

UNC Modification	At what stage is this document in the process?
<h1 data-bbox="134 324 657 414">UNC 0790:</h1> <h2 data-bbox="134 454 991 591">Introduction of a Transmission Services Entry Flow Charge</h2>	<div data-bbox="1209 309 1469 629"> <div data-bbox="1209 309 1469 383">01 Modification</div> <div data-bbox="1209 394 1469 468">02 Workgroup Report</div> <div data-bbox="1209 479 1469 553">03 Draft Modification Report</div> <div data-bbox="1209 564 1469 638">04 Final Modification Report</div> </div>
<p data-bbox="129 683 507 719">Purpose of Modification:</p> <p data-bbox="129 734 1469 965">This Modification would revise the method of the determination of National Grid Entry Transmission Services Capacity Reference Prices and introduce a new flow-based Transmission Services Entry charge (payable by all Users). The purpose of these changes is to achieve a greater degree of year on year stability in the pricing of Transmission Services Entry Capacity and reduce the overall price differential between Existing Contracts and Non-Existing Contracts.</p>	
<p data-bbox="129 1016 308 1052">Next Steps:</p> <p data-bbox="129 1068 979 1104">The Proposer recommends that this Modification should be:</p> <ul data-bbox="154 1122 1353 1240" style="list-style-type: none"> • considered a material change and not subject to Self-Governance • treated as urgent and should proceed as such under a timetable agreed with the Authority 	
<p data-bbox="129 1344 399 1379">Impacted Parties:</p> <p data-bbox="129 1395 817 1431">High: Shipper Users at Entry, National Grid NTS</p> <p data-bbox="129 1449 199 1485">Low:</p> <p data-bbox="129 1503 217 1538">None:</p>	
<p data-bbox="129 1583 389 1619">Impacted Codes:</p> <p data-bbox="129 1637 220 1673">None</p>	

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Timetable			
Modification timetable:			
Pre-Modification Discussed	05 October 2021		
Modification Proposal sent to Ofgem	08 November 2021		
Ofgem decision on Urgency	15 November 2021		
Modification Proposal issued for consultation	16 November 2021		
Consultation Close-out for representations	06 December 2021		
Final Modification Report available for Panel	09 December 2021		
Modification Panel recommendation	16 December 2021		
Final Modification Report issued to Ofgem	17 December 2021		

1 Summary

What

The current determination of Reference Prices for Transmission Services Entry Capacity is calculated *net* of any capacity or revenue associated with Existing Contracts (i.e. capacity allocated prior to 06 April 2017). As Transmission Services Entry Capacity charges are the only means of recovery of Transmission Services Entry Allowed Revenue (aside from Entry Transmission Services Revenue Recovery charges) and as the ‘fixed’ unit price of Existing Contract capacity is relatively low, recovery of the bulk of National Grid’s Allowed Revenue at Entry is currently recovered in respect of Entry Capacity allocated from 06 April 2017 (‘new Entry Capacity’).

The comparatively low quantities of new Entry Capacity allocated mean that the Entry Capacity Reference Price (and therefore Entry Reserve Prices) which are redetermined each Gas Year are significantly higher than the typical price for Existing Contract Capacity and are extremely sensitive to variations between forecast new Entry Capacity allocations year-on-year. This has led to material variations (i.e. volatility) in the year-on-year Reference Price rates (and therefore Reserve Price rates) of Entry Capacity to facilitate recovery of Allowed Revenue at Entry.

Why

The key aims of the changes proposed are two-fold:

1. Reduction of the current differential in the overall level of Transmission Services Entry Charges payable by holders of Existing Contract Capacity compared with holders of other Entry Capacity

The price protection afforded to Existing Contract Capacity results in a **significant price differential between the unit cost of Existing Contract Capacity and new Entry Capacity**, with Users allocated the latter paying on average 23 times¹ the unit price paid for the equivalent product under an Existing Contract. The proposer believes this is **detrimental to competition** between Shipper Users.

We believe that existing arrangements which effectively target the recovery of the entry revenue shortfall (created by the pricing of Existing Contract Capacity) on holders of new Entry Capacity (only) is not appropriate and that a **more equitable approach** (i.e. fairer distribution of charges across Users) would be to socialise such costs across all gas flowed at Entry Points (aside from two stated exceptions).

It is important to note that in respect of this objective, the Proposal is seeking to *reduce* the differential in question (representing an improvement when compared to the prevailing arrangements) but does not seek to *eradicate* this differential.

As part of discussions on potential further reforms of the charging regime (i.e. separate to this modification) National Grid intends to separately engage with industry stakeholders to further discuss implications and impacts of supporting ‘Existing Contracts’ within the NTS Transportation Charging Arrangements.

2. Reduction in the level of year-on-year volatility in Entry Capacity Reserve Price rates

The existing arrangements which provide for recovery of a significant proportion of Transmission Services Allowed Revenue at Entry via a smaller quantity of new Entry Capacity increases the **risk of material variations (i.e. volatility) in the Entry Capacity Reference Prices** (and by default Reserve Prices) year-on-year which is **detrimental to market confidence** and is specifically contrary to the aims of the new NTS

¹ Based on October 2021 data where the average Reserve Price for Existing Contracts (ECs) is 0.0036p/kWh/d and the average Reserve Price for ‘new’ Entry Capacity is 0.0827p/kWh/d.

Transportation Charging Methodology which was introduced from 01 October 2020 with implementation of UNC0678A.

How

The solution proposed would **revise the determination of the Transmission Services Entry Capacity Reference Price** by removing the current exclusion of Existing Contracts Capacity and Existing Contracts Revenue from the respective aggregate capacity quantity and overall Allowed Revenue value used to determine the Entry Capacity Reference Price. *This is expected to reduce the year-on-year volatility in Entry Capacity Reference Prices (and consequently, Entry Capacity Reserve Prices) and contribute to the reduction of the current differential in the level of Transmission Services Entry Charges payable by holders of Existing Contract Capacity compared with holders of other Entry Capacity.*

The anticipated sum of:

- revenue to be recovered from new Entry Capacity (attracting the ‘standard’ capacity charge rate); and
- revenue recovered in respect of Existing Contract Capacity (attracting the lower rate agreed at the point of allocation)

would drive an under recovery of Transmission Services Entry revenue. An **additional flow-based entry charge** is therefore proposed to be applied to recover this resultant shortfall (relative to Allowed Revenue at Entry). This new charge would be payable in respect of gas flows at all System Entry Points, except those at Storage Connection Points and Interconnection Points. A discount to this charge rate would be afforded in respect of relevant System Entry Points subject to a Conditional NTS Capacity Charge Discount.

This additional flow-based entry charge would effectively cease upon expiry of the Existing Contracts in 2032 as the stated shortfall would, at this point, be equal to zero. *This is expected to contribute to the reduction of the current differential in the level of Transmission Services Entry Charges payable by holders of Existing Contract Capacity compared with holders of other Entry Capacity.*

2 Governance

Justification for Urgency

This Modification should be treated as urgent and should proceed under a timetable approved by the Authority. A proposed timeline is provided in the ‘Timetable’ section of this Proposal.

Urgent status is sought on the basis of the consequential impacts of the current arrangements representing a current issue that, if not urgently addressed at the earliest opportunity, may cause a significant commercial impact on gas shippers and in turn, may have impacts for the consequential charges levied to consumers, potentially across multiple years.

The price protection afforded to Existing Contract Capacity results in a significant price differential between Existing Contract Capacity and new capacity as illustrated in the table below. The proposer believes this is detrimental to competition between Shipper Users.

