the allowed transmission services revenue associated with historical sunk costs for the relevant gas transporter. These allowed revenues relate to the actual costs incurred for transmission services relate to investment in and operation of the regulated asset base.

0678C is therefore compliant with Article 7(b) since it takes into account the actual costs (in terms of historical sunk costs) incurred for the provision of transmission services considering the level of complexity of the transmission network.

(c) ensuring non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5;

0678C will initially apply the postage stamp reference price tariffs to all entry and exit points. Therefore the tariffs are initially non-discriminatory.

There will be a 10% discount for interruptible/off peak entry and interruptible/off peak exit capacity reflects the expectation of interruption in the relevant gas year. There will be a discount of [80%] % for storage capacity at the relevant entry/exit points defined in National Grid licence.

The treatment of interruptible/off peak entry capacity, interruptible/off peak exit capacity and storage capacity reflects the wider system benefits that arise from these types of capacity (including increased operational flexibility and increased network resilience). Therefore the different treatment of interruptible/off peak entry capacity, interruptible/off peak exit capacity and storage capacity is considered as “due” discrimination under the postage stamp reference price methodology.

To ensure revenue recovery the tariffs will be adjusted to reflect the forecast of any revenue under recovery from the application of the capacity discounts. In any event there will be an adjustment to ensure that allowed revenue for transmission services is recovered from users or the relevant gas year ("k" value adjustments).

The 0678C reference price methodology will enable the interruptible/off peak entry capacity, interruptible/off peak exit capacity and storage capacity adjustments to be taken into account in considering non-discrimination and cross subsidisation in the cost allocation assessments as set out in Article 5.

On the basis of the justified discriminatory treatment of interruptible/off peak, interruptible/off peak and storage capacity and the justified cross subsidisation in relation to operation flexibility and network resilience, 0678C is compliant with Article 7(c).

(d) ensuring that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system;

0678C postage stamp reference price methodology is based on transmission services revenue recovery from capacity-based tariffs for all entry and exit points. It is envisaged that there is no "volume risk" under 0678C. Under 0678C costs are assigned to GB entry and exit and there are no costs that are assigned to final customers. 0678C is compliant with Article 7(d).

(e) ensuring that the resulting reference prices do not distort cross-border trade.

The 0678C postage stamp reference price methodology is initially applied on a uniform basis to all entry and exit points, with justified discounts for interruptible/off peak entry capacity, interruptible /off peak exit capacity and storage capacity. It does not, therefore, distort cross border trade. 0678C is compliant with Article 7(e).

Article 8 Capacity weighted distance reference price methodology

1.The parameters for the capacity weighted distance reference price methodology shall be as follows:

0678C requires the calculation of the capacity weighted distance reference price methodology as a counterfactual to the tariffs that are applied under the proposed postage stamp methodology as required under Article 26 1(a)(vi).

0678C will enable the calculation of the capacity weighted distance references prices alongside the postage stamp reference prices using the methodology set out in Article 8.

The capacity shall be the forecasted contract capacity established under 0678C.

(a) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs;

Under 0678C this information will be provided by transmission system operator and relates to the transmission service allowed revenue in the relevant gas year.

(b) the forecasted contracted capacity at each entry point or a cluster of entry points and at each exit point or a cluster of exit points;

Under 0678C the forecasted contracted capacity for each entry and exit point will be derived from a methodology set out under the UNC.

(c) where entry points and exit points can be combined in a relevant flow scenario, the shortest distance of the pipeline routes between an entry point or a cluster of entry points and an exit point or a cluster of exit points;

Under 0678C the transmission system operator will establish the data for the shortest distance of the pipeline routes between an entry point and an exit point.

(d) the combinations of entry points and exit points, where some entry points and some exit points can be combined in a relevant flow scenario;

Under 0678C there are no combinations of entry points and exit points where some entry points and some exit points are combined in a relevant flow scenario.

(e) the entry-exit split referred to in Article 30(1)(b)(v)(2) shall be 50/50. Where entry points and exit points cannot be combined in a flow scenario, this combination of entry and exit points shall not be taken into account.

Under 0678C the entry exit split will be 50/50. 0678C is compliant with Article 9(1)(e).

2.The reference prices shall be derived in the following sequential steps:

(a) the weighted average distance for each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated, taking into account, where relevant, the combinations referred to in paragraph 1(d), in accordance with the following respective formulas:

(i) for an entry point or cluster of entry points, as the sum of the products of capacity at each exit point or cluster of exit points and the distance from this entry point or cluster of entry points to each exit point or cluster of exit points, divided by the sum of capacities at each exit point or cluster of exit points:

[Formula]

Under 0678C distance will be set to zero for the purpose of this formula under the postage stamp methodology. The capacity shall be the forecasted contract capacity established under 0678C. 0678C is compliant with Article 8(2)(a)(i).

(ii) for an exit point or cluster of exit points, as the sum of the products of capacity at each entry point or cluster of entry points and the distance to this exit point or cluster of exit points from each entry point or cluster of entry points, divided by the sum of capacities at each entry point or cluster of entry points:

[Formula]

Under 0678C distance will be set to zero for the purpose of this formula under the postage stamp methodology. The capacity shall be the forecasted contract capacity established under 0678C. 0678C is compliant with Article 8(2)(a)(ii).

(b) the weight of cost for each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated in accordance with the following respective formulas:

[Formula]

Under 0678C distance will be set to zero for the purpose of this formula under the postage stamp methodology. The capacity shall be the forecasted contract capacity established under 0678C. 0678C is compliant with Article 8(2)(b).

(c) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all entry points and the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all exit points shall be identified by applying the entry-exit split;

Under 0788A the entry exit split to be applied is 50% to entry and 50% to exit in relation to the recovery of the allowed revenue for transmission services. 0678C is compliant with Article 8(2)(c).

(d) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated in accordance with the following respective formulas:

[Formula]

Under 0678C postage stamp methodology will establish to transmission services revenue to be recovered from capacity-based transmission tariffs under this formula. 0678C is compliant with Article 8(2)(d).

(e) the resulting values referred to in point (d) shall be divided by the forecasted contracted capacity at each entry point or each cluster of entry points and at each exit point or each cluster of exit points in accordance with the following respective formulas:

[Formula]

0678C will enable the calculation of the capacity weighted distance references prices alongside the postage stamp reference prices using the methodology set out in Article 8. 0678C is compliant with Article 8(2)(e).

0678C envisages a reference price model with the relevant inputs that is compliant with Article for both the capacity weighted distance methodology and the postage stamp methodology (where the distances are set to zero).

Article 9 Adjustments of tariffs at entry points from and exit points to storage facilities and at entry points from LNG facilities and infrastructure ending isolation

1. A discount of at least 50 % shall be applied to capacity-based transmission tariffs at entry points from and exit points to storage facilities, unless and to the extent a storage facility which is connected to more than one transmission or distribution network is used to compete with an interconnection point.

0678C proposes that in respect of storage sites, (locations where the type of Entry point/Oftake is designated as a 'Storage Site' in National Grid's Licence (Special Condition 5F Table 4B for Entry Points, and Special Condition 5G Table 8 for Exit Points) the applicable Specific Capacity Discount for a given gas year will be equal to 80%. 0678C is compliant with Article 9(1).

The justification for this level of discount is referenced in the document produced for the Gas Storage Operators Group by Waters Wye Associates.

2. At entry points from LNG facilities, and at entry points from and exit points to infrastructure developed with the purpose of ending the isolation of Member States in respect of their gas transmission systems, a discount may be applied to the respective capacity-based transmission tariffs for the purposes of increasing security of supply.

0678C proposes that in respect of Liquefied Natural Gas (LNG) sites, (locations where the type of Entry point is designated as a 'LNG Importation Terminal' in National Grid's Licence (Special Condition 5F Table 4B)) for the period commencing 01 October 2019 or implementation date of this Modification should it be later, the applicable Specific Capacity Discount for a given gas year will be equal to 0%. 0678C does not, therefore propose any discount under Article 9(2).

Article 10 Rules for entry-exit systems within a Member State where more than one transmission system operator is active

0678C does not propose Rules for entry-exit systems since GB is not a Member State where more than one transmission system operator is active. Article 10 is not applicable for 0678C.

Article 11 Rules for entry-exit systems covering more than one Member State where more than one transmission system operator is active

0678C does not propose a rule for entry-exit systems covering since GB is not a Member State where more than one transmission system operator is active. Article 11 is not applicable for 0678C.

Article 12 General provisions

1. For yearly standard capacity products for firm capacity, the reference prices shall be used as reserve prices. For non-yearly standard capacity products for firm capacity, the reserve prices shall be calculated as set out in this Chapter. For both yearly and non-yearly standard capacity products for interruptible capacity, the reserve prices shall be calculated as set out in this Chapter. The level of multipliers and of seasonal factors, set out in accordance with Article 13, and the level of discounts for the standard capacity products for interruptible capacity, set out in accordance with Article 16, may be different at interconnection points.

0678C proposes that yearly standard capacity products for firm capacity, the reference prices shall be used as reserve prices.

0678C proposes a methodology that calculates reserve prices in accordance with Chapter III of Regulation 2017/460.

2. Where the tariff period and gas year do not coincide, separate reserve prices may be applied respectively: (a) for the time period from 1 October to the end of the prevailing tariff period; and (b) for the time period from the beginning of the tariff period following the prevailing tariff period to 30 September

0678C proposes that the “tariff period”¹⁶ and “gas year” are coincident and recommends commencement on 1 October 2020.

We note that an Authority decision on implementation of 0678C must respect Article 12 (2). If an Authority decision is made part of the way through a gas year then a direction with respect to Article 12(2) may be required.

Given the urgent status of 0678C her modification proposal recommends implementation as soon as possible while respecting Article 12(2).

3. The respective reserve prices published according to Article 29 shall be binding for the subsequent gas year or beyond the subsequent gas year in case of fixed payable price, beginning after the annual yearly capacity auction, unless:

0678C proposes that the reserve prices published according to Article 29 shall be binding for a subsequent gas year. 0678C does not propose reserve prices that are binding for a “subsequent gas year” where that gas year is not the next gas year for which the reserve prices are applicable.

(a) the discounts for monthly and daily standard capacity products for interruptible capacity are recalculated within the tariff period if the probability of interruption referred to in Article 16 changes by more than twenty percent;

0678C must respect the requirement to recalculate the discounts for monthly and daily standard capacity products for interruptible capacity are recalculated within the tariff period if the probability of interruption referred to in Article 16 changes by more than twenty percent. We expect this to be reflected in the legal text for 0678C.

