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National Grid Gas System Operator Incentives from April 2011

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Overview:

National Grid Gas (NGG) is the System Operator (SO) for the gas transportation system in Great Britain (GB). This document sets out our final proposals for two gas SO incentive schemes for NGG to apply from April 2011, including statutory licence modification consultations. These proposals seek to incentivise NGG to act efficiently in its procurement of Operating Margins (OM) gas and to take into account the environmental impact of its decisions when operating gas compressors.

If NGG consents to our final proposals, and subject to responses to this consultation, the incentive schemes would be effective from 1 April 2011. If NGG does not consent to the licence modifications, thereby not accepting our final proposals, we would have to decide whether to consult again on revised proposals, to refer the matter to the Competition Commission, or to rely on our existing powers for the purposes of regulating NGG.

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Context

These proposals form part of our work to regulate monopolies effectively. We consider that it is important for the gas markets that the role of the System Operator is correctly identified and that the System Operator has the appropriate tools available to it to undertake these roles. Any interventions in the market by the System Operator can lead to costs being incurred, both directly by the System Operator and more widely by the market as a whole. Since customers ultimately bear these costs it is important to keep them as low as possible. Based on our experience, we remain of the view that the best way to achieve the lowest costs to customers is to provide the System Operator with commercial incentives whereby it shares some of the gains (or losses) from cost reductions (or increases).

Associated Documents

- Ofgem's initial comments on National Grid System Operator Incentives from April 2011, Ofgem, November 2010
- Gas System Operator Incentives Initial Proposals Consultation 2011/12, National Grid Gas, November 2010

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Summary

In recent years, National Grid Gas (NGG) has been incentivised in seven separate areas of its role as System Operator (SO).[1] New incentives schemes in relation to two of these areas (those relating to greenhouse gas (GHG) emissions from compressor venting[2] and Operating Margins (OM) gas[3]) require implementation from 1 April 2011.

In this document we set out our final proposals for new incentive schemes relating to OM gas and GHG emissions from compressor venting. Our final proposals have been developed following consideration of the responses to NGG's consultation document on its initial proposals for new OM and GHG emissions from compressor venting incentive schemes and further discussions with NGG. We consider that these final proposals represent an appropriate balance of risk and reward between NGG and its customers.

Since gas SO costs are ultimately borne by consumers, Ofgem sets incentives to keep these costs as low as possible. Alongside the development of RIIO-T1[4], which will set incentives for NGG as gas transmission owner (TO), Ofgem is considering ways of improving the incentives on NGG as SO, from 1 April 2013. In particular, Ofgem is keen to align NGG's SO incentives with its TO incentives to reflect interactions between these roles. In order to enable the development of new incentive arrangements from 1 April 2013, Ofgem's final proposals are for one year incentive schemes for each of the next two years for both OM gas and GHG emissions. These will expire on 1 April 2013.

Operating Margins

Our final proposal for OM gas is for a cost minimisation incentive scheme on all OM gas costs. The cost target for Year 1 has been based on the cost of tenders for the provision of OM that NGG accepted in the tender round for 2011/12. The target for Year 2 is the same minus a 5% efficiency measure.

[1] These incentives have been set for varying durations and it is only the schemes relating to OM gas and GHG emissions from compressor venting that require implementation from 1 April 2011. NGG is incentivised on its internal SO costs via a separate price control. It is also incentivised to minimise capacity buy backs via a separate SO incentive scheme.
[2] This incentive was previously called the Environmental Incentive. In its role as SO, NGG operates compressors to move gas around the system. Venting from these compressors result in natural gas being released into the atmosphere.
[3] OM gas is used to secure the gas transmission network in the immediate period following certain operational stresses.
[4] The first transmission price control under the RIIO model (Revenue = Incentives + Innovation + Outputs). RIIO-T1 is expected to be implemented on 1 April 2013.

GHG emissions

Our final proposal for GHG emissions from compressors is for one year incentive schemes for each of the next two years comprising a volume target equal to the current year's target. The price of emissions will be based on the non-traded price of carbon[5].

In order to facilitate the development of appropriate incentive arrangements across NGG as SO and TO from 1 April 2013, Ofgem requires increased information regarding the measurement and calculation of GHG emissions across the transmission system and the extent to which investment in new technologies could result in potential reductions to these emissions. Our final proposal therefore includes the introduction of a new licence condition in NGG's licence which requires it to develop and undertake a Scheme of Work designed to result in increased information in these areas.

Subject to responses to this consultation, if NGG consents to these final proposals then the licence modifications will be effective from 1 April 2011. If NGG does not consent, we will have to consider whether to consult again on revised proposals, to refer the matter to the Competition Commission, or rely on direct regulation of NGG as SO based on our existing powers.

We are intending to publish a consultation document in May 2011 setting out our initial views with respect to the incentivisation of NGG as SO from 1 April 2013.

[5] Set and updated by the Department for Energy and Climate Change (DECC) for the non-traded sector. See DECC's website: http://www.decc.gov.uk/assets/decc/what%20we%20do/a%20low%20carbon%20uk/carbon%20valuation/1_20100610131858_e_@@_carbonvalues.pdf

1. Introduction

Chapter Summary

This chapter provides a short background to the process so far. It also provides an outline of the structure of this document and the way forward.

There are no specific questions in this chapter.

Background

1.1. National Grid Gas (NGG), a subsidiary of National Grid plc, is the System Operator (SO) for the gas National Transmission System (NTS) in Great Britain (GB) and has responsibility for the residual balancing activity on the NTS. The transporter licence of NGG requires it to act in an efficient, economic and co-ordinated manner in performing its roles.

1.2. Since gas SO costs are ultimately borne by consumers, Ofgem sets economic incentives on NGG to encourage efficient cost minimisation as well as to encourage other behaviours.

Gas SO incentives

1.3. In recent years NGG has been incentivised in seven separate areas of its role as SO. Table 1.1 shows the different gas SO incentive schemes and, where applicable, the expiry dates of the current schemes.

Table 1.1: Summary of current gas SO incentive schemes

Scheme	Length of current scheme	Date current scheme expires	Purpose of incentive
NTS Shrinkage	3 years	31 March 2012	Minimise cost of purchasing gas and electricity for shrinkage
NTS Unaccounted for Gas	3 years	31 March 2012	Reduce volumes of unaccounted for gas
Residual Gas Balancing	2 years	31 March 2012	Target costs of NGG's actions to resolve participants' imbalance, whilst minimising the impact of its trades on the market
Demand forecasting	2 years	31 March 2012	Minimise the error in NGG's demand forecast

Website timeliness and availability	2 years	31 March 2012	Encourage timeliness and availability of published information
GHG emissions from compressor venting incentive	1 year	31 March 2011	Minimise Greenhouse Gas (GHG) emissions resulting from compressor venting
Operating Margins	No current scheme	N/A	

1.4. As shown in Table 1 there is currently no scheme for Operating Margins (OM) gas and the scheme for GHG emissions from compressors venting will expire on 31 March this year. We are therefore consulting on final proposals for new incentive schemes for these areas to be implemented from 1 April 2011.