Entry Capacity Product	Average Entry Reserve Price (October 2021)	Magnitude Above EC Average Reserve Price
Existing Contracts (EC)	0.0036 p/kWh/d	

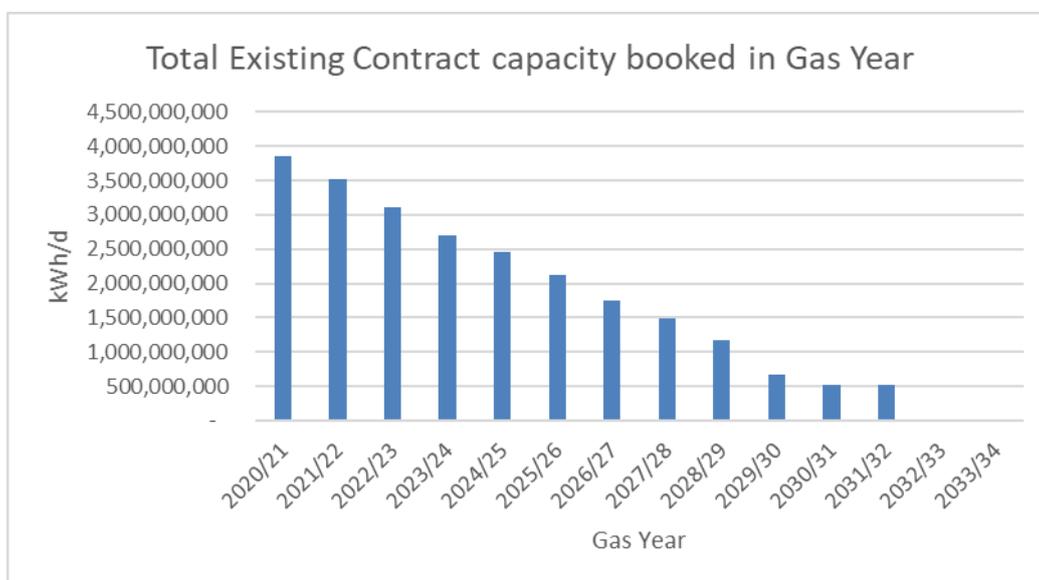
All Entry Capacity (EC and 'New')	0.0267 p/kWh/d	7.4 times
'New' Entry Capacity	0.0827 p/kWh/d	23 times

In principle, this Proposal seeks to reduce the above differential between the costs of EC capacity and New Entry Capacity. A further benefit of this change will be to increase the stability of Entry Capacity Reference Prices.

Urgent resolution seeks to introduce the proposed charge at the earliest opportunity to achieve greater stability in the pricing of Transmission Services Entry Capacity, the earliest opportunity (in terms of implementation) being for Gas Year commencing 01 October 2022. Should Urgent procedures not be applied, is it highly unlikely this benefit could be realised for 01 October 2022 thus the risk of material difference in the pricing of Transmission Services Capacity will continue beyond this point. Hence, a timely resolution will minimise, as much as possible, the volatility of the Transportation Charges.

Implementation of a new NTS Transportation Charging Methodology from 01 October 2020 was expected to impact capacity booking behaviours on the basis of the removal of zero-priced capacity. This was expected to result in capacity booking levels closer to levels of flow however, the unanticipated extent of the reduced capacity bookings at Entry in conjunction with the extent of Existing Contracts (with relatively low fixed charge rates) means that a material proportion of Allowed Revenue needs to be recovered from a relatively small proportion of Entry Capacity allocations. This has resulted in highly volatile pricing for Transmission Services Entry Capacity (other than Existing Contracts) which is not consistent with the objectives of the charging methodology, as set out in Standard Special Condition A5(5) of the NTS Licence.

The table below shows that the levels of Existing Contracts remains high for some time, highlighting the continued impact they will have on the Transmission Services Entry Capacity Reference Prices.



Justification for Authority Direction

As the Proposal seeks to adjust the proportion of costs borne by Shippers Users dependent upon the profile of their Entry Capacity allocations (between Existing Contracts and new Entry Capacity) and proportions of entry gas flows the Proposer is of the view that there is sufficient materiality to require a decision from the Authority. The materiality of this change is as set out in the Impact Analysis set out in the 'Why Change?' section.

Requested Next Steps

This Modification should:

- be considered a material change and not subject to Self-Governance.
- be treated as urgent and should proceed as such under a timetable agreed with the Authority.

As referred to above, application of Urgent procedures is sought on the basis of obtaining a decision in a timely manner in order to meet an 01 October 2022 implementation date and thus curtail the distortive impact of the current arrangements on competition as soon as reasonably practicable.

National Grid NTS ('National Grid') has highlighted in concerns in this area in a number of meetings of the NTS Charging Methodology Forum culminating in the issue of an [open letter](#) to industry on 28 May 2021 which set out our belief that further change to the charging regime was essential and a commitment to work with stakeholders and the Ofgem to achieve this. [Ofgem's response](#) to this letter dated 04 June 2021 expressed support for this action noting the need to avoid interventions in the charging regime that undermine market confidence. Ofgem also encouraged National Grid and stakeholders to "*progress...at pace...committing to an ambitious and realistic timetable for the completion of the necessary steps to effect change*".

These actions (and resultant Modification Proposal) are entirely consistent with the ACER recommendation² to "*closely monitor the impact of this 'dual regime' [the pricing of Existing Contracts and 'new' Entry Capacity] ... and to implement remedies if detrimental effects were such that that they would significantly affect competition in a negative way*"

Engagement

In addition to discussions at National Transmission System Charging Methodology Forum (NTSCMF), National Grid has hosted a number of workshops to allow those Stakeholders interested in doing so, to discuss the calculations used and the data that underpins them that help show the potential impact of these proposals. It also provided an opportunity to complement the UNC pre-modification discussions to facilitate the timescales being pursued to implement at the earliest opportunity. Materials used in these workshops is available on the National Grid website³.

In addition to the assessment in this modification and in the linked workshop materials, National Grid has also commissioned an economic assessment by Frontier Economics to assess the impacts of this proposal. This is being provided in order help support industry understanding and assessment of the impacts and to help inform any representations. It is also being provided to provide additional material that may help Ofgem in its processes to assess the impacts of this proposal and making a decision on the modification recognising the timescales needed in order to implement to set prices for October 2022.

3 Why Change?

Overall Aims

The key aims of the changes proposed are two-fold:

² See para 63 of the ACER Report '[Analysis of the Consultation Document on the Gas Transmission Tariff Structure for Great Britain](#)' (24th April 2020)

³ <https://www.nationalgrid.com/uk/gas-transmission/charging/gas-charging-discussion-qcd-papers>

1. Reduction of the current differential in the overall level of Transmission Services Entry Charges payable by holders of Existing Contract Capacity compared with holders of other Entry Capacity; and
2. Reduction in the level of year-on-year volatility in Entry Capacity Reserve Price rates.

Context

National Grid's Allowed Revenue for the provision of Transmission Services is principally recovered via the application of capacity charges to Users. The unit cost of this capacity is set by the determination of 'Reference Prices' which are then used to calculate Reserve Prices for capacity marketed via auctions. Reference Prices are re-determined for each Gas Year (reflecting variations in the annual revenue to be recovered and the forecast quantities of capacity allocated) hence the actual price payable by User will change year on year (i.e. a 'floating price') according to period to which the capacity right applies and the Reference Price for that period.

The only capacity allocations which are not subject to the floating price principle are 'Existing Contracts' which is capacity subject to fixed terms under Article 35 of the EU Tariff Code (as incorporated into UK law). This applies in respect of any capacity allocated prior to 06 April 2017 and effectively fixes the terms under which this capacity was allocated (including the price payable) regardless of the period to which the capacity right applies. In GB, as Exit Capacity is subject to a 'floating price' principle, the fixed price nature of Existing Contracts only manifests itself in respect of Entry Capacity.

