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Date: 20 May 2015

Dear Sir/Madam,

**Impact assessment of UNC modifications 0501V, 0501AV, 0501BV and 0501CV  
'Treatment of Existing Entry Capacity Rights at the Bacton ASEP to comply with EU  
Capacity Regulations'**

**Introduction**

The Uniform Network Code (UNC) Panel submitted the Final Modification Report (FMR) for UNC modifications 0501V, 0501AV, 0501BV and 0501CV to the Authority<sup>1</sup> on 1 May 2015.<sup>2</sup> It is now up to the Authority to make a decision on which, if any, of the modifications should be implemented.

Section 5A of the Utilities Act 2000 places a duty on the Authority to carry out an Impact Assessment (IA) where:

- the Authority is proposing to do anything for the purposes of, or in connection with, the carrying out of any function exercisable by it under or by virtue of Part 1 of the Gas Act 1986 or Part 1 of the Electricity Act 1989; and
- it appears to the Authority that the proposal is "important" within the meaning of section 5A

We have published guidance on our approach to IAs and when we may consider a proposal to be "important".<sup>3</sup> Our view is that our decision on the four proposed alternative modifications falls under the meaning of "important" and we have therefore decided to conduct an IA prior to making our decision.

Our IA is set out in annex 2 of this letter. We are inviting comments from stakeholders on the IA. We are also asking for any further quantitative data and/or qualitative information that stakeholders may have on the impacts of the four proposals in order to help inform our

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<sup>1</sup> References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work.

<sup>2</sup> The modifications were originally raised as UNC0501, UNC0501A, UNC0501B and UNC0501C. The proposers later submitted variation requests which changed the respective titles to UNC0501AV, UNC0501BV and UNC0501CV. We use the titles suffixed with V in this document. See Joint Office website: <http://www.gasgovernance.co.uk/0501>

<sup>3</sup> See Ofgem website: <https://www.ofgem.gov.uk/publications-and-updates/impact-assessment-guidance>

final decision. The closing date for responses is **17 June 2015**. Responses should be sent to [david.mccrone@ofgem.gov.uk](mailto:david.mccrone@ofgem.gov.uk). We will publish all non-confidential responses on our website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)).

We have quantified the impacts of each proposal where we can (for example, on commodity charges). However, we recognise that this is difficult to do and not possible in all cases. Where we have been unable to quantify the impacts of a proposal we have set out our understanding of the qualitative arguments.

## Background

The Third Package of European energy reforms (The Third Package) created a new legal framework to promote cross-border trade. These reforms were developed in response to the European Commission's inquiry into competition in gas and electricity markets published in January 2007.<sup>4</sup>

The Third Package created a regulatory framework to support a single European energy market by developing European-wide Network Codes. The Network Codes form a legally binding set of common technical and commercial rules and obligations that govern access to and use of the European energy networks. Taken together, these aim to promote liquidity, improve integration between member states' gas and electricity markets and promote the efficient use of interconnectors to ensure that gas and electricity flows according to price signals (ie, to where it is valued most). These EU legislative requirements take priority over domestic legislation in Great Britain (GB) and associated regulations and codes, including the UNC and gas licences.

One of the Network Codes, the Capacity Allocation Mechanisms Network Code (CAM)<sup>5</sup>, aims to facilitate equal and transparent access to transmission capacity, achieve effective competition on the wholesale gas market, facilitate a more transparent, efficient and non-discriminatory system of allocation of capacity and avoid foreclosure of downstream supply markets. It does this by introducing:

- standard capacity products (in terms of duration),
- auctions of 'bundled' capacity products<sup>6</sup> at interconnection points (IPs) between entry-exit zones or an entry-exit zone and an interconnector,
- cross-border web based booking system(s) and,
- coordination of maintenance of pipelines or parts of transmission networks by transmission system operators (TSOs) and communication procedures by TSOs.

In GB the current IPs are Bacton and Moffat. Bacton is unique within GB in that gas enters the GB National Transmission System (NTS) both from domestic production and from interconnectors with mainland Europe. CAM only applies at IPs.

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<sup>4</sup> See inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report) [http://ec.europa.eu/competition/sectors/energy/2005\\_inquiry/index\\_en.html](http://ec.europa.eu/competition/sectors/energy/2005_inquiry/index_en.html)

<sup>5</sup> See Commission Regulation establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems (984/2013/EU) <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013R0984>

<sup>6</sup> Currently to transport gas across an interconnection point between Transmission System Operators (TSOs) requires shippers to buy exit capacity from one TSO and entry capacity to the next TSO. Bundling of capacity products means that shippers will buy the various capacity products to transport across an interconnection point in a single transaction. There will continue to be individual contracts with each TSO on either side of the interconnection point, in the case of NGG this will be the UNC.

On 10 February 2015 we published our decision to amend the Special Conditions of National Grid Gas (NGG) plc's NTS gas transporter licence to facilitate implementation of CAM at Bacton. As a result, the existing Bacton entry point will be split into two entry points, Bacton UKCS and Bacton IP.<sup>7</sup> These new entry points will be effective from 1 November 2015 (or such other date as the Authority may direct in writing). The CAM rules will apply to the Bacton IP, and the current GB arrangements will continue at Bacton UKCS.

Capacity has been sold in the long-term auctions for use at Bacton after 1 November 2015. A solution is therefore required to manage these bookings as we move from a single Bacton entry point to the Bacton UKCS and Bacton IP entry points.

UNC modification UNC0501V was originally raised in May 2014 to facilitate the reassignment of long-term bookings between the two entry points.<sup>8</sup> Some parties raised concerns over the treatment of long-term capacity booking and the impacts on current contractual positions under this proposal. This generated three alternative modifications (UNC0501AV, UNC0501BV and UNC0501CV), each proposing a different approach to managing existing capacity bookings at Bacton. We describe these modifications in more detail in Annex 1.