1.5. OM gas is purchased by NGG on an annual basis in line with the requirements of the Uniform Network Code and NGG's Safety Case. OM gas is used to maintain safe pressures within the NTS during defined System Events (ranging from major events such as loss of supply infrastructure, multiple events or an orderly rundown emergency situation). OM costs for 2010/11 are currently expected to outturn at £17.2m.

1.6. As a result of uncertainties relating to the development of the contestable market for the procurement of OM gas, Ofgem decided not to implement an incentive scheme for OM for the period from 1 April 2010 to March 2011. As such, the economically incurred costs associated with procuring this gas have been passed through to customers for this period. Although there continues to be some uncertainties in the OM market, we consider it appropriate to, where feasible, introduce an incentive in this area from 1 April 2011 in order to provide signals to NGG to minimise these costs during the incentive period. We also consider that the existence of an OM incentive for this period will inform the development of proposals regarding longer term incentives on the SO from 1 April 2013.

1.7. In its role as SO, NGG operates compressors to move gas around the system. As a result of NGG's use of these compressors natural gas is released into the atmosphere.

Process so far

1.8. In July 2010, Ofgem published an open letter[6] on the objectives, process and timetable for the development of gas SO incentives to apply from 1 April 2011. In this letter we set out our view that there would be benefits from implementing two

[6] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Gas Open Letter Version 2.pdf&refer=Markets/WhlMkts/EffSystemOps/SystOpIncent

year incentive schemes. This would enable longer term incentivisation of NGG's SO activities from 1 April 2013 aligned with RIIO-T1[7].

1.9. Following this open letter, NGG published its initial proposals for incentive schemes for OM gas and GHG emissions from compressors in a consultation document on 9 November 2010[8], to which it received three responses[9]. NGG also gave an industry presentation on these proposals at a transmission workstream meeting in November 2010.

1.10. In November 2010 Ofgem published its initial comments on NGG's initial proposals[10]. In that letter, in terms of NGG's gas SO proposals:

- We expressed support for the reintroduction of an incentive for OM; and
- We expressed support for the introduction of two year incentive schemes for both OM and GHG emissions.

1.11. Ofgem has since scrutinised NGG's forecasts relative to its initial proposals, considered the responses to NGG's initial proposals document along with additional information from NGG and undertaken our own analysis in order to develop our final proposals.

Structure and approach

1.12. This final proposals document consists of three chapters. This chapter provides the background to our proposals, outlines the process we are following in developing SO incentive schemes for NGG from 1 April 2011, and sets out the structure of the document and the next steps.

1.13. In Chapter 2 we discuss our final proposals for the OM gas incentive scheme to apply from 1 April 2011. In Chapter 3 we discuss our final proposals for the GHG emissions incentive scheme to apply from 1 April 2011 and an associated additional licence requirement relating to this incentive. In both Chapters we explain how our final proposals have been informed by NGG's initial proposals, the views of market participants and the additional information provided by NGG.

[7] The first transmission price control under the RIIO model (Revenue = Incentives + Innovation + Outputs). RIIO-T1 is expected to be implemented on 1 April 2013.
[8] National Grid's consultation can be found at http://www.nationalgrid.com/uk/Gas/soincentives/docs/
[9] See www.nationalgrid.com/uk/Gas/so incentives/docs/
[10] http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Ofgems%20initial%20comments%20on%20National%20Grid%20Gas%20System%20Operator%20Incentives%20from%20April%202011.pdf

Next steps

1.14. Appendix 2 to this document contains a statutory notice of our proposal to modify by agreement NGG's gas transporter licence under Section 23 of the Gas Act 1986. This statutory modification notice proposes to implement the proposals set out in this document (subject to responses to this consultation).

1.15. We would welcome the views of interested parties on all aspects of our proposed modifications. Responses should be sent to soincentive@ofgem.gov.uk to be received no later than 29 March 2011. Further details on how to respond can be found in Appendix 1.

1.16. The statutory notice under Section 23 of the Gas Act 1986 specifies a period of not less than 28 days during which interested parties can make representations or objections to the proposed licence modifications, and during which the Secretary of State may direct the Gas and Electricity Markets Authority (the Authority) not to make the proposed modifications. Following any such representations, objections or direction, the Authority may make such revisions to the proposed licence modifications as it considers appropriate and carry out a further statutory consultation on the new proposed licence modifications.

1.17. These licence modifications are subject to NGG's consent. If NGG does not consent to the proposed licence modifications Ofgem can refer the proposed SO incentive scheme modifications to the Competition Commission for final adjudication. Another option would be to reissue a statutory notice on revised proposals. Alternatively we could decide not to implement an incentive scheme for these areas for the period from 1 April 2011 to 1 April 2013 (or part of that period). NGG would pass through the actual costs of procuring OM gas and have no incentive on GHG emissions. Ofgem would then directly regulate NGG for these activities.

1.18. If NGG consents to the proposed licence modifications, Ofgem intends (subject to any representations made during the consultation and any direction received from the Secretary of State) to direct the relevant modification to NGG's transporter licence in line with the proposed licence modifications shortly after 29 March 2011, so that the new licence conditions would apply on and from 1 April 2011.

1.19. There are a number of incentive schemes that are due to expire on 31 March 2012. Ofgem considers it appropriate to look to develop options for the incentivisation of NGG's SO role from 1 April 2013 which align with the incentives on NGG as Transmission Owner (TO). As such, Ofgem considers it appropriate to 'roll over' (as far as possible) the incentives that expire on 1 April 2012 to 1 April 2013. However, we do consider that certain aspects of these incentives will need to be reviewed for the roll over period. Ofgem will shortly be issuing an open letter setting out our proposed way forward with respect to this roll over.

1.20. Ofgem is currently considering longer term options for the incentivisation of NGG's gas and electricity SO roles that align with RIIO-T1 from 1 April 2013. Ofgem considers that there would be advantages from aligning the incentives on NGG and

NGET as SOs with the incentives on the TOs in recognition of the interactions between these roles. This issue is being considered as part of the RIIO-T1 consultation process. Ofgem is expecting to publish an initial consultation document on options for longer term SO incentive arrangements in May 2011.

2. Operating Margins

Chapter Summary

This chapter sets out background information relating to Operating Margins, NGG's initial proposals with respect to an OM incentive from 1 April 2011 and the views of respondents to that consultation. It also sets out Ofgem's final proposals with respect to the incentivisation of NGG's procurement of OM gas from 1 April 2011 until 31 March 2013.

Question box

Question 1: Do you consider that Ofgem's final proposal for an OM incentive on NGG represents a fair balance of risk and reward?

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

Background

2.1. OM gas is purchased by NGG on an annual basis in line with the requirements of NGG's gas transporter Licence, the Uniform Network Code (UNC) and NGG's Safety Case.