¹⁶ Regulation 2017/460 - ‘tariff period’ means the time period during which a particular level of reference price is applicable, which minimum duration is one year and maximum duration is the duration of the regulatory period;

(b) the reference price is recalculated within the tariff period due to exceptional circumstances under which the non- adjustment of tariff levels would jeopardise the operation of the transmission system operator.

0678C must respect the requirement to recalculate the reference price within the tariff period due to exceptional circumstances under which the non- adjustment of tariff levels would jeopardise the operation of the transmission system operator. We expect this to be reflected in the legal text for 0678C.

Article 13 Level of multipliers and seasonal factors

1. The level of multipliers shall fall within the following ranges:

(a) for quarterly standard capacity products and for monthly standard capacity products, the level of the respective multiplier shall be no less than 1 and no more than 1,5;

0678C proposes a multiplier of 1 for quarterly capacity products which is in the range of “no less than 1 and no more than 1.5”. 0678C is therefore compliant with Article 31(1).

0678C proposes a multiplier of 1 for monthly capacity products which is in the range of “no less than 1 and no more than 1.5”. 0678C is therefore compliant with Article 31(1).

(b) for daily standard capacity products and for within-day standard capacity products, the level of the respective multiplier shall be no less than 1 and no more than 3. In duly justified cases, the level of the respective multipliers may be less than 1, but higher than 0, or higher than 3.

0678C proposes a multiplier of 1 for daily capacity products which is in the range of “no less than 1 and no more than 3”. 0678C is therefore compliant with Article 31(2).

0678A does not propose any “duly justified cases” where the “the level of the respective multipliers may be less than 1, but higher than 0, or higher than 3”. 0678C is therefore compliant with Article 31(2).

2. Where seasonal factors are applied, the arithmetic mean over the gas year of the product of the multiplier applicable for the respective standard capacity product and the relevant seasonal factors shall be within the same range as for the level of the respective multipliers set out in paragraph 1.

0678C does not propose to apply seasonal factors. 0678C is therefore compliant with Article 31(3).

Article 14 Calculation of reserve prices for non-yearly standard capacity products for firm capacity in absence of seasonal factors

The reserve prices for non-yearly standard capacity products for firm capacity shall be calculated as follows:

(a) for quarterly standard capacity products, for monthly standard capacity products and for daily standard capacity products, in accordance with the following formula:

[Formula]

0678C will enable that calculation of reserve prices for quarterly standard capacity products, for monthly standard capacity products and for daily standard capacity products in accordance with Article 14(a). 0678C proposes that reserve prices will be produced in p/KWh/d. 0678C is compliant with Article 14(a).

Note that 0678C proposes that reserve prices for the relevant gas year will include a premium that is equal to either

- The difference between the allocated price and Reserve Price in the relevant auction when the capacity was initially contracted for (‘auction premium’); or
- The amount specified in respect of entry capacity allocated via a PARCA Application as described in TPD B1.14 and the Entry Capacity Release Methodology Statement (‘PARCA premium’).

0678C proposes that the Reserve Price for Firm capacity at an Entry Point or an Exit Point is determined by application of any applicable Multipliers to the relevant Reference Price.

(b) for within-day standard capacity products, in accordance with the following formula:

[Formula]

0678C will enable that calculation of reserve prices for within-day standard capacity products in accordance with Article 14(b) if required. 0678C proposes that reserve prices will be produced in p/KWh/d. 0678C is compliant with Article 14(b).

Article 15 Calculation of reserve prices for non-yearly standard capacity products for firm capacity with seasonal factors

0678C does not propose the use of seasonal factors. Article 15 is not applicable to 0678C.

Article 16 Calculation of reserve prices for standard capacity products for interruptible capacity

1. The reserve prices for standard capacity products for interruptible capacity shall be calculated by multiplying the reserve prices for the respective standard capacity products for firm capacity calculated as set out in Articles 14 or 15, as relevant, by the difference between 100 % and the level of an ex-ante discount calculated as set out in paragraphs 2 and 3.

0678C proposes a 10% discount for interruptible/off peak entry and interruptible/off peak exit capacity. 0678C will enable the calculation of the relevant discount using the formulas set out in Article 16.

2. An ex-ante discount shall be calculated in accordance with the following formula:

[Formula]

Pro factor is the probability of interruption which is set or approved in accordance with Article 41(6)(a) of Directive 2009/73/EC pursuant to Article 28, and which refers to the type of standard capacity product for interruptible capacity;

A is the adjustment factor which is set or approved in accordance with Article 41(6)(a) of Directive 2009/73/EC pursuant to Article 28, applied to reflect the estimated economic value of the type of standard capacity product for interruptible capacity, calculated for each, some or all interconnection points, which shall be no less than 1.

0678C will enable the calculation of the ex ante discount in accordance with Article 16(2).

3. The Pro factor referred to in paragraph 2 shall be calculated for each, some or all interconnection points per type of standard capacity product for interruptible capacity offered in accordance with the following formula on the basis of forecasted information related to the components of this formula:

[Formula]

0678C enables the establishment of a “pro factor” in relation to the probability of interruption.

0678C proposes that the interruptible/off peak discounts are based on the likelihood of interruption and the estimated economic value of the interruptible/off-peak capacity products. 0678C adopts a ‘banding approach’ for the period commencing 01 October 2019 or implementation date should it be after and for subsequent years, such that the proposed discount value will be rounded up to the nearest 10%.

0678C proposes that for the period commencing 01 October 2019, or the implementation date of this Modification should it be after, the discount applied in respect of Interruptible and Off-peak Capacity shall be 10% at Entry Points and 10% at Exit Points.

4. As an alternative to applying ex-ante discounts in accordance with paragraph 1, the national regulatory authority may decide to apply an ex-post discount, whereby network users are compensated after the actual interruptions incurred. Such ex-post discount may only be used at

interconnection points where there was no interruption of capacity due to physical congestion in the preceding gas year.

The ex-post compensation paid for each day on which an interruption occurred shall be equal to three times the reserve price for daily standard capacity products for firm capacity.

0678C does not include any provision associated with decisions made by the national regulatory authority to apply an ex-post discount, whereby network users are compensated after the actual interruptions incurred.

Article 17 General provisions

1. Where and to the extent that the transmission system operator functions under a non-price cap regime, the following principles shall apply:

- (a) the under- or over-recovery of the transmission services revenue shall be minimised having due regard to necessary investments;**
- (b) the level of transmission tariffs shall ensure that the transmission services revenue is recovered by the transmission system operator in a timely manner;**
- (c) significant differences between the levels of transmission tariffs applicable for two consecutive tariff periods shall be avoided to the extent possible.**

National Grid will be responsible for ensuring compliance with this Article. Modification 0678C employs only capacity-based charges for the recovery of Transmission Services revenue. To set accurate ex ante capacity charges, National Grid will be required to accurately forecast capacity bookings; Modification 0678C will introduce new UNC rules and obligations to provide appropriate governance to the Forecasted Contracted Capacity Methodology. 0678C proposes that under or over revenue recovery (otherwise known as the “K” value) will be calculated for Transmission Services and Non-Transmission Services for the formula year. The approach and calculation will be specified in the UNC, to be approved by Ofgem. In addition to Transmission and Non-Transmission being reconciled 0678C also proposes to have reconciliation between Entry and Exit under Transmission Services.

2. Where and to the extent that the transmission system operator functions under a price cap regime or applies a fixed payable price approach set out in Article 24(b), no revenue reconciliation shall occur and all risks related to under- or over-recovery shall be covered exclusively by the risk premium. In such case Articles 18, 19(1) to (4) and 20 shall not apply.

0678C does not envisage the use of a “risk premium” that is related to “all risks related to under- or over-recovery” under Article 17(2).

3. Subject to the requirements of periodic consultations pursuant to Article 26 and subject to approval in accordance with Article 41(6)(a) of Directive 2009/73/EC, non-transmission services revenue may be reconciled as set out in this Chapter, mutatis mutandis.

0678C proposes that all those charges in respect of Non-Transmission Services shall contribute towards Non-Transmission Services revenue recovery. All charges are set on an ex-ante basis.

0678C proposes that any under or over recovery attributed to the charges other than the Non-Transmission Services Entry and Exit Charge shall not be subject to reconciliation with any K value (Non-Transmission Services K value) adjusting the Non-Transmission Services Revenue recovery charge. Non-Transmission Services revenue charge will be added to the Non-Transmission Services K value which was calculated in y-2 (two years ago) which will be used to calculate the applicable years Non-Transmission Services Revenue which will be used for calculation of the Non-Transmission Services Charges.

Article 18 Under- and over-recovery

1. The under- or over-recovery of the transmission services revenue shall be equal to:

[Formula]

0678C will enable the calculation of the under and over recovery of transmission services revenue using the formula in Article 18(1).

In relation to the application of Revenue Recovery Charges, the proposal recommends that no charges are applied to storage (note that Modification 0678 proposes that such charges should be applied to non-Existing Capacity holdings on a capacity top-up basis). Currently, storage flows are exempt from the application of TO Commodity Charges (the mechanism employed to recover revenues not recovered from the sale of capacity products). On the basis that it is accepted that storage flows and indeed storage related capacity bookings should not be double charged then it must be the case that whatever Revenue Recovery Charge mechanism is employed that storage users should be exempt from its application. This approach is consistent with the findings of Ofgem in its Gas Transmission Charging Review on the basis that flows to and from storage (or capacity booked at an entry to deliver gas to, or an exit point to ultimately offtake from) have already made a contribution to historical cost recovery.

All other contracts will be exposed to revenue recovery charges including pre April 2017 contracts. This is permitted because the separate revenue recovery charge is not a reserve price fixed at the time of booking. (This is similar to the existing charging regime where a fixed capacity price is paid and a floating commodity price applied to recover all of the transporter's allowed revenue.) See article 35 for legal interpretation. Failure to apply a revenue recovery charge to these existing contracts will result in distortion and discrimination between existing contract holders and new entrants which will have a negative impact on competition, as noted in Ofgem's 621 decision letter.

2. Where the difference calculated in accordance with paragraph 1 is positive, it shall indicate an over-recovery of the transmission services revenue. Where such difference is negative, it shall indicate an under-recovery of the transmission services revenue.

0678C proposes that under or over revenue recovery (otherwise known as the "K" value) will be calculated for Transmission Services and Non-Transmission Services for the formula year. The "k" value will indicate an over recovery or an under recovery.

