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Dear Martin

Response to System Operator Incentive Schemes from 2013: Principles and Policy Consultation (ref 12/12)

We welcome the opportunity to respond to Ofgem's consultation "System Operator incentive schemes from 2013: principles and policy".

National Grid owns and operates the high voltage electricity transmission system in England and Wales and, as National Electricity Transmission System Operator (NETSO), operates the Scottish high voltage transmission system. We also own and operate the gas transmission system throughout Great Britain and, through our low pressure gas distribution business, distribute gas in the heart of England to approximately eleven million businesses, schools and homes. This response is provided on behalf of our UK gas and electricity transmission businesses.

This response is in two parts: this opening section provides general comments on the issues raised in the consultation, and is followed by an Appendix which considers the specific questions that are raised in the consultation. This response can be treated as non-confidential.

Please note that this response does not address the potential change in NETSO role as in Ofgem's open letter dated 23rd March 2012 entitled 'Open letter: Planning for an integrated electricity transmission system – request for views', which we will respond to separately.

Our current views on System Operator (SO) incentives are not materially different from those we set out in our response dated 26 July 2011[1] to Ofgem's June 2011 consultation "System Operator incentive schemes from 2013" (ref 77/11). However, our views have more recently been informed by our experience of the current two-year Balancing Services Incentive Scheme (BSIS) for National Grid Electricity Transmission (NGET) as electricity SO. This was put in place from April 2011 using principles which were expected to test a multi-year approach for incentive schemes for the RIIO-T1 period.

This consultation requires National Grid to submit 'well justified plans' for its SO incentives by 31 May 2012 and we are working with Ofgem and stakeholders to develop incentives in parallel with it so that we can meet that submission date.

The key points we wish to highlight in our response relate to the following and these are described in more detail both below and in the Appendix:

- ensuring that the systemic and undiversified risk faced by the SO is appropriately rewarded;

[1] Our consultation response from July 2011 can be found at http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=244&refer=Markets/WhlMkts/EffSystemOps/SystOpIncent.

- long term incentive schemes will require a range of uncertainty mechanisms to be put in place in order to minimise windfall gains and losses to both consumers and the SOs. However, this may weaken incentive properties and thereby undermine benefits to consumers;
- having in place a balanced set of incentives on the SO and all electricity TOs which ensure that constraint costs are minimised to the benefit of consumers by coordinating and optimising TO outage plans;
- assessing the impact and challenges of allowing greater interaction between the gas and electricity SOs; and
- ensuring that residual gas balancing incentives continue to encourage shippers to balance their own portfolios and that they minimise the need for intervention by the gas SO in doing so.

System Operator Risk

We welcome Ofgem's statement in the consultation that "*the regulatory framework needs to establish a balance of risk between the SOs and customers [which] needs to ensure that the SOs face strong incentives to manage these risks whilst not exposing it to unnecessary or unmanageable risks.*" (para 8 of Executive Summary). We also note the statement in para 5.5 that "*In particular, there should be no unnecessary risk around delivery of the SO outputs and the financial viability of the SO as an efficiently operating standalone entity should not be put at risk."*

SO incentives create a framework which encourages the system operator to deliver value to customers in areas where it has some degree of control. However, incentives can also expose the SO to factors it has little or no influence over, exposing them to windfall gains or losses. Generally, the more level of control the SO has over a particular output, the greater the scope for incentivisation, and conversely, incentives around outputs over which the SO has limited influence should be small.

The current level of SO incentive risk is managed through relatively low sharing factors, short-term schemes, the use of caps and floors, scope for re-openers, Income Adjusting Events and, for electricity, changes to the various incentive methodologies prepared under NGET's licence.

The potential introduction of incentive schemes for up to 8 years with higher sharing factors and wider caps and floors as proposed in this consultation significantly increases the level of risk faced by the SOs beyond current levels. For example, the current two-year BSIS scheme includes a cap and floor of ± £50m, i.e. ±£25m pa on average. We estimate that a BSIS scheme as proposed in this consultation, i.e. with no caps/floors and sharing factors of up to 50%, could lead to the electricity SO facing a risk of up to ±£100m pa – a four-fold increase. This level of risk would be significantly above that which a stand-alone SO entity could take on and therefore does not seem consistent with the Ofgem statements quoted above.

Because the provisional gas and electricity SO RAVs are relatively small at approximately £30m and £45m respectively (in 2009/10 prices), where the proposed level of risk faced by the SO is larger than that covered by the allowed return on the SO RAV, then this should be mitigated either by:

(a) providing for a net positive expected incentive outcome in the SO controls (i.e. a risk premium); or
(b) allowing a premium to the Transmission Owner (TO) cost of equity for NGG and NGET reflecting the additional risks arising from the SO incentives that the TO business will effectively need to underwrite.

