Joint Office of Gas Transporters

UNC Modification	At what stage is this document in the process?
# UNC 0621: ## Amendments to Gas Transmission Charging Regime	01 Modification 02 Workgroup Report 03 Draft Modification Report 04 Final Modification Report

Purpose of Modification:

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 Proposer recommends that this modification should be assessed by a Workgroup

~~This modification will be presented by the Proposer to the Panel on 15 June 2017. The Panel will consider the Proposer's recommendation and determine the appropriate route.~~

High Impact:

All parties that pay NTS Transportation Charges and / or have a connection to the NTS, and National Grid NTS~~Shippers and National Grid NTS~~

Medium Impact:

N/A

Low Impact:

N/A

Contents

Timetable

The Proposer recommends the following timetable:	
Initial consideration by Workgroup	07 July 2017 (NTSCMF)
Workgroup Report presented to Panel	15 March 2018~~21 December 2017~~
Draft Modification Report issued for consultation	15 March 2018~~21 December 2017~~
Consultation Close-out for representations	17 May 2018~~01 March 2018~~
Final Modification Report available for Panel	31 May 2018~~05 March 2018~~
Modification Panel decision	21 June 2018~~15 March 2018~~

Any questions?

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Joint Office of Gas Transporters

1 Summary

What

This modification proposes to introduce a new Gas Transmission Charging regime that produces stable and predictable transportation charging and is compliant with the forthcoming EU Tariff Code (Regulation 2017/460).~~.~~

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) ~~TO and 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 has 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 may be necessary to update other sections of the UNC TPD (e.g. TPD Section B, EID Section B) and these will be accommodated as necessary.

This modification proposes to move from a Reference Price Methodology (RPM) that calculates the capacity prices using the LRMC method to one that is based on a Capacity Weighted Distance (CWD) approach. It also proposes to review other aspects of the charging framework to consider if change is necessary to better meet the required objectives.

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

This proposal also introduces, for some aspects of this methodology change, some transitional arrangements and mechanisms to review and refine components of the charging framework over time so they continue to better facilitate the relevant methodology objectives[1] and support the evolution of the GB charging regime.

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

2 Governance

Justification for Authority Direction

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 assessed by a Workgroup

3 Why Change?

~~The methodology which is currently in place for the calculation of Gas Transmission charges, and the methodology to recover TO and 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 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 booking behaviours, and the impact on the charges as a result due to the interactivity inherent within the methodology that were not anticipated.~~

~~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. 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.~~

~~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. The proposed new RPM resolves this issue by narrowing the range of prices and as such making them more predictable.~~

~~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 a clear 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.~~

~~This modification proposal considers EU compliance with the EU Tariff Code which has a deadline to implement the changes of 31 May 2019. Price changes would apply from 1 October 2019.~~

Drivers

3.1. The methodology which is currently in place for the calculation of Gas Transmission 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 that were not anticipated. Additional regulatory drivers for changes to the charging framework are:

3.1.1. The EU Tariff Code[2];

3.1.2. Ofgem's Gas Transmission Charging Review[3]

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. 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. The methodology used to calculate the St. Fergus Compression Charge is not proposed to be reviewed at this stage.

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.

[2] *http://www.gasgovernance.co.uk/sites/default/files/EU%20Tariff%20Code%20-%20final%20clean.pdf*

[3] *https://www.ofgem.gov.uk/gas/transmission-networks/gas-transmission-charging-review*

Pricing Methodology

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 RPM's[4], 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).

3.7. The proposed use of CWD 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 is used and expected to be used. It would better suit the current and future expectations for the NTS and maximising its use (driven through market behaviour) rather than using a RPM built on the foundation of continued expansion whilst continuing to provide some locational diversity in charges through the use of locational capacity and the average distances applied under the CWD approach.

3.8. As a result of changing the RPM, any adjustments, discounts and other charges must be reviewed in order to avoid unintended consequences and to ensure that a clear impact assessment (including any Ofgem Impact Assessment) can be carried out on the total impact of these adjustments, discounts and other charges to NTS customers and to the end consumer.

3.9. This Proposal considers EU compliance with the EU Tariff Code which has a deadline to implement the changes of 31 May 2019. Price changes would apply from 01 October 2019.

3.10. This Proposal also seeks to establish a framework for review and update of key inputs to the newly established RPM which will further the objectives of the RPM.

3.11. This Proposal aims to simplify the charging methodology, limiting aspects of the methodology whereby some charges can materially impact other charges and also eliminating the influence between Transmission and Non Transmission Services.

Forecasted Contractual Capacity

3.12. If implemented, the proposed changes to the charging regime may result in changes to commercial behaviours in the procurement of capacity rights. Given this uncertainty, a transitional approach for the period commencing 01 October 2019 is proposed based on capacity values documented in the National Grid Licence.

[4] See https://www.gasgovernance.co.uk/ntscmf/subg1model

3.13. Beyond 30 September 2021, National Grid proposes an approach that ensures FCC is reviewed annually and updates considered, and updated in the appropriate transportation charging statement and charging models. This review of FCC values will, at an appropriate point, take account of any behavioural changes in capacity procurement observed under the revised charging regime with the aim of aligning the FCC closer to actual bookings. At the same time the FCC is reviewed and updated, beyond 30 September 2021, 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).

Multipliers

3.14. 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 National Grid fulfils any relevant obligations.

3.15. 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.

3.16. Beyond 30 September 2020, Multipliers for IPs need to be consulted on each year (as per Article 28 of the EU Tariff code).

Discounts

3.17. 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.

3.18. 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.

3.19. 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. National Grid proposes an enduring storage discount value but recognises that EU Tafiff Code requirements for the charging regime to be reviewed, as a whole, at least every 5 years.

3.20. 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 and will be subject to the required annual consultation.

Revenue Recovery

3.21. National Grid's proposals incorporate a mechanism to manage the consequence of under or over recovery of revenues from Transmission Services Capacity Charges. The approach advocated is an initial period where these Revenue Recovery charges are applied as a flow based (commodity) charge which then transitions to a capacity based charge on an enduring basis.

3.22. Whilst National Grid recognises that use of commodity (as opposed to capacity) charges must be the exception within the overall charging proposals to be compliant with the EU Tariff Code, National Grid believes this approach is appropriate in this case. This is on the basis that it is beneficial to managing the under or over recovery of Transmission Services revenue until such time as National Grid, and industry, can have confidence in the production and use of a capacity forecast that can be used both for the purposes of setting capacity reserve prices and for managing revenue recovery, where needed.