Article 19 Regulatory account

The regulatory account¹⁷ relates to the under and over recovery of transmission services under a non-price cap regime. 0678C proposes that under or over revenue recovery (otherwise known as the "K" value) will be calculated for Transmission Services and Non-Transmission Services for the formula year. For the purposes of this assessment the "k" values may be construed as the "regulatory account" as envisaged under Regulation 2017/460.

1. The regulatory account shall indicate the information referred to in Article 18(1) for a given tariff period and may include other information, such as the difference between the anticipated and the actual cost components.

¹⁷ Regulation 2017/460 'regulatory account' means the account aggregating at least under- and over-recovery of the transmission services revenue under a non-price cap regime;

0678C will allow the calculation of a “k” value related to the under and over recovery in a relevant tariff period. This value will enable the “difference between the anticipated and the actual cost components” to be calculated.

2.The transmission system operator's under- or over-recovered transmission services revenue shall be attributed to the regulatory account, unless other rules have been enacted in accordance with Article 41(6)(a) of Directive 2009/73/EC.

For the purposes of this assessment the “k” values may be construed as the “regulatory account” as envisaged under Regulation 2017/460.

3.Where incentive mechanisms for capacity sales are implemented, subject to a decision in accordance with Article 41(6)(a) of Directive 2009/73/EC, only a part of the transmission system operator's under- or over-recovery shall be attributed to the regulatory account. In such case, the residual part thereof shall be kept or paid, as relevant, by the transmission system operator.

0678C does not include provisions that allow “incentive mechanisms” as envisaged under Article 19(3).

Article 20 Reconciliation of regulatory account

The regulatory account¹⁸ relates to the under and over recovery of transmission services under a non-price cap regime. 0678C proposes that under or over revenue recovery (otherwise known as the “K” value) will be calculated for Transmission Services and Non-Transmission Services for the formula year. For the purposes of this assessment the “k” values may be construed as the “regulatory account” as envisaged under Regulation 2017/460.

1.The full or partial reconciliation of the regulatory account shall be carried out in accordance with the applied reference price methodology and, in addition, by using the charge referred to in Article 4(3)(b), if applied.

As the “applied reference price methodology” 0678C enables the full reconciliation of the regulatory account using the “k” value.

2.The reconciliation of the regulatory account shall be carried out pursuant to the rules enacted in accordance with Article 41(6)(a) of Directive 2009/73/EC over a given reconciliation period, meaning the time period over which the regulatory account referred to in Article 19 shall be reconciled.

0678C will permit the reconciliation pursuant to the rules enacted in accordance with Article 41(6)(a) of Directive 2009/73/EC over a given reconciliation period.

3.The regulatory account shall be reconciled with the aim of reimbursing to the transmission system operator the under-recovery and of returning to the network users the over-recovery.

0678C enables reimbursing to the transmission system operator the under-recovery and of returning to the network users the over-recovery through the “k” value.

Article 21 Pricing of bundled capacity

Article 21 is not applicable to 0678C.

Article 22 Pricing of capacity at a virtual interconnection point

Article 22 is not applicable to 0678C.

¹⁸ Regulation 2017/460 ‘regulatory account’ means the account aggregating at least under- and over-recovery of the transmission services revenue under a non-price cap regime;

Article 23 Calculation of clearing price at interconnection points

The clearing price for a given standard capacity product at an interconnection point shall be calculated in accordance with the following formula:

[Formula]

Subject to the availability of the relevant information from the transmission system operator, 0678C will enable the calculation of the clearing price for a given standard capacity product at an interconnection point using the applicable reserve price calculated in accordance with the postage stamp reference price methodology.

Article 24 Calculation of payable price at interconnection points

The payable price for a given standard capacity product at an interconnection point shall be calculated in accordance with either of the following formulas:

(a) where the floating payable price approach is applied:

[Formula]

Subject to the availability of the relevant information from the transmission system operator and to the extent that the calculation of “floating payable price” is required, 0678C will enable the calculation of the floating payable price for a given standard capacity product at an interconnection point using the applicable reserve price calculated in accordance with the postage stamp reference price methodology.

(b) where the fixed payable price approach is applied:

[Formula]

Subject to the availability of the relevant information from the transmission system operator, 0678C and to the extent that the calculation of “fixed payable price” is required, 0678C will enable the calculation of the fixed payable price for a given standard capacity product at an interconnection point using the applicable reserve price calculated in accordance with the postage stamp reference price methodology.

Article 25 Conditions for offering payable price approaches

1. Where and to the extent that the transmission system operator functions under a non-price cap regime, the conditions for offering payable price approaches shall be as follows:

(a) for cases where only existing capacity is offered:

- (i) the floating payable price approach shall be offered;**
- (ii) the fixed payable price approach shall not be allowed.**

(b) for incremental capacity and existing capacity offered in the same auction or same alternative allocation mechanism:

- (i) the floating payable price approach may be offered;**
- (ii) the fixed payable price approach may be offered where one of the following conditions is met:**
 - (1) an alternative allocation mechanism set out in Article 30 of Regulation (EU) 2017/459 is used;**
 - (2) a project is included in the Union list of projects of common interest as set out in Article 3 of Regulation (EU) No 347/2013 of the European Parliament and of the Council (1).**

To the extent that the GB transmission system operator functions under a non-price cap regime 0678C proposes the use of floating prices and does not propose fixed prices. 0678C is compliant with Article 25(1).

2. Where and to the extent that the transmission system operator functions under a price cap regime, the floating payable price approach or the fixed payable price approach, or both, may be offered.

To the extent that the GB transmission system operator functions under a price cap regime 0678C proposes the use of floating prices and does not propose fixed prices. 0678C is compliant with Article 25(2).

Article 26 Periodic consultation

1. One or more consultations shall be carried out by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority. To the extent possible and in order to render more effective the consultation process, the consultation document should be published in the English language. The final consultation prior to the decision referred to in Article 27(4) shall comply with the requirements set out in this Article and Article 27, and shall include the following information:

The postage stamp reference price methodology proposed under 0678C will permit the consultation envisaged under Article 26(1).

(a) the description of the proposed reference price methodology as well as the following items:

The proposed postage stamp reference price is set out under 0678C.

(i) the indicative information set out in Article 30(1)(a), including:

(1) the justification of the parameters used that are related to the technical characteristics of the system;

This information relates to the technical characteristics of the system and is available from the transmission system operator. The information should be requested as part of the Article 26 consultation and does not form part of the 0678C proposal.

(2) the corresponding information on the respective values of such parameters and the assumptions applied.

The postage stamp reference price methodology as set out in the Modification Proposal and Report includes the information with respect to the values of such parameters and the assumptions applied.

(ii) the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9;

The postage stamp reference price methodology as set out in the Modification Proposal and Report includes the information with respect to the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9.

(iii) the indicative reference prices subject to consultation;

The tariff model provided by transmission system operator as part of the 0678C assessment with respect to the postage stamp reference price methodology as set out in the Modification Proposal and Report includes the indicative reference prices subject to consultation.

(iv) the results, the components and the details of these components for the cost allocation assessments set out in Article 5;

The costs allocation assessment will be undertaken by the national regulatory authority or the transmission system operator as required under Article 5. The 0678C modification proposal and report does not include these cost assessments.

(v) the assessment of the proposed reference price methodology in accordance with Article 7;

The assessment of the proposed reference price methodology in accordance with Article 7 is included in this document based on information in the 0678 Modification Proposal and Report.

(vi) where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii);

The tariff model provided by the transmission system operator as part of the 0678C assessment with respect to the capacity weighted distance and postage stamp reference price methodology as set out in the Modification Proposal and Report provides the comparison as envisaged in point (iii).

(b) the indicative information set out in Article 30(1)(b)(i), (iv), (v);

The 0678C Modification Proposal and Report sets out the information required under Article The 0678C Modification Proposal and Report sets out the information required under Article 26(1)(a)(ii).

(c) the following information on transmission and non-transmission tariffs:

(i) where commodity-based transmission tariffs referred to in Article 4(3) are proposed:

(1) the manner in which they are set;

(2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;

(3) the indicative commodity-based transmission tariffs;

0678C does not propose commodity-based transmission tariffs referred to in Article 4(3)

(ii) where non-transmission services provided to network users are proposed:

(1) the non-transmission service tariff methodology therefor;

(2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;

(3) the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3);

(4) the indicative non-transmission tariffs for non-transmission services provided to network users;

The 0678C Modification Proposal and Report sets out the information required under Article 26(1)(a)(ii)

(d) the indicative information set out in Article 30(2);

The 0678C Modification Proposal and Report sets out the information required under Article 30(2)

(e) where the fixed payable price approach referred to in Article 24(b) is considered to be offered under a price cap regime for existing capacity:

(i) the proposed index;

(ii) the proposed calculation and how the revenue derived from the risk premium is used;

(iii) at which interconnection point(s) and for which tariff period(s) such approach is proposed;

(iv) the process of offering capacity at an interconnection point where both fixed and floating payable price approaches referred to in Article 24 are proposed.

0678C does not propose a fixed payable price approach.

2. The final consultation prior to the decision referred to in Article 27(4) shall be open for at least two months. Consultation documents for any of the consultations referred to in paragraph 1 may require that replies submitted in response to the consultation shall include a non-confidential version suitable for publication.

0678C is subject to the final consultation referred to in Article 26(2).

3. Within one month following the end of the consultation, the transmission system operator(s) or the national regulatory authority, depending on the entity that publishes the consultation document referred to in paragraph 1, shall publish the consultation responses received and their summary. To the extent possible and in order to render more effective the consultation process, the summary should be provided in the English language.

0678C is subject to the final consultation referred to in Article 26(2) notes that the consultation and responses will be published.

Article 27 Periodic national regulatory authority decision-making

1. Upon launching the final consultation pursuant to Article 26 prior to the decision referred to in Article 27(4), the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority, shall forward the consultation documents to the Agency.

2. The Agency shall analyse the following aspects of the consultation document:

(a) whether all the information referred to in Article 26(1) has been published;

(b) whether the elements consulted on in accordance with Article 26 comply with the following requirements:

(1) whether the proposed reference price methodology complies with the requirements set out in Article 7;

The information for the assessment of the proposed reference price methodology in accordance with Article 7 is included in this document based on information the 0678 Modification Proposal and Report

(2) whether the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met;

The information for the assessment of the proposed reference price methodology in accordance with Article 4(3) is included in this document based on information the 0678 Modification Proposal and Report

(3) whether the criteria for setting non-transmission tariffs as set out in Article 4(4) are met.

