



Consumers and their  
representatives, gas distribution  
networks  
(GDNs), independent gas  
transporters (IGTs), gas shippers  
and suppliers and any  
other interested parties

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all gas and electricity customers*

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Dear Colleague

### **Gas Distribution Network capacity outputs incentive 2013/14 and 2014/15**

Under Special Condition E6 Part C of the Gas Transporters Licence (The Licence) Gas Distribution Network operators (GDNs) are subject to a capacity outputs revenue incentive. The mechanism incentivises the GDNs to make efficient bookings of National Transmission System (NTS) exit capacity and to contract efficiently for GDN interruptible capacity, including making efficiency tradeoffs between the two and with network investment where appropriate.

The incentive was set as part of the Gas Distribution Price Control Review<sup>1</sup> (GDPCR) to cover formula years 2011/12 (t=4) and 2012/13 (t=5) in coordination with implementation of the revised GDN interruption arrangements<sup>2</sup> in October 2011. Under the revised interruption arrangements GDNs contract for interruptible capacity with three year lead times<sup>3</sup>, and from 2012/13, under the revised exit capacity arrangements<sup>4</sup>, will commit to incremental exit capacity with three year lead times. To incentivise the GDNs to contract efficiently for interruptible capacity and exit capacity in 2010 and 2011 we intend to re-set the capacity outputs revenue incentive to cover formula years 2013/14 and 2014/15.

This consultation letter sets out the approach we intend to take in setting the incentive to cover 2013/14 and 2014/15. We do not propose changes to the scope, form or structure of the incentive at this stage. Instead we propose to set new incentive revenue values with a commitment to further review the effectiveness of the scheme as part of a comprehensive review of incentives in GDPCR2. Consultation responses are invited and should be submitted to Lewis Hodgart ([lewis.hodgart@ofgem.gov.uk](mailto:lewis.hodgart@ofgem.gov.uk)) by Friday 29 January 2010.

<sup>1</sup> GDPCR Final Proposals, Ofgem, 3 December 2007 <http://www.ofgem.gov.uk/Networks/GasDistr/GDPCR7-13/Documents1/final%20proposals.pdf>

<sup>2</sup> Uniform Network Code (UNC) 90: Revised DN Interruption Arrangements, Ofgem decision, 15 March 2007 <http://www.ofgem.gov.uk/Licensing/GasCodes/UNC/Mods/Documents1/UNC090D.pdf>

<sup>3</sup> Under the revised interruption arrangements GDNs hold annual tenders for interruptible contracts with three year lead times but where longer term contracting makes economic sense, the arrangements permit GDNs to enter contracts with longer than three year lead times, and via the ad-hoc tender option, GDNs can contract for interruptible capacity at shorter than three years notice. In June 2008 the GDNs held an annual tender for interruptible capacity rights starting in October 2011. An ad-hoc tender was also held in September of that year. In 2009 the GDNs held an annual tender for rights starting in 2012/13.

<sup>4</sup> Uniform Network Code (UNC): Reform of the NTS offtake arrangements (UNC 0116V, 0116BV, 0116CVV, 0116VD, 0116A) and Introduction of Enduring NTS Exit capacity Arrangements (UNC 0195 and 0195AV), Ofgem decision, 19 January 2009 <http://www.ofgem.gov.uk/Licensing/GasCodes/UNC/Mods/Documents1/UNC195AVD.pdf>

## Evaluation of the capacity outputs revenue incentive to date

In our view the most straight forward way of evaluating whether the capacity outputs incentive has promoted economically efficient outcomes is to compare the incremental cost the GDNs will incur in meeting their 1 in 20 peak demand day(s) obligations following implementation of the reformed interruption arrangements, with the cost borne by firm customers under the previous regime by way of the prevailing use of system capacity charges discount received by interruptible customers.

In 2007 we calculated that the value of the capacity charges discount across all interruptible customers was approximately £39 million per annum<sup>5</sup>. In our view, if the annual cost of paying for interruptible capacity under the reformed regime (including any monies due to the GDNs for outperformance of the capacity outputs revenue incentive) combined with the discounted cost of any investment necessary to support customers moving from interruptible to firm is less than £39million per annum, the net benefit to consumers can be considered positive.