2.2. Requirements for OM gas are determined through network simulation analysis. The requirement is for the physical delivery of additional gas to maintain safe pressures within the NTS during a System Event, until other measures take effect. Potential System Events are split into three categories:

- Group 1: Major events e.g. loss of supply infrastructure, loss of largest sub-terminal.
- Group 2: Multiple events e.g. compressor failures, pipe breaks.
- Group 3: Orderly rundown e.g. maintain pressures in the event of a National Grid Supply Emergency.

2.3. OM costs comprise availability costs (the cost of being able to deliver gas, if required) and utilisation costs (the cost of delivering gas, if required). Utilisation of OM is a low probability but potentially high cost event. Total OM costs were £17.9m in 2009/10 and are currently forecast to be £17.2m in 2010/11.

OM market

2.4. When considering incentive schemes for OM it is important to understand the operation of the market for OM services and the key uncertainties in this market. During the past few months there have been a number of developments in the

market for OM which have resulted in difficulties in developing proposals for the OM scheme.

Contestability in provision of OM services

2.5. OM services have been provided only by gas held in store (from storage facilities, including LNG storage and LNG import facilities). However, in February 2010 changes were secured to NGG's Safety Case which enabled OM to be procured from sources other than gas held in store. As a result of these changes NGG has been able to procure OM gas from an increased number of types of provider. This has resulted in contestability for some OM requirements.

2.6. Until recently National Grid's Liquified Natural Gas (NG LNG) Storage facilities have provided OM only at regulated prices (the C3 prices) which are set by Ofgem. Following assessment of NGG's 2010 and 2011 OM tenders, Ofgem concluded that competition in the provision of a number of specific OM requirements was effective. As a result, Ofgem considered it appropriate to suspend the regulated prices for certain facilities for certain OM requirements, for the duration of the 2010/11 and subsequently for the 2011/12 storage years.

2.7. Ofgem expects this market to increase and new providers to come forward increasing the level of competition in the provision of OM services.

NG LNG storage facilities

2.8. In recent years, approximately one third of OM gas is currently made available by NG LNG's storage facilities at Glenmavis, Partington and Avonmouth. Ofgem issued its final proposals for review of the C3 prices on 21 February 2011. If implemented, these proposals are expected to result in significant increases in the C3 prices for OM from these facilities which will have an impact on the costs incurred by NGG as SO.

2.9. Any changes to the availability of these facilities can also impact on the costs NGG incurs with respect to procurement of OM gas. At Glenmavis, the liquefier has been shut down, pending engineering investigation. The unit may require substantive work to return to service. Whilst Glenmavis will be able to fulfil its supply requirements to the end of this storage year; its capability in the next couple of years is subject to a number of uncertainties.

NGG's initial proposals

Scope and form of incentive(s)

2.10. NGG put forward three options for the treatment of OM costs for a two year period from April 2011:

- no direct incentive - cost pass through of availability and utilisation costs;
- bundled cost minimisation incentive scheme for availability and utilisation costs; and
- separate cost minimisation incentive schemes for availability and utilisation costs.

Availability costs

2.11. In its proposals NGG recognised that there were a number of uncertainties that were outside of its control that could impact on its OM costs. In particular, NGG identified a relationship between the level of regulated prices of NG LNG Storage and the forecast cost of OM gas. As such, NGG considered it appropriate to link any cost target to the actual level of these regulated prices. In addition, NGG considered that there should be a deadband of £5.5m, based on its analysis of a range of outcomes to the regulated prices review and to reflect uncertainty in the reaction of market participants to the outcome of the review of regulated prices for OM services from LNG Storage.

2.12. As such NGG proposed a target of between £19m and £37.8m for the availability element depending on the level of the regulated prices of NG LNG's storage facilities with a deadband of £5.5m.

2.13. For Year two of the scheme NGG proposed basing the availability element of the target on the outturn costs in 2011/12 with a Retail Price Index (RPI) uplift.

Utilisation costs

2.14. NGG proposed that the utilisation element of the target (within a bundled scheme) or the utilisation target (for an unbundled scheme) should be calculated as an average historical utilisation volume multiplied by a weighted average OM utilisation price from the current tender year.

2.15. NGG proposed that in either the bundled or unbundled scheme there should be a utilisation volume cap. NGG considered that this would incentivise it to include utilisation costs within its assessment of OM tenders, such that should there be an OM utilisation event, it could be resolved in the most efficient manner. NGG considered that the volume cap would reduce its exposure to the risk of a major event such as a major supply loss, leading to a large volume of OM being utilised, which would not be within NGG's direct control.

Reopeners

2.16. NGG considered that there was a high level of uncertainty in the market for OM provision and that related changes in costs could result in a windfall profit or loss to NGG. Therefore, NGG believed that any incentive structure outlined in its proposals should be reviewed if:

- Regulated price suspension was extended to further OM requirement types; or

- If, following review, NG LNG's storage facilities' regulated prices were outside of the analysed range (one to three times current regulated prices); or
- The outcome of the NG LNG storage price review resulted in a revenue rather than a price restriction.

2.17. In addition, with respect to NGG's proposal to base the availability element of the target on outturn costs for Year one of the scheme, NGG considered that this should be reassessed if the volume requirement changed by in excess of ±10%.

Sharing factors, cap and floor

2.18. NGG proposed shallow sharing factors, caps and floors to reflect its view of the high level of additional uncertainties including the level of tender participation and pricing behaviour, the fundamentals of the gas market and the review of regulated prices. NGG proposed a 10% downside sharing factor and a floor of £1m.

2.19. NGG considered that there was less opportunity for it to reduce costs below the lower deadband value. NGG stated that it was unlikely that any external factors outside its control would lead to significantly lower tendered prices for significant levels of volume. As such, NGG considered it was appropriate to have a higher upside sharing factor of 25%. NGG proposed capping any potential profits at £2m.

Views of respondents to NGG's initial proposals document

2.20. NGG received three responses to its initial proposals consultation.

Scope and form of incentive(s)

2.21. All three respondents supported cost minimisation incentive arrangements on NGG as opposed to continuing to allow a cost pass through arrangement. Reasons given for this were that incentive arrangements would:

- ensure NGG was challenged to obtain services in the most cost effective way; and
- ensure costs to customers were kept to a minimum.

2.22. One respondent considered that this cost allowance should be reduced each year to incentivise further cost reductions and to encourage NGG to seek alternative options for the supply of OM.

2.23. Two respondents supported setting the incentive for a two year period from April 2011 to March 2013, although one further respondent suggested that there should be some form of review to ensure that the incentive was effective across this period.

2.24. All three respondents were supportive of a bundled scheme for availability and utilisation costs to:

- ensure NGG is incentivised to reduce overall costs of OM; and
- ensure that NGG is not biased towards certain providers where there are diverse cost structures between availability and utilisation costs.

Availability costs

2.25. Two respondents agreed that the target should be adjusted in line with changes to NG LNG's regulated prices although one respondent was concerned that this would reduce the incentive on NGG to seek out alternative providers. The respondents also supported the inclusion of a deadband for Year one of the scheme.