The information for the assessment of the proposed reference price methodology in accordance with Article 4(4) is included in this document based on information the 0678 Modification Proposal and Report

3. Within two months following the end of the consultation referred to in paragraph 1, the Agency shall publish and send to the national regulatory authority or transmission system operator, depending on which entity published the consultation document, and the Commission the conclusion of its analysis in accordance with paragraph 2 in English. The Agency shall preserve the confidentiality of any commercially sensitive information.

4. Within five months following the end of the final consultation, the national regulatory authority, acting in accordance with Article 41(6)(a) of Directive 2009/73/EC, shall take and publish a motivated decision on all items set out in Article 26(1). Upon publication, the national regulatory authority shall send to the Agency and the Commission its decision.

5. The procedure consisting of the final consultation on the reference price methodology in accordance with Article 26, the decision by the national regulatory authority in accordance with paragraph 4, the calculation of tariffs on the basis of this decision, and the publication of the tariffs in accordance with Chapter VIII may be initiated as from the entry into force of this Regulation and shall be concluded no later than 31 May 2019. The requirements set out in Chapters II, III and IV shall be taken into account in this procedure. The tariffs applicable for the prevailing tariff period at 31 May 2019 will be applicable

until the end thereof. This procedure shall be repeated at least every five years starting from 31 May 2019.

The process for Periodic national regulatory authority decision-making under Article 27 will apply to the postage stamp reference price methodology envisaged in 0678C under the UNC.

Article 28 Consultation on discounts, multipliers and seasonal factors

The provisions under Article 28 relate to the functions of the national regulatory authority with respect to Regulation 2017/460.

Article 29 Information to be published before the annual yearly capacity auction

For interconnection points and, where the national regulatory authority takes a decision to apply Regulation (EU) 2017/459, points other than interconnection points, the following information shall be published before the annual yearly capacity auction in accordance with the requirements set out in Articles 31 and 32 by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority:

(a) for standard capacity products for firm capacity:

(i) the reserve prices applicable until at least the end of the gas year beginning after the annual yearly capacity auction;

ii) the multipliers and seasonal factors applied to reserve prices for non-yearly standard capacity products;

(iii) the justification of the national regulatory authority for the level of multipliers;

(iv) where seasonal factors are applied, the justification for their application.

(b) for standard capacity products for interruptible capacity:

(i) the reserve prices applicable until at least the end of the gas year beginning after the annual yearly capacity auction;

(ii) an assessment of the probability of interruption including:

(1) the list of all types of standard capacity products for interruptible capacity offered including the respective probability of interruption and the level of discount applied;

(2) the explanation of how the probability of interruption is calculated for each type of product referred to in point (1);

(3) the historical or forecasted data, or both, used for the estimation of the probability of interruption referred to in point (2).

0678C proposes that the information as envisaged under Article 29 is published as part of the postage stamp reference price methodology.

Article 30 Information to be published before the tariff period

1. The following information shall be published before the tariff period in accordance with the requirements set out in Articles 31 and 32 by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority:

(a) information on parameters used in the applied reference price methodology that are related to the technical characteristics of the transmission system, such as:

- (i) technical capacity at entry and exit points and associated assumptions;**
- (ii) forecasted contracted capacity at entry and exit points and associated assumptions;**
- (iii) the quantity and the direction of the gas flow for entry and exit points and associated assumptions, such as demand and supply scenarios for the gas flow under peak conditions;**
- (iv) the structural representation of the transmission network with an appropriate level of detail;**
- (v) additional technical information about the transmission network, such as the length and the diameter of pipelines and the power of compressor stations.**

To the extent that the information is required for the postage stamp reference price methodology 0678C will enable the information envisaged under Article 30(1)(a) to be published before the relevant tariff period.

(b) the following information:

- (i) the allowed or target revenue, or both, of the transmission system operator;**
- (ii) the information related to changes in the revenue referred to in point (i) from one year to the next year;**

(iii) the following parameters:

- (1) types of assets included in the regulated asset base and their aggregated value;**
- (2) cost of capital and its calculation methodology;**
- (3) capital expenditures, including:**
 - (a) methodologies to determine the initial value of the assets;**
 - (b) methodologies to re-evaluate the assets;**
 - (c) explanations of the evolution of the value of the assets;**
 - (d) depreciation periods and amounts per asset type.**
- (4) operational expenditures;**
- (5) incentive mechanisms and efficiency targets;**
- (6) inflation indices.**

This information is available from the GB transmission system operator and the National Regulatory Authority and is not envisaged to be published as part of 0678C.

(iv) the transmission services revenue;

This information is available from the GB transmission system operator and it is envisaged that it will be published as part of 0678C.

(v) the following ratios for the revenue referred to in point (iv):

- (1) capacity-commodity split, meaning the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs;**
- (2) entry-exit split, meaning the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points;**
- (3) intra-system/cross-system split, meaning the breakdown between the revenue from intra-system network use at both entry points and exit points and the revenue from cross-system network use at both entry points and exit points calculated as set out in Article 5.**

To the extent that the information is required for the postage stamp reference price methodology 0678C will enable the information envisaged under Article 30(1) to be published before the relevant tariff period.

(vi) where and to the extent that the transmission system operator functions under a non-price cap regime, the following information related to the previous tariff period on regarding the reconciliation of the regulatory account:

(1) the actually obtained revenue, the under- or over-recovery of the allowed revenue and the part thereof attributed to the regulatory account and, if applicable, sub-accounts within such regulatory account;

(2) the reconciliation period and the incentive mechanisms implemented.

To the extent that the transmission system operator functions under a non-price cap regime the information envisaged under Article 30(1)(2) will be published under 0678C

(vii) the intended use of the auction premium.

To the extent that there is an auction premium, the intended use will be published as part of 0678C.

(c) the following information on transmission and non-transmission tariffs, accompanied by the relevant information related to their derivation:

(i) where applied, commodity-based transmission tariffs referred to in Article 4(3);

(ii) where applied, non-transmission tariffs for non-transmission services referred to in Article 4(4);

(iii) the reference prices and other prices applicable at points other than those referred to in Article 29.

The information envisaged under Article 30(1)(c) will be published.

2. In addition, the following information shall be published with regard to transmission tariffs:

(a) explanation of the following:

(i) the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published;

(ii) the estimated difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period.

0678C envisages the publication of the information as required under Article 30(2)(a).

(b) at least a simplified tariff model, updated regularly, accompanied by the explanation of how to use it, enabling network users to calculate the transmission tariffs applicable for the prevailing tariff period and to estimate their possible evolution beyond such tariff period.

0678C envisages the publication of simplified tariff model as set out in Article 30(1)(b).

3. For the points excluded from the definition of relevant points referred to in point 3.2(1)(a) of Annex I to Regulation (EC) No 715/2009, the information on the amount of forecasted contracted capacity and the forecasted quantity of the gas flow shall be published as set out in point 3.2(2) of Annex I to Regulation (EC) No 715/2009.

0678C does not envisage the exclusion of points as set out in Article 30(3). Therefore this element of the publication will have a nil return.

Article 31 Form of publication

1.The information referred to in Articles 29 and 30 shall be published as set out in Article 32 via a link on the platform referred to in point 3.1.1(1)(h) of Annex I to Regulation (EC) No 715/2009 to the website of the respective entity. Such information shall be accessible to the public, free of charge and of any limitations as to its use. It shall be published:

- (a) in a user-friendly manner;**
- (b) in a clear, easily accessible way and on a non-discriminatory basis;**
- (c) in a downloadable format;**
- (d) in one or more of the official languages of the Member State and, unless one of the official languages of the Member State is English, to the extent possible, in English.**

[0678C will require publication in the form envisaged under Article 31\(1\).](#)

2.The following information shall be published for interconnection points on the platform referred to in point 3.1.1(1)(h) of Annex I to Regulation (EC) No 715/2009: (a) at the same time as set out in Article 29, the reserve prices for standard capacity products for firm capacity and for standard capacity products for interruptible capacity; (b) at the same time as set out in Article 30, a flow-based charge referred to in Article 4(3)(a), where applied.

[0678C will require publication in the form envisaged under Article 31\(2\).](#)

3.The information referred to in paragraph 2 shall be published in the following manner:

- (a) as set out in paragraph 1(a) to (c);**
- (b) in English;**
- (c) in a standardised table which shall include at least the following information:**
 - (i) the interconnection point;**
 - (ii) the direction of the gas flow;**
 - (iii) the names of the relevant transmission system operators;**
 - (iv) the start and the end time of the product;**
 - (v) whether the capacity is firm or interruptible;**
 - (vi) the indication of the standard capacity product; (vii) the applicable tariff per kWh/h and per kWh/d in the local currency and in the euro taking into account the following:**
 - (1) where the applied capacity unit is kWh/h, the information on the applicable tariff per kWh/d shall be non-binding, and vice versa;**
 - (2) where the local currency is other than the euro, the information on the applicable tariff in euro shall be non-binding. In addition, at the same time as set out in Article 30, such standardised table shall include the simulation of all the costs for flowing 1 GWh/day/year for each interconnection point in the local currency and in the euro subject to point vii(2).**

[0678C will require publication in the form envisaged under Article 31\(3\).](#)

4.Where the information referred to in paragraph 2 is different from the respective information referred to in paragraph 1, the respective information referred to in paragraph 1 shall prevail.

[0678C will respect the requirement as set out under Article 31\(4\).](#)

Article 32 Publication notice period

The deadline for the publication of the information set out in Articles 29 and 30 shall be as follows:

- (a) for the information set out in Article 29, no later than thirty days before the annual yearly capacity auction;
- (b) for the information set out in Article 30, no later than thirty days before the respective tariff period;
- (c) for the respective transmission tariffs updated within the tariff period as set out in Article 12(3), immediately after the approval in accordance with Article 41(6)(a) of Directive 2009/73/EC.

Each update of the transmission tariffs shall be accompanied by information indicating the reasons for the changes in their level. Where Article 12(3)(b) is applied, it shall also be accompanied by the updated report referred to in Article 29(b) for the respective types of standard capacity products for interruptible capacity.

0678C will set out a timetable for publication of information that respects the requirements set out in Article 32.

Article 33 Tariff principles for incremental capacity

Article 33 is not applicable to 0678C.

Article 34 Methodologies and parameters used to determine the allowed or target revenue of transmission system operators

Article 34 is not applicable to 0678C.

