











UNC Draft Modification Report	At what stage is this document in the process?
<h1>UNC 0678J:</h1> <h2>Amendments to Gas Transmission Charging Regime (Postage Stamp) including a Cost based Optional Capacity Charge</h2>	<div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div>
<p><b>Purpose of Modification:</b></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 and a cost-based Optional Capacity Charge.</p>	
	<p>This Draft Modification Report is issued for consultation.</p> <p>All parties are invited to consider whether they wish to submit views regarding this modification.</p> <p>This Modification is subject to Authority Direction.</p> <p>The close-out date for responses is <b>08 May 2019</b>, which should be sent to <a href="mailto:enquiries@gasgovernance.co.uk">enquiries@gasgovernance.co.uk</a>. A response template, which you may wish to use, is at <a href="http://www.gasgovernance.co.uk/0678">www.gasgovernance.co.uk/0678</a>.</p> <p>The Panel will consider the responses and agree whether or not this modification should be made.</p>
	<p><b>High Impact:</b></p> <p>All parties that pay NTS Transportation Charges and/or have a connection to the NTS, and National Grid NTS</p>
	<p><b>Medium Impact:</b></p> <p>N/A</p>
	<p><b>Low Impact:</b></p> <p>N/A</p>

Contents		 Any questions?
1	Summary	3
2	Governance	4
3	Why Change?	5
4	Code Specific Matters	13
5	Solution	16
6	Impacts & Other Considerations	31
7	Relevant Objectives	33
8	Implementation	39
9	Appendix 1 – FCC Methodology Statement	39
10	Appendix 2 – Commentary on EU TAR Compliance	39
11	Appendix 3 – Commentary on Analysis	40
Timetable		 0121 288 2107
<b>Modification timetable:</b>		Proposer: <b>Adam Bates</b> <b>South Hook Gas</b> <b>Company Ltd</b>
Ofgem decision on urgency	25 January 2019	 <a href="mailto:enquiries@gasgovernance.co.uk">enquiries@gasgovernance.co.uk</a>
Initial consideration by Workgroup	29 January 2019	 <a href="mailto:abates@southhookgas.com">abates@southhookgas.com</a>
Final consideration by Workgroup	10 April 2019	 07787 524 566
Workgroup Report Finalised	10 April 2019	Transporter: <b>National Grid</b>
Publication of Draft Modification Report	12 April 2019	Systems Provider: <b>Xoserve</b>
Draft Modification Report issued for consultation	15 April 2019	 <a href="mailto:commercial.enquiries@xoserve.com">commercial.enquiries@xoserve.com</a>
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	

## List of Figures

Figure 1: Proposed Postage Stamp Model for calculation of Entry and Exit Capacity Base Reference Prices	18
Figure 2: Entry Point Reference Prices calculation model	18
Figure 3: Exit Point Reference Prices calculation model	19
Figure 4: Reserve Price derivation	21
Figure 5: Transmission Services Revenue Recovery Mechanism	22
Figure 6: Publication dates for Transportation Charges	30

## List of Tables

Table 1: Key steps in the CWD calculations.....	18
Table 2: Impact of the Modification on the Relevant Objectives .....	33
Table 3: Impact of the Modification on the Relevant Charging Methodology Objectives .....	35

## 1 Summary

This Modification proposes to introduce a new Gas Transmission Charging regime that produces stable and predictable transportation charging and is compliant with the EU Tariff Code (Regulation 2017/460). This Modification also takes into account the decision to reject UNC0621 and its Alternatives citing areas of non-compliance. This Proposal addresses the areas of compliance identified in this decision. This Modification proposes the implementation of a Postage Stamp charging methodology, rather than Capacity Weighted Distance as proposed in Modification 0678, along with a cost based optional capacity charge.

### 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 2017<sup>2</sup> – with updated analysis presented during development of UNC Modification Proposal 0621 in April 2018<sup>3</sup>) 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), the Transition Document and EID Section B).

At its core, this Modification 0678J 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.

The Proposal 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

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

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

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

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.

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 objectives<sup>4</sup> 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:

- It proposes the adoption of a Postage Stamp model as the Reference Price Methodology, whereas Modification 0678 proposes a Capacity Weighted Distance model;
- It proposes for the FCC methodology to sit under UNC governance;
- It introduces an Optional Capacity Charge and associated User commitments to replace the current Optional Commodity Charge which will be included within the UNC. Modification 0678 does not include any optional charge.

## 2 Governance

### Justification for Consideration as an Alternative to Modification 0678

This Modification 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 Modification 0678 as it uses a Postage Stamp RPM and re-introduces the concept of an optional charge to avoid inefficient bypass of the NTS.

The extended 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 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.

South Hook Gas understood that the solution proposed within this Modification would be addressed as part of an (amended) Modification 0678 that had already been raised. However, South Hook Gas had confirmation on the 12th March 2019 that this amendment would not be made, following which South Hook Gas raised this Modification as soon as possible.

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

## 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 Modification 0678. It should proceed as such under the same extended 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. Whilst there have been some changes in the last ten years, the basic approach to calculating NTS Entry and Exit Capacity charges and the approach to revenue recovery arrangements have not substantially changed. What has been seen is change in the patterns of capacity booking behaviours, and the impact on the charges as a result due to the interactivity inherent within the methodology, which were not anticipated. Additional regulatory drivers for changes to the charging framework are:

3.1.1. **The EU Tariff Code**<sup>5</sup>;

3.1.2. Ofgem's Gas Transmission Charging Review<sup>6</sup> and decision on UNC0621 and its Alternatives<sup>7</sup>. In addressing the decision letter to reject UNC0621 and its Alternatives, the Proposer is proposing changes outlined in this Modification and summarised in the comparison table provided on the JO website.

3.2 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. The high TO commodity charges, driven largely by the zero priced capacity can also result in unstable and unpredictable charges. Other charges, such as the NTS Optional Commodity Charge (also referred to as "Shorthaul"), have also seen a significant increase in its use which has impacted on other charges in a way that was not originally envisaged.

### 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.

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<sup>5</sup> [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](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)

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

<sup>7</sup> <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.
  - 3.4.4. Certain charges in respect of NTS Capacity (but not including Overrun Charges) or the surrender of NTS Capacity are classified as components of SO allowed revenue but as they are levied for in respect of a Transmission Service, need to be included within Transmission Services Charge revenue.

### **Reference Price Methodology (RPM)**

- 3.5. The current RPM (including the adjustments applied in order to calculate capacity charges) produces charges that are 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 RPMs<sup>8</sup>, the main 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 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.
- 3.7. The proposed use of a Postage Stamp methodology (with the CWD model as a counterfactual<sup>9</sup>) 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 network. It is also a fair, proportionate and non-discriminatory approach to the recovery of the allowed

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

<sup>9</sup> 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.

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 market<sup>10</sup>. 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 relevant<sup>11</sup>

- *“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 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*

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

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



*(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 compliance with the EU Tariff Code which has a deadline to implement the changes of 31 May 2019. Price changes could apply from 01 October 2019 or as soon as possible after this date in line with a decision to implement.
- 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 eliminating the influence between Transmission and Non-Transmission Services.
- 3.11A. In conclusion, the Postage Stamp RPM meets the criteria under the TAR Network Code including Recital (3) (see also the views of the Proposer on compliance with the TAR Network Code<sup>12</sup>). In this context South Hook Gas Company notes that distance is not a “cost driver” in relation to historic sunk costs. In addition, South Hook Gas Company is concerned that the use of distance in relation to the RPM may distort 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 Contracted Capacity (FCC) will be a key input into the reference price calculation.
- 3.13. It is proposed that 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 statement (Appendix 1) that will be referenced in the UNC but will not form part of Section Y of the UNC.

The FCC Methodology is not proposed to be incorporated into the UNC in order to maintain a high degree of predictability in the process to determine the values using a developed methodology. Each year the methodology will be followed to produce tariffs for the applicable year. The use of a methodology contributes towards predictability for the tariffs to be calculated and a known set of values and logical steps to derive an FCC for the applicable year. Having the methodology in a statement outside of the UNC provides the flexibility around the process to update the FCC content and ensures a timetable of

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<sup>12</sup> Available at <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/book/2019-03/0678J%20EU%20TAR%20NC%20Compliance%20Commentary.pdf>



change can be followed such that changes to the methodology can be completed and implemented in an efficient and timely manner in order to set tariffs. Incorporating the FCC into the UNC does not provide this assurance as the timetable for change may not be as certain. The use of an FCC should be flexible enough such that it can be updated to take account in a timely fashion of any relevant or useful information to incorporate into future FCC Methodology changes.

- 3.14. The FCC for each Entry Point and Exit Point will be determined ahead of each tariff year in accordance with the methodology and communicated to industry at least one month ahead of the publication of charges. Where National Grid has applied different principles to determine an FCC for a specific Entry or Exit Point (as per Chapter 4 of the FCC Methodology) then justification for why this exception was needed and an explanation for the method of calculating the revised FCC must be included.
- 3.14A. 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. In consultation with Users (including DNO Users), National Grid will review the FCC Methodology when it believes this is required to minimise over and under recovery of Target Revenue. This review of the FCC Methodology will include consideration of any behavioural changes in capacity procurement observed under the revised charging regime with the aim of aligning the FCC values derived to actual bookings. National Grid will propose any updates that it considers are consistent with overall NTS charging methodology. In this event, National Grid will notify industry of the revised FCC Methodology ahead of the relevant transportation charging statement and charging models being published.

