

Electricity System Operator incentives 2015/17: Initial Proposals

Consultation

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Overview:

The current system operations incentive scheme placed on National Grid Electricity Transmission (NGET) expires on 31 March 2015. In this document we set out our initial proposals to introduce a new two year system operation incentive scheme for National Grid Electricity Transmission (NGET). The proposed scheme would apply between 1 April 2015 and 31 March 2017 to replace the existing scheme which will expire on 31 March 2015.

Context

National Grid Electricity Transmission plc (NGET) is the electricity system operator (SO) for Great Britain (GB). It is responsible for balancing the electricity system by ensuring that generation on the national electricity grid matches demand on a second by second basis. To do this, the SO buys and sells energy and procures associated balancing services. It also provides valuable information to market participants such as forecasts of wind generation. Therefore, NGET plays an important role as the SO in the functioning of the GB electricity market.

Ofgem regulates the actions of the SO to ensure that it is encouraged to minimise the costs of operating the system for market participants to deliver value for money for consumers. Building on statutory obligations which require the SO to act in an economic, efficient and co-ordinated manner, we have historically achieved this through setting financial and reputational incentives. This document sets out our initial proposals for such incentives to cover the period from 1 April 2015 to 31 March 2017.

Associated documents

- Electricity System Operator Incentives: Incentives from 2015: <https://www.ofgem.gov.uk/publications-and-updates/electricity-system-operator-incentives-incentives-2015>
- Approval of revision to National Grid Electricity Transmission's Black Start cost target: <https://www.ofgem.gov.uk/publications-and-updates/approval-revision-national-grid-electricity-transmissions-black-start-cost-target>
- Integrated Transmission Planning and Regulation (ITPR) project: draft conclusions: <https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-draft-conclusions>
- Electricity System Operator Incentives 2013-14: System Operator Innovation Roll-Out Mechanism Determination: <https://www.ofgem.gov.uk/publications-and-updates/electricity-system-operator-incentives-2013-14-system-operator-innovation-roll-out-mechanism-determination>
- Electricity System Operator Incentives: final proposals on a scheme for 2013: <https://www.ofgem.gov.uk/publications-and-updates/electricity-system-operator-incentives-final-proposals-scheme-2013>
- Electricity System Operator incentive schemes from 2013: disallowing costs and efficiency in system operations reward scheme: <https://www.ofgem.gov.uk/publications-and-updates/electricity-system-operator-incentive-schemes-2013-disallowing-costs-and-efficiency-system-operations-reward-scheme>
- Funding arrangements for new balancing services: Final Proposals: <https://www.ofgem.gov.uk/publications-and-updates/funding-arrangements-new-balancing-services-final-proposals>

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Executive Summary

The current incentive scheme placed on National Grid Electricity Transmission (NGET) as the electricity Transmission System Operator (SO) expires on 31 March 2015. This document describes our initial proposals to introduce a new two year incentive scheme to apply from April 2015.

NGET is the electricity Transmission System Operator (SO) for Great Britain (GB). The cost it incurs in keeping the electricity transmission system in balance on a continuous basis is recovered from users of the system via Balancing Services Use of System (BSUoS) charges. In recent years, the annual costs incurred by the SO to ensure the system is balanced have been about £850 million. We place financial incentives on NGET to encourage efficient system operation.

Background

In June 2014, we set out our proposals to introduce a two year scheme from April 2015, largely based on the existing incentive scheme. We set out our view that the existing scheme had driven efficiency improvements and savings for consumers, despite the growing challenges that the SO faces in its operation of the system. We considered that the implementation of a two year scheme based on the existing scheme was appropriate to ensure that the impact of a number of related ongoing market developments could be taken into consideration in developing enduring incentive arrangements from April 2017. We also set out some areas where we would be looking to make improvements to the existing scheme.

Respondents to our June consultation were broadly supportive of our proposals. They agreed that it was appropriate to introduce a new two year scheme to enable other changes taking place to bed down.

Proposals

We are proposing to introduce a scheme largely based on the structure of the existing scheme. We propose to retain a Balancing Services Incentive Scheme (BSIS) which sets an annual cost target for balancing costs. This target would be set by the existing BSIS models as well as a target for Black Start. NGET receives 25% of any savings against the target and pays 25% of any overspend, subject to a cap and floor of ±£25 million. As with the existing scheme, we are also proposing to implement incentive schemes for wind generation forecasting and innovation rollout. We also intend to retain a reputation incentive for transmission losses.

BSIS target setting approach

The BSIS scheme target cost is derived from models designed to calculate the optimised energy and system actions that National Grid could take to resolve system imbalances. We have considered whether it is appropriate to make improvements to this approach or the models.

