

NTS GAS CHARGING DISCUSSION DOCUMENT (NTS GCD)

NTS GCD 13 – Discussion on the impacts of Existing Contracts on Transmission Services Reference Prices

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1. Version History

Version	Date of Update	Detail
0.1	31 January 2023	Initial Draft for discussion

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2. Summary

The purpose of this discussion document is to gather views on several key areas of Gas Transportation Charging:

Transmission Services Entry Charging only

- The ongoing impacts and influence of Existing Contracts in the Transmission Services Entry charges
- Options to review overall Transmission Services Entry charges considering the decision not to implement UNC0790 and expectation to review further the impact of Existing Contracts.

Transmission Services Entry charging also impacting Transmission Services Exit charging

- Whilst focused on Transmission Services Entry charging, when considering review in this area, depending on how it may be addressed, it has the potential (with a broader objective) to also impact Transmission Services Exit charging. In combination these recover Transmission Services Revenue.
- This paper also invites comments on some broader perspectives Transmission Services Charging (Entry and Exit) and if further review would be beneficial under a separate discussion topic (e.g., reviewing the split between Entry and Exit charging).

What will happen with comments / development?

- Following receipt of comments and further discussion/development with Customers and Stakeholders, with appropriate justification, UNC Modification(s) could be raised as a result to the Charging Methodology for Transportation charges.

Background

The implementation of UNC0678 on 01 October 2020, saw a significant change to the Charging Methodology, moving to a primarily Capacity based regime to ensure compliance with the EU Tariff Network Code (TAR NC). Since then, there has been volatility, notably in the Transmission Services Entry Capacity Reserve prices and a notable difference between these Reserve Prices and the Existing Contract Prices. As the reserve prices are recovered across a small proportion of Entry Capacity (due to the high levels of Existing Contracts and the low revenues they contribute) the disparity between Existing and 'new' capacity has been sizeable.

In May 2021 National Grid published an [open letter](#) on the Future of Gas Transmission Charging¹. In this letter we highlighted the disparity in Capacity prices between the floating prices forecasted for new Capacity, and the newly protected Capacity prices for Existing Contract holders who would no longer be subject to high Commodity Prices as were in place under the previous charging regime. The price protection afforded to Existing Contract Capacity resulted in Users with new capacity booked at the floating price paying, on average, 23 times the unit price paid for the equivalent product under an Existing Contract.

¹ [Gas charging discussion \(GCD\) papers | National Grid Gas](#)

Under the new regime the 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.

Revenue volatility

To resolve the volatility in the revenues, National Grid initially took the short-term step of deferring £45m of revenue from Gas Year 2021/22 into Gas Year 2022/23. This smoothed the revenues across the two years, but left unchecked this problem could still reappear in future years. To try to prevent this, UNC0796 was proposed and implemented. The key change proposed in UNC0796 meant that rather than using the remaining six-month period of the Financial or Formula Year to calculate the following 12 months of the Gas Year, we would also include the allowed revenues for the following Formula Year, giving us the opportunity to smooth revenues across the period and reducing volatility in the following Gas Years.

Tariff volatility and comparison of 'new' to Existing Capacity prices

To attempt to help address the Tariff volatility and the price disparity on Transmission Services Entry charges, National Grid proposed UNC0790. This modification proposed a Transmission Services Entry Flow Charge to be calculated based on the under-recovery due to the disparity in costs between the Existing Contract Prices and the floating prices. The key aims of the changes proposed were two-fold. Firstly, a reduction in that price differential between holders of Existing Contract Capacity compared with holders of other Entry Capacity. Second, a reduction in the level of year-on-year volatility in Entry Capacity Reserve Price rates.

National Grid believed 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) was 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 exceptions for Interconnectors and Storage Sites. The Proposal sought to reduce the differential in question (representing an improvement when compared to the prevailing arrangements).

Decision on UNC0790 and expectations for next steps

Ofgem decided not to implement UNC0790 stating in their letter² that while the Modification would further Relevant Objectives (d) and Charging Objectives (aa) and (c), it would not better facilitate

² [Uniform Network Code \(UNC\) 790: Introduction of a Transmission Services Entry Flow Charge \(UNC790\)](https://www.gasgovernance.co.uk/uniform-network-code-unc-790-introduction-of-a-transmission-services-entry-flow-charge-unc790/) ([gasgovernance.co.uk](https://www.gasgovernance.co.uk))

Relevant Objective (g) or Charging Objective (e). There were also concerns raised that the modification proposal could not be reconciled with Articles 17 and 18 of TAR NC. Summarising, this meant there were positives on competition grounds and negatives with regards to compliance of relevant codes.

Ofgem did however request that a solution be revisited and, through follow up discussions, a new Modification should be brought forward for review to address existing contracts as soon as possible, in line with the legal analysis set out in their decision.

Ofgem “strongly encouraged industry to develop a modification which addresses the price differential between new capacity and Existing Contracts, in a compliant manner.” Their view was that a modification “should approximate tariffs in respect of Existing Contracts to the pre-TAR NC charging regime as closely as reasonably practicable, while recognising that in reality this cannot be done precisely, to avoid a continued windfall for Existing Contract holders.”

Overall purpose of this discussion document and approach to development

The overarching purpose of this document is to review the influence of the legacy of existing contracts, establish the strength of views across the industry on this topic and gain opinions & insight from Users on whether a replacement for UNC0790 is required, and the form it could take.

In addition, we would also like to thinking wider than just the Transmission Services Entry charges and also look at Transmission Services Charging more broadly and with a broader objective. This objective and potential ways to look at his also form part of this discussion, and should it show promise, we would look to review in a piece of work following on from this initial discussion document.

We have produced this draft document as an aid to discussion. As that discussion develops, so will the document. We have provided the background to the problem we are looking to improve upon, as well as a range of potential remedies, which includes a do nothing approach as it is possible that that the proposals will only exacerbate the issues discussed, it may also be possible that the ideal solution is a combination of two or more of these or any other solutions proposed and discussed in what we hope will be a series of open and constructive discussions.

As ideas are proposed they will be included in this document as additional options, where the general consensus is that an option is unfavourable or unworkable, this will be noted here for future reference. Those solutions which show potential will be further analysed and developed before any Modification(s) are proposed.

Ultimately, we may or may not choose to progress with a Modification, but any decision will be informed by this document, and this document will act as a resource for any party who wishes to raise their own, or an alternative to a, proposal. We hope that it will also act as a reference to the Authority should they be asked to make a decision on a proposal.

3. Background

Impact of Existing Contracts:

Existing Contracts are Long Term Entry Capacity allocated before the introduction of the EU Tariff Network Code (TAR NC) on 6 April 2017. These Existing Contracts, embedded into the UNC as part of 0678A, are effectively made up of two components in:

- Existing Registered Holdings; and
- Existing Available Holdings.

At the simplest level they offer price protection from prevailing capacity rates, which they influence, and an exemption from any Transmission Services Entry (Capacity based) Revenue Recovery charges.

Existing Contracts still retain a significant impact to Transmission Services Entry Capacity reserve prices creating a large price disparity between some Existing Contract prices and the prevailing rates for 'new' capacity. Existing Contracts, in the manner they are accommodated into the Charging Methodology, even though they reduce over time, will continue to have a significant influence for some years.

