

UNC Final Modification Report		At what stage is this document in the process?
<h1>UNC 0716/0716A:</h1> <h2>Revision of Overrun Charge Multiplier</h2>		<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px;"> 01 Modification </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px;"> 02 Workgroup Report </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px;"> 03 Draft Modification Report </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px;"> 04 Final Modification Report </div> </div>
<p>Purpose of Modification:</p> <p>Modification 0716 and 0716A Proposal seeks to amend the multiplier in the Overrun Charge calculation at NTS Entry and Exit points.</p>		
	Panel consideration is due on 16 July 2020	
	<p>High Impact:</p> <p>UNC 0716 and 0716A</p> <p>None identified</p>	
	<p>Medium Impact:</p> <p>UNC 0716 and 0716A</p> <p>All parties that pay NTS Transportation Charges and/or have a connection to the NTS, and National Grid NTS</p>	
	<p>Low Impact:</p> <p>UNC 0716 and 0716A</p> <p>None identified</p>	

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Timetable		
UNC 0716:		
Pre-Modification presented to Workgroup	06 February 2020	
Amended Modification considered by Workgroup	02 April 2020	
Draft Modification Report issued for consultation	18 June 2020	
Consultation Close-out for representations	09 July 2020	
Final Modification Report available for Panel	13 July 2020	
Modification Panel decision	20 August 2020	
UNC 0716A:		
Proposer recommends follows 0716 Timetable		
Pre-Modification presented to Workgroup	02 April 2020	
Presented to Panel for determination on Alternative Status	21 May 2020	
Draft Modification Report issued for Consultation	18 June 2020	
Consultation Close-out for representations	09 July 2020	
Final Modification Report available for Panel	13 July 2020	
Modification Panel decision	20 August 2020	
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1 Summary

What

UNC 0716

Overrun Charges incentivise shippers to book the capacity required to match their gas flows. This supports the 'ticket to ride' principle that underpins the capacity regime in GB.

At Entry points, Overrun Charges are applied to any one User if that User flows more gas than capacity that they have booked. At Exit points capacity is aggregated, therefore Overrun Charges are only applied to flows over and above the total exit capacity booked by all parties at an exit point (i.e. irrespectively of which parties have booked the capacity).

This proposal seeks to amend the multiplier used in calculating Overrun Charges at both Entry and Exit points.

UNC 0716A

This proposal seeks to amend the multiplier used in calculating Overrun Charges at both Entry and Exit points.

Overrun Charges are intended to incentivise Users to book capacity to match anticipated flows, while not being overly penal as to lead to excessive over-booking of capacity and not encumbering Users with disproportionate costs.

At Entry Points, Overrun Charges are applied to any one User where that User's flows exceed their capacity holdings. At Exit Points, Overrun Charges are applied to an equivalent volume of flow, where the aggregate flow exceeds aggregate capacity holdings.

This proposal seeks to amend the multiplier (eight) used in the determination of Overrun Charges at Entry and Exit Points

Why

UNC 0716

An outcome of the Charging Review is that a higher proportion of revenue will be recovered through capacity charges than previously. Ofgem's minded to position is to implement UNC Modification 0678A, which results in a Postage Stamp methodology (it would introduce one price for all Entry and one price for all Exit points). As a result, capacity reserve prices will increase at some entry and exit points and decrease at others. Industry discussions suggest that a consequence of this could result in a significant increase in the **average** Overrun Charge for both Entry and Exit. This is due to the methodology for calculation of Overrun Charges being set at a multiple (x 8) of the bid or application prices already accepted for parties / users acquiring capacity. As capacity reserve prices increase, these prices would increase accordingly, meaning that Overrun Charges will also increase.

Furthermore, the industry felt that with bookings potentially being made closer to flows in the future it is anticipated that more accurate FCC (Forecasted Contracted Capacity) will be produced. Increased Overrun Charges could potentially make Users book more capacity than they require (for the fear of over-running and incurring penalties), which as a consequence might negatively affect accurate FCC predictions.

UNC 0716A

The NTS Capacity Access Review initiated through Modification 0705R is intended to establish a long-term strategy for the NTS capacity access regime. The Review separated out short-term problems from long-term ambitions, with Overrun charges being identified as a short-term problem worthy of immediate attention. The

driver behind its classification was a combination of the expected change to the NTS charging regime in October 2020, following the anticipated implementation of Modification 0678A, but also the fact that Overrun multipliers had not been reviewed since their inception, over 20 years ago. In summary, the review of Overrun multipliers was intended to consider whether they had been set at levels which were appropriate historically and for the future.

To this end, the Proposer has developed a set of Principles which it recommends are adhered to when assessing the validity of the current Overrun Multipliers as well as providing an “acid test” against which any changes to them should be measured.

Furthermore, the industry felt that with bookings potentially being made closer to flows in the future, it is anticipated that more accurate FCC's (Forecasted Contracted Capacity) should be produced. High Overrun Charges work against this by encouraging Users to book more capacity than they require (for the fear of over-running and incurring exceptionally high penalties).

The analysis carried out by the Proposer concludes that the current multipliers are inconsistent with the Principles.

How

UNC 0716

The proposer recognises that the increased Overrun Charges are likely to be incurred because of the new proposed charging methodology and believes that maintaining an appropriate incentive (by way of financial penalty) for shippers to book capacity is required. The aim of the proposal is to find a multiplier which would maintain the status quo; keep the Overrun Charge and incentive to book capacity at the same level as it is today. Revenue is used as a measure of shipper's performance of booking capacity to measure flows and therefore as a method of maintaining that status quo. It was assumed capacity booking behaviour will not worsen if revenue remains similar as in previous years.

The new charging regime will have an impact on capacity booking behaviours. While we know that the behaviour could change, we don't know to what extent. We have based this proposal on historic quantifiable data of capacity bookings against flows (revenue from historic Overrun Charges) rather than future uncertain predictions of behaviours. The principle of keeping the Overrun incentive at similar historic levels post implementation of the charging review can be achieved by reduction of the Entry Overrun x 8 multiplier (referred to in UNC B2.12.3 (a)) to x 3 and reduction of the Exit Overrun x 8 multiplier (referred to in UNC B3.13.3 (a) and (c)) to x 6. By changing the multiplier as proposed, the **overall** charges should not be increased.

This proposal does not seek amendments to the Overrun methodology in other instances.

The proposer recognises that it is not plausible to predetermine a uniquely appropriate level of the Overrun multiplier. Although the historic reason for implementing x8 multiplier is unclear, the proposer believes that the level of **overall** incentive (administered through the existing UNC mechanism) should be maintained going forward and therefore the multiplier should have quantifiable justification behind it. The impacts of the implementation of UNC Modification 0678A, Ofgem's minded to decision is not confirmed, and will not occur until October 2020, may lead to a change in Users capacity booking behaviour which at this stage is unknown. Once the new patterns are known, the proposer deems it necessary to re-assess Overrun Charges to establish whether they still meet their primary objective. The proposed change outlined in this modification is to maintain the status quo in the interim period in terms of financial exposure to Users, assuming no change in behaviour.

UNC 0716A

The Proposer has carried out analysis to examine recent patterns in User NTS Capacity bookings. The results show that while short-term products remain plentiful and broadly zero-priced, Users have engaged in a strategy

of over-booking capacity when compared to anticipated flows. DNs are an exception to this rule, as they are subject to specific Licence Conditions to meet peak demand levels on their networks,

On the basis that there is no commercial or strategic advantage to be gained through capacity Overruns, given the extremely penal nature of the charges, it is reasonable to conclude that historical Overruns are the result of User error.

With the expected implementation of Modification 0678A in the short-term, it is anticipated that Users will modify capacity booking strategies and place greater emphasis on minimising capacity costs by purchasing short term capacity products to match flows. This shift in booking behaviour will reduce the “margin for error” and likely result in a greater number of Overrun events in future.

The Proposer identified three key conclusions from its analysis:

Conclusion 1: Users have made little attempt to match capacity bookings with anticipated flows, and instead bulk buy surplus capacity at zero or significantly lower costs to safely satisfy their daily needs and avoid Overruns.

Conclusion 2: The predictable change in booking behaviour as a result of a change to the Charging Methodology focused on capacity-based charging, with limited or no discounts for short-term capacity products, renders historical booking behaviours irrelevant to informing future booking behaviours.

Conclusion 3: There is no commercial or strategic advantage to be obtained from capacity Overruns with extreme penalties, therefore, it must be concluded that such events are a result of User error.

In light of these findings and with the intention of adhering to the Principles outlined in the Modification, it is proposed that the Overrun Multiplier is reduced to 1.1. This level of Overrun Multiplier is consistent with the multiplier already established in the UNC on the occasion that National Grid takes a Constraint Management Action.

2 Governance

Justification for Authority Direction

UNC 0716

As the proposal has a material cost impact on the transportation arrangements for Shippers and relevant consumers, it should be subject to Authority Direction.

UNC 0716A

The Modification addresses the same issues that have been raised under Modification 0716 but offers an improved solution by setting Overrun Multipliers at levels better aligned with the core principles of Overrun charges than those proposed under Modification 0716.

As the proposal contains features common to Modification 0716 the Proposer believes that this Modification should be deemed to be Alternative to Modification 0716.

As with Modification 0716, the proposal has a material cost impact on the transportation arrangements for Shippers and relevant consumers and should be subject to Authority Direction.

Requested Next Steps

UNC 0716

This Modification should:

- be considered a material change and not subject to self-governance
- be assessed by a Workgroup

UNC 0716A believes that this modification should:

be deemed to be Alternative to Modification 0716, and as such should

- be considered a material change and not subject to self-governance
- be subject to the same timetable as Modification 0716

3 Why Change?

UNC 0716

As a result of the proposed changes related to the allowed transported revenue being recovered through capacity charges from 1st October 2020, some Overrun Charges will see a substantial change with the average impact being a significant increase of exposure. This proposal seeks to maintain the status quo and safeguard Users by moderating Overrun Charges caused by an unintended consequence of the implementation of UNC Modification 0678A. At the same time, the proposer recognises that it is imperative to keep an appropriate level of Overrun Charges to maintain the incentive on shippers to book capacity on the NTS. The proposer believes that the proposed solution seeks to strike an accurate balance between the magnitude of Overrun Charges and the incentive to book the capacity for the gas flows required.

Given the change to the reserve price methodology likely to be implemented by UNC Modification 0678A, as per Ofgem's minded to position, ("Minded to Letter - Modification 0678) analysis has been conducted to ensure that the potential revenue collection from Overrun Charges are forecast to remain, on average, at a consistent level as it has been in the past years in order to maintain the same incentive / penalty on Users to match capacity bookings and flows. This proposal recognises that there will be differences in the increase/decrease of reserve prices at individual entry and exit points. The entry points average reserve price increase, on average, will be greater than exit points.

This proposal has taken a holistic view of all entry and all exit points. By changing the multiplier as proposed, the overall level of Overrun Charges will remain the same and it has been assumed that for that reason the capacity booking behaviour will not worsen (Overruns will not occur more often once the new charging regime is implemented).

Entry Overrun Charge

The table below demonstrates how revenue collected from Entry Overrun Charges will potentially increase after implementation of Modification 678A if booking behaviour remains as current. *For the purpose of the calculation, the following was taken into account:*

**Expected changes to the NTS charging methodology will recover a greater proportion of transporter allowed revenue from capacity fees. The average reserve price will increase significantly. For the purpose of this calculation Actual daily bid prices paid and Postage Stamp Reserve price of 0.0412p/kWh/d were taken into account.*

Furthermore, currently there is no reserve price for within day allocation. However, should 0678A be implemented, postage stamp reserve prices will be applicable for within day allocations. Furthermore, closer to

flow auction bookings may considerably increase as may competition, which may increase charges via auction bidding in the new regime. *Charges reflected in this column are the minimum charges the fees would potentially increase to.*

Based on the figures presented, for Entry the currently collected actual revenue would maintain at approximately the same level if we reduce the multiplier to x 3 (e.g. actual revenue collected in 18/19 with x 8 multiplier = £391,142 which is close to potential collected revenue based on Reserved Prices for Daily standard Capacity in Postage Stamp Methodology x 3 = £427,069.65).

Multiplier	Actual charges Year 18/19	*Charges 18/19 updated with Reserved Prices for Daily Standard Capacity (Postage Stamp)
x8	391,142.29	1,138,852.40
x6		854,139.30
x4		562,426.20
x3		427,069.65
x2		284,713.10

Multiplier	Actual charges Year 17/18	*Charges 17/18 updated with Reserved Prices for Daily Standard Capacity (Postage Stamp)
x8	2,229,116.00	7,298,673.19
x6		5,474,004.90
x4		3,649,336.60
x3		2,737,002.45
x2		1,824,668.30

Exit Overrun Charges

The table below demonstrates how revenue collected from Exit Overrun Charges would potentially increase after implementation of UNC Modification 0678A if booking behaviour remains as current. Based on the figures presented, for Exit the currently collected actual revenue will remain most like current levels if we reduce the multiplier to x 6. In 18/19 the actual revenue collected with x 8 multiplier was = £561,791.94 and in 17/18 the actual revenue collected with x 8 multiplier was = £675,682.12. Across 17/18 and 18/19 a x 6 multiplier would over-recover by a total of £98,952.85 whereas a x 5 multiplier would under-recover by a total of £123,784.94. Therefore, a x 6 multiplier is the closest whole number multiplier which overall recovers the level of revenue most akin to actual charges for those years.

Multiplier	Actual charges (£s) Year 18/19	*Charges (£s) 18/19 updated with Reserved Prices for Daily Standard Capacity (Postage Stamp)
x8	561,791.94	863,265.67
x7		755,357.46
x6		647,449.25
x5		539,541.04
x4		431,632.83
x2		215,816.42

Multiplier	Actual charges (£s) Year 17/18	*Charges (£s) 17/18 updated with Reserved Prices for Daily Standard Capacity (Postage Stamp)
x8	675,682.12	918,636.87
x7		803,807.27
x6		688,977.66
x5		574,148.05
x4		459,318.44
x2		229,659.22

UNC 0716A

The NTS Capacity Access Review initiated through Modification 0705R is intended to establish a long-term strategy for the NTS capacity access regime. The Review separated out short-term problems from long-term ambitions, with Overrun charges being identified as a short-term problem worthy of immediate attention. The driver behind its classification was a combination of the expected change to the NTS charging regime in October 2020, following the anticipated implementation of Modification 0678A, but also the fact that Overrun multipliers had not been reviewed since their inception, over 20 years ago. In summary, the review of Overrun multipliers was intended to consider whether they had been set at levels which were appropriate historically and for the future.

This proposal looks to build on evidence from the recent past, as a basis for assessing the effectiveness of the current Overrun multipliers, as well as look to the changing landscape going forward. In the very short-term, the anticipated implementation of Modification 0678A will mean that the shift towards capacity-based charges, coupled with the removal of, or significant reduction in discounts for short term capacity products, will inflate the price of capacity and alter the way in which Users acquire it. Users will endeavour to reduce overall capacity costs from over-booking through profiling capacity purchases to better reflect flows meaning that the risk of accidental Overrun is likely to increase accordingly.

Without a reduction in multipliers in the short-term, Users will face increases in Overrun penalties, in absolute terms, as well as skew capacity purchasing behaviours to the detriment of all Users, National Grid NTS and consumers.

4 Code Specific Matters

Reference Documents

UNC 0716

None

UNC 0716A

Uniform Network Code Section B

Knowledge/Skills

UNC 0716

None

UNC 0716A

An understanding of the NTS Capacity Overrun regime

5 Solution

UNC 0716

The proposer recognises that, if Modification 678A is implemented, the reserve prices will increase at some entry and exit points and decrease at others. However, as demonstrated above, on average the potential postage stamp reserve price will cause Overrun Charges to double at entry points and significantly increase at exit points. The proposer believes that the proposed reduction in the multiplier, based on historic behaviour results, and the impact of the implementation of the UNC Modification 0678A minded to position is not leading to, on average, any significant greater financial risk from Overruns to Users.