2.26. With respect to the target for 2012/13, all respondents considered that it was inappropriate to base a target on outturn costs for Year one. However, one respondent did not consider there to be a realistic alternative. The other two respondents considered that a historical average should be used.

2.27. All three respondents supported the continued inclusion of a deadband for 2012/13. Two respondents considered that the deadband should be the same as for 2011/12, although one of these respondents suggested that the deadband should be sharpened over time with the aim of removing the deadband. Another respondent suggested that the deadband should be reduced for 2012/13.

Utilisation costs

2.28. All three respondents considered that all utilisation costs should be included within the incentive.

2.29. Two respondents supported the inclusion of a utilisation volume cap. However, one of these respondents proposed basing the cap on the maximum historical utilisation volume (instead of average historical utilisation volumes) as it considered this would represent normal OM requirements (e.g. not resulting from a major utilisation incident). Another respondent proposed that the cap should be based on average historical utilisation volumes plus a percentage (suggested 20%).

2.30. One respondent considered that NGG should be exposed to the majority of network failure utilisation costs to incentivise investment in network reliability. With respect to utilisations relating to supply failure it considered that NGG should be subject to a sufficient incentive to ensure that it uses market mechanisms available to it.

2.31. Two respondents agreed that the utilisation volume target should be based on an average historical volume for utilisation. One respondent suggested that outliers should be removed and that the target should be based on a 95% confidence interval.

Reopeners

2.32. Two respondents agreed with NGG's proposals that the incentive target should be reassessed in certain situations. One of these respondents however considered that such reassessment should only take place if the impact of that situation was deemed to be material. One respondent did not agree with this proposal as it considered that NGG should be exposed to some risk.

Sharing factors, cap and floor

2.33. As noted above, one respondent pointed out that there was an interaction between OM costs and investment in networks. It considered that by limiting NGG's exposure to network failure costs, its incentive to invest in maintenance may be reduced impacting on network reliability. This respondent therefore considered that the downside risk should be placed wholly on NGG via a 100% sharing factor.

2.34. The other two respondents supported symmetrical sharing factors. One respondent specifically suggested sharing factors of either 25% or 10% upside and downside and a cap and floor of £2m or £1m.

Ofgem's final proposals

2.35. Ofgem has considered NGG's initial proposals and the views of respondents to NGG's initial proposals consultation as well as further information provided to Ofgem by NGG when developing our final proposals.

Scope and form of incentive(s)

2.36. Ofgem agrees with participants that there are benefits from introducing a financial incentive on NGG to minimise the costs of procuring OM gas. Our final proposal is therefore for a one year incentive scheme for each of the next two years. This schemes will expire on 1 April 2013.

2.37. Ofgem agrees with respondents that there are advantages from targeting both availability and utilisation costs within a bundled incentive scheme to ensure NGG is incentivised to minimise overall costs.

Availability costs

2.38. Ofgem has given consideration to the information provided by NGG regarding the uncertainties in the market and considered NGG's proposals for availability costs. We agree with NGG and two of the respondents that there is a link between OM costs and the regulated prices for NG LNG's storage facilities and that this should be allowed for within the cost target. However, we note that NGG's proposals incorporated significant variations in OM costs for any given level of NG LNG's prices. This was as a result of NGG's view of uncertainty regarding the extent to which the

price that participants' tender bids responded to the proposed changes in NG LNG's regulated prices.

2.39. Ofgem carried out our own analysis on NGG's proposals which resulted in significant variations on the costs forecast by NGG as a result of different predictions on participants' response to regulated prices which resulted in the range summarised in Table 2.1.

Table 2.1: Estimated OM costs (both availability and utilisation costs) in 2011/12.

Summary	Ofgem view		National Grid view	
Regulated prices/ OM Costs (£m)	Low	High	Low	High
same	16.4		19.5	24.9
double	21.9	23.2	28.7	34.2
triple	27.4	29.3	37.8	43.5

2.40. Since the publication of NGG's initial proposals there have been changes in the availability of NG LNG's storage facilities at Glenmavis. In particular, Ofgem has held discussions with NGG regarding the implications of the unavailability of Glenmavis on OM costs. These discussions have demonstrated that the unavailability of this facility introduced an additional uncertainty regarding the costs of procuring OM from 1 April 2011.

2.41. In addition, Ofgem released an open letter on 24 January 2011[11] stating that the unavailability of Glenmavis would be likely to result in a lower final proposal for the regulated price for Avonmouth. This again increased the uncertainty in how participants were likely to respond to both the unavailability of Glenmavis and potentially the smaller increase in regulated price for Avonmouth within their tenders. Ofgem published its final proposals for the regulated prices for NG LNG's storage facilities on 21 February 2011.[12]

2.42. As a result of these uncertainties, we found it very difficult to develop clear forecasts which could be used to develop an outturn availability cost for Year one of

[11] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Open letter LNG FPs.pdf&refer=Networks/Trans/GasTransPolicy/LNGPriceControl

[12] Final proposals included an increase of regulated prices for 115% at Avonmouth and 270% at Partington. http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=LNGPC 2011 Final Proposals.pdf&refer=Networks/Trans/GasTransPolicy/LNGPriceControl. The most recent information suggest the need for small amendments to the numbers contained in that document. Ofgem's final proposals for the OM target have been based on the most recent information available.

the scheme, even linked to the outcome of the review of the regulated prices for NG LNG facilities. We therefore considered that there were significant risks that setting an ex ante target for Year one of the scheme could result in significant windfall gains / losses to NGG. The uncertainties were such that we considered it was not appropriate to alleviate them through the use of a deadband.

2.43. Given these uncertainties, Ofgem considered that it was appropriate to base the availability element of the Year one target on the costs incurred by NGG following the acceptance of tenders in the 2011/12 tender round. The tender round was completed on 25 February and as such we were developing our final proposals as the tender was taking place.[13] This has allowed us to base our proposed target for Year one of the scheme on the actual tenders accepted by NGG. In doing so we have monitored the acceptance of tenders to ensure that these costs will be economically and efficiently incurred.

2.44. As well as the tender information, we have also based our final proposals on the latest information regarding Ofgem's final proposals for the regulated prices of NG LNG's storage facilities into the target.

2.45. Although we recognise that this results in a cost pass through of availability costs for Year one of the scheme, we consider that it will provide the right signals to NGG in terms of minimising OM costs going forward.

2.46. Based on information provided to us by NGG relating to the 2011/12 tender, availability costs for 2011/12 are expected to be £16.47m. These costs are significantly below (around 50% lower than) the costs forecast by NGG for the level of C3 prices set out in Ofgem's final proposals. We believe that this reduction of costs reflects the benefits of competition within significant areas of the OM market. We consider that the difference between these outturn costs and NGG's forecasts support our final proposal to use actual costs to set the target for Year one of the scheme.

2.47. For Year two of the scheme we propose using this same cost target with an efficiency measure of 5% to ensure that NGG is incentivised to continue to minimise the costs of procuring OM. We consider that this target is challenging but fair given the effect of increased competition on outturn OM costs seen this year. We consider it appropriate to reduce the target for Year two to ensure that NGG continues to be incentivised to take action to encourage new OM providers.