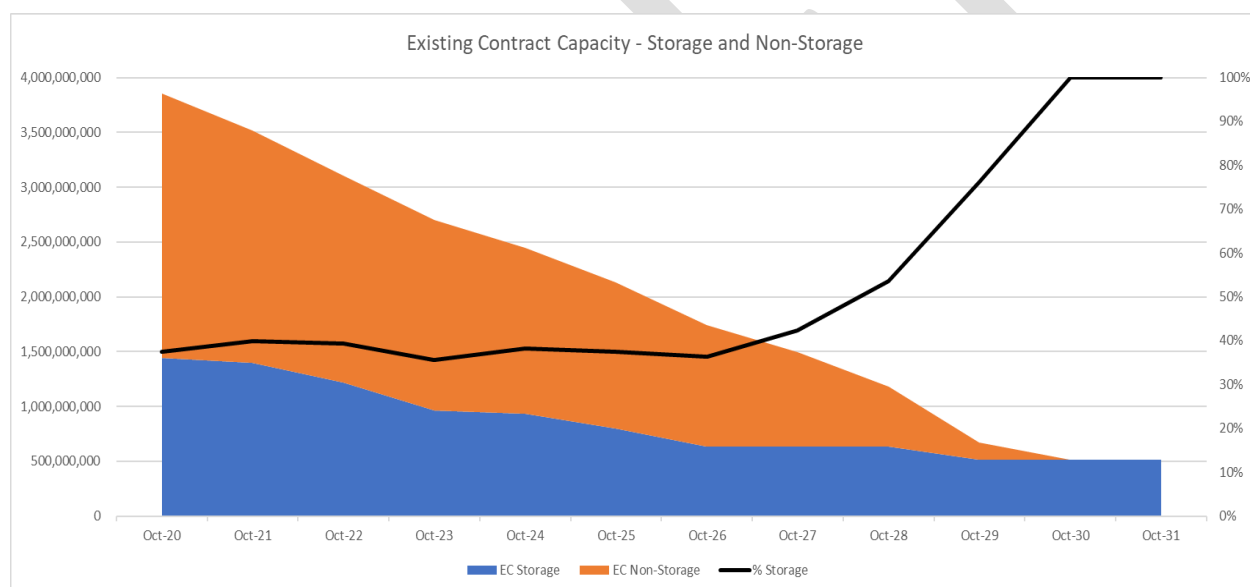


Fig.1 Levels of Existing Holdings per Gas Year split by Storage and Non-Storage.

Existing Holdings are in place until GY 2031/32.

From GY 2028/29 onwards more than half are held at Storage Sites and so the impact will begin to decrease at this time as Storage Points are already entitled to an 80% reduction in Transmission Services rates meaning the price differential at these points is lessened.

Existing Holdings show a steady drop off in volumes over time until, in the final Gas Year 2031/32, 100% of Existing Contracts are held at Storage Points.

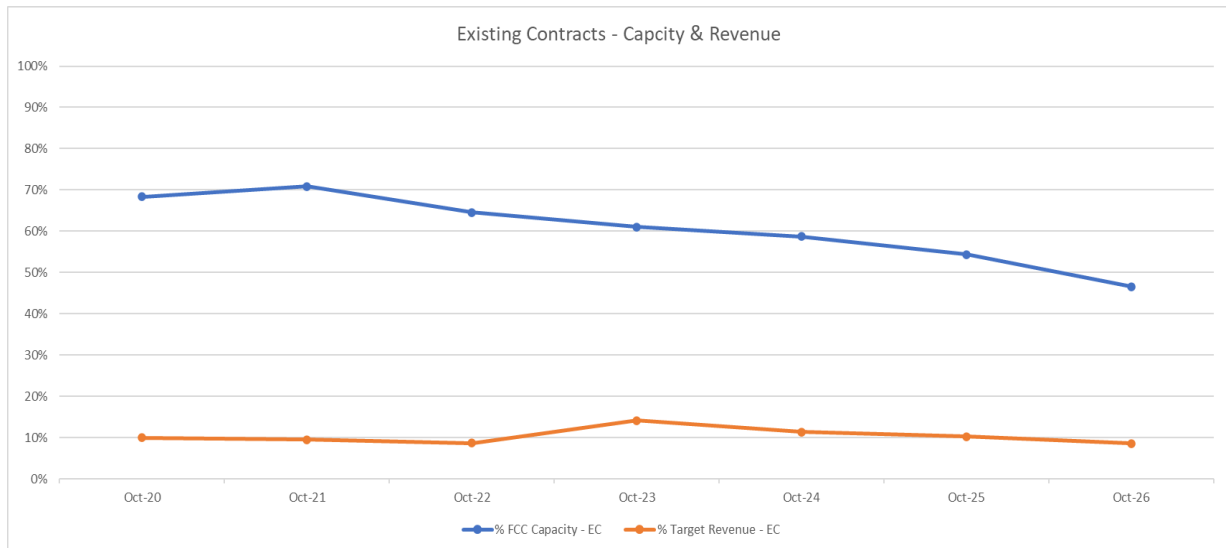


Fig.2 Illustration of Existing Holdings as a percentage of Entry Forecasted Contracted Capacity, and the revenue generated by Existing Holdings as a percentage of Entry Allowed Revenue.

As demonstrated in Fig.2, Over the next five years, Existing Holdings reduce from ~64% to ~47% of Entry Forecasted Contracted Capacity bookings, but on average only contribute around 10% of the expected Entry Allowed Revenue.

In other words, Existing Holdings currently make up a significantly higher proportion of Forecasted Entry Capacity bookings than you may expect based on the expected Entry Transmission Services Revenue that they contribute.

From this, we can reason that the new Entry Capacity Bookings generate 90% of Entry Transmission Services Revenue.

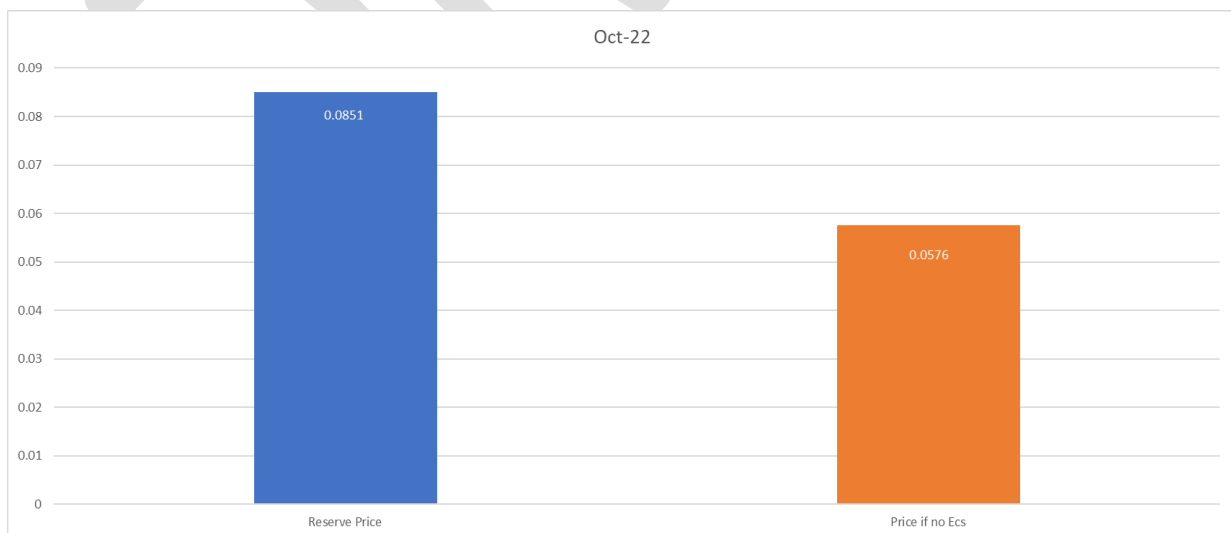


Fig.3 The calculated Transmission Services Entry rate for the current Gas Year alongside a value calculated using the same methodology but without the influence of Existing Holdings.

Existing Contracts currently drive up the Entry TS rates by 47.7% from the rate calculated without the influence of Existing Contracts, 0.0275p/kWh in monetary terms.

UNC0790 was proposed as a means to address these price impacts by introducing a new commodity charge, levied on all Entry flows (except Storage and Interconnectors). The expected influence of Existing Contracts was used as a basis of determining the additional charge. Its objective was to reduce price disparity while working within the boundaries of the Entry Transmission Services charges.

Ofgem decided not to implement UNC0790 and noted a few specific elements in this decision.

