



Promoting choice and value
for all gas and electricity customers

Gas System Operator incentive schemes from 2013 Final Proposals

Consultation

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Overview:

This paper sets out Final Proposals for incentives on the gas System Operator (SO) from April 2013. These are based on RIIO (Revenue = Incentives + Innovation + Outputs) principles for regulating monopoly energy companies.

Our proposals take account of responses to our Initial Proposals and are for a range of incentives to enable the SO to fulfil its role as efficiently and effectively as possible. These incentives include both costs and outputs (financial and reputational) covering up to eight years.

Uncertainty mechanisms are required to ensure longer term schemes remain effective over their duration. We are proposing automatic adjusters in schemes where relevant and necessary. We are also proposing a general uncertainty mechanism to enable the Authority to reopen the regulatory framework (with a view to modifying the relevant licence condition(s)) in certain extreme circumstances.

Also included is the statutory licence consultation under Section 23 of the Gas Act 1986.

Context

These Final Proposals form part of our work to regulate monopolies effectively. We consider that it is important for both the electricity and gas markets that the role of the System Operator (SO) is correctly identified and that the SO has the appropriate tools available to it to undertake this role.

Any interventions in the market by the SO can lead to costs being incurred, both directly by the SO and more widely by the market. Since consumers ultimately bear these costs it is important that they are efficient. The SO also has a wider role than its core balancing activities and we consider that it is important that the SO has the appropriate incentives to play a full role in delivering a sustainable energy system.

This work builds on previous material published in both SO incentive schemes and RIIO-T1 documents.

Associated documents

- RIIO-T1: Final Proposals for National Grid Electricity Transmission and National Grid Gas – Overview, 17 December 2012, Ref 169/12
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/1_RIIOT1_FP_overview_dec12.pdf
- RIIO-T1 and GD1: Draft licence conditions – second informal licence drafting consultation, 30 October 2012, Ref 138/12:
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIOT1andGD1_2nd_licence_draft_consultation.pdf
- System Operator incentive schemes from 2013 Initial Proposals, 27 July 2012, Ref 106/12:
<http://www.ofgem.gov.uk/Markets/WhIMkts/EffSystemOps/SystOpIncent/Documents1/IP%20SO%202013.pdf>
- RIIO-T1: Initial Proposals for National Grid Electricity Transmission plc and National Grid Gas plc, 27 July 2012, Ref 104/12:
<http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIO%20T1%20Initial%20Proposals%20for%20NGGT%20and%20NGET%20Overview%202707212.pdf>
- System Operator incentive schemes from 2013: principles and policy, 31 January 2012, Ref 12/12:
<http://www.ofgem.gov.uk/Markets/WhIMkts/EffSystemOps/SystOpIncent/Documents1/SO%202013%20Principles.pdf>
- System Operator incentive schemes from 2013, 14 June 2011, Ref 77/11:
<http://www.ofgem.gov.uk/Markets/WhIMkts/EffSystemOps/SystOpIncent/Documents1/SO%20incentives%20from%20April%202013%20Inital%20Views%20Consultation.pdf>

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Executive summary

In this document we set out our Final Proposals for the gas transmission System Operator (SO) incentive schemes for National Grid Gas Plc (with respect to the NTS) (NGGT) to apply from 1 April 2013. We consider that our Final Proposals represent a fair balance of risk and reward between NGGT and its customers.

Since early 2011, we have been working to set new incentives for the gas and electricity SOs to align with the aims, principles and timescales of RIIO (Revenue = Incentives + Innovation + Outputs) in respect of the transmission owners (RIIO-T1) (with effect from April 2013 for up to eight years). We have continued to ensure that the respective proposals are aligned.

In line with the RIIO principles, and following consideration of the responses to our Initial Proposals consultation document published in July 2012 and further discussions with NGGT, our Final Proposals include a number of important improvements to the way in which we have previously set incentives. In particular we are proposing gas SO incentives which are:

- a) **Longer term:** We recognise that gas flows will alter in the coming years, and in particular are likely to become more volatile as combined cycle gas turbines (CCGTs) respond to increased variation in renewable generation. With this in mind, we consider that extending the length of a number of existing incentive schemes to eight years (with some improvements) will provide the appropriate incentives for NGGT as SO in this changing world. In the case of the venting incentive, NGGT is currently undertaking a scheme of work which should enable a longer term incentive to be put in place. In the meantime, we are proposing a shorter term scheme while NGGT delivers analysis on the level and drivers of venting that meets our satisfaction as a basis on which to construct a longer term scheme. For the new schemes (i.e. maintenance planning and slightly longer term demand forecasting) we are proposing that they are put in place for a shorter period to enable them to be tested.
- b) **Aligned with the Transmission Owner (TO):** We are proposing incentives that follow the RIIO approach on customer focused outputs and long term costs, in particular, setting incentives that take account of the interactions between the SO and TO roles and the interactions of incentives on them. This includes, where appropriate, setting the same sharing factors (in terms of how over and underspend against target is treated), for example in respect of the shrinkage incentive, where the volume of gas and electricity used by NGGT in the operation of its compressors is linked to the available capacity of the network. In some areas we are not proposing separate incentives for the SO, where we consider that it is appropriate for the incentive being set on the TO under RIIO-T1 to also apply to the SO, for example in respect of the customer/stakeholder survey.
- c) **Defined output incentives:** We are proposing outputs that the SO will be held accountable to deliver and are proposing suitable incentives relating to these outputs through licence requirements, reputational

incentives and financial incentive schemes. For example, since one of the outputs the SO needs to deliver is the provision of information to the market on key issues, we are proposing a financial incentive on the accuracy of NGGT's demand forecast. We are also proposing a number of reputational incentives, where we consider it is appropriate to recognise the level of output that NGGT is delivering to its customers. These include in respect of NGGT's procurement of Operating Margins services, the provision of information to the market and the investigation of the causes of Unaccounted for Gas.

d) **Defined costs incentives:** We are proposing one cost incentive in respect of shrinkage. To focus the SO to deliver at long term value for money, we are proposing setting cost targets and upfront sharing factors that determine how cost reductions or increases are shared between the SO and consumers.

As part of introducing longer term schemes where there is uncertainty around costs and/or revenues, uncertainty mechanisms are required to ensure the schemes remain effective over their complete duration. We are proposing to deal with difficult to forecast uncontrollable factors through automatic adjusters embedded in the incentive schemes where relevant and necessary to do so. We are also proposing to introduce a general uncertainty mechanism that will permit the Authority to reopen the regulatory framework (with a view to modifying the relevant licence condition) in certain extreme circumstances, such as changes in the role of the SO through legislation. The circumstances under which the Authority would be able to reopen the regulatory framework are set out in a new licence condition, which should provide certainty to NGGT and stakeholders as to the discretion the Authority will have.

Subject to any responses to the statutory consultation, we will direct the modification to NGGT's gas transporter licence to be implemented on 1 April 2013 (the date of the decision to modify the licence being at least 56 days before 1 April). It should be noted that the changes to the licence modification process as a result of the implementation of the Third Package mean that NGGT's consent is no longer required in order for us to implement the modification. However, following a Direction from the Authority, relevant parties have 20 working days in which to appeal our decision to the Competition Commission (CC).

1. Introduction

In this introduction we set out the context for these Final Proposals and a high level summary of our proposals. We also set out the next steps of the process up to implementation of new incentive schemes.

The role of the gas SO

1.1. National Grid Gas (NGGT) is the gas System Operator (SO) responsible for balancing the system on a continuous basis across Great Britain (GB). To do this, the SO buys and sells gas and procures associated services. It also provides other services to market participants, such as forecasts of demand. The SO is obliged to perform its role in an economic and efficient manner.

The evolution of the SO's role in the wider market and policy context

1.2. We have set out in previous consultations that the gas SO is facing a number of challenges and opportunities which could significantly change the way it needs to operate its system:

Decarbonisation of the energy supply:

- As more intermittent generation connects to the electricity network, the demand for gas fired generation is likely to become more variable. In addition, more storage and Liquefied Natural Gas (LNG) facilities are likely to connect and there will be a need to manage this.

Increased interconnection capability and implementation of policies to increase market integration at a European level:

- In the European context, the development of network codes in several areas (including balancing, system operation and grid connection) will affect the SO's interaction with neighbouring gas markets.

Maintaining security of supply in the face of decarbonisation and declining stocks of fossil fuels:

- This may require the SO to improve system management (e.g. through the facilitation of demand side response) and to take advantage of initiatives developed at a European level (e.g. ensuring that interconnectors are used efficiently).

Playing a full role

1.3. In addressing these challenges and opportunities, and in anticipating and responding to what may be significant policy changes, it is important for the GB energy sector to achieve a successful transition to low carbon that the gas SO plays a full role in that transition. Playing a full role includes:

- Taking a proactive approach and taking appropriate actions to reduce the impact of challenges on the costs of performing the SO functions.
- Thinking longer term to anticipate future challenges and deliver long term value for money for consumers.
- Thinking innovatively and strategically about market operations and trading arrangements.
- Working with others and taking account of the interactions with all energy market participants.

The purpose of SO incentives

1.4. The rationale for setting SO incentives is:

- System operation is a natural monopoly activity. Monopoly companies tend to face little of the market discipline that spurs firms facing competition to deliver high quality and/or low costs.
- As the SOs are subject to licence conditions that require certain objectives are met (such as meeting certain security standards), they may have an incentive to over spend ('gold plating') to ensure these objectives are met.
- The two problems described above are exacerbated as the costs the SOs incur are reflected in charges they levy on shippers, suppliers and generators. These stakeholders pass the charges through to end users in their energy bills. As such there is no direct countervailing buyer power to keep costs in check.
- There is an information asymmetry in the SOs' favour that means that more direct 'command and control' style regulation would be inefficient as Ofgem knows less about what is possible in terms of quality and cost than the SOs. This restricts the ability of Ofgem to prescribe what the SO should do in precise terms (as it may prescribe costs or outputs that are not challenging enough or are unachievable).

1.5. Incentives aim to overcome these problems. The principle behind incentives is to set realistic targets on outputs and costs with penalties for failing to reach, or rewards for doing better than the target. This removes the need for Ofgem to prescribe exactly what the SO should do and instead gives the SO the incentive to take economic and efficient actions, in the context of its own cost function and capabilities.

1.6. In practice, the incentive payments and penalties work through the charges that the SO levies on users of the systems. Where, for example, the SO works to reduce the costs of a particular activity below the target, the SO retains a pre-defined proportion of that cost saving by not being required to pass 100 per cent of that cost reduction through to system users in the form of reduced charges for using the SO's system. Where actual costs are in excess of the target, the SO is prevented from increasing system user charges to fully recover those excess costs and is therefore penalised by having to bear a proportion of excess costs itself.

1.7. Since early 2011, we have been working on setting new incentives for the SOs in line with our RIIO (Revenue = Incentives + Innovation + Outputs) framework. The most important aspect of this work has been to establish incentives that focus the SOs on "right" behaviours – to encourage them to play a full role in the transition to a more sustainable energy sector. As with the network businesses generally, we

have been concerned that the SOs have been too focussed on short term cost reduction and on managing the regulatory relationship, and have not been sufficiently innovative or creative in seeking “software” solutions rather than investing in “hardware”. Part of the conservatism of the SOs has been to focus on efficiently operating under current market arrangements rather than seeking to improve those arrangements. The details of the incentive schemes are a means to get the SOs to focus on the “right” behaviours.

1.8. We have aimed to align the approach we are taking for the SOs with the transmission business price controls under RIIO-T1. The RIIO framework aims to:

- **Focus the SOs on delivery of outputs:** we set out what customer focused outputs the SOs will be held to account to deliver and set suitable incentives relating to these outputs through licence requirements, reputational incentives and financial incentive schemes. We also set out how output incentive schemes may be adapted over time and introduce uncertainty mechanisms where appropriate.
- **Focus the SOs on delivering outputs at long term value for money:** we set cost targets and upfront sharing factors that determine how cost reductions (or increases) are shared between the SOs and consumers. The cost incentive schemes include uncertainty mechanisms where appropriate.
- **Focus the SOs to work with the TOs to reduce overall costs of system operation:** we set out outputs and cost incentives taking into account the interactions between the SO and TO roles and the interactions of incentives on them. Also, recognising in particular that constraint costs are likely to rise as more renewable generation connects to the electricity system which will have implications for the gas network.

1.9. Our aim has been to put the objectives, principles and policies of the SO regulatory frameworks in place for eight years (until end of March 2021). However, as recognised by respondents to our earlier consultations, this would not be appropriate in several areas and we propose setting some incentive schemes for a shorter period. We have also considered mechanisms to allow for changes to be made to individual incentive schemes, or to a set of schemes, during this period.