Article 35 Existing contracts

1. This Regulation shall not affect the levels of transmission tariffs resulting from contracts or capacity bookings concluded before 6 April 2017 where such contracts or capacity bookings foresee no change in the levels of the capacity- and/or commodity-based transmission tariffs except for indexation, if any.

0678C proposes that the provisions will apply for Entry Capacity (for 01 October) from the effective date of this Modification, allocated up to 06 April 2017. This will include Existing Contracts where the “contract or capacity booking concluded before the entry into force of the EU Tariff Code – 06 April 2017, such contracts or capacity bookings foresee no change in the levels of capacity and/or commodity based transmission tariffs except for indexation, if any”.

‘Transmission tariffs’ are defined in Article 3(7) TAR NC as “the charges payable by network users for transmission services provided to them.” Transmission services revenue is defined in Article 3(6) as that part of the allowed or target revenue (for the transmission system operator (‘TSO’)) which is recovered by transmission tariffs.

The apparent intention of the EU legislature was to protect the legitimate expectations of those network users which benefited from fixed levels of transmission tariffs under their domestic charging regime, subject only to changes for indexation (for example, to reflect a pricing index accounting for inflation, such as the RPI or CPI).

The TAR NC was published in the Official Journal of the EU on 17 March 2017. It entered into force, pursuant to Article 38, on the 20th day following that publication. It therefore entered into force on 6 April 2017 and applied from that date. The terms of Article 35 therefore protect contracts entered into immediately prior to the entry into force of the Regulation.

The key question for analysis is whether the contracts or capacity bookings under the GB domestic charging regime in issue foresaw “no change in the levels of the capacity- and/or commodity-based transmission tariffs” (save for indexation). In the GB charging regime applied as at 5 April 2017, transmission tariffs (i.e. charges generating transmission revenue) were governed by the charging methodology set out in the Uniform Network Code (‘UNC’).

The transmission revenue charges under the UNC at the time encompassed a reserve price and a revenue recovery charge (‘RRC’) for entry capacity bookings. These two distinct charges together comprised and set the “capacity and/or commodity based transmission tariff level” for entry capacity in the GB charging regime. While the reserve price was a fixed component of the tariff level, the RRC was variable. The UNC foresaw that the RRC would change over time, since it was a fluctuating adjustment to the allowed revenue. Moreover, in practice the RRC charged did vary over time.

The contracts which were established under the charging methodology set by the UNC necessarily foresaw transmission tariff levels that included both the reserve price and the RRC. As the RRC component was variable, the transmission tariff level as a whole was foreseen to be variable. Moreover, in practice, the transmission tariff

level (as defined by Article 35(1)) was variable. Since the level of the transmission tariff foreseeably changed year on year, the relevant contracts do not benefit from protection under Article 35(1) of TAR NC. In short, the transmission tariff level was variable and accordingly does not benefit from the protection afforded by Article 35(1) for fixed tariff levels.

Consequently 678C proposes that for pre April 2017 contracts the transmission tariff level comprises of two components, the fixed reserve price and the floating capacity based RRC to produce a combined floating capacity charge.

The legal analysis provided by another network user (Eni) appears to proceed on the basis that the RRC (residual revenue recovery collected via the NTS TO Entry Commodity Charge) is not properly to be considered as a component of the transmission tariff level. That does not appear to be borne out by paragraphs 2.5.4 and 3.1. of Section Y of the Transportation Principal Document, which forms part of the UNC.

2.The contract provisions related to transmission tariffs and capacity bookings referred to in paragraph 1 shall not be renewed, prolonged or rolled over after their expiration date.

0678C does not include and provisions that would enable the transmission tariffs and capacity bookings referred to in paragraph 1 to be renewed, prolonged or rolled over after their expiration date.

0678C is compliant with Article 35(2).

3.Before 6 May 2017, a transmission system operator shall send the contracts or the information on capacity bookings, if any, referred to in paragraph 1 to the national regulatory authority for information.

The transmission system operator is required to provide information under Article 35(3) and this clause is not applicable to 0678C.

Article 36 Implementation monitoring

The provisions under Article 36 relate to the functions of ACER and ENTSOG with respect to Regulation 2017/460.

Article 37 Power to grant derogations

The provisions under Article 37 relate to the functions of ACER and ENTSOG with respect to Regulation 2017/460.

Article 38 Entry into force

0678C seeks GB compliance with Regulation 2017/460 which entered into force on 16 March 2017.

9 Appendix 2 QC Advice on Article 35

IN THE MATTER OF THE EU NETWORK CODE ON HARMONISED TRANSMISSION TARIFF STRUCTURES FOR GAS (TAR NC)

SUMMARY NOTE OF ADVICE

1. Ofgem has been consulting on the implementation of **Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas ('the TAR NC')**.¹⁹ **The GB domestic charging regime must comply with the TAR NC by 31 May 2019.**
2. Article 35 of the TAR NC provides some protection for existing contracts. It states:

"This Regulation shall not affect the levels of transmission tariffs resulting from contracts or capacity bookings concluded before 6 April 2017 where such contracts or capacity bookings foresee no change in the levels of the capacity- and/or commodity-based transmission tariffs except for indexation, if any."
3. 'Transmission tariffs' are defined in Article 3(7) TAR NC as "the charges payable by network users for transmission services provided to them." Transmission services revenue is defined in Article 3(6) as that part of the allowed or target revenue (for the transmission system operator ('TSO')) which is recovered by transmission tariffs.
4. The apparent intention of the EU legislature was to protect the legitimate expectations of those network users which benefited from fixed levels of transmission tariffs under their domestic charging regime, subject only to changes for indexation (for example, to reflect a pricing index accounting for inflation, such as the RPI or CPI).
5. The TAR NC was published in the Official Journal of the EU on 17 March 2017. It entered into force, pursuant to Article 38, on the 20th day following that publication. It therefore entered into force on 6 April 2017 and applied from that date. The terms of Article 35 therefore protect contracts entered into immediately prior to the entry into force of the Regulation.

¹⁹ OJ [2017] L No. 72, 17.3.2017, p. 29.

6. The key question for analysis is whether the contracts or capacity bookings under the GB domestic charging regime in issue foresaw “no change in the levels of the capacity- and/or commodity-based transmission tariffs” (save for indexation). In the GB charging regime applied as at 5 April 2017, transmission tariffs (i.e. charges generating transmission revenue) were governed by the charging methodology set out in the Uniform Network Code (‘UNC’).
7. The transmission revenue charges under the UNC at the time encompassed a reserve price and a revenue recovery charge (‘RRC’) for entry capacity bookings. These two distinct charges together comprised and set the “capacity and/or commodity based transmission tariff level” for entry capacity in the GB charging regime. While the reserve price was a fixed component of the tariff level, the RRC was variable. The UNC foresaw that the RRC would change over time, since it was a fluctuating adjustment to the allowed revenue. Moreover, in practice the RRC charged did vary over time.
8. The contracts which were established under the charging methodology set by the UNC necessarily foresaw transmission tariff levels that included both the reserve price and the RRC. As the RRC component was variable, the transmission tariff level as a whole was foreseen to be variable. Moreover, in practice, the transmission tariff level (as defined by Article 35(1)) was variable. Since the level of the transmission tariff foreseeably changed year on year, the relevant contracts do not benefit from protection under Article 35(1) of TAR NC. In short, the transmission tariff level was variable and accordingly does not benefit from the protection afforded by Article 35(1) for fixed tariff levels.
9. The legal analysis provided by another network user (Eni) appears to proceed on the basis that the RRC (residual revenue recovery collected via the NTS TO Entry Commodity Charge) is not properly to be considered as a component of the transmission tariff level. That does not appear to be borne out by paragraphs 2.5.4 and 3.1. of Section Y of the Transportation Principal Document, which forms part of the UNC.

KIERON BEAL QC

4 March 2019

Blackstone Chambers

Blackstone House

Temple

London

EC4Y 9BW

Appendix 3 Commentary relating to Ofgem's Decision Letter on Modification 0621.

Modification 678C incorporates proposals that mitigate the compliance concerns raised by Ofgem in the decision letter of 621 dated 20th December 2018. Specifically, 678C does not include a transition period, interim contracts nor an NTS Optional Charge. In respect of comments on Annex 2, current views on key features of UNC 621 mods, SSE has the following observations:

Cost reflectivity (RPM)

We agree with Ofgem that:

" Given low levels of anticipated new investment in gas network capacity in the near term, we anticipate this type of capacity charge would serve a predominantly revenue recovery function".

also

"there are several weaknesses with using distance as a factor for setting the reference price"

and

"On the TCR we have indicated that the following principles are relevant for assessing revenue recovery charges: 1) reducing harmful distortions. 2) fairness to end customers. 3) proportionality and practical considerations".

A flat postage stamp charge achieves this compared with a CWD approach.

Network Multipliers

678C uses a multiplier of one and as such avoids the concerns described in this section.

Competition

Treatment of "historical contracts"

We note Ofgem's concern on this. However, treatment of the historical capacity in the RPM is driven by compliance requirements to set charges to recover allowed revenue. UNC 678C does however, narrow the gap between new entrants and existing contracts by making all contracts, except storage, eligible for revenue recovery charges, in line with QC advice. No other modification achieves this.

Predictability and Stability of Charges

We agree with Ofgem that the PS approach **"would be expected to reduce volatility of capacity prices and make charge setting more stable & predictable for shippers."**

The NTS Optional Charge

Bypass is a real risk and if undertaken will increase costs to remaining customers. St Fergus and the private pipeline to the Peterhead NTS Exit point are only 400 m apart. The NTS costs avoided by building a private bypass pipeline are dependent on the RPM implemented but combined entry and exit savings vary from £6-£7m /year. There are at least 2 other similar combinations on the network that would benefit from building very short bypass pipes. Thus, we can expect costs to remaining customers to increase by £30m/year.

Capacity Based vs Commodity Based

We do not agree with Ofgem. Entry cost increases will result in 3 possible outcomes:

1. Gas does not flow to GB but to the continent.
2. Gas production at the margin becomes unprofitable and field closure is accelerated.
3. The increased capacity costs are successfully passed through to customers, and in the case of St Fergus, increases NBP price and wholesale gas costs to all customers.

Specific Capacity Discounts

We agree with Ofgem that costs for storage will increase. Therefore an 80% discount and exemption from RRC is required to reduce the likelihood of curtailment.

Impacts on investment and closure decisions

The cost increases associated with Exit will be more dramatic and we do not agree with Baringa's estimate that power generators will have lower costs. The current regime allows marginal plant that sets power price access to zero priced capacity and commodity charges that are passed through into marginal dispatch decisions. This results in the lowest wholesale cost to customers. In the new capacity regime costs to customers will increase as customers pay higher Capacity Mechanism Auction fees and/or higher daily capacity costs are fed through into marginal dispatch decisions.

