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Dear Sir/Madam,

Consultation on the National Transmission System (NTS) Exit Capacity Incentive Mechanism

We welcome the opportunity to respond to Ofgem's Consultation. Please see our response below which is non-confidential and can be published on Ofgem's website.

Our response answers the specific questions asked within the consultation, however in summary:

We believe an NTS exit capacity incentive mechanism could deliver significant benefits to gas customers through encouraging efficient capacity booking by GDNs. Up to year 7 of RIIO1, purely based on efficient reductions in bookings encouraged by the incentive we have saved our customers c. £32 million. This doesn't include the additional benefits accruing to customers through the full effects of the incentive sharing mechanism facilitated by utilising lower cost offtakes. If the incentive is removed, it is likely that current and future customers will pay more for gas transportation than they would otherwise do by comparison with a re-calibrated RIIO2 incentive framework. Our view is supported by our customer engagement where our customers told us they wanted to explore whole system solutions where we could optimise across transmission and distribution activities.

- In order to deliver the most value to customers, we believe an NTS exit capacity incentive mechanism should:

- **Enable Gas Distribution Networks (GDNs) to deliver 1-in-20 capacity obligations and ensure a safe and secure supply to customers;**

The current incentive mechanism has continued to ensure GDNs can meet their 1-in-20 obligations even under the severest conditions such as those seen in February and March 2018 from the "Beast from the East". We believe a RIIO2 incentive should be capable of achieving the same outcome and if calibrated correctly provide additional financial benefits to our customers.

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- **Encourage efficient network planning decisions for distribution and transmission systems (a whole system approach) that benefits customers over the long term which customers have told us is important to them;**

The current incentive has directly encouraged more efficient NTS exit booking behaviour by the industry reflecting the price signals received for each exit point. The direct consequence of this is that capacity that might otherwise have been sterilised is made available to other NTS customers and effective investment signals to the NTS are provided thus benefitting current and future customers. Although the dynamics may change in RIIO2 following implementation of Ofgem's UNC Modification 0678 minded to, the fundamental rationale and benefits of an incentive would be retained and continue to facilitate a whole system approach to the direct benefit of current and future customers.

- **Ensure fair and transparent charges for customers across the UK .**

To the extent that GDNs are incentivised to make more efficient booking decisions any costs that arise where additional capacity is required will more likely be due to real incremental capacity constraints and enable more accurate targeting of costs by the NTS. Without an NTS Exit incentive there is a risk that GDN booking behaviour will become more risk averse which in turn could militate against the customer benefits currently described in the above tests. We believe a positive incentive to seek more efficient bookings will be more effective than a licence obligation with no shared financial incentive with customers.

- These points are discussed further in our responses to the specific questions and further information is also available in Appendix 07.02.04, Optimising capacity between transmission and distribution, of our RIIO-2 business plan, submitted to Ofgem and published on our website in December 2019 (link https://cadentgas.com/nggdwsdev/media/Downloads/business-plan/APP_CAD_07-02-04-Optimising-Capacity-Between-Transmission-and-Distribution.pdf).

We believe that maintaining an incentive mechanism will drive material value for our customers and aligns with their needs through driving the right behaviours in a whole system way between distribution and transmission. We believe the incentive could be modified and enhanced such that it generates value and benefit as a whole system solution. We set out a proposal later in this response that we would welcome discussions with Ofgem on its merits as soon as is practical.

Question 1

What specific GDN behaviours should any future exit capacity incentive mechanism seek to drive, and what consumer benefit would these deliver?

The exit capacity incentive mechanism should seek to drive cross-sector coordination and the most efficient operation of the whole energy system for the benefit of customers. To date, the interaction between Gas Transmission and Gas Distribution Networks, has been achieved in two ways (using NTS Exit (Flat) Capacity only):

- A volume booking at Local Distribution Zone (LDZ) level in line with the Peak 1-in-20 forecast; and
- A greater utilisation of the cheaper offtakes in the LDZ, over the dearer ones.

Doing so brings the total cost of LDZ capacity for customers down to the optimum level and makes a greater use of those offtakes that drive lower ongoing costs of operation on



the NTS network. In turn, this has supported the NTS in the more efficient operation of its network through reduced compressor usage which not only benefits customers, but also the environment through lower carbon dioxide emissions. The signals are used to plan the exit and future network requirements and hence are of benefit whether there is spare capacity or not. For example, a signal that demand is reducing in one offtake may allow the NTS to reduce its compressor usage or avoid further investment on assets.

However, when thinking about the future incentive design for RIIO2 and beyond consideration should be given to how these behaviours can be incentivised across all NTS Users and all exit capacity products so that this would in effect, give rise to a whole system solution. In this manner, all Users would collectively be incentivised to operate the whole system in the most efficient manner and current and future customers would benefit through more efficient investment decisions e.g. lower compressor investment and more capacity availability for new connections.