Summary of our Final Proposals

1.10. Since publishing our Initial Proposals in July 2012, we have taken account of respondents’ views¹, including those of NGGT, received further information from NGGT in order to develop our Final Proposals that are set out in this document. The details of our Final Proposals are discussed in Chapter 2², a summary of them is set in Tables 1.1 and 1.2, with those areas discussed in Chapter 2 highlighted. In Chapter 3 we describe our proposals for a general uncertainty mechanism that we consider is required as a result of setting some of the schemes for eight years, we

¹ We received eight responses to our consultation: Npower, Renewable UK (electricity only), EDF, E-On, NG, SPTL (electricity only), SSE and Energy UK (gas only). The responses are available from the Ofgem website <http://www.ofgem.gov.uk>.

² For a number of areas in our Initial Proposals we proposed no separate incentive scheme. We did not receive any comments raising concerns with this approach and therefore do not discuss these areas further in Chapter 2.

Gas System Operator incentive schemes from 2013 Final Proposals

also explain why we do not consider that NGGT requires an additional risk premium under our Final Proposals.

Table 1.1: Gas SO output incentives

Output	Final Proposals
Safety	
Work place safety <i>- to operate its network to ensure the safety of the public and its employees</i>	Covered by legal requirements and captured by RIIO-T1 outputs – no SO scheme.
Meet Operating Margins requirements <i>- to ensure that Operating Margins (OM) are purchased to meet Safety Case requirements</i> <i>- to work with potential new providers of OM in order to facilitate additional providers</i>	Meeting Safety Case requirements captured by wider HSE ³ legal requirements – no financial SO scheme. Eight year reputational incentive. Update existing licence requirement to promote competition, including transparent reporting requirements.
Environmental impact	
Broad environmental output <i>- to ensure that energy companies play a full role in the delivery of a sustainable energy sector</i>	There were no clear aspects identified where the gas SO could be expected to make a contribution at this stage. No additional SO scheme.
Reduction in venting emissions <i>- to consider how it operates its system to reduce emissions, also potential to introduce alternatives to venting</i>	Financial incentive for three years: <ul style="list-style-type: none"> • Downside only (option 1 in our Initial Proposals) • Potential for a two-way incentive after three years, subject to certain ongoing work being completed • Audit requirement
Connections	
Ensure efficient and timely connections <i>- to fulfil its obligations regarding a connections process that needs to be put in place</i>	Covered by implementation of UNC 373 ⁴ . No separate SO scheme.
Reliability and availability	
Make capacity available at entry and exit points to meet customer requirements <i>- to ensure capacity is made available as required and in the most efficient way</i> <i>- to have in place and adhere to a methodology statement that details how it chooses between the different options (e.g. buy-back, invest) it has in respect of making capacity available</i>	Under RIIO-T1, NGGT to produce a methodology statement on how it makes capacity available. No further incentive.

³ The Health and Safety Executive.

⁴ UNC 373: Governance of NTS Connection Process. This modification, implemented in August 2012, incorporated some previously undefined NTS connection processes and steps into the Uniform Network Code (UNC).

Gas System Operator incentive schemes from 2013 Final Proposals

Output	Final Proposals
Stakeholders satisfied	
Stakeholder survey - to ensure that NGGT's stakeholder and customer surveys include questions relating to NGGT's role as system operator	Financial incentive in RIIO-T1 will cover both SO and TO roles. No further separate SO incentive.
Balanced system	
Supply = demand - to ensure that supply and demand are equal on a daily basis subject to pressure and linepack requirements	No SO output incentive scheme.
Minimise change in linepack - to ensure that the change between each end of day linepack is kept to a minimum	Financial incentive for eight years. No change to current scheme parameters. Potential reopener after four years under very specific circumstances.
Minimise impact on On the Day Commodity Market (OCM) - to ensure that when NGGT enters the OCM it minimises its impact on the market by trading close to the market price	Financial incentive for eight years. No change to current scheme parameters. Potential reopener after four years under very specific circumstances.
Unaccounted for gas (UAG) - to continue to explore the drivers of Unaccounted for Gas	Reputational incentive for eight years to investigate drivers and report on volumes of UAG. Update and extend existing condition to require NGGT to promote wider industry involvement in investigating causes of UAG.
Provision of information	
Availability and timeliness of information on website - to ensure that the SO publishes information that assists market participants to operate in the gas market	Remove current financial incentive and introduce a reputational incentive for eight years requiring NGGT to continue to publish timely information on its website.
Accuracy of demand forecasts - to ensure that the demand forecasts that NGGT publishes are as accurate as possible	D-1 13:00 forecast: Financial incentive set for eight years. Modify current performance measure to give more weight to days when demand is high. Target adjusted for new fast cycle storage connecting. New financial incentive relating to overall accuracy of D-2 to D-5 forecasts i.e. a single bundled incentive across all four forecasts. Incentive initially set for two years. Non Daily Metered demand forecast: No SO output incentive.

Output	Final Proposals
Publication of forward looking market information - to publish information to the market that assists participants with understanding future developments - to publish statements that assist market participants to understand how NGGT as SO undertakes its role - to ensure that actions undertaken by the SO or TO that affect the other party are transparent	Reputational incentive for eight years requiring publication of certain information.
Maintenance	
Minimise number of changes to agreed maintenance plans, whilst carrying out an efficient level of maintenance.	Financial incentives on number of maintenance days and on minimising NGGT instigated changes to Maintenance Plan. Both incentives to be set for two years. Reputational incentive requiring improvement in the provision of information in respect of NGGT's maintenance planning.

Table 1.2: Gas SO cost incentives

Scheme	Scheme length	Cost target methodology	Sharing factor
Shrinkage cost (bundled) ⁵	Eight years	NGGT to put in place a methodology statement to forecast baseline shrinkage volumes. Methodology statement subject to annual audit requirement of resultant volumes. Reference prices better aligned with NGGT's energy purchases: <ul style="list-style-type: none"> • Forward prices: nine month rolling average • Short term prices: week-ahead • Small swing uplift. 	45% Cap and floor ±£7m
Operating Margins cost	Reputational incentive (see output incentive)		
Residual Balancing cost	No cost scheme (see output incentive)		

Next steps

1.11. Appendix 2 of this document contains a statutory notice of our proposal to modify NGGT'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.

⁵ The shrinkage cost scheme will, as now, bundle Compressor Fuel Use costs, Calorific Value Shrinkage costs and Unaccounted for Gas costs.

1.12. It should be noted that the revised licence drafting set out in the statutory modification notice takes into account the proposed new structure of NGGT's gas transporter licence that has been developed under RIIO-T1.

1.13. Subject to any responses to the statutory consultation, we will direct the modification to NGGT's gas transporter licence to be implemented on 1 April 2013 (the date of direction being at least 56 days before 1 April). It should be noted that the changes to the licence modification process as a result of the implementation of the Third Package mean that NGGT's consent is no longer required in order for us to implement the modification. However, following publication of the Decision to modify from the Authority, relevant parties have 20 working days in which to appeal our decision to the Competition Commission (CC).

1.14. Under the RIIO framework, we will generally consider a TO's performance against its outputs on an annual basis. We will set out in our Regulatory Instructions and Guidance (RIGs) information requirements and further detail on the reporting and monitoring arrangements. We consulted on draft RIGs for the TOs in October 2012. We propose to use the RIGs framework to also consider the SO's performance, although we recognise it may be appropriate for NGGT as SO to provide information to the Authority on a more regular basis (as it currently does). We intend to publish the RIGs, including the requirements for the SO, in February 2013.

Electricity System Operator Incentives - update

1.15. Our Initial Proposals for electricity published in July set out that keeping the current balancing services incentive scheme (BSIS) arrangements in place was not providing National Grid Electricity Transmission (NGET) with the appropriate incentives in the face of expected increasing and more volatile SO costs. The main drivers for this were considered to be a changing electricity system and concerns with the accuracy of the existing models used to set the current BSIS target. We therefore proposed an alternative approach that included a mechanism to facilitate the disallowance of costs alongside a discretionary reward.

1.16. Given the extent of the changes that we proposed, and listening to the views of stakeholders who requested further detail as to how our proposals would operate in practice, we published a further consultation on our proposals in October 2012⁶. This consultation closes on 21 December 2012. We will consider the responses of all stakeholders before proposing an appropriate way forward in the new year.

1.17. We note that there will be a period between the current incentive scheme ending and implementation of the licence conditions which will bring new arrangements into effect. During this time we will continue to monitor NGET's actions under Special Licence Condition C16 of NGET's electricity transmission licence which requires NGET to operate the system in an economic and efficient manner.

⁶<http://www.ofgem.gov.uk/Markets/WhIMkts/EffSystemOps/SystOpIncent/Documents1/DAC%20and%20ESOR%20Consultation%20Document.pdf>

2. Gas SO incentives

This chapter sets out our Final Proposals for the gas SO incentive schemes to be implemented from April 2013.

Question 1: Do you consider that the proposed licence modifications appropriately reflect the Final Proposals as described in this chapter?

Operational safety (Operating Margins)

2.1 Under its Safety Case, NGGT in its role as SO is required to procure Operating Margins (OM) services. Requirements for OM services are determined through network simulation analysis. The requirement is for the physical delivery of additional gas to maintain safe pressures within the NTS in the immediate period following operational stresses, until other measures take effect. Such additional delivery can be effected as a result of demand side response, i.e. a reduction in gas demand.

2.2 NGGT currently has in place a cost incentive scheme regarding the overall cost of the OM gas it procures. NGGT has an annual cost allowance that covers charges for both the availability of gas and for utilisation of the available volumes⁷. Previously, NGGT also had a licence requirement (Special Condition C25 (C25)) to promote competition in the provision of OM gas, but the obligations under this condition have now lapsed.

2.3 In its Business Plan, NGGT proposed that OM costs be subject to a pass through arrangement and that a reputational incentive is put in place to ensure transparent reporting on how it continues to facilitate the development of a competitive market for OM services.

2.4 NGGT also noted that it is currently undertaking a review of OM services to ensure that the definitions and calculation methodology remain fit for purpose for the RIIO-T1 period and that the arrangements for OM services should be discussed further once its review is completed.

Our Initial Proposals

2.5 We proposed not to implement a cost incentive on OM gas for the gas SO from April 2013. We proposed to update C25 so that NGGT has an appropriate and up to date reputational incentive in place to promote competition in the procurement of OM services. We noted that we would work with NGGT to ensure that there is a licence condition in place from April 2013 that achieves this, and ensures that an appropriate reporting regime is introduced that ensures transparency in this area. We proposed that this reporting regime would need to include details of the types of providers, the volume of OM procured from each provider, and the average availability and utilisation costs by type of service provider.

⁷ As NGGT mainly utilises OM gas for safety reasons, the cost allowances cover both availability and utilisation so that NGGT has an incentive to take into account unit charges for using the gas when procuring OM gas.

2.6 As part of this we noted that NGGT will be required to report on the costs that it is incurring in respect of the provision of OM services. Should the costs reported increase from the current levels, or should we consider that the costs incurred do not represent value for money for consumers we stated that we will then reconsider whether it is appropriate to put in place a cost incentive. We will also reconsider this decision in light of the outcome of NGGT's review of its procurement of OM services.

Respondents' Views

2.7 Four respondents commented on this issue. Three of these agreed with the removal of the financial incentive and it being replaced with a reputational incentive. Two of these respondents noted the importance of the monitoring of the costs, whilst the other one noted its expectation that a financial incentive is introduced after NGGT's OM review. The fourth respondent considered that NGGT should be subject to a financial incentive.

NGGT's Views

2.8 NGGT agreed that it is not appropriate to put in place a financial incentive at the current time, but noted that it would welcome revisiting the potential for a financial incentive following the OM review.

Our Final Proposals

2.9 As per our Initial Proposals we propose not to implement a cost incentive on OM services for the gas SO from April 2013. **Our Final Proposal is to update the content of C25⁸ so that NGGT has an appropriate and up to date reputational incentive in place to promote competition in the procurement of OM services, with the incentive also covering a reporting regime to ensure transparency in this area.** This reporting regime will need to include details of the types of providers, the volume of OM procured from each provider, and the average availability and utilisation costs by type of service provider.

2.10 As set out in our Initial Proposals, should the costs reported increase from the current levels or should we consider that the costs incurred do not represent value for money for consumers, we will then reconsider whether it is appropriate to put in place a cost incentive. We will also reconsider this decision in light of the outcome of NGGT's review of its procurement of OM services.

Greenhouse gas emissions

2.11 As SO, NGGT vents gas as part of its operation of the system, which results in leakage of methane (a potent greenhouse gas emission (GHG)). Currently, NGGT is only incentivised to reduce the emissions resulting from compressor venting, as it has previously been considered that this covers a significant proportion of its emissions. Under Special Condition C28 (C28)⁹ of its transporter licence, NGGT is currently investigating in more detail the sources and scale of the emissions caused

⁸ Under the proposals set out in this document this will be Special Condition 8C: Procurement of Operating Margins.