Following development and industry consultation, on 19 February 2015 the UNC Panel recommended that all four modifications should be made. The UNC Panel also considered that no clear majority view existed on the preference of whether proposed modification 0501V, 0501AV, 0501BV or 0501CV better facilitated the UNC Relevant Objectives than the others.

The legal text for all four modifications envisaged the respective processes commencing following the publication of the results of the 2015 long-term capacity auctions. This will be on or before 28 May 2015. As we have decided to conduct an IA, our final decision will be after this date. We therefore returned the FMR to the UNC Panel for industry's consideration of whether the relevant dates within the legal text should be amended. This was to allow Ofgem to make a decision on modifications that did not consider dates retrospectively. Variation requests for each modification were raised, changing the start date and timing of the processes described, and the UNC Panel resubmitted the FMR, including a supplemental report, to us on 1 May 2015.<sup>9</sup>

## **Initial conclusions**

Based upon the factors we have examined in this IA we conclude that UNC0501AV, UNC0501BV and UNC0501CV will all result in increased TO entry commodity charges for all GB shippers through the re-distributional effects of returning capacity to NGG. This could disproportionately affect some shippers which may in turn impact competition.

We think there will be minimal impacts on consumers' bills directly although any impact on competition or costs associated with implementing the modifications may indirectly affect consumers bills.

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<sup>7</sup> Modification of Special Conditions 1A and 5F of National Grid Gas plc's Gas Transporter Licence to facilitate implementation of the Capacity Allocation Mechanisms Network Code <https://www.ofgem.gov.uk/publications-and-updates/modification-special-conditions-1a-and-5f-national-grid-gas-plc%E2%80%99s-gas-transporter-licence-facilitate-implementation-capacity-allocation-mechanisms-network-code>

<sup>8</sup> This was originally raised as UNC0501 and subsequently updated to UNC0501V following a successful variation request. See <http://www.gasgovernance.co.uk/0501>

<sup>9</sup> See Final Modification Report 0501V 0501AV 0501BV 0501CV <http://www.gasgovernance.co.uk/sites/default/files/Final%20Modification%20Report%200501V%200501AV%200501BV%200501CV%20v1.0.pdf>

We consider that the aggregate overrun plus rebate mechanism, proposed as part of UNC0501CV, may have some benefits in terms of reintroducing some of the flexibility which is reduced as a result of implementing CAM by means of splitting Bacton. However we think these are less than the negative impacts of returning capacity under that proposal. It may also have some unintended consequences for the 'ticket to ride' principle<sup>10</sup> of the capacity regime which potentially outweigh any advantages it has over UNC0501V, UNC0501AV and UNC0501BV.

Our final decision will be assessed against the UNC relevant objectives and our wider statutory duties. We will also consider the comments made by stakeholders during the modification process and in response to this IA.

### **Next steps**

We seek stakeholders' views on this assessment so the Authority can take them into account in deciding which, if any, of the four UNC modification proposals to implement. In particular we would like to receive comments on the following questions:

- **Have we identified the relevant quantitative impacts?**
- **Have we modelled the impacts appropriately?**
- **Have we identified the relevant qualitative impacts?**
- **Is there further quantitative and/or qualitative evidence of the potential impacts of the proposed changes not covered by our analysis?**

The closing date for responses is **17 June 2015**. Responses should be sent to [david.mccrone@ofgem.gov.uk](mailto:david.mccrone@ofgem.gov.uk). We will publish all non-confidential responses on our website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)). If you wish your response to be kept confidential clearly mark it as such.

We will aim to publish our final decision on which, if any, of the four modification proposals to implement in July 2015.

**Yours sincerely**

**Paul Branston**

**Associate Partner, Gas Networks**

Signed on behalf of the Authority and authorised for that purpose

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<sup>10</sup> Under this principle shippers are responsible for buying the capacity they need and it is up to them to manage the risk of buying more or less capacity than they need.

## **Annex 1: The four modification proposals**

We set out in our modification to NGG's NTS gas transporter licence that in order to facilitate implementation of CAM in GB by 1 November 2015, the Bacton entry point will be split into two points.<sup>11</sup> Shippers have purchased capacity at the single Bacton entry point for use after 1 November 2015 and so a mechanism is needed to manage these bookings once the entry point is split.

*UNC modification 0501V Treatment of Existing Entry Capacity Rights at the Bacton ASEP to comply with EU Capacity Regulations*

UNC0501V was raised by NGG on 1 May 2014. This modification introduces a one-off process to enable capacity holders to indicate where they wish their entry capacity rights at the existing Bacton entry point to be held following implementation of CAM.

Capacity holders are invited to indicate where they wish their existing entry capacity bookings to be held between the Bacton UKCS and Bacton IP entry points.

Where the aggregate level of capacity holders' requests for capacity to be assigned to an entry point is less than or equal to the baseline capacity at that entry point, their entry capacity reassignments will be granted in full. If this is not the case, a further invitation and assignment process will be undertaken.

If, after two such processes have been followed, the aggregate level of bookings to be reassigned is still in excess of the baseline capacity at the entry point, NGG will pro rata the holdings across both entry points such that the baseline capacities are not exceeded by the aggregate level of capacity holdings.

*UNC modification 0501AV Treatment of Existing Entry Capacity Rights at the Bacton ASEP to comply with EU Capacity Regulations, including capacity return option*

UNC0501AV was raised by Centrica Energy on 23 July 2014. The modification is the same as UNC0501V apart from providing a one-off opportunity for shippers to return all of their existing entry capacity bookings to NGG prior to the reassignment process described by UNC0501V.

Furthermore, if shippers wish to reassign holdings such that the baseline capacities are exceeded by the aggregate level of capacity holdings, and NGG are required to pro rata in the way described above, the capacity holder will have a final opportunity to return capacity to NGG. In this instance they can return capacity up to the volume that has been assigned against their original wishes.