## **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.
- 3.17A. This Modification proposes a Multiplier of 1 for all capacity products as South Hook Gas does not wish to create an artificial incentive for procurement of one capacity product in preference to another product. South Hook Gas believes Users of the system should make their own commercial decisions when procuring capacity taking account of the duration required, the timing of the commitment and payment, and the risk of scarcity (demand exceeding supply).
- 3.17B. Given the Proposal for the Multiplier to be explicit in the UNC, any subsequent change to the Multiplier would be subject to the UNC change process. This aspect is neutral on cost reflectivity grounds as the

other aspects of the RPM apportion the charges, this makes no distinction between long or short term capacity.

- 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).
- 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 but 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 Proposal 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 (which for the avoidance of doubt may be positive or negative) on an enduring basis and is levied to the Fully Adjusted Capacity (at any points) apart from that classified as 'Existing Contracts' in order to give full effect to the provisions detailed in Article 35 of the EU Tariff Code. The Fully Adjusted capacity will be net of capacity trades and buy-backs 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 3.19 to 3.22 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 3.23 means that less revenue will be required to be collected from the Transmission Services Revenue Recovery charges than if it were not carried out.

### **NTS Optional Capacity Charge**

- 3.25. This Proposal 0678J will introduce a new capacity based charge that discourages inefficient bypass of the NTS. The new NTS Optional Capacity charge is calculated by applying an equation which relates to the cost of providing pipeline capability to support a particular load size and distance travelled from a nominated NTS Entry Point to the particular NTS Exit Point to derive a unit cost in pence per kWh. The resultant cost from the equation is converted into a capacity cost by application of the site specific FCC and MNEPOR. The charge is then apportioned 50:50 between entry and exit and the Users opting to accept the charge commit to making payments equivalent to the cost of booking one year of capacity (at entry and exit) at the FCC level of the qualifying NTS Exit Point. The NTS Optional Capacity Charge arrangements will, in the view of the Proposer, encourage greater use of the NTS by way of avoiding inefficient bypass (whether via onshore or offshore gas pipelines) and facilitate the delivery of gas to the GB market. It will also support the efficient flow of gas across all GB interconnection points.

### **Existing Contracts**

- 3.26. It is proposed that provisions will apply for Entry Capacity (for 01 October 2019 or from the Effective Date of this Modification, whichever is later) allocated up to 06 April 2017.
- 3.26.1. These are 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 and revenue expected to be recovered under these Existing Contracts impact the application of the Postage Stamp charging model (specifically when determining Reference Prices at Entry Points) and calculation of Transmission Services Revenue Recovery Charges.
- 3.27. 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...”.
- 3.27. Accordingly, to ensure that the Reference Prices determined by the proposed 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 CWD 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).

- 3.28. The alternative approach of inclusion of capacity already booked and revenue levels already 'set' via Existing Contracts in the CWD 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 CWD RPM would therefore be inconsistent, and arguably non-compliant, with Article 17.
- 3.29. Recognising that Article 6(3) of the EU Tariff Code requires that "...the same reference price methodology shall be applied to 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**

- 3.30. The Effective Date of this Proposal can be any date as determined by Ofgem. The Effective Date is required to provide at least two clear months' notice from the date of the Ofgem decision, thereafter taking effect from the 1<sup>st</sup> day of the of the following month, or any specific date stipulated by Ofgem in its decision. For example, unless a different date was provided by Ofgem, if a decision is made during July, the charges would take effect from 1<sup>st</sup> October. If a decision is made in October then, unless otherwise specified by Ofgem, the Effective Date would be from 1<sup>st</sup> January.
- 3.31. To facilitate the changes as outlined it will be necessary to take into consideration actual and anticipated revenues to be collected up to this point to determine the target revenue to be applied for the remainder of the regulatory year.

#### **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](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](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 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, Section S 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**

<b>Term (Abbreviation)</b>	<b>Description</b>
<b>Effective Date</b>	The date from which the Modification will take effect being either: <ul style="list-style-type: none"> <li>the first day of the third month following the month in which Ofgem issues its letter directing implementation of this Proposal; or</li> <li>any specific date stipulated by Ofgem in its decision letter</li> </ul>
<b>Existing Contracts (ECs) (for the purposes of this Modification)</b>	Arrangements relating to Long Term Entry capacity allocated before 06 April 2017 (Entry into Force of EU Tariff Code)
<b>Forecasted Contracted Capacity (FCC)</b>	The capacity input to the RPM that will be used in the Transmission Services capacity charges calculation that will be determined via a Postage Stamp methodology. An FCC value is required for every Entry and Exit Point.
<b>Formula Year</b>	The period of twelve months commencing on 01 April at 05:00 hours;
<b>Long Run Marginal Costs (LRMC) Model</b>	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.
<b>Multipliers</b>	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
<b>Network Distances (for the purposes of modelling in the RPM)</b>	A matrix of distances used in the RPM that are the pipeline distances on the NTS.



<b>Non-Transmission Services</b>	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;
<b>Non-Transmission Services Revenue</b>	The part of the allowed or target revenue which is recovered by non-transmission tariffs
<b>NTS Optional Capacity Charge</b>	Price for a capacity product for firm capacity applicable at qualifying entry and Exit Points in accordance with the OCC Methodology Statement. Note it is intended that Methodology Statement will be presented to Panel at the same time as completion of the Draft Workgroup Report.
<b>Postage Stamp (PS) Model</b>	<p>The PS approach fundamentally requires two main inputs:</p> <ul style="list-style-type: none"> <li>• A revenue value is required, which will be the target revenue required to be recovered from Transmission Services;</li> <li>• A capacity value for each Entry and Exit Point that will be the Forecasted Contracted Capacity (FCC) (which is mentioned later in this section). These are applied in aggregate</li> </ul> <p>The PS model produces the Transmission Services Reference Prices and with additional adjustments produces the Transmission Services Reserve Prices.</p>
<b>Reference Price</b>	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).
<b>Reference Price Methodology (RPM)</b>	<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>
<b>Reserve Price</b>	<p><b>Reserve Price for Yearly standard capacity</b> = the Reference Price</p> <p><b>Reserve Price for Non- yearly standard capacity</b> is calculated by applying any Multipliers (if applicable).</p> <p>This will be produced in p/kWh/d (pence per kWh per day).</p>
<b>Target Revenue</b>	This is the revenue required to be recovered from a particular set of charges.

<b>Transmission Services</b>	The regulated services that are provided by the transmission system operator within the entry-exit system for the purpose of transmission.
<b>Transmission Services Revenue</b>	The part of the allowed or target revenue which is recovered by transmission tariffs.
<b>Transportation Statement</b>	The Transportation Statement containing the Gas Transmission Transportation Charges

## 5 Solution

This Modification Proposal seeks to amend Transportation Principal Document (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), S (Invoicing and Payment), the Transition Document 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;
  - NTS Optional 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

It is proposed that for the purposes of determining revenue to be collected via Transmission Services charges and Non-Transmission Services charges:

- revenue expected to be recovered via Transmission Services Charges will be equal to the Transmission Owner (TO) allowed revenue; and
- revenue expected to be recovered via Non-Transmission Services Charges will be equal to the System Operator (SO) allowed revenue.

It is proposed that the following exceptions apply in respect of the above principles:

- NTS Metering Charges (as a component of TO allowed revenue) will be reflected as a component of Non-Transmission Services Charge revenue;
- DN Pensions Deficit Charges (as a component of TO allowed revenue) will be reflected as a component of Non-Transmission Services Charge revenue; and
- Those charges in respect of NTS Capacity (but not including Overrun Charges) or the surrender of NTS Capacity classified as a component of SO allowed revenue will be reflected as a component of Transmission Services Charge revenue.

## Transmission Services Charges

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

It is proposed that a Postage Stamp 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.