Duration of Incentives and Uncertainty Mechanisms

We support work to move towards longer term incentive schemes, as these have the potential to encourage longer-term activities to be undertaken to drive efficiencies. The energy industry is entering a period of uncertainty and change as we move towards a low carbon economy during the next regulatory period with changes in the forecastability and predictability of requirements from the SOs driven by this uncertainty. Drivers of this include the impacts of environmental legislation and increased renewable generation, increasing interactions with other European TSOs, implementation of EU legislation, Electricity Market Reform and the gas Significant Code Review amongst others.

In addition, as incentive schemes become longer, there are also other factors which increase the risk of windfall gains and losses. These additional factors relate principally to the data relationships and models used to determine incentive targets. These are described in more detail in our response to Question 15. Our experience to date of the current BSIS scheme has highlighted the importance of allowing experience from using the models to feed back into modelling improvements; this can be achieved by having a suitable process in place for updating the models and methodologies to cater for oversimplification, errors or other unforeseen modelling issues. Initial feedback from stakeholders has shown that they believe this is an essential part of a long-term scheme as it should also protect consumers from windfall gains by the SO. We have recently written to Ofgem stating our intention to initiate the process allowed for under NGET's transmission licence to propose updates and improvements to the current BSIS target cost methodology[2]. In that letter we also state that we intend to reassess the ex ante and ex post treatment of current and future scheme inputs such that we are incentivised only on the elements within our control.

Similarly, with gas transmission, we have found that the correlations between system flows and the level of compressor fuel usage have changed as our customers' use of our system has evolved over the last few years. This resulted in us reviewing the relevant data relationships for the gas shrinkage incentive scheme for 2012/13 to ensure that incentive outcomes are based on SO performance rather than creating windfall gains or losses due to modelling issues.

We are therefore concerned to ensure that longer term schemes should be implemented in such a way as to protect consumers and the SOs from windfall gains and losses. In order to do this and maintain strong incentive properties, it is essential that careful consideration is given to the balance between incentive duration, sharing factors, caps/floors and the range of uncertainty mechanisms available.

One essential element in achieving this is the existence of suitable mechanisms such as the process for changing the methodologies highlighted above and for Income Adjusting Events. As under the current transmission licences, these mechanisms would need to include appropriate safeguards for all parties, such as a materiality threshold and a requirement for industry consultation.

SO-TO Incentive Alignment

The roles of the System Operators (SOs) and Transmission Owners (TOs) are intrinsically linked such that the performance of SOs is highly dependent on the decisions made by relevant TOs at the time of investment in assets and when planning and carrying out asset maintenance. As a combined SO and TO, we are able to consider the tensions between SO and TO activities on a co-ordinated basis to drive the most efficient and economic operation of the network; we are also able to pursue similar efficiencies with other TOs, as allowed for under the electricity SO-TO Code.

We support measures to further develop the alignment between SO and TO priorities, regardless of ownership. Ofgem has proposed a mechanism for the electricity SO to pay the Scottish TOs so that constraint costs can be minimised and their capital plans are delivered. In order to minimise competing priorities of businesses under different ownership, it is essential that the SO and the TOs are subject to consistent incentives to drive towards this common goal, but Ofgem's Initial Proposals for the Scottish TOs do not currently include a strong enough incentive on them to do this. In our answer to Question 3, we provide more detailed comments on this point.

SO-SO Interaction

We agree with Ofgem's assessment that there will be greater interactions between the gas and electricity networks with higher levels of renewable generation and note Ofgem's statement in para 2.30 of the consultation that: *"We want National Grid, as owner of the gas and electricity SO, to*

[2] See paragraph B2 of Part B of Schedule A to Special Condition AA5A of NGET's transmission licence.

demonstrate that it is taking account of these interactions when making decisions under the SO regulatory framework from April 2013. Through the framework we will encourage greater transparency of SO-SO interactions and their impact on the decision making of the SOs." (para 2.30)

We are actively considering how the gas and electricity networks will interact with each other as we move towards a low carbon economy and will continue to explore the practicalities and limitations of this, including seeking stakeholder views. To date, such views have been mixed about whether and to what extent it is appropriate for the gas SO to take account of its actions on the electricity network and vice versa. In addition, we note that section 105 of the Utilities Act 2000 places punitive restrictions on information sharing between regulated utilities except in very limited circumstances, which do not include the circumstances suggested in the consultation.