Protection of Current and future customers

The recovery of NG's £1 bn of TO and SO revenue is not in doubt and will create winners and losers. However, the key risk to avoid is the distortion to competition and wholesale gas and power price. Postage stamp minimises this risk compared with CWD by potentially £300m/yr.

Appendix 4 includes the supporting analysis for statements made in 0678C.

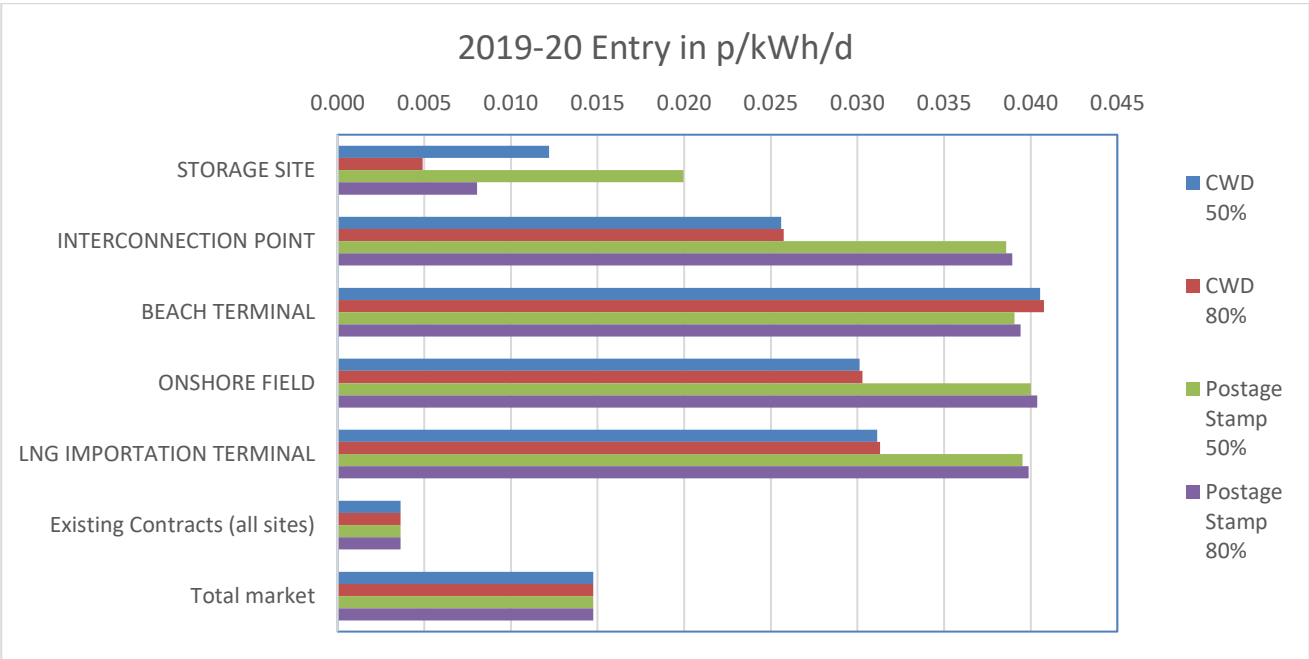
Appendix 4 Supporting Analysis

Charges have been calculated using the same model, FCC input data and booking assumptions provided by National Grid on 15 March. Only charges for 2019/20 have been calculated given the uncertainty of booking behaviour and the different allowed revenue in other years that make year on year comparisons less meaningful.

Average Entry Charges

The graphic below shows the average Entry charges by customer type for the main modification groupings. i.e CWD or Postage Stamp and the size of discount for storage.

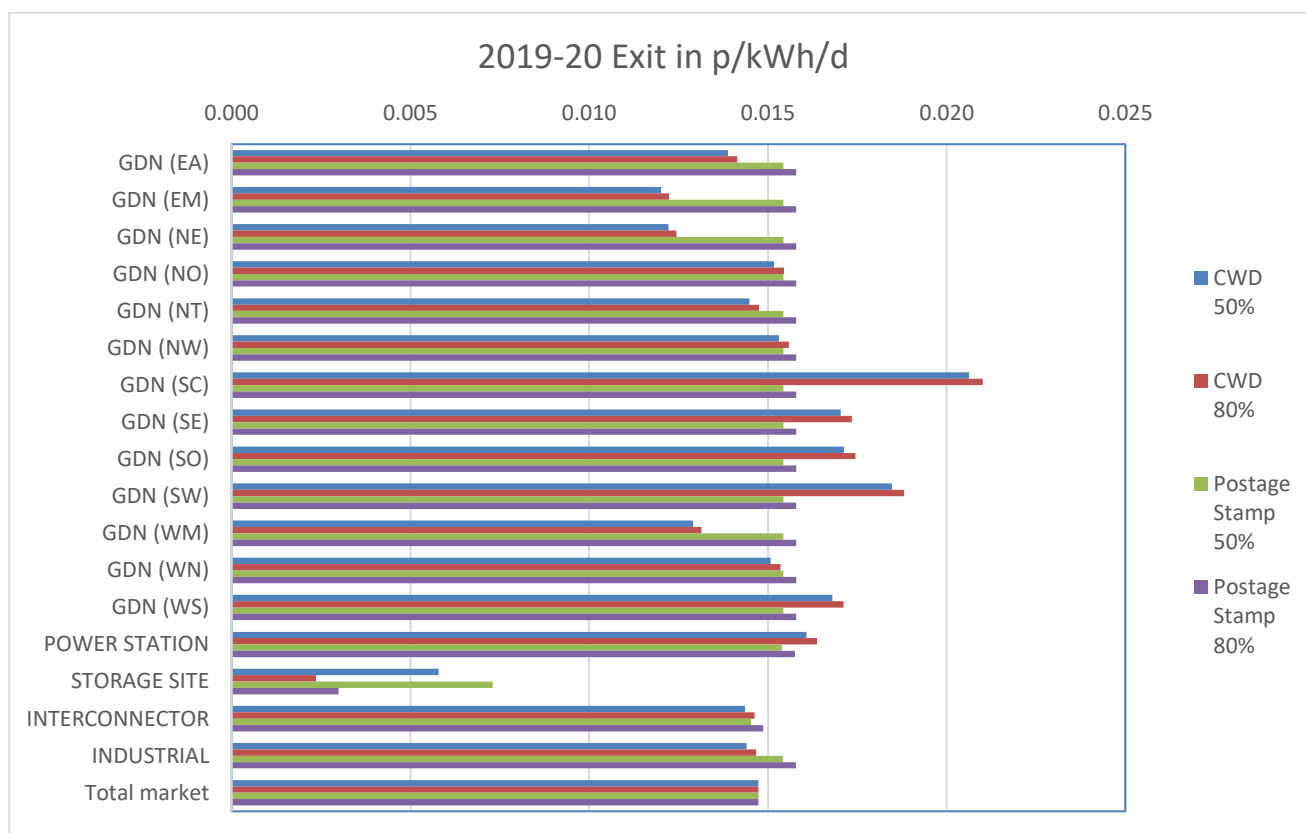
The Entry charges for customer groups for PS are close together whereas CWD penalises Beach terminals. Existing contracts are lower than all future costs. This may be unduely discriminatory and makes the application of RRC to all points,except storage, not only an important point for compliance but also for effective competition.



Average Exit Charges

The graphic below shows the average Exit charges by customer type for the main modification groupings. i.e CWD or Postage Stamp (PS) and the size of discount for storage.

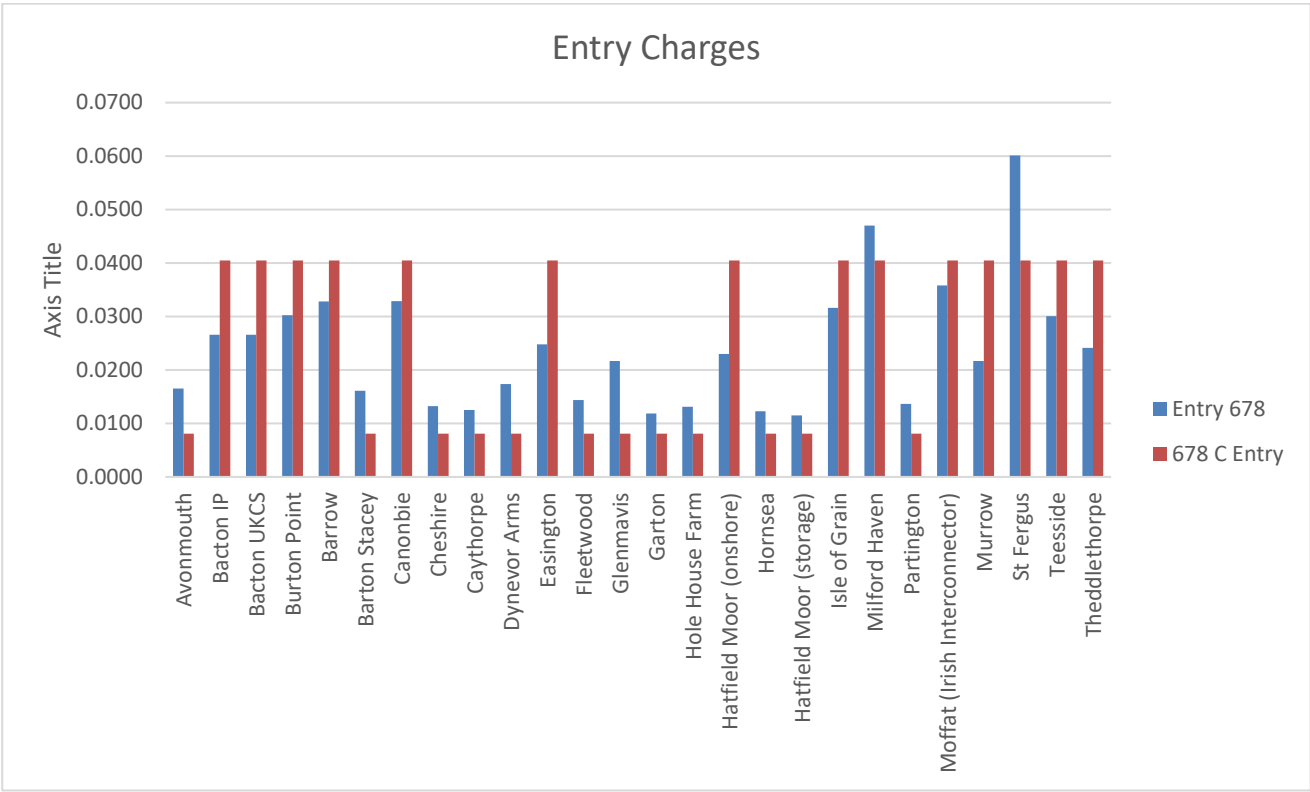
The Exit charges for customer groups for PS are close together whereas CWD has higher charges for DN customers in Scotland and SW. Given higher usage costs given climatic conditions in Scotland it might be considered unfair to ask customers to pay more for Transportation charges which are not cost reflective given the high percentage of GB gas landed at St Fergus.