⁹ This condition will be renumbered to 8D under these proposals.

by its operation of the National Transmission System (NTS) more broadly, including venting activities from assets other than compressors.

2.12 Decisions about how best to manage operational emissions, including venting, involve a significant degree of interaction between NGGT's SO and TO roles. Broadly, emissions can be reduced either through changes in operational procedures or capital investment in operational equipment. The former is generally considered an SO matter, whilst the undertaking and maintaining of capital investments is largely a TO role.

Our Initial Proposals

2.13 In our Initial Proposals we put forward a structure for a scheme that sets a threshold of venting 3007 tonnes of methane from compressors, minus an annual efficiency factor of five per cent. There would be no sharing factors. Beyond this, we set out two options. Option 1, our minded to approach, was an asymmetric structure, whereby NGGT would be penalised for emissions of methane (above a threshold) according to the Department of Energy and Climate Change (DECC)'s non-traded price of carbon, but it would not be rewarded for volumes of gas vented below the threshold. Option 2 was an incentive that would retain the same structure as the current scheme, with no caps and floors, emissions above or below the threshold being valued at DECC's non-traded price of carbon and no sharing factors, but without a deadband around the threshold.

Respondents' Views

2.14 Four respondents provided views on the GHG venting incentive. Three supported an asymmetric downside only scheme, while one felt a symmetrical scheme would be more appropriate for promoting appropriate behaviours. Two respondents noted that it would be appropriate to review the scheme once work under C28 was available.

NGGT's Views

2.15 NGGT raised concerns about our proposals for an asymmetric incentive, which it considered does not promote appropriate behaviours and does not provide a fair balance of risk and reward. It argued that both options proposed by Ofgem are asymmetric in practice because the target would be lower than the optimal level of venting, would not adjust for changes in the operational environment and would not align with other obligations, output targets and investment allowances.

Our Final Proposals

2.16 **Taking account of responses our Final Proposal is for a modified version of Option 1 in our initial proposals.** The scheme will run for three years, it will be asymmetric and retain the existing target (3007 tonnes) minus an efficiency factor of three per cent for each of the three years of the scheme. The resultant targets for each year are set out in Table 2.1.

Table 2.1: Proposed targets for Greenhouse Gas Emissions

Incentive Year	Target (tonnes of natural gas)
2013/14	2,917
2014/15	2,829
2015/16	2,744

2.17 As in the current scheme, NGGT’s penalties for emissions above the target will be calculated using DECC’s non-traded price of carbon and taking into account the global warming potential of methane (21 times the global warming potential of CO₂ over a 100 years time horizon).

2.18 At the conclusion of the incentive period, Ofgem is minded to propose a five year scheme that restores an upside incentive for NGGT. This is conditional upon NGGT providing a satisfactory methodology for calculating emissions under the new incentive and providing independently verified emissions data under the new incentive, that both meet generally accepted greenhouse gas accounting principles. These principles will be set out in the RIGs. NGGT should also satisfactorily complete the scheme of work, and through this work provide Ofgem with information to enable it to expand the scope of the incentive.

2.19 Should NGGT identify any capital expenditure (capex) investments that might mitigate methane emissions, it may make proposals in its business case as part of the RIIO-T1 mid-point review.

Residual balancing

2.20 The current SO balancing incentive comprises two elements: a price performance measure (PPM) and a linepack performance measure (LPM).

- The PPM incentivises NGGT to minimise the impact of trades that it takes to balance supply and demand on the market on a daily basis.
- The LPM incentivises NGGT to ensure that the volume of gas in the system (the linepack) at the end of each trading day is similar to that at the start of the gas day.

Our Initial Proposals

2.21 In our Initial Proposals we set out a residual balancing scheme based on the existing scheme to be put in place for eight years from April 2013. We also proposed to put in place an uncertainty mechanism that enables the Authority to reopen the scheme (but not within the first four years) should within day flows on the system change to the extent that the balancing role of the SO on the day had altered to the extent that the scheme was no longer fit for purpose.

2.22 We considered that this proposal would provide an incentive on NGGT to continue to improve its performance in light of expectations of changing flows (including increasing volatility within day) on the network. We also considered that this proposal provided predictability in respect of NGGT’s role as residual balancer.

Respondents' Views

2.23 Four respondents commented on our Initial Proposals for the residual balancing incentive scheme. All of them supported our proposal to maintain the current incentive structure and parameters. Two respondents believed that an eight year scheme was appropriate, whilst one respondent considered that a potential review of the scheme after four years would provide some comfort to NGGT. One respondent was concerned about the suitability of the incentive for eight years and not having the possibility to reopen the scheme however unsuitable it may be.

NGGT's views

2.24 NGGT did not agree with our Initial Proposals. NGGT noted that our proposal for setting fixed targets for eight years would not adapt to changes in the operational environment. It considered that in longer term schemes there is a significant potential for the incentive to become ineffective and that, given the uncertainty over future supply and demand patterns, Ofgem should give further consideration to the introduction of a mid point review. NGGT proposed to reopen the scheme when market indices diverged significantly from current values, for example, when shipper imbalance rose above 3.5mcm (25 per cent above our proposed 2.8mcm linepack target).

2.25 In line with the proposals put forward in its Business Plan, NGGT proposed to link the PPM target to market price spreads and the LPM target to the previous year's aggregate shipper imbalance. These target adjusters would either be applied each year or by indexing the target to the previous rolling 12 months.

2.26 Regarding the PPM target, NGGT disagreed with our proposal to maintain the current performance measure, that is, a price spread as a percentage of System Average Price (SAP)¹⁰. NGGT argued that to achieve the 1.5 per cent target it would have to trade in a range of less than 0.9p/therm, which is about the same level as the default cashout differential. NGGT considered that this would mean it would incur a loss when trading beyond the cashout price to incentivise the market to balance. NGGT proposed to set a price spread target in p/therm in line with market prices instead of as a percentage of SAP. It considered that this would allow it to set an appropriate incentive for the market to self balance and minimise the cost of residual balancing.

2.27 NGGT also believed that its role and performance as residual balancer is currently undervalued. It proposed to align the value of good performance to the default cashout differential.

2.28 NGGT also proposed to introduce an exceptional event adjuster for the linepack incentive following an exceptional event on the NTS. NGGT proposed that this adjuster would suspend the linepack target either when the linepack change is greater than eight mcm, following specific events (e.g. Operating Margins utilisation, a Gas Deficit Warning or a Daily Margin Notice¹¹) or could be requested following a

¹⁰ The SAP is calculated daily as the sum of all gas balancing charges divided by the sum of all balancing transactions quantities in respect of that gas day.

¹¹ The latter two replacing the Gas Balancing Alert following implementation of UNC Modification 415.

significant event impacting end of day balancing that does not fall under these categories. NGGT proposed that on the following gas day, the linepack incentive would have a wider target linepack range but would be downside only so as not to penalise NGGT when restoring linepack to the level seen before the event.

Our Final Proposals

2.29 As we set out in our Initial Proposals, we believe that the previous market environment does not necessarily reflect market conditions at the moment when the incentive scheme is applied. Moreover, we believe that NGGT's proposals would introduce excessive complexity. The update of targets would entail continuous recalculation of the incentives' sharing factors, caps and floors, reducing transparency vis a vis customers.

2.30 We do not consider that NGGT's proposal for a price incentive target and performance measure calculated as an absolute value (p/therm) instead of a percentage of SAP is an appropriate measure. As NGGT recognises, a target based on the price spread of NGGT's balancing trades would require adjustments as market conditions change. The price spread depends on the level of market prices, which may not necessarily remain stable over the scheme period. Also, a p/therm fixed target may not represent an appropriate benchmark even in the short term if prices are volatile.

2.31 In addition, the objective of the price incentive is to encourage NGGT not to enter the market when possible (NGGT receives the maximum incentive payment in days when it does not enter the market), and when it does, to minimise the effect of its balancing actions on market prices. A target that is not related to the SAP may result in NGGT trading at prices away from the SAP, while still staying within the allowed spread, potentially resulting in a larger impact on the market.

2.32 Although it is important that the actions taken by the SO should provide users with strong economic incentives to balance their portfolios, NGGT has proposed that the lower level of the PPM is limited by the default cashout price. We do not consider that this proposal is consistent with the objective of the scheme being to limit the impact of NGGT's balancing trades on the market. In particular, we have concerns that this proposal may provide an incentive to NGGT to trade at prices above the default cash out price thereby always setting a cashout price when it enters the market.

2.33 Regarding NGGT's proposal for increasing the value of the incentive, in our Initial Proposals we expressed our concerns that the value proposed by NGGT would effectively double the value of the incentive, and that the annual recalculation of this value would result in annual changes to the incentive parameters. Stakeholders have also expressed their disagreement with this proposal. Also, the change to the default cashout price and new arrangements on alerts to the market as a result of the implementation of UNC Modification 415 should increase the incentive on users to balance their own positions, therefore reducing the need for residual balancing trades.

2.34 We do not agree with NGGT's view that a specific exceptional event adjuster for the linepack incentive is required. Should an "exceptional event" occur (e.g. a gas supply emergency), it is likely to impact more than one incentive at the same time.

We are therefore proposing mechanisms to deal with uncertain events as explained in Chapter 3 of this document.

2.35 We recognise that in setting long term schemes there is a risk that changes in the operating environment result in these schemes being no longer fit for purpose. In particular, in respect of the residual balancing scheme, we set out in our Initial Proposals our intention to put in place a mechanism that enables the Authority to reopen the scheme should within day flows on the system change to the extent that the balancing role of the SO has altered to the extent that the scheme is no longer fit for purpose. We also proposed that this mechanism should not be applied before the 2017/18 incentive year.

2.36 We continue of the same view and we propose that the Authority would be able to reopen the residual balancing scheme under the following circumstances: i) there is material evidence that within day volatility of gas demand has resulted from changes in CCGT operation as a consequence of increased level of wind generation, ii) the levels of within day volatility of gas demand have severely impacted on NGGT's attainment of the residual balancing targets, and iii) the Authority has consulted interested parties¹².

2.37 **Our Final Proposals are therefore for the current scheme and all of its associated parameters to be put in place for each of the eight years from April 2013 to March 2021.** Annual payments would be capped at £2million and the floor would be set at -£3.5million. The parameters of the scheme are summarised in Table 2.2.

Table 2.2: Parameters for the Residual Balancing Scheme

	PPM	LPM
Target	Difference between maximum and minimum price of NGGT's balancing trades: 1.5 per cent of SAP	Daily difference between opening and closing linepack: 2.8 mcm
Daily maximum payment (£)	1,500	4,000
Daily maximum penalty (£)	-30,000	-30,000

Unaccounted for Gas

2.38 Unaccounted for gas (UAG) is that energy which remains unallocated after accounting for all measured inputs and outputs from the NTS: Own Use Gas consumption, CV shrinkage and the change in the NTS linepack¹³. NGGT is required

¹² It should be noted that this incentive will also be subject to the general uncertainty mechanism. The specific events set out here are included within the provisions of Special Condition 3E.

¹³ Whilst we note that even when the system is in balance there may be Unaccounted for Gas, we consider that it is an important component of ensuring that market participants are able to balance their own portfolios.

to purchase UAG on behalf of all system users. Prior to April 2012, NGGT was incentivised to minimise the volumes of UAG and the price at which it purchases these through the SO shrinkage and/or a separate volume incentive.

2.39 From April 2012, the direct financial incentive on the SO to reduce UAG volumes was removed in favour of a licence condition requiring it to investigate the causes of UAG and report on this work. This change was made because it was unclear to what extent NGGT could directly influence the levels of UAG. Currently the work that NGGT is required to undertake, and report on, under this condition includes (at least) meter validation and data analysis.

2.40 In its Business Plan, NGGT proposed that the current licence condition is retained for the eight year period, as it considers that this encourages NGGT to undertake projects to identify the causes of UAG. It noted that in recent years the main contributors to the volume of UAG have been meter errors and inherent meter tolerances. NGGT also noted that whilst it has a meter assurance role, the NTS connected meter assets are predominantly owned by Gas Distribution Networks (GDNs), Terminal Operators or large industrial end consumers. NGGT proposed to continue to investigate the causes of UAG through activities including meter validation witnessing and data investigations. NGGT recognised that as a party to all the agreements and as a recipient of component data, it is in the best position to apply analysis to this data and to share the results of this analysis with the meter owners and, where required and appropriate, the wider community. NGGT considered that this approach should serve to keep levels of UAG down and mitigate the risk of costs to users which could be passed on in turn to consumers.

2.41 NGGT proposed that twice yearly reporting on its UAG activities is included as a requirement within the incentive. NGGT also acknowledged that it is appropriate to include a review of whether the scope of activities remains correctly focussed during the period of the incentive.