Ofgem Decision Letter UNC0790

Ofgem laid out in their decision letter, a clear statement that in their view the price disparity due to the protected Capacity rates applicable to Existing Contracts carried over from the old pricing regime, without an equivalent level of Commodity Charge in place was an unnecessary windfall to Existing Contract holders:

“Article 35(1) TAR NC means that network users with existing contracts or capacity bookings should not pay higher levels of transmission tariffs than those foreseen in the contracts. However, it also means that it is permissible to introduce arrangements which ensure that they do not pay lower, let alone substantially lower, levels of tariffs than those foreseen in their Existing Contracts.

In other words, Article 35 does not necessitate providing those with Existing Contracts with a windfall, simply because the earlier very substantial commodity-based tariffs are not levied on new contracts. Those with Existing Contracts are certainly entitled to the benefit of Article 35 (i.e., in locking in the low capacity-based tariffs), but they should also be required to carry the burden of these contracts, by paying a charge reflecting the previous commodity-based charges they would have expected to pay under them, rather than having this burden lifted by operation of the new system.”

However, while they considered that 0790 furthered some Relevant Objectives it negatively impacted others including compliance.

Of note, Ofgem said of the 0790 methodology and the price ‘gap’:

“...we note that a modification proposal that would levy the additional charge only on existing contracts would be more effective than UNC790 in closing the price gap between existing contracts and new contracts.”

In making the decision Ofgem also said:

“We expect industry to bring forward a new modification proposal to address existing contracts as soon as possible, in line with the legal analysis set out in this decision.”

Several specific points were highlighted in Ofgem’s UNC0790 decision letter.

- Ex-ante price setting if considering Article 4(3)(b) would not be permitted for any new charge
- The method to determine the commodity charge as a consequence of capacity charges was not considered compliant

Version 0.1

- The price disparity between Existing Contracts and 'new' capacity subject to prevailing rates is considered negative for competition
- 0790 would have somewhat mitigated that the price paid for the same service would be reduced. They note a more focused charge only on Existing Contract would be more effective in reducing this price gap.

Whilst not exhaustive, of all this would need to be taken into account. Each of these points would need to be considered in any option that may ultimately form a new UNC change proposal.

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4. Potential Options

We see merits in discussing options that would impact Entry but also those which would have impacts to Exit, to assess any benefits of such options.

Entry only:

- A new commodity charge focused only on (utilisation of) Existing Contracts
- A new commodity charge focused on Entry flows (taking on board views on 0790)
- A review of Existing Contracts and their flexibility / use into the future

Entry and Exit:

- Discuss and review the Entry/Exit split. This is currently 50%/50% for Transmission Services.
- A new commodity charge focused on all flows

These are purely options we feel have merit in discussing and are seeking Stakeholder views on. These are not an expression of preference from National Grid. The aim is to build some options that can be assessed and developed to form a basis to consider next steps for any potential future change.

This is not an exhaustive list, we welcome thoughts on these plus any others that may be helpful to include. We have tried to think about how each could impact the Charging Methodology and how they could be implemented. This may not be the only way, but we hope it provides a basic understanding to allow you to relate to the potential approach.

Each option provides:

- a brief description
- a simplified method of implementation
- a non-exhaustive list of things that are worth being aware of and would need to be considered

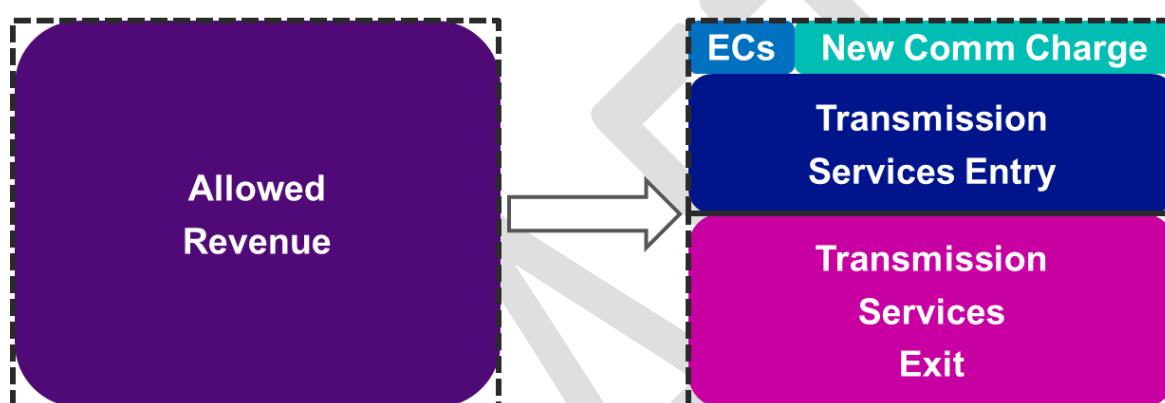
4.1 A new commodity charge based on Utilisation of Existing Contracts

The decision letter from Ofgem suggested a charge set to replicate the Commodity Charges applicable (and therefore expected) under the previous Charging Regime, with a potential link or reference to the LRMC methodology used prior to GY 2020/21.

The Commodity Charge must be calculated before the Capacity rates, and not as a consequence of the Capacity Charges.

How a charge levied against flows, based on the usage of Existing Contract Capacity, could work:

Apply over all Existing Contract Capacity using [Existing Available Holdings] held at the specific Aggregate System Entry Point except those at [Storage Connection Points/Interconnectors/LNG Terminals].



Apply at each ASEP for each Shipper for each Gas Day based on the Minimum of the amount of flow at the point and the amount of Existing Available Holdings.

This sets the limitation and which value to use for flows to be measured against. Existing Capacity Holdings are split between Registered and Available.

Once Existing Contracts expire, methodology should out-turn a figure of zero for future years.

Considerations:

- Capacity Hierarchy:
 - Do we assume Existing Holdings are flowed against first and the additional charge is to be applied up to level of Existing Holdings?
 - Who holds the Existing Contract for the purposes of levying a commodity charge?
 - Use Existing Available Holdings rather than Existing Registered Holdings?
- Commodity may need to be calculated before Capacity in the methodology.
- Should any exemptions or discounts be offered?
- How or if to accommodate CNCCD ("Shorthaul")
- What considerations should be made if a user's EC rate combined with the flow rate exceeds the standard Capacity rates?
- Needs to comply with how TAR NC is currently embedded in UK Law.

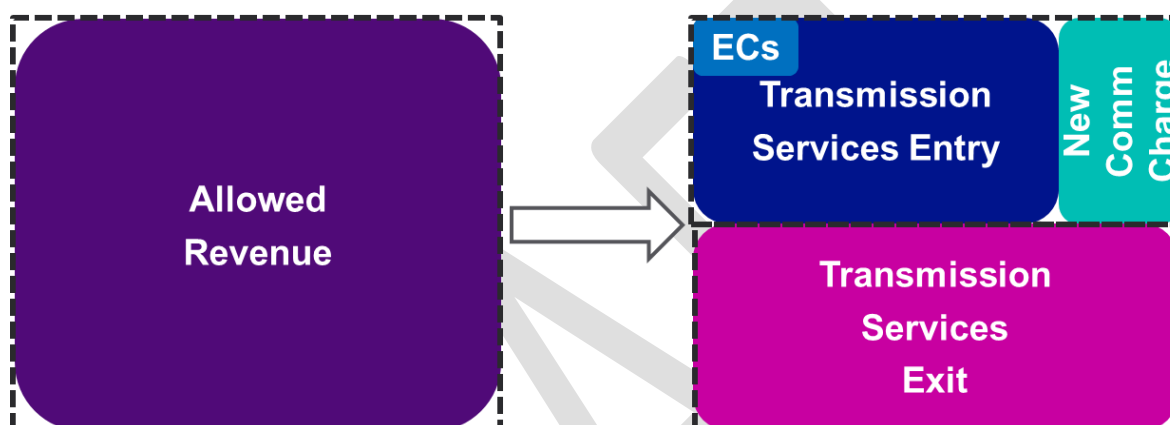
4.2 A new commodity charge applied to all Entry flows

A charge levied against all Entry Flows, regardless of Capacity type.