The current determination of Reference Prices for Transmission Services Entry Capacity (as set out in TPD Section Y Part A-I 2.4.1) is calculated *net* of:

- any capacity associated with Existing Contracts (the '*Net Forecast Contracted Capacity*' as per TPD Section Y Part A-I 2.5.1(b)(i); and
- any revenue associated with Existing Contracts (the '*Net Allowed Transmission Services Entry Revenue*' as per TPD Section Y Part A-I 2.3.1(c))

This means that the recovery of National Grid's Allowed Revenue at Entry, net of the revenue recovered from Existing Contracts, is recovered exclusively from new Entry Capacity and as the 'fixed' unit price of Existing Contract capacity is on average significantly below that for new Entry Capacity, this means that recovery of the bulk of National Grid's Allowed Revenue at Entry (in monetary terms) is currently recovered from new Entry Capacity. In terms of proportion, the Existing Contract capacity for Gas Year 2021/22 equates to **71%** of total forecast Entry Capacity quantity (kWh) to be booked however it is forecast to only collect **10%** of the total Allowed Revenue (£) at Entry⁴.

The comparatively low quantities of new Entry Capacity allocated mean that the Entry Capacity Reference Price (which is redetermined each Gas Year) is significantly higher than the typical price for Existing Contract Capacity and is extremely sensitive to variations between forecast new Entry Capacity allocations year-on-year. This has led to material variations in the year-on-year Reference Prices (and therefore Reserve Prices) of Entry Capacity which is detrimental to market confidence and is specifically contrary to the aims of the new NTS Transportation Charging Methodology which was introduced from 01 October 2020.

By way of illustration, the following table shows the charge rate which would need to be applied to recover the specified allowed revenue dependent upon differing scenarios of aggregate quantities of capacity allocated to

⁴ These values can be seen within the latest version of the published [Transmission Services Model](#).

Users. Whilst there are equal incremental increases in the quantity of capacity (kWh) in each of the subsequent scenarios, the increasing overall capacity quantity (as the denominator) means that the proportional change to the price reduces. Hence, it can be concluded that a lower denominator value increases the sensitivity of the charge rate to change in aggregate capacity quantities.

Allowed Revenue	
£	100,000,000

Scenario	Capacity (kWh/d)	p/kWh/d to recover Allowed Revenue	Change in Capacity (kWh/d) from previous scenario	Change in Price (%)
1	500,000,000,000	0.0200		
2	1,000,000,000,000	0.0100	500,000,000,000	-50.00%
3	1,500,000,000,000	0.0067	500,000,000,000	-33.33%
4	2,000,000,000,000	0.0050	500,000,000,000	-25.00%
5	2,500,000,000,000	0.0040	500,000,000,000	-20.00%
6	3,000,000,000,000	0.0033	500,000,000,000	-16.67%
7	3,500,000,000,000	0.0029	500,000,000,000	-14.29%
8	4,000,000,000,000	0.0025	500,000,000,000	-12.50%
9	4,500,000,000,000	0.0022	500,000,000,000	-11.11%
10	5,000,000,000,000	0.0020	500,000,000,000	-10.00%
11	5,500,000,000,000	0.0018	500,000,000,000	-9.09%
12	6,000,000,000,000	0.0017	500,000,000,000	-8.33%

We believe that existing arrangements which effectively target the recovery of the entry revenue shortfall (created by the pricing of Existing Contract Capacity) on holders of new Entry Capacity (only) is not appropriate and that a more equitable approach would be to socialise such costs across all gas flowed at Entry Points (aside from two stated exceptions). We believe this is a more equitable and efficient approach on the basis of the following:

- we are of the view that the focus of the recuperation of this shortfall in Entry revenue should be focussed on **system utilisation (flows)** as opposed to the reserving of space in it (capacity);
- Existing Contracts are currently only contributing a small amount towards capacity-based revenue collection and there are **restrictions on the application of a capacity-based** additional charge that would target a small User base undermining its fairness (see below). Under a flow-based approach for this charge, broadly all flows will be required to pay it making it fairer across Users;
- the proposed approach that treats Existing Contracts and Non-Existing Contracts the same would not require a distinction to be drawn between the two i.e. **not requiring the identification of Existing Contracts and Non-Existing Contracts and matching/allocation of flows** to these capacity types. The complexities of changes required to central systems to deliver any such allocation of flows to capacity types is understood to preclude (or at the very least put at material risk) the deliverability of the necessary changes for October 2022; and
- the proposed application does not need to consider the impacts arising from circumstances where **the party liable for the capacity to National Grid is different to the party that is flowing** (allocated the gas at Entry).

Determining the Specific Proposal

In determining the Specific Proposal Rationale, we considered other options that were not pursued as it was thought the option presented in this Proposal is the one that provides the optimal outcome.

Any approach where the method of calculating and applying an additional charge needs to fulfil the objectives and be implementable and in meeting those objectives, doing so in a fitting manner.

A flow-based charge distributed across all flows (save for the noted exemptions to Storage and Interconnection Points and providing for the relevant discount to Entry Eligible Quantities) has the benefit of being applied over a larger base. This helps with the stability of any such charge given any movement in the numerator (i.e. flows) is spread across a larger base than any capacity charge would be applicable to. Using flows also provides for greater stability in the denominator as flow forecasting by National Grid has historically been relatively accurate, more so than capacity forecasting to actuals.

We discounted an approach where the additional charge is levied on capacity. With the restrictions on how this could be applied (i.e. not to Existing Contracts in line with the Entry Revenue Recovery Charge application) then it would by and large replicate the arrangements in place now through applying two charges instead of one. We do not see how this approach would add any benefits in reducing overall price volatility and the redistribution of charges to make the charging on Entry more equitable, more stable and less volatile. It would, in essence be charging the same amount to the same Users in a more complex manner. This, we concluded, would not further any of the Relevant Objectives.

Specific Proposal Rationale

In this Proposal, the desired outcome is achieved via two distinct aspects:

- *inclusion of all Entry Capacity quantities and full Entry Allowed Revenue in the calculation of Entry Reference Prices.*

This will reduce the susceptibility of the Entry Reference Price rate to material change year-on-year by reducing its sensitivity to changes in Entry Capacity quantities (as *all* Entry Capacity quantities will be used in the calculation) and therefore increase the stability of this charge rate.

- *Establishment of a new flow-based charge to recover the shortfall in revenue recovered as a consequence of the price-protection applied in respect of Existing Contracts.*

EU Tariff Code and Form of Charge

The NTS Transportation Charging Methodology effective from 01 October 2020, as implemented by UNC Modification 0678A, exempted Existing Contracts (as set out in Article 35 of the EU Tariff Code) from exposure to capacity-based Revenue Recovery Charges. These capacity holdings were excluded on the basis that levying such an additional capacity charge would impact the level of transmission tariffs resulting from Existing Contracts which is explicitly precluded by Article 35. If the proposed charge was capacity based it could not be applied to Existing Contracts for the above reason, hence this charge would be applied exclusively to new capacity. Given that new capacity effectively incurs these costs under *current* arrangements (as identified above), the additional charge, in a *capacity* form, would in essence achieve no change from the existing arrangements.

On this basis of these considerations, we have concluded that in order to remain consistent and compliant with Article 35 and to deliver the desired change to the funding of the shortfall in Allowed Revenue at Entry driven by the pricing arrangements for Existing Contracts, the proposed charge needs to be flow-based in nature.

We are of the view that this flow-based charge falls within the remit of Article 4(3)(b) of the EU Tariff Code. This article permits, by exception, an additional 'commodity-based' transmission charge. It sets out a number of criteria which such a charge should comply with as follows:

- i. *levied for the purpose of managing revenue under- and over-recovery;*

the proposed charge would be used solely for the purpose of managing the under-recovery arising from the 'fixed' pricing afforded to Existing Contracts. The proposed method of determining the Entry Capacity Reference Price gives rise to an under recovery which is the basis on which the additional charge is set. Managing under recovery (and over recovery) is consistent with the principle in Article 17. This aims to minimise any under or over recovery and to recover Transmission Services Revenue in a timely manner. The under recovery in this methodology is predictable given the nature of how prices are set and applied, enabling the ex-ante view of under recovery to be catered for;

- ii. *calculated on the basis of forecasted or historical capacity allocations and flows, or both;*

the proposed charge would be calculated on the basis of forecast flows such that application of the flow-based charge would recover the intended quantity of revenue;

- iii. *applied at points other than interconnection points; and*

the proposed charge would not be applicable at Interconnection Points. The rationale for non-application of the charge at Storage is detailed below.

