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21 September 2012

Dear Pamela

This response expands upon our initial views on Ofgem's Initial Proposals consultation on SO Incentives from 2013 which we published[1] on 3rd September. We provide additional detail and specific responses to the questions posed by Ofgem within the appendices to this letter:

Appendix 1: General gas and electricity response
Appendix 2: Detailed electricity response
Appendix 3: Detailed gas response

In summary, we have a number of comments in relation to the proposals, in particular:

- We regard the proposal to suspend the Balancing Services Incentive Scheme (BSIS) as a backward step and detrimental to GB consumers;
- The asymmetric design of some of the proposals create unfunded obligations rather than incentives to deliver consumer benefits by outperforming;
- By fixing 8 year schemes without appropriate adjustment mechanisms, some of the proposals do not acknowledge the changing environment in which we operate; and
- The proposals do not recognise the additional risk that such incentives place on our SO businesses which need to be appropriately funded.

System Operator (SO) incentives have delivered significant consumer benefit by rewarding improvements in key outputs valued by stakeholders, promoting continuous improvement and innovation. Our proposals were designed against these principles, providing a focused and balanced set of incentives that would promote longer-term innovation and operate effectively against the uncertainty of the next 8 years. However, key aspects of our proposals have been dismissed without clear rationale.

Suspending BSIS

We are extremely surprised that Ofgem has proposed to suspend the Balancing Services Incentive Scheme (BSIS). These incentives have delivered huge benefits to consumers over the past 18 years. The changing market is placing significant upward pressure on balancing costs, and any decision to suspend the BSIS arrangements at this critical time will be to the detriment of consumers.

Such incentives sharpen managerial focus and effort, driving benefits for consumers through specific investment, operational and contracting actions. They serve to sharpen the drive for external cost management, risk based decision making, short and longer term commercial

[1] Our initial response is published at http://www.nationalgrid.com/uk/electricity/soincentives/docs/.

innovation and cost transparency. Rather than risk losing momentum by removing incentives, it is our view that these should be reinforced going forward, even if this is with a short-term BSIS scheme whilst longer-term framework changes are considered.

Whilst Ofgem propose an alternative approach to incentivisation, based on disallowance of inefficient costs and discretionary awards for innovation, the development of a clear and robust framework together with the associated governance by April 2013 will be extremely challenging. Furthermore, the potential for unlimited downside risk coupled with a limited (and unknown) upside will inevitably drive us towards lower-risk, near-term decisions as opposed to creating a portfolio of long-term contracts, investments and innovative solutions to drive down balancing costs. Ultimately, we regard the move to ex-post regulation of these costs as a backwards step, running counter to the principles of RIIO.

We are already making operational, contracting and investment decisions that affect 2013/14 and beyond. A lack of understanding of the regulatory framework that will be in place and the guidelines for assessing which actions may be deemed inefficient or applicable for a discretionary reward is starting to impact on these decisions. This leads to a concern that actions taken now may be subject to hindsight regulation.

We recognise that some issues have been identified with the modelling for the current BSIS scheme. We have addressed the majority of these issues via our recent industry consultation and subsequent Ofgem approval for a number of methodology amendments. Supplementary initiatives have also been proposed to further enhance the models in our plan for RIIO-T1 such that they will be more robust going forward. In our view, the evolution of the target setting models and methodologies, building on the learning of the past 18 months, will serve to provide a more robust basis for the incentive scheme going forward.

However, recognising Ofgem concerns over the model, we propose that another short-term BSIS scheme should be implemented from 2013/14, whilst longer-term arrangements are developed. The updated model could be tested and in place for April 2013/14, thus ensuring the current focus on managing balancing costs is maintained. The concept of a discretionary award scheme could be worked up in parallel to this and implemented over the next 12 months, thus creating the incentive for longer-term innovation. This approach would be consistent with the views expressed by stakeholders at the recent Ofgem workshop.

Asymmetric Incentives

An appropriate balance of risk and reward is an important factor in designing an effective incentive scheme. We are therefore concerned by the asymmetric nature of the following proposals:

- The proposed penalty only Greenhouse Gas Emissions incentive, which effectively creates an obligation to drastically reduce venting of methane from compressors without providing the associated funding for investment in emissions reduction technologies to achieve this;
- The alternative approach to BSIS, with a discretionary reward scheme of 25% sharing factor but 100% cost disallowance; and
- Inappropriate and often unjustified targets for a number of schemes, many of which are unrealistic. These include gas demand forecasting, renewable generation forecasting, greenhouse gas emissions and maintenance.

To address these concerns, we look forward to working with Ofgem over the coming months to ensure a more balanced, focused and effective set of incentives are established under RIIO-T1.

Enabling Longer-term Incentives

Our proposals included mechanisms to adjust targets as appropriate over the 8 year RIIO-T1 period to ensure the incentives remain focused and appropriate against the changing environment in which we operate. Ofgem's proposals have removed these mechanisms without clear justification. Our view remains that if longer-term schemes are to be established, they should be designed to cater for the changing environment. Otherwise we should continue with traditional shorter-term schemes with fixed ex-ante targets, recognising that such arrangements would not promote longer term innovation.

Removal of Income Adjusting Events

Ofgem has also proposed the removal of the existing Income Adjusting Event (IAE) mechanism and to replace it with an SO Uncertainty Mechanism. We consider that the existing IAE mechanism is appropriate because it enables suitable changes for unforeseen circumstances to be brought forward by ourselves or other industry parties for Ofgem to consider. We are concerned that the Uncertainty Mechanism would restrict the scope for bringing forward such events and adjusting targets accordingly, creating the risk of windfall gains or losses for both ourselves and our customers. Therefore our view is that the IAE mechanism in its current form should be retained.

Financeability and Risk premium

We are disappointed that Ofgem has not recognised the risks associated with the System Operator incentives with a risk premium in its Initial Proposals.

The schemes as proposed have been calibrated to provide a neutral expected outcome at best, with a negative expected outcome more likely. In the absence of a transparent risk premium it is evident that the risks of the SO incentives are not currently funded by the Initial Proposals. A stand alone business with a Regulatory Asset Value (RAV) as small as that of the SO could not conceivably support the incentive scheme risks with the financial package proposed.

Ofgem cannot simply ignore this requirement and assume a cross-subsidy from the Transmission Owner (TO): a standalone SO would need to be equity financed - to cope with the uncertainty of revenues and the potential for losses in any year (or over a run of years) - and would need to offer investors a positive return over a period of time. Even if Ofgem chose to assume a cross-subsidy from the TO, it would need to make an adjustment to increase the TO's cost of capital to compensate for the increased volatility of returns.

We look forward to working with Ofgem and the industry over the coming months to finalise a robust and balanced set of SO incentive schemes that will promote efficiency and innovation in the delivery of outputs valued by our customers and consumers.

Yours sincerely

[by e-mail]

Chris Train
Director, Market Operation

Appendix 1: General gas and electricity response

Question 15: Do you agree with our proposals for uncertainty mechanisms and on not including a risk premium?

General uncertainty mechanism versus specific re-openers

Ofgem proposes one general uncertainty mechanism to cater for all eventualities and for all incentive schemes over the 8 year period, which can only be employed by Ofgem in 'extreme circumstances'. We consider that this provides insufficient transparency for us and the industry as to when/how schemes may be re-opened and does not appropriately account for the potential uncertainty over the RIIO-T1 period. A lack of transparency over the treatment of unforeseen events effectively increases the risks associated with the incentives, which would need to be funded.

In proposing this general uncertainty mechanism Ofgem has not taken into account any of the specific uncertainty mechanisms that we proposed in our plans despite recognising that longer term schemes inevitably increases the associated risk. Our proposed Uncertainty Mechanism for the SO external incentives covered the facilitation of European energy markets, changes to the GB regime (e.g. Electricity Market Reform), network flexibility and the Industrial Emissions Directive. Our proposed mechanisms would be triggered in certain and transparent circumstances and therefore cater for the significant potential changes to the environment in which we operate. This is essential for the protection of the consumer over the course of longer term schemes and must be included.

Income Adjusting Event

Ofgem also proposes that this general SO uncertainty mechanism will replace the current Income Adjusting Event (IAE), with the existing provisions removed. We consider that the existing IAE mechanism is fit for purpose because it:

- Provides the means by which the licence can manage unforeseen circumstances in the regulatory regime/commercial framework which is critical as we move to a longer 8 year framework under RIIO-T1;
- Provides for consideration of SO and TO costs and revenues both retrospectively and prospectively;
- Provides a mechanism employable by both Users and National Grid to ensure the appropriate treatment of costs and revenues following significant events; and
- Includes appropriate consultation and governance procedures such that only significant changes would be brought forward and where the Authority has the final decision.