Available Capacity (which accounts for things like trades pre-2017) feels more suited. However, it must recognise this effectively splits the Existing Capacity Holdings between the party liable for the capacity (invoiced) and the available volume (ability to use).

How a charge levied against Entry flows could work:

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 (EQ) that will attract a discount in line with the Conditional NTS Capacity Charge Discount, if applicable.

Transmission Services Allowed Revenue at Entry is the total revenue to be collected by Transmission Services Entry Revenue minus known Existing Contract Revenue.

Transmission Services Entry Flow Revenue is the proportion of the Transmission Services Allowed Revenue at Entry to be collected by the Transmission Services Entry Flow Charge (EFC).

Considerations:

- No Capacity Hierarchy issues to consider
- Commodity may need to be calculated before Capacity in the methodology.
- Should any exemptions or discounts be offered?
- How or if to accommodate CNCCD ("Shorthaul")
- Ofgem's rejection leads us to some necessary changes required to the original 0790 proposal decision to make this compliant with TAR NC.
- What considerations should be made if a user's EC rate combined with the flow rate exceeds the standard Capacity rates?

4.3 A review of Existing Contracts, their flexibility and usage

Restrictions are put in place to limit the flexibility of Existing Contracts, or potentially end date those currently in place.

How this could look in practice:

Entry Existing Contract Capacity can only be used by the party which has bought the capacity (before 06 April 2017) and has the available capacity at the time of implementation.

No other trades can take place on this capacity after the implementation date.

Existing Contracts are excluded from values displayed in any Gemini screens used for Trade & Transfer processes.

Limitations or restrictions could apply from a specified, future date.

Considerations:

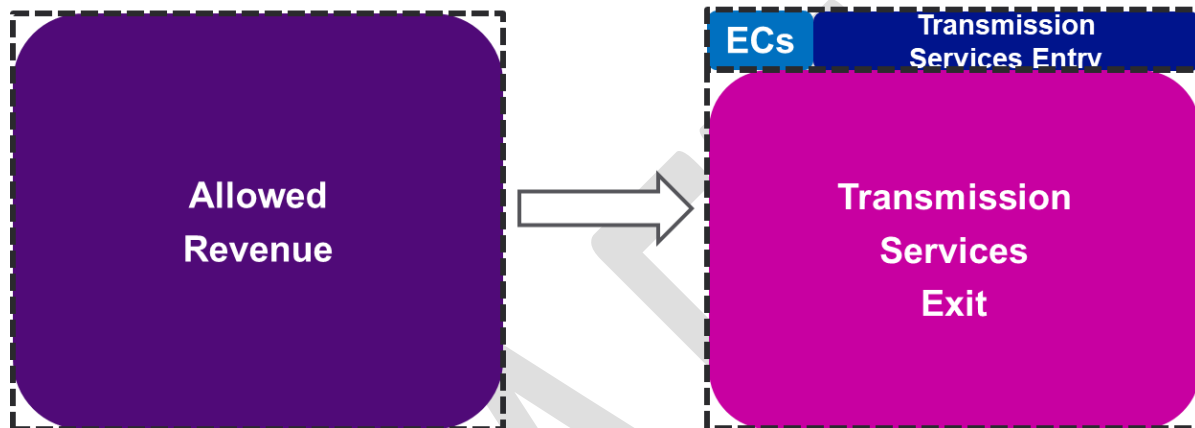
- Users were able to use the trade and transfer process at the time of purchasing, creating an inconsistency, though the scale of the impact at that time was unforeseen.
- Some Existing Contracts have already been traded.
- Does this create a disparity in treatment?
- Needs to comply with how TAR NC is currently embedded in UK Law.
- Impacts on Existing Contracts and Capacity in general if there are restrictions or limitations applied from a future date.

4.4 Review of the Entry/Exit split

Any modification which looks to address the Entry Exit split, would likely move the burden of cost further to Exit which by default would reduce the Entry Transmission Services Rates, and may bring standard rates more closely in line or potentially below Existing Contract Rates.

How this could look in practice:

No new charges to be raised, but this change would impact existing rate calculations, typically this would mean a greater proportion of Revenue applied to Exit than to Entry.



Considerations:

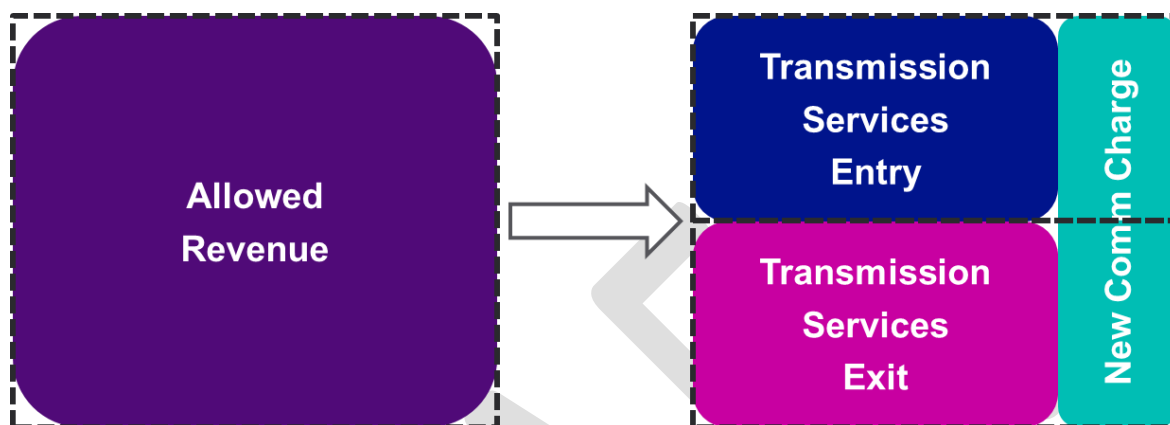
- This is a mechanism used around Europe with no TAR conflict.
- Justification of need to move the existing 50:50 split.
- Further justification required to define the new ratio.
- Should the ratio be fixed, or could it be dynamic?
- What considerations should be made if a user's EC rate exceeds the standard Capacity rates?

4.5 A new commodity charge applied to all flows

A charge levied against all Flows, Entry & Exit, regardless of Capacity type.

How this could look in practice:

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



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

Transmission Services Allowed Revenue is the total revenue to be collected by Transmission Services Revenue minus known Existing Contract Revenue.

Transmission Services Flow Revenue is the proportion of the Transmission Services Allowed Revenue to be collected by the Transmission Services Flow Charge.

Considerations:

- Commodity may need to be calculated before Capacity in the methodology.
- Should any exemptions or discounts be offered?
- How or if to accommodate CNCCD ("Shorthaul")
- Needs to comply with how TAR NC is currently embedded in UK Law.
- This would impact both Entry and Exit charges.
- What considerations should be made if a user's EC rate exceeds the standard Capacity rates?

4.6 Do Nothing

When considering all options to address the disparity between standard Transmission Services Reference prices and the fixed prices attached to the Existing holdings it is possible that the best solution is to continue with the status quo, perhaps not in terms of addressing the disparity, but to retain the required compliance with the EU Tariff Code as applicable now transposed into UK Law.

Alongside the Analysis presented below, we will also include details from the current regime to act as a base line to the potential options for change.

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5. Analysis

All analysis has been run for GY 2024/25 as this is the targeted implementation date for any modification which may be developed as part of this process.

For any options progressed further analysis will be provided as far into the future as needed to demonstrate the impacts up to and beyond the expiration of the final Existing Contracts.

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5.1 A new commodity charge based on Utilisation of Existing Contracts

To aid this analysis, the published Commodity charge data from the old LRMC regime has been extracted from Final Publication documents published on the National Grid Gas Charging website³ and tabulated below.