We consider that the use of these models in setting the target is important to ensure that National Grid is incentivised, as far as possible, only in respect of costs that are within its control. We are confident that the models are robust and capable of setting

appropriate targets. We therefore propose to continue to apply the existing framework for the validation, governance and development of target-setting models. However, we are looking to make improvements with respect to the determination of inputs, parameters and assumptions that are used in these models. In addition, we propose to extend the licence obligation on the SO to continue improving these models.

Transparency of SO actions

We believe there is more NGET can do to provide the market with analysis and rationale for its actions. We also believe that there is scope for NGET to increase visibility of target-setting models. In particular, we note that NGET publishes all the coefficients on the energy model, but does not publish the model itself. We are in discussions with NGET about steps it can take to improve transparency without compromising its commercial position. Ultimately, we are not proposing to introduce new licence requirements on NGET in this area at this time but we will be working with NGET to deliver a roadmap for improving SO transparency.

Additional Incentives

Alongside core energy and system balancing incentives, the current scheme includes additional incentives for wind generation forecasting, innovation and transmission losses. We consider it appropriate to implement new incentives for each of these activities based on the existing proposals but with the following improvements:

- A tightening of the wind generation forecast incentive target to reflect the improvement that NGET has made on this incentive and a rebalancing of the incentive to ensure that NGET is equally as incentivised to improve accuracy in the winter as well as the summer;
- Improvements in the process for the Innovation Roll-out Mechanism to facilitate the use of this mechanism;

Next steps

This consultation closes on 25/11/2014. Following our review of responses, we intend to issue a consultation on final proposals during winter 2014. We intend to have the licence modifications in place for 1 April 2015.

1. Introduction

Chapter Summary

This chapter summarises our current incentives on the SO, revisits key points from our June consultation, the views we received, and our proposal for 2015/17. Subsequent chapters will explore our initial proposals in more depth.

Question box

Question 1: Do you agree with the changes we are proposing?

Question 2: Do you agree with how we have reflected these changes on licence conditions?

System Operator Incentives

1.1. We have been setting incentives¹ on the electricity SO in broadly their current form since 2001. These schemes have lasted one to two years and the core Balancing Services Incentive Scheme (BSIS) incentivises NGET to operate efficiently by setting an overall cost target² for its balancing actions. NGET receives 25% of any saving against the target and incurs 25% of any cost above the target, subject to a cap/floor of $\pm\text{£}25$ million. The remainder of the costs are passed on through Balancing Services Use of System (BSUoS) charges. In the current scheme, we introduced additional incentives on NGET to produce outputs beyond core energy and system balancing actions. These incentives are either reputational (no financial reward or penalty) or financial incentives.

1.2. The table below summarises BSIS and all other components of the incentive scheme. More detail on the structure of the current scheme can be found in our June 2014 consultation.

¹ These incentives focus on the external costs of the SO which includes the actions it takes in the balancing mechanism and contracts that it signs in order to manage constraints or procure ancillary services for example. Incentives for the internal costs of the SO (staff and other resource costs) are developed as part of the price controls set on the transmission owners (RIIO-T1).

² Recent schemes have not set an overall target at the commencement of the scheme. Rather, NGET's performance against a target at the start of the scheme for certain cost components is combined with updated actual data to generate an overall target which is only known at the end of the scheme.

Table 1: Summary of current incentive scheme

Characteristic	Description	2013-15 scheme
<u>Core BSIS Incentive Parameters</u>		
Scheme length	Amount of time that the scheme is in place	Two-year scheme with one year update of target, cap and floor and some inputs
Target setting approach	Methodology used to define the target against which NGET's costs are compared	Use of two models to identify a target for energy balancing and system balancing costs. These are combined with the Black Start target to form one overall BSIS scheme target
Cap and floor	Maximum return/loss that the SO can make from the scheme	±£25m in each year of the scheme
Sharing factor	Percentage of under/overspend that the SO retains	25%
Income adjusting events (IAEs)	Provisions to apply for changes to the target in light of unforeseen events	Materiality threshold for opening an application to £10m.
Black Start	How the cost incurred by the SO in order to procure sufficient Black Start capability is treated	Target set up front built up from the different costs which we would expect the SO to incur over the scheme period. SO has the ability to apply for changes to the cost target for the second year of the scheme in certain areas. For example where the SO identifies opportunities for enduring cost savings or if it identifies market developments outside of its control that significantly impact against the target
<u>Additional Incentives</u>		
System Operation-Innovation Roll-out Mechanism	Funding for roll-out of innovation (Technology Readiness Level 9 ³) that moves towards enduring approach objectives	Up to £10m available between 2015/17