Ofgem's proposal could be seen by some to imply that, for example, the most economic electricity balancing action might not be taken by the electricity SO in order to minimise the impact on the gas network or vice versa. This could result in a cross subsidy between different sets of consumers.

Given the complexities relating to this topic, it is unlikely to be feasible to implement any changes to the existing arrangements in time for April 2013, but this is an area we intend to keep under review going forward. As it may affect the way the SOs operate, it will also need to be included as an uncertainty mechanism.

SO Innovation

We are also considering whether there should be a separate innovation incentive for the SOs separate from the Network Innovation Allowance and Network Innovation Competition, which have been proposed for the TOs under RIIO-T1. We also intend to ask stakeholders their views on this point.

We would be happy to discuss and expand on any of the points made in this response. If you would like to discuss this response please contact:

- Louise Wilks about general principles (louise.wilks@uk.ngrid.com or 01926 653872);
- Juliana Urdal about gas SO incentives (juliana.urdal@uk.ngrid.com or 01926 656195); or
- Katharine Clench about electricity SO incentives (katharine.clench@uk.ngrid.com or 01926 656036).

Yours sincerely

Alison Kay
Commercial Director, Transmission

Appendix: Answers to specific questions

Question 1: Do you consider that we have captured the full role of the SOs going forward?

The SO activities outlined in the consultation cover the role of the SOs in respect of the areas being considered for incentivisation and are necessarily described at a relatively high level. However, how each of the SOs manages these activities, e.g. system balancing, involves a different set of more detailed processes and tools, which may be unique to each SO and hence different approaches may be appropriate.

We have described our role more fully in our response to Questions 2 and 3 of our response dated 26 July 2011[3] to Ofgem's June 2011 consultation "System Operator incentive schemes from 2013" (ref 77/11).

Question 2: Do you consider that our minded to position on the length of the regulatory framework is appropriate?

We agree in principle that longer term incentive schemes could potentially drive some benefits through leveraging longer term trade-offs between the SO and TO where such trade-offs are possible and/or longer term investments could be efficiently made. However, this may not be the case for all SO outputs. There could also be benefits to the SO and consumers in having clear principles agreed with the regulator for a longer duration than is currently the case in order to drive better value for money.

However, in order to achieve long term incentivisation which is focussed on driving the right behaviours, it is essential that appropriate safeguards are put in place to protect consumers and the SOs from windfall gains and losses. These should include appropriate scheme parameters such as sharing factors and caps/floors, as well as a robust and comprehensive set of uncertainty mechanisms, including those associated with modelling and the associated methodologies. They should also include scheme reopeners to address unforeseen issues and industry/legislative change, whether currently known or not. We support Ofgem's suggestion in para 2.22 that 8-year incentive schemes could be designed to mitigate risks associated with modelling and data uncertainty in the early years, e.g. using a 2+6 or 2+2+4 approach, with different scheme parameters during the different scheme phases once knowledge of modelling and data improves.

Ofgem does not describe when payments under the incentives should be made or received by the SOs during multi-year schemes. This is of significant importance both to consumers and the SOs, as it will determine when charges are adjusted to cater for incentive outcomes. We support the principle that charges faced by consumers should be cost-reflective, timely and appropriately targeted. For long term incentive schemes 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.

Question 3: Do you consider that our proposals regarding SO-TO interactions provide the SOs with sufficient incentive to consider interactions with the TO in a longer term context?

As a combined SO and TO, we recognise the significant benefits that common ownership can provide when seeking an overall 'lowest cost' solution. The inclusion of the SO viewpoint in the TO decision making process, both in terms of the delivery of assets onto the system and their ongoing operation, allows the TO to consider a wider range of options than it might otherwise have done.
With regard to NGG, we agree that appropriate SO and TO incentives act together to drive best overall performance (including cost optimisation) by virtue of being in shared ownership with identical geographic boundaries.

[3] Our consultation response from July 2011 can be found at http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=244&refer=Markets/WhlMkts/EffSystemOps/SystOpIncent.

With respect to NGET, the same incentivisation also exists by virtue of the same ownership as the England and Wales TO. We are also working (as both SO and TO) with the Scottish TOs to develop a set of consistent Network Availability Policies (NAPs) which allow all the TOs to deliver their capital plans in such a way as to minimise overall costs – including those of the SO – to consumers . Under the RIIO-T1 framework, the TOs are rightly incentivised to deliver their capital plans, but given the significant volume of TO investment involved we expect that the GB transmission network will be increasingly congested with outages during the RIIO-T1 period, with limited scope for outage change.