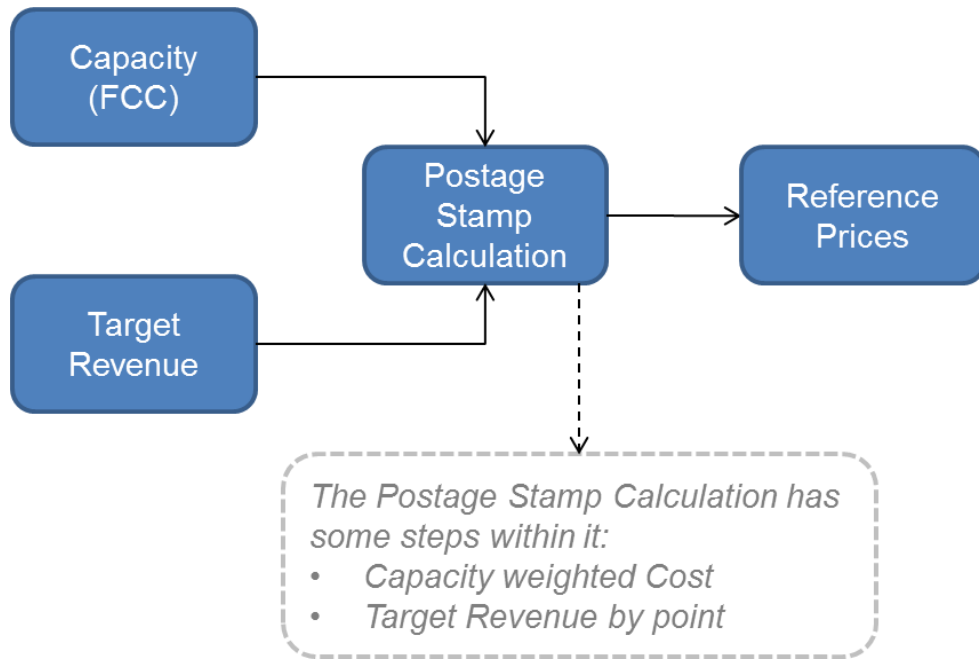
### Calculations within the Postage Stamp Model

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 01 April to 31 March (National Grid's Formula Year), it is proposed that profiling factors will be applied separately to Entry and Exit annual Allowed Revenue 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 Formula Year the tariffs will be set to minimise any under or over recovery in respect of Transmission Services; and
- Capacity (FCC) - FCC (by point) net of Existing Contracts (EC) capacity booked to recover the target Entry or Exit Transmission Services revenue. It should be noted that whilst TAR NC permits Existing Contracts at both Entry and Exit, there are no eligible Exit Existing Contracts.

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



Key steps in the CWD calculations see Table 2.

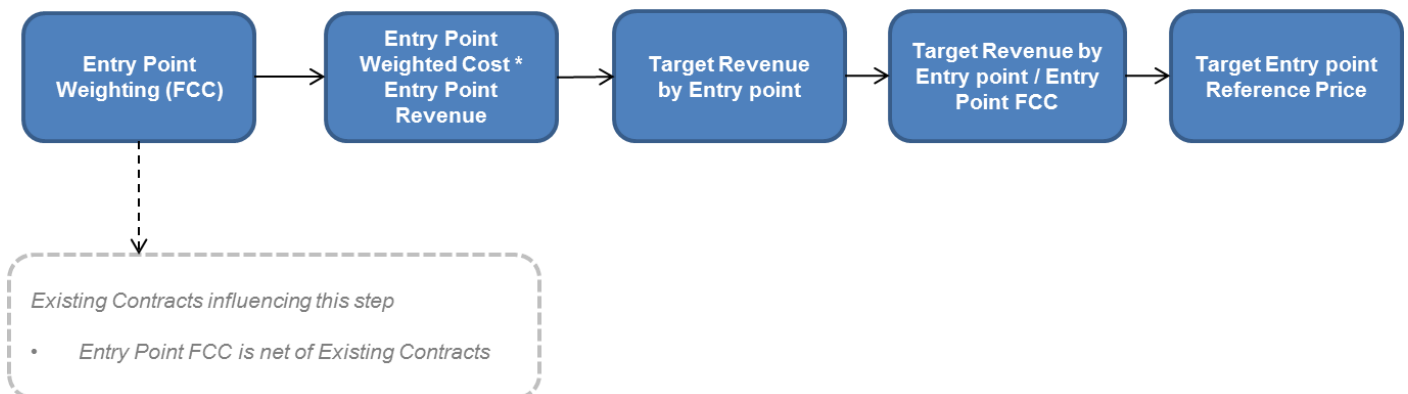
Table 2: Key steps in the CWD calculations

	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)

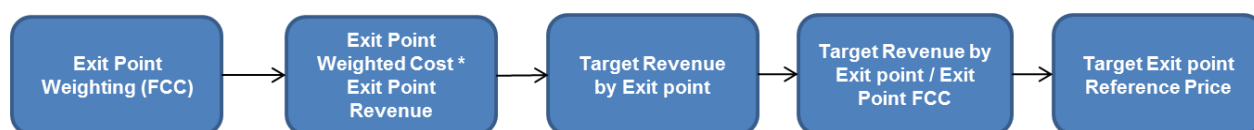
Entry Point Reference Prices are calculated in the following steps in the Postage Stamp model, see figure 2.

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**



There are no eligible Exit Existing Contracts and therefore the impact of including them is zero. The same approach or methodology is applied to Entry and Exit. Were there to be any Exit Existing Contracts they would be incorporated in the same manner as Entry. As there are none, the approach outlined is the same effect as if they are zero in any algebra.

### Forecasted Contracted Capacity (FCC) (see paragraphs 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, in line with a new methodology statement (the 'FCC Methodology'). It is proposed that the FCC Methodology attached to this Proposal applies from the date of implementation for application within the relevant Gas Year(s).

It is proposed that ahead of each Gas Year National Grid will determine the FCC value for each Entry Point and Exit Point and will be communicated to industry at least one month prior to the publication of the relevant charges. Where National Grid has applied different principles to determine an FCC for a specific Entry or Exit Point (as per Chapter 4 of the FCC Methodology) then justification for why this exception was needed and an explanation for the method of calculating the revised FCC must be included.

It is proposed that where National Grid believes it necessary to review or update the methodology, it will run a consultation with stakeholders to review the FCC Methodology. Following the consultation, if the FCC Methodology is revised, National Grid will notify industry of any revisions at least one month prior to any publication of charges. Any such consultation would be concluded in advance of setting the tariffs for the forthcoming tariff (gas) year.

It is proposed that any such revision will take effect from the date specified unless Ofgem (upon application by any Shipper or Distribution Network Operator within one month of the notice) directs that the change is not made as per its powers under Standard Special Condition A11(18) of National Grid's Licence.

### Reserve Prices produced from Reference Prices (see paragraphs 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 2020 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; and
- Shall be calculated on an ex-ante basis ahead of the applicable year.

It is proposed that 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 paragraphs 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 2019 or implementation date of this Modification should it be after, 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 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%.

It is proposed 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:

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

### **Specific Capacity Discounts (see paragraphs 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.

It is proposed that in respect of storage sites, (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) the applicable Specific Capacity Discount for a given gas year will be equal to 50%.

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 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%.

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

### **Additional Calculation Step under Postage Stamp for Reference / Reserve Prices (see paragraph 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.

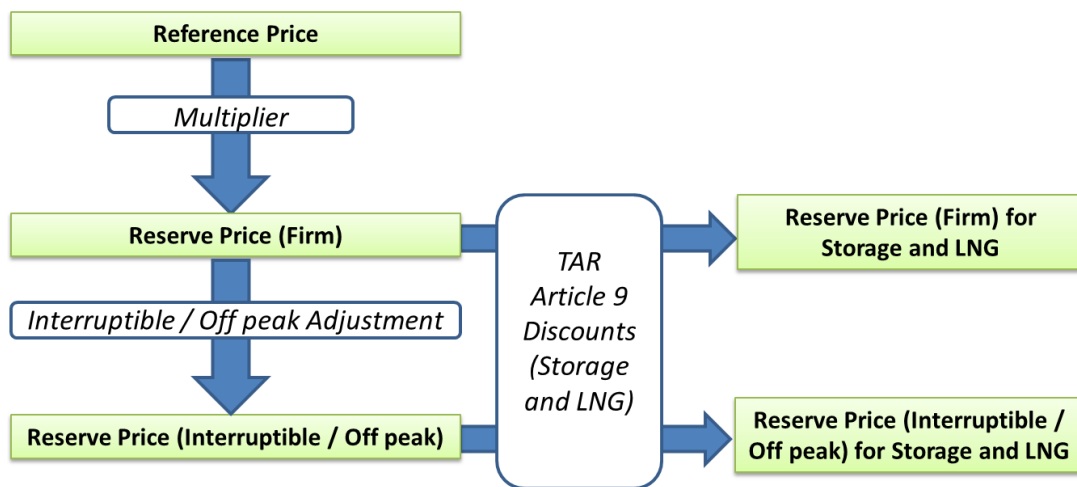
### Minimum Reserve Price

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

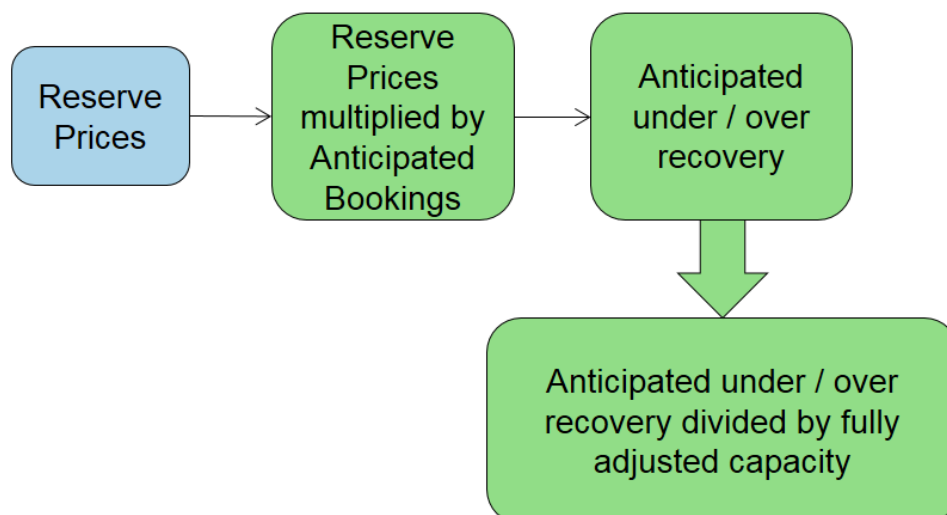
For the purposes of capacity step prices used in the QSEC Auction, these will be an additional 5% of the applicable Reserve Price or 0.0001 p/kWh/Day, whichever is the greatest, per step.