³ Technology Readiness Level (TRL) refers to the stage of innovation of a technology. A TRL of 9 indicates the roll out stages of development

Wind Generation Forecast incentive	Incentive on the accuracy of the SO's day ahead wind generation forecasting	A cap/collar of £250k each month based on the SO's day ahead forecast accuracy measured against a defined target
Transmission Losses incentive	Incentives for the SO to reduce transmission losses where possible and report on transmission losses	Requirement for the SO to report on actions it takes that impact on transmission losses and on losses on the system more generally
Model development licence condition	Requirement for the SO to develop the models which are used to set a target under a scheme	Licence condition to continue developing models. Focus on working with stakeholders to ensure models remain fit for purpose and are able to make robust forecasts of future balancing costs

To note, this review does not cover the Supplemental Balancing Reserve (SBR) or the Demand-Side Balancing Reserve (DSBR) which are covered until 2016 under Licence Condition 4K.

Impact of incentives

1.3. In recent years, there have been new challenges for NGET in ensuring the system is balanced. There has been a change in generation mix such as the growth of intermittent generation, changes in the types of balancing services providers, greater interconnection, falling system inertia and a rise in thermal, voltage and stability constraints. These challenges have resulted in increased costs of operating the system (the cost of operating the system in 2013/14 was 28% higher compared with 2009/10). We have reflected these challenges when setting SO incentive arrangements in recent years by using predictive target-setting models to derive the cost target.

1.4. We consider that incentive schemes have been effective in ensuring NGET is efficient in its role as SO. We have seen NGET drive efficiencies in its system operation in a number of areas:

1.4.1. Ancillary Services: NGET has continued to evolve the market for ancillary services. For example, the Short-Term Operating Reserve (STOR) market has continued to become more liquid and the costs of procuring and operating STOR continue to fall. We have also seen innovation in STOR products to increase competition in service provision. NGET has also diversified its strategy to meet frequency response requirements as the availability of thermal generators, traditional providers of frequency response, decreases. However, we believe there is more NGET can do to exploit potential for service provision from the demand side and renewable generation.

1.4.2. Balancing Mechanism (BM) Actions: NGET has taken action to minimise the cost it incurs by optimising between taking actions within the BM or

using non-BM services. Changes in system characteristics arising from an evolving generation mix and the need for outages to manage network development has led to upward pressure on constraints costs for thermal, voltage and stability reasons. This optimisation has led to efficiency on the costs being incurred to manage a challenging constraints environment.

1.5. Hence, we are confident that our incentive schemes have led to savings for consumers and are currently able to drive improvements from NGET.

June 2014 Consultation

1.6. In our June 2014 consultation, we described our intention to introduce a two-year scheme from April 2015, broadly similar to the incentive scheme for 2013/15. We stressed that we believed this was appropriate as the current scheme has been effective in encouraging NGET to deliver efficiency improvements and savings for consumers. It would also allow us to consider the impact of market and regulatory changes, such as the proposals for an enhanced-SO as part of our recent draft conclusions on the Integrated Transmission Planning and Regulation (ITPR) when developing enduring incentive arrangements to apply from April 2017.

1.7. We stated that we would look into enhancing the incentives where appropriate. We identified the following areas for further analysis:

- BSIS target setting approach
- Greater transparency on NGET's actions
- Non-BSIS incentives and benefits of new incentives
- SO-TO financial mechanisms

1.8. We reiterated our intention to review the incentives to account for changes to the market and to develop enduring arrangements for the SO. We proposed to start this review in time for implementation in April 2017.

Stakeholder responses

1.9. Stakeholders were broadly supportive of our intention to implement an incentive for 2015/17 in a similar format to the current incentive scheme. Some of the stakeholders agreed with the necessity of continuing with the current scheme framework until 2017. However, they stressed that it was important for the work required to develop enduring arrangements to start promptly to allow for completion by 2017.

1.10. One stakeholder highlighted NGET's increased engagement on developing services as evidence that these incentives have had a positive impact on driving NGET's performance. Other stakeholders expressed some concerns with the incentive scheme, particularly on whether the recent outperformance seen by NGET was

because the targets were not appropriately set rather than improvements in NGET's performance.

1.11. Stakeholders were supportive of our proposed review focus. A respondent considered that there was a need to review how the BSIS parameters are set, while another participant suggested that the BSIS scheme sharing factor should be reduced to 10% from the current level of 25%.