3.23. National Grid believes that the proposed transition is as short as practicable and provides a means to mitigate the risks associated with Transmission Services revenue being wholly capacity based from October 2019. Without evidence of the change in behaviours for capacity bookings under the new regime, and given National Grid's experience to date in the use of commodity to manage revenue recovery, the temporary use of commodity as revenue recovery charge will be an effective way to manage the revenue under / over recovery in compliance with Article 17(1) of the EU Tariff Code. It will also afford National Grid time to develop a capacity booking forecast capability learning from any changing capacity booking behaviours in the market.

3.24. From October 2021, the charging framework moves away from the commodity charge to a greater 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. From October 2021, the calculation of the capacity prices will, at the time of calculation, take into account the revenue shortfall from any discounts referred to in paragraphs 3.17 to 3.20 of Section 3) in order to adjust the reserve prices such that the amount forecast to be under collected as a result of these discounts is reduced. For the avoidance of doubt the calculation of capacity charges from 1 October 2019 to 30 September 2021 will not have this additional step.

3.24.2. The approach in 3.24.1, applicable from October 2021, less revenue will be required to be collected from the Transmission Services Revenue Recovery charges than if it were not carried out. It is most relevant to do this step from October 2021 at the same time as the FCC is updated.

NTS Optional Charge

3.25. National Grid proposes to retain a charge that discourages inefficient bypass of the NTS. The general principle is to retain an incentive to utilise the NTS rather than construct a dedicated pipeline to exit points that are sufficiently close to an entry point. Such a product should consider the most appropriate method of applying such a charge and in its derivation should consider such elements as the costs of building an alternative pipeline and a reasonable limit over which this may be considered economic to construct and how the charge functions with the rest of the charging framework to be in keeping with the general principle of the NTS Optional Charge.

3.25.1. Within the transition period, National Grid proposes to effectively retain this through the use of, in principle, the existing NTS Optional Commodity ('NTS shorthaul') charge as an alternative charge to the transitional flow based Transmission Services entry and exit Revenue Recovery charges.

3.25.2. We continue to believe it is appropriate to dis-incentivise the construction of dedicated pipelines to exit points which are sufficiently close to an entry point.

3.26. Recognising the proposed transition to an entirely capacity based Transmission Services charges in October 2021 (after the end of the transition period), National Grid proposes that the application of the NTS Optional Charge as an alternative to the transition period flow based Transmission Services charges expires at the end of the transition period. For the calculation and application of an equivalent charge on an enduring basis after the transition period (i.e. from 01 October 2021), we anticipate a future change proposal to be raised to achieve this.

3.27. As a means of applying the NTS Optional charge in the transition period, there are two key differences that will apply in the transition period:

3.27.1. *Inclusion of a 60km distance cap.*

As the existing charge is based on a fixed formula (as opposed to a percentage discount for example), the number of exit points for which the optional charge is less than the standard change is far in excess of the numbers initially intended. Consequently, the entry to exit point distances within scope are also far in excess of the distances initially envisaged.

National Grid believes that the distance cap proposed constrains the availability of the incentive to those exit points sufficiently close to entry points (to genuinely consider construction of a dedicated pipeline) in line with the original aims of the optional charge.

3.27.2. *Indexation of the costs incorporated into the charge formula.*

The existing formula incorporates four numeric values which are driven by the estimated cost of laying and operating a dedicated pipeline of NTS specification in 1997. National Grid proposes that these cost inputs are updated to October 2017 values via indexation using the Retail Prices Index. Prospectively, National Grid believes it is appropriate to update these costs (via indexation) for the relevant charging period and proposes to use the Retail Prices Index for this purpose (i.e. for

October 2019 the cost inputs will be updated using RPI to October 2019 and for October 2020 updated using RPI to October 2020).

3.28. Other aspects of the existing NTS Optional Commodity charge derivation are proposed to be retained within the new NTS Optional Charge:

3.28.1. The existing range of pipe sizes taken into account;

3.28.2. The maximum daily capacity, as derived from the maximum hourly volume as specified in the Network Exit Agreement, as an input to the formula; and

3.28.3. The maximum daily capacity load being subject to a 75% load factor adjustment

Existing Contracts and Interim Contracts (Collectively referred to as Historical Contracts)

3.29. National Grid proposes provisions to apply for Entry Capacity allocated before the date of the Ofgem direction to implement this Proposal that will have been booked for 01 October 2019 or beyond.

3.29.1. This will include Existing Contracts, as outlined in Article 35 in EU Tariff Code where the "*contract or capacity booking concluded before the entry into force of the EU Tariff Code – 6 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*".

3.29.2. This will also include Interim Contracts, as defined in this Proposal the contract or capacity booking concluded subsequent to entry into force of the EU Tariff Code (06 April 2017) but before the date of the Ofgem direction to implement this Proposal. Beyond this date, sufficient clarity of the charging regime to apply from 01 October 2019 is apparent and therefore no specific treatment (for capacity subsequently booked) is proposed.

3.29.3. The capacity procured under these contracts impact the application of the CWD charging model (specifically when determining Reference Prices at Entry Points) [and calculation of Transmission Services Revenue Recovery Charges].

Periodic Consultation Processes

3.30. This Proposal advocates determination of a number of pricing related values on a periodic basis following consultation with stakeholders. Where National Grid believes it is efficient to do, consultation on more than one pricing related value may, in practice, be incorporated into a single consultation document and process.

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
- 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.

For information only:

As an overall package this updated draft modification proposal is an update reflective of current views and following discussions at NTSCMF with industry stakeholders. This can be updated within the UNC modification process where there are areas requiring additional detail or discussion. These are highlighted in the relevant parts of the solution.

~~As an overall package this modification proposal is not intended to be seen as a final view, which will evolve through assessment within the UNC modification process. Some areas represent firmer positions, however all areas will be discussed and debated to establish a charging framework that is appropriate for GB. Accordingly, the modification will be updated periodically to reflect emerging thinking.~~

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.

A CWD Model and User Guide have been produced which can be found at: http://www.gasgovernance.co.uk/ntscmf.

A Postage Stamp model is also available to be able to do a comparison of the prices in each of these models (found at the same location).