The analysis conducted show that by reducing the multiplier to x 3 for Entry and x 6 for Exit, on average, a similar amount of revenue will be collected from Overrun Charges and therefore a similar level of incentive would be provided as prior to the introduction of the UNC Modification 0678A changes.

	Actual charges (£s) Year 17/18 & 18/19	*Charges (£s) 17/18 & 18/19 updated with Reserved Prices for Daily Standard Capacity (Postage Stamp) x 3 Entry / x 6 Exit
Entry Overrun Charges	2,690,258.42	3,164,072.10
Exit Overrun Charges	1,237,474.06	1,336,426.91
TOTAL	3,927,732.48	4,500,499.01

For the changes to be implemented the following would need to be amended in UNC:

- UNC B2.12.3 (a)) number change from x 8 to x 3
- UNC B3.13.3 (a) and (c)) number change from x 8 to x 6

It is worth noting that the revenue collected from Entry Overrun Charges is credited to Neutrality monthly and returned to Users. Neutrality is shared out based on each User's end of the day firm capacity (as a percentage of the total system end of the day firm capacity for all Users). Revenue collected does not, therefore, contribute to the NTS Transporter Allowed Revenue. Revenue from Exit Overrun Charges is deducted from SO Commodity in Y+2 in the instance of over-recovery of Transporter Allowed Revenue.

UNC 0716A

Purpose of Overrun multipliers

Overrun multipliers have formed part of the UNC since market opening in 1996. They were established to provide an incentive on Users to purchase sufficient volumes of capacity, at both NTS Entry and NTS Exit Points, to satisfy expected supplies/demand. A multiplier of 8 was introduced primarily, as it was proposed at the time, as being representative of a reasonable incentive, however, there is no suggestion that this was settled upon as a result of any meaningful analysis. It should also be recognised that at the time the Overrun multiplier of 8 was set, the GB gas market was in a period of growth (during the "dash for gas"); capacity was invariably constrained in some locations; and the NTS was expanding to accommodate market demand. Therefore, at that time, a higher incentive and penalty may have been more justified.

While other incentives, such as balancing, have been changed to reflect the changes in the gas market, Overrun multipliers have been retained at their original levels without being subject to review. The solution put forward in this modification, endeavours to assess the effectiveness of the current Overrun multiplier as well as investigate how the changes in the gas market, both physically and commercially might be reflected upon in the derivation of future Overrun multipliers.

Principles underpinning Overrun multipliers

In order to determine what would constitute an appropriate multiplier, a set of base principles should be established.

Proposer's recommended base principles;

1. Any incentive should be set at a level to encourage capacity bookings that are more reflective of "need"
 - a. Overbooking to insure against Overrun will create false scarcity and potentially mislead NGG where capacity bookings are used as an indication of flow
 - b. Where capacity reserve prices are set as a basis for recovering revenue. excess bookings will increase TO revenue which in turn will require balancing via k factor or Revenue Recovery Charge. This creates uncertainty and unpredictability in capacity costs for Users and end consumers and runs contrary to the objectives which underpinned the NTS Charging Review
2. Overrun charges should not be dis-proportionate
 - a. Provide an incentive to book required capacity, but not be unduly penal. Revenues raised from Overruns are allocated to shippers via capacity neutrality, resulting in a windfall benefit as a result of shipper error, where shipper error is the cause of an Overrun
 - b. When the network (the NTS) is "unconstrained", meaning there is generally surplus of capacity, the provision of additional "unbooked" capacity via Overruns is at no cost to NGG and does not disadvantage or undermine the market
 - c. Where the NTS is constrained, Overruns could be priced at levels greater than the default multiplier (currently 8) multiplied by the auction price. The alternative Overrun charges will better reflect the cost of managing the NTS during a constraint.

Capacity booking behaviour in the recent past

An examination of booking patterns over the last 12 months provides a useful indicator of User booking behaviour in respect of the current capacity charging regime. Section 11 of this Modification provides a summary of the analysis carried out by the Proposer to support the observations and conclusions set out below.

During this period, NTS capacity has been broadly unconstrained, with Users able to access relatively cheap, or even free Entry Capacity. At exit, competition for capacity is generally restricted as at most Exit Points the Exit Capacity is provided to support an individual offtake. Further to this, on the Exit side at NTS/DN interconnections, DNs are subject to regulatory obligations to meet peak levels of network demand, meaning that commercial drivers to minimise Exit capacity costs are greatly diminished. For shippers, where they are required to acquire Exit capacity, the ability to pass on these charges to customers is more prevalent, when compared to entry charges, which again diminishes the incentive to actively manage and minimise associated costs.

Booking behaviour at Entry Points

Entry Capacity can be acquired directly from National Grid via a series of term auctions, ranging from quarterly firm to within day interruptible. For capacity bought ahead of the day a positive reserve price is set, while for within day products (firm and interruptible) the reserve price is zero. To understand how the unconstrained properties of the NTS combined with the variance in reserve prices impacts User booking behaviour, the Proposer has elected to investigate two Entry Points, Bacton UKCS and St Fergus. Based on our wider examination of Entry Capacity booking behaviour these Entry Points provide a good benchmark, reflecting similar behaviours to other Entry Points.¹

The results of the analysis (Section 11, part 1) clearly show a strong demand for short-term capacity products, both within day firm and interruptible, which reflects the confidence in the market that capacity is plentiful with negligible probability of not being made available, allowing it to be acquired at zero, or close to zero cost. Further, as all of the short-term capacity made available is acquired, usually in excess of actual flows, it is reasonable to assume that Users make little attempt to match capacity bookings with anticipated flows, rather bulk buying surplus capacity at zero cost to more than satisfy their daily needs.

Booking behaviour at Exit Points

Exit capacity can be acquired directly from National Grid via a series of term auctions, ranging from annual firm to off-peak capacity. For firm capacity a positive reserve price is set, while for the off-peak product the reserve price is zero.

The booking of Exit Capacity varies depending on the nature of the offtake, with varying emphases placed on managing costs versus ensuring capacity is acquired, as described above.

To understand how the unconstrained status of the NTS combined with the variance in reserve prices impacts User booking behaviour, the Proposer has elected to investigate three Entry Points, Stublach (storage), Rocksavage (power station) and Bacton IUK (interconnector). The Proposer elected not to investigate NTS/DN Exit Points as capacity booking is dictated by licence requirements.

The Proposer believes that the data from the three Exit Points (Section 11, part 2) provides a good indicator of User booking where there is a commercial incentive to minimise costs.

¹ Those Entry Points which acquired significant volumes of QSEC capacity in order to fulfil incremental investment User commitment obligations show moderately different results.

As with Entry Capacity, at the three Exit Points examined, there has been a high level of demand for off-peak capacity, with available capacity often sold out. Again, it is reasonable to assume that as the product can be acquired at zero cost, Users make little attempt to match capacity bookings with anticipated flows, again over-booking capacity to more than meet their needs.

Conclusion 1: Users have made little attempt to match capacity bookings with anticipated flows, and instead bulk buy surplus capacity at zero or significantly lower cost to safely satisfy their daily needs and avoid Overruns

Impact of anticipated changes to the NTS Charging Methodology

In order to comply with the EU Tariff Code, Modification 0678 (and alternatives) were developed by industry and are currently under consideration by Ofgem. The Modifications all propose a move towards capacity-based NTS charges and a change to the underlying charging methodology, replacing the current LRMC approach with either Postage Stamp or Capacity Weighted Distance methodologies. In its minded to decision² Ofgem has stated a preference for Modification 0678A which proposes a Postage Stamp methodology. Further, it includes: the removal of discounts for firm capacity products; a 10% discount for interruptible products and the replacement of TO Commodity Charges with Revenue Recovery Charges.

On the basis that Modification 0678A is implemented by Ofgem, this will change the reserve prices for all capacity products at all NTS Entry and Exit Points.

The analysis in Section 11, parts 3 and 4, shows that, on average and in absolute terms, reserve prices for NTS Entry Capacity and NTS Exit Capacity will be 76 times and 57 times higher, respectively, as a result of Modification 0678A. Clearly, given the current significant reliance on short-term, zero-priced capacity products as highlighted above, it is reasonable to expect Users' capacity booking strategies to evolve, with an emphasis being placed on minimising capacity costs. This will require that Users move away from "bulk buying" excess volumes of zero-price capacity to more pro-active, profiling of short-term capacity products to closely match anticipated flows. It is also likely that Users will defer booking until as late as possible as end of day flow information becomes more reliable.

Conclusion 2: This predictable change in booking behaviour as a result of a change to the Charging Methodology focused on capacity-based charging, with limited or no discounts for short-term capacity products, renders historical booking behaviours irrelevant for informing future booking behaviours.

Why Overrun?

Accepting the conclusion made above regarding booking behaviours this can be extended to the treatment of Overrun multipliers.

Data provided by National Grid at the March 2020 Modification 0716 workgroup meeting³ summarised Overrun incidents during 2017/18 and 2018/19. Although the data is useful in order to understand the magnitude and dispersion of the Overrun charges, no attempt was made to investigate the underlying reasons as to why the Overruns occurred.

² <https://www.ofgem.gov.uk/publications-and-updates/amendments-gas-transmission-charging-regime-minded-decision-and-draft-impact-assessment>

³ https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/book/2020-03/Mod%200716%20Tx%20WG%20050320_0.pdf?BSR7TUILqNTN4HZ6w68FEsayotlzYG24=

The Proposer recommends that based on our analysis, the relatively “hands off” approach to capacity booking observed by Users, as shown by the preference for short-term, zero-cost capacity products, coupled with the extremely penal cost associated with incurring Overrun penalties (multiplier of 8) that the primary, if not sole reason for Overruns is User error. It is evident that there is no commercial or strategic advantage to Overrun, as the cost of doing so will be subsumed entirely by the User and undermine the tradeable value of the gas commodity. This assertion is reinforced by the observation that Overruns appear to have been spread across multiple System Points and multiple Users, rather than any trend to consistently Overrun at certain points

Conclusion 3: There is no commercial or strategic advantage to be obtained from capacity Overruns with extreme penalties, therefore, it must be concluded that such events are a result of User error.

Setting the Overrun multiplier

In order to understand the impact of Overrun multipliers, the Proposer has compared the costs of applying a multiplier of 8, using current firm reserve prices, with the multipliers of 3 and 6 at NTS Entry and Exit Points respectively, using forecast October 2020 Postage Stamp reserve prices. The full results are shown in Section 11, parts 5 and 6.

On average, in absolute terms, at entry, Overrun costs would increase by a multiple of 28 and at exit by a multiple of 43. In both cases, the impacts are wide-ranging with at entry, multiples ranging from 0.3 to 80 and at exit between 0.23 and 129, however, it should be noted that in all cases this equates to an effective uplift in the price of capacity by 0.1287 p/kwh, (0.06345 p/kwh for storage) at entry and 0.1032 p/kwh, (0.0516 p/kwh at storage).⁴ With gas trading at around 1p kwh for Gas Year 2020/21, these levels of Overrun charges remain extraordinarily penal and any commercial motivation to Overrun is not evident.

In determining an appropriate level for an Overrun multiplier, in parallel with fulfilling the Relevant Objectives, it should:

- be consistent with the Principles set out in the Modification;
- only use historical evidence where it is valid to do so;
- be forward looking, reflecting the outlook for the UK gas market and accommodate any anticipated regulatory/contractual changes;

In respect of the above, it is proposed that the Overrun multiplier is reduced from 8 set to 1.1.

This represents a 10% uplift to capacity charges, translating to 0.00429 p/kwh (0.00215 p/kwh at storage) for entry and 0.00172 p/kwh (0.00086 p/kwh at storage).

A multiplier of 1.1 is consistent with the level applied where National Grid has taken Constraint Management Actions at either entry or exit.

⁴ Were the multiples derived on the basis of interruptible, off-peak reserve or entry within-day firm prices they would be infinite.

6 Impacts & Other Considerations

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

UNC 0716

None

UNC 0716A

Modification Panel participants agreed in May that this Modification does not have a SCR impact

Consumer Impacts

UNC 0716

Improved safety & liability: Overrun Charges embed the ticket to ride principle whereby a shipper should hold one unit of capacity to flow one unit of energy onto or off the system. Receiving accurate capacity booking information supports the efficient and safe commercial operation and management of the system. Reduction of the multiplier will have a positive impact on accurate booking behaviour (i.e. by maintaining the status quo of incentive through financial penalty, there should not be a greater fear of Overrunning than current as the aggregate charges remains the same), meaning that capacity bookings are reflective of flows and not inflated due to risk of incurring a high Overrun Charge.

Lower bills than would otherwise be the case: The reduction in multiplier will reduce the potential higher User exposure to increased charges because of implementation of Modification 678A. Assuming that the industry as a whole passes through charges to end consumers as a principle, by extension, lowering the multiplier would have the effect of maintaining the level of aggregate charges, ensuring that any increase in capacity unit rates has a neutral effect on consumer bills

Reduced environmental damage: As new technology and new sources of gas enter the market as the industry evolves to meet decarbonisation targets, the risk of high Overrun Charges being passed on, to potentially small customers may be a blocker to their entry and continued operation.

Improved quality of service: National Grid's stakeholders have identified the impact of UNC Modification 0678A on Overrun Charges. By raising this modification, National Grid aims to provide a good quality of service which will ultimately benefit consumers.

UNC 0716A

Improved safety and liability. Accurate capacity booking information supports the efficient and safe commercial operation and management of the system. In the current regime, capacity is not booked in any meaningful way, with Users booking excessive volumes of Entry and Exit Capacity, primarily on a short-term basis, as it is zero-priced and plentiful. Current Overruns can only be explained as a result of User error, as commercially Users will always incur financial penalties for over-running. Where the charging regime favours capacity-based charges, a commercial incentive will endure, resulting in Users placing a greater emphasis on capacity booking strategies and processes. Reducing the multiplier to a level which balances an incentive to book without unfairly penalising User error will result in Users booking capacity representative of actual need, providing valuable information for the purposes of system operation. Where multipliers are too high, Users will tend to overbook capacity, degrading the value of capacity booking information in respect of system operation.

Lower bills than would otherwise be the case. The reduction in the multiplier will reduce User exposure to increased charges as a result of a change to the charging methodology, while also removing disproportionate penalties as a result of User error. Overrun charges are unlikely to be passed directly through to consumers, however, consumer bills will directly be reduced by the resultant profiling of capacity booking by Users to more closely match anticipated flows. Were the Overrun multiplier set at a higher level, Users are likely to “overbook” capacity, to mitigate against overly penal Overrun risk, and pass the additional capacity costs directly onto consumers

Reduce environmental impacts Reduced Overrun Charges will help facilitate the new technology and new sources of gas, by eradicating penal charges, caused by User Error and ensuring excess volumes of capacity need not be purchased to mitigate against the risk of incurring excessive charges.

Cross Code Impacts

UNC 0716 and UNC 0716A

None identified

EU Code Impacts

UNC 0716 and UNC 0716A

None identified

Central Systems Impacts

UNC 0716

None, there will be no charge for the system implementation of this change. Testing will be required to ensure system calculation of charges is accurate.

UNC 0716A

None identified

Workgroup Impact Assessment

UNC 0716 (Discussions between March and May Transmission Workgroup Meetings)

Transmission Workgroup has discussed Modification 0716 Review of ‘Overrun Charge Multipliers’ since March 2020. The aim is to amend the Overrun Multiplier used for calculating NTS Entry and Exit Points Overrun charges as a result of Modification 0678A Amendments to Gas Transmission Charging Regime which will become effective following implementation on 1st October 2020; whereby the reserve prices could increase significantly resulting in higher Overrun charges. Therefore by raising this modification, would safeguard Users of these impending costs.