*UNC modification 0501BV Treatment of Existing Entry Capacity Rights at the Bacton ASEP to comply with EU Capacity Regulations, including a restricted capacity return option*

UNC0501BV was raised by Centrica Storage Limited on 10 October 2014. The modification follows the reassignment process described by UNC0501AV except that there is no initial possibility to hand back all capacity.

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<sup>11</sup> See footnote 7.

*UNC modification 0501CV Treatment of Existing Entry Capacity Rights at the Bacton ASEP to comply with EU Capacity Regulations, including a capped capacity return option and an aggregate overrun regime*

UNC0501CV was raised by ENI UK on 7 November 2014. The modification is similar to the return and reassignment of capacity described by UNC0501AV although the maximum that can be returned to NGG is capped at 72.77%.<sup>12</sup>

Furthermore, UNC0501CV proposes that capacity that is reassigned to either of the entry points (defined in the modification as 'Residual Capacity') can be used flexibly in an aggregate overrun plus rebate mechanism.

Currently shippers must hold entry capacity to flow onto the NTS at a single entry point. If they flow greater than their capacity entitlement they are liable for overrun charges. Under UNC0501CV, a shipper holding Residual Capacity at Bacton UKCS (or Bacton IP) can use it to flow via Bacton IP (or Bacton UKCS) without facing an overrun charge even if they do not hold entry capacity there.

A rebate is also proposed where a shipper is forced to buy the NTS element of a capacity bundle twice but, by definition, does not need all of the capacity purchased to flow. That is, for example, if a shipper holds Residual Capacity at Bacton UKCS but wishes to flow via the interconnectors they can seek to use the Bacton UKCS Residual Capacity they hold along with unbundled interconnector capacity. If interconnector capacity is available only as a bundle with Bacton IP NTS capacity they would effectively be buying NTS entry capacity twice. The modification does not obligate the shipper to buy unbundled interconnector capacity if it is available or that they must return any unutilised capacity to the market in order to receive the rebate.

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<sup>12</sup> This value was chosen as the Bacton IP entry point baseline capacity represents 72.77% of the Bacton entry baseline capacity.

## **Annex 2: Impact assessment of the four modification proposals (UNC0501V, UNC0501AV, UNC0501BV and UNC0501CV)**

In line with our Impact Assessment guidance we have considered the impacts on competition, existing and future consumers and other factors such as European network code implementation, regulatory governance, and security of supply. Where possible we have tried to monetise the costs involved, identify distributional impacts and assess wider, hard-to-monetise, strategic and sustainability considerations.

This annex is set out as follows:

- **Competition impacts:** we look at the value of capacity that can be returned under each of the proposals. We examine the distributional impacts of capacity return on the costs faced by shippers, potential impact of creating new classes of network user and the impacts of reduced flexibility in using existing Bacton capacity;
- **Impact on existing and future consumers:** we examine the potential impacts on consumers' bills under each of the proposals; and
- **Other impacts:** we consider the impacts on other areas such as European network code implementation, regulatory governance, and security of supply.

### **Competition impacts**

#### *Potential impact on the Transportation Owner (TO) commodity charge: methodology*

NGG recovers some of its TO allowed revenue through auction sales of NTS entry capacity for specific locations (entry points). Where this is insufficient to recover NGG's allowed revenue, a non-locational TO entry commodity charge is applied. This charge is based on a shipper's actual flows.

UNC0501AV, UNC0501BV and UNC0501CV all propose that existing capacity holders should be able to return an amount of capacity to NGG and be relieved of any payment to NGG for any returned capacity. The maximum amount of capacity that can be returned varies in each modification. Where capacity is handed back, all other things being equal, the amount of TO allowed revenue collected by NGG through locational capacity charges will decrease. Therefore there will need to be an increase in the non-locational TO commodity charge to recover the shortfall in TO allowed revenue. This will be applied equally to all users at all NTS entry points based upon their flows.

In order to quantify the potential impact on the commodity charge of the four modification proposals we took data from the long term capacity bookings made at Bacton until March 2026 from all the Quarterly System Entry Capacity (QSEC) auctions including the recent auction in March 2015.<sup>13</sup> We multiplied the capacity allocated by the price for each successful bid to calculate total value of capacity for each quarter.

In doing this we used the following assumptions:

- Any capacity returned to NGG will be done so at the price at which it was booked at auction.

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<sup>13</sup> The results from the March 2015 QSEC were not published at the time of this analysis. We have therefore been able to confirm the volume bid for in our figures but not the final confirmed price. We do not however consider that the volume bid for in this auction makes a material difference to our findings.

- We have included long-term bookings for the quarter beginning October 2015 although note that CAM is not implemented until 1 November 2015.
- The charging methodology as it currently is today (ie excluding any possible changes from Ofgem's Gas Transmission Charging Review<sup>14</sup> or from the Tariff Network code<sup>15</sup>)

The result reflects the value of capacity that can be returned to NGG. Under UNC0501AV all capacity can be returned, representing the maximum possible return value. We have also calculated the return values for different proportions of capacity return: no capacity is returned (as per UNC0501V), 25%, 50% or 72.77% (as per UNC0501CV).

UNC0501BV is different to the other modifications in that it does not propose a maximum amount of capacity that can be returned which can be represented by a simple percentage. Under UNC0501BV a return of capacity is only possible where NGG pro rated shippers' indicated reassignment, and shippers are assigned capacity against the original request. In this case shippers can return all capacity assigned which is against their original request. In order to model the maximum possible impact on the TO commodity charge we assumed that all shippers indicate that they want all of their existing booked capacity at Bacton to be assigned to the Bacton UKCS entry point. This is because the Bacton UKCS baseline is less than Bacton IP and represents the worst case scenario of any potential oversubscription. Any oversubscription above the Bacton UKCS baseline will then be assigned to Bacton IP through NGG's pro rating process and represents the volume that could be potentially handed back. We then took each shipper's percentage share of the overall booked capacity for each quarter and applied this to the oversubscription. This gives each shipper's contribution to the capacity allocated to Bacton IP against the shipper's wishes. We then multiplied this by the relevant shipper's allocated bid price to give the total potential value of capacity return.