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

We anticipate that Ofgem's assessment of cost-reflectivity will, in part, be considered as part of the cost allocation assessment undertaken in respect of this Proposal

This modification would apply a flow-based charge to flows other than Storage and Interconnection Point flows. Therefore, compared with the current charging arrangements the Transmission Services Entry Reference price (and by default, the Reserve Prices) will be lower for the time where the additional charge exists. The additional charge, by virtue of complying with the EU Tariff Code, cannot be applied to Interconnection Points. Therefore, the additional charge is borne at Non-Interconnection Points. An example, looking at October 2022 is shown below.

Category of ASEP	Current Regime	% contribution to overall collection from Current Regime	Total including Additional Charge	% contribution to overall collection including Additional Charge
	£m	%	£m	%
Storage Site	£7.50	1.60%	£7.1m	1.70%
Interconnection Point	£28.90	6.30%	£16.8m	3.90%
Beach Terminal	£365.70	80.00%	£343.2m	80.60%
Onshore Field	£4.40	1.00%	£3.2m	0.70%
Biomethane Plant	-	-	-	-
LNG Importation Terminal	£50.90	11.10%	£55.3m	13.00%

TOTAL	£457.40	£425.60
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Considering the potential impact on cross-subsidisation between interconnection points and points other than interconnection points looking at the data above, there is a reduction in the amount that charges at Interconnection Points will recover. Therefore, as the target revenue will not change in terms of what is needed to recover for any given year, the amounts effectively not collected from Interconnection Points will be spread across other Entry Points.

Within the EU Tariff Code there is a specific Cost Allocation Assessment (CAA) prescribed under Article 5 (Cost allocation assessments). The purpose of the CAA is around the periodic consultation conducted under Article 26 of the EU Tariff Code. Any references to the CAA therefore for this proposal may provide some insight for the CAA however it is not prescribed in its need for changes outside of the consultation required under Article 26.

This CAA can provide some figures showing the resulting distribution of capacity and commodity for Transmission Services however given that the flow-based charge cannot be applied to Interconnection Points, the results may not provide more information than the commentary above related to the distribution across points.

The CAA calculations are more prescribed for Capacity. However, the same calculation can be applied for commodity to provide one each for capacity and commodity (it can be shown Entry and Exit and total). The calculations below are shown for October 2022 values and applied consistent with previous use of the CAA.

	Entry Capacity CAA Comparison Index	Exit Capacity CAA Comparison Index	Total Capacity CAA Comparison Index
Current Regime	8.0%	29.2%	17.2%
Proposed Regime	13.7%	29.2%	17.8%

	Entry Commodity CAA Comparison Index	Exit Commodity CAA Comparison Index	Total Commodity CAA Comparison Index
Current Regime	0.0%	0.0%	0.0%
Proposed Regime	200.0%	0.0%	200.0%

Comparing the two shows that on Exit it is unchanged, for Entry the CAA ratio for Entry reduces in an understandable direction due to the ratio of capacity divided by revenue for Interconnection Points slightly increasing relative to the ratio of capacity divided by revenue for Non-Interconnection Points. The commodity percentage will naturally result in a one-sided percentage due to the non-application of the additional flow-based charge at Interconnection Points.

It is arguably more relevant to show that overall, the contribution from Interconnection Points in terms of financial value would naturally reduce, however no single category of ASEPs bear most of these changes when looking at then overall charge distribution.

A flow-based charge is also consistent with Article 4(3)(b) and we believe is most appropriate in these circumstances because it is more equitable in its application compared to a capacity-based charge that would have more limitations on which Users would pay it (as set out above), lessening its impact

compared to the current methodology. A capacity-based charge for revenue recovery is already in place and highlights the limited application of such a charge.

We view the proposed socialisation of the shortfall in Allowed Revenue at Entry created by the fixed price nature of Existing Contract capacity (via the proposed flow-based charge) as similar in principle to the arrangements to 'fund' the provision of discounts to Capacity Reserve Prices for interruptible capacity, storage capacity and conditional discounts for avoiding inefficient bypass. The shortfall in revenue that would ordinarily be generated by provision of these discounts is funded via an upscaling of all capacity Reserve Prices. In this way all Users paying capacity charges 'fund' the provision of discounts. In a similar vein, the proposed flow-based charge will socialise the funding required (to maintain the price protection for Existing Contract capacity) between all Users flowing gas into the NTS.

In terms of the application of the proposed charge to all flows, including those pursuant to Existing Contract capacity allocations, Article 35 of the EU Tariff Code affords protection to the level of transmission tariffs for Existing Contracts where a change in such a level was not foreseen. The NTS Transportation Charging Methodology in place when Existing Contracts were struck included provision for flow-based entry charges (at all Entry Points except at Storage Connection Points), one of the purposes of which was to recover shortfalls in allowed revenue at entry (arising from low entry capacity revenue).

On the basis that a flow based charge to manage revenue shortfall was apparent when Existing Contracts were entered into (up until April 2017), we do not believe that the application of the proposed charge to all flows other than at Storage Connection Points (including those flowed pursuant to an Existing Contract capacity allocation) represents a change to the level of transmission tariff *which was not foreseen*.

Exemptions

Initial considerations for the additional charge focused on application of the charge to all Entry flows and then determination of any justifiable exemptions. For this charge, two exemptions are proposed for Interconnection Points and Storage Connection Points.

The exception of **Interconnection Points** is prescribed by Article 4(3)(b) of the EU Tariff Code which precludes application of such charges at Interconnection Points.

The exception of **Storage Connection Points** is, in part, as a consequence of Article 35 of the EU Tariff Code preventing change to the level of charges applicable for capacity bookings concluded before 6th April 2017 *aside from where such change were foreseen*. As noted above, whilst the NTS Transportation Charging Methodology in place when Existing Contracts were struck included provision for additional flow-based entry charges, these charges were *not* applied at Storage Connection Points. Given that such change was not therefore *foreseen* at Storage Connection Points, to levy the Entry Flow Charge to such points would be in conflict with Article 35.

Whilst there are perspectives on Storage within the charging framework related to the history of applying commodity charges within the Transportation Charging Methodology and consistency with other charges, notably the Non-Transmission Charges, the position in relation to compliance with the EU Tariff Code presents the dominant case for the exemption.

It should be noted that the compliance with the EU Tariff Code is focused on the flows associated to Existing Contracts, the materiality associated to non-Existing Contract Storage flows is extremely small and unlikely to trigger any influence to the overall additional charge rate were they to be included. We note some additional points below that also can help consider why they might be excluded.

In a wider context, non-application of flow based (commodity) gas transportation charges to gas flows to and from storage facilities:

- was a feature of the NTS Transportation Charging Methodology in place prior to 01 October 2020, specifically in respect of the both SO (System Operator) and TO (Transmission Owner) commodity charges). TO commodity charges were conceptually, the closest in nature and form to the proposed Transmission Services Entry Flow Charge in terms of managing variances between allowed revenue and collected revenue; and
- is applied in the current NTS Transportation Charging Methodology in respect of the General Non-Transmission Services Charge. This essentially replicates the purpose of the previous SO commodity charge and thus retained an exemption for storage on the basis of the rationale for such in respect of the SO commodity charge.

In all cases, the rationale for exempting storage⁵ was to prevent ‘multiple payment’ as commercial flows at Storage Connection Points may not necessarily result in a physical flow, for example concurrent injection of 100 units and a withdrawal of 100 units would result in zero physical flow but 200 units of commercial flow. Consequently, application of a flow-based charge would dis-advantage the ‘cycling’ nature of gas injection/withdrawal at Storage. On this basis the absence of an exception would disproportionately impact storage.

We note that as part of the implementation of UNC0727 Ofgem, in their decision letter, noted they “consider that an exemption of storage from gas charges (i.e. 100% discount) would not be consistent with the principle of fair recovery of costs”. This was in relation to a modification increasing the capacity discount for storage and we note the challenge to be considered within the charging regime where a potential full exemption (or 100% discount) is being proposed.