Ofgem has a duty to ensure that licence holders are able to finance the activities which are the subject of obligations on them, and the IAE provisions provide an important safeguard to ensure that obligations can be funded in light of events or circumstances not envisaged when revenue allowances were set.

This mechanism has been rarely used. During the TPCR4 period we have only made a handful of applications for IAEs in gas and electricity transmission and industry have also proposed one IAE for gas transmission. These applications have related to both increases and reductions in costs for the end consumer to enable the appropriate allocation of costs and revenues. At our stakeholder workshop on 5 September, concerns were raised about the removal of the ability to raise an IAE, with parties preferring instead the retention of the existing IAE mechanism with a review of the materiality thresholds for raising an IAE.

For the reasons we set above, we believe that this mechanism should be retained in its current form to safeguard industry participants and consumers alike. This mechanism would

enable appropriate frameworks for any unforeseen significant change over the RIIO-T1 period (not covered by our proposed specific uncertainty mechanisms) in a manner with which the industry is already accustomed.

Recognition of a Risk Premium

As we set out in our letter above, we are disappointed that Ofgem has not recognised the risks associated with the System Operator incentives within a risk premium. Ofgem should provide further justification as to why this aspect of our proposals has not been included.

The introduction of incentive schemes for 8 years without appropriate adjustment and uncertainty mechanisms would significantly increase the level of risk faced by the SO. The SO activity does not have a sufficiently large balance sheet to underwrite the risks associated with these incentives. These risks would effectively be underwritten by the wider balance sheet, and need to be funded accordingly.

Ofgem has previously expressed a preference for the TO and SO controls to be considered separately and therefore we have calculated the specific transparent risk premium that would be required under this approach for schemes with a neutral incentive performance expectation. We consider and have proposed that the risks associated with System Operation can be financed in 3 ways:

- A transparent risk premium for the SO;
- A positive incentive expectation for neutral performance; or
- Inclusion of the SO incentive scheme risks within the overall package of risks considered when setting the equity return and gearing assumptions for the wider National Grid RIIO-T1 controls.

Ofgem have not proposed to take any of these options forward. Moreover, the differences between Ofgem's Initial Proposals and the incentive schemes as we proposed changes the level of risk that we face and therefore the level of premium required to manage that risk on behalf of consumers. For example, Ofgem has proposed that its' minded to option for the Greenhouse Gas Emissions incentive is a penalty only scheme which increases the risk profile of that scheme. Indeed this introduction of asymmetry into the scheme design will increase the risk profile that we face.

Ofgem should provide further justification as to why this aspect of our proposals has not been included and demonstrate how its proposals provide an appropriate premium or return to compensate for the risks.

SO Innovation

We welcome Ofgem's proposal to enable the SO to access the TO innovation funding mechanisms introduced by RIIO-T1, namely the Network Innovation Allowance (NIA) and Network Innovation Competition (NIC). However, it is not clear from the proposals as to whether the SO also has access to the third element of the innovation stimulus package which is the Innovation Roll-out Mechanism (IRM). This element is particularly important for the SO as the wider implementation of innovative solutions may serve to reduce system operating costs on behalf of the consumer.

We also consider that the proposed funding level of 0.6% of allowed revenue[2] (an additional 0.1% provided above the current Innovation Funding Incentive (IFI) allowance), is insufficient

[2] As proposed in the 'Outputs, incentives and innovation supporting document' of Ofgem's RIIO-T1 Initial Proposals: http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIO%20T1%20NGGT%20and%20NGET%20Outputs%20and%20incentives.pdf

to cover the scope of projects with which the SO will be required to be involved. The current TO mechanism (IFI) relates only to TO asset based innovation and has been fully utilised and implemented in recent years. Whereas the inclusion of the SO into the new RIIO-T1 funding mechanisms will also need to cater for commercial and framework innovation in addition to further areas of asset related innovation. It will also need to take into account the SO's required involvement with innovation projects that will not necessarily directly benefit the SO, such as those associated with the Low Carbon Network Fund (LCNF).

More detail on the specifics of our innovation strategy and inclusion of the SO in relation to the level of funding proposed by Ofgem is set out in our RIIO-T1 response to Ofgem's RIIO-T1 Initial Proposals for gas and electricity transmission (reference 104/12). In summary we consider that our original proposal, as set out in our Innovation Strategy of our RIIO-T1 TO plan, of 1% of allowed revenue is an appropriate level.

Appendix 2: Detailed Electricity Response

Retaining a Balancing Services Incentive Scheme (BSIS)

Question 3: In respect of the incentive on energy balancing and constraint costs, do you agree that direct financial incentive should be removed?

Our BSIS proposals, as set out in our plan to Ofgem[3], offer a powerful means to managing balancing costs into the future, with a commitment to drive innovation in the wider regulatory framework, and to contract long-term for balancing services. We do not agree that this direct financial incentive should be removed. Instead, Ofgem should consider a two pronged approach with the introduction of a process to consider longer term framework changes, alongside shorter term financial incentives until such time frameworks are developed.

Ofgem's rationale for the removal of the direct financial incentive is based on the following areas:

- Modelling complexity;
- Lack of transparency; and
- The inability for shorter term schemes to offer the right incentives for longer term development.

Modelling complexity

We understand that the opaqueness, complexity and accuracy of the current target setting models, and the potential to address this, are at the heart of Ofgem's concerns and have also been expressed by other stakeholders. Our proposals however improve modelling accuracy and remove undue focus on the mechanics of the model whilst ensuring that they remain fit for purpose on an enduring basis.

Timely delivery of modelling accuracy is paramount to the establishment of a transparent and accurate process as possible. To this end, we have proposed a wide range of initiatives that will improve target forecast modelling accuracy, gain stakeholder confidence and drive continuous improvement across the period. These initiatives have resulted from operating experience with the current incentive scheme (2011-13) which was intended to be a stepping-stone to longer term schemes under RIIO-T1.

A number of these initiatives (with the exception of increased nodes and lines which better represent the transmission system) were included in the BSIS methodology amendments recently approved by Ofgem[4]. Implementation of these amendments will address the shortfalls identified with the current Constraint model ahead of the commencement of the new scheme, thus providing greater confidence with respect to accuracy.

Transparency

The modelled approach for the current scheme, introduced as a new approach in April 2011, is such that the modelling methodologies, including what inputs are fed to the models, are transparent to the industry. Prior to the current scheme, the method by which a target was determined and agreed was less transparent and less holistic than the current approach which has therefore been a step forward in this area.

[3] Our proposals can be found on our website at: http://www.nationalgrid.com/NR/rdonlyres/13531149-75DC-4BF9-BD27-2A0C9425A649/54364/ElectricitySystemOperatorExternalIncentivePlan.pdf

[4] Ofgem's decision letter can be found at : http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Pages/SystOptIncent.aspx

In order to provide both Ofgem and the industry with greater visibility we have proposed to further increase the level of transparency of the target setting models for the current scheme by publishing model outputs on a regular basis. For example, there is significant industry value in publishing the modelled outputs on a monthly basis compared to actual BMU outturns, which in turn would allow the industry to 'self-regulate' to a greater extent, albeit post event. The NETSO, however, remains the only party able to influence and optimise system operation across the entire market ahead of real time. We are therefore best placed to manage these costs on behalf of the industry.

We would ensure that the models are presented and explained to the industry prior to the commencement date of any new scheme, for example, through the use of an industry workshop and publication of detailed methodology statements.

Short-term focus versus long-term development

We understand that Ofgem and some stakeholders are further concerned that our focus on the short-term prevents us being innovative and creative in the long-term. We do not agree with this view.

In a world where regulatory policy is introducing uncertainty, as we enter the RIIO-T1 period, incentive arrangements offer the most appropriate tool to promote stability and minimise costs. Incentives provide enhanced focus on the actual costs to consumers and even ahead of major policy decisions remain in the best interests of the consumer. Our proposals also create an incentive for long-term innovation, through either contracting or investment, to reduce balancing costs and it is not clear why Ofgem believe that this is not the case.

We note the concern that the incentive created by our proposals will focus us on getting the model right rather than on longer term actions to reduce balancing costs. We consider that this concern is unfounded. The purpose of the models is to perform post-event cost allocation, and therefore determine the level of any incentive payment / penalty - ensuring that the NETSO is rewarded in part for the appropriate actions where it has delivered benefit, and exposed to a proportion of those costs where a more economic solution could have been employed.

The models are not used in our operational decision making and are independent from those teams establishing future framework strategies or operating the system in real time. In operational timescales, our focus is the delivery of a secure system with managed risk at minimum cost.

Completion of our proposed modelling enhancements will reduce the focus on the mechanics of the model itself, and allow / incentivise the NETSO to focus on creating long-term value through wider framework changes, investment and innovative contracting arrangements. Such arrangements include the proposal to align constraint volumes incentives in Scotland with those best able to manage them particularly at a time when constraint costs are increasing. We therefore see no conflict between operating in the short-term and the longer term delivery of improvements to the wider commercial framework / transmission service around system operation. Indeed we believe we must do both.