	NTS Entry Commodity		
	TO p/kWh	SO p/kWh	Combined p/kWh
Oct-12	0.0331	0.0229	0.0560
Apr-13	0.0244	0.0176	0.0420
Oct-13	0.0249	0.0251	0.0500
Apr-14	0.0297	0.0215	0.0512
Oct-14	0.0431	0.0185	0.0616
Apr-15	0.0451	0.0169	0.0620
Oct-15	0.0481	0.0148	0.0629
Apr-16	0.0499	0.0147	0.0646
Oct-16	0.0481	0.0129	0.0610
Apr-17	0.0530	0.0105	0.0635
Oct-17	0.0509	0.0106	0.0615
Apr-18	0.0434	0.0101	0.0535
Oct-18	0.0435	0.0092	0.0527
Apr-19	0.0458	0.0149	0.0607
Oct-19	0.0447	0.0122	0.0569
Apr-20	0.0491	0.0114	0.0605

Two methods have then been used to produce a potential future charge for use in this analysis. First, a simple average of the combined figures would give us a value of **0.0575 p/kWh**. This value would be fixed and applicable to all flows against an Existing Contract in all future years, this value would be set to expire alongside the last eligible Existing Contract Holding.

The Second method uses a linear trend line plotted against the historic Commodity charge values:

³ <https://www.nationalgrid.com/gas-transmission/charging/transmission-system-charges>

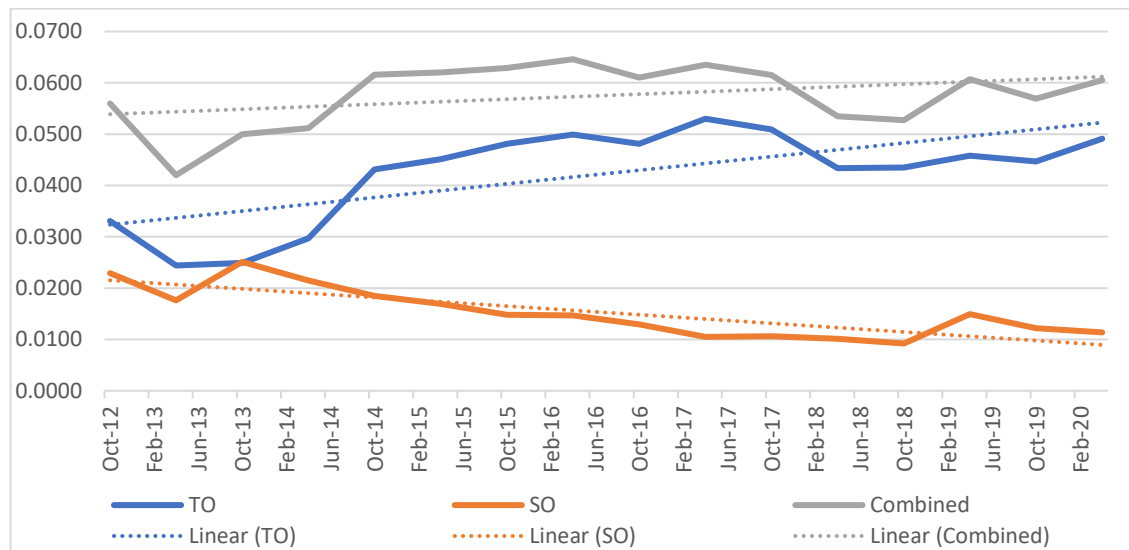


Fig.4 Plot of historic NTS Entry Commodity Charges in p/kWh

These trend lines forecast the following rates:

	TO (p/kWh)	SO (p/kWh)	Combined (p/kWh)
Oct-20	0.0536	0.0081	0.0617
Oct-21	0.0562	0.0064	0.0627
Oct-22	0.0589	0.0047	0.0636
Oct-23	0.0615	0.0031	0.0646
Oct-24	0.0642	0.0014	0.0656
Oct-25	0.0668	-0.0003	0.0666
Oct-26	0.0695	-0.0020	0.0675
Oct-27	0.0721	-0.0036	0.0685
Oct-28	0.0748	-0.0053	0.0695
Oct-29	0.0775	-0.0070	0.0705
Oct-30	0.0801	-0.0087	0.0714
Oct-31	0.0828	-0.0104	0.0724
Oct-32	0.0854	-0.0120	0.0734

The TO value shows an increase over time, while the SO value decreases and eventually dips below 0.0000p/kWh. The forecast of the combined value produces a value which increases slightly year on year.

One potential variation to consider against these figures is to apply a collar of 0.0000p/kWh to the SO rate to prevent a negative effect on the combined price. The forecast TO and the collared SO are then combined to create a variation on the Combined rate. There would be no impact on the year analysed, but an increased rate would be seen from GY 2025/26 onwards.

	TO (p/kWh)	SO (p/kWh)	Combined (p/kWh)	Combined Collared (p/kWh)
Oct-20	0.0536	0.0081	0.0617	0.0617
Oct-21	0.0562	0.0064	0.0627	0.0627
Oct-22	0.0589	0.0047	0.0636	0.0636
Oct-23	0.0615	0.0031	0.0646	0.0646
Oct-24	0.0642	0.0014	0.0656	0.0656
Oct-25	0.0668	-0.0003	0.0666	0.0668
Oct-26	0.0695	-0.0020	0.0675	0.0695
Oct-27	0.0721	-0.0036	0.0685	0.0721
Oct-28	0.0748	-0.0053	0.0695	0.0748
Oct-29	0.0775	-0.0070	0.0705	0.0775
Oct-30	0.0801	-0.0087	0.0714	0.0801
Oct-31	0.0828	-0.0104	0.0724	0.0828
Oct-32	0.0854	-0.0120	0.0734	0.0854

Comparing the flows at each Entry Point with the Existing Contract values for the Gas Year 2024/25 we can calculate an expected Existing Holding Utilisation value in kWh.

Using daily figures for each month and using the assumption that Existing Holdings are Utilised first, before New Capacity, we estimate that the total Existing Holdings utilised will be approximately 1.01TWh/day. Should exemptions for both Storage and Interconnectors be incorporated into a proposal this figure would reduce to 0.88TWh/day.

Multiplying this reduced value by first the Averaged figure of **0.0575 p/kWh** for version A and then by the forecasted figure for Gas Year 2024/25 of **0.0656 p/kWh** for version B, we then remove each of those two calculated monetary values from the Entry Allowed Revenue and calculate two new sets of Transmission Services Reserve rates.

Option A, when applied to the volume value calculated to include exemptions for Storage and IPs, calculates a total of £184.6m likely to be recovered by the new charge. When this value is removed from the Price Setting process the Calculated rate for new capacity will be approximately **0.0428 p/kWh**.

Option B calculates a total of £210.6m likely to be recovered by the new charge. When this value is removed from the Price Setting process the Calculated rate for new capacity would be **0.0379 p/kWh**.

In the table below we have combined the Average Existing Contract rate with the new charge based on expected utilisation of Existing Contracts.