With the points above notably on the compliance with EU Tariff Code, we believe this addresses this point whilst recognising the aspiration that charges should be considered to apply before any exemption or discount is proposed.

Discounts

A discount will be applied to entry flows which are subject to the **Conditional NTS Capacity Charge Discount**⁶, more commonly referred to as short-haul. The flow volume eligible to receive the discount will be equivalent to the Entry Eligible Quantity value used in the short-haul calculation and will receive a discount equal to that afforded to the Transmission Services Entry Capacity Charge.

The discount will apply to not unduly impact those availing of the new Conditional Discount for managing inefficient bypass. Overall, the impact to those able to access the conditional discount would be much higher than to other Users. Therefore, the application of a discount would unlike increase any charge exposure (given the new lower capacity rates to discount from) and in many cases result in lower charges than the current regime, certainly in the earlier years of the additional charge.

The discount structure established by UNC Modification 0728B in respect of short-haul was intended to replicate the potential costs of building a new pipeline and the associated savings on Capacity charges. While it excluded a discount to General Non-Transmission Services charges on the basis that they provided a proxy for maintenance costs of the new pipeline, this new flow based charge is different in

⁵ See Ofgem [decision in respect of UNC Modification Proposal 0120V](#), Ofgem [decision in respect of NTS GCM03](#) and [National Grid discussion document NTS GCD 05](#).

⁶ As introduced from 01 October 2021 by UNC Modification 0728B

that it aims to recover some of the same revenues previously incorporated in the Transmission Services Capacity charges. As these revenues were used to determine the methodology behind the short-haul discount, it is logical to extend the discount to the Transmission Services Entry Flow Charge.

Interactions and Scope

For the avoidance of doubt the proposed charge does not replace or impact the application of the Entry Transmission Services Revenue Recovery Charge which is in place to address any variations between Allowed Revenue and actual revenue expected to be recovered (i.e. this is not limited to instances of revenue shortfall expected as a consequence of the fixed terms, including price, afforded to Existing Contracts).

Impact Analysis

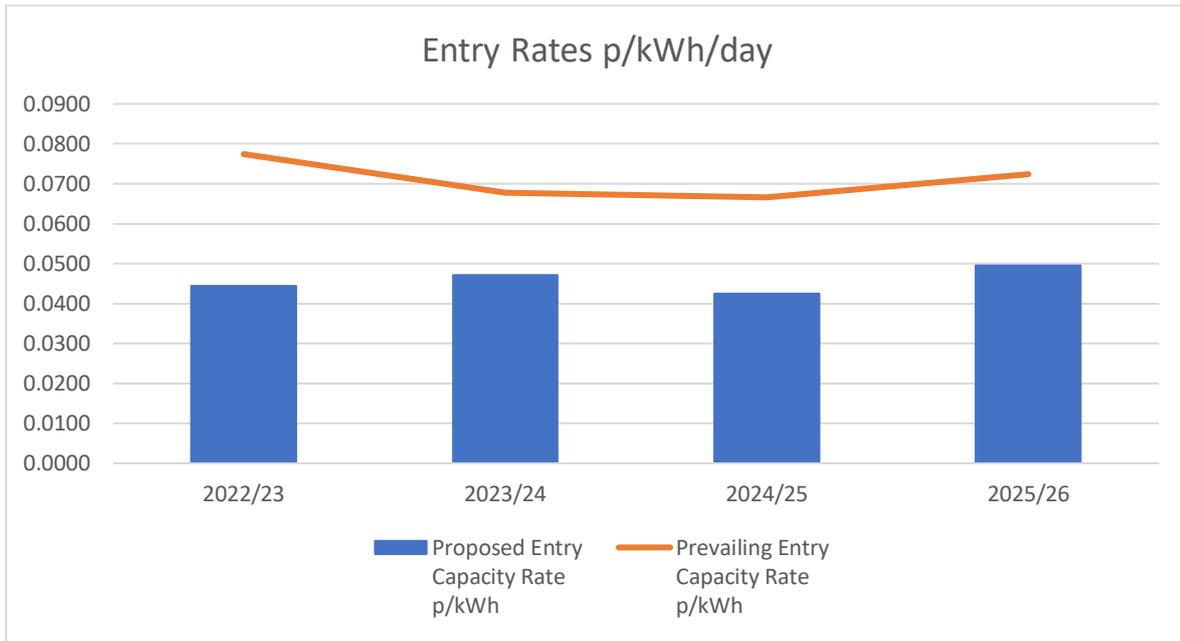
In the tables and graphs below, we compare the current published and indicative Transmission Services Entry Capacity Reference Prices⁷ against indicative Transmission Services Entry Capacity Reference Prices calculated based on the proposed method set out in the Solution (see “Transmission Services Entry Capacity Reference Price”).

Table 1

	Prevailing Entry Capacity Rate p/kWh	Proposed Entry Capacity Rate p/kWh
2022/23	0.0774	0.0444
2023/24	0.0678	0.0471
2024/25	0.0666	0.0425
2025/26	0.0724	0.0495

Fig.1

⁷ <https://www.nationalgrid.com/uk/gas-transmission/charging/transmission-system-charges>



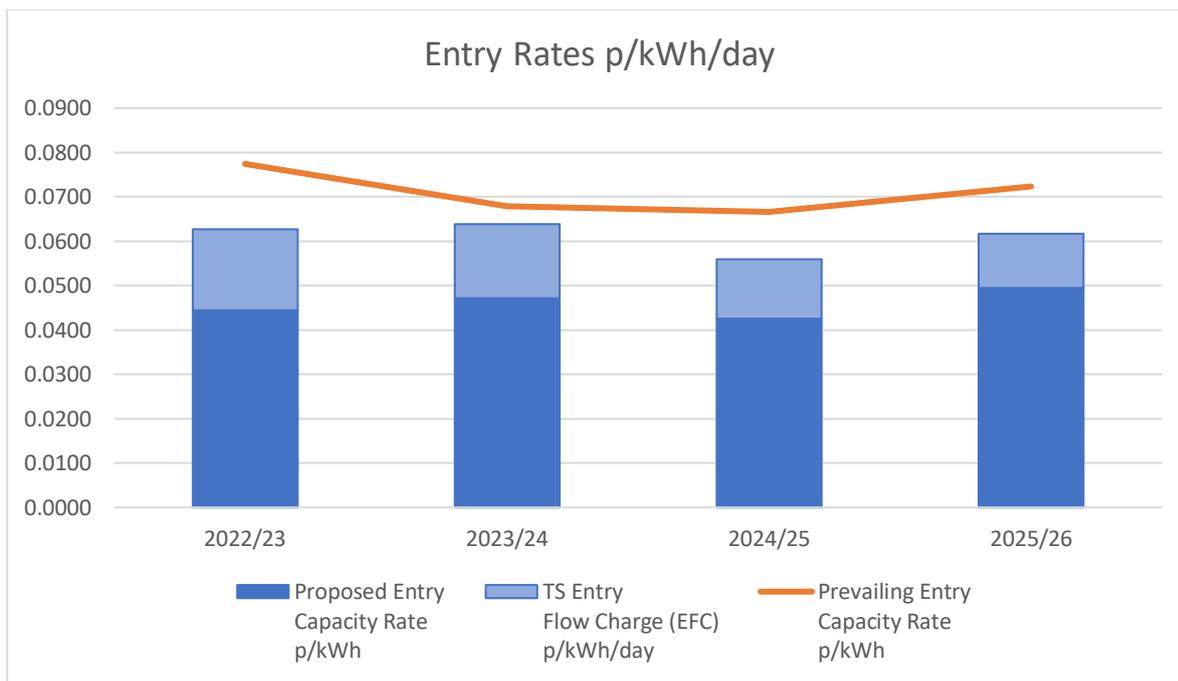
The proposed Transmission Services Entry Flow Charge (EFC) would be payable on Entry flows. Where Entry Capacity is utilised, the two rates can be combined to provide the full cost of booking and flowing that unit of energy. Where Entry Capacity is not utilised, only the Transmission Services Entry Capacity Reserve Price would be payable.