### Transmission Services Revenue Recovery Charges (see paragraph 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 the 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 Existing Contracts. 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 (except Existing Contracts) or Exit Capacity booked for the applicable year would be subject to Revenue Recovery charges.

It is proposed that in respect of adjustments (including as a consequence of trades) to available Entry Capacity, where the adjustment is executed:

- Up to and including 05 April 2017, the Capacity will be treated as Entry Capacity procured via Existing Contracts; or
- Subsequent to 05 April 2017, the Capacity will not be treated as Entry Capacity procured via Existing Contracts.

## NTS Optional Charge (see paragraph 3.25 in Section 3)

### Introduction

The new method will provide for alternate entry and Exit Capacity charges at applicable entry and exit system points, replacing the NTS Optional Commodity Charge Rate. These charges will be derived from applying updated cost data from National Grid to an amended NTS Optional Commodity Charge equation (similar to the Option Two proposed in NGG discussion document GCD11<sup>13</sup>) to obtain a relationship between the cost of providing pipeline capability to support a particular load size and distance travelled from a nominated NTS Entry Point to the particular NTS Exit Point (OCC rate given in p/kWh), known as the OCC Route.

<sup>13</sup> <https://www.nationalgridgas.com/sites/gas/files/documents/42342-NTS%20GCD11%20-%20Optional%20Commodity%20Charge%20Change%20V1.3.pdf>

The results of the cost function are then converted into a capacity charge by reference to the FCC and MNEPOR for the relevant NTS Exit Point. Consistent with the approach advocated for recovery of Transmission Services revenue, the resultant cost in p/kWh/day is then split 50:50 to apply at the relevant NTS Entry Point and NTS Exit Point.

Users of a specific OCC route (the combination of a qualifying NTS Exit Point and nominated NTS Entry Point will, in aggregate, incur an Annual OCC Fee equivalent to the cost of building and maintaining a bypass pipeline, independent of the quantity of gas flowed from the NTS Entry Point to the NTS Exit Point (to be charged monthly or annually)

## **Methodology**

### Stage One – create the updated cost function (OCC rate)

The OCC rate (p/kWh) is created using the following steps:

- a) Use a pipeline portfolio that, through using flow rates and distances, allocates a specific pipe size from the portfolio to a certain distance and flow rate combination;
- b) Produce a cost for each distance/flow rate combination by using a fixed element, relating only to the pipe diameter (this can be thought of as the "connection cost" to the NTS and includes the costs such as Calorimetry, Pig Traps, Pressure Reduction) and a distance related (cost per km) element which applies to a range of pipe diameters (using updated price control based costs from National Grid for the larger diameter pipes);
- c) Produce an annual capital cost based on the applicable annuity factor (AF) (provided by National Grid and published within the Transportation Statement);
- d) Produce commoditised unit costs (in terms of p/kWh) by dividing by the assumed annual quantity (AQ) (which is derived from the specific site MNEPOR);
- e) Measure the average p/kWh using a comparison between the costs at 0km and 50km.

The OCC rate formula is calculated based on flow rates and pipeline distances. The form of the equation is as follows:

$$p/kWh = A \times M^{E1} \times D + B \times M^{E2}$$

where the applicable parameters for the equation, A, E1, B and E2, will be published on an annual basis within the Transportation Statement and the variable inputs (M and D) into the equation are as follows:

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

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

^ means 'to the power of..'

The applicable parameters for the 2019/20 Gas Year are as follows:

$$A = 862.64$$

$$B = 735.1$$

$$E1 = -0.79$$

$$E2 = -0.7$$

So the resultant OCC rate formula is:

$$\text{OCC (p/kWh)} = 862.64 * [(M)^{-0.79}] * D + 735.1 * (M)^{-0.7}$$

### Stage Two – convert cost function into a capacity charge

The OCC formula produces a p/kWh based on an assumed peak flow per day. As the MNEPOR value is a maximum flow rate per day value it can be used to convert the OCC formula to a daily pipeline cost. This can then be divided by the FCC to create a capacity rate as per the following:

Daily pipeline cost (p/day) by application of the following:

$$\text{Daily Pipeline cost} = \text{OCC rate} * \text{MNEPOR}$$

NTS Optional Capacity rate (p/kWh/day) by application of the following:

$$\text{NTS Optional Capacity rate} = \text{Daily Pipeline cost} / \text{FCC}$$

where FCC is the Forecasted Contracted Capacity for the relevant NTS Exit Point (as determined by National Grid and published within the NTS Gas Transportation Charges Statement and the relevant charging model).

### Stage Three – apportion the charge between entry and exit

Consistent with the approach advocated for recovery of Transmission Services revenue, the resultant cost in p/kWh/day is then split 50:50 to apply at the relevant NTS Entry Point and NTS Exit Point.

$$\text{NTS Exit OCC rate} = \text{NTS Optional Capacity rate} / 2$$

$$\text{NTS Entry OCC rate} = \text{NTS Optional Capacity rate} / 2$$

As Users will be booking NTS Entry and NTS Exit Capacity through the usual methods, in order to arrive at the above level of charges, a rebate (or charge<sup>14</sup>) will need to be calculated and provide for difference between the actual NTS Entry and NTS Exit Capacity charges and the revised charges as above. This will be calculated and charges adjusted on a monthly basis.

It is proposed that the cost inputs going forwards will be updated for the relevant charging period via indexation using publicly published CPI figures<sup>15</sup> i.e. for the Gas Year beginning October 2020 the cost inputs will be updated using CPI from the 12 month period ending 31 January 2020. For each subsequent 12 month period the cost inputs will be updated using CPI from the previous 12 month period ending 31 January.

### Example 1 Derivation of the NTS OCC charge

The following example shows how the charge would be calculated and applied:

Entry Point X

Exit Point Y

MNEPOR = 40,000,000 kWh/d

FCC (for the relevant NTS Exit Point) = 35,000,000 kWh/d

D = 10 km

<sup>14</sup> A charge may apply for example where the User's WAPen is lower than the NTS Entry OCC rate by virtue of the value of Existing Contracts

<sup>15</sup> For details, see <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l55o/mm23>

Stage one:

$$\begin{aligned} \text{OCC rate} &= 862.64 * [(M)^{-0.79}] * D + 735.1 * (M)^{-0.7} \\ &= 0.0120 \text{ p/kWh} \end{aligned}$$

Stage two:

$$\begin{aligned} \text{Daily pipeline cost (£)} &= 0.0120 * 40000000 / 100 = £4808.84 \\ \text{Capacity shorthaul rate (p/kWh/d)} &= £4808.84 / 35000000 * 100 = 0.0137 \text{ p/kWh/d} \end{aligned}$$

Stage three:

$$\begin{aligned} \text{NTS Exit OCC rate} &= 0.0069 \text{ p/kWh/d} \\ \text{NTS Entry OCC rate} &= 0.0069 \text{ p/kWh/d} \end{aligned}$$

## Application of OCC

The NTS Optional Capacity Reserve Charges will apply to an Applicable Quantity (Q) calculated on each gas day:

$$Q = \text{MIN} \{ \text{CAPen}, \text{CAPex}, \text{FLOWen}, \text{FLOWex} \} \text{ where}$$

CAPen = User's net firm entry capacity entitlement on the day at the applicable ASEP,

CAPex = User's net firm Exit Capacity entitlement on the day at the applicable Exit Point,

FLOWen = User's gas flow entry allocation on the day at the applicable ASEP, and

FLOWex = User's gas flow exit allocation on the day at the applicable Exit Point.

For an applicable entry and Exit Point combination, the NTS Optional Capacity Reserve Charges to be levied on the Applicable Quantity are calculated as follows:

$$\text{NTS Optional Entry Capacity Charge} = Q \times \text{NTS Entry OCC Rate}$$

$$\text{NTS Optional Exit Capacity Charge} = \text{OCCex} \times \text{NTS Exit OCC Rate}$$

where OCCex is the OCC Exit Capacity volume calculated as follows

$$\text{OCCex} = (\text{CAPex} - \text{FLOWex}) + Q$$

### Example 2 Application of the OOC

From Example 1 where User books CAPex 35,000,000 kWh/d at the Exit Point, CAPen 20,000,000 kWh/d at the Entry Point and flows FLOWex 30,000,000 kWh/d:

$$\text{NTS OOC Entry Charge} = 20,000,000 \times 0.0069 = £1,380$$

$$\text{NTS OCC Exit Charge} = ((35,000,000 - 30,000,000) + 20,000,000) \times 0.0069 = £1,725$$

Non-Transmission Services charges and Transmission Services Revenue Recovery charges will not be levied on the Applicable Quantity (Q) or the OCC Exit Capacity volume (OCCex). Justification for the exclusion of Non-Transmission charge can be found in the note prepared by WWA as part of the UNC 0621 development

process.<sup>16</sup> In relation to Transmission Services Revenue Recovery the application of this charge would not be cost reflective of the costs associated with building and maintaining a bypass pipeline.