We have not modelled the effect of UNC0501BV if all shippers assign all their existing capacity at Bacton to Bacton IP as the baseline for Bacton IP is higher than total bookings in any one quarter.

The above calculations give us a value of the maximum amount of TO allowed revenue which would need to be recovered via increases in the TO commodity charge if the maximum amount of capacity could be returned under each modification proposal. As the commodity charge is a flow based charge, any increase will be dependent on flows onto the NTS. To estimate the impact of allowing a return of capacity on the commodity charge we have taken the forecast flows from the Gone Green and Slow Progression scenarios in NGG's Future Energy Scenarios (April 2014).<sup>16</sup> We have then divided the total value of capacity handed back in each year (ie the revenue that NGG needs to recover via the commodity charge) by the forecast flows to give an indicative value for the p/kWh increase in commodity charge year on year.

#### Potential impact on the TO commodity charge: results

A summary of the maximum potential volumes and value of capacity that could be returned under each of the modifications is as follows.

<sup>14</sup> More details on the GTCR can be found here <https://www.ofgem.gov.uk/gas/transmission-networks/gas-transmission-charging-review>

<sup>15</sup> More detail on the draft Tariff Network Code can be found here <https://ec.europa.eu/energy/en/topics/markets-and-consumers/wholesale-market/gas-network-codes>

<sup>16</sup> See <http://www2.nationalgrid.com/uk/industry-information/future-of-energy/future-energy-scenarios/>



Modification	Potential maximum capacity returned		
	%	Volume (GWh)	Value (£m)
<b>UNC0501V</b>	0	0.00	0.00
<b>UNC0501AV</b>	100	1,254,168.91	112.54
<b>UNC0501BV</b>	n/a	303,615.19	27.77
<b>UNC0501CV</b>	72.77	912,658.72	81.90
<b>25% return</b>	25	313,542.23	28.14
<b>50% return</b>	50	627,084.46	56.27

We have calculated the maximum potential impact this might have year on year on the commodity charge in the way described above. Our analysis shows that all scenarios which allow some form of capacity return (ie, UNC0501AV, UNC0501BV and UNC0501CV) will all potentially result in an increase in the TO commodity charge beyond what may otherwise have been expected if there was no possibility to return capacity.

Annual increases are set out in Annex 2A but the average increases in each scenario over the period examined are listed below.<sup>17</sup> In these examples we assume that NGG recovers any shortfall in capacity revenue in the year it was originally booked for. These increases are only based on the revenue that NGG must recover from capacity that has been returned and assumes all other factors which may affect the commodity charge remain equal (eg, after the current RIIO-T1 price control ends in March 2021 the capacity returned is not re-sold at a non-zero price).

Modification	Average annual increase in TO commodity charge between 2015/16 and 2025/26			
	Gone Green		Slow Progression	
	Average p/kWh increase	Average % increase	Average p/kWh increase	Average % increase
<b>UNC0501</b>	0.00000	0.00%	0.00000	0.00%
<b>UNC0501A</b>	0.00123	2.73%	0.00124	2.76%

<sup>17</sup> The individual annual increases vary from 0.00% and 4.41% depending on the modification and scenario.

<b>UNC0501B</b>	0.00030	0.67%	0.00031	0.68%
<b>UNC0501C</b>	0.00089	1.98%	0.00091	2.01%
<b>25% return</b>	0.00031	0.68%	0.00031	0.69%
<b>50% return</b>	0.00061	1.36%	0.00062	1.38%

For reference the current TO entry commodity charge is 0.0451p/kWh.<sup>18</sup>

We note that at Bacton there is currently a substantial amount of capacity that is unsold. It is difficult to know until one of the four modifications proposed is implemented and existing capacity is reassigned to either Bacton IP or Bacton UKCS the amount of unsold firm capacity that will be available at the two new entry points. However, given current levels of flows we know that there will be substantial amounts of interruptible capacity made available. Given that both interruptible capacity and within-day sales of firm capacity are currently offered at a zero reserve price then we could assume that if there is the option to hand back capacity shippers may hand back the majority of their capacity and buy it at an auction with zero reserve price only if they need the capacity.

We have also considered what impact returning capacity could have on competition in the wholesale market. In our view, returning capacity could redistribute transmission costs from Bacton users to other NTS users and increase transaction costs for new entrants. We set out our thinking in more detail below.

#### Potential impact of redistribution of transmission costs

As described and quantified in the previous section returning capacity would reduce the amount of revenue NGG recover through entry capacity charges at Bacton. Unless resold at later date, the costs associated with the returned capacity would need to be recovered through the TO entry commodity charge. Correspondingly, the level of the TO entry commodity charge would increase in comparison to what would have been expected had the capacity not been returned.

We noted earlier that due to zero reserve price auctions and availability of capacity at Bacton IP and Bacton UKCS we would expect a large proportion of shippers holding capacity at Bacton to hand back most of their capacity and then buy any capacity as and when they need at zero reserve price auctions in the short term. If they handed back capacity under UNC0501AV, UNC0501BV or UNC0501CV and bought the same capacity at zero price to flow in the future, they would pay zero capacity charges and a higher TO entry commodity charge. NTS users at other entry points would be subject to an increase in their overall charge rate as they would become liable to pay the higher commodity charge but see no change in the capacity charges they are liable to pay.

<sup>18</sup> NGG NTS Transportation Statement, April 2015

<http://www.gasgovernance.co.uk/sites/default/files/Transportation%20Charging%20Statement%20April%202015new.pdf>

In effect, this would redistribute the costs of the returned capacity at Bacton among all NTS users. In our view, it is not economically efficient to allow a limited group of NTS users at Bacton to redistribute costs in this way. Users across the NTS would become responsible to pay for the returned capacity through their higher TO commodity charges. The only way for them to avoid paying these redistributed costs would be to reduce their exposure to commodity charges – ie flow less gas – which would not be desirable for security of supply or the use of NTS assets.