Specific Entry Charges

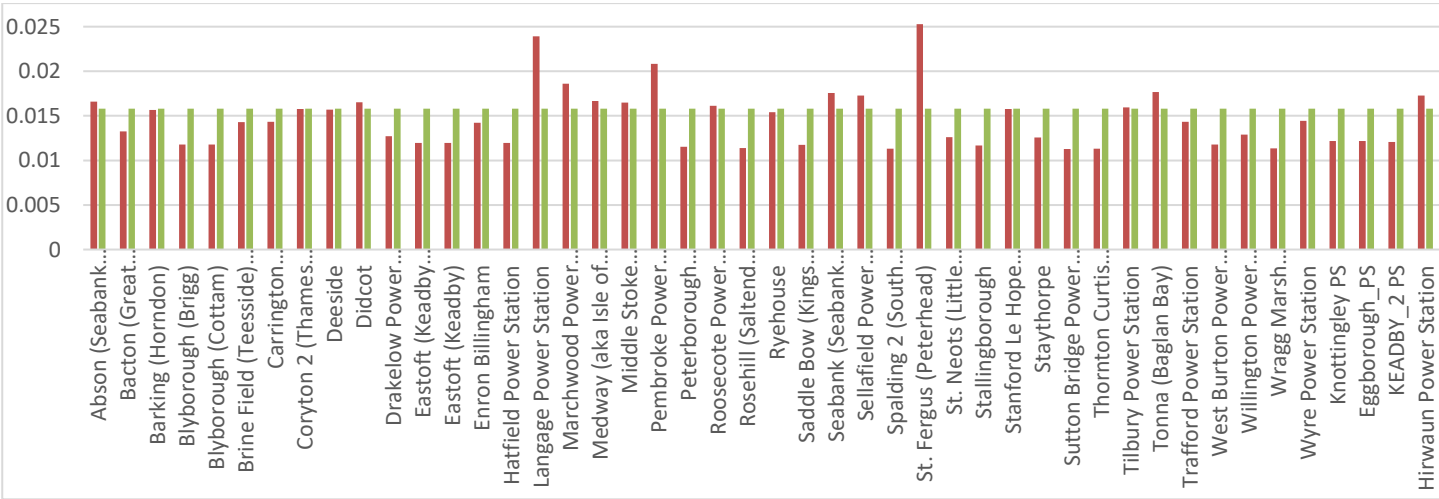
SSE's concern is the impact of an RPM which is not cost reflective and the subsequent distortive impacts on wholesale markets. NG will always recover allowed revenue but the increase in costs arising to customers from distortions to wholesale markets can be material. The PS will always minimise these distortions and is therefore preferable. As expected, averages in the above graphics can be misleading for individual points and therefore the next 2 graphics provide more detail for individual points with consequences for wholesale prices and increased costs to customers.

The Postage Stamp Entry costs are the same for storage and non- storage user groupings and therefore no distortion occurs. Whereas the costs differentials and subsequent distortions under CWD are much higher, St Fergus is the highest by 50% compared with PS. Given that St Fergus is key to GB gas supply this will lead to an increase in NBP gas price for CWD compared with PS of 0.02 p/kwh or 0.6 p/th. If St Fergus sets the marginal price of supply on each day (supporting information below) then wholesale costs to customers will increase by 0.6p/th * 33 bn therms /yr = £193 m/yr or £10/year/customer.



Specific Exit Charges

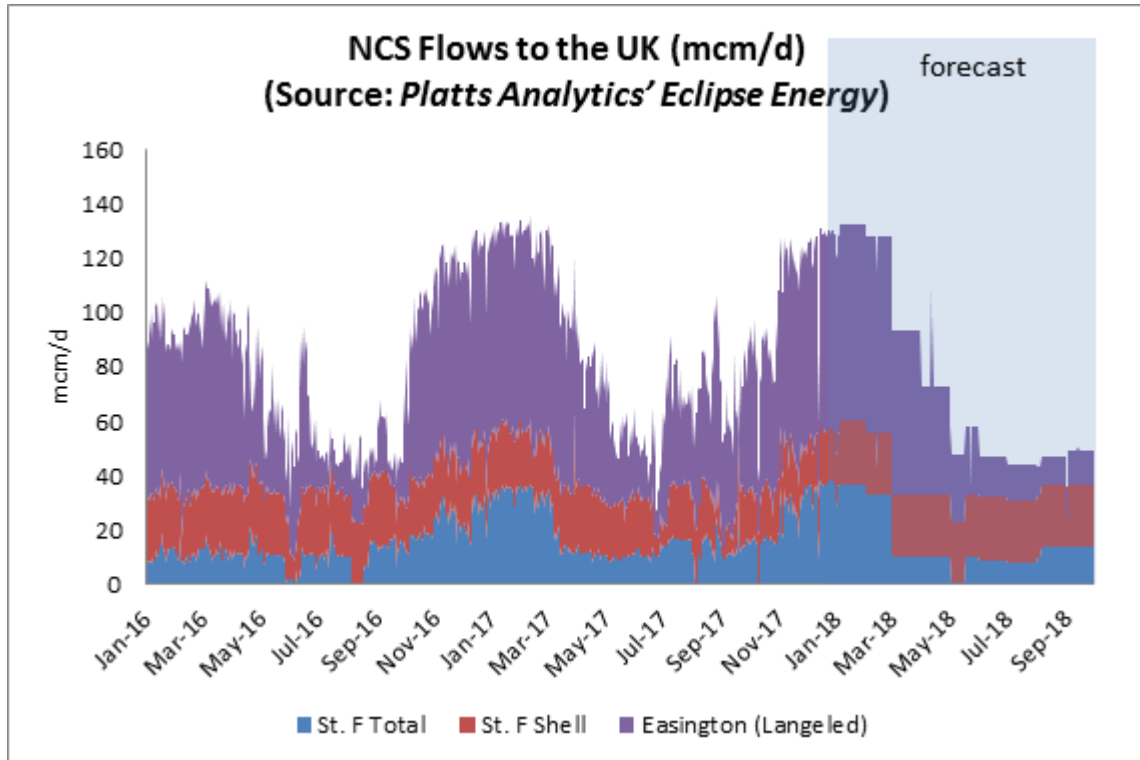
The Postage Stamp Exit costs are the same for all power stations and therefore no distortion to the wholesale electricity market occurs. Whereas the costs differentials and subsequent distortions under CWD are much higher, Peterhead is the highest by 60% compared with PS and results in an increase in cost of 0.025-0.0154 p/kwh/d which equates to £2.3 /kW based on 73 GWh/day. If this plant were marginal and set the clearing price in the Capacity Mechanism auction then, all else being equal, the increase in cost across a typical 50 GW auction volume would be £117m/year charged to and paid by increases to customer bills.



A table is included at the end of this appendix to show the amount of revenue collected by each customer grouping by main modification type.

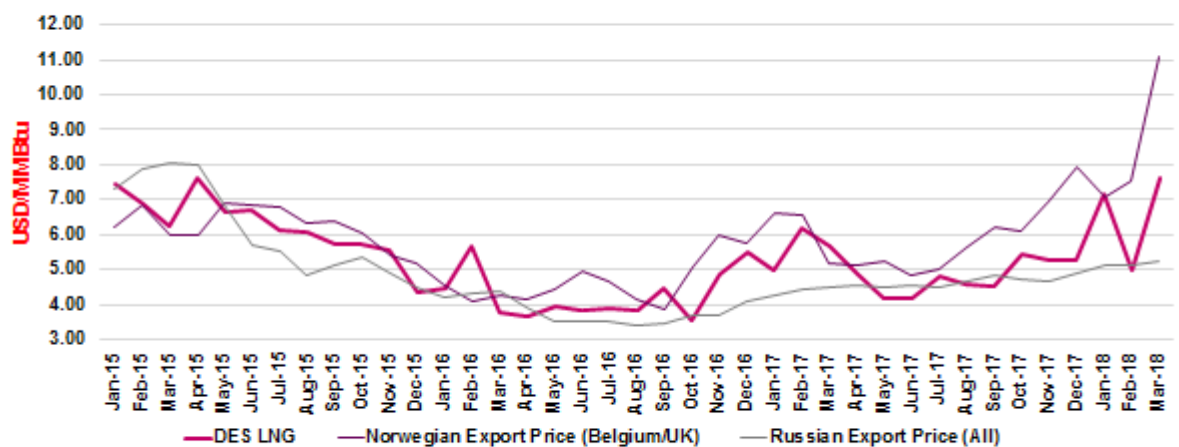
St Fergus Setting Marginal Price for GB NBP

1. GB receives a material amount of gas from Norway and indigenous production through St Fergus, making it a key supply point and price setter for NBP price. St Fergus currently receives gas every day from the Norwegian Continental Shelf (NCS) as shown below



- 2.
3. Additionally, the chart below shows that Norway has been the marginal supplier in 2018 with the highest price. It is therefore reasonable to expect any future costs associated with delivering gas from Norway to GB/EU to be passed through to the NBP price.

NWE competitive price landscape: DES NWE LNG is not always the most expensive



Source: Eurostat

S&P Global
Platts

- 4.

5. In the future, if Norwegian flows into St Fergus are incremental and discretionary on the day, then all else being equal, one can expect the marginal capacity cost to feed into the cost of wholesale gas at the NBP.
6. The link from the ACER publication below, shows on page 57, figure 31 the cost of transiting gas around Europe.
https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202016%20-%20GAS.pdf
7. It shows that the cheapest option to flow gas from Norway to GB is direct and not via Europe. Therefore, if we are to continue to receive gas on any day from the NCS, any increase in entry capacity costs at St Fergus will directly feed through into GB gas price.