A summary of the development and thinking behind the capacity outputs revenue incentive for 2011/12 and 2012/13 is set out in Appendix One of this consultation. A full evaluation of the GDNs performance against the 2011/12 and 2012/13 incentive will be contingent on the final 2011/12 and 2012/13 flat exit capacity bookings they make and on the extent to which they exercise interruption rights in these years. However, to allow us to evaluate the effectiveness of the incentive to date, in September 2009 we wrote to the GDNs requesting a range of information concerning among other things, an indicative view of the costs of paying for interruptible capacity in 2011/12 and 2012/13 and their view of the investment implications associated with interruption reform.

### *Forecast cost of interruption payments and investment*

From the indicative information provided to us we have estimated that at an aggregate level across all networks the GDNs forecast that the fully exercised cost of paying for interruptible capacity in 2011/12 will be in the region of £8.5m with a similar figure forecast for 2012/13.

In terms of additional investment necessary to support customers moving from interruptible to firm following the first interruption tender only Scotia Gas Networks (SGN) has approached us for additional funding under the capacity outputs capex reopener provision. We consulted with industry on SGN's capex application in June 2009<sup>6</sup>. The paper identified at that stage that the reopener would be approximately £17m. A decision on the reopener is expected in early 2010 and the discounted value of the final investment allowance will be deducted from SGN's interruption allowance for the years 2011/12 and 2012/13. None of the other GDNs have applied for additional funding, but from the indicative information provided to us, we have estimated that excluding SGN's reopener, the GDNs consider that £15m of investment will have been made within the price control to support interruptible customers moving to firm across all networks as a consequence of the reform. On the assumption that SGN's reopener application is funded to £17m we estimate that the total annuitised cost of this investment (£17m + £15m) discounted for a 4.84% vanilla WACC and depreciated over 45 years, would be in the region of £1.7m.

In 2007 the GDNs forecast that the level of investment they would require in order to support all existing interruptible customers as firm would be in the region of £500m<sup>7</sup>. Although some investment has been required, a significant amount has been avoided as a result of GDNs successfully contracting for interruptible capacity with a number of key interruptible customers. However it is also likely that a significant amount of investment may have been postponed as a consequence of the reduction in demand associated with

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<sup>5</sup> Based on 1 October 2007 distribution network charges and assuming interruptible customers pay LDZ capacity charges based on bottom stop SOQ

<sup>6</sup> A copy of the June 2009 consultation can be found at the following location on Ofgem's website:

<http://www.ofgem.gov.uk/Networks/GasDistr/GDPCR7-13/Documents1/GDPCR%20Interruption%20reopener%20open%20letter%20consultation.pdf>

<sup>7</sup> Disaggregated data by GDN can be found in Chapter Six of GDPCR final proposals.

the economic downturn. Appendix Two of this consultation summarises the impact of the economic downturn on demand forecasts and peak day capacity requirements in more detail. We anticipate that any latent investment impacts associated with interruption reform are likely to be picked up by capital expenditure forecasts for GDPCR2 or beyond.