UNC Panel raised the following two questions for the Workgroup to discuss :-

1. The Consumer impacts and;
2. The materiality of the proposal in terms of governance of the Modification.

In order to satisfy the above, National Grid, the proposer provided the workgroup with analysis of the current volumes of Overruns during (2017/2018 & 2018/2019 (<https://www.gasgovernance.co.uk/0716/050320>) to highlight the revenue incurred from the Overrun charges. The following questions were raised by the workgroup.

- What the rationale was on the current multiplier x8 being used?
- Situations where Overruns have caused a constraint on the network, what was the associated cost?

- Current contractual arrangements to determine to what extent existing contracts with a close to zero reserve price could lead to zero Overrun Charges?

The proposer advised workgroup that the current multiplier has been in place for many years in the current regime and as far as the proposer is aware, was not based on anything specific. Some workgroup participants felt that the multiplier was excessively high. One workgroup participant challenged why the exit multiplier is twice as large as the entry multiplier in the proposal. The proposer explained that the change is dictated by the difference between the potential entry and exit price increase (entry reserve prices will increase significantly more than exit following implementation of Modification 0678A on 1st October 2020), therefore in order to maintain the status quo (collect the same amount of revenue from Overrun charges with effect from 1st October 2020) the multiplier will need to be different.

The proposer believes that maintaining status quo will see similar numbers of Overruns on the system as seen historically; too severe reduction of the multiplier might not incentivise Users to book the capacity required. A number of workgroup participants questioned the relevance of linking Overrun revenues with the level of Overrun multipliers. Where a change in the charging methodology will necessarily result in significant changes in behaviour i.e. a shift from low, or no cost capacity overbooking to “close to flow” booking, renders any such approach to be disingenuous.

National Grid provided further data for the workgroup to analyse; analysis of correlation between Overruns and constraints show no direct link. The proposer stressed that where constraints on the system happen, a multiplier of 1.1 is used for the purpose of Overrun calculation and such instances are not a subject of this proposal. Furthermore, the proposer highlighted that the purpose of the charges is to incentivise capacity booking behaviour and link to constraints/ recovery of costs incurred, is not their objective.

National Grid stressed that this proposal (0716) is a temporary solution which will shield users from excessive charges from 1st October 2020 and was of an opinion that any change put forward should be quantifiable and that another review could take place once capacity booking behaviour is available after Mod 678A is implemented. At that time different options, including tolerance, could be considered.

Several workgroup participants noted that UNC 705R NTS Capacity Access Review was intended to provide a vehicle for more strategic changes to be made to the capacity regime, providing short-term “wins” while future-proofing the arrangements. Following the implementation of UNC 678A the risks and costs of Overrun at a large number of entry and exit points will increase substantially and as a result more radical changes are needed to be made in the short term.

The proposer provided an amended modification (V2) which incorporated some of the Workgroup concerns. TO Commodity was taken out of the presented analysis and actual revenue from Overrun charges 2017/18 and 2018/19 were compared with their potential equivalent in Postage Stamp methodology. This resulted in the reduction of the Entry multiplier from the original 4x to 3x but analysis demonstrated in the Proposers view that the Exit Capacity should remain at the original solution at 6x. This however was not the view of all workgroup.

The Proposer reviewed the consumer impacts to provide clarification for panel and workgroup and stated that the, revised multiplier could have a positive impact on consumers. Furthermore, they believe that if the change is not made the increased penalties or Overruns charges may be passed to end consumers.

Several workgroup participants felt that it would have a negative impact as from 1 October 2020 as Users would be more inclined to overbook capacity when faced with such penal Overrun charges; the costs of which would be passed directly onto consumers.

The Proposer felt very strongly that Overrun Charges should provide an incentive on Shippers to book NTS Entry and Exit Capacity. A workgroup participant believed that the levels should encourage Capacity to be booked close to flows e.g.: that the penalty should be proportional to the detriment and would be raising an

alternative modification to address these concerns, as the solution in this Modification was not addressing this issue. Workgroup participants also agreed that the current solution in this modification was not logical.

Ofgem did highlight during the discussion during the May Workgroup when the Pre-Modification was discussed, that any evidence should be well substantiated, if it is to be considered by them in the outcome of this modification. The original proposer of 0716 noted that the current multiplier drives capacity booking behaviour and the assumption has been made that if revenue from Overruns remains the same that booking behaviour will not worsen after 0678A implementation. Some workgroup participants noted that it is not reasonable to compare booking behaviours under the current charging regime with those we expect to see post-October 2020.

The Workgroup participant who would be raising the alternative modification (0716A) advised that they would not be looking at changing the proposed multiplier after 12 months and advised Workgroup that the solution in their modification would not be a transitional change. It also noted that UNC 0716 was not proposed as a transitional change and could be modified at any point in the future. The proposer of 0716 recognised that the future capacity booking behaviour will change, but it is not known to what extent – hence the need for a further review once the new booking behaviour patterns are known.

Further Development of the Workgroup Report had been discussed in April and May Transmission Workgroups capturing comments of Workgroup.

May Workgroup discussions

UNC 0716 and 0716A (Pre-Panel determination discussions)

The following discussions were held in May Workgroup to review both of the Modification solutions and seek feedback from Workgroup prior to 0716A determination by Panel

NG the proposer of 0716 does not believe that 1.1 multiplier has been determined as an appropriate multiplier to be used in the Overrun calculation. The comparison of average increase in reserve prices does not give a true indication of the price change on the network overall. While it has been demonstrated that the average entry firm reserve price increase at entry points will be x76, it also demonstrates that at majority entry points (9 out of 15), the increase will be on average x 3.05. At the same time, the exit data clearly shows that in many instances the average price will decrease. Industrial sites and Power stations where reserve price was set at 0.0001 create an ambiguous picture of x57 average increase. Looking at the details, 77 out of 104 exit points listed will have an increase no greater than x 4 (out of these in 31 instances the average reserve price will actually be reduced).

The Proposer Of 716A believed that although the average increase is impacted by a number of more extreme increases in reserve prices, a large number of individual entry and exit points are exposed to significant increases in the costs of acquiring capacity. The increase is particularly marked where, as shown in the charts displaying booking behaviour, (Appendix 11) there is a growing reliance on zero-cost, within day and interruptible products. Any attempt to weight the increases in reserve prices would be more misleading as it is not possible to predict at which system points Overruns will occur. Given, the Proposer of 0716A has endeavoured to show that, historically, Overruns are a result of User error, it should not be the case that Users at any entry or exit point face even greater Overrun penalties going forward. The Proposer of 0716A also maintains that as Users will alter their booking behaviours in response to escalating capacity costs, the propensity to Overrun will be far greater than is currently the case and that this should be balanced with a more proportionate Overrun penalty regime

Some workgroup participants concurred with the views of the proposer of 0716A.

NG's view is that a quantifiable method has not been used to justify the drastic change (x 8 to 1.1) and, if the proposal is implemented, it creates a risk of decreasing Users' incentive to book adequate capacity and therefore will diminish the primary objective which the Overrun charge is set to achieve. Overrun charges regardless of

whether they are a result of User error or otherwise, are to encourage to book relevant capacity and to implement processes which will ensure Overruns don't occur. The proposer of 0716 does not believe that 10% charge is likely to adequately support that objective.

The Proposer of 0716A contends that given the x8 multiplier was not derived on the basis of any quantitative assessment, then there is little justification to require that any alternative multiplier should be subject to more stringent examination. The Proposer also notes that the change in the charging methodology and subsequent predictable change in booking behaviours requires a more strategic change to Overrun multipliers beyond attempting to simply extend the current levels of Overrun revenue. The x1.1 multiplier is consistent with the multiplier set down in the UNC for Overrun charges during periods of constraint. Some workgroup participants agreed with this statement.

Some workgroup participants maintain that evidence produced in UNC 0716A is more wide-reaching than that produced in UNC 0716, It provides data to support the assertion that Overruns are a product of User error and reasonably forecasts how User booking behaviour will change in response to the implementation of UNC 678A. In combination with the changing physical nature of the NTS, moving from a period of growth and constraints to one of surplus capacity, a more radical approach to multipliers is justified.

Modification 0716A Determination

An alternative Modification was discussed at the May UNC Modification Panel meeting and panel determined that 0716A had been determined to be an alternative Modification to UNC 0716.

Modification 0716/716A Discussions

It was agreed following determination from Panel during the May Workgroup, that both Proposers would review the first draft of the Workgroup Report once Modification 0716 and 0716A had been combined with **both** Modification and proposed solutions.

During the June Workgroup, a full review of the workgroup report was conducted. A workgroup participant noted that on the decision of 0678A it is particularly justified given that Ofgem have noted NTS is a meshed network with largely operating below Capacity with expected declining demand.

The Proposer of 0716, stressed that making the change based on uncertain predictions might lead to weakening the incentive Overruns that are supposed to maintain. Although it is not clear how the multiplier of 8 was determined – its impact is tried and tested. If status quo is maintained and similar booking behavior remains, it can be assumed that the impact of Overruns on NTS is manageable. Also, recognising that there is likely to be changes in booking behaviours, but at this stage, do not know the extent and cannot be quantified. The review suggested after 0678A implementation would ensure that any future change is based on new established behavioral patterns.

Both proposers of 0716 and 0716A noted that system testing is required to ensure that the change to the multiplier is robust and tested advising that this will be carried out by CDSP and will require adequate time to carry this out prior to any implementation.

Next Steps for Modification 0716/0716A

Both Proposers of Modification 0716 and 0716A wanted to advise UNC Panel that these Modifications were drafted before a decision on 0678 was issued, Ofgem decision has been determined to implement 0678A on 1st October 2020.

Workgroup recommends that Modification 0716 and 0716A should:-

- proceed to Consultation at the June 2020 Modification Panel
- should be considered a material change and not subject to self-governance.

7 Relevant Objectives

Impact of the modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Positive / Positive
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	None / None
c) Efficient discharge of the licensee's obligations.	None / 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.	Positive / Positive
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	None / None
f) Promotion of efficiency in the implementation and administration of the Code.	None / 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 / None

UNC 0716

Incentivising Users to book capacity reflecting their flows of gas will enable National Grid NTS to commercially plan, operate and manage the NTS accordingly, and therefore facilitate efficient and economic operation of the system.

Expected changes to the NTS charging methodology will recover a greater proportion of transporter allowed revenue from capacity compared to the current regime. As capacity charges will be set at a level to recover this higher proportion, the financial impact of a User incurring an Overrun Charge may materially increase compared to such a charge being incurred under the current framework. If no change is made to the Overrun regime, and as a consequence of the implementation of UNC Modification 0678A, the costs of an Overrun materially increases as described above, it is arguably detrimental to competition. Accordingly, implementation of this proposal would better facilitate objective (d) by adjusting the Overrun multiplier in order to, as far as possible, match the financial impact (in proportion terms) and therefore drive the same behaviours as the existing Overrun regime.

Furthermore, significant increase to Overrun Charges could create additional barrier to new market entrants, which would go against the desire of creating effective competition.

UNC 0716A

Incentivising Users to book capacity reflecting their flows and not overbook capacity for fear of incurring excessively penal Overrun Charges will enable National Grid NTS to commercially plan, operate and manage the NTS accordingly thereby facilitating the efficient and economic operation of the system. Furthermore, ensuring the Overrun Charge is proportionate, will ensure that use of the unconstrained network is optimised and capacity is not sterilised, by risk-management motivated overbooking.

The changes to the NTS charging methodology, in order to comply with the EU Tariff Code will place a greater emphasis on capacity charges as a vehicle for collecting Transmission Operator allowed revenue. Users will give increased prominence to capacity booking, continuing to focus on short term products, but profiling purchases to more closely match flows, thereby reducing costs. In practice, Users will have an incentive to delay capacity booking until as late as possible within day, as end of day flow volumes become clearer. The changes in booking behaviour will exacerbate the potential for User errors, as surplus holdings will no longer be retained. A reduction in the multiplier to properly balance an incentive to book capacity, while discouraging excessive overbooking with a “penalty” which reflects the unconstrained status of the NTS will ensure costs are more effectively generated and allocated to the Users of the NTS. This will better facilitate effective competition between all Users of the network.

Furthermore, a multiplier which does not reflect the changing nature of the capacity regime, both in terms of the level of charges and subsequent User booking behaviour will unfairly penalise Users for errors and create a barrier to entry to new market entrants.

8 Implementation

UNC 0716

This modification was raised due to a consequential impact of UNC Modification 0678A and implementation should be on concurrent timescales (i.e. 1st October 2020). This proposal should be considered now to ensure delivery of a solution is achievable within those timescales.

UNC 0716A

This modification is raised as an Alternative to Modification 0716. It has been raised to properly reflect the objective of Modification 0705R “Capacity Access Review” to review the performance of the current Overrun regime and set appropriate Overrun Multipliers to reflect short-term changes to the charging regime, as a result of implementation of Modification 0678A, while also be “fit for purpose” over the longer term.

This proposal should be considered for implementation on concurrent timescales with the implementation of Modification 0678A.

9 Legal Text

The Workgroup agreed that Legal Text will be provided by National Grid and will be published alongside the Workgroup Report and were satisfied that the changes will be minimal and will only change the multiplier number and no other changes are required. Workgroup were therefore satisfied that it meets the intent of the Solution.

Text Commentary

None Provided

Text

Text is published alongside the Workgroup Report dated 09 June

10 Consultation

Panel invited representations from interested parties on 18 June 2020. The summaries in the following table are provided for reference on a reasonable endeavours' basis only. It is recommended that all representations are read in full when considering this Report. Representations are published alongside this Final Modification Report.

UNC 0716

Of the 16 representations received 4 supported implementation, 4 offered qualified support, 1 provided comments and 7 were not in support.