The dark blue boxes displayed in Fig.1 (which demonstrate the payable Entry Capacity Price) are repeated below. Here the light blue boxes stacked on top highlight the EFC which is payable if all capacity is utilised i.e. gas flows are equal to Entry Capacity quantity. If gas is not flowed and the Entry Capacity is not utilised, only the rate represented by the dark blue box is payable.

Table.2

	Prevailing Entry Capacity Rate p/kWh	Proposed Entry Capacity Rate p/kWh	Combined Rate p/kWh/day
2022/23	0.0774	0.0444	0.0627
2023/24	0.0678	0.0471	0.0638
2024/25	0.0666	0.0425	0.0560
2025/26	0.0724	0.0495	0.0617

Fig.2

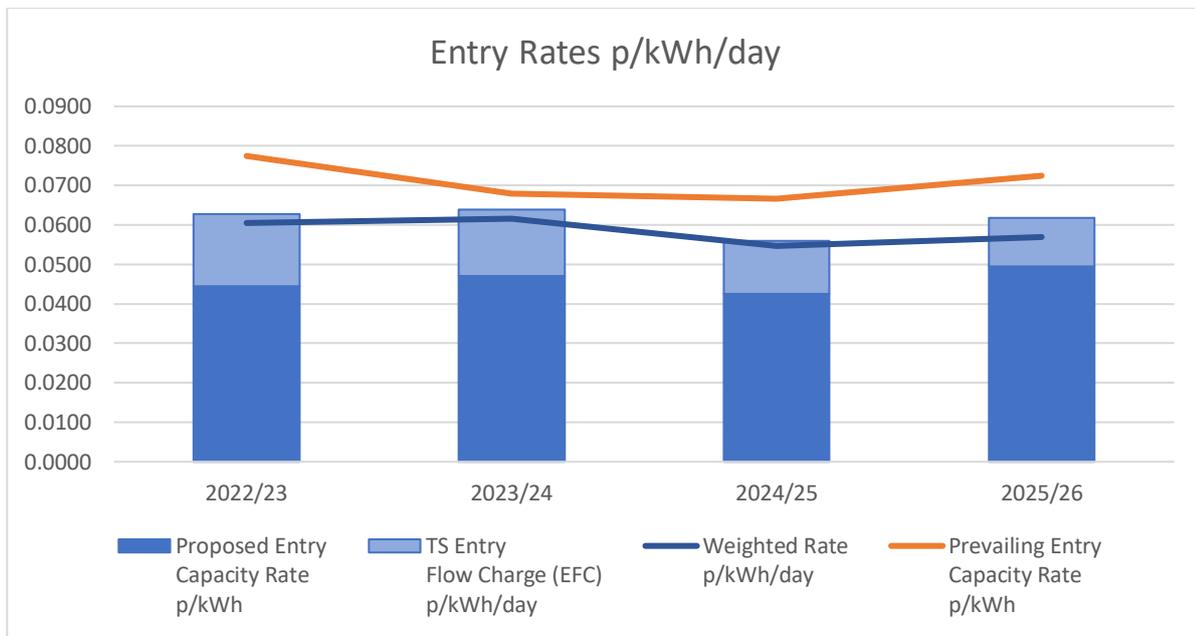


Based on the utilisation of Entry Capacity across the NTS, regardless of booking type, a weighted rate can be inferred, for both utilised Entry Capacity and Entry Capacity booked but unused, for the average User. Users who regularly maximise usage of their Entry Capacity bookings would generate a weighted rate higher than the average User and Users who utilise less than the average will have a weighted rate lower than this line, but both will still fall between the limits defined by the light blue box displayed previously in Fig.2 and repeated in the illustration below.

Table.3

	Prevailing Entry Capacity Rate p/kWh	Proposed Entry Capacity Rate p/kWh	Combined Rate p/kWh/day	Weighted Rate p/kWh/day
2022/23	0.0774	0.0444	0.0627	0.0604
2023/24	0.0678	0.0471	0.0638	0.0615
2024/25	0.0666	0.0425	0.0560	0.0546
2025/26	0.0724	0.0495	0.0617	0.0569

Fig.3



Using the same data as above and applying a 90% discount. We can see the impact on a User able to benefit from the maximum available discount relating to the Conditional NTS Capacity Charge Discount (short-haul).

Table.3a

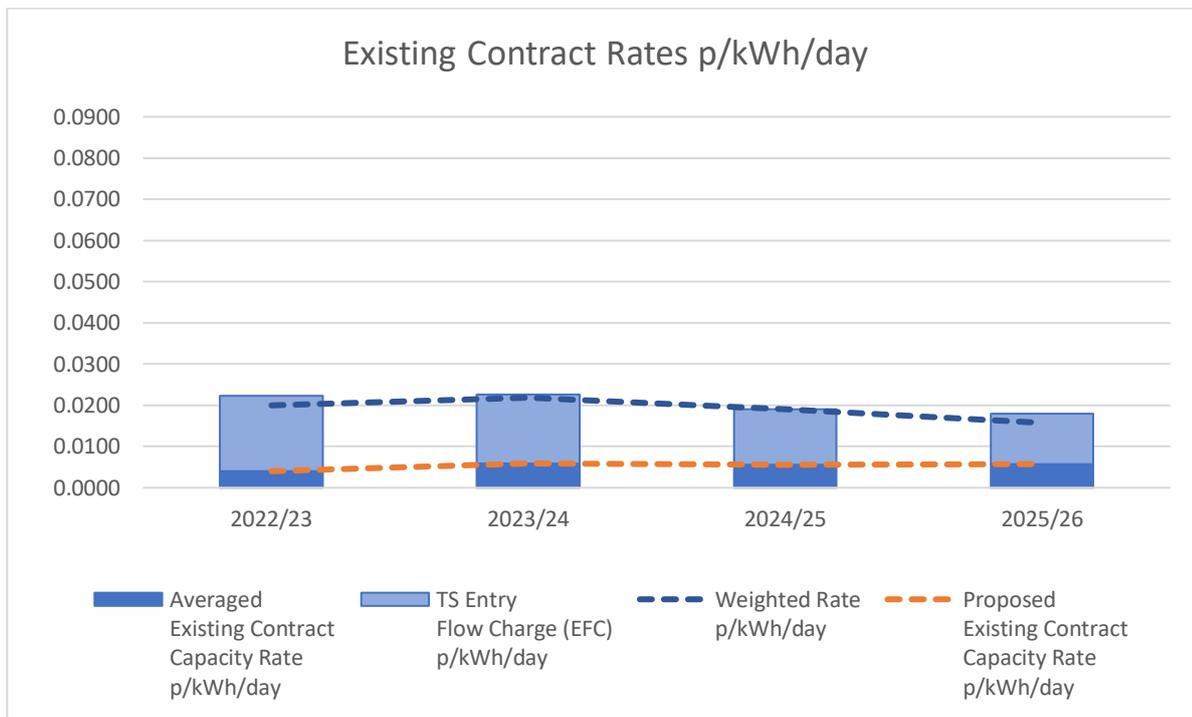
	Prevailing Entry Capacity Rate p/kWh	Proposed Entry Capacity Rate p/kWh	Combined Rate p/kWh/day	Weighted Rate p/kWh/day
2022/23	0.0077	0.0044	0.0063	0.0060
2023/24	0.0068	0.0047	0.0064	0.0062
2024/25	0.0067	0.0043	0.0056	0.0055
2025/26	0.0072	0.0050	0.0062	0.0057

The same logic can be applied to holders of Existing Contract Capacity. Below is a table and graphical representation of the impact of the mean EFC payable when combined with the weighted average Entry Capacity Price paid by holders of Existing Contracts. Note that the Capacity Price Payable by Existing Contract holders, represented by the orange line, remains unchanged as this Proposal does not impact the protected capacity price arrangements already in place for holders of Existing Contracts.