The proposed payment mechanism described in Chapter 4 of the consultation provides a means to encourage the Scottish TOs to cooperate in minimising overall costs to consumers. However, our principal concern is that, when considered alongside its Initial Proposals for the Scottish TOs published on 7 Feb 2012, there may be insufficient incentive on them to do so. We note that Ofgem outlined some principles in its March 2011 RIIO strategy decision document, paras 6.121 to 6.128 (Penalties for breach of network availability policy), which would provide appropriate incentivisation on the Scottish TOs to cooperate with the SO by exposing them to the costs faced by consumers. We are concerned that these principles have not been implemented. In light of this, it is crucial that sufficient reporting arrangements are introduced to ensure transparency around TO outage performance and that incentive model inputs reflect actual rather than forecast TO performance to ensure the SO receives the appropriate cost target.

We also note that this approach will need to apply for offshore transmission networks if an integrated offshore approach is adopted in the future.

Question 4: Do you agree with our minded to position on SO outputs and the interactions with SO and TO outputs?

For electricity, we are supportive of Ofgem's minded to position regarding those areas that are not to be incentivised. We are working with Ofgem to understand the scope of reputational incentives relating to broad environmental targets, management of processes and procedures, and demand meets supply. Note that, under the demand meets supply output, NGET already reports annually on frequency excursions under Special Condition C17 of its licence. In our response to Question 10 we also describe our current position on the incentivisation of transmission losses.

For gas, Ofgem's minded to position is broadly aligned to our own views in many areas. Our views on residual gas balancing incentives are outlined separately in our response to Question 9. We realise the value to the UK Gas industry of the information that we provide and will continue to explore the best way to develop and fund this service as we consider the impact of European Third Package and other developments.
In our RIIO-T1 business plan we provided details of how the TO actions need to be fully taken into account when setting appropriate targets for the SO, particularly in the area of constraint management. We will continue to develop further details regarding this in our May submission.

Our views on SO-TO interaction are covered in the main body of our response and in our response to Question 3.

Question 5: Do you agree with our minded to position on the period for which the various outputs and associated incentives will be fixed?

Please refer to our response to Question 2.

Question 6: Do you agree with our views on incentivising SO outputs?

We agree that SO outputs can be incentivised using one of the three incentive categories proposed; namely cost minimisation, financial and reputational. We also note that all existing incentives fall into one of these categories.

We agree with the criteria outlined in paragraphs 3.12 and 3.13 of the consultation for determining the design and strength of financial incentives and note that these also need to be applied to the cost incentives described in Chapter 4.

Question 7: What areas, in addition to DSR, should a broad environmental output cover? What is your view on having a financial (rather than a reputational) incentive on NGET and/or NGG as SOs to encourage them to deliver against a broad environmental output?

We note that Ofgem states that "*reputational incentives on NGG in respect of its broad environmental target are included in RIIO-T1*" (Appendix 5, para 1.9) and support the approach of combining SO and TO for this incentive.

With respect to electricity, Ofgem proposes a different approach, which is for an SO incentive in addition to that on NGET as TO. We are still working with Ofgem to establish what the scope of such an incentive would cover and whether this should be reputational or financial.

Question 8: What is your view on having a financial output incentive on the accuracy of NGET's forecast of wind generation and the timeliness and availability of that information on its website?

We support the idea of incentivising NGET on the production of a wind generation forecast. We are currently exploring with Ofgem and stakeholders how existing wind generation forecasts are used by different industry parties, what additional information would be useful to them and what value they place on them.

Question 9: What is your view on introducing an incentive based on the total cost of NGG's balancing actions? Should such a total cost incentive replace or be in addition to current incentives for NGG to minimise the impact of its balancing actions?

We have been in discussions with Ofgem to understand their rationale for proposing the current approach to incentivising our role as the Residual System Balancer and to explore the practicalities and implications of this potential incentive. This has included assessing the impact of such a cost incentive on the liquidity of the National Balancing Point and the OCM market.

The gas balancing arrangements differ in a number of important ways from electricity, where there is already a cost minimisation incentive in the form of BSIS, principally:

- The gas SO takes actions to balance the system while the market is still open and active. The price of our balancing actions can also affect the marginal imbalance prices paid by shippers, which can provide a signal for them to modify their commercial position. This contrasts with electricity where there is a 'gate closure' after which the SO continues to balance while the market is closed;

- There is no statistical correlation between the volume of gas bought or sold by the gas SO and the volume delivered by the market, unlike for electricity where it is expected to be a 1:1 ratio.