Question 7: What are your views on NGET's proposals for commercial contracts with non-NGET TOs to incentivise them in respect of constraint costs caused by changes to their output plans?

Our proposal to enter into commercial contracts with non-NGET TOs is a good example of innovation within the wider commercial frameworks. Power flows on the National Electricity Transmission System (NETS) are north to south in nature, with substantial constraints

evident across key north to south system boundaries, particularly as more renewable generation is connected in Scotland.

Our proposed incentive mechanism would create a strong alignment between National Grid and other TOs to minimise the cost of constraints across the various TO networks. It would also avoid the need for complex contractual provisions between National Grid and TOs which would be difficult to manage, negotiate and monitor such as for moving outages etc.

It is not possible however to implement such proposals without substantive modelling capability. It was our intention, as part of our BSIS proposal, to use the enhanced constraint model in order to calculate the payments between the NETSO and non-NGET TOs.

In addition, any type of arrangement whereby the NETSO can make payments to or charge other TOs would need to be reviewed in light of a mechanism which includes the ability to disallow inefficient costs (as discussed further below).

Ofgem's Proposed Alternative Approach to Incentivisation

Question 4: Do you agree that we should put in place a licence condition to enable us to disallow costs incurred by NGET if they are uneconomic or inefficient?

Question 5: Please provide your comments in respect of our proposals for a discretionary reward mechanism. In particular:
a. Do you consider that the proposed process for agreeing to a reward is appropriate?
b. Who should be the members of the panel that decides upon reward requests?
c. Is the size of the potential reward appropriate?
d. Are the examples of behaviours that might lead to a reward being made appropriate?

The removal of BSIS altogether and the lack of any real time exposure to balancing costs will inevitably reduce downward pressure upon them and will undoubtedly result in a more cautious approach to cost management, particularly under a regime where costs could be determined as inefficient. While our system operation activities will remain economic and efficient, the more marginal risk based decisions and longer term contracting approaches are likely to be assessed in a different way to ensure overall compliance with our licence obligations. In contrast, BSIS encourages taking the risk that the potential upside benefit of a contracting or trading investment decision is greater than the downside risk of being inefficient. Removal of this incentive in favour of an asymmetric ex post approach will inevitably change this behaviour.

<u>Cost disallowance mechanisms</u>
We have concerns over the proposals to introduce a licence condition to enable the disallowance of costs, not least because of the lack of detail within the proposal documents. Cost disallowance in this manner has the potential to be subjective and lead to an inaccurate assessment of cost, particularly where there is no defined baseline of cost (or a target) against which actual expenditure is to be compared.

Our understanding is that the licence condition would require monitoring of outturn costs in accordance with our licence obligation to operate the system in an 'efficient, economic and co-ordinated manner'[5]. Under this proposal, Ofgem would be able to launch investigations into areas of balancing costs, at its discretion, and potentially disallow costs that it (or an industry standing group) deems to have been incurred inefficiently. This uncapped exposure represents a huge business risk that would need to be underwritten (see section on Risk Premium).

[5] Standard Licence Condition C16 of the Electricity Transmission Licence.

The detailed governance and processes for assessing the efficiency of costs will need to be agreed and established, and we would expect the level of detailed rigor associated with a full and detailed investigation to be undertaken if any costs are to be disallowed.

The basis upon which costs could be determined as inefficient and disallowed in this way must be defined tightly and avoid any temptation of hindsight so as not to expose the SO to undue risk. Furthermore, the rules around cost disallowance should be based on objective information rather than subjective opinions. It is absolutely critical that any post event review of costs incurred by the NETSO is undertaken on the basis of the information that we had available to us at the time the cost had been incurred rather than in hindsight. To do otherwise would lead to an inaccurate assessment of cost efficiency, as the operating environment can change between a cost being incurred, such as a contract cost, and real time system conditions. For example, a constraint contract is struck having been assessed as an efficient action by National Grid on the basis of the forecast generation background. In this example, having entered into the contract, a generator belonging to the same group as the contracted generator subsequently incurs a fault thereby, in hindsight, making the contract cost appear inefficient.

Currently, under the BSIS scheme, the benefit of a modelled approach to the incentive is that the models automatically and independently determine the efficiency of our actions by the relative position of the modelled target versus our outturn expenditure. This removes an element of the bilateral forecasting discussion quite often a feature of past schemes and provides a continual and constant pressure on us to reduce costs in every action that we take on an ongoing basis. This is because the risks and consequences of our actions can be assessed at the time that the decision is taken. The monitoring of costs on an ex post basis does not allow for this ex ante assessment of risk thereby making this approach to regulation less effective.

We are already taking operational, contracting and investment decisions that impact on 2013/14 and beyond. In the absence of a BSIS scheme it is important that the rules around disallowances and discretionary rewards are set out clearly to aid these decisions – otherwise there is a risk that more marginal or risk based decisions will be suppressed until such time that these arrangements become clear.

Discretionary reward scheme

In order to encourage longer term and innovative actions by the NETSO, Ofgem also proposes to introduce a discretionary reward scheme. This would be designed to provide reward for actions that the NETSO undertakes that go well beyond 'business as usual' and delivers significant value for end consumers. It is difficult to comment on the proposal in any meaningful way given the level of detail provided within the proposal.

Again, the arrangements surrounding this reward scheme in terms of how exactly how a reward can be obtained and by what means would need to be carefully defined so as to provide the strength of incentive on us that BSIS currently provides. We also consider that the cap and sharing factor proposed by Ofgem (at £25m and 25% respectively) are too low given that, in theory, any action that could qualify for such a reward should be in the control of, and facilitated by, the NETSO. With BSIS costs of circa £800m per annum and growing, the scope for achieving significant cost savings could be suppressed by the cap proposed.

In addition, the terminology 'business as usual' must be employed carefully. Everything that we currently do when operating under today's incentive scheme cannot simply be termed as 'business as usual'. This is because we face equal and immediate exposure (upside and downside in equal measure) for the commercial contracting decisions that we take under the current incentive arrangements i.e. for all contracting decisions we bear the risk that the contract may not deliver value. Risks that we would not necessary take without an immediate

and automated incentive mechanism as we have today, particularly when contracting further ahead of real time. Therefore any action that we take to reduce costs to minimise price and/or volume of Balancing Services procured over and above those actions in the Balancing Mechanism should be eligible for a reward under this new scheme.

The introduction of asymmetry

On a simple level, the combination of the discretionary reward scheme and cost disallowance amounts to something similar to the current incentive structure, with one important exception. Ofgem's proposals introduce asymmetry into system operator costs, tipping the balance of risk and reward between us and consumers.

Under Ofgem's proposal, we could potentially be exposed to unlimited downside through the disallowance of inefficient costs but capped upside through the discretionary reward scheme (up to £25m per annum). This imbalance and asymmetry should be addressed through the application of a collar on the amount of cost that could be disallowed each year and the introduction of a sharing factor (consistent with the discretionary reward scheme). It is not clear from Ofgem's initial proposals as to whether any disallowed costs would be subject to a sharing factor or whether we would face 100% exposure to such costs.

Calculating the discretionary reward / disallowance

Interestingly, Ofgem's proposed alternative approach to incentivisation still requires a method by which to determine the efficient baseline level of balancing costs in order to assess actual costs (both for the discretionary reward scheme and disallowing of any inefficient costs). Some form of model will still be required. There is insufficient detail in Ofgem's proposal on its alternative approach to understand how this benchmark will be calculated. Similarly, we will also require a model in order to fulfil any forthcoming obligation to forecast BSUoS charges on behalf of industry on a more regular basis[6]. It would seem inconsistent however to use a model that Ofgem does not consider to be robust to assess the efficiency of our actions.

Independence of decision making will also be important in any reward payment / disallowance calculation. The models in the current incentive scheme provide an objective measure of system operation performance fed by inputs that we have sought to make as transparent as possible. The proposed alternative to BSIS would rely on a panel of Ofgem and industry representatives to determine whether a discretionary reward should be awarded to us or inefficient costs disallowed. We would question the consistency and basis upon which such decisions can made by parties that will ultimately bear, or be refunded with, the costs associated with these decisions. We would also expect any decisions made by such a panel to be open to appeal, to encourage objective rather than subjective decision making. This has been evident through the current incentive scheme consultation responses from industry where there were concerns expressed regarding any proposal to apply charging reconciliations retrospectively. However, any discretionary reward scheme would need to be applied retrospectively.

In terms of the charging process itself, it is difficult to see how the proposed alternative to BSIS will represent a more predictable and less volatile option than BSIS given that the level of discretionary reward or disallowance of costs will be unforecastable at year ahead, even by the NETSO.