A Non-Transmission Services model has been produced which can be found at: http://www.gasgovernance.co.uk/ntscmf

Uniform Network Code (UNC) Section Y:

http://www.gasgovernance.co.uk/sites/default/files/TPD%20Section%20Y%20-%20Charging%20Methodologies_29.pdf

UNC European Interconnection Document (EID):

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

EU Tariff Code:

http://www.gasgovernance.co.uk/sites/default/files/EU%20Tariff%20Code%20-%20final%20clean.pdf

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

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

Uniform Network Code (UNC) Section B:

http://www.gasgovernance.co.uk/sites/default/files/TPD%20Section%20B%20-%20System%20Use%20&%20Capacity_55.pdf

NTS Transportation Statements:

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

Customer and Stakeholder Objectives:

http://www.gasgovernance.co.uk/sites/default/files/NTS%20Charging%20Review%20Objectives%2006Sep16%20v1.0.pdf

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

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

Knowledge/Skills

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

Definitions

Term (Abbreviation)	**Description**
Capacity Weighted Distance (CWD) Model	The CWD approach fundamentally requires three main inputs: • A revenue value is required, which will be the target revenue required to be recovered from Transmission Services; • A distance matrix for the average connecting distances on the NTS; and • A capacity value for each Entry and Exit point that will be

	the Forecasted Contracted Capacity (FCC) (which is mentioned later in this section). The CWD model produces the Transmission Services Reference Prices and with additional adjustments produces the Transmission Services Reserve Prices.
Existing Contracts (ECs) (for the purposes of this modification)	Arrangements ECs relating to Long Term Entry capacity allocated before 6 April 2017 (Entry into Force of EU Tariff Code) and Long Term Entry capacity allocated before the implementation of this modification.
Forecasted Contracted Capacity (FCC)	FCC is the capacity input to the RPM that will be used Transmission Services capacity charges calculation that for this proposal will be through a CWD methodology. There should be an FCC value for every Entry and Exit point.
Historical Contracts (HCs)	The combination of Existing Contracts (ECs) (for the purposes of this modification) and Interim Contracts (ICs).
Interim Contracts (ICs)	Arrangements relating to Long Term Entry capacity allocated after 6 April 2017 but before the date of the Ofgem direction to implement this Proposal.
Long Run Marginal Costs (LRMC) Model	This is 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 TBD Section Y of UNC.
Multipliers	The factor applied to the respective proportion (runtime) of the Base Reference Price in order to calculate the Reference Price for non-yearly standard capacity product
Network Distances (for the purposes of modelling in the RPM)	A matrix of distances used in the RPM that are the pipeline distances on the NTS.
Non-Transmission Services	The regulated services other than transmission services and other than services regulated by Regulation (EU) No 312/2014 that are provided by the transmission system operator;
Non-Transmission Services Revenue	The part of the allowed or target revenue which is recovered by non-transmission tariffs
Reference Price	Price for a capacity product for firm capacity with a duration of one year, which is applicable at entry and exit points and which is used to set capacity based transmission tariffs. This will produced in

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

5 Solution

This modification proposal seeks to amend TPD Section Y, Part A (The Gas Transmission Transportation Charging Methodology) of the UNC, by changing the methodology for the calculation of gas transmission transportation charges. Changes to TPD Sections B (System Use and Capacity) and Annex S-1 (Invoice Types and Invoice Items), and European Interconnection Document (EID) Section B (Capacity) [may be / are] required [and this will be kept under review and the modification updated accordingly].

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;
  - Transmission Exit Capacity charges;
- Transmission Services Entry Revenue Recovery charges;
- Transmission Services Exit Revenue Recovery charges; and
- Avoiding inefficient bypass of the NTS charges.

Non Transmission Services Charges

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

- Non Transmission Services Entry and Exit Charges;
- St Fergus Compression Charges;
- NTS Metering Charges; and
- DN Pensions Deficit charges.

Transmission Services Charges

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

It is proposed that a CWD 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

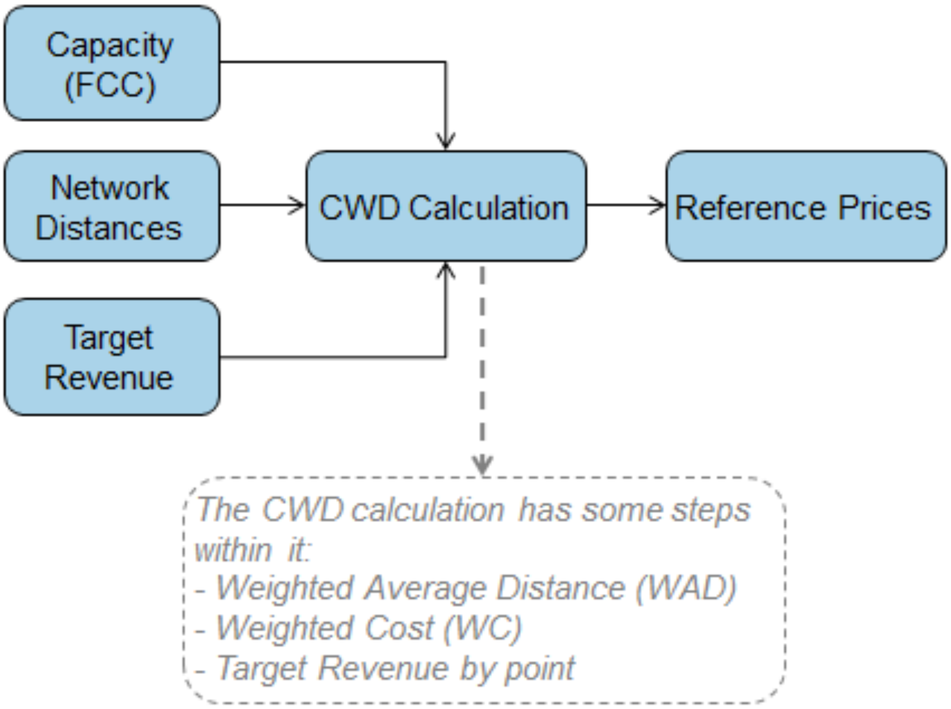
It is proposed that the calculation of the final Reference Price for a given Entry Point or Exit point cannot be zero. If application of the CWD methodology derives a zero price as a result of the FCC value or the Existing Contracts (EC) influencing the CWD calculation (see below), then the Reference Price to be used for such points will be the nearest non-zero priced Entry Point (for an Entry Point) or the nearest non-zero priced Exit Point (for an Exit Point). The applicable distance is the shortest distance based on the distance matrix from the relevant entry or exit point to the nearest non-zero priced entry or non-zero priced exit point respectively.