Table.4

	Averaged Existing Contract Capacity Rate p/kWh/day	Proposed Existing Contract Capacity Rate p/kWh/day	Combined Rate p/kWh/day	Weighted Rate p/kWh/day
2022/23	0.0040	0.0040	0.0223	0.0200
2023/24	0.0059	0.0059	0.0226	0.0219
2024/25	0.0056	0.0056	0.0191	0.0190
2025/26	0.0058	0.0058	0.0180	0.0157

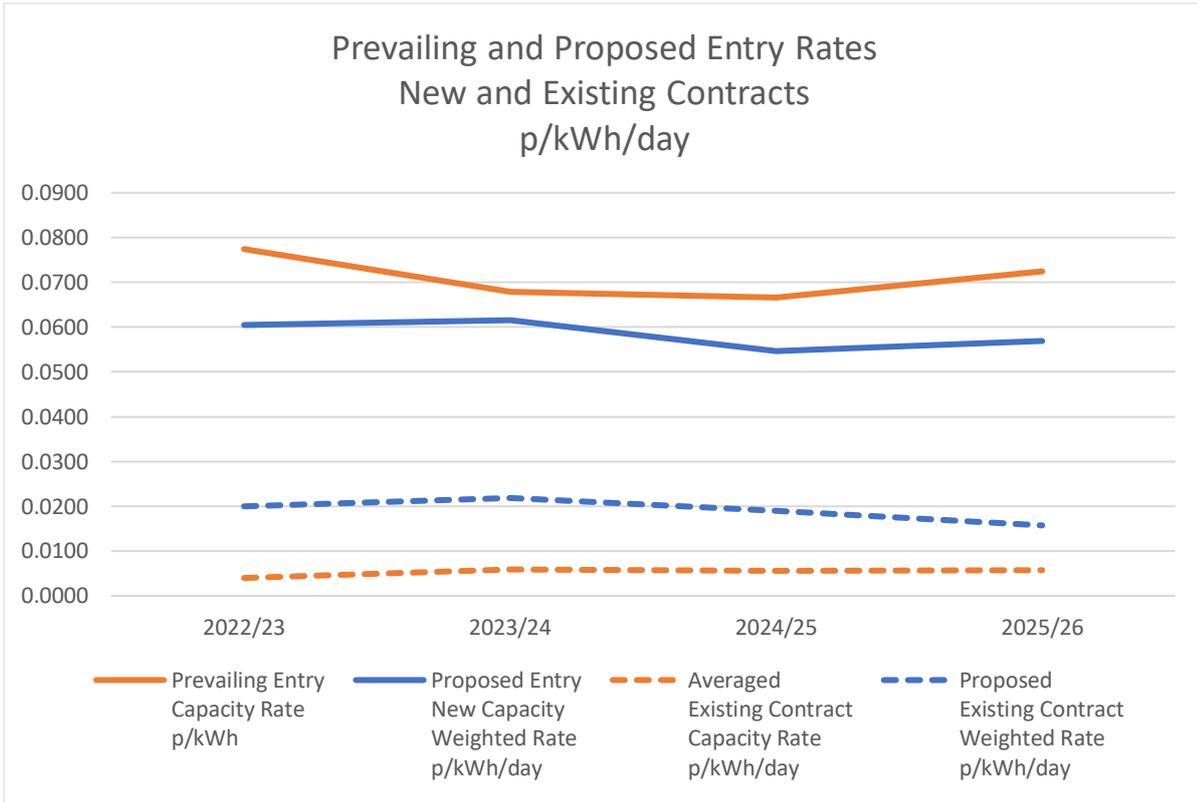
Fig.4



Comparing the proposed weighted rates for both New and Existing Contact Capacity below, we see that the differential between the expected costs associated with standard New Capacity Bookings (excluding any discounts associated with; Storage, Interruptible or Conditional NTS Capacity Charge Discount) are now approximately three times higher than the expected costs associated with the average Existing Contract, as compared with the previous figure of 23 times higher (inclusive of discounts) demonstrated in the Justification for Urgency section.

When comparing the non-discounted New Capacity Booking costs to the highest price Existing Contract Capacity price for each of the years below, rather than the average Existing Contract Price, the ratio seen would be closer to, but still below, 1:1.

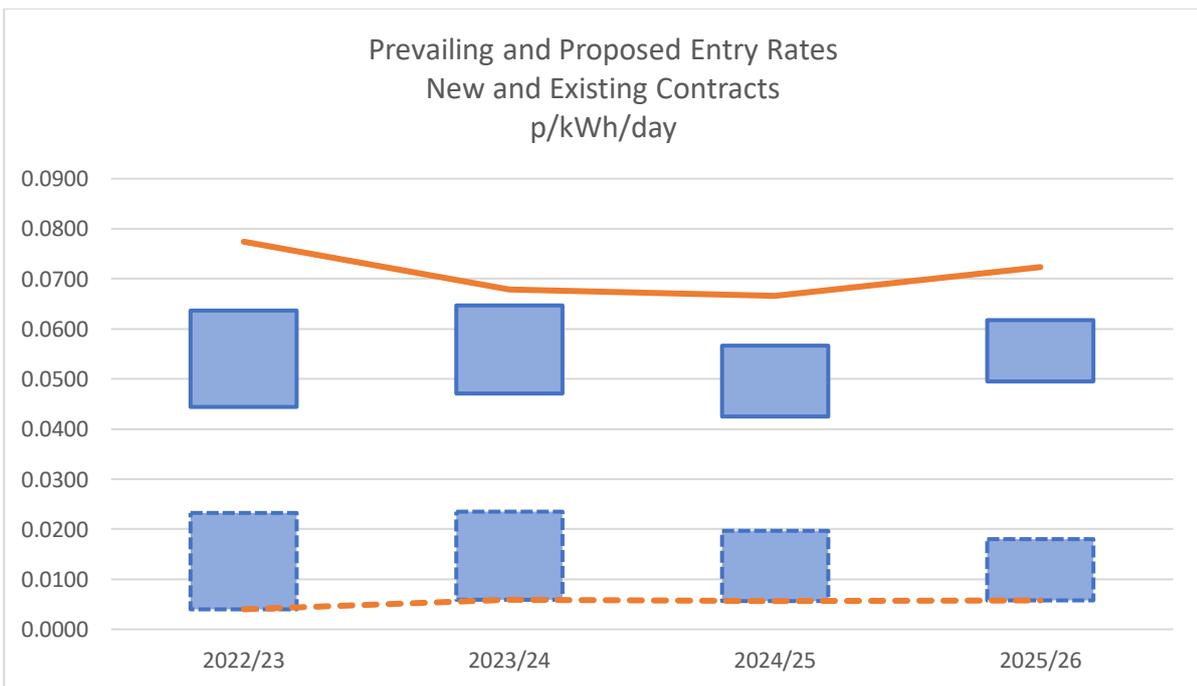
Fig.5



We repeat this graph below, but using the potential ranges, either side of the weighted average usage line, rather than the weighted average line seen previously, to give Users an idea of the potential upper and lower limits of the cost for New Capacity vs. the Average Existing Contract User.

Individual Users will be able to make an informed assessment about where they would expect their average to fall based on how they use their capacity bookings currently.

Fig.6



4 Code Specific Matters

Reference Documents

[UNC TPD Section Y](#) (including Part A-I: NTS Transportation Charging Methodology)

[UNC TPD Section B](#)

[May 2021 - Open Letter on the Future Of Gas Transmission Charging](#)

- open letter
- subsequent materials

[Ofgem Response to National Grid Open Letter](#)

ACER Report '[Analysis of the Consultation Document on the Gas Transmission Tariff Structure for Great Britain](#)' 24th April 2020

Knowledge/Skills

Knowledge of the NTS Transportation Charging Methodology and evolution from that in place prior to October 2020 would be beneficial.

5 Solution

For the avoidance of doubt, there are no changes proposed to the derivation of the Transmission Services Exit Capacity Reference Price nor General Non-Transmission Services Charges.