Normal Transmission Services charges or Non-Transmission Services charges will apply, as appropriate, to those capacities or gas flows not covered by the Applicable Quantity (Q) or the OCC Exit Capacity Volume (OCCex):

WAPen = the Shipper's weighted average price of relevant firm entry capacity entitlements held on the day;

WAPex = the Shipper's weighted average price of relevant firm Exit Capacity entitlements held on the day;

Where CAPen > Q, WAPen will apply to (CAPen – Q) units of the User's entry capacity entitlement.

Where CAPex > Q, WAPex will apply to (CAPex – OCCex) units of the User's Exit Capacity entitlement.

Where FLOWen > Q, Non-Transmission Services entry charges will apply to (FLOWen – Q) units of the User's entry allocation.

Where FLOWex > Q, Non-Transmission Services exit charges will apply to (FLOWex – Q) units of the User's exit allocation.

### Example 3 Charges at the non-OCC Rate

Using the scenario from Example 2

Entry Charges Non-Transmission (non-OCC) = 30,000,000 – 20,000,000 = 10,000,000 kWh/d x Non-transmission commodity rate

Exit Capacity Charges (non-OCC) = (35,000,000- 25,000,000) x WAPex

Exit Charges Non-Transmission (non-OCC) = 30,000,000 – 20,000,000 = 10,000,000 kWh/d x Non-transmission commodity rate

Note: The reason why Exit is treated differently to Entry is to reflect the capacity nature of the service and the contribution made to the cost of building and maintaining a pipeline as provided for via the Annual NTS OCC Fee. Where, for example, a User books Exit Capacity on an annual basis at the FCC rate, and flows are below the booked level, the capacity which is not used is charged at the OCC rate. This is consistent with the concept of operating a bypass pipeline and aligns the charges generated from the methodology with the volume of capacity booked. For the avoidance of doubt, where gas is supplied from an alternative Entry Point (not the nominated OCC Entry Point) it is charged at the non-OCC Exit Capacity rate.

The same approach cannot be applied at entry on the basis that Entry Capacity can be used to supply multiple offtakes.

### **Annual NTS OCC Fee**

Users operating under the NTS Optional Capacity charge will commit to paying charges which in aggregate are equal to the total annual costs of capacity at FCC levels, for the relevant NTS Exit Point, at both entry and exit. Where the level of NTS Exit Capacity bookings and/or the level of NTS Entry Capacity bookings are below FCC levels, then an additional fee will be levied on the User, so that:

$$\text{Annual NTS Optional Capacity Fee} = (\text{FCC} \times \text{NTS Exit OCC Rate} + \text{FCC} \times \text{NTS Entry OCC Rate}) \times 365 - (\sum \text{OCC Entry Charges} + \sum \text{OCC Exit Charges})$$

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<sup>16</sup> <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/book/2018-02/SO%20derivationv3%20NW.pdf>



Where  $\sum \text{OCC Entry Charges}$  = sum of all Users OCC Entry Charges for the OCC Route

And  $\sum \text{OCC Exit Charges}$  = sum of all Users OCC Exit Charges for the OCC Route

The Annual NTS Optional Capacity Fee is apportioned over each month of the 12 month period and charged, where applicable, at the end of each month across the specific OCC Route Users.(or annually)

Where there is more than one User on a specific OCC Route the Annual NTS Optional Capacity Fee will be apportioned as follows:

User Annual NTS Optional Capacity Fee =  $\sum \text{User Q} / \sum \text{Q}$  (could be annual or monthly) over that route.

#### Example A: Annual NTS OCC Fee: A Single User

From Example 1, where the annual Applicable Quantity (Q) is on average 25,000,000 kWh/d.

Annual OCC paid by User =  $(0.0069 * 25,000,000 + 0.0069 * 25,000,000) * 365 = £1,259,250$

Annual NTS Optional Capacity Fee =  $£1,762,950 - £1,259,250 = £503,700$

The Annual NTS Optional Capacity Fee will be apportioned over each month of the 12 month period and charged, where applicable, at the end of each month (or end of each year).

#### Example B: Annual NTS OCC Fee: Two Users

From Example 1, where User A's Annual Applicable Quantity (Q) is on average 15,000,000 kWh/d and User B Annual Applicable Quantity (Q) is on average 10,000,000 kWh/d

Annual Optional Capacity Fee (to be paid by User A and User B) =  $£1,762,950 - £1,259,250 = £503,700$

User A Optional Capacity Fee =  $15/25 * 503,700 = £302,220$

User B Optional Capacity Fee =  $10/25 * 503,700 = £201,480$

As above, each Users' Annual NTS Optional Capacity Fee will be apportioned over each month of the 12 month period and charged, where applicable, at the end of each month (or end of each year).

Where the  $(\sum \text{OCC Entry Charges} + \sum \text{OCC Exit Charges}) > (\text{FCC} \times \text{NTS Exit OCC Rate} + \text{FCC} \times \text{NTS Entry OCC Rate}) \times 365$ , Users will not be charged an Annual NTS OCC Fee.

NTS Optional Capacity charges will not apply where either the Entry or Exit Point is a gas storage facility or where the Exit Point is a NTS/DNO offtake. For the avoidance of doubt, the Exit Point must be an NTS Exit Point. An Exit Point can be associated with only one Entry Point/ASEP for the purpose of attracting NTS Optional Capacity Charges.

National Grid NTS will notify relevant Shipper Users of the NTS Optional Capacity rate and the date from which they are to apply for the OCC route, as they would for the normal set of transportation charges. The NTS Optional Capacity charge will be set for a period of 12 months "the OCC Period", with the commencement of the period being on 01 October each and every year. In addition, National Grid NTS will notify the Shipper Users of the Annual Optional Capacity Fee which will apply for the OCC route. For the avoidance of doubt, where there is more than one User applying for an NTS Optional Capacity Rate for a particular OCC route, the Annual Optional Capacity Fee notified to each individual User will be the aggregate Fee calculated on the basis of the applicable FCC at the qualifying NTS Exit Point. On acceptance of the Annual Optional Capacity Fee, Users enter into a commitment to pay the Fee over the duration of the OCC Period.

A new OCC Period can commence following the expiry of an OCC Period, subject to Users making a commitment to pay the Annual Optional Capacity Fee over the duration of the OCC Period.

NTS Optional Capacity charge rates will be quoted or notified to an accuracy of 4 (four) decimal places and will be accompanied by the value of each variable in the relevant formula described above. The Annual Optional Capacity Fee will be notified in pounds and pence.

#### Transition Arrangements for NTS Optional Capacity charge

A transition run-in period is recommended to be a 150-day period date before the date on which charges from the new Proposals take effect.

At the commencement of the transition run-in period, National Grid will:

- (a) provide a written statement to each Shipper, that has Optional Commodity Charge arrangements in place, that details the NTS Optional Capacity charges to apply to the optional charge arrangements. The Shipper will be offered a one-off opportunity to terminate the optional charge arrangements for specified optional charge arrangements in which case National Grid will cancel the arrangements accordingly on behalf of the Shipper. Shippers will have 1 month to respond to the offer to terminate; and
- (b) Notify Shippers holding optional charge supply point offers of the NTS Optional Capacity charges that will apply from the commencement date and that the terms of the offers will be deemed to be amended accordingly from that date.

Except where a User elects to terminate an optional charge arrangement in accordance with sub-paragraph (a) above, Users will be required to use the usual supply point administration processes to amend or cancel optional charge arrangements.

### **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.

Where Allowed Revenue for Non-Transmission Services is required to be determined in respect of a period of less than 12 months and that period is not 01 April to 31 March (National Grid’s Formula Year), it is proposed that profiling factors will be applied separately 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 Formula Year the tariffs will be set to minimise any under or over recovery in respect of Non-Transmission Services.

## **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 of this Proposal can be any date as determined by Ofgem. It is proposed that the Effective Date will provide at least two clear months' notice from the date of Ofgem's decision and thereafter take effect from the 1<sup>st</sup> of the following month, unless an alternative specific date is stipulated by Ofgem in its decision as outlined in 3.40 of the Why Change section of this Proposal.

Where the Effective Date of the Proposal necessitates changes to reserves prices taking effect on dates other than 01 October, National Grid will require an Ofgem derogation from its obligation under Standard Special Condition A4(2) of its licence which limits changes to reserve prices to once a year and for such change to only take effect on the aforementioned date.

For the avoidance of doubt, for all Entry Points and Exit Points the revised arrangements will apply in respect of the payable price for capacity allocated for the Effective Date onwards. This rule applies regardless of whether the Effective Date falls within the overall period of tranche of capacity (i.e. within a period of a quarterly or annual allocation).