The above issues aside, we do consider that such a discretionary reward scheme may have some merit in driving longer term innovation and framework development. However we do not see any reason why this type of reward scheme could not be implemented in parallel with

[6] This is something that is currently being discussed as part of CUSC Modification Proposal (CMP)208: http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/currentamendmentproposals/

a modelled approach to BSIS. This would ensure that the NETSO is driven to make the most economic and efficient operating actions on a continual basis whilst also focussing on longer term innovation to deliver significant consumer benefit.

Black Start

Question 6: Do you consider that a cost incentive on black start should be retained? Do you consider that the proposed parameters for a black start scheme are appropriate?

As part of the Initial Proposals consultation, the continuation of a separate Black Start cost incentive is considered. The proposed incentive scheme, to derive an annual cost target for the eight year period, is broadly in line with our proposal with some exceptions.

Black Start is an ancillary service that has historically been bundled within BSIS and hence subject to the same cap/collar and sharing factors as all other balancing services costs. Whilst the costs incurred in maintaining current Black Start contracts and procuring new providers could in theory be considered as isolated costs, in practice there are interactions between Black Start and other balancing services such as Short Term Operating Reserve (STOR) and BM Start-up.

A standalone Black Start cost incentive in the absence of BSIS could create perversities in the way that Black Start services are procured in relation to other balancing services. It would therefore be inconsistent to retain an incentive on Black Start but to remove the incentive on all other balancing services. These costs should either be included with all balancing costs that the NETSO can be incentivised to reduce on behalf of consumers or the cost incentive removed altogether.

Further, we consider that there are other areas of balancing costs over which the NETSO has a greater degree of control and ability to forecast than those associated with Black Start. This is due to the level of competition that can be stimulated for the service and therefore to continue to incentivise this area of cost and not others would again appear inconsistent.

In the absence of a BSIS scheme we would consider a reputational incentive on Black Start to be more appropriate until such time when a more robust approach to determining a new entrant cost target can be established and therefore a cost incentive reintroduced. Ideally this would also coincide with the reintroduction of BSIS.

If Ofgem do decide to implement a separate cost incentive, then a number of elements must be considered.

<u>Cost Target Derivation</u>
As part of any analysis of costs, it is important to make a distinction between peaking plant and Black Start plant as this is incorrectly described within the Initial Proposals. The auxiliary unit at a Black Start station (which could also be used as peaking plant) is only one element of the overall project cost incurred by a new Black Start provider and therefore the cost that we are required to pay for the service. In addition, as we set out in our plan, the approach that we have taken to determine a Black Start incentive target is based on a value driven market for Black Start rather than a cost reflective methodology.

We would need to understand how Ofgem's proposed approach to determining an initial target impacts or potentially changes the other elements of our original proposal i.e. in terms of the other cost elements of Black Start and how these are factored into the target on an annual basis.

Timing of Incentive Payments

Ofgem proposes that rather than incentive payments being made annually that these are accrued over a four year period. We continue to support the principle that charges faced by consumers should be cost-reflective, timely and appropriately targeted. For long term incentive schemes, such as the one proposed for Black Start, this means that charges should continue to be adjusted to include incentive profits and losses within each financial year where at all possible to avoid a large adjustment at the end of the multi-year scheme. We therefore consider that annual incentive payments are more appropriate, particularly when the target is also set on an annual basis.

Transmission Losses

Question 1: In respect of transmission losses, do you agree with our proposal to put in place a reputational incentive and to remove the current financial incentive?

In our SO Incentives plan, we proposed a methodology for determining a transmission losses target volume using ex ante and ex post inputs in the absence of a full network model with which to derive a target. We also set out that the NETSO has limited control over the volume of losses across the system given that we manage a very small percentage of the total volume of energy in the market via the balancing mechanism and that typically these actions are taken on the basis of cost in order to comply with our licence obligations.

Therefore given the extent of our ability to both control and forecast transmission losses, Ofgem's proposal to remove the financial incentive on us to reduce their volume would appear reasonable. Our TO business will continue to invest in equipment to minimise losses, consistent with our RIIO-T1 proposals. As the NETSO we are however best placed to report volumes and drivers of losses on an ongoing basis and agree that a reputational incentive in this area may be appropriate.

Renewable Generation Forecasting Incentive

Question 2: Please provide your comments in respect of our proposals for an incentive on renewable forecasting. In particular:

a) Do you agree that an incentive is appropriate?
b) Which renewable output forecast would you like to be incentivised (5pm, 5am, 11am or 11pm)?
c) Do you have a view on which error measure should be incentivised and whether the monthly target should be set on an annual or a seasonal basis?
d) Do you agree with the proposed cap, floor and range of the incentive?
e) Do you agree that the incentive should initially be set for 2 years?

We support the introduction of an incentive scheme on renewable generation forecasting and welcome, given its infancy, a scheme duration of two years in the first instance.

However, we are not supportive of Ofgem's proposed adjustment to our proposal such that the incentivised range is reduced and the strength of the incentive diluted. Renewable generation forecasting is of increasing importance and value to the industry as more wind and other types of renewable generation connects to the system. Hence the incentive properties should be sufficient to promote innovation and improvement in this area.

Our proposal to set monthly targets using monthly outturns from the previous year provides an appropriate relative benchmark from which to drive future improvement. Similarly, the variable chosen to be incentivised (% mean absolute error) has been selected to provide the optimum balance between incentive payment for positive forecasting performance for the duration of a month and incentive downside for under-performance on a particular day.

We do however appreciate that the use of seasonal targets, which comprise one of Ofgem's proposals, would be a more straight forward approach. However, if the incentive is still to be calculated on a monthly basis, there is reduced merit in a smoothed target. Ofgem also considers whether yearly targets would further simplify the incentive, however this is more likely to introduce windfall gains and losses as there clearly different forecasting challenges associated with the summer and winter seasons.

Appendix 3: Detailed Gas Response

NTS Shrinkage Incentive

Question 14: Please provide your comments in respect of our proposals for a shrinkage incentive, in particular:
a. Do you agree that it is appropriate for NGG to have in place a volume methodology statement?
b. Do you agree that the proposed changes to the reference prices are appropriate?
c. Do you agree with the proposed sharing factor? Do you agree with increasing the cap and floor of the incentive?

The aim of the NTS Shrinkage incentive is to minimise shrinkage costs through the management of the volume and procurement of shrinkage energy. We support the continuation of a cost minimisation incentive that promotes effective and innovative management of shrinkage cost drivers where we are able to exert control and influence. Further, we welcome the adjustments of the shrinkage incentive to separate the procurement and energy efficiency aspects of the cost minimisation incentive. This will sharpen our focus on areas that we can control and reduce the potential for windfall gains or losses.

However, there are elements of the proposed scheme where arrangements should be more reflective of the operating environment and where further clarity on the proposed arrangements is required as detailed in specific sections below.

Appropriate Cost Allowances

Part of our role as the NTS System Operator is to manage and procure shrinkage which includes the gas and electricity used in the transportation of gas from supply to demand, which is known as Compressor Fuel Use (CFU). The costs providing this role include:

- The cost of procuring gas for gas powered compressors at wholesale and associated trading costs;
- The cost of procuring electricity for electric powered compressors (currently procured via a retail contract) and associated transportation costs (e.g. TNUoS);
- Environmental charges and revenues associated with the use of gas compressors through the EU Emissions Trading System (EUETS); and
- Environmental charges associated with the use of electricity compressors through the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES).

Appropriate allowances are necessary for all of these activities in order to set an incentive that drives the right behaviours to deliver value to the consumer.

Swing costs

Swing costs result from trading the difference between the average shrinkage requirement for the price reference period (e.g. average over a month) and the daily gas and half hourly electricity needs. Ofgem propose to limit the exposure to swing costs through the use of a more prompt reference price.

To do so will require the alignment of the price and volume aspects of the procurement cost with the relevant balancing period, i.e. at a daily outturn for gas and half-hourly outturn for electricity. Given that Ofgem do not propose to align the reference prices and volumes with the balancing periods, it is important that separate funding of swing costs remains within in the incentive.

Environmental Costs

The costs associated with the environmental impact of using compressors (EUETS and CRCEES) should be appropriately funded and incentivised as part of operating the NTS

given their linkage to external factors such as supply and demand patterns. There are no allowances for environmental costs within Ofgem's Initial Proposals and no environmental adjustment within the incentive. We do not agree with this approach as we consider that it will not act as an effective incentive or fund efficient costs of operation.

Our business plan proposed the use of energy efficiency targets within the incentive, such that performance above or below the target is priced at the government defined traded price of carbon to incentivise efficient energy use. We proposed to combine this with a pass-through of environmental compliance costs to ensure appropriate funding. This is a consistent approach with the volume efficiency aspect of the incentive to ensure that the environmental impact of our actions is appropriately incentivised, considering the drivers of compressor use. We need further clarity on Ofgem's policy in this area to be able to fully understand the impact of its proposals, particularly in order to ensure that there is appropriate funding of environmental costs relating to system operation.