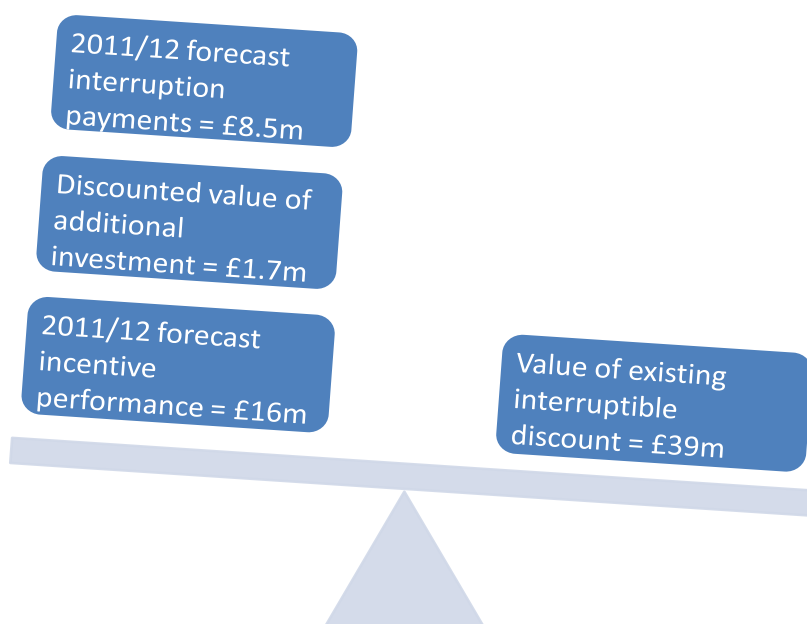
*Forecast performance against the capacity outputs incentive*

As set out in full in Appendix One, for GDPCR we took the view that at an aggregate level it would be efficient for the GDNs to contract for interruptible capacity up to the combined discounted cost of the investment and the annual cost of any incremental flat capacity required to support interruptible customers as firm. From the information provided to us via the GDNs' Business Process Questionnaire (BPQ) submissions it was forecast that the total new investment required to support all interruptibles as firm would be in the region of £500m. The annuitised discounted value of this investment across each of the eight GDNs resulted in an interruption allowance in the region of £27m per annum for formula years 2011/12 and 2012/13.

From the indicative information provided to us in September, it is apparent that for 2011/12 and 2012/13 the GDNs anticipate that they will out-perform both the flat capacity and interruption components of the incentive. In our view the reduction in demand associated with the economic downturn is the principle reason why the GDNs anticipate significantly outperforming the flat exit capacity component of the 2011/12 and 2012/13 incentive. Across all GDNs, for 2011/12 outperformance of the incentive is forecast to be in the region of £16m of which approximately £9m is forecast to derive from the interruption allowance.

Diagram one provides an indicative high level summary of the impact of the incentive under interruption reform taking into account the GDNs performance against the incentive, forecast investment consequences, and the 'costs' of paying for interruption pre and post reform. The diagram illustrates that although GDNs forecast significant outperformance of the capacity outputs incentive, the discounted level of additional investment combined with the GDNs forecast interruption payments is expected to be significantly less than the £39m per annum paid by firm customers to interruptible customers by way of the prevailing capacity charges discount.

Diagram One: Comparison of capacity management costs pre and post interruption reform



## **2013/14 and 2014/15 capacity outputs revenue incentive proposals**

On the basis of the forecast data to date, in our view the capacity outputs revenue incentive in combination with the reformed interruption arrangements will be effective in reducing the costs of meeting peak day capacity demand for system users. The arrangements have so far incentivised the GDNs to contract for interruptible capacity with customers who provide direct economic benefit to the system in being interruptible - thereby reducing the need for additional pipeline investment - and from 2011/12 will significantly reduce the prevailing £39m annual subsidy of interruptible customers by firm.

The impact of the economic downturn on demand and the effect this has had on the GDNs forecast performance against the 2011/12 and 2012/13 incentive was not fully anticipated in 2007. However we note that the decision to apply a 50% sharing factor on outperformance will ensure that half of the forecast outperformance benefit is shared with customers, and we consider that this is a preferable outcome to inefficient capital spend.

We continue to consider that setting the interruption revenue incentive on the basis of the discounted annuitised cost of the investment necessary to support interruptible customers as firm will lead to economically efficient outcomes and we continue to consider that it is appropriate to incentivise the GDNs to make efficient use of NTS flat exit capacity. We therefore do not propose changes to the scope, form or structure of the incentive at this stage. Instead we propose to set new incentive revenue values for 2013/14 and 2014/15 with a commitment to further review the effectiveness of the scheme as part of a wider review of incentives in GDPCR2.