[13] Market day for the OM tender process was 4 February and results were published on 25 February.

Utilisation costs

2.48. Although we agree that NGG should be protected from the risk of major utilisations (which otherwise would risk de-stabilising the OM incentive scheme), Ofgem agrees with respondents, that NGG has some degree of control over whether or not it takes OM actions. As such, it should be exposed to some volume, as well as price, risk. In particular, we consider that:

- The utilisation performance measure should be based on average historical volumes (33.4GWh).
- The utilisation cap should be related to previous maximum volumes in line with the views of a respondent (78.1GWh)[14].
- The price for calculating the utilisation cost performance measure should be based on a volume weighted average of prices from the current tender round.

2.49. This ensures that NGG is exposed to both upside and downside volume risk. It will also ensure that NGG remains incentivised on the utilisation costs.

2.50. Our final proposals for the utilisation cost element of the target is for a utilisation cost performance measure of £844k (based on the 2011/12 tender).

Reopeners

2.51. Ofgem has considered NGG's proposal to include a reopener if volume requirements for Year two of the scheme varied by ±10%. Following further discussion with NGG we have not been able to identify any drivers that are likely to result in such a change in the volume requirement for OM gas and we do not consider that NGG has justified why this adjuster may be necessary. As such we do not propose to include a reopener for this issue.

2.52. We do, however, consider it appropriate to include reopeners in the following circumstances:

- Avonmouth deliverability (Year one) if NGG needs to purchase deliverability at the Avonmouth facility: if commercial market participants procure deliverability to the level of NGG's requirement at Avonmouth, NGG does not need to procure its own deliverability. In previous years no such deliverability has been procured by NGG as sufficient deliverability has been procured by market participants. We do not consider it likely that this will change for 2011/12 but given the cost pass through nature of the incentive for Year one it is appropriate for NGG to be able

[14] This is the maximum utilisation volume seen since 1999. Higher volumes were seen in the first year of the Network Code.

to recover any efficiently incurred costs associated with booking deliverability at Avonmouth should this be necessary.

- C3 regulated prices adjuster: Our final proposals for the OM incentive schemes have been based on the best information available at the time of publication as to the expected level of regulated prices for procurement of OM gas from NG LNG's storage facilities. As the level of regulated prices are still subject to consultation, Ofgem considers it appropriate to include a reopener for the incentive scheme which would allow us to review the target if the actual prices for NG LNG's storage facilities are materially different from these levels.
- Availability of OM service for locational Scotland provision (Year two): OM services are not currently available to enable NGG to procure OM gas for the locational Scotland requirement. Should this change for Year two of the incentive then NGG may request an adjustment for efficiently incurred costs to the extent that these costs are necessary to meet its Safety Case requirements with respect to OM gas.

Sharing factors, cap and floor

2.53. We agree with respondents that it is appropriate to have symmetrical scheme parameters for the OM scheme, particularly as the scheme we propose reduces NGG's exposure to risk. We therefore propose symmetrical sharing factors of 20% and a cap and floor of ±£1m for both years.

Summary of Ofgem's final proposals

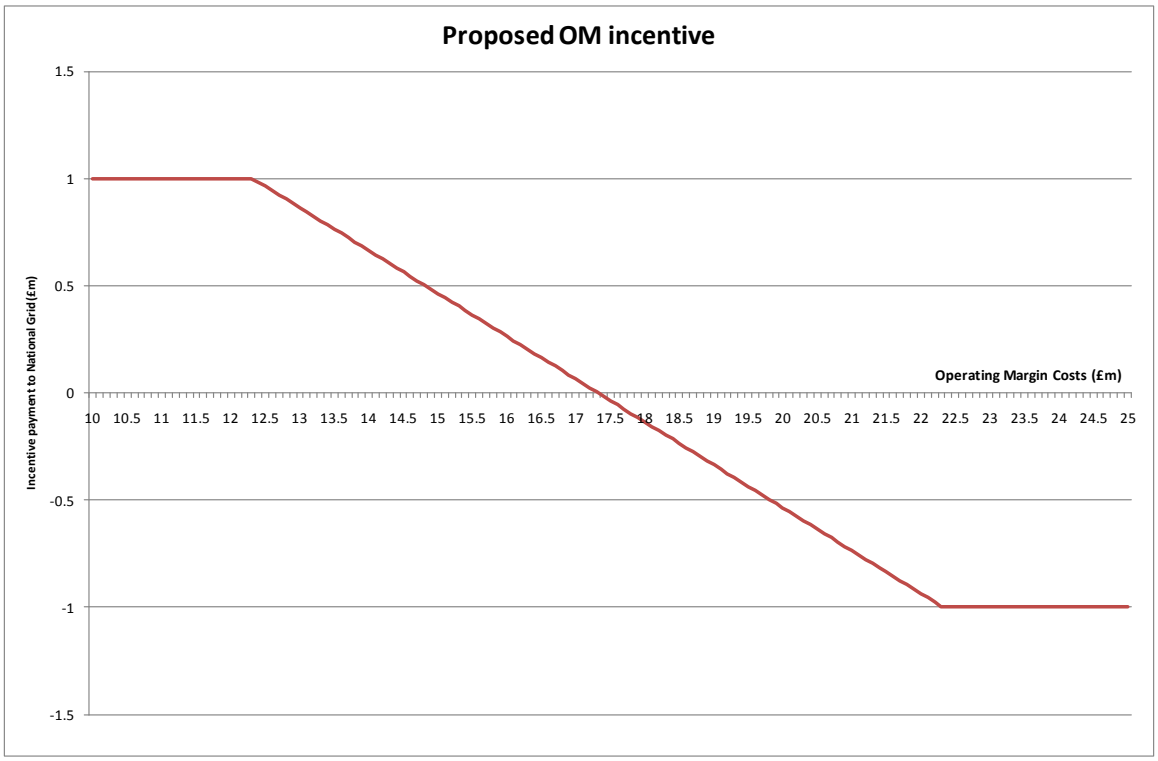
2.54. In summary we propose one year incentive schemes for each of the next two years for all OM costs. The scheme will comprise of:

- A Year one target of £17.32m (£16.47m availability costs + £844k utilisation costs).
- A Year two target of £16.45 (£17.32m - 5%).
- A utilisation volume cap of 78.1 GWh for both years of the scheme.
- Upside and downside sharing factors of 20%.
- Cap and floor of ±£1m.
- A mechanism to adjust the target for Year one if additional efficiently incurred availability costs at Avonmouth LNG Storage facility arise.
- A mechanism to adjust the target for Year two if services for locational Scotland become available.
- A mechanism to adjust the scheme targets in the event that regulated prices for NG LNG storage facilities are materially different from those on which these targets are based.[15]

[15] Any discrepancies are as a result of rounding.