UNC 0716A

Of the 16 representations received 14 supported implementation, 1 offered qualified support, and 1 was not in support

Summary Table of Support and Preferences

	0716	0716A	Preference
Centrica	Oppose	Qualified Support	0716A
ConocoPhillips	Support	Support	0716A
Drax	Qualified Support	Support	0716A
Eni Trading & Shipping	Oppose	Support	0716A
Energy UK	Support	Support	0716A
ESB	Oppose	Support	0716A
Equinor	Comments	Support	0716A
National Grid	Support	Oppose	0716
OGUK	Qualified Support	Support	0716A
RWE Supply & Trading GmbH	Oppose	Support	0716A
ScottishPower	Qualified Support	Support	0716A
Shell Energy Europe Ltd (SEEL)	Support	Support	0716A

SSE	Qualified Support	Support	0716A
Storengy UK Limited	Oppose	Support	0716A
Triton Power Ltd	Oppose	Support	0716A
Uniper	Oppose	Support	0716A

Representations were received from the following parties: **0716/0716A**

Organisation	Response	Relevant Objectives	Key Points
Centrica - 0716	Oppose	a) - positive d) - positive	<ul style="list-style-type: none"> Supports the need for change. With the new charging regime starting in October 2020 existing Overrun penalties will be unduly onerous and would not reflect the costs incurred by the system operator to manage such errors. Believes the modified Overrun Multiplier regime should provide an incentive to book and manager capacity correctly over all timeframes, and at the same time strike a balance between (i) not unduly penalising clear operational errors and (ii) not providing scope for opportunistic behaviour at the expense of prudent system programming. For this reason, Centrica oppose Modification 0716 and provide qualified support to Modification 0716A. Centrica do not support the implementation of this Modification because they believe that the proposal based on historical revenues for National Grid from Overrun charges is flawed, Historical Overruns are irrelevant to anticipate future behaviour, especially because of the shift to capacity-based charges and the removal of short-term capacity booking incentives. Centrica expect Users to modify behaviour and attempt to minimise capacity costs by matching capacity bookings with anticipated flows. This means that compared with the current regime, Centrica expect a greater number of Overrun events in future, largely driven by operational errors. In neither Modification is there an analysis of the interaction between the possibility to book interruptible capacity at a discounted tariff (0.9) and the Overrun multiplier (1.1).
Centrica - 0716A	Qualified Support	a) - positive d) - positive	<ul style="list-style-type: none"> Provides qualified support to Modification 0716A. Centrica prefer this alternative because it would better reflect the costs incurred by National Grid to manage

			<p>Overruns and would strike a better balance between point (i) (i) not unduly penalising clear operational errors and (ii) not providing scope for opportunistic behaviour at the expense of prudent system programming.</p> <ul style="list-style-type: none"> • However, Centrica recognise that the Overrun Multiplier suggested at 1.1 might give scope to no regret opportunistic strategies. Given the higher cost of capacity bookings under the new charging regime, Users may choose to acquire interruptible capacity in case obligated capacity is abundant (widely expected). Interruptible capacity is priced at 0.9 of the firm capacity. In this instance, with the Overrun Multiplier set at 1.1 the risk-reward payoff for an interruptible-under-booking strategy would be symmetrical and likely insufficient to provide the correct incentive to book capacity to cover the anticipated flows. • With the objective of striking a balance with the need to avoid overly punitive charges, Centrica believe that an Overrun Multiplier between 1.15 and 1.3 would be more appropriate. • Certainly, in case of future changes to seasonal factors and/or short-term multipliers, Centrica believe that the Overrun Multipliers will need to be adapted. • Alternatively, an increase of the tolerance level could be also be considered as an option to manage upward variations to production late in the gas day e.g. last 3 hours. This may allow Shippers with robust operations to be protected against less predictable events, however further analysis would be needed. • Believes the Modification should be implemented by 01 October 2020. • Centrica see undue costs rising in the case that none of the alternatives are approved.
<p>ConocoPhillips (U.K.) Marketing and Trading Ltd - 0716</p>	<p>Support</p>	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • Supports the review of the Overrun charge multiplier and urgent need to update it to reflect the new Postage Stamp charging regime that will come into force in October, so as to avoid disproportionately high penalty charges for capacity Overruns. However, ConocoPhillips feel that the logic of Modification 0716 is flawed and that Modification 0716A provides a more appropriate solution. • The aim of this Modification is to maintain the same level of revenue that the current x8 multiplier generates each year and so it ignores the impact that the change in charging methodology will have on booking behaviour. Under the

			<p>current charging regime, where short term capacity is zero cost, the only reason for an Overrun can be put down to user error, as there are no strategic/cost saving benefits to be gained from not booking the correct amount of capacity.</p> <ul style="list-style-type: none"> • Going forward, under the new charging regime, Users will have to match their bookings and flows much more closely as reserve prices will be much higher, the luxury of having a large buffer through over booking will not be a viable option. Maintaining a level of revenue as an aim should not be the end goal especially when the reason for setting the current charge at x8 can no longer be recalled. The fear of excessive Overrun penalties could cause Shippers to overbook and thereby incur unnecessary extra charges but also distort the Forecasted Contracted Capacity which would send wrong signals to NGG and impact future tariffs. • Believes if a solution is not implemented by 01 October 2020, then there is a risk that users will face substantial charges with a multiplier remaining at x8. This charge forms part of the overall charging regime and a fragmented implementation approach should be avoided.
ConocoPhillips (U.K.) Marketing and Trading Ltd - 0716A	Support	a) - positive d) – positive	<ul style="list-style-type: none"> • Believe that User behaviour will change in response to the new charging regime, and ConocoPhillips feel that this Modification 0716A proposal of x1.1 multiplier provides an appropriate incentive to users to accurately book the required capacity, that is both proportionate and cost reflective, for the current system that generally has surplus capacity available. It is also consistent with the multiplier already established in the UNC if National Grid needs to take a Constraint Management Action. • Prefer implementation of Modification 0716A 01 October 2020. • If a solution is not implemented by 01 October 2020, then there is a risk that users will face substantial charges with a multiplier remaining at x8. This charge forms part of the overall charging regime and a fragmented implementation approach should be avoided. • Legal Text has not been reviewed.
Drax - 0716	Qualified Support	a) - positive b) - none c) - none d) - positive e) - none f) - none	<ul style="list-style-type: none"> • Drax are supportive of both proposals and prefer UNC716A as this option provides a proportionate solution that advances the relevant objectives. The Workgroup agreed that altering the baseline Overrun charging arrangements is a necessity due to the imminent introduction of postage stamp charges under UNC0678A.

	g) - none	<ul style="list-style-type: none"> • Drax agree with the Workgroup that maintaining the current multiplier based on eight times the prevailing capacity charge will lead to excessive Overrun charges. The evidence presented to the Workgroup showed that there was no pattern to overbooking or correlation to when there were either national or local constraints. The inference being that Overruns were either for very small amounts of capacity, or the consequence of errors by parties that due to the absence of manifest error provisions in the UNC could not be rectified. • Believe that it is logical to conclude that without change, Shippers will overbook capacity to reduce the risk of Overrun charges. This would be both costly and inefficient and would undermine the benefits of UNC Modification 0678A. For instance, the Impact Assessment for 0678A assumed no overbooking and consequently assigning benefits to consumers based on the capacity being booked equalling flows on every gas day. • Moreover, given the generally higher capacity charges as a result of UNC Modification 0678A, it is reasonable to assume that shippers will be incentivised to optimise capacity bookings and flows to minimise costs, without the need for a punitive Overrun regime. • Believe that both proposals provide some certainty for parties as to the Overrun regime. Although there is a clear need to alter the baseline arrangements following approval of UNC Modification 0678A, Drax are not convinced that Overrun charges are necessary at all under the new capacity charging arrangements. • Drax offer qualified support to the original proposal on the basis that it is an improvement on baseline arrangements and furthers Relevant Objectives (RO) a) and d) - in that it promotes more efficient and economic operation of the system through enhancing effective competition than the baseline arrangements. Without change, Overrun charges would be excessive under the new postage stamp methodology. Drax were however unconvinced by National Grid's analysis and rationale for reducing multipliers based on the level of charges historically received, as it was accepted by the Workgroup that there was no evidence that Overruns were due to anything other than user-error / mistakes. If Modification 0716 is approved, Drax believe it would only be a temporary solution and would expect proposals to come forward to reduce the multiplier further and enable a process to manage manifest errors.
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<p>Drax - 0716A</p>	<p>Support</p>	<p>a) - positive b) - none c) - none d) - positive e) - none f) – positive g) – none</p>	<ul style="list-style-type: none"> • Drax supports UNC Modification 0716A and it is their preferred option. • In common with the original proposal, the alternative is positive with respect to Relevant Objectives a) and d) - enhancing the operation of the pipeline system by introducing an Overrun mechanism that facilitates effective competition. Modification 0716A compared with the original provides a more proportionate methodology that reflects the change to a postage stamp capacity regime. Drax believe that Modification 0716A should drive more efficient booking behaviour than the Modification 0716. In addition, Drax consider that the Modification is positive against Relevant Objective f) - promotion of efficiency in the implementation and administration of the Code - in that it provides a solution that is likely to endure longer than the original solution. • Drax believe that both proposals provide benefits for parties when compared with the baseline arrangements. If either is approved, it should be implemented in line with the introduction of UNC Modification 0678A. This is currently 01 October 2020. The Overrun charge change is expected and has been clearly signalled to parties and it is understood will not require extensive changes to transporters or industry participants systems. • Without a change the baseline arrangements impose unnecessary risk and costs on parties, which will consequently incentivise parties to overbook capacity. Modification 0716A provides ample incentive to ensure parties maintain the accuracy of capacity booking. • Believe that the legal text will deliver the respective solutions. • In addition the current multiplier, based on eight times the prevailing capacity charge, was introduced over 20 years ago and referenced against capacity charges that were (prior to modification UNC Modification 0678A) low in terms of p/kWh. The evidence presented to the Workgroup showed no correlation between overbooking and system constraints, or any associated balancing costs. Drax believe that in a highly meshed network with reducing demand, available capacity, and no locational based capacity charges, there is no clear rationale for maintaining a punitive Overrun regime. • Where an Overrun mechanism is deemed necessary, it should not be excessive and should be targeted at driving efficient booking behaviour. Ideally any Overrun charge
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			<p>should be equivalent to the greater of either the capacity charge, or any directly applicable commercial actions taken by the system operator as a direct consequence of the Overrun.</p>
Energy UK - 0716	Support	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • Agrees that it is appropriate to review the Overrun regime and considers that ideally this should have been carried out in parallel with the changes to the charging methodology under UNC Modification 0678A. However, Energy UK welcomes the recognition and progress of this issue by the Capacity Access Review. • Believes that there is no known logic to the current 8x multiplier, rather it was a value chosen over 20 years ago and has not been changed since then. In this time the network has moved from a growth phase with some constraints, to being mostly unconstrained with declining demand. This rationale was used to support the Ofgem decision to implement Modification 0678A Postage Stamp charging methodology. So Energy UK feels it is appropriate to review the 8x multiplier. • In addition, believes the reform to transmission charging being implemented via Modification 0678A will change the structure of charges with the vast majority of the revenue being recovered by capacity charges, leading to higher capacity charges overall particularly when the changes to charges for short term capacity products are taken into account. It is, therefore, reasonable to conclude that Shippers will more actively manage their capacity bookings to minimise costs from October 2020. • Energy UK consider that if the Overrun multipliers are not reviewed, the Overrun regime may lead to inefficient capacity booking decisions. The 8x multiplier would give rise to potentially penal Overrun charges and so would encourage booking a margin above intended use to reduce Overrun risk. • Believes it is also the case that an aspiration of the charging reforms is to promote bookings close to flows, as this is expected to deliver efficient outcomes overall. An overly penal Overrun charge would conflict with this ambition. • Energy UK agree that both proposals further the relevant objectives a) and d) the decision becomes which provides a better balance between ensuring the ticket to ride principle is maintained whilst avoiding a detrimental impact on competition. It is argued that most Overruns are caused by human error by the proposer of Modification 0716A as

			<p>there is no systematic benefit in Overrunning and as such a higher Overrun charge will not incentivise improved performance. Energy UK agree with this view.</p> <ul style="list-style-type: none"> • Believes that Modification 0716 suggests entry and exit multipliers to maintain the same level of revenue from Overruns under the new charging regime. Energy UK can see no logic to this as the revenue recovered from Overruns will not be an influencing factor for operational decisions, particularly if most Overruns arise from errors. • Energy UK are of the view that if this logic is thought to be robust then the multipliers should be recalculated now that the final reserve prices effective from October 2020 have been published and vary significantly from those used to derive the multipliers in the proposal. However, there is no mechanism to achieve this, so this logic fails. • Understands if either proposal is approved, ideally the implementation date should align with that of Modification 0678A, 01 October 2020. • Does not see any impacts on costs as a Trade Association
Energy UK - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> • Believes this proposal suggests multipliers of 1.1 consistent with the multipliers for other elements that feed into the derivation of the Overrun charge in UNC TPD section B 1.12 and 3.13. This at least provides for some consistency and logic, particularly in a mostly unconstrained system, where Overruns are unlikely to cause any system issues that require intervention from the system operator. • Concludes that Modification 0716A furthers the relevant objective d) better than Modification 0716 by providing reasonable incentives to avoid Overruns whilst avoiding potentially penal Overrun charges which could have a detriment on competition. • Does not see any impacts on costs as a Trade Association. • Satisfied that the legal text will deliver the intent of the solution.
Eni Trading & Shipping – 0716 (ENI)	Oppose	a) - none d) – none	<ul style="list-style-type: none"> • Objects to Modification 0716 for the following reasons: • ENI believe that the proposer of Modification 0716 acknowledged that “the historic reason for implementing the x8 multiplier is unclear”. This existing 20-year-old arrangement seems to be designed to work with conditions when the demand for gas is high and when there are periods of capacity scarcity on the network. However, since then, significant structural changes to the GB gas

			<p>transmission network have taken place and for quite some time the historical records show that:</p> <ul style="list-style-type: none"> ○ There is spare capacity at the majority of gas transmission points (Ofgem GTCR documents); ○ There is a low level of competition for short-term capacity products (unsold capacity) despite the fact that most of the capacity is secured on a short-term basis at zero price (Ofgem GTCR documents); and ○ There is a significant number of recorded capacity Overruns despite the fact that users can book capacity at zero price on a short-term basis (National Grid analysis for Modification 0716). <ul style="list-style-type: none"> • Taking the above into account, ENI find it hard to understand why the proposer of Modification 0716 is merely seeking to maintain the “status quo” when clearly this is no longer an adequate arrangement, even for the current gas charging regime when the short-term capacity price is zero. • Shipper licences already set broad requirements on any operator to “act in a reasonable and prudent manner in the use it makes of a relevant transporter’s pipeline system for the purpose of the conveyance of gas”. Therefore, it is appropriate to change the Overrun UNC arrangement in such a way that the level of Overrun penalty incentives shippers to book sufficient capacity but at the same time does not burden them with excessive and improper fines if sometimes they unintentionally make administrative errors and encounter capacity Overruns. • In the future, the need for reducing the Overrun multipliers is even greater because the expectation is that the risk of Overrun will increase. This is because, in the new regime the capacity reserve price will be at a much higher level than in the current one, and Users will aim to book capacity much closer to their forecasted gas flows but the unreliable nature of gas allocations will persist. Therefore, a higher number of instances of capacity Overruns can be expected.
<p>Eni Trading & Shipping - 0716A (ENI)</p>	<p>Support</p>	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • ENI Supports Modification 0716A because the proposer of this Modification addressed all issues that are highlighted above by proposing the level of 1.1 of Overrun Charge Multiplier that is adequate for the current GB gas transmission network. • Proposes Modification 0716A should be implemented by October 2020, i.e. at the same time when the new charging regime will entry into force.