In summary, the future exit capacity incentive should:

- Encourage GDNs to efficiently book Exit Capacity from the NTS;
- Recover NTS costs from those who create the need for them;
- Encourage whole system outcomes wherever possible; and
- Ensure gas is transported securely and reliably to customers at the lowest possible cost

Question 2

Can you provide evidence of specific actions taken by GDNs in response to the RIIO-GD1 exit capacity incentive, and set out how these have delivered lasting benefits to consumers?

Under RIIO1 we have taken actions that have delivered both short and long-term benefit to customers. For example, just using the reduction in exit bookings as a consequence of the incentive (excluding the additional sharing mechanism incentive benefits of using lower cost offtakes to roughly equate to the effect of the UNC Modification 0678 minded to) the value of enduring capacity reductions for customers based on the RIIO1 NTS exit prices is c. £32 million. Other examples of actions taken are as follows:

1. Offtake charges across Cadent networks tend to be cheaper at northern offtakes, compared to southern offtakes. This is not always the case, but in some circumstances, this has been more pronounced e.g. the indicative charge for Thornton Curtis offtake in 2023/4 is 0.00010 and Alrewas offtake 0.02210 p/kWh/pkday (both within East Midlands). Where possible, we have optimised the operation of the network to continue to maintain Peak 1-in-20 demands, such that booked capacity can be diverted (to varying degrees) from the southern offtakes to those in the north of the LDZ. Doing so has resulted in a reduction in total National Transmission System (NTS) charges for that period, which has then been passed to customers through the Totex mechanism.
2. We have consistently booked capacity in line with Peak 1-in-20 demand forecasts. In some situations, this has meant that we have had to secure additional capacity to meet the latest forecast. In other areas though, we have been able to make reductions to booked levels of Enduring Annual NTS Exit (Flat) Capacity. Doing so has meant that capacity is not being sterilised and is being made available for other NTS customers e.g. for NTS to consider as Donor Points for Substitution in order to satisfy the requirements of a Planning & Advanced Reservation of Capacity Agreement (PARCA). By taking this action, we have delivered lasting benefit to current and future customers through the avoidance of investment being made on the NTS that would in other circumstances have been made. These reductions or managing any increases in demand would still



be of value under a postage stamp charging regime for NTS exit. An example of one such PARCA request that although subsequently suspended by Trafford Power in the Northwest illustrates how significant levels of NTS investment could be avoided through the incentive driving efficient capacity bookings is appended to this response.

From our actions in response to the incentive, over RIIO-1 to date 356,593,466 kWh has been made available to other NTS Users since the start of RIIO1. This translates to approximately, 32.9mcmd. To put this into perspective, West Midlands LDZ has a forecast Peak1-in-20 Day at 33.3mcmd, and serves approximately, 1.9 million customers. This is a significant amount of flat capacity that may not have come to light had the current NTS Exit Capacity Incentive not been in place.

With regards to capacity being used to mitigate against NTS investment, capacity is due to be substituted away at two offtakes in April 2023. This is demonstrated in the table below. This shows the value of giving efficient long-term signals to the NTS.

Table 1

Offtake	LDZ	Capacity to be Substituted (kWh)	Effective Date
Blyborough	EM	23,504,144	01/04/2023
Silk Willoughby	EM	1,070,148	01/04/2023

Booking capacity efficiently within the incentive does come with some exposure to subsequent peak day demand increase risk which would be less if no incentive were available.

Our actions taken are a direct result of the incentive being in place and encouraging the best use of existing capacity. This has directly benefitted customers by ensuring that Peak 1-in-20 capacity is in place at the lowest possible cost and obviating the need for incremental NTS investment which would be paid for by future customers.

Question 3

Do you agree with the considerations we've identified and the issues associated with them?

Exit Capacity Pricing: As stated in our response to the consultation on UNC0678 (Amendments to the Gas Charging Regime) we do not support the minded-to decision to approve 0678A which adopts a Postage Stamp approach to pricing.

We remain in support of the Capacity Weighted Distance (CWD) approach as despite its imperfections, it is the most cost-reflective Reference Price Methodology (RPM) option under consideration. In our opinion, distance is and will continue to remain, a significant factor of both the Exit and Charging regimes.

The distance between Entry and Exit points is a key indicator utilised in the determination of the level of investment required to flow gas at a specific point. Under existing rules when a User requests an increase to Enduring levels of NTS Exit (Flat) Capacity that remain within the Obligated amount, in order to mitigate against investment, substitution is employed (as per the Exit Capacity Substitution and Revision Methodology Statement). It is distance that aids the decision-making process in determining potential Donor Points i.e. the furthest away from the Recipient will be considered as the priority.