Transmission Services Entry Capacity Reference Price

It is proposed that the determination of the Transmission Services **Entry** Capacity Reference Price for a Gas Year (in principle, the quantity of entry revenue to be collected (£) over this period divided by the quantity of entry capacity (kWh) expected to be booked over this period) is revised as follows:

Component	Current Method	Proposed Method
Quantity of Revenue (£)	Transmission Services Allowed Revenue at Entry <i>minus revenue from Existing Contracts</i>	Transmission Services Allowed Revenue at Entry
Quantity of Capacity (kWh)	Current Forecast Contracted Capacity (Entry) <i>minus Existing Contract capacity</i>	Proposed Forecast Contracted Capacity (Entry)

Transmission Services Entry Flow Charge

It is proposed that a new Transmission Services charge is introduced, this being the Entry Flow Charge as follows:

- **Application**

The Transmission Services Entry Flow Charge (EFC) will be payable as a flow-based charge in respect of all Entry Gas Allocations (i.e. Entry Gas Allocation multiplied by the EFC rate) at all System Entry Points except those at Storage Connection Points and Interconnection Points ('Qualifying Entry Points').

The EFC is set via an iterative calculation that takes into account the flows that will attract 100% of the rate and those Entry Eligible Quantities that will attract a discount in line with the Conditional NTS Capacity Charge Discount, if applicable.

- **Overview of the Charge Rate calculation**

The EFC rate (p/kWh), which will account for any applicable discounts mentioned above, will principally be based on the following formula (noting the iterative calculation referred to above):

$$EFC = \frac{RD \times 100}{FEF}$$

where

FEF is a forecast of the aggregate of input gas flows at all Qualifying Entry Points on the Total System (kWh) in the forthcoming Gas Year; and

RD is the Revenue Difference (£), calculated as follows:

$$RD = ATSER - ACCR$$

where

ATSER is the Allowed Transmission Services Entry Revenue (£) in the forthcoming Gas Year; and

ACCR is the Actual Collectable Capacity Revenue at Entry (£) in the forthcoming Gas Year, calculated as follows:

$$ACCR = ECR + NECR$$

where

ECR is the expected revenue (£) from Existing Contracts in the forthcoming Gas Year; and

NECR is the forecast of the revenue (£) from Entry Capacity other than that associated with Existing Contracts in the forthcoming Gas Year.

The EFC Rate at a Qualifying Entry Point which is (for the purposes of the Conditional NTS Capacity Charge Discount) a Nominated Entry Point for a current CNCCD Election will be subject to a discount equal to the CNCC Discount. This discounted Charge Rate will be applied to the Eligible Entry Amount for that CNCCD Election.

For the avoidance of doubt, any 'residual' Entry Gas Allocations at such Qualifying Entry Points (that is not an Eligible Entry Amount) will pay 100% of the EFC Rate.

- **Invoicing**

The EFC will be invoiced and payable in accordance with TPD Section S.

6 Impacts & Other Considerations

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

None.

Consumer Impacts

There will potentially be an impact on different consumer groups but the Entry Allowed Revenue (determined in line with National Grid NTS' Licence) which is collected by National Grid NTS will not change in the event of implementation of this Proposal. This Proposal will essentially apportion the shortfall in recovery of National Grid's Allowed Revenue at Entry Points (driven by the fixed pricing of Existing Contracts) to Users of the NTS at Entry Points in a way that National Grid NTS believes is fairer, more proportionate and better aligned to the objectives of the NTS Transportation Charging Methodology than the current arrangements.

The nature of how the Users' Transportation charge liability is charged downstream from UNC arrangements will depend on how Users and other market participants structure their respective contracts and associated service charges.

Where the published prices for Transportation Charges are accommodated into NBP prices the result of this proposal would be that the combined rate of capacity (updated as per this proposal) and the additional charge would be lower than the single capacity price under the current methodology. Therefore, one assertion that can be made is that this provides a benefit with the lower combined rate of published prices than would otherwise be. Ultimately, costs do find their way to Customers and Consumers.

Whilst it cannot be shown precisely how, given the contractual structure and reciprocal charging onwards from Transmission, it can be reasonably assumed that this lower charging value would ultimately find its way downstream from Transportation charging towards Customers and Consumers.

National Grid has commissioned Frontier Economics to conduct a broader economic assessment than is traditionally contained in modification proposals. This assessment can be seen in its entirety on the modification pages for this proposal. In terms of consumers, there is expected to be a consumer benefit as a result of this proposal given the changes to the distribution across Customers and how the updated Transportation charges are expected to be passed on to consumers.

What is the current consumer experience and what would the new consumer experience be?

The nature and extent of any change in consumer experience is not clear for the reason explained above.

Impact of the change on Consumer Benefit Areas:	
Area	Identified impact
Improved safety and reliability	None
No impact.	

<p>Lower bills than would otherwise be the case</p> <p>Individual consumers bills may change as a consequence of implementation dependent upon the nature and type of relevant shippers' capacity allocations and how the associated transportation costs are recovered from downstream stakeholders under the relevant contractual terms.</p>	<p>For individual consumers: positive (lower bills), negative (higher bills) and potentially none (no change)</p>
<p>Reduced environmental damage</p> <p>No impact.</p>	<p>None</p>
<p>Improved quality of service</p> <p>No impact.</p>	<p>None</p>
<p>Benefits for society as a whole</p> <p>No impact.</p>	<p>None</p>

Cross-Code Impacts

No impact.

EU Code Impacts

No impact.

Central Systems Impacts

There will be impacts on Gemini and UK Link invoicing systems. These impacts are being assessed.

7 Relevant Objectives

Impact of the Modification on the Transporters' Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None
c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or	Positive

(iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	
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.	None

Demonstration of how the standard Relevant Objectives are furthered:

d) Securing of effective competition between relevant shippers;

The proposed changes in this Modification are expected to provide a more stable and predictable Reference Price for Entry Capacity hence Users 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. Further, implementation would enable a more equitable recovery of Allowed Revenue at Entry (as provided for in the Special Conditions of National Grid’s Licence) across all Shipper Users as opposed to the existing approach which effectively targets recovery of the aforementioned deficit on holders of new capacity only.

for Section Y (Charging Methodology) Modifications

Impact of the Modification on the Transporters’ 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;	None
aa) That, in so far as prices in respect of transportation arrangements are established by auction, either: <ul style="list-style-type: none"> (i) no reserve price is applied, or (ii) that reserve price is set at a level - <ul style="list-style-type: none"> (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
b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;	None
c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and	Positive
d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets).	None

e) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None
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Demonstration of how the charging Relevant Objectives are furthered:

aa) That, in so far as prices in respect of transportation arrangements are established by auction (ii) that reserve price is set at a level - best calculated to promote competition between gas suppliers and between gas shippers;

The proposed changes in this Modification are expected to provide a more stable and predictable Reference Price (and therefore a more stable and predictable Reserve Price) for Entry Capacity. Further, in conjunction with the additional flow-based charge proposed, this is expected reduce the material differentiation in Users' Transportation Charges for the equivalent Transportation service which is apparent under the current arrangements.

c) facilitates effective competition between gas shippers and between gas suppliers

The proposed changes in this Modification are expected to provide a more stable and predictable Reference Price for Entry Capacity hence Users 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. Further, implementation would enable a more equitable recovery of Allowed Revenue at Entry (as provided for in the Special Conditions of National Grid's Licence) across all Shipper Users as opposed to the existing approach which effectively targets recovery of the aforementioned deficit on holders of new capacity only.

8 Implementation

Implementation of this Proposal should take effect in time to be reflected in the Transportation Charges which will apply from 1 October 2022 or the next 1 October following the Authority direction to implement.

9 Legal Text

Text Commentary

To be provided ahead of consultation.

Text

To be provided ahead of consultation.

10 Recommendations

Proposer's Recommendation

This Modification should be treated as urgent and should proceed as such under a timetable approved by the Authority.