Calculations within the CWD Model

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

The proposed CWD approach fundamentally requires three main inputs:

- Target Entry or Exit Transmission Services Revenue - Revenue which is Allowed Revenue net of known Existing Contracts (EC) revenue and Interim Contracts (IC) revenue.
- Network Distances – derived from a distance matrix for the average connecting distances on the NTS
- Capacity (FCC) - FCC (by point) net of EC (by point) capacity booked to recover the target Entry or Exit Transmission Services revenue and Interim Contracts (IC) revenue.



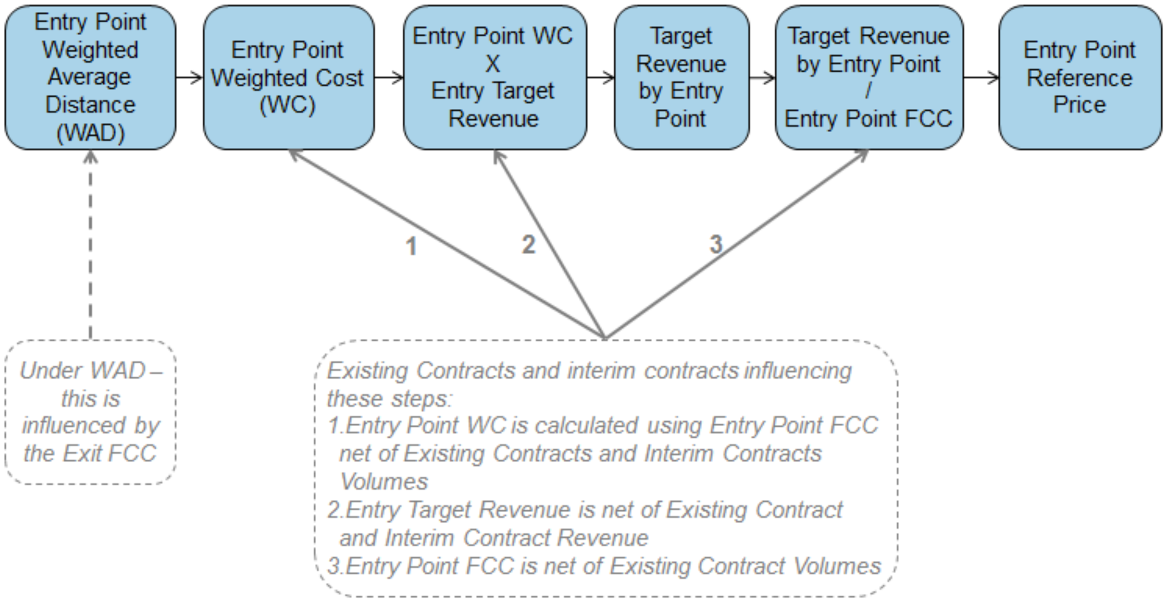
Key steps in the CWD calculations:

	Entry Capacity Calculation	Exit Capacity Calculation
Weighted Average Distance (WAD)	(Sumproduct Exit Point FCC x Distance to Entry Point) / Sum Exit Point FCC	(Sumproduct Entry Point FCC# x Distance to Exit Point) / Sum Entry Point FCC#
Weighted Cost (WC)	Entry Point FCC* x WAD / (Sumproduct Entry Point FCC* x WAD)	Exit Point FCC x WAD / (Sumproduct Exit Point FCC x WAD)
Target Revenue by point (TRP)	Entry Target Revenue x WC	Exit Target Revenue x WC
Reference Price (RefP)	Entry TRP / Entry Point FCC*	Exit TRP / Exit Point FCC

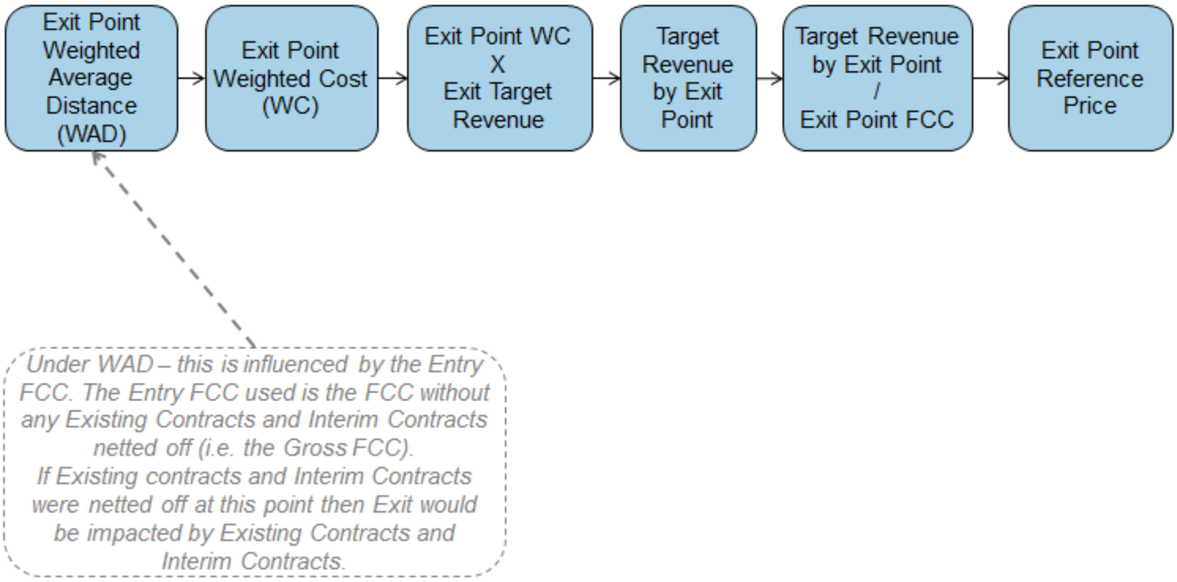
#Entry Point FCC – this is Gross Entry Point FCC (not reduced by capacity associated with Existing Contracts and Interim Contracts)

*Entry Point FCC – this is the Entry Point FCC net of capacity associated with Existing Contracts and Interim Contracts.

Entry Point Reference Prices are calculated in the following steps in the CWD model:



Exit Point Reference Prices are calculated in the following steps in the CWD model:



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

It is proposed that:

- for the period commencing 01 October 2019 until 30 September 2021 (inclusive), the FCC for an Entry Point or an Exit Point will be equal to the 'Baseline capacity' specified within National Grid's Licence (Special Condition 5F Table 4B for Entry Points, and Special Condition 5G Table 8 for Exit Points) for the relevant Entry Point or Exit Point; and

- for the period commencing 01 October 2021 onwards, the FCC for an Entry Point or an Exit Point will be equal to a forecast value determined by National Grid taking account of capacity booking trends observed at respective Entry Points and Exit Points from 1st October 2019. The approach to determine a capacity forecast will be developed and shared with industry and the intention is that it be transparent and to keep the approach flexible to develop the best possible forecast to be applied to the relevant year from 2021 onwards in the calculation of the capacity charges.