2.55. The parameters of the scheme for Year one are shown in Figure 2.1.

Figure 2.1 Summary of Year One OM scheme (potential effect of utilisation volume cap not shown)



3. GHG emissions from compressor venting incentive

Chapter Summary

This chapter sets out background information relating to GHG emissions from compressor venting, NGG's initial proposals with respect to a GHG incentive from 1 April 2011 and the views of respondents to that consultation. It then sets out Ofgem's final proposals with respect to the incentivisation of GHG emissions from compressor venting from 1 April 2011 until 31 March 2013. It also explains why we are proposing a new licence condition on NGG to assist in the development of future GHG emissions incentive schemes.

Question box

Question 1: Do you consider that Ofgem's final proposal for a GHG emisisons incentive on NGG represents a fair balance of risk and reward?

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

Question 3: Do you consider that Ofgem's proposal for a new Special Licence condition requiring NGG to assist in the development of future GHG emissions incentive schemes is appropriate?

Background

3.1. There are activities associated with the commissioning, operation, maintenance and decommissioning of assets on the NTS which result in the release of natural gas into the atmosphere. The majority of natural gas venting from the NTS is from compressors that are used to move gas around Great Britain to where it is required.

3.2. As there is currently no external mechanism to reflect the environmental costs of natural gas emissions, NGG (and its customers) therefore does not pay these costs. To compensate for this, NGG has been subject to an incentive scheme based on the marginal costs of these emissions since 2008. NGG's current scheme will expire on 31 March 2011.

3.3. More recently, NGG has undertaken studies to improve the methodology for calculating these emissions and to begin to identify technologies which may result in emissions reduction.

3.4. Ofgem considers that in the long term it is appropriate for the full environmental costs of GHG emissions to be paid by NGG. Ofgem asked NGG to consider options for this within its proposals for a new GHG emissions incentive scheme from 1 April 2011. We are considering this issue further as part of the development of proposals for the longer term incentivisation of NGG's SO activities from April 2013.

NGG's initial proposals

Form of incentive scheme

3.5. In its initial proposals document NGG set out an explanation of various NTS emissions types along with an initial assessment of technologies that could be used to reduce these emissions. To deliver progress towards zero emissions, NGG believed that it was important to have a scheme that values the marginal cost of venting and to push towards understanding further venting emissions and alternatives.

3.6. At the moment compressor venting is the only vent type[16] that is formally calculated and as such NGG did not consider it appropriate to extend the incentive to other vent types until the venting could be measured. As such, NGG's initial proposal for a GHG emissions incentive was for an incentive on compressor venting (in line with the current scheme).

Volume target level

3.7. As with the current scheme, NGG proposed that the incentive scheme should comprise an annual volume target with payments to/from NGG if the outturn volumes were below/above the target.

3.8. NGG believed that the requirement to vent compressors was likely to rise as volatility in supply and demand increases. NGG considered that this would result in more uncertainty as to when a compressor was next likely to run and therefore whether it is better to de-pressurise the compressor (leading to a process vent) or keep it pressurised (leading to seal leakage venting and energy use) ready for the next use of the compressor.

3.9. As a result, NGG proposed that a volume target should be based on the recent outturn vent masses which at the time of its initial proposals resulted in a target of around 3,182 tonnes of carbon, compared with a target this year of 3,007 tonnes. Since the publication of NGG's initial proposals consultation the expected outturn of emission volumes has increased further and hence the proposed target would be 3,568 tonnes.

[16] Compressor venting accounts for approximately 80% of vent emissions from the NTS. Other NTS venting types include pipelines, pig traps, filters and valves.

Emission price

3.10. NGG proposed that the payment to/from NGG would, as in the current scheme, be equal to the marginal environmental cost calculated using DECC's non-traded price of carbon.

Scheme parameters

3.11. NGG proposed that the scheme should include no sharing factors, caps and collars in line with the current incentive. NGG proposed three options with respect to a deadband: no deadband; a ±5% deadband; or a deadband between 0 and ±5%.

Work to progress development of incentives from 1 April 2013

3.12. In order to drive forward environmental performance in the medium and longer term NGG considered that there was a need for further investment to understand and measure emissions and to develop technologies and processes to reduce or eliminate the effects of venting natural gas from the NTS.

3.13. To undertake this work, NGG proposed that £2-3 million was made available to take forward these two areas. NGG stated that it intended to discuss the project further with Ofgem including an estimate of the costs, outputs and delivery timescales.

3.14. In subsequent responses to information requests, NGG has expanded on these proposals and provided more details regarding its planned future work in this area.

Views of respondents to NGG's initial proposals document

Form of incentive scheme

3.15. One respondent considered that the costs of emissions should be fully internalised by NGG who would then be able to make the most economic decision on the use of scarce resources. In this situation, this respondent considered further incentive arrangements would not be necessary.

3.16. Another respondent pointed out that NGG already had plans to reduce its GHG emissions by 80% by 2050. Both participants considered that this commitment should be funded by NGG and not customers. One respondent suggested that this should be considered further as part of RIIO-T1.

3.17. Another respondent also considered that it was correct to aspire to apply a real price for emissions via a carbon market or EU ETS. It considered that NGG should be accountable for emissions and pay the full value of these emissions. This respondent

was concerned that the income stream associated with this incentive may perversely incentivise NGG to use high cost solutions to maintain an incentive income.

3.18. The respondents' comments on the detail of the incentive scheme (summarised below) are subject to these high level views.

3.19. Two respondents agreed that the incentive should be based on the marginal cost of emissions.

Volume target level

3.20. Two respondents considered that the volume target should be based on a two year average, rather than this year's outturn. Both parties considered this should become a five year average as more data became available. Another respondent considered that the target should be set to reduce rather than maintain performance. Given changing supply patterns it suggested linking the target to throughput.

Emissions price

3.21. Two respondents agreed that the price of the emissions should be derived from the non-traded price of carbon, and updated as that price is updated. One respondent considered that this should be updated following the conclusions of DECC's consultation on carbon price floor and market reform.

Scheme parameters

3.22. Two respondents disagreed with the inclusion of a deadband, to ensure that the signal was sharp and to bring consistency. The other respondent stated that a small deadband may be necessary.

3.23. All three respondents agreed that there should be no caps and floors for this incentive.

Work to progress development of incentives from 1 April 2013

3.24. With respect to NGG's proposal for additional funding for research on these emissions one respondent agreed that this work was important but considered that NGG should also commit funds to this. The other two respondents considered that this funding was inappropriate in light of NGG's commitment to reduce emissions.

Ofgem's final proposals

Form of incentive scheme

3.25. Ofgem agrees with respondents that there are advantages to ensuring the full costs of GHG emissions are paid by NGG. Ofgem recognises that there is currently no trading scheme covering these emissions and hence that the only economic signal to NGG to reduce these emissions results from the incentive scheme.

3.26. Ofgem intends to consider this issue further when developing incentives from 1 April 2013. We are aware that significant reductions to these emissions are likely to result only from investment in technological solutions. We consider that aligning SO incentives with TO incentives as part of RIIO-T1 will provide the right opportunity to consider this further.

3.27. Ofgem agrees with NGG that it is important for NGG to carry out work to better inform the setting of incentives from 1 April 2013 and has incorporated final proposals with respect to this (discussed below).