In recent years, we have seen a growing reliance on the use of substitution and we believe that this trend will continue for the foreseeable future. We therefore, suggest that distance will continue to play a significant role in the delivery of Capacity requests and that CWD is the more appropriate RPM, rather than Postage Stamp (PS).



Levels of Spare Capacity: If the existing incentive were to be removed, there is a risk that GDNs will not have a strong incentive to explore making reductions and instead hold (and increase when necessary) existing capacity levels to protect both against upturns in the Peak Day forecast and substitution. Levels of unsold capacity being made available for substitution will be eroded and the likelihood of investment on the NTS increase which would be a detrimental impact on customers over the longer-term.

Reward/Penalty Calibration: We support the need to review the incentive for RIIO2 such that the balance of reward and penalty between networks and customers is adjusted and there are a variety of means by which this can be achieved. For example, we have set out a proposal that we would like to be considered prior to any decision being made on the outcome of this consultation. This is covered in our response to Question 8.

Persistence of Improvements: We believe that enduring improvements are being realised in the form of the correct behaviours being displayed by GDNs both in their operation of the Networks, and implementation of the capacity bookings process.

For this to continue and indeed be built upon, encouragement for efficient behaviours needs to be in place and we believe this is best achieved via a positive incentive mechanism that shares benefits and losses with customers.

Question 4

Are there any considerations, beyond those we've identified, that we should take into account for incentivising exit capacity bookings in RIIO-GD2?

The long-term objective should be to incentivise the most efficient and economical behaviours across all capacity products and across all NTS users to benefit customers i.e. to include both Flat and Flex capacity for both GDNs and Shippers.

Question 5

Do you agree with the options CEPA has identified, and if not, what others should we consider for RIIO-GD2?

Retain as is / Retain as is with an Uncertainty Mechanism (UM) to address the Impact of UNC0678:

We do not agree with the view that the incentive *"will cease to work in the way intended once UNC0678 comes into effect, regardless of the final option taken"*. As previously stated, we believe that CWD is the most cost-reflective RPM and so favour UNC0678 over 0678A. Under 0678, Pricing Signals will remain, and distance will continue to play an important role in the use of unsold Capacity.

In addition, even under Postage Stamp while locational signals will be reduced, efficient capacity bookings to support substitution will remain an important consideration to protect current and future customers

We therefore believe an ex ante incentive could provide material benefits to customers and is in line with their preferences for us to explore whole system solutions across transmission and distribution.

Modify Incentive: We would be supportive of a modified incentive utilising a combination of one of the first three methods outlined in the CEPA report:

- **Use Alternative Prices:** we would support incentive revenue being based upon t-1 Prices;
- **Apply a Bespoke Incentive Sharing Factor:** please see our response to Question 8;



- **Introduce an UM to Adjust Baselines:** we would be supportive of a UM to allow Targets to be adjusted in the case of events such as significant changes to a Networks 1-in-20 Peak Demand Forecasts;
- **Discretionary Reward:** We do not think the introduction of a discretionary reward will be effective as an ex ante incentive as it creates a subjective ex-post assessment.

Remove Incentive: We do not think removal of the incentive is in the best interests of customers. We consider this to be major step backwards and would result in inefficient capacity utilisation in RIIO2 and be detrimental for customers, both those who may wish to connect to the NTS as well as current and future customers of GDNs.

The introduction of enhanced obligations being placed on the GDNs in our opinion, is not as effective a mechanism as an ex ante incentive where benefits are shared between networks and customers. This is likely to reduce the push for innovative thinking and reduce the collaborative work that has taken place between Transporters over RIIO1.

We believe that the best way to build on the many improvements gained over the last few years would be to retain some form of incentive, one that encourages all Users to make the best and most efficient use of the Whole System to the benefit of customers overall.

Question 6

Which of the options presented by CEPA is your preference for RIIO-GD2 and why?

Out of the options presented, our preference is for the modification of the existing incentive mechanism using a combination of one or more of the first three elements listed in 3.10. In our opinion, this option has the greatest probability of achieving the stated objectives and delivering the most benefit to customers. The GDNs collectively, represent over 20 million customers, over 50% of NTS Capacity Bookings, and an even greater percentage of revenue recovered by the NTS.

By keeping an incentive in place for RIIO2, this would build on the work done to date and continue to encourage efficient whole system behaviours in

- securing NTS capacity for our customers at the lowest cost;
- booking in the most efficient manner; and
- enable lower overall charges to NTS customers

While there are a number of potential incentive mechanisms that could be applied to maximise benefits for customers, one option that would support the whole system approach would be a three-way sharing factor which would also encourage NTS and GDN collaboration as well as reward customers. A balanced Sharing Factor could be:

1. Customer: 33%
2. GDN: 33%
3. NTS: 33%

The introduction of the NTS into a whole system incentive would have two benefits:

1. Encourage whole system collaboration and co-ordination between the NTS and GDNs and;
2. The proportion of the incentive that NTS earned would (in part, or whole) off-set any under-recovery of overall revenues which would otherwise need to be recovered elsewhere thus reducing the impact on customer bills over time.