Furthermore, this would seem to allow existing Bacton capacity holders who can hand back their capacity to flow the same amount of gas onto the NTS at a lower overall cost whilst this cost is picked up by other users. This would appear to reduce competition in the wholesale gas market. Furthermore, as the commodity charge is a fixed value for all entry points and all capacity products then shippers cannot compete in this regard, whilst on capacity they can develop strategies to compete on location and time of purchase. Therefore if more TO allowed revenue is collected via the TO commodity charge then there is less possibility to compete amongst shippers.

#### Potential impact of increased transaction costs

We are also concerned that an increase in the rate of the TO entry commodity charge could affect the ability for new entrants to enter the market and supply gas to the NTS.

Returning capacity would mean new entrants would face higher transaction costs – through upward pressure on the TO entry commodity charge - to access the NTS due to the actions of incumbent NTS users.

This could discourage new entrants as they would have to pay a higher share of the socialised cost of providing NTS access and infrastructure. This could be a particular issue at interconnector points where shippers have greater choice to flow gas depending on the price differentials between the GB market and neighboring European markets.

#### Potential impacts on competition of reduced flexibility in using Bacton entry capacity

Prior to the introduction of CAM and the Bacton entry point being split into two new entry points, Bacton entry capacity could be used to flow gas onto the NTS from three potential sources. These were from:

- domestic gas production from the United Kingdom Continental Shelf (UKCS)
- Interconnector UK (IUK) which connects GB and Belgium, and
- BBL which connects Netherlands and GB

This provided shippers holding Bacton entry capacity with a degree of flexibility as to how they could use it.

Implementation of CAM is required by EU law. We examined a number of ways of implementing CAM at Bacton and decided that splitting the current entry point was the most appropriate method. This was supported by responses to our consultations on changes to NGG's NTS gas transporter licence. We noted a consequence of splitting Bacton is that existing bookings must be reassigned to the Bacton UKCS or Bacton IP entry point and the subsequent loss of the ability to use capacity interchangeably at Bacton. CAM itself also reduces flexibility at the Bacton IP due to bundling of capacity along a specific route. Any

reduction in flexibility is therefore a combination of our approach to implementing CAM and the network code itself rather than a new impact that is being created by any of the four modification proposals. We note however that part of UNC0501CV attempts to reintroduce a degree of flexibility.

Once capacity is reassigned to either of the two new entry points at Bacton following implementation of UNC501V, UNC501AV and UNC501BV shippers will have fewer options in how they use that capacity.

Where shippers reassign their existing capacity to the Bacton IP they will be able to flow onto the NTS from either of the two interconnectors, IUK and BBL, (assuming they hold the corresponding interconnector capacity) but not from UKCS. Conversely, where shippers reassign their existing capacity to Bacton UKCS they will be able to flow onto the NTS from the UKCS but not from either of the two interconnectors. There is therefore a cost to shippers holding Bacton entry capacity after it is reassigned under UNC501V, UNC501AV and UNC501BV. We note that this flexibility also reduces when Bacton IP capacity is sold as a bundle with either BBL or IUK capacity.

We assess the impact below by looking at a number of scenarios:

- **Scenario 1: Shippers reassign capacity to Bacton UKCS in 2015 but at time of use they want to flow via Bacton IP and not at Bacton UKCS**

This shipper therefore needs to buy Bacton IP capacity.<sup>19</sup> Note that the shipper needs corresponding interconnector capacity to be able to flow onto the NTS and the cost of buying this is not as a result of any of these modifications.<sup>20</sup> We consider this in two scenarios, one where Bacton IP firm capacity has sold out and another where Bacton IP firm capacity is available:

- **Bacton IP firm capacity has sold out** – in this case the shipper can buy interruptible Bacton IP capacity at an auction with a zero reserve price. The likelihood of this scenario is low given that existing capacity sales do not exceed the Bacton IP baseline and maximum flows at Bacton IP have not exceeded and have not been forecast to exceed the Bacton IP baseline.<sup>21</sup> The impact of this depends on whether the shipper has sold their Bacton UKCS capacity that they no longer need on the secondary market. We consider two further scenarios here and assess the impact of UNC501V, UNC501AV and UNC501BV by considering the cost of the interruptible capacity and the potential cost of being interrupted.
  - **The shipper has not sold their Bacton UKCS capacity on the secondary market** – in this case their interruptible Bacton IP capacity acts like firm capacity. With their Bacton UKCS capacity not being used

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<sup>19</sup> All the scenarios in this section assume that shippers want to flow at the other Bacton entry point an amount of gas equal to their original capacity holdings.

<sup>20</sup> If the shipper already holds unbundled interconnector capacity then there should be unbundled Bacton IP capacity made available (given the baseline capacity at Bacton IP equals the sum of the capacities on IUK and BBL). If the shipper does not hold interconnector capacity then it may need to buy bundled or unbundled.

<sup>21</sup> Our minded to position on whether to split the Bacton entry point showed that flows into GB from BBL and IUK did not exceed the technical capacity of the respective interconnector between January 2010 and May 2014. Therefore we consider that the Bacton IP baseline (set at the sum of the maximum technical capacity of the two interconnectors) is unlikely to be constrained and capacity will be available for auction. For more details our minded to position is available at <https://www.ofgem.gov.uk/publications-and-updates/facilitating-implementation-aspects-capacity-allocation-mechanisms-network-code-great-britain>

and the physical infrastructure at Bacton not changing as a result of the commercial split (that created the two new entry points) then their interruptible Bacton IP capacity has, all other things being equal, no increased likelihood of being interrupted than before the split. As interruptible capacity can be bought at a zero reserve price auction then the cost of the interruptible capacity is likely to be low. Therefore with a low likelihood of interruption and low cost of buying interruptible capacity the impact of UNC501V, UNC501AV and UNC501BV on costs to shippers of reduced flexibility are considered to be low.