Equinor - 0716	Comments	a) - positive d) - none	<ul style="list-style-type: none"> Equinor agrees that it is long overdue to review and amend the Overrun charge regime following implementation of Modification 0678A. Equinor feels Modification 0716A is the more appropriate for implementation of the 2 proposals because the multipliers proposed in Modification 0716 would still represent high penal charges in the event of a capacity Overrun. The Modification seeks to maintain the existing level of revenue collected that currently exists based on the 8x methodology which Equinor do not feel is appropriate under the new charging regime from October 2020. Overruns are usually incurred because of errors and do not accurately reflect the impact on the system. It is for this reason that while Equinor welcome the reduction in multipliers, Equinor feel that Overruns will still be too high under Modification 0716. Believes that Modification 0716 although better than the existing arrangements this Modification would still result in excessively high levels of penalties. Satisfied that the legal text will deliver the intent of the solution.
Equinor - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> Is of the view that Modification 0716A is more appropriate considering the other charges being made to the tariff regime which should still provide an incentive to accurately book required capacity without Overruns being unduly penal. Modification 0716A would also be consistent with the cost of managing the NTS during a constraint. Believe that the level of 1.1 for Overrun Multiplier should be reviewed periodically based on experience with the new system. Believe that Modification 0716A should be implemented by October 2020. Believes Modification 0716A looks to bring penalties in line with constraint costs while providing a clear incentive to avoid and minimise any Overruns.
ESB - 0716 (Initial Representation March 2020)	Support	Not Applicable	<ul style="list-style-type: none"> ESB would like their initial submission in response to Modification 0716 to be considered alongside their representation to this consultation. Supports the initiative to minimise impacts of the capacity reserve prices increases as a consequence of minded-to UNC Modification 0678A implementation on Overrun

			<p>charges. However, ESB do not agree with the basis of the proposal, specifically, ESB do not see sufficient justification for using historical booking and Overrun data as the baseline for setting the proposed multiplier. Overall, ESB do not see sufficient evidence to support the proposer's preferred level of Overrun charges and multiplier values.</p> <ul style="list-style-type: none"> • ESB outlines their key concerns with the approach: <ul style="list-style-type: none"> • Considers that historical data for capacity bookings against flows shows that most of the Overruns were unintended and were within a reasonably tolerable level. It can be assumed that those Overruns occurred due to administrative errors. In this case the level of the Overrun multiplier will not affect Shipper actions, unless set at such a high level as to justify extreme measures to ensure errors never take place. • Believes more importantly, historical data was based on a completely different capacity charging regime with weaker incentives for shippers to book sufficiently adequate capacity in advance. Going forward, the charging regime changes significantly and the basis for behavioural assumptions should reflect this accordingly. ESB acknowledges that it is difficult to forecast exact shipper behaviour under the new regime. However, it is safe to assume that higher capacity charges will lead to a stronger incentive for users to book accurately. • Proposes the Modification and its proposed multiplier are aligned to the previous level of revenue collected from Overrun charges. It is EBS's view that it is an invalid reference point and needs proper justification. Proposes there is no evidence to suggest that the current level of the multiplier influences Shipper behaviours or that today's position is somehow optimal and should be replicated. • Notes that when the original multiplier of 8x was set and used by Transco, it was based on Transco's allowed revenue, which was linked to the buy-back incentive calculation as well as capacity investment incentive. This was set at the peak of gas usage in both power and gas markets. It was reasonable to assume at the time that Overrun capacity would signal an additional need for capacity, i.e. capital investment costs incurred by Transco for investment and reinforcement of the network. This assumption does not apply in the current market, where the gas network is expected to be increasingly under-used, with growing spare capacity and no investment requirements into further capacity
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			<p>are expected (as outlined by Ofgem in its minded-to position on 0678/A).</p> <ul style="list-style-type: none"> In evidence of the foundations of the multiplier, Transco’s National Transmission System Review of System Operator incentives 2002-7, consultation document notes the following: “3.23. <i>Ofgem considers that it is important to include the potential revenue from Overruns within the target level for the entry capacity buy-back incentive calculation. This is because a shipper over-running could be putting Transco in a position where it buys back entry capacity (as it is increasing flow at the entry point). As such, the charge that the shipper pays for Overrunning should be used to offset the liability that it has caused Transco to incur.</i>” ESB acknowledges NGG’s position that primary objective of Overrun charges is to act as an incentive on Shippers to book accurately rather than a cost-reflective mechanism. Nevertheless, ESB believes that some kind of quantifiable justification for a level of revenue or a multiplier that is used as a basis for the calculation methodology is required. ESB would expect NGG to provide more evidence around actions, investments or impacts on its allowed revenue caused by capacity Overruns. Believes that it is important to take into account gas-to-power interactions and the changing electricity capacity mix. As such, a high Overrun multiplier can be penal to gas users that provide flexibility and security of supply to the power system and facilitate decarbonisation by providing reserve that can be flexibly dispatched in response to fluctuations in RES. ESB expect the Overrun charge methodology to be reflective of wider system conditions and both gas and power requirements, and to facilitate development of new capacity products or seasonal adjustments to multipliers. For example, generators providing electricity flexibility may have far lower load factors and limited visibility of demand for their services. Instead of extending the current regime for multipliers, work is required to understand how the best outcome for consumers can be derived, in terms of cost and future energy system resilience, through development of capacity product duration, availability and pricing.
ESB - 0716	Oppose	a) - none d) - none	<ul style="list-style-type: none"> As stated in ESB’s initial representation dated 13 March 2020 (as detailed above), ESB believes there is insufficient justification for using historical booking and Overrun data

			<p>for setting the Overrun multiplier for the new regime. ESB believes that historical data is based on a completely different capacity charging regime with weaker incentives for Shippers to book sufficiently adequate capacity in advance. Going forward, there will be a sufficiently penal regime that is likely to moderate capacity booking behaviour. The original UNC Modification 0716 proposal does not take into account this expected change in capacity booking patterns.</p> <ul style="list-style-type: none"> • ESB furthermore feels the proposed ‘status quo’ approach is not reflective of material changes and developments in the use of gas networks. As noted in their initial submission, the current level of multiplier was set at the peak of gas usage both in power and gas markets. At the time of setting the multiplier levels, Overruns were a direct indication of need for more capacity or capital costs for TOs. In the current market the gas network is becoming increasingly under-used, with growing spare capacity and no investment requirements into further capacity. Therefore, a significantly punitive Overrun regime is no longer required as there is no evidence of significant additional costs triggered by occasional ‘unintended’ Overruns. • Believe that there could be costs associated with updating internal systems, processes, forecasting tools. Impacts include limited scope for managing and mitigating the increased cost risk from Overrun charges due to the additional economic risk from the greater capacity cost burden under Modification 0678A.
<p>ESB - 0716A</p>	<p>Support</p>	<p>a) - positive d) - none</p>	<ul style="list-style-type: none"> • ESB believes Modification 0716A better supports the transition into the new charging regime while taking into account a significant expected change in booking behaviour. The proposed level of multiplier (x1.1) is sufficient and optimal to encourage accurate capacity bookings from shippers while maintaining safe and secure network operation at the lowest cost to consumers. Given the increasingly flexible nature of power and gas markets, it is our view that this solution will also deliver the best value to end consumers as the pass-through charges in the event of unintended Overrun will be as low as possible. • Implementation should be aligned with Modification 0678 implementation – October 2020. • Costs associated with updating internal systems, processes, forecasting tools etc. Impacts include improved scope, in comparison to 0716 above, for managing and

			mitigating the increased cost risk from Overrun charges due to the additional economic risk from the greater capacity cost burden under 0678A.
National Grid - 0716 (NG)	Support	a) - positive d) – positive	<ul style="list-style-type: none"> • As the Proposer of this Modification, National Grid supports its implementation. The proposal leads to a reduction to the applicable Overrun charge multipliers to x3 on NTS Entry and x6 on NTS Exit on the basis that it will: <ul style="list-style-type: none"> ○ Implement a solution which seeks to safeguard Users by moderating Overrun charges caused by an unintended consequence of the implementation of UNC Modification 0678A. ○ Maintain the status quo by keeping Overrun charges at the same level as they are today therefore maintaining the same level of forecast financial incentive to book capacity adequate to flows. The proposer assumes that for that reason the capacity booking behaviour will not worsen. ○ A significant financial increase to Overruns could result in a barrier to entry which this proposal seeks to mitigate. ○ Maintain User incentive to book capacity adequate to flows which supports the ‘ticket to ride’ principle and, as an extension, supports efficient planning and management of the network. Despite the decline in capacity demand on NTS, efficient running of the network still requires Users to book capacity to cover their flows. ○ A quantifiable method has been used to determine the sufficient level of the financial incentive to book the capacity adequate to flows. • NG believes that following the experience of how the revised charging regime impacts on User behaviour then a subsequent review of Overruns may be necessary. • NG suggest that system testing is required to be conducted prior to implementation (approx. 1-month lead time required, NG are awaiting final confirmation on timescale). • Believe that there are no costs associated with the system change mentioned above. No ongoing costs have been identified. • Satisfied that the Legal Text will deliver the intent of the solution for either Modification.

<p>National Grid - 0716A (NG)</p>	<p>Oppose</p>	<p>a) - negative d) - positive</p>	<ul style="list-style-type: none"> • NG opposes this proposal on the basis that by reducing the Overrun charge multiplier too drastically a risk of disincentivising Users to book adequate capacity is likely to increase. Consequently, NG do not believe objective (a) of the proposal is met as its potential negative impact i.e. increase of number of Overruns occurring, will have a negative impact on the efficient and economic operation of the network. • Agrees that the proposal meets objective (d), but find the prospective benefit diminished by the risk associated by severity of the change as mentioned. • Does not believe that the analysis presented, and specifically the comparison of average increase in reserve prices coming into effect on 01 October, gives an accurate picture of the diversity of price change throughout the network. The price increases at majority of entry and majority of exit points will not exceed x4 current reserve prices, therefore the reduction of multiplier to 1.1 would not be proportional to the increase. The entry and exit points mentioned would benefit from lower Overrun charges in comparison to those currently set. • Believes that the principle is that Overrun charges should continue to encourage adequate capacity booking behaviour, regardless of whether Overruns are incurred by User errors or otherwise. The level of Overrun charges in the last 3 years persisted at around 1000 instances annually on entry and between 70-90 annually on exit, it is therefore arguable that the level of financial incentive is not currently set too high. It is National Grid’s concern that until the impacts of Modification 0678A on User’s booking behaviour is known the proposed change of the multiplier to 1.1 has the potential to diminish the objective Overrun charges are set to achieve. Furthermore, NG believe that a quantifiable method of determining the multiplier should be established rather than it being based on future booking behaviours, which cannot be accurately predicted. • Believes there are no costs associated with the system change mentioned above. No ongoing costs have been identified.
<p>OGUK - 0716</p>	<p>Qualified Support</p>	<p>a) - positive d) - none</p>	<ul style="list-style-type: none"> • Understands that Modification 0716 seeks to adjust the penalty regime, recognising that the Overrun multipliers had not been reviewed since their inception, over 20 years ago and acknowledges that “the historic reason for implementing x8 multiplier is unclear”. The Modification seeks to maintain the aggregate level of incentive, in terms

			<p>of total revenue collected, that currently exists based on the 8x methodology</p> <ul style="list-style-type: none"> • However, OGUK consider that the level of previous Overrun payments is not a good basis for an incentive system going forward since it is clear that previous Overrun charges are largely the result of errors, rather than being the result of a premeditated booking strategy. • Likewise OGUK consider that the new charging regime will have an impact on capacity booking behaviours. There will also be a future link between the level of booking, the forward-looking FCC projections and future tariffs. This could lead to instability in charges if the current penal regime for Overrun is continued or maintained at the current level. This potentially has a negative impact in terms of competition by adding to the risks and cost of market entry and leading to instability in tariffs. • More widely, Overrun charges should be proportionate and cost reflective. The concept of a “penalty” is arguably no longer appropriate and furthermore shipper licences already set broad requirements on operators to “act in a reasonable and prudent manner in the use it makes of a relevant transporter’s pipe-line system for the purpose of the conveyance of gas”. • OGUK believe that the proposal is therefore, at best, a limited improvement on current system in terms of the Code Objectives relating to system operation or securing effective competition.
OGUK - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> • OGUK believe that Modification 0716A is a better basis going forward considering the other charges being made to the tariff regime which should: <ul style="list-style-type: none"> ○ Provide an incentive to accurately book required capacity, but to avoid being be unduly penal; ○ Recognise that (unlike the situation when the 8x multiplier was introduced there is generally surplus of capacity, and the provision of Overruns is at no cost to NGG and does not disadvantage or undermine other market participants; ○ Be consistent with the cost of managing the NTS during a constraint. • The level of 1.1 for Overrun Multiplier provides a good basis for the future tariffication system and can be reviewed on the basis of experience with the new system. It will avoid adding to the risks and uncertainties faced by shippers and, by extension, the costs faced by network

			<p>users. Charges should, as a result, be more stable since capacity bookings will accurately reflect the use made and closely match anticipated flows.</p> <ul style="list-style-type: none"> • There is a sound basis for the 1.1x multiplier as it is consistent with the multiplier already established in the UNC on the occasion that National Grid takes a Constraint Management Action. • Support implementation of Modification 0716A by October 2020.
RWE Supply & Trading GmbH - 0716 (RWE)	Oppose	a) - negative d) - negative	<ul style="list-style-type: none"> • RWE consider that the proposal is better than the baseline since it seeks to revise the Overrun charges in the light of the implementation of UNC Modification 0678A (Postage Stamp) from 01 October 2020. However, the underlying rationale of Overrun charges in this proposal remains flawed particularly in relation to the potential impact of Overrun on an unconstrained gas network. The Overrun charges that are proposed are unduly penal and are not compliant with EU Gas Regulation 715/2009 (Article 13) and the TAR Network Code 2017/460 (Article 7) in relation to cost reflectivity. The proposal refers to historic Overrun performance and does not attempt to assess Overrun in the context of the new capacity charges that are being applied from October 2020. RWE expect that capacity booking behaviour will change significantly under the new charging regime. RWE do not support implementation of this Modification. • RWE do not support implementation but if approved, the Modification should be implemented from 01 October 2020 alongside application of the new capacity-based charges under Modification 0678A (Postage Stamp). • Since the Modification is a change to the existing parameters, RWE do not envisage that there would be any analysis, development or ongoing costs. • Does not have any comments on the legal text.
RWE Supply & Trading GmbH - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> • RWE believe that Modification 0716A proposal is better than the baseline since it seeks to revise the Overrun charges in the light of the implementation of UNC Modification 0678A (Postage Stamp) from 01 October. The proposal better reflects the potential impact of Overrun on an unconstrained gas network where the actual costs of Overrun are limited. The 10% premium for access to the network as a result of Overrun is a proportionate charge that is appropriately targeted. On this basis, the proposal is compliant with the EU Gas Regulation 715/2009 (Article

			<p>13) and the TAR Network Code 2017/460 (Article 7). The proposal is better than the base line and better than the than the original proposal. Consequently, RWE support implementation.</p> <ul style="list-style-type: none"> • Believe that the Modification should be implemented from 01 October 2020 alongside application of the new capacity-based charges under UNC Modification 0678A (postage Stamp). • Since the modification is a change to the existing parameters, RWE do not envisage that there would be any analysis, development or ongoing costs. RWE note that Overrun charges should be subject to review in relation to cost reflectivity and to ensure ongoing compliance with EU Gas Regulation 715/2009 (Article 13) and the TAR Network Code 2017/460 (Article 7).
ScottishPower - 0716	Qualified Support	a) - positive d) - positive	<ul style="list-style-type: none"> • ScottishPower provided qualified support for Modification 0716 in acknowledgement that the proposer recognises that the current level of multipliers appear not to have any historical rationale and is in need of major review to make the charges more proportionate and cost reflective, yet argues that the overall level of incentive should be maintained without any justification or supporting analysis for that position. • Believe that implementation should be 01 October 2020 align with the implementation of the new Charging Methodology.
ScottishPower - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> • In contrast to Modification 0716, ScottishPower believes that this proposal recognises that the fundamental structural change to the Charging Methodology will undoubtedly result in changes to parties booking behaviour. Going forward it is not unreasonable to anticipate that parties will seek to secure capacity more closely aligned with their anticipated flows and that therefore, the risk of Overrun may theoretically become greater. However, Modification 0716A also recognises that the system is now largely unconstrained and that the potential for system issues arising from Overruns is reduced as a result. It rightly reflects on the “penal” nature of the current regime and provides for an alternative, more balanced and proportionate incentive that is commensurate with the risks posed and consistent with similar provisions elsewhere in the UNC.

			<ul style="list-style-type: none"> • Believe that implementation should be 01 October 2020 align with the implementation of the new Charging Methodology. • Satisfied that the legal text will deliver the intent of the solution for both Modifications.
Shell Energy Europe Ltd – 0716 (SEEL)	Support	a) - positive d) - positive	<ul style="list-style-type: none"> • SEEL supports the aim of both proposals to find a solution to the unintended consequence of disproportionately high penalty charges for capacity Overruns, resulting from implementation of Modification proposal 0678A Amendments to Gas Transmission Charging Regime. • Believes moving to a primarily capacity-based charging regime, alongside fundamental changes to the gas charging methodology will lead to higher capacity tariffs and as a result, higher Overrun charges for both Entry and Exit as these charges are based on a multiple of bid or application prices already accepted for parties / users acquiring capacity. • Considers that the consequential disproportionate increase in capacity Overrun charges creates a perverse incentive on network users to book more capacity than they need to avoid incurring excessive Overrun charges. In the worst-case scenario, this could lead to contractual congestion at some points on the network. Moreover, it jeopardises National Grid’s ability to accurately calculate Forecasted Contracted Capacity (FCC). • Accepts the principles behind Modification 0716 to maintain the same level of revenue from Overruns under the new charging regime but at the same time, recognise that the historic reason for implementing x8 multiplier is unclear so the rationale for keeping the same level is flawed. As identified by the Proposer for 0716A and widely accepted in previous working groups, historical Overruns are the result of User error rather than commercial or strategic choices. • To ensure Shippers are not subject to penal and disproportionate Overrun charges following implementation of Modification 0678A and to ensure this does not adversely skew National Grid’s ability to calculate FCC, it is vital that the proposal, preferably Modification 0716A as the proposal that best achieves this objective, is implemented in October 2020. • Believes regarding impact and costs, should a User error occur, Network Users risk being faced with disproportionate and Penal Overrun charges.