To be more ambitious, a true Whole System solution would include all Users. We have been exploring the merits of a further incentive mechanism which encourages all Shippers



and GDNs to make the best and efficient use of NTS exit through Flex incentives based on those developed in GDPCR1 in addition to Flat mechanisms.

This would help to support the planning and operation of Exit to minimise linepack swings on the NTS which are continuing to increase as customers utilise the flexibility available. At a time when GDNs are experiencing increasing requests for embedded generation connections an NTS Flex incentive would help to improve behaviours such that large within-day swings on the NTS would be mitigated.

Therefore, we recommend that the NTS Exit flat incentive is modified and maintained for RIIO-2 and we are keen to continue to explore the benefits of a further flex incentive similar to that of the GDPCR1 Model with the industry and Ofgem.

Question 7

If we removed the existing incentive mechanism without any mitigations, what are the potential risks and how should these managed?

Without an incentive in place encouraging the efficient use of the NTS, there is a risk that the GDN appetite for risk will diminish and therefore, booking behaviour will be more risk averse and less innovative. Our customers will continue to receive supplies that satisfy our Peak Day requirements, but the risk is that GDNs and NTS have less incentive to work together towards a co-ordinated whole system approach to making capacity available at the lowest cost for customers. This could mean that booking levels will be held (to mitigate risk of being short) where reductions could have been made, resulting in capacity being sterilised. The outcome being that the amount of unsold capacity being made available for substitution will reduce, leading to an increased likelihood of otherwise unnecessary investment in the NTS being required for future projects.

Question 8

If we remove the existing incentive mechanism, what enhanced obligations could we consider introducing for RIIO-GD2 that would effectively maintain GDN booking restraint? Please provide specific examples.

In the event Ofgem do not believe an incentive is warranted we believe the existing Gas Act and licence obligations should suffice. Although enhanced obligations could be introduced that seek to maintain existing levels of GDN booking efficiency, these would not be as effective as an incentive mechanism in driving innovation and encouraging whole system coordination.

The existing incentive has successfully encouraged more efficient booking behaviour (as demonstrated in our response to question 2 above).

We believe that maintaining an exit incentive for RIIO2 would continue to provide benefits and be in the best interests of current and future customers. A re-calibration of the existing framework has the potential to benefit the whole system in both the short and long-term and hence overall gas customers and we would encourage Ofgem to continue to explore its continuation. We would also be keen to work with Ofgem and the industry to further develop the options for a wider flex incentive to support whole system considerations for customers on within day impacts.

Yours sincerely
By email

Gurvinder Dosanjh
Industry Codes Manager

Substitution and NTS investment

- In 2016, the Trafford Power Station requested 84,000,000 kWh of capacity above their baselines.
- Due to booking reductions made by Cadent and WWU, the NTS were able to reduce our baselines and substitute over 90,000,000 kWh of capacity for use by Trafford Power Station.
- Had the NTS been unable to substitute capacity from Cadent and WWU, they may have needed to invest on the network to meet the increase in demand.



The table below is an example shows the PARCA request for this. The highlighted rows relate to Cadent Offtakes in the North West and West Midlands area

Ref	NTS Area	Capacity Requested (kWh)	LDZ	Offtake	Distance (km)	Current Baseline (kWh)	Proposed New Baseline (kWh)	Capacity Substituted from Donors (kWh)	Unsold After Substitution (kWh)	Comments
2016-May-Trafford-PARCA	North West and West Midlands (North) (Region 2)	84,000,000	NW	Partington	0.00	87,630,000	54,702,858	90,718,100	0	All unsold from NW Offtakes taken away
			NW	Warburton	0.66	110,652,366	96,345,394		0	
			NW	Holmes Chapel	29.37	22,199,592	18,387,105		0	
			NW	Audley	44.32	12,140,000	8,037,574		0	
			WM	Audley	44.32	21,830,000	15,330,891		1	
			NW	Malpas	71.86	990,000	685,222		0	
			NW	Ecclestone	76.01	21,140,000	16,370,887		0	
			WN	Nasear	83.75	57,560,000	40,258,090		0	
			NW	Shotwick (Bridgewater Paper)	78.58	5,520,000	140,000		0	
			NW	Shellstar (aka Kemira, not Kemira CHP)	74.71	16,240,000	11,732,444		0	
			NW	Weston Point	80.12	30,599,872	28,841,618		20,762,210	
			NW	Weston Point (Rocksavage)	80.12	40,797,358	37,584,503		37,584,503	
			NW	Weston Point (Casher Kelhar, aka ICI Runcom)	80.12	11,683,359	10,816,960		10,230,818	

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