- **The shipper has sold their Bacton UKCS capacity on the secondary market** – in this case the interruption of their Bacton IP capacity is more likely as those that have bought their Bacton UKCS capacity on the secondary market are more likely to use it to flow. If the shipper has sold their Bacton UKCS capacity on the secondary market we would expect the price they receive for it to be above zero. Given that they sold firm capacity on the secondary market and bought interruptible we would expect that the price received for the firm capacity would outweigh the price they pay for interruptible. Therefore the impact of UNC501V, UNC501AV and UNC501BV on costs to shippers of reduced flexibility is marginal as they may gain financially from selling firm capacity and buying interruptible though face a low likelihood of interruption.<sup>22</sup>

- **Bacton IP firm capacity has not sold out** – in this case shippers can buy Bacton IP capacity on the day at a zero reserve price auction. Therefore the impact of UNC501V, UNC501AV and UNC501BV on costs to shippers of reduced flexibility is very low.

- **Scenario 2: Shippers reassign capacity to Bacton IP in 2015 but at time of use they want to flow via Bacton UKCS but not Bacton IP**

The analysis for the different scenarios is similar to above. However, the likelihood of Bacton UKCS firm capacity selling out is higher than for Bacton IP selling out given the lower baseline at Bacton UKCS. However, as the maximum flows at Bacton UKCS have not exceeded and have not been forecast to exceed the Bacton UKCS baseline this is still expected to have a low likelihood.<sup>23</sup>

The above analysis notes that there are possible marginal impacts to shippers holding existing Bacton entry capacity prior to reassigning it to one of the two new entry points under UNC501V, UNC501AV and UNC501BV in terms of reduced flexibility of how that capacity can be used. We consider the relative impacts between the four proposals are that:

- The aggregate overrun plus rebate component of UNC501CV would have no impact on reduced flexibility for existing holders of capacity at Bacton. This is due to the

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<sup>22</sup> We still consider it to be a low likelihood of interruption as capacity has been scaled back at Bacton on only 12 winter days since November 2007.

<sup>23</sup> As in the previous scenario we refer to our minded to decision on whether to split the Bacton entry point. We showed that the proposed Bacton UCKS baseline was sufficient to meet historic flows into Bacton from UKCS over the period March 2012 to May 2014 (except for one day). We also noted that production from UKCS is generally decreasing so expect the Bacton UKCS baseline to be sufficient to meet flows into GB.

aggregate overrun and rebate mechanisms which allow users at Bacton IP to flow at Bacton UKCS (and vice versa) with no additional capacity or overrun charges.

- UNC501AV would have the least impact on existing holders of Bacton capacity to use their flexibly between the three potential entry sources into Bacton compared to UNC501V and UNC501BV. This is due to the possibility in this modification to hand back all existing Bacton capacity and therefore there would be less capacity which has to be reassigned with reduced flexibility
- UNC501V would have the most impact on existing holders of Bacton capacity in terms of their ability to use their capacity flexibly between the three potential entry sources into Bacton. This is still considered to be a low impact and is due to there not being the possibility to hand back any capacity under this modification.

#### Potential impact on competition from rebate mechanism

UNC501CV allows a shipper that has bought more bundled Bacton IP capacity than it needed to flow gas or avoid overrun charges to receive a rebate on entry capacity charges when its capacity at both of the two new Bacton entry points was not used to flow gas nor avoid incurring overrun charges at the other new Bacton entry point. The rationale for this was to avoid the situation in a fully bundled world where a shipper has residual Bacton UKCS capacity (resulting from the reassignment process under UNC501CV) but at the time of use wants to flow via one of the interconnectors (ie Bacton IP) when unbundled interconnector capacity is not offered. Such a shipper may need to buy bundled Bacton IP capacity (with the corresponding interconnector capacity). As a result the shipper may have to buy double the amount of entry capacity at the two new Bacton entry points than it needs.

Under UNC501CV, if the shipper in the scenario in the previous paragraph buys bundled Bacton IP capacity it has the option of flowing both at Bacton UKCS and Bacton IP. If it does not fully use the capacity to flow or avoid overrun charges it gets rebated (for the capacity that was not used to flow or to avoid overrun charges). This would appear to give such existing Bacton shippers a competitive advantage over other users in that they have an optionality of using capacity and if they do not use it they get their money back. This type of arrangement would be contrary to the principle in the capacity regime of 'ticket to ride' where shippers are responsible for buying the capacity they need and for them to manage the risk of buying more or less capacity than they need.

#### Potential impact on competition between Residual Capacity holders versus non Residual Capacity holders

UNC0501CV, if implemented, will create two classes of capacity holder at Bacton. These are Residual Capacity holders (capacity bought pre 1 November 2015 for use in the future), and non Residual Capacity holders (capacity bought after 1 November 2015). Residual Capacity holders will be able to use their capacity interchangeably between the two entry points without incurring an overrun charge (assuming their flows remain equal or below their aggregate capacity holding across the two entry points).

We have considered whether this creates the situation where different capacity holders are treated differently and whether this is justified. We consider that UNC0501CV seeks to maintain arrangements that existed when the capacity was originally purchased. Shippers booking capacity after 1 November 2015 are also aware of the product being purchased at that time. We think therefore that while there is an argument that UNC0501CV creates a

new class of capacity holder, we do not think shippers booking capacity after 1 November 2015 are being unfairly discriminated against by this change. As a result we do not consider that there will be a negative impact on competition between Residual Capacity holders and non Residual Capacity holders.

#### Potential impact on long term bookings

The GTCR has observed a general trend over recent years from long term to short term capacity booking. We also note that the Third Package came into force in September 2009 and envisaged changes at cross border points across Europe. Shippers have therefore been aware of the potential for change (if not the exact detail) for some time and the implementation of the European Network Codes themselves does not appear to have affected the shift from long to short term booking.