Our view at this stage is that changing to a cost minimisation incentive for residual gas balancing could result in greater intervention by the gas SO in the market and that this could increase our impact on the market and change the incentives on shippers to balance their positions. In addition, as we would be balancing in a different way from now, we do not currently have data with which to forecast volumes for this incentive. If it were to be introduced then we would want to ensure that it is developed

and introduced in such a way as to minimise windfall gains and losses in accordance with the principles outlined in the last part of para 2.22 of Ofgem's consultation document.

Question 10: Do you agree that the cost incentives we are minded to apply are appropriate? Please explain your reasoning.

We agree with the principle of continuing with BSIS as a cost incentive, though we are currently seeking stakeholder views on whether the transmission losses and Black Start elements of BSIS should continue as financial incentives or be treated differently owing to the limited control we have over them. We have also highlighted elsewhere in this response our concerns about rolling the current 2-year scheme into a longer term scheme.

For the gas SO, we support the continuation of shrinkage as a cost incentive, though we are concerned that such an approach for Operating Margins (OM) could incentivise the gas SO to minimise volumes that are a Safety Case requirement. There are two alternative options to avoid this: either to treat OM as a cost pass-through item without incentivisation; or to incentivise procurement efficiency with a pass through of the requirement volumes.

Please refer to our response to Question 9 in respect of the proposed cost incentive for residual gas balancing.

Question 11: Do you agree that the parameters (scheme length, sharing factors etc.) we have proposed for the cost incentives are appropriate? Please explain your reasoning.

We describe in the main body of our response under SO Risk how the proposed changes to scheme parameters (wider sharing factors, longer schemes, wider caps/collars) would increase the levels of risk carried by the SO, and how this additional risk could be funded.

Question 12: Do you agree with our proposals to introduce a payment mechanism to encourage efficient SO-TO interactions?

Please refer to our response to Question 3.

Question 13: Do you agree with the factors we propose to consider when deciding on the role of uncertainty mechanisms?

We support the principle that incentive schemes should incentivise the SO for what it can control or forecast in order to avoid windfall gains and losses. Therefore, the use of uncertainty mechanisms is essential to cater for factors outside the SO's control or ability to forecast as well as changes that were unquantifiable or not foreseen when the scheme was established. The range of available uncertainty mechanisms should therefore include specific re-openers, ex-ante or ex-post adjustment mechanisms and appropriate incentive caps/floors and sharing factors. The current Income Adjusting Event process also provides protection for both consumers and the SOs in the case of unexpected changes that we could not foresee when setting the control and we expect that this will remain, though with the continued safeguards in place so it can only be used when appropriate and following industry consultation.

We agree with the principles described for determining uncertainty mechanisms and describe in the main body of our response how our current experience of BSIS has highlighted the importance of also having uncertainty mechanisms in place to address modelling issues.

Question 14: Do you agree with our initial view that the caps and floors on SO incentive payments could undermine the SO taking long term decisions and could undermine alignment of incentives between the SO and TO?

We agree that there is some benefit to aligning SO and TO incentive schemes in order to encourage long term decisions by the SO. We describe in the main body of our response under SO Risk how the widening or removing caps and floors could increase the levels of risk carried by the SO.

Question 15: Are there any areas where you think specific uncertainty mechanisms should be introduced into the regulatory framework?

It is important to ensure that the appropriate factors are captured by uncertainty mechanisms to avoid windfall gains and losses. We agree that there should not be too many uncertainty mechanisms, but it is important to strike a balance which avoids making the scheme overly complex while at the same time keeping the level of windfall gains and losses to an acceptable level.

When considering the development of a long term incentive scheme, there are several factors which we have identified in addition to those specified by Ofgem, which could lead to windfall gains or losses. These are principally, though not exclusively, related to modelling and data and need to be considered when developing the full list of uncertainty mechanisms or in the scheme design:

- Event types that were either not modelled accurately or not modelled at all;
- Accuracy of the assumptions in the underlying incentive methodologies, including market behaviour and correlations in data;
- Accuracy of the software models used, given that they are simplified representations of reality and may not capture all factors that result in costs to the SO;
- Accuracy of input data, including TO outage performance and timeliness of reinforcements completed by the relevant TO;
- Frequency of updates to the models, e.g. network topology, outage plans;
- Accuracy of the models or the methodologies that are developed to determine ex-ante inputs on an ongoing basis;
- Changes to the networks and how they are operated as a result of introducing new technologies, e.g. DC links, series compensation, integration of off-shore networks;
- Incentives that may be included in the EU network codes;
- Impact on role and actions in light of increased SO-SO interaction between gas and electricity; and
- Changes in the regulatory and legislative framework that may be driven by changes in market requirements, such as for system flexibility.

We will continue to develop our thinking on uncertainty mechanisms to inform our May submission.