<p>Shell Energy Europe Ltd - 0716A (SEEL)</p>	<p>Support</p>	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • Prefers proposal Modification 0716A as SEEL agree with the proposer that following implementation of Modification 0678A, Users will place greater emphasis on minimising capacity costs by purchasing short term capacity products to match flows. Shares their concerns that this shift in booking behaviour will reduce the “margin for error” and likely result in a greater number of Overrun events in future. For this reason, SEEL support an Overrun Multiplier of 1.1, consistent with the multiplier already established in the UNC on the occasion that National Grid takes a Constraint Management Action and better aligned with the core principles of Overrun charges than those proposed under Modification 0716. • To ensure Shippers are not subject to penal and disproportionate overrun charges following implementation of Modification 0678A and to ensure this does not adversely skew National Grid’s ability to calculate FCC, it is vital that the proposal, preferably Modification 0716A as the proposal that best achieves this objective, is implemented in October 2020. • Impacts and Costs - Should a User error occur; Network Users risk being faced with disproportionate and Penal overrun charges under both Modifications. • Legal text has not been reviewed.
<p>SSE - 0716</p>	<p>Qualified Support</p>	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • SSE agrees that it is appropriate to change the Overrun regime following implementation of Modification 0678A and believes Modification 0716A is a better solution than 0716 – see 0716A below. • Although better than the current overrun charging levels, this would still see excessively high levels of penalties and place unnecessary pressure on the financial stability and operation of industry members. This extra financial risk ultimately is passed to end customers. • Satisfied that the legal text will deliver the intent of the solution.
<p>SSE - 0716A</p>	<p>Support</p>	<p>a) - positive d) - positive</p>	<ul style="list-style-type: none"> • SSE believe that Modification 0716A is a better solution than Modification 0716 – for the following reasons: <ul style="list-style-type: none"> ○ Understands the current 8x multiplier is arbitrary and has been unchanged for 20 years. In this time the network has moved from growth with some constraints, to being unconstrained with declining demand. This was the key reason for Ofgem implementing Modification 0678A Postage Stamp

			<p>charging methodology and therefore supports the change of the 8x multiplier.</p> <ul style="list-style-type: none"> ○ Believes the reform to transmission charging implemented via Modification 0678A has led to higher capacity charges, particularly for short term capacity products. Consequently, Shippers will be more active in managing their capacity bookings to minimise costs and Ofgem recognise this in their Final Decision where they state, “bookings will match flows”. ○ SSE believe that if the Overrun multipliers are not reviewed, the Overrun regime may lead to inefficient capacity booking. The 8x multiplier gives rise to very penal Overrun Charges and would encourage booking a “safety margin” above intended use to reduce Overrun risk which may give misleading signals. ○ Agrees that historical Overruns are caused by human error as there is no systematic benefit in overrunning with the existence of zero priced capacity and as such a higher over run charge is unlikely to improve performance. ○ Understands that Modification 0716 suggests entry and exit multipliers to maintain the same level of revenue from Overruns under the new charging regime as the old. This is flawed logic, as the revenue recovered from Overruns will not be an influencing factor for operational decisions, particularly as overruns arise from errors, given the previous availability of zero priced capacity. ○ Modification 0716A suggests multipliers of 1.1 consistent with the multipliers for other elements that feed into the derivation of the overrun charge in UNC TPD section B 1.12 and 3.13. This provides for consistency and logic, particularly in an unconstrained system, where overruns are unlikely to cause any system issues that require intervention from the system operator. ○ Conclude that Modification 0716A furthers the relevant objective d) better than Modification 0716 by providing an incentive to avoid overruns and book capacity to match flows. <ul style="list-style-type: none"> ● Support an implementation date that aligns with that of Modification 0678A, 01 October 2020. ● This Modification looks to bring penalties into proportion with other industry costs. Thus, it provides a clear commercial incentive to avoid and minimise any overruns,
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			whilst also helping the industry to match capacity booking and flows.
Storengy UK Limited - 0716	Oppose	a) - none d) - none	<ul style="list-style-type: none"> • Storengy welcome this Modification in recognising the excessive level of Overrun Charges under the new charging methodology, and its attempts to re-balance the levels of charging. • However, Storengy cannot support these proposals as they do not address either the impacts of changes in business behaviour under the new gas charging methodology, or the effectiveness of the traditional way of charging for Overruns in the current charging system. • In the current system, even with excessive charges for Overruns, Overruns still occur. As capacity prices are very low compared to the Overrun penalties, there is no clear commercial incentive for businesses to Overrun, and therefore these Overruns must primarily be due to unexpected business errors. • Current processes for booking capacity, and matching against flows, require a high level of manual operational management and are inflexible, increasing the risks to businesses of more frequent Overruns. • With capacity booking under the new charging methodology expected to move towards a just in time booking of capacity and matching against flows, these activities are likely to become more frequent and therefore more prone to manual errors, with excessive penalties only adding to the financial pressures on businesses trying to maintain efficient and cost-effective services. • Support implementation by 01 October 2020. • Although better than the current Overrun charging levels, this would still see excessive levels of penalties hitting businesses for minor errors, and therefore potentially placing unnecessary strain and pressure on the financial stability and operation of industry members. This increased level of costs to businesses may result in higher costs for the end consumer. • Agrees the legal text will deliver the intent of the Solution as explained within Modification 0716A • This Modification simply addresses the mathematical element of the charging, and does not take into account the following: <ul style="list-style-type: none"> ○ The reasons for Overruns. ○ The likely financial impacts of penalties on businesses.

			<ul style="list-style-type: none"> ○ The increased frequency and risk of Overruns ○ The high manual element of the capacity booking and matching processes. ○ The higher than expected capacity reserve prices for the coming gas year. ● Storengy make reference to the comparisons shown in the Modification 0716A proposals.
Storengy UK Limited - 0716A	Support	a) - positive d) - positive	<ul style="list-style-type: none"> ● In raising this Modification we support its proposed implementation. ● As stated above in the response to Modification 0716 Storengy's expectation is that Shippers capacity booking habits will change, and it is likely more errors in matching flows to capacity will occur. The substantial increase in the reserve prices for capacity under the new charging methodology means the current method of penalising overruns utilising a high multiplier would see businesses charged potentially large amounts of money for what in most cases will be minor errors. ● These excessive penalties for overruns will only harm the industry, by increasing financial pressures and risks on businesses, and creating a greater imbalance between businesses with differing levels of resources. ● Contention for capacity on the National Transmission System is reducing as we transition to greener forms of energy, so a high overrun charge to deter the likelihood of excessive use of the network is also not indicated. ● Storengy therefore believe that a lower level of penalty (multiplier of 1.1) to that proposed in Modification 0716 would be more prudent and effective, in discouraging imbalances, whilst not resulting in sudden huge increases in cost levels for managing capacity and flows. ● Storengy believe that with the increase in reserve prices for capacity under the new charging methodology and the expected changes in business behaviour resulting from this, that this modification should be implemented in line with the implementation of Modification 0678A. ● Therefore support implementation from 01 October 2020. With this being a simple numerical change to the existing overrun charging method, Storengy believe that this can easily be implemented at short notice. ● This modification looks to bring overrun charges into proportion with other industry costs.

			<ul style="list-style-type: none"> • Storengy believe that with these charges being proportionate they are unlikely to have a major impact on businesses costs and therefore unlikely to affect the consumer. • This will still provide a commercial incentive to avoid and minimise any overruns, whilst not excessively penalising the industry in a period of substantial change. • This Modification represents a simple numerical change to the calculation of overrun penalties, and so therefore the intent of the solution should be fully supported by the legal text. • Storengy do not believe that there are any errors in this Modification. • This Modification only alleviates some of the problems caused by the high manual nature of capacity booking and matching processes, and we would encourage further investigation into how these may be better automated and facilitated in the future. • Storengy reference additional analysis in section 11 of Modification 0716A (https://www.gasgovernance.co.uk/0716). This analysis shows the current trend for sites to over-book capacity to avoid overruns, and the reserve price increases under the new charging regime.
Triton Power - 0716	Oppose	a) - none d) - none	<ul style="list-style-type: none"> • Triton Power believe the basis upon which the revised multipliers are determined is flawed. Although the Proposer recognises that the change in the Charging Methodology will result in changes to booking behaviours it makes no attempt to reflect these changes in its derivation of appropriate multipliers. The methodology for setting the multipliers preserves the historical levels of overrun revenues and “allocates” it across the new reserve prices (note the reserve prices have been changed subsequently by National Grid). There is no justification as to why historical overrun revenues are a reasonable benchmark and no assessment as to why overruns occur. For these reasons the proposal lacks any meaningful analysis; does not attempt to account for behavioural changes; and is based on spurious observations. • Finally, the Proposer dismisses these clear limitations by suggesting that a further review could take place at a later date. This infers that the proposal requires further reflection and improvement which does not reflect well on its current standing. In any case, the proposal is not intended to be a “transitional solution” and furthermore, all aspects of the

			<p>UNC can be reviewed and modified at any point, subject to the governance procedures. We find it curious as to why the Proposer deemed it necessary to make such assurances.</p> <ul style="list-style-type: none"> • The lack of confidence the Proposer has in its own solution should be considered by Ofgem when making its decision. • 01 October 2020 to coincide with the effective date of the new Charging Methodology. Any delay will expose Users to significant penalties for User errors which are wholly disproportionate to the impact overruns have on the System and other Users. This is explored further in the Proposal. • Triton Power suggest that the level of the multipliers should be revisited post the publication of National Grid’s Final Notice of Charges for Gas Year 2020/21. • As stated above the approach adopted in the Modification 0716 Proposal is to “maintain the status quo”. This is not the case. It assumes that overruns will occur at the same rate as they have in the past, where it is clear that Overruns have been caused by User error, as there is absolutely no commercial or strategic advantage to overrun capacity. To assume that User errors, which by their very nature are unpredictable, both in terms of size and location, can be fixed for the purposes of setting the multipliers is a misleading representation and should be disregarded.
<p>Triton Power-0716A</p>	<p>Support</p>	<p>a) - positive d) – positive</p>	<ul style="list-style-type: none"> • This proposal recognises that due to the change in the Charging Methodology on 01 October 2020, there can be no doubt that Users will modify the manner in which they acquire entry and exit capacity. Where currently capacity can be acquired at zero cost, capacity has been continually overbooked (when compared to flows). As there is no incentive to limit bookings it is surprising to note that capacity Overruns have been recorded, which as the proposal correctly identifies can only be due to User error. Moving forward, as Users temper their capacity acquisition strategies to more closely reflect anticipated flows, in order to manage costs, the risk of overrun will become exponentially higher. The application of a 10% penalty to what will be in many cases a significantly higher base price, is sufficient incentive to ensure Users do not “freeride” on the NTS. • In summary this proposal properly examines changes to User booking behaviour and the associated increased risk of overrunning. Any concerns that the “penalty” is insufficient to incentivise ex-ante booking of appropriate

			<p>levels of capacity should note that at entry a penalty equivalent to more than 0.2 p/th and at exit 0.06 p/th are suitably substantial to ensure that Users manage their portfolios effectively, discouraging the potential for “freeriding”.</p> <ul style="list-style-type: none"> • 01 October 2020 to coincide with the effective date of the new Charging Methodology. Any delay will expose Users to significant penalties for User errors which are wholly disproportionate to the impact overruns have on the System and other Users. This is explored further in the Proposal. • Agrees the Legal Text delivers the intent of the Solution. • Does not foresee any impacts of additional costs. • The impact analysis presented in the Proposal should be considered in the light of the increases in capacity prices set out in National Grids Final Notice of Charges for Gas Year 2020/21. The impacts presented in the Proposal and the Draft Mod report will be conservative following the significant increase in capacity charges, particularly at entry.
Uniper - 0716	Oppose	a) - negative d) - negative	<ul style="list-style-type: none"> • Uniper do not support implementation of this proposal as Uniper disagree with the logic behind it, which is to seek to maintain historical levels of revenue from overrun charges, rather than considering objectively the behavioural incentives and disincentives that a specific multiplier could have. Uniper do not believe that historical capacity booking patterns and behaviour are appropriate to rely on, given the implementation of a fundamentally different charging regime which will drive new behaviours and approaches. Therefore, Uniper have no confidence that the Overrun Charges would be reflective of the costs incurred by NGG. An excessively penal Overrun Charge will also result in instability of general transmission charges, if it incentivises significant over-buying of capacity to help mitigate the risk of overruns (i.e. inconsistent with FCC values) or results in large penalty charges which feed back into transmission charges. • Do not support implementation. • Suggest that there could be minor administrative and IT costs. • Agrees the Legal Text will deliver the intent of the Solution
Uniper - 0716A	Support	a) - positive d) – positive	<ul style="list-style-type: none"> • Uniper support implementation of this proposal. If no change is made, the implementation of UNC Modification

			<p>0678 will result in Overrun Charges which are disproportionate to the impact they are having on the operation of the network and therefore would fail to reflect the costs incurred. The proposed multiplier of 1.1 is consistent with multipliers used elsewhere in the UNC, such as Constraint Management. In our view, Modification 0716A furthers relevant objective d), by providing proportionate incentives on Shippers to avoid overruns whilst avoiding excessively penal overrun charges, which would have negative impacts on competition.</p> <ul style="list-style-type: none"> • Support implementation date of 01 October 2020 - or as soon as possible thereafter. • Suggest that there could be minor administrative and IT costs. • Agrees the Legal Text will deliver the intent of the Solution.
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Please note that late submitted representations will not be included or referred to in this Final Modification Report. However, all representations received in response to this consultation (including late submissions) are published in full alongside this Report and will be taken into account when the UNC Modification Panel makes its assessment and recommendation.

11 Panel Discussions

12 Recommendations

Panel Recommendation

Panel Members recommended:

- that Modification 0716/0716A should [not] be implemented
- that Modification [0716/0716A] better facilitates the Relevant Objectives than Modification [0716/0716A].

13 Supporting Analysis

UNC 0716A

Supporting Analysis below:-

Part 1. Entry Capacity booking behaviour

Bacton UKCS

Figure 1 shows the pattern of short-term capacity booked (within day firm and interruptible) over the period 1 April 2019 to 1 April 2020. It can be seen that the volumes of short-term capacity acquired during this period were close to, or exceeded the total monthly release obligated volumes, and on the majority of days exceeded flows.