We have not received any evidence to suggest that implementing any one of the four modifications would affect this trend positively or negatively.

#### **Impact on existing and future consumers**

##### *Potential impact on consumers of increased TO commodity charges*

NGG will recover the same TO allowed revenue regardless of whether it is recovered from capacity or commodity charges. This means that the sum passed through to the shipper community as a whole, and ultimately consumers' bills, will not change depending upon which, if any, modification is implemented. However as stated above we think that there will be a reduction in competition in the wholesale gas market due to some aspects proposed under UNC0501A, UNC0501B or UNC0501C – particularly the possibility to hand back capacity. Reduced competition in wholesale markets can result in increased prices for consumers.

We also consider that there may be a risk of further charges being passed on to consumers under UNC0501A, UNC0501B and UNC0501C. We are concerned that creating an environment where capacity return is allowed (freely or under particular circumstances), may result in shippers perceiving that they are able to book capacity safe in the knowledge that it can be returned without penalty if circumstances change and it is no longer required. This may create false signals for incremental capacity at entry points and lead to unnecessary network development by NGG. The cost for this will be met ultimately by consumers. We note the comments in the UNC workgroup that this is such a unique set of circumstances such as not to create a precedent. We do make a judgement on whether this is true or not but we need to remain alert to these risks in our decision making.

##### Costs of implementing the modifications

We understand that the return and or reassignment processes described by the four modifications will be carried out as a paper exercise and managed by NGG. The costs associated with this, and therefore the impacts on existing and future consumers, are not considered to be material. We therefore think that no modification is better or worse than another in this respect.

UNC0501CV proposes an additional aggregate overrun plus rebate mechanism which should be implemented and available to shippers from 1 November 2015.

In the UNC0501CV Workgroup NGG provided a Rough Order of Magnitude (ROM) that indicated an interim offline solution was required for the aggregate overrun and rebate mechanism until a system solution could be implemented by April 2016 at the earliest. The ROM stated that the interim solution would cost at least £20,000 per annum but probably no more than £50,000 per annum. The enduring solution would cost at least £415,000 but probably no more than £490,000 with unspecified ongoing annual application support costs. While there was debate during the Workgroup on how these costs should be recovered, the proposer of UNC0501CV believed that the modification was a Non User Pays modification (that is, the costs associated would be met by NGG and, depending on whether it warranted a reassessment of allowed revenue, recovered through gas transportation charges). NGG stated during development that they considered the modification to be User Pays (that is, the costs are met by those parties who benefit). Our view is that ultimately these could be met by consumers regardless of the cost recovery method (either by socialisation of gas transportation charges, or via User Pays charges to those shippers who will benefit from the service).

### **Other impacts**

In this section we consider the impacts of the modifications on five other areas: European network code implementation, regulatory governance, security of supply, greenhouse gas emissions and health and safety.

#### *European network code implementation*

Some stakeholders commented during the UNC workgroup that UNC0501AV, UNC0501BV and UNC0501CV would facilitate full bundling of capacity faster than UNC0501V. This is because any capacity returned to NGG would then be made available for bundling. We agree this would be the case but subject to two additional comments.

Any capacity returned to NGG would need to be matched with capacity on either IUK or BBL for bundling to occur. As long term capacity on IUK has been sold out until at least 2018 then bundling will only be possible by those shippers also possessing IUK capacity (some capacity is available on BBL with more being made available from 2016).

Furthermore, Article 20 of CAM says that those shippers party to existing contracts should aim to reach an agreement on bundling on a voluntary basis. NGG is proposing to implement this via UNC500 'EU Capacity Regulations - Capacity Allocation Mechanisms with Congestion Management Procedures'.<sup>24</sup> Following implementation of article 20 of CAM shippers will have the opportunity to voluntarily bundle capacity with either BBL or IUK at Bacton IP. None of the four modifications prevent this from happening.

We think on balance therefore that full bundling of capacity can be achieved without the potential costs on competition as set out above from returning capacity.

#### *Regulatory governance*

We note that when shippers sign up to the UNC, they also sign up to the modification process which allows a change to any part of the code to be proposed. The four modifications have been raised and have followed the process set out in the UNC modification rules. Therefore we think there is no reason under the regulatory governance

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<sup>24</sup> UNC0500 EU Capacity Regulations - Capacity Allocation Mechanisms with Congestion Management Procedures <http://www.gasgovernance.co.uk/0500>



of the UNC why any of the four modifications cannot be approved (or indeed, that all are rejected).

### Efficient use of NTS

In the section above on potential impacts on competition from the rebate mechanism we noted how under UNC501CV a shipper can get a rebate for capacity that it has bought as part of a Bacton IP bundle which it does not use to flow gas or avoid overrun charges. Under UNC501CV we noted how a shipper can have optionality to flow using Bacton IP and Bacton UKCS and if it does not fully use its capacity at these entry points to flow gas or avoid overrun charges it gets rebated. This could have a detrimental impact on efficient use of the NTS if shippers can buy capacity which gives them the optionality highlighted and if they do not fully use their capacity to flow gas or avoid overrun charges they get rebated without this capacity being re-offered to the market for others to use.

### Security of supply

UNC0501CV may provide some benefit by allowing shippers to use their capacity to bring gas into GB from another route in the event of an outage on one of the interconnectors or domestic field. We do not however have any evidence to quantify this benefit as it will be dependent on the particular situation, capacity holding and shipper's commercial drivers at the time. In addition, as noted above, this aspect of UNC0501CV is not intrinsic to the modification and could be achieved by other means.

Conversely, we think that UNC0501V, UNC0501AV and UNC0501BV may be negative in their impact on security of supply as they do not maintain the current level of flexibility. However we think this impact is marginal as capacity can be made available at either entry point through the release of interruptible capacity or the use of anti-hoarding mechanisms such as those envisaged by UNC0500.