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

It is proposed that Reserve Prices for capacity will be produced in p/kWh/d. The Reserve Prices will be calculated each year based on the latest available set of inputs and once published, these will be the Reserve Prices applicable for the relevant gas year regardless of when the capacity product is procured. For example, capacity procured in 2019 for a period in October 2025 will be subject to the Reserve Prices determined for gas year 2025/26 including, where applicable, any auction premium.

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

It is proposed that Multipliers

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

It is proposed that:

- for the period commencing 01 October 2019 until 30 September 2020 (inclusive) the Multiplier applied to the Reference Prices for all Entry Point and Exit Points in order to determine the Reserve Price will be 1.

- for the period commencing 01 October 2020 onwards, the applicable Multipliers for a given gas year will be subject to an annual consultation. Once approved [method to be determined] they will be published in the Transportation Statement.

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

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

It is proposed that when determining the level of discount applied in respect of Interruptible and Off Peak Capacity from 01 October 2019, 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 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 until 30 September 2020 (inclusive) the discount applied in respect of Interruptible and Off Peak Capacity:
  - at Entry Points is 10%; and
  - at Exit Points is 10%.

- for the period commencing 01 October 2020 onwards, the level of discount applied in respect of Interruptible and Off Peak Capacity will be subject to an annual consultation. Once approved [method to be determined], they will be published in the Transportation Statement.

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

It is proposed that Specific Capacity Discounts will be applied to the [Reserve] Prices in respect of Firm and Interruptible or 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 until 30 September 2020 (inclusive), the applicable Specific Capacity Discount for a given gas year will be equal to 0%; and

- for the period commencing 01 October 2020 onwards, the applicable Specific Capacity Discount for a given gas year will be subject to an annual consultation. Once approved [method to be determined], they will be published in the Transportation Statement.

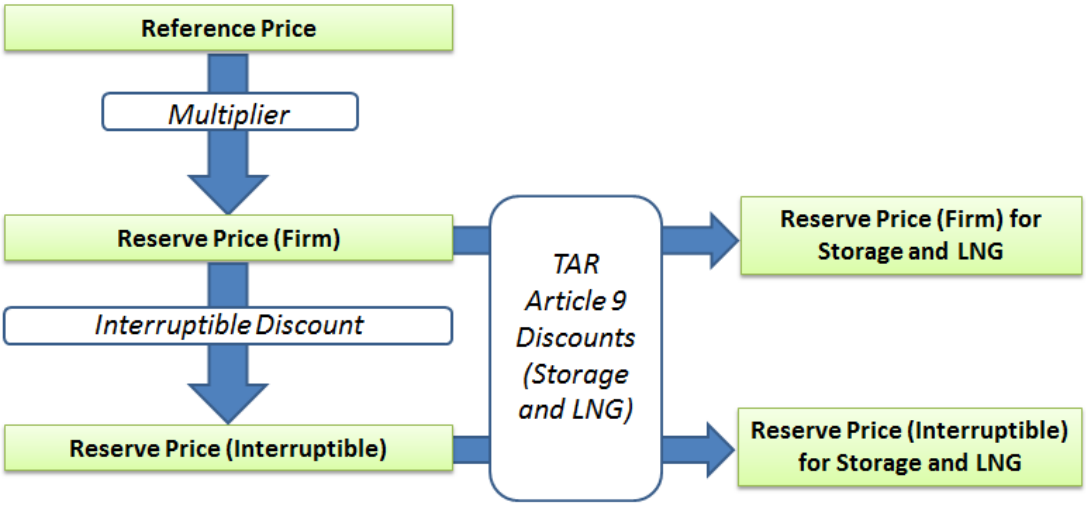
It is proposed that no other Specific Capacity Discounts are applied.

Additional Calculation Step under CWD for Reference / Reserve Prices applicable from 01 October 2021 (see para 3.24 in section 3)

This step is only applicable for Capacity reference prices from October 2021 in line with the time when the FCC is updated to be based on a more informed forecast. Once the reserve prices have been calculated taking into account all the required multipliers and discounts there will be an under recovery driven by the levels of discounts (e.g. interruptible and specific capacity discounts). The anticipated under recovery will result in an adjustment being applied to the CWD calculation in order to recalculate reference prices, and therefore reserve prices, so that the under recovery is estimated to be zero or close to zero to minimise the size of the Transmission Services Entry and Exit Revenue Recovery charges. This will be applied to the Entry and Exit Capacity calculations to recalculate the Entry and Exit Capacity reference / reserve prices for all Entry and Exit points.

Summary of Reserve Price Derivation

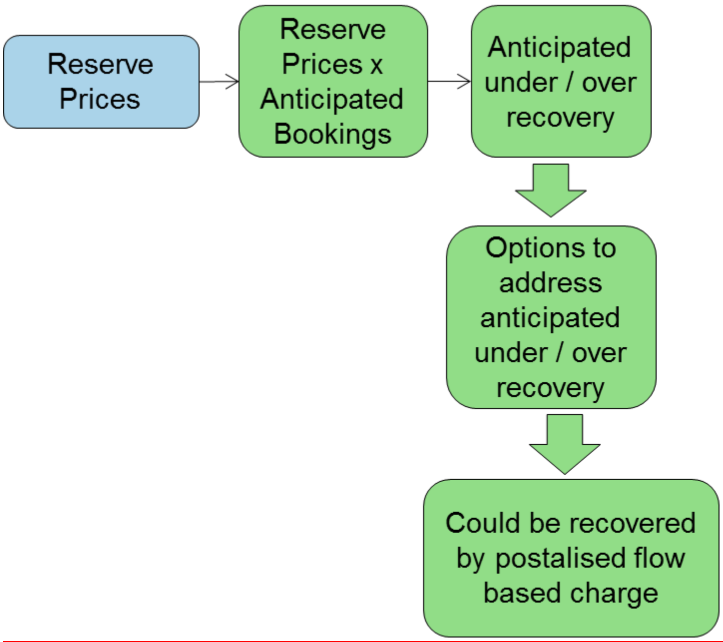
The following diagram summarises the proposed approach to the derivation of Reserve Prices (from the applicable Reference Price) for both Firm and Interruptible Capacity products (including Capacity at Storage and LNG sites).