Our Initial Proposals

2.42 In our Initial Proposals we set out that we did not consider that it was feasible to introduce a financial incentive on NGGT with regard to the volumes of UAG from April 2013. Our view was that with the current information available it is not clearly established the extent to which NGGT, in its role as SO, can directly influence the levels of UAG. Further, that the levels of UAG are very volatile and consequently, setting a credible target volume for UAG is impractical. For these reasons we could not be confident that any financial incentive payments would reflect NGGT performance in reducing volumes of UAG rather than windfall gains (or losses). We had therefore focused our Initial Proposals on measures to promote transparency and understanding about UAG.

2.43 We continued to consider that NGGT has an important role to play in identifying the causes of UAG and promoting transparency about UAG, and that NGGT is well placed to do this because of its unique access to data regarding gas flows over the NTS. We therefore proposed to update the current UAG licence condition so that NGGT is required to undertake and report on relevant projects in this area. In addition, given the concerns raised by users regarding the volumes of UAG, we also considered that NGGT should provide information in respect of the actual volumes of UAG.

2.44 We also thought that wider industry stakeholders can play a role in helping to identify the causes of UAG and promote transparency as these stakeholders have substantial industry expertise, and that this could be a valuable tool to help improve understanding of UAG. We set out our understanding that stakeholders are at a substantial informational disadvantage compared to NGGT as they do not have access to the same data, particularly data on the flows of gas across the NTS. To help overcome this disadvantage and enable wider stakeholder contribution to the understanding of UAG, we proposed to facilitate cooperation between stakeholders (or their appointed third party), including the sharing of data. We noted that if necessary we would amend NGGT's licence to set out the process for this cooperation.

2.45 We therefore proposed to put in place a reputational incentive for eight years on NGGT in respect of identifying the causes and reporting on the volumes of UAG. We considered that this incentive should be based on the current licence condition, but should be extended to include NGGT facilitating the help of wider industry stakeholders in investigating the causes of UAG. We considered that it may be appropriate to require NGGT to establish an industry workgroup to take forward this work. The licence condition would also include the requirement on NGGT to report on the volumes of UAG that have occurred.

2.46 We proposed to put in place this incentive for the eight year period. However, we expected that significant progress will have been made in reducing the levels of UAG in much shorter timescales. When the work undertaken by NGGT or wider stakeholders identified solutions to reducing the levels of UAG we would consider, along with NGGT and industry, the most appropriate way for those solutions to be implemented. This would include deciding whether to introduce any further incentives on NGGT as SO with regard to volumes of UAG.

Respondents' Views

2.47 Four respondents commented on this specific issue. Three of those supported the proposal for a reputational incentive, with two noting difficulties with setting a financial incentive. Two respondents commented on the importance of adequate reporting by NGGT. One respondent did not consider that a reputational incentive goes far enough and that a symmetrical financial incentive would be more effective.

NGGT's Views

2.48 NGGT agreed that it is not currently appropriate to put in place a financial incentive and that a reputational incentive was appropriate. Its view was that the scope of its activities should continue to include meter validation witnessing, data centres investigations, reporting and discussing findings with industry. It considered that discussions already take place at a number of industry fora and therefore it was not necessary to set up another industry workgroup. NGGT also raised concerns regarding an obligation to publish or share data where there may be commercial or legal consequences and noted that it was essential that the right safeguards are in place.

Our Final Proposals

2.49 Whilst we recognise the importance of reducing the levels of UAG, we do not consider that it is possible to put in place a financial incentive at this time. **Our Final Proposal is therefore to put in place a reputational incentive for eight years on NGGT in respect of identifying the causes and reporting on the volumes of UAG.** As set out in our Initial Proposals, this incentive should be based on the current licence condition, but should be extended to include NGGT facilitating the help of wider industry stakeholders in investigating the causes of UAG. However, we recognise that discussions already take place in a number of industry fora and therefore we are not proposing that NGGT should set up a separate workgroup. The licence condition also includes the requirement on NGGT to report on the volumes of UAG that have occurred. When the work undertaken by NGGT or wider stakeholders identifies solutions to reducing the levels of UAG we will consider, along with NGGT and industry, the most appropriate way for those solutions to be implemented. This will include deciding whether to introduce any further incentives on NGGT as SO with regard to volumes of UAG.

Provision of information

2.50 NGGT in its role as SO produces and makes public large volumes of information that are used for various purposes by a large number of stakeholders. The range of information provided by NGGT falls into a number of categories which include:

- Information on short term gas market conditions – for example, its day ahead demand forecasts
- Information on long/medium term market and network conditions/development – for example, the ten year statement and winter outlook
- Information about its internal process/decision making – for example, its methodology statement for the provision of incremental capacity

2.51 In its Business Plan, NGGT set out its view that the current financial incentive in respect of the availability and timeliness of information on its website has worked effectively to improve performance over the last six years such that the feedback it receives suggests that its customers are broadly happy with the level of service that they are currently receiving. NGGT therefore considered that it would be appropriate to remove the financial incentive with respect to the availability and timeliness of the critical market data that it publishes on its website, and for this to be replaced with a reputational incentive based upon the existing performance levels.

2.52 NGGT also set out its proposal to engage with stakeholders later this year in respect of its information provision strategy. Following feedback from this engagement process, NGGT expected to propose an overall information provision strategy reflecting stakeholder requirements. It considered that it may then be appropriate to also review the data publication incentive arrangements given wider industry developments.

2.53 NGGT did not put forward any proposals in respect of forward looking market information or transparency in respect of SO-TO interactions.

Our Initial Proposals

2.54 Our Initial Proposal was to remove the financial incentive on NGGT with regard to the availability and timelines of certain key data items and introduce a reputational incentive in its place. We considered that this activity can be considered business as usual and should be funded through the SO internal costs. Further, the extent of information provided and the way in which the NGGT website is used are very different compared to the situation when the current incentive structure was devised. We noted our view that stakeholder views are a more important influence on the extent and quality of information provided by NGGT than an incentive in the current form.

2.55 We also noted that NGGT already has a strong reputational incentive in place on the quality of its information provision. This is an area of NGGT's activity that a wide variety of stakeholders value and where NGGT's performance is relatively transparent. Therefore stakeholders take an active interest in this area and make their views known, both to NGGT and ourselves, when they consider NGGT's performance to be inadequate. We therefore proposed to build on this by introducing a more formal reputational incentive on NGGT with regard to the provision of market information. We proposed to put a licence requirement on NGGT to have in place an information strategy, this must include a description of how NGGT takes stakeholders' views into account and how it will continue to do so. This will ensure that NGGT continues to ensure its information provision develops in line with its stakeholders' expectations and requirements. We will also require NGGT to review its performance on a periodic basis and to report on its information provision performance on a monthly basis. We would also note that NGGT's performance in this area will be covered as part of the stakeholder and customer satisfaction surveys.

2.56 In respect of forward looking market information, our initial proposal was that given the importance of this information to the industry and more widely, a reputational incentive should be placed on NGGT to publish this information. We considered that given the amount of information that NGGT produces, it would be extremely helpful to users for a list of this information to be set out in a single place. We noted that we would work with NGGT to consider whether the most appropriate place for this to be set out is within its transportation licence or if there is an alternative location that would better enable the list to be kept up to date. We noted that we would also work with NGGT and stakeholders to ensure the contents of the list provide the most benefit to users.

Respondents' Views

2.57 One respondent commented on this issue and noted that any arrangement should consider the significant extent to which users rely on NGGT's website and therefore that a transparent and accountable measure of website data and availability needs to be in place.

NGGT's Views

2.58 NGGT agreed with the introduction of a reputational incentive but has also stated that it considers that licence obligations are not the appropriate approach for information provision. It noted that the impact of not having a financial incentive in

place means there is no funding available to develop systems to meet customers' requirements and to fund improvements in system performance that stakeholders have said they need. Also, NGGT noted that any obligations as part of a reputational incentive should be aligned with the outcome of the ongoing discussions that were taking place as part of the RIIO-T1.

Our Final Proposals

2.59 Whilst we recognise NGGT's concerns regarding funding, we consider that there is a strong reputational incentive on NGGT in respect of its provision of information. Further, that through the stakeholder and customer surveys, financial rewards would be available to it should stakeholders recognise its performance in this area. Further, we consider that NGGT may benefit as a result of its financial incentives (e.g. residual balancing) should it provide accurate and timely data to the market.

2.60 Our Final Proposal is to remove the financial incentive on NGGT with regard to the availability and timelines of certain key data items and introduce a reputational incentive in its place. The reputational incentive will also cover forward looking market information.

2.61 The drafting of the reputational incentive is such that it will enable NGGT to respond to changes in the gas market and the views of stakeholders over the eight year period.

Demand forecasting

2.62 NGGT publishes national gas demand forecasts over a range of timescales. This information assists market participants to make efficient decisions in balancing their supply and demand positions. Currently, NGGT is incentivised in respect of the accuracy of its gas demand forecast published at 13:00 on the day ahead of the gas day (13:00 D-1).

2.63 In its Business Plan, NGGT proposed to widen the range of forecasts covered under the demand forecasting incentive scheme to include, in addition to the 13:00 D-1 demand forecast, forecasts that NGGT already publishes ahead of the gas day at D-5, D-4, D-3 and D-2, i.e. between five and two days ahead of the gas day. NGGT also proposed the introduction of a new financial incentive on a Non Daily Metered (NDM) demand forecast.

2.64 In our Initial Proposals documents we set out our views on each of these forecasts. We proposed to introduce separate incentives for the 13:00 D-1 demand forecast and earlier forecasts published by NGGT. We also set out our views on the role of NGGT in providing NDM demand forecasts. In the following sections we summarise our Initial Proposals, NGGT's views and stakeholders' responses to our Initial Proposals consultation, and we set out our final proposals for the D-1 13:00 and D-2 to D-5 demand forecasting schemes.

D-1 demand forecast

Our Initial Proposals

2.65 In its Business Plan, NGGT argued that the current method of measuring forecasting performance (as a percentage of demand) is susceptible to the windfall impacts of unseasonably high or low demand, and proposed that its performance should be measured by the average absolute daily error (in mcm).

2.66 NGGT also considered that a number of factors (e.g. continued increase in the number of fast cycle storage sites, CCGTs flexing their output to reflect variations in wind generation) will make demand forecasting more challenging in the future. NGGT therefore proposed to adjust the incentive target to reflect actual demand volatility.

2.67 Our Initial Proposal was for a financial incentive on the accuracy of the 13:00 D-1 demand forecast. In response to NGGT's and stakeholders' concerns with the current performance measure¹⁴, we proposed a new performance measure that weights the daily forecast error by the proportion annual demand accounted for by each day's demand. This performance measure gives more weight to errors incurred in days of higher demand (e.g. winter) without the need to introduce separate targets for each season.

2.68 We also proposed to maintain the current demand forecasting target, converting the current percentage target¹⁵ into the new proposed measure (in the region of 7.5 mcm), with a maximum payment of £10m for a zero forecast error and a penalty floor of £-1.6m.

2.69 We proposed to set the target for eight years and did not consider it appropriate to include an adjuster for additional demand volatility over the incentive period. Longer term incentives should encourage continuous improvement over the length of the scheme. We considered that continuous improvement of demand forecasting in a context of increasing volatility means that the SO is able to learn and adapt to a more challenging environment, accomplishing similar levels of performance every year.

Respondents' Views

2.70 Five respondents commented on our proposals for the demand forecasting incentives. All respondents agreed with our proposal to continue incentivising NGGT on the accuracy of its D-1 demand forecast. Two respondents mentioned specifically that they agree with fixing the targets for eight years and three stakeholders supported the new calculation of the forecast error. One stakeholder did not support setting a fixed target for eight years.

¹⁴ The current forecast error is measured as a percentage of annual demand. This measure creates a risk of windfall gains or losses when demand is exceptionally low or high and does not provide an incentive to forecast winter demand more accurately than summer demand.

¹⁵ The target in 2012/13 (2.75%) includes an adjuster for new injection capability of short cycle storage facilities connected to the NTS at Holehouse Farm, Aldbrough, Holford Byley and Hilltop Farm. The target could increase from 2.75% up to a maximum of 3.1%, depending on the new injection capability connected.

NGGT's views

2.71 NGGT agreed with our proposed forecast error measure as it considered that this would respond to stakeholders' requests for a measure that is adjusted to increase the focus on winter or higher demand days.

2.72 However, NGGT argued that our proposal for the target is unachievable and therefore, performance would be likely to be at the floor. It also mentioned that although it is planning to increase its forecasting modelling capability, it will not be possible to keep pace with the increasing volatility of demand. NGGT expects that forecasting accuracy will reduce over the next eight years and it estimates that it will be able to forecast 62 per cent of day-to-day demand volatility.

2.73 NGGT proposed to include an adjuster for volatility, either in the form of an adjuster for total demand volatility, or adjusting for individual elements (e.g. storage injection capability). NGGT provided additional information to Ofgem in respect of the effect of fast cycle storage on its forecast error.

Our Final Proposals

2.74 We have taken into account the responses received to our Initial Proposals and we remain of the view that NGGT should be incentivised to produce accurate 13:00 D-1 demand forecasts.