In any event, it will be necessary to take into consideration actual and anticipated revenues to be collected up to the Effective Date to determine the target revenue to be applied for the remainder of the Formula Year.

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**

It is proposed that information in respect of Transportation Charges will be published in accordance with figure 6 below.

**Figure 6: Publication dates for Transportation Charges**

	<b>Data Item</b>	<b>Publication</b>	<b>Issued by*:</b>
<b>Transmis sion</b>	Forecasted Contracted Capacity	Charging Model	2 months prior to Effective Date**
	CWD Distances***	Charging Model	
	Capacity Reference Prices	Transportation Statement	

	Multipliers	Transportation Statement
	Capacity Reserve Prices	Transportation Statement
	Interruptible Adjustment (Entry)	Transportation Statement
	Interruptible Adjustment (Exit)	Transportation Statement
	Specific Capacity Discounts (Storage)	Transportation Statement
	Specific Capacity Discounts (LNG)	Transportation Statement
	Revenue Recovery Charge (Entry)	Transportation Statement
	Revenue Recovery Charge (Exit)	Transportation Statement
	NTS Optional Capacity charge formula parameters	Transportation Statement
Non-Transmission Services	Non-Transmission Services Charges	Transportation Statement
	DN Pension Deficit Charges	Transportation Statement
	NTS Metering Charges	Transportation Statement
	St Fergus Compression Charges	Transportation Statement
	SSMP Administration Charges	Transportation Statement
	Allocation Charges at Interconnectors	Transportation Statement

\* 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. The publication dates may also be changed depending on the Effective Date.

\*\* Unless the Authority provides the necessary approval for a shorter notice period to be provided.

\*\*\* The CWD distances will be calculated for the purpose of undertaking analysis of a Counterfactual CWD Model

## 6 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 but the allowed revenue collected by National Grid NTS will not change. The Gas Transportation Charges recover a set amount of monies from Users of the NTS that will not change in the event of implementation of this Proposal. These amounts are the allowed revenues determined in line with National Grid's Licence. Under these Proposals, the overall amount of money that is being recovered does not change in line with the Licence. This Proposal does provide a new overall framework that will essentially distribute the same amount over a changing base of Customers in a way that National Grid believes is fairer and more proportionate than the current regime with all Users of the NTS contributing towards the costs of the NTS by picking up Transportation Charges.

The nature of how the overall revenue is charged downstream from NTS Charging will depend on how other market Participants will accommodate charges into their respective charges.

### **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. These impacts are being assessed. The CDSP (Xoserve) has been consulted on all stages of development of this project



## 7 Relevant Objectives

**Table 2: 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.	None
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.**

The whole charging package contained in this Modification has been designed to encourage fair and efficient access to the pipe-line system. The expected more stable and predictable charges compared with what is generated from the current methodology should encourage more stable and predictable use of the system by Shippers - something that should in turn help National Grid generate accurate capacity usage forecasts for setting charges in future. The removal of free capacity products is an important aspect of the Proposal as is the inclusion of an NTS Optional Capacity Charge (to replace the Optional Commodity Charge). Without an NTS Optional Capacity charge there will likely be an increased incentive for the use of some system bypass pipelines because some of the charges being generated by PS produce counter-intuitive outcomes – high exit charges for large sites located close to Entry Points (the same argument could be made had the reference price methodology been CWD.) By improving the predictability of the use of the system, National Grid should be better placed and better prepared to operate it in a more efficient manner. By encouraging efficient use of the system by Users (e.g. by avoiding inefficient bypass) National Grid will ensure that its operations can be economically optimised so that costs are kept as low as possible on a pence / kWh flowed basis.

At the same time, this Modification recognises that the current level of Optional Commodity Charge discounts applied to Transmission Owner (TO) charging has become distorted in recent years by its structural link to the rising level of TO Commodity charges. The Modification is therefore designed to promote efficiency and economy in the use of the NTS pipeline system by increasing the costs paid by Users shipping along routes which qualify for the NTS Optional Capacity charge in line with the costs for building and maintaining a bypass pipeline of the same distance. Where Users/customers are able to choose between the costs of using the NTS or building and maintaining a bypass pipeline, where the cost of using the NTS are a reasonable proxy for private ownership, the outcome will be efficient. A cost based Optional charging methodology provides a robust, enduring basis for dis-incentivising inefficient NTS by-pass.

**c) Efficient discharge of the licensee's obligations.**

The proposed changes to TPD Section B and EID Section 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;**

The proposed changes to TPD Section B and EID Section B (where applicable) support the implementation of the new charging methodology and arrangements. To the extent that the application of a new Reference Price Methodology is expected to provide a more stable and predictable price setting regime, Shippers will have a greater level of confidence in their forecasts of prospective use of network costs and therefore set their own service costs more accurately (potentially with a lower risk margin) thereby enhancing effective competition.

The NTS Optional Capacity charge solution will allow Shippers to compete more effectively at proximate offtakes, including power stations, without having to build their own (inefficient) by-pass pipelines. It will also facilitate gas flows across Interconnection Points, encourage gas trading and help to attract gas to the GB market. By ensuring that the NTS Optional Capacity charges applied on nominated routes are set in a manner reflective of the costs of building and maintain a bypass pipeline, cross-subsidies between NTS OCC Users and non-NTS OCC Users will be eliminated. As such competition will be duly secured.

Competition between relevant Shippers is not adversely affected by the exclusion of Existing Contracts from the proposed application of the Transmission Services revenue recovery mechanism. While this Proposal is expected to result in reduced capacity charges under Existing Contracts vis-à-vis other contracts, different treatment of Existing Contracts is justifiable and necessary due to the nature of these contracts. The Existing Contracts were typically concluded for peak capacity on a long [or medium] term basis in order to signal initial capacity, to support capital project investment and/or to provide assurance and visibility as to secured capacity costs over the term of the contract. This differs materially from the decision-making underpinning short term capacity contracting. Moreover, as noted in greater detail in paragraph 7(g) below, the Existing Contracts are within the class of fixed price contracts which are exempted by Article 35(1) of the EU Tariff Code from any change to transmission tariffs and therefore should not be subject to the imposition of these additional charges. Finally, imposition of "top-up" charges has typically been linked to utilisation of capacity and utilisation under Existing Contracts is relatively low. Therefore, it is appropriate for Existing Contracts to be treated differently from other contracts as regards the imposition of the additional capacity charges to fully adjusted capacity.

**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 Section B and EID Section 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 UNC0621 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. 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 NTS Optional Capacity charge solution is consistent with Ofgem's Decision Letter in respect of EU Tariff Code compliance in that charges are wholly capacity-based.

Existing Contracts are those contracts potentially falling within the class of fixed price contracts defined in Article 35 of the EU Tariff Code. The ENTSOG TAR NC Implementation Document – Second Edition (revised) July 2018, clarifies that the EU Tariff Code shall not affect the tariff level in these contracts as this would otherwise undermine the principle of legal certainty and legitimate expectations. Provided that the relevant Existing Contract meets the three criteria set out in the ENTSOG TAR NC Implementation Document, the Existing Contract shall not be subject to any adjustment in capacity price for the duration of the contract, except for indexation where provided by the relevant contract.

**Table 3: 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: <ul style="list-style-type: none"> <li>(i) no reserve price is applied, or</li> <li>(ii) that reserve price is set at a level - <ul style="list-style-type: none"> <li>(I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and</li> <li>(II) best calculated to promote competition between gas Suppliers and between gas Shippers;</li> </ul> </li> </ul>	Positive
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 inclusion of a workable NTS Optional Capacity charge solution is critical to enhancing the cost-reflectivity of the methodology. PS would produce counter-intuitive capacity charges for some combinations of entry and Exit Points, e.g. high entry and exit charges when the Exit Point is in close proximity to the Entry Point. In particular, as the derivation of the NTS Optional Capacity charge is based on the cost of National Grid building and maintaining a bypass pipeline of an equivalent distance, Users of the NTS Optional Capacity charge will pay cost reflective charges. Further, the annual indexation of the Charge, based on CPI will ensure that the Charge is updated, maintaining cost reflectivity. The use of CPI is consistent with Ofgem's RIIO-2 Framework Decision<sup>17</sup> where it states: "*An accurate measure of inflation is important to ensure an accurate price control settlement. RPI is upwardly biased and has lost its credibility as an accurate measure of inflation*".

- 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:**

- 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**

The Proposer believes that the proposed utilisation of a new Reference Price Methodology which re-distributes National Grid's costs on a capacity basis will enhance cost recovery. The proposed model is better suited to the recovery of the historic sunk costs of the NTS and better relates to the expected future contracting usage of the existing NTS. The current Long Run Marginal Cost Methodology (LRMC model) is more suitable for an expanding network requiring an investment-based RPM.