Price References

We welcome the change of price reference period to 9 months in advance of the quarter for forwards procurement. This change acts to balance the potential for trading opportunities over a period of time whilst reducing the forecast horizon to reduce the risk of changing shrinkage requirements. This timescale also enables the alignment of reference price for electricity and gas procurement.

Through our consultation on the NTS Shrinkage Incentive Methodology Statement, we have been working to provide clarity on a number of areas which are not fully detailed in Initial Proposals and where we are keen to understand Ofgem's policy. Areas of uncertainty include:

- The price reference for 2013/14 for forwards electricity procurement. This is important because our proposed rolling 9 month reference period has already begun and therefore our procurement of electricity for 2013/14 has commenced;
- The prompt reference price (e.g. week ahead) and any implications for the associated energy volumes and swing costs; and
- The differential between the retail and wholesale electricity costs, which include supply costs (e.g. supplier margin) and market costs (e.g. renewables obligation).

Methodology Statement

The target as proposed is made up of price and volume aspects, some in the NTS licence and others set in accordance with a methodology statement.

We agree that it is appropriate to have a methodology statement in place and we are currently consulting on an NTS Shrinkage Incentive Methodology Statement[7]. The proposed statement describes how targets could be set that adjust with the operating environment and includes a calculation of the targets under this methodology for 2013/14.

The methodology statement should cover gas and electricity shrinkage volumes for use in the procurement and volume efficiency parts of the incentive and a benchmark for electricity and gas swing costs.

Scheme Parameters

We support Ofgem's proposal to increase the sharing factors to align with those proposed for the gas transmission RIIO-T1 price control. These sharing factors should also be aligned to those on the greenhouse gas emissions incentive to enable more complete alignment between outputs to avoid any unintended consequences.

[7] The NTS Shrinkage Incentive Methodology Statement is open for consultation response until 3 October 2012 and is available from http://www.nationalgrid.com/uk/Gas/soincentives/docs/.

Ofgem noted that it would consider our proposal to increase the caps and collar on the Shrinkage incentive following consultation with stakeholders on our NTS Shrinkage Incentive Methodology Statement. We look forward to further discussion in this area and consider that it is important to ensure that we are incentivised across a reasonable range of shrinkage costs.

In summary, the NTS shrinkage incentive scheme should incentivise efficient system operation through the procurement and management of shrinkage volumes and appropriately fund this aspect of the System Operator activity.

Greenhouse Gas Emissions Incentive Scheme

Question 8: In respect of an incentive on greenhouse gas emissions, is your preference for Option 1 (penalty only) or Option 2 (upside and downside payment) and why?

Venting results from commissioning, operation, maintenance and decommissioning activities on the gas transmission system. In particular, these processes include:

- Purging assets from gas to air when the equipment is no longer needed for operation, when an asset needs to be maintained, following a trip or in order to check the integrity of the system; or
- Purging assets from air to gas to enable operation (e.g. on pressurising a compressor before use); or
- To reduce pressure or remove gas in an emergency to make system safe or in order to safely carry out work on the NTS.

These activities enable system integrity to be maintained which is a primary driver in running a safe, reliable and efficient system.

The aim of any Greenhouse Gas Emissions incentive should be to discover and incentivise the optimal level of operational venting of natural gas to deliver maximum customer benefit. Optimisation leads to effective management of the level of venting whilst maintaining balanced supply and demand using the existing asset base with due consideration of the safety and costs of NTS operation. By its very nature, efficient optimisation may not necessarily lead to year on year venting reductions, but should incentivise the effective management of venting to ensure the environmental costs of actions are included within operational decisions.

As the environmental impact of venting methane is higher than that of CO_2, the current incentive uses a factor, the global warming potential, to represent this in the price per tonne of natural gas vented. Ofgem discuss that in the shorter term this gas has a greater impact than over the longer term. Industry standards including DECC's guidance on emissions reporting[8] are generally on the same basis as the current incentive, and therefore it seems at odds to consider the use of a different factor within future incentives. Further, it is important for the venting valuation to be clear and aligned to other environmental schemes applicable to the UK, such that the incentive drives economic behaviours using an understood and consistent environmental cost of venting.

The current proposal would not act as an effective incentive to drive these behaviours and does not represent a fair balance between risk and reward as set out in more detail below.

[8] 2012 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting: Methodology Paper for Emission Factors is available at http://www.defra.gov.uk/publications/files/pb13792-emission-factor-methodology-paper-120706.pdf

Asymmetric Scheme Structure

Two options are put forward for the greenhouse gas emissions incentive scheme – a downside only scheme or a symmetrical scheme where there is a penalty (or reward) for emissions above (or below) the target. An incentive should be symmetrical with a balance between targets and allowances, risk and reward. In practice both options are asymmetric for the following reasons:

- The proposed target is lower than our view of an optimal level of venting and does not adjust for changes in the operational environment; and
- The target level is not aligned to other obligations, output targets and investment allowances.

The proposed penalty only Greenhouse Gas Emissions incentive effectively creates an obligation to drastically reduce natural gas venting from compressors to an unrealistic level without providing any funding for investment in emissions reduction technologies to achieve this. Instead, the greenhouse gas emissions incentive should be symmetrical with realistic and achievable targets that align with the allowances and obligations set out in the RIIO-T1 initial proposals, particularly relating to investment allowances and the provision of capacity.

We do not agree with Ofgem's justification for a downside only incentive that centres around two points:

- Insufficient data is available on natural gas venting; and
- Funding mechanisms are available to fund investment.

With respect to data, we are continually developing and improving our understanding of venting from assets on the NTS which in turn feeds our operating strategies and venting calculation methodologies. This work has been progressing with further research and development in line with our proposals[9]. Though we agree that the incentive should be reviewed following these developments, the continuous improvement of venting quantification should not be a reason to dismiss a symmetrical incentive form that could drive further improvements through funding incremental costs of reducing emissions.

With respect to funding mechanisms, we did not include any funding for the reduction of vented (or any other) emissions beyond legislative limits within our RIIO-T1 business plan submissions following clear stakeholder feedback that we should only be funded to meet environmental legislative requirements. If Ofgem believe there is value in additional investment to reduce venting, this should be clearly stated and the incentives and allowances should be designed to fund such investment.

The Network Innovation Allowance (proposed to replace the Innovation Funding Incentive) is designed to fund small-scale innovative projects that are primarily in the early stages of development (as measured on a Technology Readiness Level (TRL)). The commercialisation and rollout of vent reduction techniques could be covered by the Network Innovation Competition (NIC) and Innovation Rollout Mechanism (IRM). However, the NIC mechanism is based on competitive processes that are designed to cover a small number of large projects across the gas industry rather than NTS specific venting abatement. Furthermore Ofgem has not yet confirmed whether the SO will have access to the IRM which is designed to fund the rollout of a proven solution with remuneration being considered in the two re-opener windows within the RIIO-T1 period, the earliest one being in 2015. Therefore, there are no confirmed allowances at this point in time that would fund venting reduction techniques and as such it is inappropriate for the targets to reflect their implementation.

[9] Our Scheme of Work under Special Condition C28 is available at http://www.nationalgrid.com/uk/Gas/soincentives/supportinginfo

Further, a downside only incentive would reduce both the financeability of the SO, by adding further costs and obligations without adequate funding and remove a potential funding mechanism for any expenditure to reduce the level of venting (if the target is set appropriately).

Target

We do not agree with the unjustified severity of Ofgem's proposed targets based on the current target with a 5% year on year reduction because this does not take into account the changing operational environment, the options available to reduce venting or the costs and timescales to develop and implement any potential solutions.

In its Initial Proposals, Ofgem refers to large projected reductions of methane emissions in the energy sector that appear to be more cost effective than reducing CO_2 as a consideration in setting its proposed 5% target reduction rate.

According to a DECC report[10], the majority of this decline in emissions in the energy sector is expected to materialise from reductions in emissions from coal mines and leakage from the gas distribution networks (GDNs). Methane emission reductions from the latter are based on the replacement of cast iron pipes using commercially available technology which is funded through the respective GDN price controls. The emissions reductions in the coal industry results from a forecast decrease in the quantity of coal extracted. These declines in venting requirements are not expected to occur on the NTS and funded technology options are not available to reduce the level of NTS gas venting. Further, the reductions highlighted above in other parts of the energy sector are forecast to deliver a smaller reduction over 10 years than the reduction proposed over 8 years under this incentive. Therefore it is not appropriate to draw these parallels in setting a target venting reduction rate based on options that are not available and not funded for the NTS in our optimisation of the level of vented emissions. The incentive should therefore be limited to marginal opportunities to optimise venting from operational activities rather than through large scale investment.