2.75 We believe that this incentive should be in place for eight years as we consider that this fits our criteria for introducing longer term schemes where possible. The 13:00 D-1 demand forecasting incentive has been in place for several years and NGGT has been able to improve its forecasting performance. We expect that a long term scheme would encourage NGGT to improve its forecast accuracy even in a more challenging environment, taking into account the potential long term benefits it could obtain as a result of improving its performance.

2.76 We believe an accurate demand forecast is highly valued by users, and it is particularly important in a more volatile environment. We also recognise that increasing demand volatility will create additional challenges for NGGT to forecast demand accurately. However, since NGGT in its role as SO should be able to think long term and adapt to a changing environment, we are not convinced that increasing demand volatility should necessarily translate into increasingly poorer performance and therefore, we do not believe that an adjuster for total additional demand volatility is appropriate.

2.77 Based on the information provided by NGGT, we propose to include an automatic adjuster to the demand forecasting target for additional fast cycle storage injection capability that comes on line, similar to the adjuster that is currently applied to the demand forecasting incentive scheme. Storage has been one of the main components of demand forecast error, mainly as a result of volatility introduced by new fast cycle storage. The target adjuster would increase the incentive target by 0.038 mcm/day per each mcm/day of additional fast cycle storage injection capability that comes on line. This adjustment is based on historical information on the contribution of fast cycle storage to the average forecast error. This adjuster would decrease exponentially for subsequent years following the increase in storage capacity.

2.78 Our Initial Proposal was for a target in the region of 7.5mcm, which was equivalent to the current target level. We have observed that NGGT hit the floor of the demand forecasting incentive last year, and that a similar outcome is likely this year. NGGT believes that our proposed target is unachievable and has proposed to set the target based on its recent performance (9.37mcm). Although we recognise that in order for the incentive scheme to be effective the target should not be set at a level that NGGT is not likely to achieve, we believe that the target should be challenging enough to drive improvements.

2.79 Our Final Proposal is therefore for a financial incentive to be implemented on the accuracy of NGGT's D-1 demand forecasts. This incentive would be in place for eight years.

2.80 The target would be set at 8.5 mcm, with a £10m payment for a zero forecast error and a penalty floor of £-1.5m after an average forecast error of 9.35mcm. The target would be adjusted for additional fast cycle storage capability that comes on line during the incentive period.

D-2 to D-5 demand forecasting

Our Initial Proposals

2.81 Considering stakeholders' views and NGGT's Business Plan, we proposed to introduce an incentive on the accuracy of NGGT's D-2 to D-5 demand forecasts. We observed the difference in forecast accuracy between NGGT's incentivised forecast (D-1 13:00) and its other forecasts, and recognised there was scope for improvement. Our proposal was for a bundled performance measure across the four forecasts, calculated as the average of the forecast error of each individual demand forecast. We proposed that as this was a new scheme, it would initially be set for two years.

2.82 We noted that after the D-1 13:00 demand forecasting incentive was introduced in October 2006, NGGT's performance improved significantly, with a reduction of the forecast error of over 28 per cent. Based on this improvement, but acknowledging that earlier forecasts are likely to be less accurate, we proposed to set the target for 2013/14 at 14.38 mcm, and for 2014/15 at 12.78 mcm, which represent improvements of ten per cent and 20 per cent respectively over NGGT's average performance in the last three years.

2.83 Our proposal was for a maximum payment of £10m for a zero forecast error and a floor of -£0.5m. We also set out that NGGT's performance would be published for each forecast separately to promote transparency and help inform any future scheme.

Respondents' Views

2.84 We received five responses on this area. Four respondents agreed with our proposal for an incentive on NGGT to improve its D-2 to D-5 demand forecasts, although two of them considered that the maximum payment under the incentive should be lower. One respondent mentioned that the relative weights of the D-1 and the D-2 to D-5 incentives should favour the D-1 forecasts. One respondent did not agree with the introduction of this incentive.

NGGT's views

2.85 NGGT did not consider that the target reductions set out in our Initial Proposals were appropriate. NGGT proposed to set the target based on its recent performance, with an adjustment for the difficulty of the demand forecasting environment (similar to the adjustment proposed for the incentive on its D-1 forecast), and a mid-point review to ensure that the incentive remains effective. NGGT presented further information to Ofgem showing how the introduction of the D-1 forecast had had an impact on its earlier forecasts.

Our Final Proposals

2.86 We agree with stakeholders that although there is value in NGGT producing earlier forecasts, the incentives should be set such that NGGT does not lose focus on the accuracy of its D-1 13:00.

2.87 Having received additional information from NGGT regarding the improvement in its forecasts following the introduction of the D-1 incentive, we agree with NGGT that the target should be set at the level of its recent performance. We therefore propose to set the target at the level of NGGT's average performance over the last three years. This target would be fixed for the two years of the duration of the scheme.

2.88 As opposed to the case of the D-1 13:00 demand forecasting incentive, we do not believe that an adjustment for volatility is appropriate for this scheme. In the case of the D-1 demand forecasting scheme, we are proposing to set the target based on the current target, not on recent performance. Since for the D-2 to D-5 incentive we are proposing to set the target at the level of recent performance, we expect to observe improvements in the short term. Also, as we set out in our Initial Proposals, and in response to stakeholders' concerns regarding the complexity of the incentive schemes, we believe that the incentive schemes should be kept as simple and transparent as possible.

2.89 Our Final Proposal is for a financial incentive to be implemented on the accuracy of NGGT's D-2 to D-5 demand forecasts for two years.

2.90 The target would be set at 16 mcm (NGGT's average forecast error over the last three years). Under this scheme NGGT would receive a payment of £1m for a ten per cent improvement over the target, and would have to pay £1m for a forecast error of ten per cent above the target. The penalty floor would be set at £-1m.

Non Daily Metered (NDM) forecast

2.91 In our Initial Proposals we considered that it was not appropriate to introduce a new incentive on NGGT in respect of the production of NDM demand forecasts. Our view was that NGGT had a very limited role in the development of this forecast.

2.92 Four respondents commented on this proposal. Three respondents agreed with our view that the development of accurate NDM forecasts should be taken forward by the Operators of the GDNs. One stakeholder believed that NGGT had a

role since NGGT is a voting member of the Demand Estimation Sub Committee (DESC) whose remit includes the provision of the NDM forecast.

2.93 In its written response to our Initial Proposals, NGGT recognised that DNOs could be incentivised to provide an accurate NDM demand forecast. NGGT also commented that it wanted to understand stakeholder feedback in this area.

2.94 Taking into account stakeholder feedback in this area, and considering that the NDM forecast is already produced by the DNOs, we continue to consider that it is not appropriate to incentivise NGGT in respect of the production of this forecast.

Maintenance

2.95 We set out in our Initial Proposals that over a period of time stakeholders have raised concerns regarding NGGT's maintenance planning and in particular, the potential for stakeholders to incur financial loss as a result of NGGT making short term changes to its maintenance plan.

2.96 In its Business Plan, NGGT noted that stakeholders had asked it to improve its flexibility, in particular, with regard to how and when it carries out maintenance on the NTS. In response to these requests, NGGT set out an approach that included the introduction of incentives to promote flexibility where it is valued by its stakeholders and to encourage efficient planning on the NTS. In particular, NGGT set out an approach to include:

- earlier and better communication of its outage needs to affected parties to enable better alignment of outages;
- a financial incentive to reward good performance where it can reduce the number of changes made to its year ahead maintenance plan compared to a benchmark based on historic performance;
- a financial incentive to use an efficient level of maintenance days; and
- ensuring all parties are aware of the services it offers allowing them to pay the incremental costs of working flexibly outside normal working practices or making outages to meet their needs where this is of particular value to them (e.g. taking outages outside normal working hours such as at weekends).

Our Initial Proposals

2.97 In respect of two of the areas that NGGT put forward in its Business Plan: earlier and better communication of its outage needs and ensuring all parties are aware of the services it offers regarding paying incremental costs for additional services; we considered that these are services that NGGT should undertake as "business as usual". We therefore did not consider that it was appropriate to put in place an output incentive scheme in these areas. However, we considered that it is important that stakeholders are satisfied with the service that NGGT offers and therefore consider that these areas should be covered within the Stakeholder Survey.

2.98 Our Initial Proposal was that a financial output incentive could be placed on NGGT in respect of changes it makes to its Maintenance Plan and using an efficient level of Maintenance Days. However, we recognised that when introducing any new



incentive we need to be satisfied that we can set the baseline for performance at an appropriate level. In particular, that we needed to be aware of the impact that the introduction of an incentive scheme will have on a company’s focus and therefore the need to ensure that any initial benefits that accrue as a consequence of introducing a new scheme do not result in over rewarding the company. A further key concern in respect of setting an incentive that we raised was in respect of the number of maintenance days in order to ensure that NGGT is still incentivised to carry out an efficient level of maintenance, that is, that the incentive does not result in NGGT simply reducing the amount of maintenance it undertakes. Our Initial Proposals for financial output incentives in these two areas are set out below.

Maintenance days

2.99 Based on the information provided to us by NGGT, we considered that the target for in-line inspections (ILIs) (i.e. work necessary to undertake an In Line Inspection of a section of the licensee’s pipeline) and valve operations could be calculated as follows:

$$\begin{array}{l} \text{Target} \\ \text{number of} \\ \text{Maintenance} \\ \text{Days per year} \end{array} = \begin{array}{l} \text{Target number of} \\ \text{Maintenance Days} \\ \text{for ILI per year} \end{array} + \begin{array}{l} \text{Target number} \\ \text{of Maintenance} \\ \text{Days for Valve} \\ \text{Operations} \end{array}$$

2.100 With the target number for the ILIs calculated as:

$$\begin{array}{l} \text{Target} \\ \text{number of} \\ \text{Maintenance} \\ \text{Days for ILI} \\ \text{per year} \end{array} = \sum_{\text{Each Short ILI run}} \begin{array}{l} \text{Benchmark} \\ \text{for Short ILI} \\ \text{run} \end{array} + \sum_{\text{Each Long ILI run}} \begin{array}{l} \text{Benchmark} \\ \text{for Long ILI} \\ \text{run} \end{array}$$

2.101 We agreed with NGGT’s proposals regarding the form of the data to be used to set the benchmark. However, based on the information provided to us by NGGT and our view that any initial target should ensure that the company is not over rewarded, our proposal was that the target for maintenance days for valve operations and ILIs should be as set out in Table 2.3. These targets required the same level of improvement from the baseline data provided as set out previously for the new demand forecasting scheme (i.e. 10 per cent in year 1 and 20 per cent in year 2). Based on the data that NGGT had provided, this would equate to a target in the region of 150 days for 2013/14.

Table 2.3: Proposed targets for Maintenance Days

Incentive year	Target for each ILI Short run	Target for each ILI Long run	Target for Valve Operations
2013/14	4.005	5.240	42.3
2014/15	3.560	4.660	37.6

2.102 NGGT had proposed that each day that changes from the target is valued at £50k, with an overall limit of ±£1 million (i.e. allowing for a maximum increase or decrease of 20 days away from the baseline). We noted that NGGT did not provide any evidence as to why it considered each day should be valued at £50k.

2.103 Our initial view was that £50k seemed a relatively high payment for NGGT to receive for each day's reduction in maintenance. Our view was that £20k may be a more appropriate level of payment. This would enable the overall limit to remain at ±£1 million, but would enable up to 50 days change to be covered.

2.104 Our Initial Proposal was for a financial incentive to be implemented in respect of the number of maintenance days. The target would be calculated as set out above. We proposed a value of £20k for each day higher or lower than the target, with a cap and floor of ±£1 million per year.

Change in maintenance days

2.105 NGGT had provided information to Ofgem in respect of its 2011 maintenance season where it had instigated changes to a formal maintenance notification at an offtake site on 25 occasions, of which ten were at direct connect sites. NGGT noted that some of these changes could relate to the same piece of maintenance, where NGGT requests a change on more than one occasion. This compared to 139 total formal maintenance notifications. NGGT also provided us with some data in respect of the 2010 maintenance season, when NGGT instigated 16 changes to 109 formal notifications.

2.106 We recognised the concerns that users have with NGGT changing pre agreed maintenance plans. However, we also set out our concerns with setting an incentive based on the information that was currently available to us.

2.107 Given the above, our Initial Proposal was for a financial incentive that was as simple and as transparent as possible, but one that we consider should reflect the concerns that have been raised by users. Based on this we illustrated how such a scheme could operate. For 2013/14 a target could be 18 NGGT instigated changes to a formal maintenance notification, and 16 changes for 2014/15, based on a baseline taken as an average of the two years of data. The value for each change to this baseline could be £50k, with a cap and floor of ±£0.5 million (i.e. a total of ten changes in either direction) per year. We noted that we would continue to work with NGGT to ensure that the data on which any baseline is set is fit for purpose.