Revenue collected by Customer type and by Modification Alternative

UNC0678	678 CWD 50 %				678E	CWD 80 %				678A	PS 50 %				678C	PS 80 %								
ENTRY	CWD 50%	Calculated Entry Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep- 2020	FCC kWh/d	Average Tariff (p/kWh/d)	CWD 80%	Calculated Entry Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep- 2020	FCC kWh/d	Average Tariff (p/kWh/d)	Postage Stamp 50%	Calculated Entry Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep- 2020	FCC kWh/d	Average Tariff (p/kWh/d)	Postage Stamp 80%	Calculated Entry Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep- 2020	FCC kWh/d	Average Tariff (p/kWh/d)	ENTRY	678 678E 678A 678C						
																		CWD 50%	CWD 80%	Postage Stamp 50%	Postage Stamp 80%			
	STORAGE SITE	£2,571,135	57,700,209	0.0122	STORAGE SITE	£1,034,127.82	57,700,209	0.0049	STORAGE SITE	4,203,464	57,700,209	0.0200	STORAGE SITE	£1,696,603.97	57,700,209	0.0081	STORAGE SITE	0.0122	0.0049	0.0200	0.0081			
	INTERCONNECTION POINT	£14,326,198	153,340,165	0.0256	INTERCONNECTION POINT	£14,405,232.58	153,340,165	0.0257	INTERCONNECTION POINT	21,592,301	153,340,165	0.0386	INTERCONNECTION POINT	£21,787,732.45	153,340,165	0.0389	INTERCONNECTION POINT	0.0256	0.0257	0.0386	0.0389			
	BEACH TERMINAL	£262,073,242	1,770,863,969	0.0405	BEACH TERMINAL	£263,519,052.87	1,770,863,969	0.0408	BEACH TERMINAL	252,453,234	1,770,863,969	0.0391	BEACH TERMINAL	£254,738,181.16	1,770,863,969	0.0394	BEACH TERMINAL	0.0405	0.0408	0.0391	0.0394			
	ONSHORE FIELD	£2,185,898	19,875,016	0.0301	ONSHORE FIELD	£2,197,956.91	19,875,016	0.0303	ONSHORE FIELD	2,902,508	19,875,016	0.0400	ONSHORE FIELD	£2,928,778.65	19,875,016	0.0404	ONSHORE FIELD	0.0301	0.0303	0.0400	0.0404			
	LNG IMPORTATION TERMINAL	£18,416	162,054	0.0311	LNG IMPORTATION TERMINAL	£18,517.65	162,054	0.0313	LNG IMPORTATION TERMINAL	23,380	162,054	0.0395	LNG IMPORTATION TERMINAL	£23,591.61	162,054	0.0399	LNG IMPORTATION TERMINAL	0.0311	0.0313	0.0395	0.0399			
	Existing Contracts (all sites)	£56,648,303	4,275,056,123	0.0036	Existing Contracts (all sites)	£56,648,302.88	4,275,056,123	0.0036	Existing Contracts (all sites)	56,648,303	4,275,056,123	0.0036	Existing Contracts (all sites)	£56,648,302.88	4,275,056,123	0.0036	Existing Contracts (all sites)	0.0036	0.0036	0.0036	0.0036			
	Total market	£337,823,191	6,276,997,538	0.0147	Total market	£337,823,190.70	6,276,997,538	0.0147	Total market	£337,823,190.72	6,276,997,538	0.0147	Total market	£337,823,190.72	6,276,997,538	0.0147	Total market	0.0147	0.0147	0.0147	0.0147			
EXIT	CWD 50%	Calculated Exit Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep-2020	Total FCC (Firm + Interruptible)	Average Tariff (p/kWh/d)	CWD 80%	Calculated Exit Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep-2020	Total FCC (Firm + Interruptible)	Average Tariff (p/kWh/d)	Postage Stamp 50%	Calculated Exit Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep-2020	Total FCC (Firm + Interruptible)	Average Tariff (p/kWh/d)	Postage Stamp 80%	Calculated Exit Capacity Revenue (Based on Booking Scenario) (£) for 01-Oct-2019 to 30-Sep-2020	Total FCC (Firm + Interruptible)	Average Tariff (p/kWh/d)	EXIT	CWD 50% CWD 80% Postage Stamp 50% Postage Stamp 80%						
																		CWD 50%	CWD 80%	Postage Stamp 50%	Postage Stamp 80%			
	GDN (EA)	£15,791,168	311,566,153	0.0139	GDN (EA)	£16,083,157.53	311,566,153	0.0141	GDN (EA)	£17,547,961.63	311,566,153	0.0154	GDN (EA)	£17,959,324.20	311,566,153	0.0158	GDN (EA)	0.0139	0.0141	0.0154	0.0158			
	GDN (EM)	£17,579,484	400,813,787	0.0120	GDN (EM)	£17,904,541.26	400,813,787	0.0122	GDN (EM)	£22,574,547.61	400,813,787	0.0154	GDN (EM)	£23,103,744.34	400,813,787	0.0158	GDN (EM)	0.0120	0.0122	0.0154	0.0158			
	GDN (NE)	£12,192,167	273,356,427	0.0122	GDN (NE)	£12,417,609.05	273,356,427	0.0124	GDN (NE)	£15,395,921.69	273,356,427	0.0154	GDN (NE)	£15,756,835.74	273,356,427	0.0158	GDN (NE)	0.0122	0.0124	0.0154	0.0158			
	GDN (NO)	£13,317,914	240,472,594	0.0152	GDN (NO)	£13,564,171.24	240,472,594	0.0155	GDN (NO)	£13,543,845.54	240,472,594	0.0154	GDN (NO)	£13,861,342.88	240,472,594	0.0158	GDN (NO)	0.0152	0.0155	0.0154	0.0158			
	GDN (NT)	£20,433,029	386,394,547	0.0145	GDN (NT)	£20,810,850.70	386,394,547	0.0148	GDN (NT)	£21,762,430.29	386,394,547	0.0154	GDN (NT)	£22,272,589.22	386,394,547	0.0158	GDN (NT)	0.0145	0.0148	0.0154	0.0158			
	GDN (NW)	£26,011,844	465,565,511	0.0153	GDN (NW)	£26,492,821.56	465,565,511	0.0156	GDN (NW)	£26,221,480.23	465,565,511	0.0154	GDN (NW)	£26,836,169.04	465,565,511	0.0158	GDN (NW)	0.0153	0.0156	0.0154	0.0158			
	GDN (SC)	£27,899,511	370,512,837	0.0206	GDN (SC)	£28,415,392.33	370,512,837	0.0210	GDN (SC)	£20,867,944.04	370,512,837	0.0154	GDN (SC)	£21,357,134.26	370,512,837	0.0158	GDN (SC)	0.0206	0.0210	0.0154	0.0158			
	GDN (SE)	£28,747,210	462,296,616	0.0170	GDN (SE)	£29,278,766.53	462,296,616	0.0174	GDN (SE)	£26,037,370.24	462,296,616	0.0154	GDN (SE)	£26,647,743.10	462,296,616	0.0158	GDN (SE)	0.0170	0.0174	0.0154	0.0158			
	GDN (SO)	£20,374,958	325,907,609	0.0171	GDN (SO)	£20,751,705.69	325,907,609	0.0174	GDN (SO)	£18,355,698.04	325,907,609	0.0154	GDN (SO)	£18,785,995.72	325,907,609	0.0158	GDN (SO)	0.0171	0.0174	0.0154	0.0158			
	GDN (SW)	£17,068,944	253,227,142	0.0185	GDN (SW)	£17,384,560.99	253,227,142	0.0188	GDN (SW)	£14,262,204.44	253,227,142	0.0154	GDN (SW)	£14,596,541.69	253,227,142	0.0158	GDN (SW)	0.0185	0.0188	0.0154	0.0158			
	GDN (WM)	£15,222,140	323,178,470	0.0129	GDN (WM)	£15,503,607.83	323,178,470	0.0131	GDN (WM)	£18,201,988.04	323,178,470	0.0154	GDN (WM)	£18,628,682.42	323,178,470	0.0158	GDN (WM)	0.0129	0.0131	0.0154	0.0158			
	GDN (WN)	£2,710,397	49,258,990	0.0151	GDN (WN)	£2,760,513.88	49,258,990	0.0154	GDN (WN)	£2,774,354.20	49,258,990	0.0154	GDN (WN)	£2,839,391.13	49,258,990	0.0158	GDN (WN)	0.0151	0.0154	0.0154	0.0158			
	GDN (WS)	£12,700,098	207,005,335	0.0168	GDN (WS)	£12,934,932.13	207,005,335	0.0171	GDN (WS)	£11,658,909.80	207,005,335	0.0154	GDN (WS)	£11,932,220.13	207,005,335	0.0158	GDN (WS)	0.0168	0.0171	0.0154	0.0158			
	POWER STATION	£65,989,935	1,124,304,871	0.0161	POWER STATION	£67,210,135.77	1,124,304,871	0.0164	POWER STATION	£63,165,146.86	1,124,304,871	0.0154	POWER STATION	£64,645,875.96	1,124,304,871	0.0158	POWER STATION	0.0161	0.0164	0.0154	0.0158			
	STORAGE SITE	£10,221,973	483,741,003	0.0058	STORAGE SITE	£4,164,393.89	483,741,003	0.0024	STORAGE SITE	£12,896,533.63	483,741,003	0.0073	STORAGE SITE	£5,279,542.63	483,741,003	0.0030	STORAGE SITE	0.0058	0.0024	0.0073	0.0030			
	INTERCONNECTOR	£20,879,844	398,350,547	0.0144	INTERCONNECTOR	£21,265,926.76	398,350,547	0.0146	INTERCONNECTOR	£21,121,700.92	398,350,547	0.0145	INTERCONNECTOR	£21,616,839.76	398,350,547	0.0149	INTERCONNECTOR	0.0144	0.0146	0.0145	0.0149			
	INDUSTRIAL	£10,682,575	203,124,284	0.0144	INDUSTRIAL	£10,880,103.43	203,124,284	0.0147	INDUSTRIAL	£11,435,153.38	203,124,284	0.0154	INDUSTRIAL	£11,703,218.37	203,124,284	0.0158	INDUSTRIAL	0.0144	0.0147	0.0154	0.0158			
	Total market	£337,823,191	6,279,076,722	0.0147	Total market	£337,823,190.59	6,279,076,722	0.0147	Total market	£337,823,190.59	6,279,076,722	0.0147	Total market	£337,823,190.59	6,279,076,722	0.0147	Total market	0.0147	0.0147	0.0147	0.0147			