The optimal level of venting is not easily modelled as it is influenced by many factors that include our customers' requirements for NTS input and output flows, the notice period given for those flows, maintenance requirements and asset characteristics. By its very nature, it is likely to vary (both upwards and downwards) over time as our customers' supply and demand requirements change. Therefore, it is important that the target is based on recent performance and prevailing conditions rather than an inappropriate baseline without any adjustment.

The issues with modelling venting have been discussed with Ofgem and the industry over many years. Further work is ongoing to disaggregate venting due to different drivers to enable analysis in this area amongst other activities under Special Condition C28. As such we have not been able to develop a venting target methodology that accurately identifies the optimal venting volumes associated with drivers such as NTS gas flow patterns.

The optimal level of venting is not necessarily the minimum feasible level as other outputs are likely to be adversely impacted in the process of venting minimisation. This is particularly the case around facilitating access to capacity and enabling customers to react to short-term market dynamics (e.g. power stations being used to support intermittent electricity generation). Therefore, any actions taken to reduce venting should be economic and efficient in the wider context of our operational requirements.

[10] DECC published its Projections of non-CO_2 greenhouse gas emissions: A report on the non-CO_2 projections to accompany the Autumn 2011 update http://www.decc.gov.uk/assets/decc/11/about-us/economics-social-research/2770-nonco2-ghg-emission-project-autumn2011.pdf on 15 September 2011

We are concerned that an incentive target that is not benchmarked to our operational requirements, whilst also requiring the substantial proposed annual reductions, would drive the target to a suboptimal point with likely unintended consequences. We propose that the target is instead based on recent performance, together with a small reduction in the target over time to act as an incentive to strive to this level.

We do not agree with the proposed removal of the deadband as this recognises the uncertainties associated with modelling an efficient level of venting and helps to protect against any windfall profits or losses from small changes due to amounts of year on year volatility.

Consequences of meeting the proposed target

It is not possible to meet the target as proposed without the significant installation of new technology which, at this time, is either not commercially available or in the very early stages of development. Further, the funding of such investment has not been proposed under Ofgem's Initial Proposals for the RIIO-T1 period. If we were to reduce emissions towards the proposed target levels, it is likely there would be unacceptable unintended consequences on our ability to:

- Manage system access in line with our customers' needs;
- Effectively maintain and test the system in line with best practice and legislative safety and reliability requirements (estimated to be approximately 60% of current compressor venting); and
- Maintain expenditure within the allowances set out in the RIIO-T1 settlement.

The efficient level of venting could reduce in future if manufacturers can develop lower venting assets for the commercial market. We are not aware of any such developments in the short term and the associated investment would significantly outweigh any potential incentive income if the incentive were to be symmetrical. We are continuing our involvement in projects to research and develop alternatives to venting to promote the developments in this area.

Incentive Alignment

We agree that venting should be valued using DECC's non-traded price of carbon as this is deemed as the most appropriate valuation for non-traded emissions. However we disagree with the continuation of 100% sharing factors as this will distort the trade-offs with other output incentives.

The sharing factors should instead be aligned with those in place for shrinkage costs, other emissions (from the use of compressors), operational and capital expenditure. All of these other schemes have 45% sharing factors, such that if this was also implemented for the greenhouse gas emissions incentive, the potential for perverse incentives would be reduced. Further, some of our venting requirements are driven by our customers' use of the system and a 45% sharing factor may influence customers' behaviours as they would then share in NTS' venting performance.

In summary, the greenhouse gas emissions incentive should be symmetrical with realistic and achievable targets and 45% sharing factors that align with the allowances and obligations set out in the RIIO-T1 initial proposals, particularly relating to investment allowances and the provision of capacity.

Residual Balancing Incentive Scheme

Question 9: Please provide your comments in respect of our proposals for a residual balancing incentive. In particular, do you agree that by fixing the targets for the eight year period this will provide NGG with an incentive continuously to improve its performance in this area?

The aim of the Residual Balancing incentive is to align the factors influencing our residual balancing trading behaviour with those of other market participants. Achieving this leads to appropriate trading behaviour by National Grid that is not out of synch with other market participants such that we consider our impact on the market whilst maintaining appropriate cost targeting. The price and linepack performance measures are as relevant today as they were when first introduced and continue to provide an appropriate incentive which attracts support from our stakeholders. The price incentive is unique in all the incentives historically placed on us in that it was originally devised by a shipper and has attracted widespread and vocal support from market participants ever since which demonstrates the value of this incentive.

The scheme proposed in Ofgem's Initial Proposals is not appropriate for a long term incentive given it could not adapt to changes in the operational environment such as wind intermittency increasing within-day and inter-day demand variation and increasing levels of LNG and interconnector imports which are responsive to global prices. Both elements may increase the within day and end of day market imbalance and are expected to prevail within the RIIO-T1 period.

Adjusting Targets for the Operational Environment

Ofgem have proposed to fix the incentive targets for 8 years, rather than introducing targets that adjust with the operational environment. Ofgem point out that market behaviour in the previous year is not necessarily representative of that in the following year and that this would introduce complexity.

We disagree with this approach to fixing the target because an incentive that is so closely linked to market behaviour should reflect the operational environment, and this is particularly important for longer term incentives where market uncertainty means that there is a significant potential for the incentive to become ineffective. The targets should adapt from year to year to better reflect market conditions at the time. Given the uncertainty, Ofgem should also give further consideration to the introduction of a mid-point review to consider whether the incentive is still effective and appropriate – an important safeguard for consumers, particularly given the uncertainty surrounding future supply and demand patterns.

Given this, we proposed to link the price performance target to market price spreads and the linepack target to aggregate shipper imbalance over the previous year. An alternative could be to index the target to these indicators in the previous rolling 12 months. Both approaches would enable the incentive to adjust with market behaviour. This recognises the importance of setting targets in advance of the incentive period using the previous year's data so that the trade off between price and linepack measures is clear at the time decisions are made. However, the alternative option could address concerns regarding a time lag between the target setting and performance periods.

Where performance targets do not reflect changing market conditions, then the targets will be of limited relevance and may not drive desired behaviours. Therefore any fixed targets should be reviewed if market indices diverge significantly from current values. In particular, a review of arrangements, including the incentive, should be triggered if, for example, the shipper imbalance[11] rises above 3.5mcm (25% above Ofgem's proposed 2.8mcm linepack

[11] The annual average of daily net imbalance of neutrality shippers

target). The last time shipper imbalance averaged 3.5mcm over an incentive year was in 2005/06 (3.6mcm). If this level was reached, we would wish to reopen both linepack and price components to ensure that an effective and appropriate incentive was in place.

Price Performance Measure and Target

Ofgem have proposed to maintain the current measure of price performance that is based on the price spread of our trades as a percentage of SAP with the current target of 1.5%.

The market is incentivised to balance, without our intervention, by the default cashout prices, which are set a fixed differential away from SAP. This differential is increasing from 0.77p/therm to 0.88p/therm from 1 October. If the market does not balance, we will intervene and aim to address the imbalance through its trading by signalling a stronger incentive on shippers to balance; this is likely to be by setting a new cashout price. This may mean trading within a range of prices either above or below SAP dependant on whether the system is short or long, with the range (in pence per therm) greater than the fixed default differential.

With SAP at around 60p/therm, to achieve a price spread within the proposed 1.5% target means trading in a range of less than 0.9p/therm. This is about the same level as the 0.88p/therm default cashout differential from 1 October. Hence under Ofgem's proposal, at the start of the RIIO period, we would incur a loss on the price incentive when trading to set the cashout price beyond the default to incentivise the market to balance. Moreover, if the cashout differential rises or SAP decreases over the next 8 years, trading within the target would be progressively less effective, such that we would have a weaker tool than default market arrangements. This would generally result in losses whenever the default differential is insufficient to incentivise the market to self balance.

For consistency, the price spread target in the Residual Balancing incentive should therefore be in p/therm in line with the market and be greater than the fixed default differential. This would allow the residual balancer to set an appropriate incentive for the market to self-balance whilst also minimising the absolute cost of the residual balancing.

Value

We consider that our role and performance as Residual Balancer is currently under-valued with a realistic potential of ±£0.5m compared to a total value of trades of £149m in 2011/12. The value of good performance should be aligned to market benchmarks such as the default cashout differential as set out in our SO External Incentive Plan thus creating a sharper incentive to undertake this activity reflecting the value this represents to consumers.

Exceptional Event Adjustment

Following stakeholder feedback we proposed an exceptional event adjuster for the linepack aspect of the incentive following an exceptional event on the NTS. An event such as a significant supply loss could lead to a large change in linepack on one day, such that on the following day it may not be appropriate to be incentivised to return to the opening linepack level.