2.108 Our Initial Proposals were that both of the maintenance schemes should be set for two years and that they should be reviewed in time for a scheme, as appropriate, to be set for implementation from April 2015.

Respondents' Views

2.109 Five respondents commented on our Initial Proposals, four of whom welcomed our Initial Proposals to introduce incentives in respect of NGGT's maintenance planning. One respondent considered that NGGT works flexibly and in collaboration with users in this area and therefore it did not see the need for specific incentives. This respondent considered that if an incentive was introduced, it would be more

meaningful that the affected party was compensated directly instead of via adjustments to the commodity charge.

2.110 Two respondents agreed that it was appropriate for the schemes to be set for two years. These respondents also noted that the proposal does not take into account customer instigated changes. One of them suggested that an incentive in this area could be considered as part of the review after two years if it is not possible to have it before Final Proposals. One other respondent, whilst supporting the incentive believed that focusing only on changes instigated by NGGT may be misleading since the original plan may be unsatisfactory. It considered that NGGT should focus more on accommodating users' preferences in the original maintenance plans. No respondents commented specifically on the scheme parameters.

NGGT's Views

2.111 In respect of the use of maintenance days incentive, NGGT considered that the targets and efficiency rates proposed were not appropriate because of technical limitations and because the current performance already includes work to minimise impact on users. NGGT believed the performance measure should be weighted according to the number of users impacted.

2.112 In respect of the changes to planned maintenance days incentive, NGGT believes the benchmark should be proportional to the number of maintenance days called instead of a fixed number of days. Further, it considered that the yearly reductions to the target proposed by Ofgem are unrealistic and that the target should be set based on current performance.

2.113 NGGT also considered that the relative value of both incentives should be the same (not £20k and £50k). NGGT considered that if the value was not aligned there is risk of perverse outcomes. NGGT suggested that if the values were not aligned, NGGT initiated changes to reduce the number of maintenance days should not be classified as changes for the purpose of the "changes to planned maintenance days" incentive.

Our Final Proposals

2.114 We have taken into account the responses received to our Initial Proposals, and have also continued to bear in mind our view that a financial incentive in respect of maintenance should be as simple and as transparent as possible, but one that we consider reflects the concerns that have been raised by users. Importantly, we consider that the incentives schemes proposed should promote flexibility where it is valued by NGGT's stakeholders and encourage efficient planning of maintenance on the NTS.

2.115 In addition to the two specific financial incentives, we are also proposing a reputational incentive that will require NGGT to focus more on accommodating users' preferences in the original maintenance plans and also to collect accurate data, such that the incentives proposed may be developed as appropriate for implementation from April 2015.

2.116 In respect of one respondent's view that the affected party should be compensated directly instead of via adjustments to the commodity charge, we would



note that such a proposal could be implemented via the UNC and therefore, that the respondent concerned could raise such a modification.

Maintenance days

2.117 We note NGGT’s view that the performance measure for this incentive should be weighted according to the number of users impacted. However, we are concerned that adding this extra dimension to the scheme at this stage may add a level of complexity and reduce the transparency of the scheme such that it may lead to unsatisfactory outcomes. For example NGGT focussing its planning on maintenance that may have a minimal effect on a large number of users, compared to another piece that has a significant effect on only one user. However, as part of its reputational incentive, NGGT will be required to collect accurate data in respect of the number of customers affected by each piece of maintenance.

2.118 We recognise NGGT’s concerns that the targets and efficiency rates proposed were not appropriate because of technical limitations and because the current performance already includes work to minimise impact on users. We would also note that in setting this new incentive, the initial aim is to ensure that NGGT takes better account of the requirements of its stakeholders when planning its maintenance, and therefore it is important that the parameters of the incentive are such that NGGT is in a position to adapt its behaviour accordingly. We therefore consider that for the two years of this incentive, the target for each component is set at a five per cent level of improvement compared to NGGT’s current performance. The targets for each type of maintenance for the two years are set out in Table 2.4.

Table 2.4: Targets for Maintenance Days

Incentive year	Target for each ILI Short run	Target for each ILI Long run	Target for Valve Operations
2013/14	4.23	5.53	44.65
2014/15	4.23	5.53	44.65

2.119 In our Initial Proposals we set out our view that £50k seemed a relatively high payment for NGGT to receive for each day’s reduction in maintenance. Our view was that £20k may be a more appropriate level of payment. This would enable the overall limit to remain at ±£1 million, but would enable up to 50 days change to be covered. We continue to consider that this is an appropriate level of payment in respect of each day’s reduction from the maintenance plan, and that minimising changes from the agreed maintenance plan is of greater value to NGGT’s Stakeholders.

2.120 Our Final Proposal is for a financial incentive to be implemented in respect of the number of maintenance days. The target would be calculated as set out above. We propose a value of £20k for each day higher or lower than the target, with a cap and floor of ±£1 million per year.

Change in maintenance days

2.121 We recognise that respondents noted that the proposal did not take into account customer instigated changes. We agree with the respondent who suggested that an incentive on this area could be considered as part of the review after two

years. NGGT as part of its reputational incentive will be required to collect the relevant data such that an appropriate incentive could be put in place from April 2015.

2.122 We agree with NGGT that it would be more appropriate for the incentive target to be set in proportion to the number of maintenance days called instead of a fixed number of days, in order to take into account the variations in the volume of maintenance required on the NTS from year to year.

2.123 As with the number of maintenance days incentive, we also recognise NGGT's concerns with the targets and efficiency rates proposed. We therefore consider that for the two years of this incentive, the target for each component is also set at a five per cent level of improvement compared to NGGT's current performance.

2.124 The data provided to us by NGGT, gave 16 notices of change from 109 planned notifications (14.7 per cent) in 2010 and 25 notices of change from 139 planned notifications (18 per cent) in 2011. NGGT has subsequently provided us with data for 2012, which gave 22 notices of change from 167 planned notifications (13.2 per cent). For the target for this scheme, we propose taking the average of these three percentages and reducing by five per cent and multiplying this by the number of days of planned maintenance.

2.125 Our Final Proposal is for a financial incentive to be implemented in respect of the change in maintenance days. The target would be calculated as set out above and would therefore be set at 14.5 per cent for each of the two years. We propose a value of £50k for each change higher or lower than the target, with a cap and floor of ±£0.5 million (i.e. a total of ten changes in either direction).

Shrinkage cost

2.126 NTS Shrinkage refers to gas and electricity that is used to operate NTS compressors for system operation purposes (Compressor Fuel Usage - CFU) energy that is delivered but cannot be billed due to local differences in the calorific value of gas (CV shrinkage) or gas unaccounted for by the entry and exit measurement and allocation processes (unaccounted for gas). Shrinkage gas and electricity needs to be bought by the SO in its capacity as Shrinkage Provider under the UNC.

2.127 The objective of the incentive is to incentivise the efficient purchase of the elements of shrinkage gas. We consider that this means:

- NGGT should seek to minimise the cost at which it purchases gas and electricity whilst limiting the risk to which it exposes consumers to.
- NGGT should have incentives to reduce the volume of shrinkage where it is able to influence these.

Our Initial Proposals

2.128 We had previously set out that we considered the shrinkage cost incentive scheme should take the same form as the current scheme, in that it is a bundled scheme in respect of the volume of compressor fuel usage, CV shrinkage and Unaccounted for Gas, with the volumes then being multiplied by a reference price to form a target. We also set out that we would set, as appropriate, the methodology

for calculating the parameters (target, sharing factors, caps, floors) or the parameters themselves for eight years from April 2013.

2.129 We had also previously set out the need to develop the methodology for setting and updating the targets, which would require NGGT to update its modelling methodology in respect of compressor fuel usage and future gas flows. We noted that NGGT's plans to further roll out its electric driven compressor replacement programme need to be fully captured within its shrinkage costs. Given these close interactions with the TO we had set out our proposal to increase the sharing factor for the shrinkage cost scheme to between 40 and 50 per cent.

2.130 In our Initial Proposals we took account of NGGT's views as set out in its Business Plan and proposed to implement a cost incentive in respect of NTS Shrinkage for the gas SO from April 2013 for eight years.

2.131 Our proposals were for an incentive scheme that takes the same format as the current scheme, but with a number of enhancements that we considered would enable it to be set for an eight year period. The scheme would therefore incentivise NGGT to minimise its cost of procuring gas and electricity for its shrinkage requirements (compressor fuel usage, CV shrinkage and UAG) and also to incentivise it in respect of its efficient use of its compressors and in minimising the volumes of CV shrinkage.

2.132 In its Business Plan, NGGT proposed to put in place a methodology statement that would enable it to forecast a baseline volume of the three components of shrinkage. However, we noted that it did not provide any detail regarding the information that would be contained within the statement or the process for how the methodology would be updated.

2.133 We agreed with NGGT that it would not be possible to set a target volume for the baseline level of shrinkage for each of the eight years at the outset of the scheme. We also agreed that putting in place an agreed methodology would enable the volume to be calculated on a pre-agreed basis and therefore would overcome this issue. We considered that the methodology should contain the following detail:

- UAG: for each quarter the target would be based on the average volume in the previous quarter and this methodology would only be amended if directed by the Authority as a result of new information regarding the drivers of UAG.
- CV shrinkage: would be based on the current methodology with the same carve outs that currently exist. NGGT would consider the effects of any new supply source on CV shrinkage, and if appropriate would request that the Authority directs an update to the methodology to take account of the effect of the new supply source.
- CFU (gas and electric): calculated based on NGGT's regression model of CFU vs. actual flows, using historic data. The coefficients from the regression would be updated on an annual rolling basis.
- CFU (review): By May 2016 NGGT should consider whether its regression model approach remains fit for purpose and if not, develop an alternative approach to be implemented from April 2017. If its regression model is retained for 2017 and beyond, NGGT should, as appropriate, keep it under review.

- CFU (electric drive rollout): detail as to how NGGT's electric drive replacement programme will be incorporated, including how the resultant reduction in gas CFU, and increased efficiency of compressor usage will be accommodated.

2.134 In order for users to be able to understand how the shrinkage volume target will be calculated for 2013/14, we considered it appropriate that NGGT consults with stakeholders on its methodology statement prior to the Authority issuing its Final Proposals towards the end of 2012. We noted that this consultation would also need to explain how NGGT proposes that the methodology is applied to its forecast of volumes for 2013/14.

2.135 Once the methodology statement is in place, we also proposed that it is subject to an annual audit requirement. The obligation would be for NGGT to hire independent examiners (at its cost) to verify that it has correctly applied the approved methodology.

2.136 We also agreed with NGGT's view that the forward price benchmarking methodology should be adjusted to better align with NGGT's energy purchases. Our Initial Proposal was therefore that for each quarter, the reference price for the baseline volume should be determined using the daily average of the quarterly forward price over the preceding nine month window¹⁶.

2.137 NGGT had also proposed that the baseline volume would then be adjusted to take account of the actual volume procured and that this volume should be priced at a short term reference price. Correcting the volume target in this way means that NGGT would be incentivised against the actual volume, which we agreed would be appropriate in respect of UAG.

2.138 NGGT proposed that this short term volume should be priced at a month-ahead reference price and in addition a swing allowance should be added. NGGT proposed that this swing allowance should be based on a market benchmark with an indicative value of £7.2million. This compared to a £2.2million figure for day ahead and within day trades at the current uplift value¹⁷.

2.139 Our proposal was that this short term volume should be priced at a short term reference price. As we have set out previously we noted that we have concerns regarding the necessity of the swing uplift. We therefore considered that this should not be included as part of the cost allowance. In order to take account of short term changes in volume, we considered that it may therefore be appropriate to use a shorter term reference price than month-ahead.

2.140 We agreed with NGGT that a number of additional ancillary costs that it incurs in procuring shrinkage are included in the target. NGGT considered these costs are: Distribution Use of System (DUoS) charges, electricity supplier and market costs. Our proposal was also that NGGT should have a target cost for Transmission Network Use of System (TNUoS) charges.

¹⁶ Prices quoted in the ICIS European Spot Gas Markets report.

¹⁷ The value of the uplift for 2012/13 is 0.1185p/KWh. The £2.2m figure is obtained by multiplying the net volume of day ahead and within day trades in 2011/12 by the value of the uplift in 2012/13.

2.141 NGGT also proposed that its energy efficiency volume is priced at the traded price of carbon in order to give an environmental target adjustment. Our proposal was for this adjustment to not be included in the scheme target cost. NGGT's compressors are already subject to the European Union Emissions Trading Scheme (EU ETS)¹⁸ and Carbon Reduction Commitment (CRC) Energy Efficiency schemes¹⁹ which provide NGGT with incentives to incorporate the environmental efficiency dimension into its decisions.