Figure 1 Bacton UKCS short-term entry capacity bookings (Apr19-Apr20)

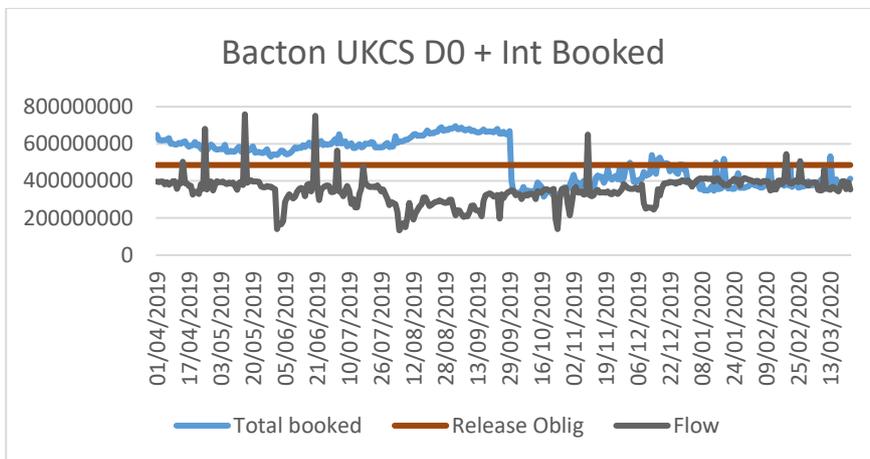
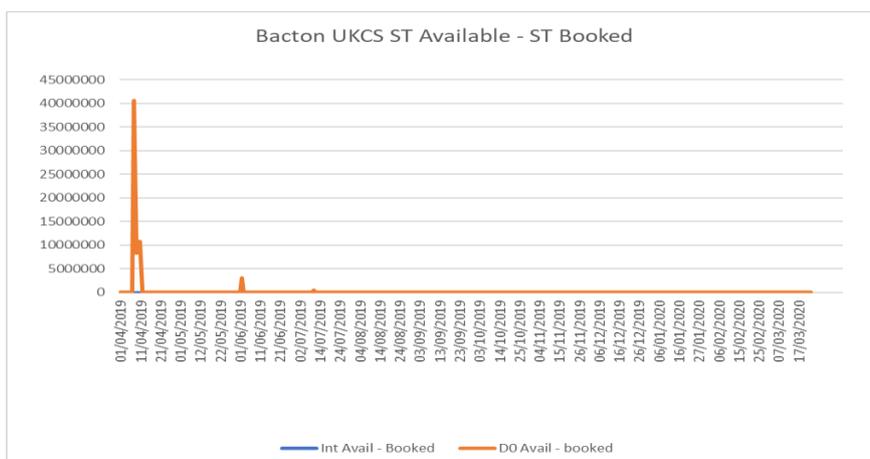


Figure 2 shows the the volume of within day firm and interruptible capacity bought compared to the volumes made available. It can be observed that on nearly every day all capacity made available on a short-term basis was booked by Users.

Figure 2 Bacton UKCS short-term capacity bookings v capacity made available



St Fergus

Figure 3 shows the same information as figure 1. The results at St Fergus are similar to Bacton, with significant volumes of short-term capacity acquired, exceeding flows throughout the period.

Figure 3 St Fergus short-term entry capacity bookings (Apr19-Apr20)

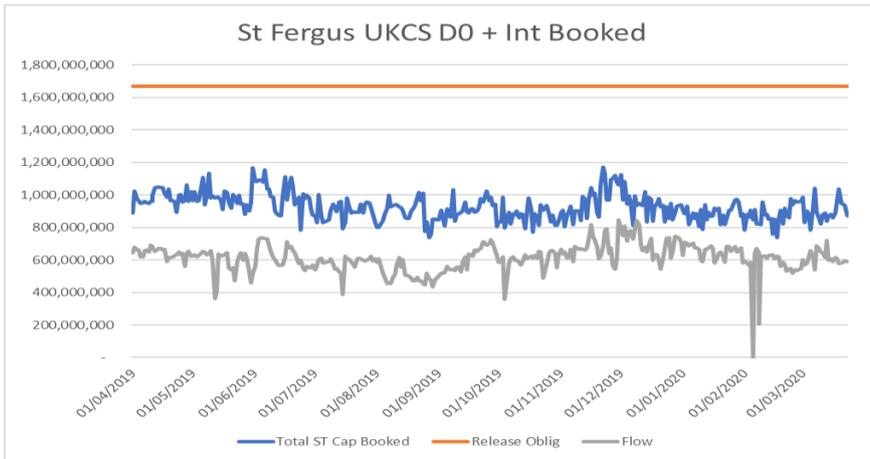
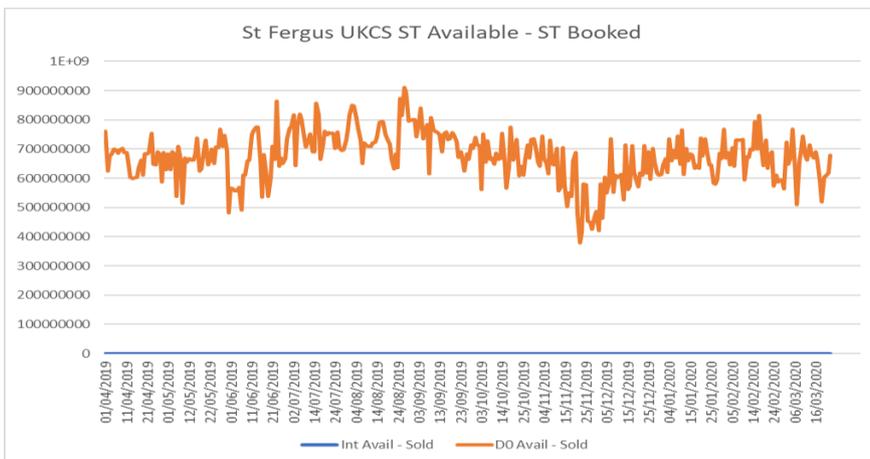


Figure 4 shows the the volume of within day firm and interruptible capacity bought compared to the volumes made available. The results are a little different to Bacton, with less bookings of within day firm, compared to available capacity, however, all interruptible capacity made available was booked.

Figure 4 St Fergus short-term capacity bookings v capacity made available

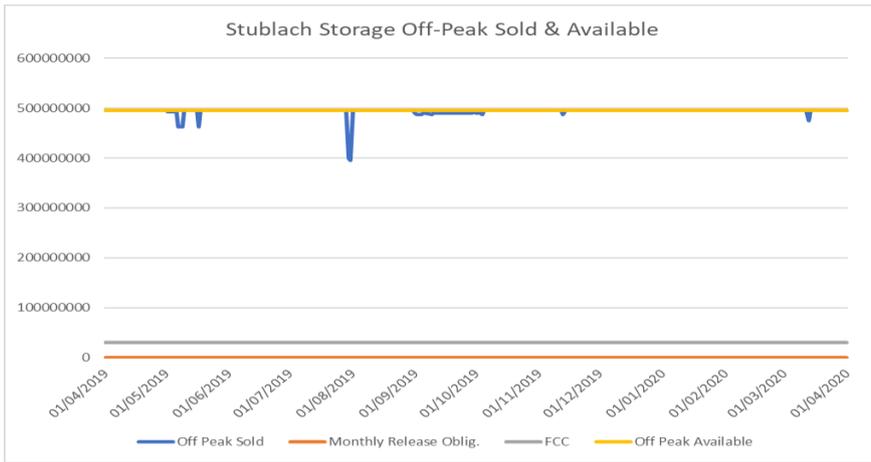


Part 2. Exit Capacity booking behaviour

Stublach (storage)

Figure 5 shows the pattern of off-peak capacity booked over the period 1 April 2019 to 1 April 2020. The maximum volumes of available off-peak capacity were acquired almost every day.

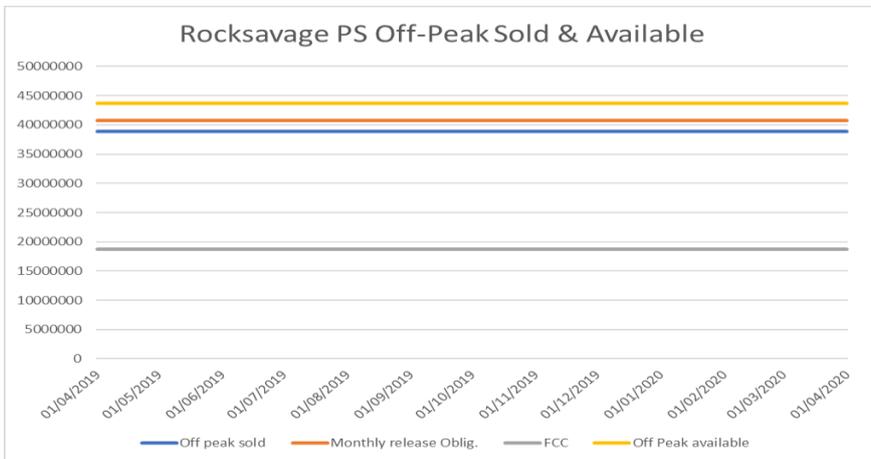
Figure 5 Stublach, Off-peak capacity bookings



Rocksavage (power station)

Similar patterns off-peak bookings occurred at Rocksavage, as shown in figure 6, with sales of off-peak capacity being close to available volumes throughout the period

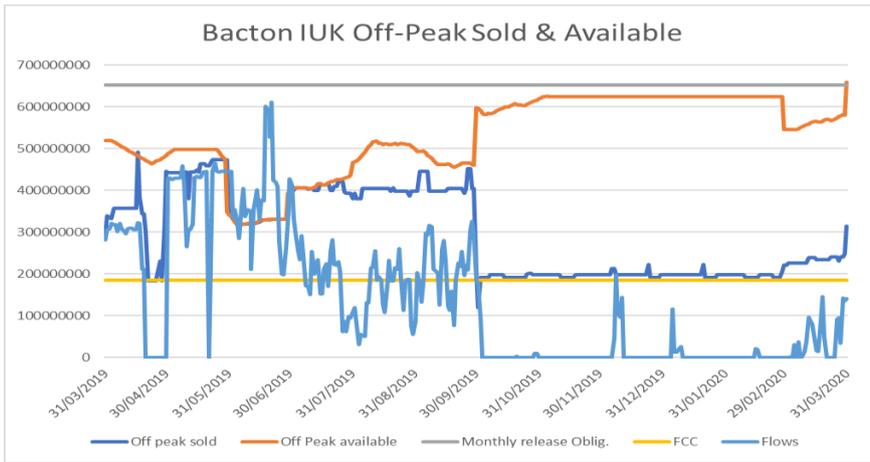
Figure 6 Rocksavage, Off-peak capacity bookings



Bacton IUK (interconnector)

Figure 7 shows a clear change in booking strategies over the period. From April to October, off-peak bookings are high, reducing from October onwards. This can be explained by the reduction in flows, however, it is worth noting that off-peak bookings are significantly higher than flows during this latter period.

Figure 7 Bacton IUK, Off-peak capacity bookings



Part 3. Impact of Modification 0678A on Entry Capacity firm reserve prices

Figure 8 shows that, on average and in absolute terms, reserve prices at NTS Entry Points will increase by a multiple of 76

Figure 8 Comparison of firm entry reserve prices

Entry Point	MSEC Oct 20	PS Oct 20	Multiple Increase
Bacton	0.0095	0.0429	4.52
Barow	0.0015	0.0429	28.60
Easington	0.0149	0.0429	2.88
Isle of Grain	0.0001	0.0429	429.00
Milford Haven	0.0235	0.0429	1.83
St Fergus	0.0532	0.0429	0.81
Teesside	0.0087	0.0429	4.93
Theddlethorpe	0.0134	0.0429	3.20
Hatfield Moor	0.0035	0.0429	12.26
Barton Stacey	0.0001	0.02145	214.50
Cheshire	0.0001	0.02145	214.50
Garton	0.013	0.02145	1.65
Hole House	0.0001	0.02145	214.50
Hornsea	0.014	0.02145	1.53
Hatfield Moor Store	0.0035	0.02145	6.13
Average	0.0106	0.5148	76.06

Part 4. Impact of Modification 0678A on Exit Capacity firm reserve prices

Figure 9 shows that, on average and in absolute terms, reserve prices at NTS Exit Points will increase by a multiple of 57.

Figure 9 Comparison of firm exit reserve prices

Exit Point	Offtake	19/20 prices	PS Oct 20	Multiple Increase
Apache (Sage Black Start)	INDUSTRIAL	0.0001	0.0172	172.00

Barrow (Black Start)	INDUSTRIAL	0.0102	0.0172	1.69
Billingham ICI (Terra Billingham)	INDUSTRIAL	0.0001	0.0172	172.00
Bishop Auckland (test facility)	INDUSTRIAL	0.0023	0.0172	7.48
Blackness (BP Grangemouth)	INDUSTRIAL	0.0001	0.0172	172.00
Centrax Industrial	INDUSTRIAL	0.0309	0.0172	0.56
Ferny Knoll (AM Paper)	INDUSTRIAL	0.0222	0.0172	0.77
Goole (Guardian Glass)	INDUSTRIAL	0.0036	0.0172	4.78
Harwarden (Shotton, aka Shotton Paper)	INDUSTRIAL	0.031	0.0172	0.55
Hollingsgreen (Hays Chemicals)	INDUSTRIAL	0.0271	0.0172	0.63
Phillips Petroleum, Teesside	INDUSTRIAL	0.0001	0.0172	172.00
Pickmere (Winnington Power, aka Brunner Mond)	INDUSTRIAL	0.0262	0.0172	0.66
Rollswood Kintore	INDUSTRIAL	0.0001	0.0172	172.00
Saltend BPHP (BP Saltend HP)	INDUSTRIAL	0.0001	0.0172	172.00
Sandy Lane (Blackburn CHP, aka Sappi Paper Mill)	INDUSTRIAL	0.0207	0.0172	0.83
Seal Sands TGPP	INDUSTRIAL	0.0001	0.0172	172.00
Shellstar (aka Kemira, not Kemira CHP)	INDUSTRIAL	0.0303	0.0172	0.57
Shotwick (Bridgewater Paper)	INDUSTRIAL	0.0307	0.0172	0.56
St. Fergus (Shell Blackstart)	INDUSTRIAL	0.0001	0.0172	172.00
Teesside (BASF, aka BASF Teesside)	INDUSTRIAL	0.0001	0.0172	172.00
Teesside Hydrogen	INDUSTRIAL	0.0001	0.0172	172.00

Terra Nitrogen (aka ICI, Terra Severnside)	INDUSTRIAL	0.0193	0.0172	0.89
Thornton Curtis (Humber Refinery, aka Immingham)	INDUSTRIAL	0.0001	0.0172	172.00
Upper Neeston (Milford Haven Refinery)	INDUSTRIAL	0.0001	0.0172	172.00
Weston Point (Castner Kelner, aka ICI Runcorn)	INDUSTRIAL	0.0308	0.0172	0.56
Zeneca (ICI Avecia, aka 'Zenica')	INDUSTRIAL	0.0001	0.0172	172.00
Air_Products (Teesside)	INDUSTRIAL	0.0001	0.0172	172.00
Fordoun CNG Station	INDUSTRIAL	0.0001	0.0172	172.00
St_Fergus_Segal	INDUSTRIAL	0.0001	0.0172	172.00
Kinneil CHP	INDUSTRIAL	0.0001	0.0172	172.00
Bacton (BBL)	INTERCONNECTOR	0.0001	0.0172	172.00
Bacton (IUK)	INTERCONNECTOR	0.0001	0.0172	172.00
Moffat (Irish Interconnector)	INTERCONNECTOR	0.0017	0.0172	10.12
Abson (Seabank Power Station phase I)	POWER STATION	0.0172	0.0172	1.00
Bacton (Great Yarmouth)	POWER STATION	0.0001	0.0172	172.00
Barking (Horndon)	POWER STATION	0.012	0.0172	1.43
Blyborough (Brigg)	POWER STATION	0.0064	0.0172	2.69
Blyborough (Cottam)	POWER STATION	0.0052	0.0172	3.31
Brine Field (Teesside) Power Station	POWER STATION	0.0001	0.0172	172.00
Burton Point (Connahs Quay)	POWER STATION	0.0311	0.0172	0.55
Caldecott (Corby Power Station)	POWER STATION	0.0129	0.0172	1.33
Carrington (Partington) Power Station	POWER STATION	0.0255	0.0172	0.67
Cockenzie Power Station	POWER STATION	0.0001	0.0172	172.00