### *Interruption incentive values*

For the interruption component of the incentive for 2013/14 and 2014/15 we propose to set new values for each GDN based on the costs of the reinforcement necessary to support all remaining interruptible customers as firm as at 1 October 2013. We propose to calculate the annual allowances using the cost of capital recently published in Final Proposals for DPCR5 (4 per cent vanilla WACC) and assuming a depreciation period of 45 years.

Given the reduced volume of interruptible capacity the GDNs forecast on their networks from October 2011 (see Table 1, Appendix Two), we expect that the cost of the reinforcement necessary to support interruptibles as firm will be very significantly less than the £500m forecast in 2007 and that as a consequence the aggregate annual interruption allowance will be much less than the £27m agreed for 2011/12 and 2012/13.

The preliminary data the GDNs have provided us with to date suggests that the investment required could be in the region of £90m - £110m across all GDNs. This would result in an interruption allowance for 2013/14 and 2014/15 in the region of £4.5m - £5.5m per annum across all GDNs. We have yet to receive finalised investment forecasts from all GDNs and we propose to further analyse the submissions we have received before publishing firm values, but we seek industry views at this stage on the proposed methodology for setting the values for the interruption component of the incentive.

### *Flat exit capacity incentive values*

In calculating the flat exit capacity incentive values for 2013/14 and 2014/15 we propose to apply the 1 in 20 peak day demand (GWh/day) growth forecasts implicit in table A2.1C of National Grid (NG) Transmission's 2009 Gas Transportation Ten Year Statement<sup>8</sup> to the GDNs flat exit capacity allocations for 2011/12 confirmed via the 2009 Offtake Capacity Statement (OCS) process<sup>9</sup>. In our view the 2011/12 flat capacity bookings represent the

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<sup>8</sup>National Grid's Gas Transportation Ten Year Statement is available at the following location <http://www.nationalgrid.com/uk/Gas/TYS/>

<sup>9</sup> GDNs submit exit capacity requests to the National Grid NTS annually via the Offtake Capacity Statement (OCS) process. NTS provide confirmed allocations for up to three years out and indicative allocations for the period beyond.

GDNs' most accurate view of the combined effect on peak day demand of the reformed interruption arrangements and the economic downturn. The GDNs 2009 OCS data for 2012/13 and, as highlighted in Table 1 of Appendix Two, for 2013/14 reveal that a number of the GDNs have ratcheted up their flat capacity requests on the 2011/12 level. We are not aware of the reasons for these increases but we note that they are not reflected in NG Transmission's Ten Year Statement where marginally negative growth is anticipated across the period. In our view the NG Transmission's growth forecasts represent the most consistent view of the growth in 1 in 20 peak day demand (GWh/day) at an LDZ level.

Table 1 of Appendix Three contains the flat exit capacity incentive target values we propose for 2013/14 and 2014/15.

#### *Flex exit capacity incentive*

We continue to consider that it is appropriate for us to monitor the GDNs' bookings of flex capacity and that they should continue to write to us in the event that their flex capacity bookings increase by ten per cent or more year on year. We are aware that a number of GDNs have been advised that zonal NTS flex constraints have and will limit the level of flex capacity available to them at an LDZ level, but we understand that the industry debate concerning the optimal allocation of flex is being taken forward by National Grid NTS under the System Flexibility Workshops. We propose to revisit the need for a flex capacity incentive as part of GDPCR2, but we do not propose to set a GDN flex capacity incentive for 2013/14 or 2014/15 at this stage.

#### **Next Steps**

Following conclusion of this consultation we intend to publish a decision on the capacity outputs incentive values applying for 2013/14 and 2014/15 at the end of February 2010. Subject to responses to consultation, and in conjunction with publishing our decision, we intend to publish a statutory consultation on the licence modifications necessary to install the new values within each GDN's gas transporters' licence with effect from 1 April 2010 if possible.

We seek industry views on the issues highlighted in this consultation and in particular on the following questions:

- Do you agree with our proposal to retain the scope, form and structure of the existing capacity outputs revenue incentive for 2013/14 and 2014/15?
- Do you agree with our proposed methodology for setting the values for the interruption component of the incentive?
- Do you agree with our proposed methodology for setting the values for the flat exit capacity component of the incentive?
- Do you agree with our proposal to continue to monitor the GDNs bookings of flex but not to set a specific flex incentive for the years 2013/14 or 2014/15 at this stage?