Transmission Services Revenue Recovery Charges

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 for Entry and Exit in the same way:



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 for the period commencing 01 October 2019 until 30 September 2021 (inclusive) the transmission services revenue recovery mechanism is calculated in a number of steps and applied differently to Interconnection Points and Non Interconnection Points:

- The required revenue to be applied to the transmission services revenue recovery mechanism will be determined in the same manner for Entry and for Exit in the steps highlighted above. The steps below apply to both Entry and to Exit to produce Transmission Services Entry Revenue Recovery charges and to produce Transmission Services Exit Revenue Recovery charges.
- The total anticipated flows on the NTS excluding Storage flows unless it is flowed as "own use" gas at the Storage point will be used as the main denominator.
    - For Non interconnection points, the anticipated Non Interconnection Point flows as a proportion of the total anticipated flows on the NTS will be applied to the required revenue from the transmission services revenue recovery mechanism to determine the revenue to be collected from Non Interconnection Points. This amount divided by the applicable Non Interconnection Point flows shall determine the Transmission Services Entry and Exit revenue recovery charges for Non Interconnection Points for the relevant period. This charge shall be applied to all Non Interconnection Point flows except Storage flows not considered "own use" gas at the storage point. The Transmission Services Entry and Exit revenue recovery charges for Non Interconnection Points will be produced in p/kWh.

    - For interconnection points, the anticipated Interconnection Point flows as a proportion of the total anticipated flows on the NTS will be applied to the required revenue from the transmission services revenue recovery mechanism to determine the revenue to be collected from Interconnection Points. This amount divided by an aggregate forecast of bookings at Interconnection points shall determine the Transmission Services Entry and Exit revenue recovery charges for Interconnection Points for the relevant period. This charge shall be applied to all Interconnection Point bookings. The Transmission Services

Entry and Exit revenue recovery charges at Interconnection Points for this period will be produced in p/kWh/d.

It is proposed for the period commencing 01 October 2021 onwards, the transmission services revenue recovery mechanism is capacity based and applied as additional capacity charges to all booked capacity except Historical Contracts for Storage. The Transmission Services Entry and Exit revenue recovery charges for this period will be produced in p/kWh/d. For the avoidance of doubt, any Entry Capacity (except Historical Contracts for Storage) or Exit Capacity booked for the applicable year (irrespective of when this capacity was procured from National Grid) would be subject to Revenue Recovery charges.

[Further consideration is to be given to the application of Transmission Entry and Exit Revenue Recovery charges at IPs, and specifically its interaction with the NTS Optional Charge as outlined in this solution. This will be discussed through the UNC0621 workgroup].

NTS Optional Charge (see paras 3.25 to 3.28 in Section 3)

It is proposed that for the period up until and including 30 September 2021, the NTS Optional Charge is available as an alternative to the flow based Transmission Services Revenue Recovery charges (entry and exit). The principles that underpin the NTS Optional Charge will take into consideration those items referred to in paragraphs 3.25 to 3.28.

The method of updating the NTS Optional Charge for the relevant year in the transition period will be to follow the following formula structure and indexation approach to provide an updated formula to be applicable in the relevant year.

Formula Structure to apply whilst NTS Optional Charge is applicable as an alternative to the flow based Transmission Services Revenue Recovery charges:

$\mathbf{2086.59}*(M^{\mathbf{-0.835}})*D + \mathbf{610.70}*(M^{\mathbf{-0.654}})$ where:

where:

D means the direct (‘as the crow flies’) distance from the site or non-National Grid NTS pipeline to the Specified Entry Point in km (up to a maximum distance of 60km);

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

^ means to the power of

Indexation approach:

It is proposed that the estimated costs (of laying and operating a dedicated pipeline of NTS specification) which underpin the calculation that derives the four numeric values in bold above (which are based on costs for the gas Year commencing 1st October 2017) are subject to indexation to the Retail Prices Index for the relevant charge period consistent with RIIO-T1 Licence RPI calculations. It is proposed that the updated formula for the relevant year (within the period for which the NTS Optional charge is applicable as an alternative to the flow based Transmission

Services Revenue Recovery charges i.e. up to 30 September 2021) are specified in the Transportation Statement.

Existing Contracts (EC) and Interim Contracts (IC) (see para 3.23 in section 3)

It is proposed that before the Base Reference Prices are calculated, in respect of Existing Contracts [and Interim Contracts]:

- the Entry Capacity booked will be removed from the Entry Capacity input into the CWD model; and
- the Entry Revenue will be removed from the Entry Target Revenue input into the CWD model

It is proposed that [application of Existing and Interim Contracts in Transmission Services Revenue Recovery Charges]

Non-Transmission Services Charging

It is proposed that revenue due for collection via 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 and the St. Fergus Compressor Charges

The revenue due for collection via 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 this is applied to all flows excluding Storage flows unless it is flowed as "own use" gas at the Storage point.

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

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

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

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

Transmission Services Revenue:

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

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

Non Transmission Services Revenue:

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

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

~~This modification proposal will seek to amend Section Y Part A (NTS Charging Methodologies) of the UNC, by changing the methodology for the calculation of gas transmission charges. Changes to Section B (System Use and Capacity) of the UNC may be required and this will be kept under review and the modification updated accordingly.~~

~~This modification has a broad scope and covers a number of potential combinations of how to define certain charges and how they could be calculated and applied.~~

~~As the application (e.g. Interconnection Point (IP) vs Non IP, or any discounts or exemptions) will be discussed through the further development and refinement of the solution and options in the development process, this modification states initially that there is one single approach for all charging arrangements for GB.~~

~~Where there is a definite decision on the solution proposed in this modification, this will be highlighted. Where there is a default position for further discussions to develop solutions with NTSCMF and sub-groups these will also be identified.~~

~~Mapping of the TO revenue and SO revenue to Transmission Services revenue and Non-Transmission Services revenue~~

~~Within the collection of revenue there are some changes to the terminology used to assign the revenue. These changes are required by the EU Tariff Code. This does not affect the actual allowed revenue National Grid will be required to recover through the charges.~~

~~TO Revenue currently includes DN Pensions Deficit Charge and Meter Maintenance Charge but under the EU Tariff Code (Article 4) these do not fall into the specific criteria for Transmission Services. As the DN Pensions deficit charge and Meter Maintenance change are targeted specific charges this modification is proposing that these will be collected as Non-Transmission Services charges, thereby contributing towards Non-Transmission Services Revenue. The methodologies to calculate these are not proposed to be reviewed at this stage. 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.~~