2.142 As outlined in our January 2011 document, we considered that it was appropriate to align the SO's incentive with respect to shrinkage with the TO's incentive rate, i.e. efficiency factor. Under the transmission price control for NGGT, our proposal is for an efficiency factor of 45 per cent. Our proposal was for the same sharing factor to be applied with respect to shrinkage. We noted that we would undertake further analysis on the target after NGGT had consulted with stakeholders on its methodology statement, and on that basis, we would consider whether NGGT's proposal to increase the cap and floor was appropriate.

2.143 We also noted that because of the inclusion of a forward reference price in the shrinkage incentive, provision was made in NGGT's transporter licence for the reference price to be in place during 2012/13 for the procurement of shrinkage gas to be delivered in 2013/14 based on the current incentive²⁰. We recognised that our Initial Proposals set out an alternative reference price for the procurement of gas, and also a forward reference price for the procurement of electricity that is more forward looking than the current incentive scheme. We noted that following the outcome of our Initial Proposals consultation, should our Final Proposals be for reference prices that amended those currently provided for in the transporter licence, we may need to make interim provision such that the reference price is not amended midway through NGGT's procurement period.

Respondents' Views

2.144 Four respondents commented on our proposals in this area. Three respondents agreed with our proposals including the need for a methodology statement and the changes to the reference prices. One respondent noted that the methodology statement needed to be written in a meaningful way. One respondent considered that the shrinkage incentive should be unbundled and, at the minimum, there should be a standalone incentive for UAG. This respondent disagreed with forecasting UAG volumes as the average volume in previous quarter.

NGGT's Views

2.145 NGGT considered that given that Ofgem did not propose to align the reference prices and volumes with balancing periods, it was important that separate funding of swing costs remains within the incentive. It also considered that there should be an

¹⁸ Details on this scheme, including implementation of Phase III of the EU ETS scheme can be found at www.decc.gov.uk/en/content/cms/emissions/eu_ets/eu_ets.aspx

¹⁹ Details on this scheme can be found at www.decc.gov.uk/en/content/cms/emissions/crc_efficiency/crc_efficiency.aspx

²⁰ Because of the month-ahead nature of the current forward price for electricity procurement, there is no similar provision in NGGT's transporter licence.

allowance for environmental costs and an environmental target adjuster. NGGT agreed that there should be a methodology statement for gas and electricity volumes and also agreed with increasing the sharing factors, caps and floors. However, NGGT considered that the sharing factor should be aligned with the GHG emissions incentive. NGGT also noted a number of areas that it considered required further clarification from Ofgem. These were: treatment of environmental costs; reference price for 2013/14 forward electricity procurement; prompt reference price; the differential between retail and wholesale electricity costs, which include supply costs and market costs; and the cap and floor.

Our Final Proposals

2.146 Based on the feedback received from NGGT and respondents to our Initial Proposals, **our Final Proposals are for a bundled shrinkage incentive scheme in respect of the volume of CFU, CV shrinkage and UAG, with the volumes then being multiplied by a reference price to form a target.** Our Final Proposals for the calculation of the volume component and the reference prices are as follows:

Shrinkage volumes

2.147 As set out in our Initial Proposals, and in line with NGGT's Business Plan, NGGT would be required to produce a methodology statement detailing the methods and principles on which NGGT calculates the volume target for both gas and electricity. The application of this methodology would be verified each year by an independent examiner hired by NGGT. NGGT would also consult on any modifications to its methodology statement.

2.148 NGGT has already published its first methodology statement setting out the forecast baseline volumes for 2013/14²¹. This methodology statement has been subject to consultation and it will be updated once the definitive form of the scheme is approved.

2.149 In line with our Initial Proposals, **our Final Proposal is that the volume target would consist of a baseline volume target and a short term volume target.** The baseline volume target would be forecast the year before according to the methodology set out in NGGT's shrinkage methodology statement. NGGT's published methodology statement sets out the methodology for calculating each component of the baseline volumes:

- CFU (gas and electric): calculated for each quarter based on NGGT's regression model of CFU vs. actual flows.
- UAG: for each quarter the target would be based on the average volume in the previous 90 days.
- CV shrinkage: to be based on the current methodology with the same carve outs that currently exist.

²¹ Available from the SO incentives section of the NGGT website
<http://www.nationalgrid.com/uk/Gas/soincentives/>

2.150 The short term volume target would be based on the difference between forecast and outturn volumes.

2.151 As set out in our Initial Proposals, the methodology would be reviewed if directed by the Authority as a result of new information regarding the drivers of UAG. Also, NGGT should consider whether its regression model approach remains fit for purpose and if not, develop an alternative approach to be implemented from April 2017. If its regression model is retained for 2017 and beyond, NGGT should, as appropriate, keep it under review.

Reference prices

2.152 Our Final Proposal for the reference prices of gas and electricity is that these prices continue to be a mix of forward and prompt prices. After the publication of our Initial Proposals, we have further developed our thinking on the methodology for calculating the reference prices, and on the suitability of a swing allowance. Our Final Proposals are:

- The forward reference price would be calculated as a nine-month rolling daily average ahead of the delivery quarter²². As we set out in our Initial Proposals, we believe that this price is better aligned with NGGT's energy purchases than the current reference price (i.e. 12-month average of forward prices on the previous year and fixed for the entire year).
- The short term reference price would be calculated as an average of week-ahead forward prices. This reference price is intended to provide a price reference closer to real time for NGGT's short term purchases of gas and electricity.

2.153 We recognise that there is a risk of NGGT incurring short term costs associated with the differences between its procurement for a flat profile and the actual requirements. In our Initial Proposals we addressed this concern by moving the reference price from a quarterly reference price to a week-ahead reference price, minimising the risk of high swing costs. We therefore proposed not to include a swing allowance for NGGT's short term purchases.

2.154 We recognise there is a likelihood of NGGT having to make buy or sell trades in the short term when compared to a weekly flat profile and that therefore, there is still a risk of NGGT incurring in swing costs (albeit much smaller when compared to being exposed to a month-ahead or quarter-ahead reference price). Based on further information provided by NGGT, we consider it is appropriate to include an annual swing allowance for both gas and electricity based on a reasonable expectation of future swing costs. **Our Final Proposals include a swing allowance of £2m (to be indexed to inflation) for each year.**

²² Based on the prices quoted in the ICIS European Spot Gas Markets report and ICIS Heren European Daily Electricity Markets.

Efficiency adjusters

2.155 As we expressed in our Initial Proposals, we agree with NGGT's view that it should be incentivised to purchase an efficient level of CFU and CV shrinkage, compared to a well defined benchmark. We therefore propose that the shrinkage incentive includes an adjuster that would increase the shrinkage target for an efficient level of CFU and CV shrinkage costs and would decrease the target for inefficient levels.

2.156 NGGT also proposed to maintain the adjuster for environmental efficiency introduced in 2009. As we expressed in our Initial Proposals, we do not consider that this adjuster is appropriate. First, NGGT's procurement efficiency would be already incentivised through the efficiency adjuster explained in the previous paragraph. An additional adjuster would reward NGGT twice for the same efficiency. Also, NGGT is already incentivised on its environmental performance through more general schemes, such as the EU ETS.

Treatment of ancillary costs

2.157 Regarding NGGT's proposal to include within the target the ancillary costs that it incurs in procuring shrinkage (DNUoS, electricity supplier and market costs), we continue of the view that the shrinkage target should include these costs equal to the actual costs that NGGT incurs and that there should be a target TNUoS cost. We also agree with NGGT that the target should include the environmental costs that it incurs (i.e. CRCEES, if applicable, and EUETS).

Sharing Factors, Cap and Floor

2.158 We set out in our previous consultation documents our intention to align the sharing factors applicable to the TO and SO where appropriate, and therefore, in our Initial Proposal document we proposed to apply the same sharing factor as under the transmission price control for NGGT to the shrinkage incentive. Feedback from stakeholders was supportive of this proposal and therefore **our Final Proposal is for a 45 per cent²³ sharing factor for the shrinkage incentive.**

2.159 We recognised that an increase in the sharing factor may require an increase on the cap and floor of the incentive in order for a reasonable range of outcomes to continue to be incentivised. We set out our intention to review the cap and floor once the methodology statement for the shrinkage volumes was published and consulted with stakeholders. We have taken into account the methodology proposed by NGGT and stakeholder feedback on this area and we believe that the cap and floor of the incentive should increase to reflect the higher sharing factor.

2.160 NGGT's proposal was for the incentive to cover the same range of costs as the current incentive (+/- £20m around the target). Under this proposal, the value of the cap and floor would almost double in comparison with the current scheme. We believe that the proposed methodology for calculating the volume targets and

²³ We note that this number is not to the same level of accuracy as under the transmission price control, however, we consider this to provide the appropriate level of alignment.

reference prices will drive NGGT’s performance closer to the incentivised region, in comparison with previous years (NGGT hit the cap in almost all the years when this incentive has been applied). **Our Final Proposal is for a cap of £7m and a floor of -£7m, which corresponds to an incentivised range of +/- £15.5m around the target.**

2.161 Our Final Proposals for the shrinkage incentive are summarised in Table 2.5.

Table 2.5: Summary of our Final Proposals for a Shrinkage cost incentive

	Long term	Short term
Volume	UAG: 90 day historical rolling average	UAG: Outturn
	CV shrinkage: (as in methodology statement) – based on network analysis	CV shrinkage: (Outturn – energy efficiency level)
	CFU: (as in methodology statement) – based on network analysis (initially continuation of regression modelling)	CFU: (Outturn – energy efficiency level)
Price	Nine month rolling average	Week-ahead
Swing costs	£2 million annual allowance to be increased in line with inflation	
Environmental costs	No environmental adjuster included	
Other costs	Include in target those costs NGGT has no control over	
Sharing factors	+/- 45%	
Cap/floor	± £7m	
Length	8 years	

3. General uncertainty mechanism and risk premium

For the gas SO we are proposing a general uncertainty mechanism, as discussed in this section. This section also sets out our proposals on why we do not consider it appropriate for NGGT to receive a risk premium as part of this incentive package.

Uncertainty mechanisms

Our Initial Proposals

3.1. In our Initial Proposals, we set out that we consider that it is appropriate to introduce a general uncertainty mechanism that will permit Ofgem to reopen the regulatory framework in certain extreme circumstances. We considered that this general uncertainty mechanism is particularly important since we are increasing the length of some of the schemes and this inevitably increases the risk that a scheme will become unfit for purpose at some point in its period of application, or that legislative change or other one-off events will significantly change the role of the SO.

3.2. We set out two broad sets of circumstances that could lead us to use the uncertainty mechanism:

- a) Firstly, where expected or unexpected 'events' that have a significant impact on the role of the SO occur. For example, the outcome of Electricity Market Reform or the outcome of our gas security of supply review could have significant implications for the role of the SO. Where the role of the SO is likely to change significantly, we envisaged a review of SO regulation triggered by the uncertainty mechanism which would involve looking at all the schemes in the round.
- b) Secondly, individual schemes, or sets of schemes, may become unfit for purpose. For example, an output may become irrelevant or a scheme may hit its cap or floor and appear likely to continue doing so in future years rendering the incentive for 'right' behaviours ineffective.

3.3. We also set out that our proposed mechanism would operate in a different way to the current income adjusting event (IAE) uncertainty mechanism, which we proposed to remove. We considered that the current IAE mechanism can be triggered in too many circumstances, potentially undermining the credibility of the targets and the strength of the incentives. We therefore proposed that the new uncertainty mechanism can only be triggered by the Authority. We considered that this would mean that there is more certainty that it would be triggered when NGGT is receiving payments under its SO incentive schemes as well as when NGGT is making losses under the schemes. We considered that this would ensure that individual incentive schemes are not continually being reopened at varying times over the period. We also proposed that NGGT can apply to the Authority to reopen a scheme or set of schemes under the uncertainty mechanism.

Respondents' Views

3.4. Five respondents commented on our proposals for uncertainty mechanisms, all of whom agreed with their introduction. Two respondents raised a concern regarding Ofgem's proposal to remove the ability of parties other than Ofgem to raise an uncertainty event.

NGGT's Views

3.5. NGGT raised several concerns regarding our proposals for an uncertainty mechanism. It considered that our proposals for a general uncertainty mechanism were not transparent enough and that the current IAE mechanism is fit for purpose and therefore, that it should be retained. NGGT also noted that we had not taken into account any of the specific uncertainty mechanisms proposed by NGGT.

Our Final Proposals

3.6. As set out in our Initial Proposals, we continue to consider that a general uncertainty mechanism is particularly important since we are increasing the length of some of the schemes and this inevitably increases the risk that a scheme will become unfit for purpose at some point in its period of application or that legislative change or other one-off events will significantly change the role of the SO.

3.7. We note the concerns raised by respondents in respect of the removal of the ability of parties other than Ofgem to raise an Uncertain Event. We have therefore set out mechanism whereby any party affected (including NGGT), or likely to be affected, can notify the Authority of an event which they consider an Uncertain Event²⁴. Following the notification of such an event, the Authority will then have to consider whether the event in question is an Uncertain Event and, if so, the impact (or potential impact) on the incentive schemes. The Authority would then, as appropriate, undertake a consultation process, prior to implementing any changes to the incentive schemes via the statutory licence modification process; any changes would be subject to appeal to the Competition Commission by relevant parties.