Consultation responses are invited and should be submitted to Lewis Hodgart (lewis.hodgart@ofgem.gov.uk) by Friday 29 January 2010.

Yours sincerely



Rachel Fletcher  
Partner, Distribution

## **Appendix One: Development of capacity outputs revenue incentive 2011/12 – 2012/13**

GDNs have a licence obligation to maintain their pipeline system to enable them to meet gas demand on their networks in the event of a 1 in 20 peak demand day(s). They can meet this standard through a combination of investment in their own pipeline network, contracting for interruptible capacity on their own network, and booking flat and flexibility exit capacity from the NTS.

Setting the capacity outputs incentive as part of GDPCR was affected by two main factors: uncertainty concerning the outcome of the first interruption tender under the reformed interruption arrangements in 2008, and to a lesser extent, uncertainty concerning the resolution of enduring offtake reform.

The reformed interruption arrangements were implemented on 1 April 2008 and with effect from October 2011 allow GDNs to tender for interruptible capacity solely in the locations and volumes they require it. In requiring customers to reveal the value they place on being interruptible in these locations, the reformed arrangements make it possible for the GDNs to make more discrete economic tradeoffs between contracting for interruption versus reinforcing their own pipeline system and booking incremental offtake capacity.

The shift from an administered set of arrangements, where large customers unilaterally determine their own interruptible status, to market arrangements where interruptible payments would more closely match the system benefits provided, created some uncertainty with regard to the total volume of interruptible capacity available post reform. In setting the value of the interruption component of the incentive, we set out to allow the GDNs to earn sufficient revenues from the interruption allowance to ensure that they would not undertake investment where contracting for interruption provided an economically efficient alternative.

We decided to set the interruption revenue target at a level equivalent to the maximum amount it would be efficient for the GDNs to pay for interruption. To do this we used BPQ analysis of the investment required on each network assuming all customers were redesignated firm following the first interruption tender, and discounted these figures on an individual network basis over 45 years using the cost of capital agreed as part of the price control settlement. In recognition of the uncertainty over the total amount the GDNs would be likely to pay for interruptible capacity under the reformed arrangements, we decided to protect customers from potential windfall gains against the incentive by implementing a 50% sharing factor to ensure that any benefits associated with securing interruptible contracts at a price below the interruption revenue target were shared equally between shareholders and customers.

Because generic interruption is primarily substitutable with network investment in conjunction with incremental exit (flat) capacity, we decided to set the flat capacity incentive target at a level equivalent to the volume of gas required to support all customers<sup>10</sup> as firm. To optimise the efficiency of the tradeoffs between offtake capacity and interruption we also implemented a 50% sharing factor on over and under performance against this component of the incentive.

Our decision not to set a specific incentive allowance for the GDNs use of NTS flex was informed in part by the Competition Commission's decision in 2007 to uphold in part the appeal of UNC 116V 'Enduring Offtake Arrangements'<sup>11</sup>. At the time the view expressed by a number of industry parties during the consultation on the offtake proposals was that

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<sup>10</sup> Firm and existing interruptible but excluding those interruptible customers (formerly known as NSLs) at location specific constraints. We took the view in the round that it would be necessary for the GDNs to contract for interruption with such customers.

<sup>11</sup> On 5 April 2007 Ofgem directed the implementation of Network Code Modification Proposal 116V 'Enduring offtake reform', but following an appeal by E-ON on 10 July 2007, the Competition Commission (CC) quashed Ofgem's decision to implement this variant of the offtake reform proposals.

despite some evidence of a zonal scarcity, at an aggregate level there was insufficient evidence of a scarcity of flex to justify a full market allocation of the service. National Grid Gas (NGG) Transmission also indicated that since NTS flex capacity is produced as a by-product of investing for flat capacity it would not invest to provide flex capacity alone. For the purposes of GDPCR we concluded that since it was claimed that there was no discernable marginal cost in providing flex capacity it would be inefficient to superficially constrain the GDNs use of it. Instead we decided that they should be allowed to book it to the extent that the NTS was able to provide it on the understanding that the prevailing arrangements were such that where the NTS was unable to provide it, incremental requests would be denied. To protect against any tendency among GDNs to hoard flex or to book it inefficiently we established a licence requirement that they had to write to us with an explanation in the event that their bookings of flex increased by more than 10% in any one year.