~~Within the SO suite of charges currently there is a St. Fergus Compression charge. The methodology used to calculate this is not proposed to be reviewed at this stage. Revenue from St. Fergus Compression, which will be a Non-Transmission Services charge, will therefore be removed from the Non-Transmission Services Revenue before the main Non-Transmission Services charges are calculated.~~

~~The amounts to be recovered through these charges do not amend the overall amounts that would be required to be recovered through the remaining charges although there will be some minor UNC amendments required to reflect their inclusion under Non-Transmission Services rather than Transmission Services.~~

~~Transmission Service Charging – Capacity Charge Calculation~~

~~Capacity charging requires a RPM as the core part of the calculation for Capacity prices. This RPM is the framework to spread the costs / revenues (relevant to the methodology in place) to the Entry and Exit points and thereby on to network users.~~

~~The current methodology used to calculate the capacity prices, prior to any adjustments, is the LRMC methodology. Discussions around different RPM's have taken place in recent NTSCMF meetings in order to question whether the current LRMC methodology is the most appropriate for a NTS that is not growing. The LRMC model uses strong locational signals linked to continued investment, a principle which Network Users considered as being of limited use and not a significant factor in decision making due to the lack of expansion of the NTS.~~

~~A methodology for the calculation of the Transmission Services Charges would need to be appropriate to the way the NTS is used and expected to be used and marginal pricing is not considered the most appropriate currently nor looking into the near future. Based on a review (http://www.gasgovernance.co.uk/ntscmf/subg1model) of the sensitivity of the LRMC approach to changing certain inputs, the LRMC is more unpredictable, yielding more volatile results than other approaches, for example a CWD approach.~~

~~The industry working groups concluded that a methodology based on CWD would better suit the current and future expectations for the NTS and maximising its use (driven through market behaviour) rather than using a RPM built on the foundation of continued expansion.~~

~~Through this assessment of RPM's, the main alternative considered 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).~~

~~This modification is proposing a CWD approach which will continue to provide some locational diversity in charges through the use of locational capacity and the average distances applied under the CWD approach.~~

~~One RPM will be used for the calculation of capacity prices for all points on the system and this approach is EU compliant. This modification is not proposing to have multiple RPMs within the GB Transportation charging framework.~~

~~As they are in the current regime, capacity reserve prices will be produced in p/kWh/d.~~

~~The CWD approach fundamentally requires three main inputs:~~

- ~~A revenue value is required, which will be linked to the allowed revenues National Grid will be required to recover;~~
- ~~A distance matrix for the average connecting distances on the NTS; and~~

- ~~A capacity value for each Entry and Exit point that will be the Forecasted Contracted Capacity (FCC) (which is mentioned later in this section).~~

~~For information only: As defined in the EU Tariff Code the reference price means the 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.~~

~~For information only: A CWD Model and User Guide have been produced which can be found at: http://www.gasgovernance.co.uk/ntscmf. A Postage Stamp model is also available to be able to do a comparison of the prices in each of these models (found at the same location).~~

~~Adjustment methodology to charges (Transmission Services)~~

~~There are a number of adjustment methodologies that could be applied to the Transmission Services charges that, in combination would recover the Transmission Services Revenues. Transmission Services charging methodology adjustments may include and are not limited to RPM adjustments.~~

~~Adjustments or separate charges may serve to recover revenues where relevant or beneficial to do so, to encourage behaviours along with ensuring National Grid fulfils relevant NTS obligations.~~

~~Examples which will be discussed during this modification process and how they are applicable, are:~~

- ~~RPM adjustment;~~
- ~~Multipliers;~~
- ~~Specific Capacity Discounts;~~
- ~~Interruptible pricing;~~
- ~~Seasonal Factors~~
- ~~Other adjustments or charges~~

~~Non-Transmission Services Charging~~

~~For some aspects of the Non-Transmission Services Charging there is no proposal to change the methodology of how certain charges will be calculated. The revenue from these will contribute towards Non-Transmission Services Revenue:~~

- ~~DN Pensions Deficit Charge~~
- ~~Meter Maintenance Charge~~
- ~~St. Fergus Compression Charge~~

~~Before the Non-Transmission Services charges are calculated the total Non-Transmission Services revenue excluding the DN Pensions, Meter Maintenance and the St. Fergus revenue will be calculated. ,~~

~~Non-Transmission Services Revenue is to be recovered through a flow based charge as a flat unit price for all relevant or qualifying Entry and Exit Points, which may be for all flows on the NTS as all flows do use the NTS.~~

~~Therefore the denominator for the calculation of the Non-Transmission Services charges will be developed alongside this Modification proposal. Through the development of this modification proposal this will be discussed and debated as to whether this is appropriate and if other positions better meet the collected objectives the modification proposal will be refined and updated accordingly.~~

~~The main Non-Transmission Services charge will be produced in p/kWh, the same units as the current SO Commodity charge.~~

~~For information only: A Non-Transmission Services model has been produced which can be found at: http://www.gasgovernance.co.uk/ntscmf~~

~~Revenue Reconciliation~~

~~A separate under or over revenue recovery (otherwise known as the "K" value) will be calculated for Transmission Services and Non-Transmission Services. 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 necessary to include in this modification to ensure this is an approach populated in the UNC, to be approved by the NRA, that preserves the reconciliation between the two newly established terms (Transmission Services and Non-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, like 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 (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:~~

~~The applicable years Non-Transmission Service Revenue is added to any total (Entry and Exit) under/over recovery (K value) which was calculated in y-2, to give the applicable revenue which will be used in the Non-Transmission Services model to calculate the Non-Transmission Services charges. One K value will be produced for Non-Transmission Services Revenue.~~

~~Specific Capacity Discounts~~

~~This modification proposal is starting with a single GB approach. Contained within the EU Tariff Code there are requirements to apply 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.~~

~~The storage discount will be based on locations where the type of Entry point/Offtake is designated as a 'Storage Site' in the Gas Transporter Licence (the "Licence"), Table 4B and Table 8.~~

~~The EU Tariff Code (Article 9) also allows for discounts under certain conditions (e.g. Entry points from LNG facilities and at Entry Points from and Exit Points to infrastructure ending isolation) however does not mandate them. The level and application of discounts to all parties, and their impact on other NTS customers, will be discussed as part of this modification proposal.~~