Ofgem's Initial Proposals do not include a linepack exceptional event adjuster that suspends the normal linepack target. Its concerns were centred on the automatic nature of our proposal, as it could be triggered for any linepack change greater than 8mcm. Whilst we do not share these concerns, an alternative mechanism would be one that is triggered automatically only following specific events (Operating Margins utilisation, Gas Deficit Warning or Daily Margin Notice[12]) or could be requested following a significant event impacting end of day balancing that does not fall under these categories. Under this

[12] UNC Modification 0415 proposes that these notices replace the current Gas Balancing Alert. If this were not to be the case we would propose this trigger to be the Gas Balancing Alert.

alternative exceptional event mechanism, on the day of the event, the daily linepack incentive payment would be zero, to recognise the impact of events outside of our control. On the following gas day, the linepack incentive would be the downside only scheme as described in our SO External Incentive Plan, so as not to penalise National Grid when restoring linepack to the level seen before the event.

Demand Forecasting Incentive

Question 11: Please provide your comments in respect of our proposals for demand forecasting incentives. In particular:
a. Do you agree that by fixing the targets for the eight year period in respect of the D-1 forecast this will provide an NGG with an incentive continuously to improve its performance in this area?
b. Do you agree with our proposal to amend the calculation of the error target, including increasing the weighting for days of higher demand?
c. Do you agree with our proposals for the D-5 to D-2 forecast incentive?
d. Do you agree that the improvement in the NDM forecast should be taken forward by the DNs?

The aim of the Demand Forecasting Incentives is to promote accuracy in our gas demand forecasts. We question whether Ofgem's proposed incentives will deliver these aims as currently proposed. If our concerns with the demand forecasting proposal are not addressed, we consider that it would be more appropriate to put in place a reputational incentive.

Fixed Targets for Day Ahead (D-1) Demand Forecasting

The targets as set out in the initial proposals are unjustified and will compromise the continuous improvement that our customers have said they continue to value.

Any incentive should have a reasonable expectation to break even for current levels of performance and, if it is to fund improvements, generate a return for improved performance. The likely outcomes under the proposed 8 year incentive fall outside the incentive range because the target is much lower than an efficient level of performance, such that from the beginning, irrespective of our actions, performance is likely to be at the collar. This means that the proposed incentive would not act to incentivise us to maintain or improve our forecasting performance; it would merely become an unfunded penalty for not being able to achieve an unfeasibly high level of forecast accuracy.

The proposed target is unachievable in the current forecasting environment. We have demonstrated improvements in our forecasting abilities over a number of years such that the scope for further improvement is limited, given the inherent uncertainties associated with forecasting. Despite considerable investment in models, absolute errors have increased in the last three years due to increasing demand volatility (particularly from IUK and storage).

To inform our forecasts we use information submitted by the industry. Last year the accuracy of aggregate information from industry was not within the target for National Grid's forecast until 14 hours after our forecast was published, which shows the inherent difficulties in forecasting. In the year to date, this indicator has not improved - our target accuracy was only met by industry information at 10am within the gas day (21 hours after our forecast). The changes in information received from industry between day ahead and on the gas day will take into account changes in demand needs and market drivers.

We proposed an alternative approach in our SO External Incentive Plan that calculated the target based on performance in a base year adjusted for demand volatility in the incentive year with a mid point review. This approach has greater justification than that proposed by Ofgem and enables the incentive to start from a reasonable performance expectation and reflect any changes in difficulty in forecasting the market. This would maintain the incentive

aims and reduce the potential for windfall gains and losses resulting from changes in the operational environment.

This approach uses an overall measure including all demand types, but an alternative could be to include separate adjusters for specific likely drivers of demand forecasting accuracy.

During the RIIO period, the main impacts on demand forecasting are likely to be:

- Renewable generation intermittency leading to more unpredictable gas power station demand; and
- New and expanded storage sites that could lead to more unpredictable storage injection demand.

Although we are planning to increase our modelling capability in wind/gas power forecasting, and gas price/storage demand forecasting, it will not be possible to keep pace with the increasing unpredictability and volatility of demand. Though we are planning to continue improvements in our forecasting performance, we expect the accuracy to reduce over the next 8 years and estimate that we will be able to forecast 62% of day-to-day demand volatility.

To align our performance targets to this increasingly difficult forecasting environment, we either need them to adjust for total demand variability (as proposed in our Business Plan) or put in place adjusters for individual elements. For example, additional storage injection capability increases the potential volume of demand change that can be driven by price movements after day ahead forecast and the end of the gas day. The current incentive represents this by adjusting the target in proportion to the increased storage injection capability within the year. A similar approach for the RIIO period, along with an adjuster proportional to increases in renewable generation capability and a mid point review would better align targets and forecasting difficulty.

Measure

We support the change to an absolute measure from a percentage measure to reduce the windfall impact of size of demand on our performance. Some stakeholders have asked for the measure to be adjusted to increase the focus on winter or higher demand days. We do not have any concerns about this proposed change that aligns with stakeholder feedback.

D-2 to D-5 Demand Forecasting

We support the introduction of further demand forecasting incentives where they are of value to stakeholders. However the incentive targets are not justified by Ofgem and will not drive the forecasting accuracy that our customers have said they continue to value.

Ofgem have proposed that the incentive targets are based on recent performance with a substantial cut (10% in the first year, 20% in the second year). The reduction in target is based on performance improvements made on day ahead forecasting when this was initially introduced. Following the introduction of the demand forecasting incentive, we strengthened the focus on demand forecasting and post-event review for a range of forecasting timescales including D-2 to D-5. Any assumption that the target should include a similar level of improvement over the first two years of this incentive is invalid. Setting targets in this way will not enable a funding of incentives that will drive such improvements.

Further, Ofgem has proposed targets without any adjustment for changing conditions (i.e. the expected increase in demand side volatility) or mid point review. In the current forecasting environment, as explained above, the difficulty of demand forecasting is changing year by year and therefore basing an incentive on a fixed target without regular review is not appropriate for a longer term demand forecasting incentive.

We propose that the target should be set on recent performance with an adjustment for the difficulty of the demand forecasting environment and a mid point review to ensure that the incentive remains effective.

NDM Demand Forecasting

Following stakeholder feedback, we proposed an incentive on the accuracy of an NTS forecast of Non-Daily Metered (NDM) Demand. We recognise that GDNs could instead be incentivised in this area and are interested in understanding any stakeholder feedback in this area.

Maintenance Incentives

Question 12: Do you consider that our proposals in respect of maintenance could address the concerns that you have in respect of NGG's behaviour in this area? Are our proposals appropriate and likely to be effective?

As part of our SO External Incentive Plan, we included new measures to improve maintenance communications and planning as well as specific financial incentives. Whilst we are pleased that Ofgem have taken forward our high level proposals in this area, we have some specific concerns over some parameters proposed.

There was some stakeholder support for our proposals for earlier and better communication and for an incentive relating to minimising National Grid's changes to maintenance plans; however some stakeholders felt that incentive should not be required to deliver these changes.

Incentive on National Grid Initiated Changes to Planned Maintenance Days

The target proposed by Ofgem is a benchmark of an absolute number of changes within the formula year. Instead any benchmark should be proportional to the number of maintenance days called in the incentive year to ensure that the target remains appropriate in the context of the prevailing maintenance workload and reduce the potential for windfall losses and gains i.e. the number of days subject to change divided by the number of days scheduled.

Ofgem propose that the target for National Grid initiated changes that affect our customers is current performance minus a 10% reduction for 2013/14 and a 20% reduction for 2014/15. This is an unrealistic change from current performance levels, particularly within the proposed timescales. The rationale stated for this reduction is based on improvements delivered following a new demand forecasting incentive scheme 6 years ago; a justification which is irrelevant for maintenance planning activities.

We are currently developing systems and processes to improve our maintenance planning. However, the maintenance plan for next year will not be able to benefit from these planned improvements as any benefits from longer term planning will take 2 to 3 years to reach full effectiveness. We have not requested allowances to fund these improvements and therefore we feel it is inappropriate to set targets including such a substantial improvement factor. Our preference would be to fix a reasonable target based on current performance and fund developments from incentive revenues from improvements against the baseline.

Incentive on Use of Maintenance Days

The initial targets and efficiency rates proposed by Ofgem for the use of maintenance days for pipeline in-line inspections (ILI runs) and valve operations are not appropriate due to the physical constraints of the sites and work involved in carrying out these operations.

As with the maintenance changes incentive, Ofgem has proposed targets that are related to recent performance but with a reduction based on previous demand forecasting performance. Ofgem's proposed reduction to the targets we proposed (based on current

performance) are equally inappropriate for an incentive that is driving us to challenge our assumptions on how we conduct maintenance and really drive innovation.