3.28. For the short term. we therefore agree with NGG that an interim incentive should be put in place to continue to incentivise NGG to minimise the emissions resulting from compressor venting.

Volume target level

3.29. We have considered the information provided by NGG in its initial proposals document and in subsequent communications with Ofgem regarding the impact of changes to supply patterns on the NTS and compressor venting. Although we recognise that there are changing supply patterns we do not consider that NGG has demonstrated the effect of these changing supply patterns on its SO activities including its use of compressors and the number of times these compressors are vented.

3.30. In addition, we do not consider that the information provided by NGG explains the drivers behind the significant rise in compressor venting seen this year satisfactorily such as to demonstrate that this year's outturn is the correct benchmark for future schemes.

3.31. We do consider that there is a need for NGG to investigate further the drivers behind the increased venting seen this year so as to provide assurance that these increased levels represent efficient system operation.

3.32. Furthermore, we note respondents' concerns that the GHG emissions from compressor venting incentive should not be used to fund the commitments NGG has made regarding the reduction of its carbon footprint.

3.33. Given the importance of the need to reduce GHG emissions, we do not consider it is appropriate to raise the target of this incentive scheme in the absence of adequate evidence to justify the increase in emissions. We therefore propose to retain this year's target as the target for both Years one and two of the incentive scheme.

3.34. Ofgem has considered the views of two respondents that support non-inclusion of a deadband to ensure a sharp incentive on NGG. However, given the significant increase in emissions outturn this year and the lack of clarity regarding the drivers of this increase we consider it appropriate to retain the current ±5% deadband for this incentive.

3.35. As such, our final proposal is for a Year one target equal to the target for this year (3007 tonnes) with a deadband between 2857 and 3157 tonnes. We also propose retaining this target and deadband for Year two of the scheme.

Emissions price

3.36. Ofgem agrees with NGG's proposals and the views of respondents that the incentive emission price should continue to be based on DECC's non-traded price of carbon. The price for Year one will be based on DECC's current non-traded price of carbon. The price for Year two of the scheme will be this price as updated by DECC in June 2011.

Scheme parameters

3.37. Ofgem agrees with NGG and the respondents that the scheme should continue to include no sharing factors, caps and floors.

Work to progress development of incentives from 1 April 2013

3.38. Following the publication of NGG's initial proposals consultation, Ofgem has received further information from NGG regarding its proposals to carry out further work to understand and measure emissions and to develop technologies and processes to reduce or eliminate the effects of venting natural gas from the NTS.

3.39. In particular, NGG proposed to carry out work to develop technologies and process to reduce or eliminate the effects of venting of natural gas from the NTS using IFI funding[17]. With respect to the understanding and measurement of

[17] "Innovation funding initiative (IFI)" A mechanism to remunerate research & development expenditure by Transmission Owners."

emissions NGG has proposed that £500k is required to research venting characteristics of assets on the NTS.

3.40. As stated above, Ofgem is keen to set longer term incentives on NGG from April 2013, alongside RIIO-T1 which seek to internalise the costs associated with GHG emissions. In order to develop such incentives Ofgem considers it is important that more information is provided with respect to both the measurement of emissions and alternatives to venting.

3.41. Ofgem therefore proposes to introduce a new licence requirement on NGG to develop and undertake a scheme of work, approved by the Authority, for the purposes of developing a long term external gas SO incentive to reduce targeted GHG emissions from 1 April 2013.

3.42. Ofgem agrees with NGG that it is appropriate to pursue IFI funding with respect to the work specified. However, Ofgem notes that IFI funding would not be appropriate with respect to the measurement work specified above. Ofgem agrees with participants that there are benefits to NGG from carrying out this work and that some of this work is expected to be carried out by NGG in its role as System Operator. Ofgem considers that it is appropriate to share the costs of this work between NGG and the industry. We therefore propose to allow NGG to recover 60% of these costs up to a value of £300k via its System Operator external costs to the extent that we consider that these costs have been efficiently incurred and are not recoverable from an alternative source.

Summary of Ofgem's final proposals

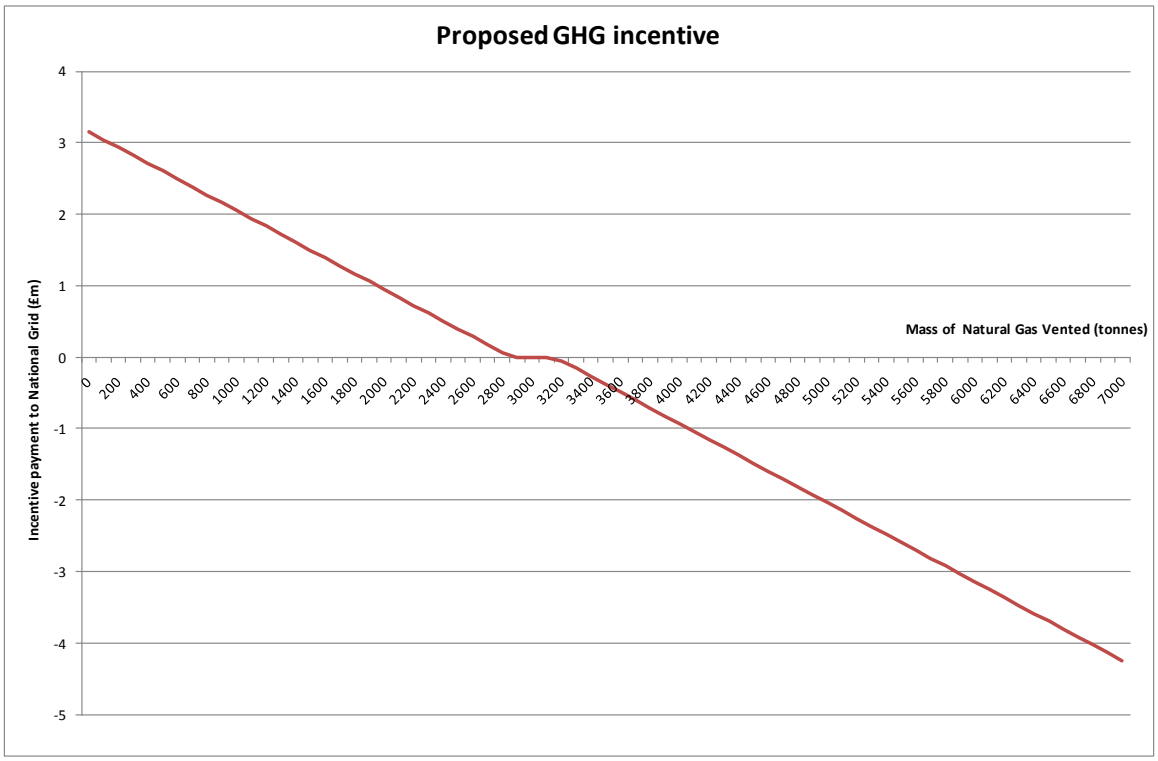
3.43. Our final proposals for a GHG emissions from compressor incentive scheme from 1 April 2011 is for one year incentive schemes for each of the next two years to minimise the volume of GHG emissions from venting. Our final proposals comprise:

- A Year one volume target of 3007 tonnes of natural gas vented from compressors.
- A Year two volume target of 3007 tonnes of natural gas vented from compressors.
- A ±5% deadband around the target (between 2857 and 3157 tonnes).
- Payment to / from NGG if outturn volumes are lower / higher than the lower / higher deadband at approximately £1,094 per tonne for 2011. For 2012 it would be approximately £1,111 subject to any DECC updates of the non-traded price of carbon in June 2011[18]. No sharing factors, cap or floor.