~~For information only – The storage discount is applied to the capacity reference price which reduces the revenue that will be collected based on the expected capacity bookings which means there is an expected under-recovery of revenue. An action can be taken at this point to account for this expected shortfall, e.g. this could be via an adjustment to the revenue input to the chosen reference price model or a unit price adjustment applied either to the reference price or the reserve prices. Some of these options would still be subject to the storage discount and some would apply equally to all locations. This will be~~

~~discussed as part of the Adjustment Methodologies to charges section of this modification proposal. This process would apply equally to other sites or types where discounts are applied.~~

~~For information only – A separate UNC modification will be raised for splitting relevant points on the NTS to identify different categories of capacity.~~

~~Multipliers~~

~~Multipliers are applied after the Reference Prices have been calculated to produce the Capacity Reserve Price. Multipliers can be greater or less than 1 so they could increase or decrease the resulting reserve price relative to the reference price. Different multipliers can be applied to the different capacity products (i.e. Quarterly, Monthly, Daily) and could vary at different Entry or Exit points. They can also be applied to Entry and Exit differently.~~

~~Multipliers can be perceived in different ways by different users and can be used in a charging framework for a number of reasons (e.g. could be used as an incentive to book Long Term (LT) capacity could be used to aid revenue reconciliation, or could be a way of reflecting potential scarcity of capacity and the risk waiting until the day to book). A discussion needs to take place as to what is the purpose of multipliers and a framework developed consistent with this.~~

~~For information only: Multipliers are specified under the EU Tariff code (Article 13) for IP quarterly standard capacity products and for IP monthly standard capacity products are no less than 1 and no more than 1.5 and for IP daily standard capacity products and IP within-day standard capacity products are 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.~~

~~Multipliers for IPs need to be consulted on each year (Article 28 of the EU Tariff code), this modification proposes that the methodology for the calculation of the multipliers will be within UNC Section Y Part A but the actual values for the multipliers will be contained within a separate document.~~

~~Multipliers will be discussed and this modification proposal will be updated with the outcomes of the discussions.~~

~~Interruptible~~

~~The pricing of Interruptible capacity will be reviewed within this modification proposal, but the principles and the application of Interruptible capacity will not be amended.~~

~~A single approach for GB is the starting proposal for this modification which as a consequence means that all points will be prices based on Article 16 of the EU Tariff Code, which states that for IPs there will be a probability of Interruption to calculate the Interruptible price.~~

~~The pricing of interruptible will be further developed as part of this Modification proposal.~~

~~Forecasted Contracted Capacity (FCC)~~

~~A FCC value is a necessary and fundamental input into the Transmission Services capacity charges calculation. There needs to be a FCC for every Entry and Exit point. The term FCC comes from the EU Tariff Code however it is not a defined term under the EU Tariff Code and will require additional work to relate this to the most appropriate method for GB.~~

~~The values of the FCC are very influential on the resulting prices from the RPM and have the potential to drive the necessity or weight on other elements within the Transmission Services capacity charges calculation.~~

~~An appropriate methodology to determine FCC will be developed as part of this Modification proposal, there are a number of potential options to be discussed.~~

~~Avoiding In-efficient bypass of the NTS~~

~~There is a benefit of having such a product for avoiding in-efficient bypass of the NTS, providing its objectives, calculation and application are relevant to the overall methodology. This product will be developed alongside all elements of the charging methodology under this modification.~~

~~Seasonal Factors~~

~~Seasonal Factors are not proposed to be used in the CWD model.~~

~~Where seasonal factors are applied (linked to article 13 of EU Tariff Code) for IPs these will be subject to consultation each year (in accordance with article 28 of the EU Tariff Code).~~

~~Existing Contracts~~

~~Existing contract provisions (Article 35 in EU Tariff Code) are applicable if the "contract or capacity booking concluded before the entry into force of the EU Tariff Code – 6 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".~~

~~It does not apply to capacity at Exit points as charges change each October nor Entry and Exit commodity charges as they change at least twice a year in April and October.~~

~~As part of this modification it will be necessary to consider the charges or adjustments or alternative charging arrangements that it may be permissible to levy on Existing Contracts.~~

~~Aspects of the GB Charging Regime where there are no proposals for change (for information only):~~

~~The following is a list of items for which changes are not being proposed at this time. Some of these may be discussed as part of the longer term charging reviews:~~

- ~~Auction Structure – All timings for auctions will be as per now or as per CAM changes.~~
- ~~Entry/Exit Split – Keep as 50:50 split.~~
- ~~Gas Year/Formula Year – Formula Year is April to March and Gas Year is October to September, will keep these as currently are.~~
- ~~DN Pensions Deficit Charge – No change to the calculation or the application of the charge.~~
- ~~St.Fergus Compression Charge – No change 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 MOD 611 Amendments to the firm capacity payable price at IPs.~~
- ~~Allowed Revenue – No change as per the Licence.~~
- ~~Principles and application of Interruptible – As per MOD 500 EU Capacity Regulations - Capacity Allocation Mechanisms with Congestion Management Procedures.~~

Joint Office of Gas Transporters

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

Depending on the final proposal of the charging methodologies there will be impact on different consumer groups but the allowed revenue collected by National Grid NTS will not change. This section will be developed as this modification proposal develops.

Cross Code Impacts

None

EU Code Impacts

EU Tariff Code compliance is considered as part of this modification proposal.

Central Systems Impacts

[Impact being assessed by Xoserve]. There will be impacts on Gemini and UK Link invoicing systems. Discussions on these impacts are already underway.

~~To be discussed during the development of this modification proposal.[There are likely to be impacts on Gemini and invoicing systems.~~

7 Relevant 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~~None~~
aa) That, in so far as prices in respect of transportation arrangements are established by auction, either: (i) no reserve price is applied, or (ii) that reserve price is set at a level - (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and (II) best calculated to promote competition between gas suppliers and between gas shippers;	Positive~~None~~
b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;	Positive
c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between	Positive~~None~~

gas shippers and between gas suppliers; and	
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:

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.

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.

To the extent that TPD Section B is impacted, this will require a review of the standard Relevant Objectives in addition to the above.

8 Implementation

No implementation timescales proposed, these will be discussed within the workgroups.

This modification and the resulting methodology change will take effect for prices from October 2019, in order to achieve compliance with the EU Tariff Code.

9 Legal Text

Text Commentary

To be provided later

Text

To be provided later

10 Recommendations

Proposer’s Recommendation to Panel

Panel is asked to:

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