	Current (p/kWh)	Average (p/kWh)	Forecast (p/kWh)
Standard New Capacity	0.0779	0.0428	0.0379
Average Existing Contract	0.0056	0.0056	0.0056
Additional Charge	0.0000	0.0575	0.0656
Weighted Average EC	0.0056	0.0284	0.0316

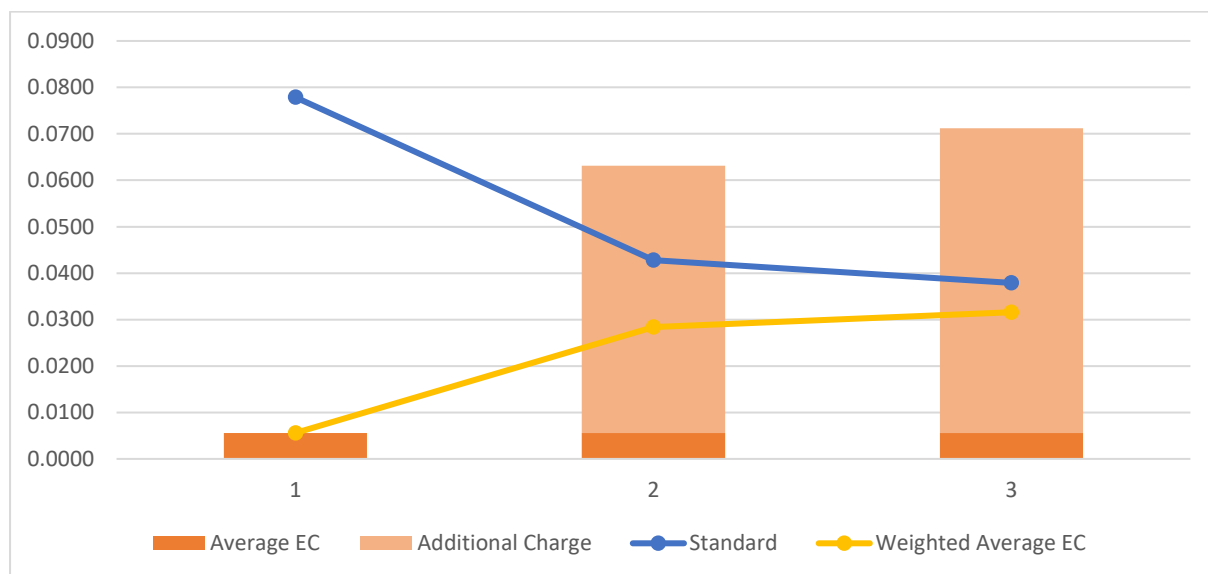


Fig.5 Effective Capacity Rates based on Current process (1) and two potential options for calculation of a new Commodity rate, Average (2) or Forecast (3).

The Standard price, i.e. the rate paid by all Capacity booked at a floating price is reduced between each of the options due to the additional revenue now being collected against Utilised Existing Holdings.

0.0056 p/kWh is a Weighted Average price applicable to Existing Contracts held during the Gas Year 2024/25.

The Additional Charge values would be paid against all Utilised Existing Contract Capacity, i.e. Existing Holdings which can be matched to a flow.

This does mean that in some instance Utilised Existing Contract Capacity would be paying more than New Capacity, but Un-utilised Existing Contract Capacity would not pay the additional charge and so would be paying less than New Capacity.

The Weighted Average EC price shown in the graph above takes the Weighted Average Price of all Existing contracts, adds on to this the Additional Charge based on the Utilisation of all Existing Contracts when compared with flow forecasts and then divides by the total Existing Contracts held.

This is for illustrative purposes only.

An alternative option could use a Commodity rate set based on the price difference between the floating and the highest Existing Contract rate noted in the Gas Year. This calculated commodity rate is then applied to all Existing Contract capacity bringing some Existing Contract holders in line with the new capacity rates and reducing the disparity between rates for those Existing Contract holders with rates below the maximum noted.

Applying the additional revenue received from the Commodity charges would result in an over collection and so the rates would then need to be recalculated to account for the overcollection. This would reduce the floating price for the Gas Year, in turn reducing the Commodity rate as the difference between the highest EC rate and the new floating price will have reduced.

This process would require a number of iterations to adjust the rates once calculated as the introduction of the Entry Flow Charge on top of the calculated revenue would result in an over collection. Adjusting the Transmission Service rate down would then mean a lower Entry Flow Charge bringing the revenue collected below the Allowed Revenue in turn requiring an uplift in both TS Rates and EFC. A simpler alternative would be to apply a scaling factor to both the Entry rate and the EFC based on the variance between Allowed Revenue and Forecast Revenue.

To comply with article 7(a) of TAR NC, we would need to publish that Maximum Existing Contract rate to enable replication of rates. An averaged, and therefore anonymised rate could be used instead, though this would again lead to any holders of Existing Contracts, with an agreed rate greater than that average, paying more overall for every utilised unit of their Existing Holdings.

Other potential methods could be used to calculate the new charge. We are open to discussing these and any additional suggestions further, with a view to producing more in-depth analysis if Users feel it would be beneficial:

- A weighted average of the historic Commodity Rates rather than a simple one, which incorporates either the capacity bookings or total flows in each of the original Gas Years to give a weighted average p/kWh value across the period.
- A version of the LRMC run against current year's data to generate a rate.
- An entirely new methodology designed to replicate elements of the LRMC.

For clarity, the figures presented include exemptions for Storage and Interconnectors but do not include any other allowances for example, a discount for Capacity which qualifies for the CNCCD. Should this option be taken further, additional analysis will be completed.

5.2 A new commodity charge applied to all Entry flows

The first possibility explored under this scenario was to use the same Commodity Charge figures calculated above based on the historic Commodity Flow Rates and applying these to all Entry Flows. However, using either of the Rates calculated results in collection of more revenue than is required at Entry which would create a Commodity Based regime rather than the Capacity Based regime required by TAR NC, as transposed in to UK Law.

Option two uses a rate set based on the price difference between the floating and the highest Existing Contract rate noted in the Gas Year. This calculated commodity rate is then applied to all capacity.

As in the previous scenario, to comply with article 7(a) of TAR NC we would need to publish that Maximum Existing Contract rate to enable replication of rates, but an anonymised Weighted Average could be used.

This would bring some Existing Contract holders in line with the new capacity rates and reducing the disparity between rates for those Existing Contract holders with rates below the maximum noted. It would also mean new capacity holders would overpay, as applying the additional revenue received from the Commodity charges would result in an over collection. To resolve this the rates would need to be recalculated. Once the additional revenue is accounted for a lower floating price would be calculated and this would then mean a smaller disparity between the highest Existing Contract rate and the new Capacity rate, meaning a lower commodity rate.

In the first iteration of this method, the recalculated Entry Transmission Service Rate would be **0.0113 p/kWh**. This rate would be lower than the highest noted Existing Contract Rate for the Gas Year and so the first iteration would produce a negative Commodity charge to redress the balance. At this point the iterative process fails and so this proposal is invalid. Using the Weighted Average of the Existing Holdings would enable the iterative process to run, but results in a charging regime heavily weighted towards the commodity charges rather than capacity charges.

The final possibility explored is similar to that proposed under UNC0790⁴, in that the under recovery due to the presence of Existing Contracts is used to calculate the Commodity charge applicable to all flows. We have previously demonstrated that this can work in the submission of UNC0790, however, any new version of this proposal would need to take on board the feedback from Ofgem to differentiate this from the previously rejected UNC0790. i.e. using an alternative justification to that used previously.

⁴ https://www.gasgovernance.co.uk/sites/default/files/ggf/book/2021-11/Modification_0790_v1.0.pdf

5.3 A review of Existing Contracts, their flexibility and usage

As an example, we have totalled all trades between shippers for GY 2021/22, the most recently completed period, to use as a forecast for trades in a future period, these total to a Daily figure of 10.3 TWh

We have used the Existing Capacity Holdings for the Analysis period, GY 2024/25. The Daily Total is 2.4 TWh.

We have matched these, so where the Existing Contract holder is also the selling Shipper in a Trade at an Entry Point, the minimum of the traded capacity and the Existing Contract holding is assumed to have been traded. This is a daily figure of 0.8 TWh.

In a scenario where the trade of Existing Capacity holdings has been restricted, we have made the assumption that these values would become additional new Capacity Bookings for the buying Shipper at the Entry Point. The value calculated is assumed to increase the Forecast Contracted Capacity (FCC) at the Entry Point accordingly. These updated figures have been input to the Pricing Model and rates have been recalculated.

The forecasted Entry rate for Gas Year 2024/25 is currently **0.0779 p/kWh**. With the change to the Entry FCC the new forecasted rate for the period would be **0.0559 p/kWh** for all new Capacity.