## Appendix Two: Impact of the economic downturn on demand forecasts and peak day capacity requirements

The values for the 2011/12 and 2012/13 capacity outputs revenue incentive were based on the most up to date demand assumptions available at the time of final proposals on GDPCR. As part of the BPQ process we asked the GDNs to provide us with forecasts of the level of flat capacity (mcm/d) they would require to support all existing interruptible customers (other than Network Sensitive Loads (NSLs)) as firm, and forecasts of the level of investment they would require in order to support all existing interruptible customers (including NSLs) as firm. We shared this information with our consultants PB Power in advance of using it to determine the flat capacity and interruption components of the incentive.

The impact of the economic downturn on demand was not anticipated in 2007. Table 1 shows the GDNs 2011/12 demand forecast at the time of GDPCR and compares it with the 2011/12 flat exit capacity allocated to the GDNs via the 2009 OCS process. The 2009 data indicates an aggregate reduction in demand in the region of around 15%. All other things being equal we would have expected the substantial reduction of interruptible capacity from 2011/12 to have put upward pressure on the GDNs peak day demand requirements, but it would appear that this shift has been more than offset by the reduction in demand associated with the present economic downturn.

Table 1 – Volume of interruption (mcm/d) and flat capacity forecasts/bookings (mcm/d) (figures in brackets represent number of interruptible customers)

GDN	Interruptibles		11/12 flat forecast/booking		13/14 flat booking
	2009/10	2011/12	GDPCR 07	OCS 09	OCS 09
Scotland	5.772	0.089 (7)	38.194	36.404	36.478
Northern	6.236	0.507 (5)	57.397	45.843	47.907
North West	3.380	0.710 (7)	55.096	45.96	51.28
East of England	5.510		89.23	73.3	83.29
London	1.600		47.694	39.15	45.02
West Midlands	1.230		42.576	34.78	39.37
Wales and West	5.780	0.187 (4)	59.671	46.157	52.79
Southern	7.302	0	100.349	93.522	93.581
<b>Total</b>	<b>36.810</b>	<b>1.493</b>	<b>490.207</b>	<b>415.116</b>	<b>449.716</b>

**Appendix Three: Proposed Flat Capacity incentive targets 2013/14 and 2014/15**

**Table 1**

DN	LDZ Exit Zone	Flat Capacity (GWh/day)	
		2013-14	2014-15
Scotland	SC1	67.90	67.68
	SC2	82.15	81.88
	SC4	248.86	248.04
North of England	NO1	213.60	211.67
	NO2	30.90	30.63
	NE1	205.06	205.06
	NE2	57.52	57.52
North West	NW1	247.61	246.01
	NW2	249.95	248.33
East of England	EA1	44.49	44.22
	EA2	54.73	54.39
	EA3	52.05	51.73
	EA4	189.34	188.17
	EM1	106.91	106.65
	EM2	82.74	82.54
	EM3	248.66	248.04
	EM4	15.48	15.44
London	NT1	13.02	12.93
	NT2	142.44	141.40
	NT3	262.88	260.96
West Midlands	WM1	95.45	95.20
	WM2	174.11	173.65
	WM3	107.75	107.47
Wales & West	SW1	30.95	30.95
	SW2	137.87	137.87
	SW3	77.03	77.03
	WA1	44.94	44.74
	WA2	209.88	208.95
South of England	SE1	472.21	469.00
	SE2	91.64	91.02
	SO1	116.21	115.85
	SO2	306.30	305.35
<b>Total</b>		4480.66	4460.37