The PS methodology generates charges which will result in a number of customers building private pipelines to bypass the NTS. This is due to the reasons identified in Charging Objective (a) above. Where a cost reflective NTS Optional Capacity charge is established, bypass pipelines are less likely to be built, minimising the unit costs of transportation for all Users of the NTS while eliminating cross-subsidies. In this case, competition is better facilitated

Competition between relevant Shippers is not adversely affected by the exclusion of Existing Contracts from the proposed application of the Transmission Services revenue recovery mechanism. While this Proposal is expected to result in reduced capacity charges under Existing Contracts vis-à-vis other contracts, different treatment of Existing Contracts is justifiable and necessary due to the nature of these

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<sup>17</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2\\_july\\_decision\\_document\\_final\\_300718.pdf#page62](https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf#page62)

contracts. The Existing Contracts were typically concluded for peak capacity on a long [or medium] term basis in order to signal initial capacity, to support capital project investment and/or to provide assurance and visibility as to secured capacity costs over the term of the contract. This differs materially from the decision-making underpinning short term capacity contracting. Moreover, as noted in greater detail in paragraph 7(g) below, the Existing Contracts are within the class of fixed price contracts which are exempted by Article 35(1) of the EU Tariff Code from any change to transmission tariffs and therefore should not be subject to the imposition of these additional charges. Finally, imposition of “top-up” charges has typically been linked to utilisation of capacity and utilisation under Existing Contracts is relatively low. Therefore, it is appropriate for Existing Contracts to be treated differently from other contracts as regards the imposition of the additional capacity charges to fully adjusted capacity.

**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, , however, the challenges of operating the system are becoming more acute. Where it is the case that gas supplies from non-UK sources are required to satisfy demand, as is becoming increasing the case, it is essential that transportation charges are cost reflective for offtakes close to Entry Points. Inefficient NTS bypasses and/or inflated transportation charges could result in supplies being diverted to alternative markets, or gas prices being set at artificially high levels.

**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.**

The EU Tariff Code compliance is taken into account in this Modification Proposal. Accordingly, implementation of this Proposal would ensure that the GB arrangements are compliant with the EU Tariff Code. The decision to reject UNC 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. In order to provide a compliant Proposal to address these areas, the Proposer is proposing:

- Not to propose the creation of Interim Contracts;
- Not to use a transition period for the introduction of the methodology changes; and
- To establish a cost reflective NTS Optional Capacity charge.

Please see also the comparison table between UNC Modification Proposal 0621 (which was rejected by Ofgem) and this UNC Modification Proposal located here: <http://www.gasgovernance.co.uk/0678/>

Existing Contracts are those contracts potentially falling within the class of fixed price contracts defined in Article 35 of the EU Tariff Code. The ENTSOE TAR NC Implementation Document – Second Edition (revised) July 2018<sup>18</sup>, clarifies that the EU Tariff Code shall not affect the tariff level in these contracts as this would otherwise undermine the principle of legal certainty and legitimate expectations. Provided that the relevant Existing Contract meets the three criteria set out in the ENTSOE TAR NC Implementation

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<sup>18</sup> [https://www.entsoe.eu/sites/default/files/entsoe-migration/publications/Tariffs/2018/TAR1004\\_180501\\_2nd%20revised%29%20Implementation%20Document\\_Low-Res.pdf](https://www.entsoe.eu/sites/default/files/entsoe-migration/publications/Tariffs/2018/TAR1004_180501_2nd%20revised%29%20Implementation%20Document_Low-Res.pdf), p.150

Document<sup>19</sup>, the Existing Contract shall not be subject to any adjustment in capacity price for the duration of the contract, except for indexation where provided by the relevant contract.

## **Additional considerations**

### **Consistency with the Ofgem Electricity TCR principles**

Ofgem has set out three principles to guide their work in the Electricity Targeted Charging Review. It would be reasonable to assume that the same principles will apply in its consideration of any wholesale changes to the gas transmission charging regime. To this end, the Proposer recommends that this Proposal is consistent with these principles, as follows:

#### **1) Reducing harmful distortions**

The replacement of the TO commodity charge with a capacity-based charging regime is consistent with EU TAR and ensures a fairer distribution of costs across Users and customers. A capacity-based approach reduces any distortions caused by excessive residual charges, however, a revenue allocation RPM, such as PS, generates counterintuitive prices and distorted pricing signals, particularly at Exit Points located in close proximity to Entry Points. In such cases, distorted economic signals will result in the construction of private pipelines to the disadvantage of the broad GB customer base, through; the imposition of higher unit costs for NTS transportation; possible diversion of gas supplies to competing markets where access charges are lower; or inflated gas prices, as a result of higher marginal costs of supply. A cost-reflective OCC ensures that those customers able to construct private pipelines will be presented with non-distorted NTS access prices leading to the most efficient outcomes for all GB customers. In the case of this Proposal, an OCC which is reflective of costs for building and maintaining private pipelines, the current levels of “cross subsidisation” will be extinguished, removing a critical barrier to completion

#### **2) Fairness**

The Proposal results in a fairer allocation of network charges, recognising that the PS methodology does create prices which do not accurately reflect costs of transporting gas from an Entry Point to an Exit Point. Customers which are able to contract for gas supplies directly from a specified Entry Point (being of significant size) and are located in close proximity to an Entry Point are unfairly charged for theoretical supplies from all Entry Points. A cost reflective OCC will ensure those customers pay a charge representative of the costs of transporting gas to the offtake while at the same time affording benefits to the wider GB customer base, a social benefit not factored into the OCC cost function.

#### **3) Proportionality and practical considerations**

Overall the Proposal is straightforward to implement and will have minimal impacts on central or User systems, however, it should be understood that market processes, in particular contracting for gas to be supplied to large offtakes is a process which occurs months in advance of the Gas Year. Typically, gas supply contracts of such magnitude are at least one year in length and subject to bespoke tender processes. It is essential that NTS transportation charges are known in advance of these tender processes so that contracts are able to be correctly priced and risks appropriately shared. In order for the market to respond to and accommodate any changes to the underlying transmission charging regime, sufficient notice must be provided prior to the commencement of

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<sup>19</sup> (1) The Existing Contract must be a fixed price (subject to any indexation provision) contract or capacity booking thereunder, not a floating price contract,  
(2) Only the transmission tariff level (whether capacity- or commodity-based) qualifies for exemption and  
(3) The contract must have been concluded before 06 April 2017.



the customer contracting processes. Ideally, the implementation of any significant changes to charges, in particular capacity-related charges, should take place at the beginning of a Gas Year.

## 8 Implementation

Implementation of this Modification (the 'Modification Effective Date') is proposed to be in line with an Ofgem decision. It should be by 31 May 2019 or as soon as possible after this date.

This Modification and the resulting methodology change will take effect for prices from 01 October 2019 or any other date in line with the Ofgem decision (with a minimum of two months' notice), in order to achieve compliance with the EU Tariff Code (and the relevant Statutory Instrument) as soon as possible.

## 9 Appendix 1 – FCC Methodology Statement

The FCC Methodology (as referred to in Section 5 is published on the Joint Office website and is contained within the following document:



Adobe Acrobat  
Document

## 10 Appendix 2 – Commentary on EU TAR Compliance

Proposers views on compliance with COMMISSION REGULATION (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas.



Adobe Acrobat  
Document



## 11 Appendix 3 – Commentary on Analysis

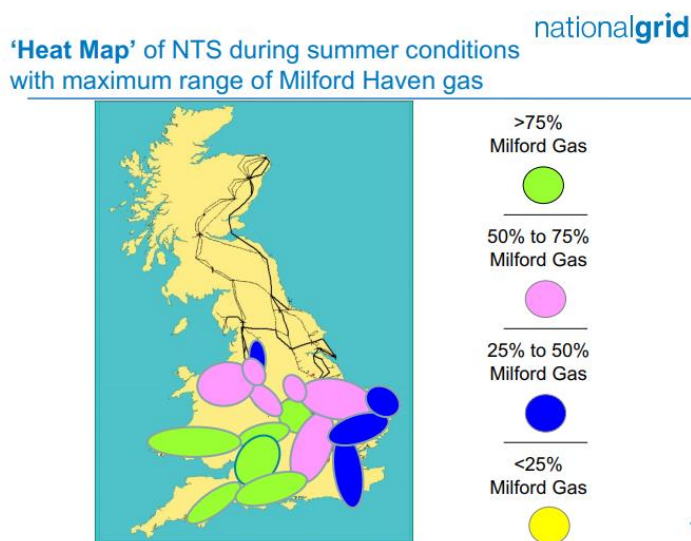
### Reference Price Methodology

Analysis comparing the Postage Stamp and Capacity Weighted Distance Reference Price Methodologies (RPM) has been conducted by RWE20 as part of Modification 0678A which South Hook Gas endorses and therefore used to support Modification 0678J.

In summary the analysis considers the potential differences in revenue recovery across the NTS that occur through the application of the Postage Stamp and CWD RPM. It is noted that the removal of distance as a cost driver results in reduced revenue recovery from entry and Exit Points that are at the extremities of the NTS. This is consistent with Ofgem’s observations in their Modification 0621 decision letter<sup>21</sup> which highlight the potential weakness in using distance as a cost driver as it could attribute a greater proportion of network costs to points on the network that have a longer average distance to other points on the NTS.