In further analysis, we would look at the impact this new Capacity could have on the Shorthaul charges as there may be an increase in the uptake of the Entry discount and a corresponding impact on Entry Revenue/Rates.

An additional step, beyond restricting trades, could be to revoke or end date Existing Contracts. To do explore the impact his change may have we removed all Existing Contracts from the pricing model and rerun the prices for Gas Year 2024/25. This results in an Entry Rate of **0.0402 p/kWh**. Again, the changes to the way Existing Contracts are managed would likely lead to an uptake in the Shorthaul discount as currently any Existing Holding is excluded from the Entry Eligible Quantity, and so the forecast would need to account for additional Shorthaul discounts being applied.

5.4 Review of the Entry/Exit split

The following is a list of Nations who have a published Entry/Exit split analysed by ACER:

Nation	Methodology	Entry Split	Exit Split
Sweden	Postage Stamp	0.00	100.00
Estonia	Common Entry Tariff (FinEstLat)	9.00	91.00
Finland	Common Entry Tariff (FinEstLat)	13.00	87.00
Slovenia	Matrix	14.00	86.00
Austria	Virtual Point Based	19.10	80.90
Czech Republic	CWD	20.35	79.65
Latvia	Common Entry Tariff (FinEstLat)	22.00	78.00
Lithuania	Postage Stamp	24.00	76.00
Belgium	CWD	33.00	67.00
Ireland	Matrix	33.00	67.00
France	CWD	34.00	66.00
Hungary	Postage Stamp	40.00	60.00
Portugal	CWD	40.00	60.00
Bulgaria	Matrix	50.00	50.00
Greece	Postage Stamp	50.00	50.00
Italy	CWD	50.00	50.00
Netherlands	Postage Stamp	50.00	50.00
Romania	Postage Stamp	50.00	50.00
Slovakia	Postage Stamp	50.00	50.00
Spain	CWD	50.00	50.00
Croatia	Postage Stamp	60.00	40.00
Malta	Postage Stamp	100.00	0.00
Denmark	Postage Stamp	Dynamic	
Germany	Postage Stamp	Dynamic	
Northern Ireland	Postage Stamp	Dynamic	
Poland (SGT)	CWD	Dynamic	
Poland (National)	Postage Stamp	Dynamic	

Of

these, a number can be immediately excluded from comparison to the GB Market; Malta and Sweden for example have no Exit regime and no Entry regime respectively, Finland, Latvia and Estonia have a bespoke, cross border arrangement, the FinLatEst Common Entry Tariff, which could not be applied to the GB Market, Lithuania have also aligned their Entry Tariffs with this Common Entry Tariff, Slovenia, Ireland and Bulgaria use a Matrix style pricing regime, Austria have proposed a Virtual Point, and another seven nations use Capacity Weighted Distance.

Of the remaining 10, which use a Postage Stamp pricing regime and have no additional complexities, at least at this initial level of review, four use a form of dynamic split while the others range from the 40:60 of Hungary to the 60:40 used in Croatia. Greece, Netherlands, Romania & Slovakia use a 50:50 split, identical to the current GB Regime.

Balanced Regimes (Denmark & Northern Ireland):

The Danish TSO Energinet proposes an ex-post entry-exit split to set all entry and exit tariffs at the same level.

In Northern Ireland, prices are also set to balance at Entry and Exit, the split is therefore an output based on the Capacity bookings rather than an input to the Pricing calculation.

To replicate this in GB for the Gas Year modelled, 2024/25, a split of 29.7%/70.3% is required to match Entry and Exit rates. This would vary year on year, with the intent to align Entry and Exit rates in the circumstances specific to each year.

Germany:

Germany have two Transmission Networks; NCG & GASPOOL. The NRA have set individual ratios of 32:68 for NCG and 38:62 for GASPOOL.

The split across the whole Network is therefore dynamic dependent on bookings across each of the two Networks and is expected to be approximately 36.9:63.1.

“The NRA does not apply an ex-ante entry-exit split. The allocation of revenues to entries and exits can be calculated based on the contracted capacities. This results in an entry-exit split of 36.9% - 63.1% that is subject to changes based on the booked capacities per tariff year.”

For our purposes it would be better to consider the two networks as separate, giving us two fixed points to work with, rather than consider the whole network and the variability in the split which this set up creates. **NCG: 32:68** and **GASPOOL: 38:62**.

Poland (National):

GAZ-SYSTEM consulted on a 50%/50% ratio for the year 2020, while for subsequent years a range of possible entry-exit splits (from 40%/60% to 60%/40%) is provided. GAZ-SYSTEM specifies that ‘The Entry-Exit split ranging from 40/60 to 60/40 may apply only in the situations of high increases in reference prices at entry or exit points’.

We will calculate the both the extremities and the mid-point in this structure in the course of running the published splits for Hungary & Croatia alongside the current 50/50 split.

Examples of how GB Rates would look under these variations:

	Entry Split	Exit Split	Entry Rate (p/kWh)	Exit Rate (p/kWh)
Balanced	29.7%	70.3%	0.0335	0.0335
Germany NCG	32.0%	68.0%	0.0370	0.0324
Germany Gaspool	38.0%	62.0%	0.0463	0.0296
Hungary	40.0%	60.0%	0.0494	0.0287
Current	50.0%	50.0%	0.0649	0.0241
Croatia	60.0%	40.0%	0.0804	0.0194

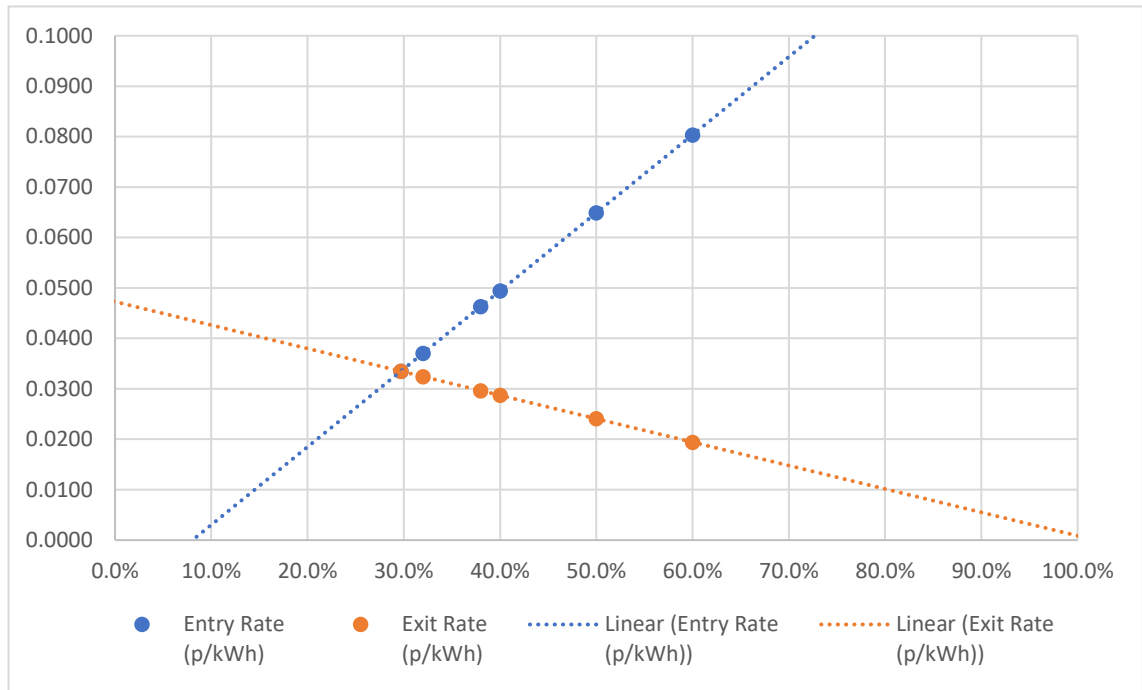


Fig.6 Impact of variations in the Entry Split on Entry and Exit Capacity Rates.