3.8. We consider that this approach provides sufficient transparency, whilst removing the possibility (via the IAE mechanism) of schemes that have been set for the long term being continually reopened as a result of short term, one-off events. We would note that we have retained the ability to reopen the schemes as a result of a force majeure event or a gas supply emergency, both as defined in the network code, under this general uncertainty mechanism.

3.9. In terms of the specific uncertainty mechanisms that NGGT proposed, a number of specific uncertainty mechanisms are incorporated into the individual schemes; e.g. the reference prices within the shrinkage scheme, setting the price performance measure in the residual balancing scheme in relation to SAP and the inclusion of a volatility adjuster in respect of short cycle storage in the D-1 demand forecasting scheme. However, we recognise that a significant event or events that are currently not foreseeable may have a significant impact on individual schemes.

²⁴ Uncertain Events are set out in the relevant licence condition.

Therefore our Final Proposal is that the scheme(s) may be reopened if it is no longer appropriate, which we expect to be highlighted, for example, by NGGT potentially meeting the cap or floor of a scheme for at least two consecutive years as a result of an event or series of events.

3.10. NGGT also set out in its Business Plan a proposal for the inclusion of a number of political/regulatory uncertainty mechanisms to be included as part of the overall package. In respect of the schemes set out in this document these were: the facilitation of European energy markets; changes to the GB regime (including as a result of the Electricity Market Reform and DECC's review of UK security of supply); and the impact of the Industrial Emissions Directive on compressor fuel usage and venting from compressors.

3.11. We agree with NGGT that there are a number of uncertainties regarding the political/regulatory environment, some of which are set out above, but we would also note that it is unclear at the moment if and how these (or any other developments in this area) may affect the incentive schemes set out in this document. We therefore consider that rather than specifying each specific event within the licence, it is more appropriate to set out a more general condition that enables the scheme(s) to be reopened should there be a change in the legal/regulatory framework that has, or is likely to have an impact on the incentive schemes.

Risk premium

3.12. In its Business Plan, NGGT set out its view that it considered that an ex ante risk premium of £3.3m a year for the gas SO is required to cover the residual risk within its proposals.

Our Initial Proposals

3.13. In our Initial Proposals we set out our view that the schemes that we are proposing, including the sharing factors, caps, floors and uncertainty mechanisms, adequately reflect the risks to NGGT. In addition, we considered that our initial proposals adequately managed the financial scope of the schemes. Therefore, we considered that the risks associated with the proposals are not significantly different to those the SO faces under the current schemes and as a result, we were not proposing that an additional risk premium is included as part of the incentive framework.

Respondents' Views

3.14. Five respondents commented on this issue, all of whom agreed that there was no requirement for a risk premium. One respondent noted that reopeners and individual scheme parameters are sufficient safeguards to remove the need for a risk premium. Another respondent commented that NGGT is sufficiently funded and organised to effectively manage risk, whilst another commented that the incentive regime should be designed to encourage appropriate actions and performance, and should not be viewed as an additional income stream to supplement business as usual processes.



NGGT's Views

3.15. NGGT disagreed with our Initial Proposal for not giving it a risk premium. NGGT stated that Ofgem should provide further justification as to why NGGT's proposal has not been included and that Ofgem should demonstrate how its proposals provide an appropriate risk premium or return to compensate the risks.

Our Final Proposals

3.16. As set out in our Initial Proposals, we continue to consider that our Final Proposals, including the sharing factors, caps, floors and uncertainty mechanisms adequately reflect the risks to NGGT.

3.17. We consider that the risks associated with these proposals are not significantly different to those the SO faces under the current schemes, and importantly we do not consider that the lengthening of some of the schemes increases the risk on NGGT. We therefore do not consider it appropriate to include a risk premium.



4. Appendices

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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 responses to the specific questions which we have set out at the beginning of each section heading and which are replicated below.

1.2. Responses should be received by **22 January 2013** and should be sent to soincentive@ofgem.gov.uk for the attention of:

Emma Kelso
Associate Partner
Wholesale Markets
Ofgem
9 Millbank
London
SW1P 3GE

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 Graham Knowles, Senior Economist, Wholesale Markets (020 7901 7103), email: graham.knowles@ofgem.gov.uk.

Chapter Two

Question 1: Do you consider that the proposed licence modifications appropriately reflect the Final Proposals as described in this chapter?



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

Please see separate document.

Appendix 3 – Glossary

A

The Authority/Ofgem/GEMA

Ofgem is the Office of Gas and Electricity Markets, which supports the Gas and Electricity Markets Authority (The Authority or GEMA), the body established by Section 1 of the Utilities Act 2000 to regulate the gas and electricity markets in Great Britain.

B

Balancing charges

Charges that National Transmission System (NTS) users pay for differences between their inputs and offtakes from the NTS and for differences between its nominated and delivered quantities.

Business Plan

In this document, it refers to the document prepared by National Grid Gas Transmission (NGGT) containing its proposals for the system operator (SO) incentives for the RIIO-T1 period.

C

Cap

The maximum incentive payment the SO is permitted to receive as part of an incentive scheme (this may also be subject to a 'sharing factor').

Capacity (gas)

The amount of natural gas that can be produced, transported, stored, distributed or utilised in a given period of time under network design conditions.

Capital expenditure (capex)

Expenditure on investment in long lived transmission assets, such as gas pipelines or electricity overhead lines.

Carbon footprint

Total amount of greenhouse gas emission caused directly and indirectly by a business or activity.



Consumer

In considering consumers in the regulatory framework we consider users of network services (for example, generators, users) as well as domestic and business end consumers, and their representatives.

Compressor Station

An installation on the NTS that uses 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.

Calorific Value Shrinkage (CV shrinkage)

The volume of the energy which cannot be billed due to calorific value capping under application of the Gas (Calculation of Thermal Energy) Regulations 1996 (amended in 1997). Calorific value capping creates a shortfall between the amount of energy delivered and the energy that customers are charged for.

F

Financeability

Financial models are used to determine whether the regulated energy network is capable of financing its necessary activities and earning a return on its regulated asset value (RAV) under the proposed price control. This financeability is assessed using a range of different financial ratios.

Floor

The maximum loss the SO can make as part of an incentive scheme (this may also be subject to a 'sharing factor').

G

Gas Distribution Networks (GDNs)

The GDNs maintain and operate the local gas networks that transport gas from the national transmission system (NTS) to homes and businesses throughout Great Britain (GB).

Gas Transporter (GT)

Formerly Public Gas Transporter (PGT). GT's are licensed by the Gas and Electricity Markets Authority to transport gas to consumers.

H

The Health and Safety Executive (HSE)

A public body responsible for regulating health and safety in Great Britain with the primary function to secure the health, safety and welfare of people at work and to protect others from risks to health and safety from work activity.



I

Interconnector

Equipment used to link electricity or gas systems, in particular between two Member States.

L

Licence conditions (obligations)

Obligations placed on the network companies to meet certain standards of performance. The Authority (GEMA) has the power to take appropriate enforcement action in the case of a failure to meet these obligations.

Linepack

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

Liquefied Natural Gas (LNG)

LNG consists mainly of methane gas liquefied at around -260 degrees Fahrenheit. Cooling and liquefying the gas reduces its volume by 600 times such that a tonne of LNG corresponds to about 1,400 cubic metres of methane in its gaseous state. LNG may be stored or transported by special tanker.

Low carbon economy

An economy which has a minimal output of greenhouse gas emissions.

N

National Grid Electricity Transmission (NGET)

NGET is the Transmission System Operator for Great Britain. As part of this role it is responsible for procuring balancing services to balance demand and supply and to ensure the security and quality of electricity supply across the Great Britain Transmission System.

National Grid Gas Transmission (NGGT)

The licensed gas transporter responsible for the gas transmission system, and four of the regional gas distribution companies.

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.

Net Present Value (NPV)

A NPV is the discounted sum of future cash flows, whether positive or negative, minus any initial investment.

Network charges

These are charges set for the use of network services.

O

On the day Commodity Market (OCM)

Enables anonymous financially cleared on the day trading between market participants. In its role as residual balancer, NGGT trades gas on the OCM to resolve imbalances.

Operating Margins (OM) (in gas)

Gas used to maintain system pressures under specific 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.

Outputs

What the SOs are expected to deliver, for example, the gas SO (NGGT) is expected to deliver efficient and timely connections.

Own Use Gas

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

P

Price control

The control developed by the regulator to set targets and allowed revenues for network companies. The characteristics and mechanisms of this price control are developed by the regulator in the price control review period depending on network company performance over the last control period and predicted expenditure in the next.

R

Reopeners

A process undertaken by Ofgem to reset the revenue allowances (or the parameters that give rise to revenue allowances) under a price control or incentive scheme before the scheduled next formal review date.



RIIO-T1

RIIO-T1 is the first transmission price control review under the new regulatory framework known as RIIO (Revenue = Incentives + Innovation + Outputs). The RIIO model builds on the previous RPI-X regime, but is designed to better meet the investment and innovation challenge by placing much more emphasis on incentives to drive the innovation needed to deliver a sustainable energy network at value for money to existing and future consumers.

S

Safety Case

A document required by the Gas Safety (Management) Regulations 1996. No person may convey gas without having a Safety Case accepted by the Health and Safety Executive.

Sharing factors

For cost incentives, these describe the percentage of profit or loss which the SO will have to bear if the relevant incentive performance measure falls below or exceeds the relevant incentive target. For output incentives, these describe the percentage of profit or loss which the SO will have to bear if the relevant incentive performance measure exceeds or falls below the relevant incentive target.

Shrinkage

Shrinkage is a term used to describe gas either consumed within or lost from a transporter's system. For example, shrinkage can result from gas transmission companies using gas within their transportation systems to fuel gas compressors. At the distribution level, the majority of shrinkage results from gas escaping from old iron gas mains during transportation. Shrinkage also occurs when gas is stolen or not charged for in error.

SO External costs

The costs National Grid incurs in relation to the operation of the gas and electricity system. These costs include contracts for balancing activities in electricity, purchasing energy to transport gas and entering into trades on the commodity market (gas) and the Balancing Mechanism (electricity).

SO Internal costs

Internal costs relate to the SO's own costs associated with its SO activities, such as building, staff and IT costs.

Stakeholder

Stakeholders are those parties that are affected by, or represent those affected by, decisions made by network companies and Ofgem. As well as consumers and companies involved in the energy sector, this would for example include Government and environmental groups.

Storage (gas)

Installations owned by Gas Distribution Networks (GDNs) and storage capacity contracted from third parties e.g. salt cavities, liquefied natural gas (LNG), storage vessels and gas holders. Gas storage is required to balance diurnal and seasonal variations in supply and demand.

Sustainable energy sector

A sustainable energy sector is one which promotes security of supply over time; delivers a low carbon economy and associated environmental targets; and delivers related social objectives (e.g. fuel poverty targets).

System Average Price (SAP)

The System Average Price (SAP) is calculated daily as the sum of all gas balancing charges divided by the sum of all balancing transactions quantities in respect of that gas day.

System event (in gas)

An event that requires the utilisation of Operating Margins to maintain safe pressures within the NTS. Potential System Events are split into three categories: i) major events (e.g. loss of supply infrastructure, loss of largest sub-terminal), ii) multiple events (e.g. compressor failures, pipe breaks), and iii) orderly rundown (e.g. maintain pressures in the event of a National Gas Supply Emergency).

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. NGGT is the SO of the gas NTS for GB.

T

Third Package (Third Internal Energy Market Legislative Package)

The Third Package is a key step in implementation of the internal EU energy market. It recognises the need for better coordination between European network operators and continuing coordination between regulators at that level.

Transmission Owner (TO)

There are three separate high voltage electricity Transmission Owners in GB. National Grid Electricity Transmission (NGET) owns and maintains the high voltage electricity transmission system in England and Wales. SHE Transmission Plc (SHETPLC) is the electricity transmission licensee in Northern Scotland and Scottish Power Transmission Limited (SPTL) is the electricity transmission licensee in Southern Scotland.

There is one gas Transmission Owner in Great Britain. NGGT owns and maintains the National Transmission System in Great Britain.



U

Uncertainty mechanisms

Uncertainty mechanisms allow changes to be made to the base revenue during the price control period to reflect significant cost changes that are expected to be outside the company's control. Examples include revenue triggers and volume drivers.

Uniform Network Code (UNC)

As of 1 May 2005, the UNC replaced NGGT's Network Code as the contractual framework for the NTS, GDNs and system users.



Appendix 4 – 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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Consultation Co-ordinator
Ofgem
9 Millbank
London
SW1P 3GE
andrew.macfaul@ofgem.gov.uk