The parameters of the scheme are shown in Figure 3.1.

[18] NB these figures are based on 2009 so will be subject to an RPI uplift.

Figure 3.1: GHG emissions from compressors incentive scheme final proposals



3.44. In addition we propose a new licence condition requiring NGG to carry out further work to understand and measure NTS venting emissions and to develop technologies to reduce these emissions.

Appendices

Index

Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document. We would especially welcome response to the specific questions set out at the beginning of chapters two and three and which are replicated below.

1.2. Responses should be received by [29] March 2011 and should be sent to:

Philippa Pickford
Senior Economist, Regulatory Economics
Ofgem
9 Millbank
London
SW1P 3GE
077 86197346
SOincentives@ofgem.gov.uk

1.3. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.4. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

1.5. Any questions on this document should, in the first instance, be directed to Philippa Pickford (Philippa.pickford@ofgem.gov.uk).

CHAPTER: One

There are no specific questions in this Chapter.

CHAPTER: Two

Question 1: Do you consider that Ofgem's final proposal for an OM incentive on NGG represents a fair balance of risk and reward?

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

CHAPTER: Three

Question 1: Do you consider that Ofgem's final proposal for a GHG emisisons incentive on NGG represents a fair balance of risk and reward?

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

Question 3: Do you consider that Ofgem's proposal for a new Special Licence condition requiring NGG to assist in the development of future GHG emissions incentive schemes is appropriate?

Appendix 2 - Notice under Section 23 of the Gas Act 1986

1.1. Please see separate document containing the notice.

Appendix 3 - The Authority's Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority ("the Authority"), the regulator of the gas and electricity industries in Great Britain. This appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute (such as the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Acts of 2004, 2008 and 2010) as well as arising from directly effective European Community legislation.

1.3. References to the Gas Act and the Electricity Act in this appendix are to Part 1 of those Acts.[19] Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This appendix must be read accordingly.[20]

1.4. The Authority's principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interests taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them.

1.5. The Authority is generally required to carry out its functions in the manner it considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition between persons engaged in, or commercial activities connected with,

- the shipping, transportation or supply of gas conveyed through pipes;
- the generation, transmission, distribution or supply of electricity;
- the provision or use of electricity interconnectors.

1.6. Before deciding to carry out its functions in a particular manner with a view to promoting competition, the Authority will have to consider the extent to which the interests of consumers would be protected by that manner of carrying out those functions and whether there is any other manner (whether or not it would promote competition) in which the Authority could carry out those functions which would better protect those interests.

[19] Entitled "Gas Supply" and "Electricity Supply" respectively.
[20] However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

1.7. In performing these duties, the Authority must have regard to:

- the need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- the need to secure that all reasonable demands for electricity are met;
- the need to secure that licence holders are able to finance the activities which are the subject of obligations on them[21]; and
- the need to contribute to the achievement of sustainable development.

1.8. In performing these duties, the Authority must have regard to the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.[22]

1.9. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

- promote efficiency and economy on the part of those licensed[23] under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
  protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity; and secure a diverse and viable long-term energy supply, and shall, in carrying out those functions, have regard to the effect on the environment.

1.10. In carrying out these functions the Authority must also have regard to:

- the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.11. The Authority may, in carrying out a function under the Gas Act and the Electricity Act, have regard to any interests of consumers in relation to communications services and electronic communications apparatus or to water or

[21] Under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Acts in the case of Electricity Act functions.
[22] The Authority may have regard to other descriptions of consumers.
[23] Or persons authorised by exemptions to carry on any activity.

sewerage services (within the meaning of the Water Industry Act 1991), which are affected by the carrying out of that function.

1.12. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation[24] and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

[24] Council Regulation (EC) 1/2003.

Appendix 4 - Glossary

C

Compressor Station

An installation on the National Transmission System (NTS) that used gas turbine or electricity driven compressors to boost pressures in the pipeline system; it is used to increase transmission capacity and move gas through the System.

D

Distribution Network Operator (DNO)

An administrative unit responsible for the operation and maintenance of the local pipeline network within a defined geographical boundary.

Distribution System

A network of mains operating at three pressure tiers: intermediate (2 to 7barg), medium (75mbarg to 2barg) and low (less than 75mbarg).

G

Gas Transporter (GT)

Formerly Public Gas Transporter (PGT). GTs such as Northern Gas Networks are licensed by the Gas and Electricity Markets Authority to transport gas to consumers.

L

Linepack

The volume of gas within the National or Local Transmission System at any time.

N

National Grid LNG (NG LNG) Storage Facilities

National Grid's LNG Storage Facilities at Glenmavis, Partington and Avonmouth. In recent years these facilities have provided approximately 30% of OM services to NGG. These facilities are subject to price control pursuant to Special Condition C3 of NGG's gas transmission licence.

National Transmission System (NTS)

A high pressure system consisting of terminals, compressor stations, pipeline systems and offtakes. Designed to operate at pressures up to 85 bar. NTS pipelines transport gas from terminals to NTS offtakes.

National Transmission System (NTS)

A high pressure system consisting of terminals, compressor stations, pipeline systems and offtakes. Designed to operate at pressures up to 85 bar. NTS pipelines transport gas from terminals to NTS offtakes.

Non-Traded Price of Carbon

Carbon price as published by the Department of Energy and Climate Change for the non-traded sector.

O

On the day Commodity Market (OCM)

Enables anonymous financially cleared on the day trading between market participants.

Operating Margin (OM)

Gas used to maintain system pressures under circumstances including periods immediately after a supply loss or demand forecast change before other measures become effective and in the event of plant failure, such as pipe breaks and compressor trips.

Own Use Gas

Gas used by system owners to operate the transportation system, this includes gas used for compressor fuel, heating and venting.

S

Sharing factors

Describe the percentage of profit or loss which the System Operator will be subjected to if the relevant incentive performance measure falls below or exceeds the relevant incentive target.

Sliding Scale

Used to describe incentive schemes which involve profit (and loss) sharing around a fixed target cost.

System Operator (SO)

The entity charged with operating either the GB electricity or gas transmission system. NGET is the SO of the high voltage electricity transmission system for GB. NGG is the SO of the gas NTS for GB.

Appendix 5 - Feedback Questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

1.2. Please send your comments to:

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London
SW1P 3GE
andrew.macfaul@ofgem.gov.uk