Any change in the Entry/Exit split would require a strong justification, but this demonstrates that a range of options are already compliant with the TAR NC.

5.5 A new commodity charge applied to all flows

The first possibility explored under this scenario was to use the same Commodity Charge figures calculated above based on the historic Commodity Flow Rates and applying these to all Entry Flows. However, using either the Averaged or Forecasted rates and applying them to all flows would generate more revenue than allowed and so the calculated Entry and Exit Reserve Prices would both drop to 0.0000 p/kWh and still generate an over recovery, the regime would become entirely Commodity Based.

Because of the wider charging base, only a Commodity Rate smaller than those calculated based on historic Commodity Charges could be considered without pushing the regime too far away from a Capacity based regime and back towards a Commodity based regime. An alternate method of calculating the Commodity Charge would need to be explored.

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5.6 Do Nothing

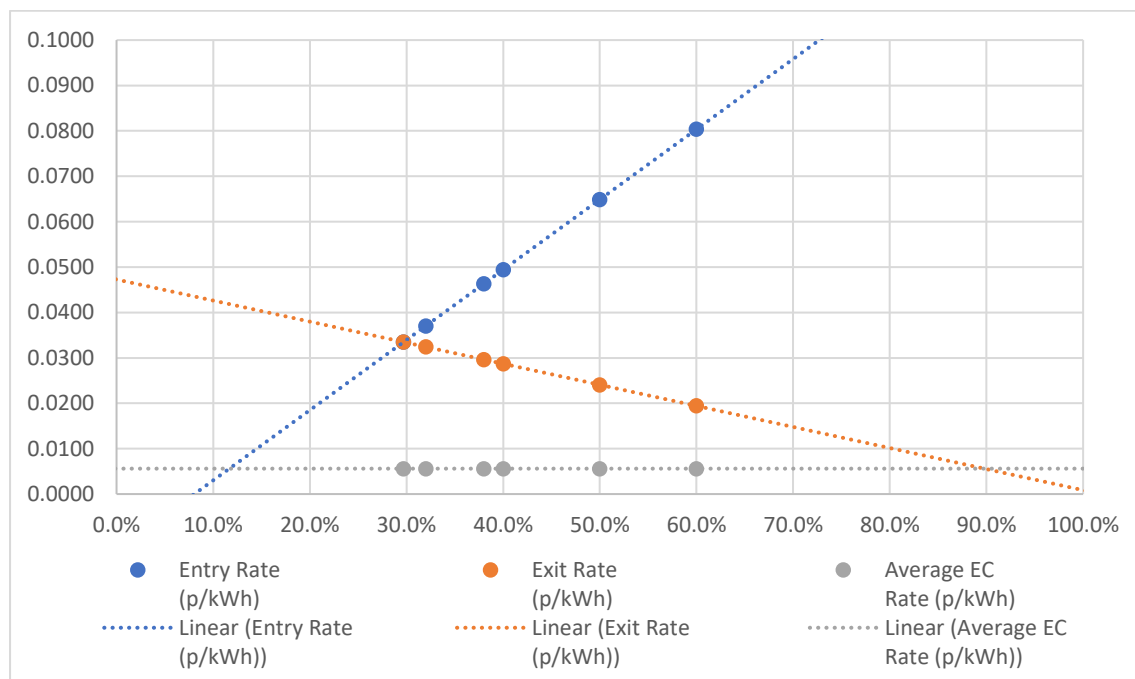
Under a do nothing approach we would simply allow the Existing Contracts to run until they naturally expire in Gas Year 2031/32 in the knowledge that the level of impact reduces year on year. As the proportion of the remaining Existing Contracts are located at Storage Points increases, the impact reduce further over the next nine Gas Years as the 80% discount in place for all New Capacity minimises the disparity between new and Existing Contracts at these sites.

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5.7 A combination option

In the scenario below we take two of the previously discussed options, [5.4 Review of the Entry/Exit Split](#) & [5.1 A new commodity charge based on Utilisation of Existing Contracts](#), and use these in combination.

Below is the effect of adjusting the Entry/Exit split with the Average Existing Contract rate overlaid.



If we adopted the balanced Entry/Exit pricing split (29.7%/70.3%), the discrepancy between the Average Existing Contract rate (**0.0056 p/kWh**) and the Transmission Services Price used for both Entry and Exit (**0.0335 p/kWh**), is **0.0279 p/kWh**. We could apply an Entry Flow charge, targeted to flows against Existing Contracts only using this value. This effectively matches the costs of the average priced, utilised Existing Contract to the cost of New Capacity.

The additional revenue from the Entry Flow Charge would result in an over collection and so there would need to be a cycle of calibration to bring the rates down in line with the Allowed Revenue. This could be by a simple scaling factor applied to the Transmission Services Rate and the Entry Flow or via an iterative process to rebalance each charge, the process of which would gradually move the calculated Entry/Exit split away from the estimated 29.7%/70.3% and back towards 50/50 as the contribution of the Entry Flow charge pushes up the Entry revenue contribution.

Combining two potential solutions in this way also comes with double the issues of anything else on the list meaning a higher risk of rejection as there are two sets of interactions with the relevant objectives which would need to be balanced, but, if managed correctly, could provide a more efficient result than any one option alone.

6. Tools & Resources Available

The Transmission Services Rate Calculation Model, along with all published price statements are available from the [National Grid Gas Charging website](#)⁵.

Details of the Entry/Exit splits are taken from reports produced by ACER and directly from the NRA consultation for each Member State. These can all be viewed at [ACER's analysis on the national tariff consultation documents](#)⁶ page.

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⁵ <https://www.nationalgrid.com/gas-transmission/charging/transmission-system-charges>

⁶ <https://www.acer.europa.eu/gas/network-codes/tariffs/acer-reports-national-tariff-consultations/acer-analysis-national-tariff-consultation-documents>

7. Relevant Objectives

Assessment against Licence Objectives

Impact of the Modification on the Transporters' Relevant Objectives:

Relevant Objective Identified impact

- a) Efficient and economic operation of the pipe-line system.
- b) Coordinated, efficient and economic operation of
 - (i) the combined pipe-line system, and/ or
 - (ii) the pipe-line system of one or more other relevant gas transporters.
- c) Efficient discharge of the licensee's obligations. Positive/Negative/None
- d) Securing of effective competition:
 - (i) between relevant shippers;
 - (ii) between relevant suppliers; and/or
 - (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.
- 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.
- f) Promotion of efficiency in the implementation and administration of the Code.
- 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.

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;
- 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;
- b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;
- c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and
- 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).
- 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.

8. Questions for discussion and contact details

When considering the impacts of ECs:

- Do you agree that Existing Contracts are having a significant impact to Transmission Services Entry Reserve Prices?
- Do you believe there should be some remedy to limit/reduce/remove their influence?
- Should there be any specific treatment of any ECs when considering impacts of changing how overall they are charged?

On the options that focus on TS Entry alone:

- Do you think any of these options provide a more suitable approach to Transmission Services Charging achieving an objective of more 'fair' TS Entry charges?
- Are there any other options or refinements / amendments / specific treatment within these options that should be considered and why?
- Should there be any additional things to consider (e.g. capacity handbacks)

On the broader approach to managing TS Entry charging as part of a bigger objective (e.g. making the UK more attractive to land Gas)

- Is a review of the 50/50 split an appropriate method to review this objective?

Overall

- Assuming an initial conclusion that something should be done (subject to views) do Stakeholders agree that we should explore:
 - TS Entry only?
 - A wider scope i.e. Transmission Services as a whole?
- Is there anything missing in this initial review that would be beneficial in considering any further optioneering selection / direction / development for 2024 and beyond?

Daniel Hisgett
Code Change Lead

daniel.hisgett@nationalgrid.com

Colin Williams
Charging & Revenue Manager

colin.williams@nationalgrid.com