Coryton 2 (Thames Haven) Power Station	POWER STATION	0.0116	0.0172	1.48
Deeside	POWER STATION	0.0311	0.0172	0.55
Didcot	POWER STATION	0.0231	0.0172	0.74
Drakelow Power Station	POWER STATION	0.0231	0.0172	0.74
Eastoft (Keadby Blackstart)	POWER STATION	0.0051	0.0172	3.37
Eastoft (Keadby)	POWER STATION	0.0051	0.0172	3.37
Enron Billingham	POWER STATION	0.0001	0.0172	172.00
Epping Green (Enfield Energy, aka Brimsdown)	POWER STATION	0.0154	0.0172	1.12
Gowkhall (Longannet)	POWER STATION	0.0001	0.0172	172.00
Grain Power Station	POWER STATION	0.0092	0.0172	1.87
Hatfield Power Station	POWER STATION	0.0032	0.0172	5.38
Langage Power Station	POWER STATION	0.0346	0.0172	0.50
Marchwood Power Station	POWER STATION	0.0301	0.0172	0.57
Medway (aka Isle of Grain Power Station, NOT Grain Power)	POWER STATION	0.0093	0.0172	1.85
Middle Stoke (Damhead Creek, aka Kingsnorth Power Station)	POWER STATION	0.0092	0.0172	1.87
Pembroke Power Station	POWER STATION	0.0001	0.0172	172.00
Peterborough (Peterborough Power Station)	POWER STATION	0.0095	0.0172	1.81
Roosecote Power Station (Barrow)	POWER STATION	0.0102	0.0172	1.69
Rosehill (Saltend Power Station)	POWER STATION	0.0001	0.0172	172.00
Ryehouse	POWER STATION	0.016	0.0172	1.08
Saddle Bow (Kings Lynn)	POWER STATION	0.0056	0.0172	3.07

Seabank (Seabank Power Station phase II)	POWER STATION	0.0194	0.0172	0.89
Sellafield Power Station	POWER STATION	0.0153	0.0172	1.12
Spalding 2 (South Holland) Power Station	POWER STATION	0.007	0.0172	2.46
St. Fergus (Peterhead)	POWER STATION	0.0001	0.0172	172.00
St. Neots (Little Barford)	POWER STATION	0.0139	0.0172	1.24
Stallingborough	POWER STATION	0.0001	0.0172	172.00
Stanford Le Hope (Coryton)	POWER STATION	0.0116	0.0172	1.48
Staythorpe	POWER STATION	0.0089	0.0172	1.93
Sutton Bridge Power Station	POWER STATION	0.0074	0.0172	2.32
Thornton Curtis (Killingholme)	POWER STATION	0.0001	0.0172	172.00
Tilbury Power Station	POWER STATION	0.0112	0.0172	1.54
Tonna (Baglan Bay)	POWER STATION	0.0001	0.0172	172.00
Trafford Power Station	POWER STATION	0.0255	0.0172	0.67
West Burton Power Station	POWER STATION	0.0053	0.0172	3.25
Weston Point (Rocksavage)	POWER STATION	0.0308	0.0172	0.56
Willington Power Station	POWER STATION	0.021	0.0172	0.82
Wragg Marsh (Spalding)	POWER STATION	0.007	0.0172	2.46
Wyre Power Station	POWER STATION	0.0193	0.0172	0.89
Palm_Paper	POWER STATION	0.0057	0.0172	3.02
Eggborough_PS	POWER STATION	0.0044	0.0172	3.91
KEADBY_2 PS	POWER STATION	0.0051	0.0172	3.37
Avonmouth Max Refill	STORAGE SITE	0.0194	0.0086	0.44
Bacton (Baird)	STORAGE SITE	0.0001	0.0086	86.00
Barrow (Bains)	STORAGE SITE	0.0102	0.0086	0.84
Barrow (Gateway)	STORAGE SITE	0.0102	0.0086	0.84
Barton Stacey Max Refill (Humbly Grove)	STORAGE SITE	0.0278	0.0086	0.31
Caythorpe	STORAGE SITE	0.0009	0.0086	9.56
Deborah Storage (Bacton)	STORAGE SITE	0.0001	0.0086	86.00

Dynevor Max Refill	STORAGE SITE	0.0001	0.0086	86.00
Garton Max Refill (Aldbrough)	STORAGE SITE	0.0001	0.0086	86.00
Glenmavis Max Refill	STORAGE SITE	0.0001	0.0086	86.00
Hatfield Moor Max Refill	STORAGE SITE	0.0042	0.0086	2.05
Hill Top Farm (Hole House Farm)	STORAGE SITE	0.027	0.0086	0.32
Hole House Max Refill	STORAGE SITE	0.027	0.0086	0.32
Holford	STORAGE SITE	0.0263	0.0086	0.33
Hornsea Max Refill	STORAGE SITE	0.0001	0.0086	86.00
Partington Max Refill	STORAGE SITE	0.0255	0.0086	0.34
Saltfleetby Storage (Theddlethorpe)	STORAGE SITE	0.0001	0.0086	86.00
Stublach (Cheshire)	STORAGE SITE	0.0263	0.0086	0.33
Rough Max Refill	STORAGE SITE	0.0001	0.0086	86.00
Average		0.01034712	0.015629	57.39

Part 5. Impact of alternative entry multipliers

Figure 10 shows the impact of applying an Overrun multiplier of 3 based on forecast reserve prices generated by Modification 0678. In comparison to the current arrangements, Overrun Charges increase by a multiple of 28

Figure 10 Impact of alternative entry multipliers

Entry Point	8x MSEC	3x PS	Multiple Increase
Bacton	0.076	0.1287	1.693421053
Barow	0.012	0.1287	10.725
Easington	0.1192	0.1287	1.079697987
Isle of Grain	0.0008	0.1287	160.875
Milford Haven	0.188	0.1287	0.684574468
St Fergus	0.4256	0.1287	0.302396617
Teesside	0.0696	0.1287	1.849137931
Theddlethorpe	0.1072	0.1287	1.200559701
Hatfield Moor	0.028	0.1287	4.596428571
Barton Stacey	0.0008	0.06435	80.4375
Cheshire	0.0008	0.06435	80.4375
Garton	0.104	0.06435	0.61875
Hole House	0.0008	0.06435	80.4375
Hornsea	0.112	0.06435	0.574553571

Hatfield Moor Store	0.028	0.06435	2.298214286
Average	0.084853	0.10296	28.52068228

Part 6. Impact of alternative exit multipliers

Figure 11 shows the impact of applying an Overrun multiplier of 6 based on forecast reserve prices generated by Modification 0678. In comparison to the current arrangements, Overrun Charges increase by a multiple of 43.

Figure 11 Impact of alternative exit multipliers

Exit Point	Offtake	8x MSEC	6x PS	Multiple Increase
Apache (Sage Black Start)	INDUSTRIAL	0.0008	0.1032	129
Barrow (Black Start)	INDUSTRIAL	0.0816	0.1032	1.264705882
Billingham ICI (Terra Billingham)	INDUSTRIAL	0.0008	0.1032	129
Bishop Auckland (test facility)	INDUSTRIAL	0.0184	0.1032	5.608695652
Blackness (BP Grangemouth)	INDUSTRIAL	0.0008	0.1032	129
Centrax Industrial	INDUSTRIAL	0.2472	0.1032	0.417475728
Ferny Knoll (AM Paper)	INDUSTRIAL	0.1776	0.1032	0.581081081
Goole (Guardian Glass)	INDUSTRIAL	0.0288	0.1032	3.583333333
Harwarden (Shotton, aka Shotton Paper)	INDUSTRIAL	0.248	0.1032	0.416129032
Hollingsgreen (Hays Chemicals)	INDUSTRIAL	0.2168	0.1032	0.47601476
Phillips Petroleum, Teesside	INDUSTRIAL	0.0008	0.1032	129
Pickmere (Winnington Power, aka Brunner Mond)	INDUSTRIAL	0.2096	0.1032	0.492366412
Rollswood Kintore	INDUSTRIAL	0.0008	0.1032	129
Saltend BPHP (BP Saltend HP)	INDUSTRIAL	0.0008	0.1032	129
Sandy Lane (Blackburn CHP, aka Sappi Paper Mill)	INDUSTRIAL	0.1656	0.1032	0.623188406
Seal Sands TGPP	INDUSTRIAL	0.0008	0.1032	129
Shellstar (aka Kemira, not Kemira CHP)	INDUSTRIAL	0.2424	0.1032	0.425742574
Shotwick (Bridgewater Paper)	INDUSTRIAL	0.2456	0.1032	0.42019544
St. Fergus (Shell Blackstart)	INDUSTRIAL	0.0008	0.1032	129
Teesside (BASF, aka BASF Teesside)	INDUSTRIAL	0.0008	0.1032	129
Teesside Hydrogen	INDUSTRIAL	0.0008	0.1032	129
Terra Nitrogen (aka ICI, Terra Severnside)	INDUSTRIAL	0.1544	0.1032	0.668393782
Thornton Curtis (Humber Refinery, aka Immingham)	INDUSTRIAL	0.0008	0.1032	129
Upper Neeston (Milford Haven Refinery)	INDUSTRIAL	0.0008	0.1032	129
Weston Point (Castner Kelner, aka ICI Runcorn)	INDUSTRIAL	0.2464	0.1032	0.418831169
Zeneca (ICI Avecia, aka 'Zenica')	INDUSTRIAL	0.0008	0.1032	129
Air_Products (Teesside)	INDUSTRIAL	0.0008	0.1032	129
Fordoun CNG Station	INDUSTRIAL	0.0008	0.1032	129
St_Fergus_Segal	INDUSTRIAL	0.0008	0.1032	129
Kinneil CHP	INDUSTRIAL	0.0008	0.1032	129
Bacton (BBL)	INTERCONNECTOR	0.0008	0.1032	129
Bacton (IUK)	INTERCONNECTOR	0.0008	0.1032	129

Moffat (Irish Interconnector)	INTERCONNECTOR	0.0136	0.1032	7.588235294
Abson (Seabank Power Station phase I)	POWER STATION	0.1376	0.1032	0.75
Bacton (Great Yarmouth)	POWER STATION	0.0008	0.1032	129
Barking (Horndon)	POWER STATION	0.096	0.1032	1.075
Blyborough (Brigg)	POWER STATION	0.0512	0.1032	2.015625
Blyborough (Cottam)	POWER STATION	0.0416	0.1032	2.480769231
Brine Field (Teesside) Power Station	POWER STATION	0.0008	0.1032	129
Burton Point (Connahs Quay)	POWER STATION	0.2488	0.1032	0.414790997
Caldecott (Corby Power Station)	POWER STATION	0.1032	0.1032	1
Carrington (Partington) Power Station	POWER STATION	0.204	0.1032	0.505882353
Cockenzie Power Station	POWER STATION	0.0008	0.1032	129
Coryton 2 (Thames Haven) Power Station	POWER STATION	0.0928	0.1032	1.112068966
Deeside	POWER STATION	0.2488	0.1032	0.414790997
Didcot	POWER STATION	0.1848	0.1032	0.558441558
Drakelow Power Station	POWER STATION	0.1848	0.1032	0.558441558
Eastoft (Keadby Blackstart)	POWER STATION	0.0408	0.1032	2.529411765
Eastoft (Keadby)	POWER STATION	0.0408	0.1032	2.529411765
Enron Billingham	POWER STATION	0.0008	0.1032	129
Epping Green (Enfield Energy, aka Brimsdown)	POWER STATION	0.1232	0.1032	0.837662338
Gowkhall (Longannet)	POWER STATION	0.0008	0.1032	129
Grain Power Station	POWER STATION	0.0736	0.1032	1.402173913
Hatfield Power Station	POWER STATION	0.0256	0.1032	4.03125
Langage Power Station	POWER STATION	0.2768	0.1032	0.37283237
Marchwood Power Station	POWER STATION	0.2408	0.1032	0.428571429
Medway (aka Isle of Grain Power Station, NOT Grain Power)	POWER STATION	0.0744	0.1032	1.387096774
Middle Stoke (Damhead Creek, aka Kingsnorth Power Station)	POWER STATION	0.0736	0.1032	1.402173913
Pembroke Power Station	POWER STATION	0.0008	0.1032	129
Peterborough (Peterborough Power Station)	POWER STATION	0.076	0.1032	1.357894737
Roosecote Power Station (Barrow)	POWER STATION	0.0816	0.1032	1.264705882
Rosehill (Saltend Power Station)	POWER STATION	0.0008	0.1032	129
Ryehouse	POWER STATION	0.128	0.1032	0.80625
Saddle Bow (Kings Lynn)	POWER STATION	0.0448	0.1032	2.303571429
Seabank (Seabank Power Station phase II)	POWER STATION	0.1552	0.1032	0.664948454
Sellafield Power Station	POWER STATION	0.1224	0.1032	0.843137255
Spalding 2 (South Holland) Power Station	POWER STATION	0.056	0.1032	1.842857143
St. Fergus (Peterhead)	POWER STATION	0.0008	0.1032	129
St. Neots (Little Barford)	POWER STATION	0.1112	0.1032	0.928057554
Stallingborough	POWER STATION	0.0008	0.1032	129
Stanford Le Hope (Coryton)	POWER STATION	0.0928	0.1032	1.112068966
Staythorpe	POWER STATION	0.0712	0.1032	1.449438202
Sutton Bridge Power Station	POWER STATION	0.0592	0.1032	1.743243243
Thornton Curtis (Killingholme)	POWER STATION	0.0008	0.1032	129
Tilbury Power Station	POWER STATION	0.0896	0.1032	1.151785714
Tonna (Baglan Bay)	POWER STATION	0.0008	0.1032	129

Trafford Power Station	POWER STATION	0.204	0.1032	0.505882353
West Burton Power Station	POWER STATION	0.0424	0.1032	2.433962264
Weston Point (Rocksavage)	POWER STATION	0.2464	0.1032	0.418831169
Willington Power Station	POWER STATION	0.168	0.1032	0.614285714
Wragg Marsh (Spalding)	POWER STATION	0.056	0.1032	1.842857143
Wyre Power Station	POWER STATION	0.1544	0.1032	0.668393782
Palm_Paper	POWER STATION	0.0456	0.1032	2.263157895
Eggborough_PS	POWER STATION	0.0352	0.1032	2.931818182
KEADBY_2 PS	POWER STATION	0.0408	0.1032	2.529411765
Avonmouth Max Refill	STORAGE SITE	0.1552	0.0516	0.332474227
Bacton (Baird)	STORAGE SITE	0.0008	0.0516	64.5
Barrow (Bains)	STORAGE SITE	0.0816	0.0516	0.632352941
Barrow (Gateway)	STORAGE SITE	0.0816	0.0516	0.632352941
Barton Stacey Max Refill (Humbly Grove)	STORAGE SITE	0.2224	0.0516	0.232014388
Caythorpe	STORAGE SITE	0.0072	0.0516	7.166666667
Deborah Storage (Bacton)	STORAGE SITE	0.0008	0.0516	64.5
Dynevor Max Refill	STORAGE SITE	0.0008	0.0516	64.5
Garton Max Refill (Aldbrough)	STORAGE SITE	0.0008	0.0516	64.5
Glenmavis Max Refill	STORAGE SITE	0.0008	0.0516	64.5
Hatfield Moor Max Refill	STORAGE SITE	0.0336	0.0516	1.535714286
Hill Top Farm (Hole House Farm)	STORAGE SITE	0.216	0.0516	0.238888889
Hole House Max Refill	STORAGE SITE	0.216	0.0516	0.238888889
Holford	STORAGE SITE	0.2104	0.0516	0.245247148
Hornsea Max Refill	STORAGE SITE	0.0008	0.0516	64.5
Partington Max Refill	STORAGE SITE	0.204	0.0516	0.252941176
Saltfleetby Storage (Theddlethorpe)	STORAGE SITE	0.0008	0.0516	64.5
Stublach (Cheshire)	STORAGE SITE	0.2104	0.0516	0.245247148
Rough Max Refill	STORAGE SITE	0.0008	0.0516	64.5
Average		0.082777	0.093773	43.04057818