There might also be potential for substitution between entry points if capacity is unsold at one entry point and an incremental signal for additional capacity at another is received. This could provide additional firm capacity at an entry point if there is demand. We recognise however that there are some differences between the auctions at Bacton UKCS and Bacton IP that need to be examined at some time in the future in order for this to work. Furthermore we think any need to examine the interactions between the capacity substitution methodology and CAM is a consequence of splitting the Bacton entry point rather than a direct impact of implementing one of the four alternative modifications.<sup>25</sup>

### Greenhouse gas emissions and health and safety

We think that the four modifications are neutral in terms of greenhouse gas emissions or health and safety.

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<sup>25</sup> The four modifications could have varying impacts on the speed at which one of the entry points is sold out. We consider that this might occur quickest under UNC0501V as all capacity is reassigned and none is returned to NGG. This scenario might be least likely to occur under UNC0501AV which allows a full return of capacity. We cannot say this definitively however as it will depend on the levels of capacity returned (and therefore the level to be reassigned) under UNC0501AV, UNC0501BV and UNC0501CV.

## Annex 2A: Further data

**Table 2A1: Maximum potential volume of capacity returned (GWh/d, annual totals)**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11	Total
<b>UNC0501V</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>UNC0501AV</b>	198,783.20	170,084.33	139,873.49	121,106.54	119,782.85	110,455.55	90,257.68	83,066.19	82,886.75	82,256.17	55,616.17	1,254,168.91
<b>UNC0501BV</b>	43,357.35	43,080.88	42,445.87	22,188.82	22,607.05	22,732.49	25,681.68	27,063.95	27,378.99	27,078.12	0.00	303,615.19
<b>UNC0501CV</b>	144,654.54	123,770.37	101,785.94	88,129.23	87,165.98	80,378.50	65,680.51	60,447.27	60,316.69	59,857.81	40,471.88	912,658.72
<b>25.00%</b>	49,695.80	42,521.08	34,968.37	30,276.63	29,945.71	27,613.89	22,564.42	20,766.55	20,721.69	20,564.04	13,904.04	313,542.23
<b>50.00%</b>	99,391.60	85,042.17	69,936.74	60,553.27	59,891.43	55,227.77	45,128.84	41,533.09	41,443.38	41,128.08	27,808.08	627,084.46

**Table 2A2: Maximum potential value of capacity returned (£m, annual totals)**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11	Total
<b>UNC0501V</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>UNC0501AV</b>	16.25	14.41	12.26	10.96	10.76	9.98	8.63	8.00	7.93	7.93	5.44	112.54
<b>UNC0501BV</b>	3.56	3.70	3.84	2.11	2.12	2.16	2.47	2.60	2.60	2.60	0.00	27.77
<b>UNC0501CV</b>	11.82	10.48	8.92	7.97	7.83	7.26	6.28	5.82	5.77	5.77	3.96	81.90
<b>25.00%</b>	4.06	3.60	3.07	2.74	2.69	2.49	2.16	2.00	1.98	1.98	1.36	28.14
<b>50.00%</b>	8.12	7.20	6.13	5.48	5.38	4.99	4.32	4.00	3.96	3.96	2.72	56.27

**Table 2A3: Annual increase in TO commodity charge (p/kWh) – Gone Green**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11
<b>UNC0501V</b>	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
<b>UNC0501AV</b>	0.00199	0.00178	0.00149	0.00134	0.00127	0.00116	0.00102	0.00095	0.00094	0.00094	0.00066
<b>UNC0501BV</b>	0.00044	0.00046	0.00047	0.00026	0.00025	0.00025	0.00029	0.00031	0.00031	0.00031	0.00000
<b>UNC0501CV</b>	0.00145	0.00129	0.00108	0.00097	0.00092	0.00085	0.00074	0.00069	0.00068	0.00068	0.00048
<b>25.00%</b>	0.00050	0.00044	0.00037	0.00033	0.00032	0.00029	0.00025	0.00024	0.00024	0.00023	0.00016
<b>50.00%</b>	0.00099	0.00089	0.00075	0.00067	0.00063	0.00058	0.00051	0.00047	0.00047	0.00047	0.00033

**Table 2A4: Annual increase in TO commodity charge (%) – Gone Green**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11
UNC0501V	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
UNC0501AV	4%	4%	3%	3%	3%	3%	2%	2%	2%	2%	1%
UNC0501BV	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
UNC0501CV	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	1%
25.00%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
50.00%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%

**Table 2A5: Annual increase in TO commodity charge (p/kWh) – Slow Progression**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11
UNC0501V	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
UNC0501AV	0.00199	0.00178	0.00152	0.00136	0.00126	0.00115	0.00102	0.00097	0.00097	0.00098	0.00068
UNC0501BV	0.00044	0.00046	0.00048	0.00026	0.00025	0.00025	0.00029	0.00032	0.00032	0.00032	0.00000
UNC0501CV	0.00145	0.00129	0.00110	0.00099	0.00091	0.00084	0.00074	0.00071	0.00071	0.00071	0.00050
25.00%	0.00050	0.00044	0.00038	0.00034	0.00031	0.00029	0.00026	0.00024	0.00024	0.00024	0.00017
50.00%	0.00100	0.00089	0.00076	0.00068	0.00063	0.00058	0.00051	0.00049	0.00049	0.00049	0.00034

**Table 2A6: Annual increase in TO commodity charge (%) – Slow Progression**

Gas Year beginning	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25
CAM Year	CAM Y1	CAM Y2	CAM Y3	CAM Y4	CAM Y5	CAM Y6	CAM Y7	CAM Y8	CAM Y9	CAM Y10	CAM Y11
UNC0501V	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
UNC0501AV	4%	4%	3%	3%	3%	3%	2%	2%	2%	2%	2%
UNC0501BV	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
UNC0501CV	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	1%
25.00%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
50.00%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%