In addition to the Modification 0678A comparison analysis, South Hook Gas would like to highlight the Milford Haven “Heat Map” analysis National Grid has previously conducted UNC Modification 0645S<sup>22</sup>. The analysis shows NGG’s view on the penetration of gas from the Milford Haven ASEP and Figure 1 illustrates the “worst case” scenario for Milford Haven Gas penetration into the NTS. The network analysis highlights that there is no scenario where Milford Haven gas flows into, or past, the North East area of the NTS.

**Figure 7:** Heat Map analysis showing the maximum penetration of Milford Haven gas into the NTS



Milford Haven cannot flow to all Exit Points on the NTS and given that the Milford Haven ASEP is one of the largest serving the NTS, it therefore can be assumed that most Entry Points on the NTS would be consistent with this.

Ofgem’s decision letter on UNC 0621 indicates that, given the low levels of anticipated new investment on the NTS, capacity charges should seek to recover sunk costs on the NTS. This network analysis highlights the issue

<sup>20</sup> “0678A Analysis provided by RWE” found at <https://www.gasgovernance.co.uk/0678/Analysis>

<sup>21</sup> See <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/page/2018-12/Ofgem%20Decision%20Letter%200621.pdf>

<sup>22</sup> See <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/book/2018-02/0645S%20-%20Heat%20Map%20Analysis.pdf>

of using a distance cost driver that averages distances from an Entry Point to all Exit Points on the system<sup>23</sup> which is not representative of how the NTS is used and leads to costs being incorrectly allocated and could result in prices being set in a discriminatory manner. It is not possible to allocate historic costs to specific points, or routes, on the NTS and therefore the removal of a distance cost driver is appropriate, and the usage of a Postage Stamp RPM is more suitable.

## Optional Capacity Charge

The analysis set out here is specific to impact of introducing the OCC as proposed in Modification 0678J.

The OCC analysis was performed by National Grid<sup>24</sup> as the base data is commercially confidential.

## OCC Impacts

### a) Impact on OCC flows

Table 1 shows the reduction in OCC flows under Modification 0678J compared to the current flows (2017/18 completed gas year). The analysis conducted assumes that where the combined OCC charge (at entry and exit) is less than the standard transportation charge then the User will elect to use the OCC service.

Actual OCC flows are likely to be less than stated in Table 1 for the following reasons:

- (i) The lower capacity price for Existing Contracts<sup>25</sup> is not considered within the analysis, which would result in lower weighted capacity prices for a number of Users and therefore make a number of OCC routes uneconomical
- (ii) As Existing Contracts expire, the calculated reserve prices will reduce and therefore the OCC would become less attractive on a number of routes

The figure below therefore represents an absolute maximum value and is not reflective of the expected take up of OCC under Modification 0678J.

Notwithstanding the above, Table 1 shows that, at a minimum, flows will reduce by 98,222 GWh for 2019/20 compared to 2017/18, which is a decrease of around 40%. The analysis also shows that all OCC routes under Modification 0678J solution are under 30km compared to 274km under the current OCC methodology<sup>26</sup>.

**Table 4:** Comparison of OCC flows using 2017/18 completed gas year and 2019/20 forecast prices from 0678J

2017/18	Actual	Optional Charge flow GWh	244,508
2019/20	678J	Optional Charge flow (based on 2017/18 GY) GWh	146,283

### b) Impact on Under-recovery

Table 2 compares the level of under-recovery associated with the utilisation of OCC under Modification 0678J during a period where the current level of Existing Contracts are in place. The analysis indicates a reduced combined under-recovery of £55m which represents a significant reduction in under-recovery compared with approximately £139m in 2017/18. This assumes the full take up of OCC however, as discussed above, SHG believes this to be unlikely. In the near term there is likely to be an impact on the utilisation of the OCC because of Existing Contracts, however, given the underlying assumptions with Table 2, along with the confidential nature of the Existing Contracts data, it is difficult to determine an accurate reflection of what the impact would be. If

<sup>23</sup> As of 27<sup>th</sup> March 2019, UNC 0678 and all Alternatives that propose using the CWD RPM use this distance cost driver

<sup>24</sup> "National Grid Optional Charge Analysis v1.0" found at <https://www.gasgovernance.co.uk/0678/Analysis>

<sup>25</sup> Entry Capacity allocated prior to EU TAR NC implementation on 6<sup>th</sup> April 2017

<sup>26</sup> Optional Charge Analysis Paragraph 67

the under-recovery on Entry were to be more in-line with Exit then in the near term the total combined under-recovery could be in the region of £20m.

**Table 5:** Comparison of under-recovery from OCC use using 2017/18 completed gas year and 2019/20 forecast prices from 0678J

			Entry	Exit
2019/20	678 PS	Total Revenue Recovered (£):	325,638,141	318,084,409
		Target Revenue Recovery (£):	337,823,191	337,823,191
		Revenue Input Figure Adjustment (£):	-12,185,049	-19,738,781
2019/20	678J	Rev from Optional Charge flow @ 678 capacity prices	58,678,619	22,727,494
		Rev from Optional Charge flow @ 678J capacity prices	5,488,720	5,488,720
		Annual OCC Fee	7,814,930	7,814,930
		678J Under Recovery	-45,374,969	-9,423,844

### c) Impact post Existing Contracts

National Grid conducted further analysis to determine impact of the Modification 0678J OCC solution should Existing Contracts not be considered within the RPM (i.e. to represent the enduring scenario once Existing Contracts have expired). Table 3 shows the level of under-recovery associated with the utilisation of OCC under Modification 0678J with excluding Existing Contracts. This analysis confirms that the under-recovery for 2019/20 would be approx. £20m without Existing Contracts.

**Table 6:** Comparison of under-recovery from OCC using 2017/18 completed gas year and 2019/20 forecast prices from 0678J - excluding existing contracts

678J			Entry	Exit
2019/20	678J	Rev from Optional Charge flow @ 678 capacity prices	25,034,469	22,624,401
		Rev from Optional Charge flow @ 678J capacity prices	5,488,720	5,488,720
		Annual OCC Fee	7,814,930	7,814,930
		678J Under Recovery	-11,730,819	-9,320,751

### d) Impact on Reserve Prices

The analysis for Modification 0678J determined that reserve prices in an enduring scenario (post Existing Contracts) for Entry and Exit Users not on OCC would increase by 12% and 10%<sup>27</sup> respectively as a result of the under-recovery from OCC. The near term “worst case” price impact indicates an increase of 39% and 10%<sup>28</sup> respectively.

In addition, National Grid looked at the impact on reserve prices<sup>29</sup> if current (2017/18 gas year) OCC Users left the NTS and built private pipelines. The results of this sensitivity analysis can be seen in Table 4.

The most comparable sensitivity to the Modification 0678J Proposal is NTS OCC routes less than 30 km (given all routes within the Modification 0678J solution are under 30km<sup>30</sup>). This indicates that the redistribution of the Entry and Exit under-recovery from the OCC in Modification 0678J (approx. reserve price increase of 12% and 10%, respectively) is likely to be less than the redistribution of revenues if those OCC Users were to build private pipelines and no longer use the NTS (reserve price increases of up to 32% for Entry and 21% for Exit). Even when comparing the results with “worst case” scenario for the short term, the solution is roughly comparable with the 30km scenario, with 39% increase for Entry and 10% for Exit, although in reality this redistribution figure for the OCC would be lower when allowing for Existing Contracts prices.

<sup>27</sup> Optional Charge Analysis, Paragraph 75

<sup>28</sup> Optional Charge Analysis, Paragraph 72

<sup>29</sup> Using the CWD RPM from National Grid's 0678 solution

<sup>30</sup> Optional Charge Analysis, Paragraph 67

**Table 7:** Reserve price increase if OCC Users no longer used the NTS

	NTS OCC routes less than 20km	NTS OCC routes less than 30km	NTS OCC routes with >80% NTS OCC flow	All NTS OCC routes
<b>Entry</b>	<b>+16% to +23%</b>	<b>+24% to +32%</b>	<b>+34% to +45%</b>	<b>+46% to +54%</b>
<b>Exit</b>	<b>+11% to +18%</b>	<b>+14% to +21%</b>	<b>+18% to +26%</b>	<b>+29% to +35%</b>

## OCC Summary

Noting the limitations of the analysis above, the analysis shows that as a minimum:

- Total OCC flows for 2019/20 gas year would be reduced by a minimum of 98,222 GWh (40%), compared to the current methodology.
- The maximum distance would be reduced to below 30km (compared to approx. 270km under the current methodology)
- The number of routes using OCC would be reduced to 18 (compared to 58 currently under the current methodology)
- Redistribution of under-recovery from OCC is likely to be lower than if those OCC Users were to avoid the NTS

South Hook Gas believes that Modification 0678J limits the availability of OCC to those Users that are otherwise likely to progress private investment options that bypass the NTS. This analysis shows that there is a benefit to keeping these Users within the NTS and that there is a low, if any, cost impact as a direct result of the OCC solution contained within Modification 0678J. The solution also provides wider system benefits which are highlighted within the Relevant Objectives section of the Modification 0678J<sup>31</sup>.

<sup>31</sup> Modification 0678J can be found at <https://www.gasgovernance.co.uk/0678/>