For example, for each section of pipeline that requires an inspection there will be a set number of 'ILI runs' that will be required as different Pipeline Inspection Gauges (PIGs) are run in advance of the intelligent PIG to ascertain whether there are any defects within the pipeline. We do not run more than one PIG within a particular pipeline at a time due to operational constraints of loading and unloading the PIGs and to avoid the risks associated with driving multiple PIGs by the same gas flow. PIGs are generally built to travel within a limited speed range to avoid the PIG becoming stuck, damaged or not able to measure and record the required data during the inspection run.

Given the limitations in the options available to minimise the length of time the ILI run affects an end user, and our current performance already includes work to minimise their impact, it is inappropriate to reduce the ILI benchmark target number of maintenance days as substantially or year on year.

For Valve Operations, we only call a maintenance day if the gas flow to a customer would be affected by the work required and there are limited options to reduce the number of maintenance days for this activity. We currently believe that the number of maintenance days National Grid would call for valve operations would only change if:

- A new site came on line without a full bypass or an existing site was physically altered to accommodate a full bypass in the system – this decision would be made by the site owner; or
- There are changes to maintenance and operational policy to comply with the latest regulations (including Pipeline Safety Regulations) that may, for example, affect the flow rates allowed through bypasses or the frequency that valve operations are required.

As proposed, the incentive does not have the appropriate balance of potential risk and reward, with limited actions available to National Grid to mitigate a loss rather than acting as an effective incentive to drive improvements in performance for our customers.

Ofgem noted its concerns that using a measure that includes a weighting according to the number of customers impacted would over-complicate the incentive without obvious benefit. We would like to explore this further as we believe there is a risk that the absence of such a weighting in the scheme may not drive the desired System Operator behaviours in prioritising our efforts on work with greatest customer impact.

As set out in our proposals, we consider that the scope of both incentives should be carefully considered to ensure that it covers planned activities with some level of control over when they occur and where sufficient information is available to set informed targets.

<u>Relative Value of Maintenance Incentives</u>
In its Initial Proposals, Ofgem has proposed a lower value (£20k) for the use of a maintenance day than for a National Grid initiated change to planned maintenance (£50k). We do not agree with using a lower value for the utilisation of a maintenance day compared with a National Grid initiated change to maintenance as this could lead to a perverse incentive.

This is as a consequence of the difference in value effectively penalising any shorter term actions that reduce the impact of maintenance on our customers as some changes may result from actions where we are working to reduce the number of maintenance days that affect our customers. For example, National Grid instigation of a reduction (of 1 day) to the

number of days utilised for maintenance would result in a payment of £20k under the 'use' incentive but a penalty of £50k under the changes incentive resulting in a net penalty of £30k.

If the value is not aligned between these incentives, in order to avoid the potential for perverse incentives, we propose that a National Grid initiated change to *reduce* the number of maintenance days would not be classified as a change for the purposes of the incentive on National Grid Initiated Changes to Planned Maintenance Days, thus removing the interaction between the incentives in this case. This would mean that we would not be penalised for reducing the impact of maintenance on our customers.

To summarise, appropriate maintenance incentive targets should be realistic for the tasks undertaken and reflect the workload in the year to maintain a balance between risk and reward. The performance measures and values should also be carefully defined to reduce the potential for perverse incentives.

Operating Margins

Question 13: In respect of Operating Margins, do you agree with our proposal to put in place a reputational incentive and to remove the current cost incentive?

We agree that it is not currently appropriate to put in place a cost incentive and to therefore pass through the costs of Operating Margins (OM). This reflects the nature of the OM requirement and the current review that is considering the OM requirement definitions and potential OM service type development to meet OM needs within the changing operational environment.

We are happy to revisit the potential for further incentives in this area following the OM review and to work with Ofgem to develop appropriate reporting and further build on the market for OM provision.

National Grid has issued a tender for OM services in the South West for a six to eight year period, which aims to secure services until the replacement pipelines which have been proposed as part of our RIIO-T1 business plan can be commissioned. If Avonmouth is selected to deliver the required services, it is understood that the costs to keep the plant operating will be funded through the OM mechanism. However, we also understand that Ofgem is undertaking a separate consultation regarding funding for LNG Storage and therefore this also needs to taken into consideration in relation to any incentive schemes relating to the provision of OM.

Unaccounted for Gas

Question 10: Do you agree that we should continue to put in place a reputational incentive on NGG in respect of investigating the drivers of UAG? Do you support the proposed industry workgroup to assist the investigation of the drivers of UAG?

Unaccounted for Gas (UAG) is rightly an area of importance to stakeholders to ensure appropriate management of the cost and uncertainty of this aspect of Shrinkage. We agree that it is not currently appropriate to put in place a financial UAG incentive because we do not have direct control over the levels of UAG. However, we play an important role in UAG management identifying potential issues and highlighting these with meter owners in order that they can work to eliminate or minimise sources of UAG. We therefore agree that it is appropriate for us to continue to have a reputational incentive.

The scope of our activities should continue to include meter validation witnessing and data centred investigations alongside reporting and discussing our findings with industry[13]. An industry working group could provide a constructive arena to discuss and identify ways to effectively manage UAG across the industry, and could also be a place to agree appropriate funding. Such a group would need active engagement across industry and it is important to gauge the level of interest in this before a specific obligation is put on us to facilitate this.

We remain concerned about an obligation to publish or share data where there may be commercial or legal consequences of releasing it. Therefore it is essential that the right safeguards are be in place to ensure that any data sharing is appropriate, and that the costs of meeting reasonable requests for data are funded appropriately.

Information Provision

As set out in our proposals we agree that this area is more suited to a reputational incentive than a financial incentive. A strong reputational incentive exists in this area as we know that our customers value information provision and provide feedback in this area.

Any obligations should be aligned to allowances that enable the delivery of these services, both in data provision and publications that facilitate market requirements (e.g. Future Energy Scenarios documents and events). Our RIIO-T1 submission included plans to enhance the capability of the MIPI system. Ofgem's Initial Proposals for RIIO-T1 did not include allowances for this development and as such there is currently no funding to develop our information provision services. The impact of this proposal is that there is no funding available to:

- Develop systems to meet our customers' requirements; nor
- Fund improvements in system performance that stakeholders have said they need.

There are discussions ongoing as part of the RIIO-T1 Initial Proposals that consider whether it would be more appropriate for specific information services to be directly billed to parties who wish to access those services. There are a number of options as to how this could be taken forward, each with differing costs. We are currently developing those options and expect to be able to discuss them with Ofgem later this year, followed by wider stakeholder engagement. Any obligations as part of the reputational incentive must be aligned with the outcome of these discussions, and be subject to appropriate funding.

Given the rapidly changing landscape with data provision, driven by increasing supply and demand volatility, significantly more demand for information, EU driven change and use of different technologies, we do not consider that licence obligations are the most appropriate approach for information provision. This is because they can act to reduce flexibility in evolving publications as market requirements change. This is particularly relevant for an 8 year price control.

Connections

We note that Ofgem has proposed that no further incentives on the performance of the SO are required regarding the connection process in light of the implementation of UNC Modification 0373 and the undertakings given as part of our RIIO-T1 business plan. We agree with Ofgem's conclusion that no new obligation is required and have shared an initial draft of this information with Ofgem in August and note that this will be published to the industry for the first time in October.

[13] The latest UAG report is available at http://www.nationalgrid.com/uk/Gas/soincentives/supportinginfo

Capacity SO-TO Interactions
Ofgem have proposed that National Grid has a licence obligation "to have in place and adhere to a methodology statement that details how it chooses between the different options (e.g. buyback capacity, invest) it has in respect of making capacity available".

Our initial thoughts on this statement were included in our draft generic revenue driver methodology statement (submitted within Annex B of our May 2012 SO External Incentives Business Plan). We used this approach because the decision process to assess the most efficient means of delivering incremental capacity is inextricably linked with calculating the revenue driver. We therefore remain of the opinion that it is essential that this should form part of the generic revenue driver methodology as defined under our licence. We look forward to further discussions with Ofgem and the industry, ahead of the second informal licence consultation to progress the development of a generic revenue driver methodology.

Provision of Enhanced Services and Capacity Scaleback
We are pleased that Ofgem has recognised that when additional requirements for enhanced services are identified, the most appropriate way to deliver solutions should be considered, and that this may include incentives. As the framework for RIIO-T1 continues to develop over the next few months, the process to enable this flexibility should be considered (for example within uncertainty mechanisms in the NTS licence). This will enable any arrangements to reflect the needs of our stakeholders as they evolve over the next 8 years.

As with the provision of enhanced services, we propose that similar arrangements should be in place for capacity scaleback as discussed in our Gas SO External Incentive Plan. This again would enable the regulatory regime to remain appropriate as our stakeholders' needs change.