Proposal for 2015/17 scheme

1.12. We are proposing to introduce a scheme for 2015/17 largely based on the structure of the existing scheme. We propose to retain a Balancing Services Incentive Scheme (BSIS) which sets an annual cost target for balancing costs. This target would be set by the BSIS models as well as a target for Black Start. We propose to focus our attention on the inputs and assumptions of the BSIS target setting models to ensure they are fit for purpose. We also propose to work with NGET to increase transparency of its actions, in particular the narrative around the actions it takes and making the models more transparent to industry, where possible

1.13. On additional incentives, we are proposing to maintain both the Transmission Losses reputational incentive and the System Operation Innovation Roll-out Mechanism (SO-IRM). We are also proposing to tighten the incentive on the wind generation forecast incentive to recognise the improvement made by NGET. Finally, we are not proposing to introduce an incentive on SO-TO interaction and propose to continue assessing the need for and format of such an incentive in the meantime.

1.14. We are also continuing to propose a thorough review of the incentives arrangements to develop enduring arrangements in time for the April 2017 scheme.

Document structure

1.15. The next chapters describe the key changes we are proposing to make to the 2015/17 incentive scheme. Chapter 2 describes the BSIS parameters. Chapter 3 describes our proposals for Model transparency and governance. Chapter 4 describes our views and proposals on SO Transparency.

1.16. Chapters 5 and 6 discuss our proposals for additional incentives, including wind generation forecasting and other additional incentives. Together with this document we are also publishing a consultation on the draft licence conditions needed to implement these proposals.

Next steps

1.17. This consultation closes on 25/11/2014. Following our review of responses, we intend to issue a consultation on final proposals during winter 2014 and we intend to have the licence modifications in place for 1 April 2015.

Your views

1.18. We are interested in your views on the changes we are proposing to make to the SO incentives for the 2015/17 scheme. We also seek views on the draft licence conditions we are publishing alongside this consultation.

2. BSIS parameters

Chapter Summary

This chapter describes our analysis on the BSIS incentives and our proposal for these parameters for 2015/17.

Question box

Question 1: Do you agree with our proposal to maintain the BSIS incentives without alteration?

Question 2: Do you agree with our focus on making sure the modelling avoids the SO from hitting the cap or floor?

BSIS parameters

Background

2.1. The main incentive on the System Operator is BSIS. BSIS incentivises NGET on the actions it has to take in order to operate the National Electricity Transmission System. It includes one target for all the costs the SO incurs in ensuring that the system is kept in balance, whether these actions are required to balance energy or to manage transmission constraints. It also incentivises the SO on the costs it incurs to be ready to respond in the event that there is a need to re-energise part of the entire system (a process known as Black Start).

2.2. The current BSIS runs for a two-year period, settled at the end of each year. The assumptions used to set the target (including the agreement of which ones are defined ex-post) are defined at the start of the scheme with no deadband around the target. If the SO spends less than the target it is allowed to keep 25% of that underspend. Conversely, if the SO spends more than the target, it has to incur 25% of that overspend. National Grid's performance under the scheme is limited to $\pm£25$ million per year.

2.3. BSIS includes a number of mechanisms to manage those factors outside NGET's control. The models used to set the target use a mixture of forecast and actual inputs (ex-ante and ex-post, respectively). These are determined based on NGET's ability to control or forecast. NGET also has the opportunity to reset a few of the inputs between incentive scheme years subject to our approval. This includes the most difficult to predict costs in black start, such as capital contributions.

2.4. While the mechanisms described above are expected to account for the expected range of uncertainty, BSIS includes a mechanism on large unforeseen events. In those instances and subject to certain condition, NGET may apply for an

adjustment under the income adjusting event mechanism.⁴ Figure 1 below summarises the key parameters of the BSIS scheme, including its uncertainty mechanisms.



Figure 1: Current structure of BSIS incentive scheme

June 2014 consultation

2.5. In our June 2014 consultation, we proposed to extend the scheme to 2015-17, maintaining the same structure as in 2013-15. This proposed continuation of the current framework recognised the fact that the scheme is now well understood by us, NGET and wider stakeholders. It also allows the resources of both ourselves and

⁴ Applications for income adjusting events have to match a set of criteria described in part E of licence condition 4C of NGET's Special Licence Condition.

stakeholders to focus on how an incentive framework may need to change post-2017.

2.6. The effectiveness and robustness of the current models informed our proposal in the June consultation to retain a target setting approach which is broadly consistent with that used currently.

2.7. We proposed to maintain the same BSIS parameters as included in the current scheme, with a sharing factor of 25 per cent and a cap and floor of $\pm£25$ million in each year of the new scheme.

2.8. We also proposed to extend the annual review process under which NGET can propose changes to a number of selected areas of the scheme: proposing amendments to the target setting methodology, making updates to identified target setting inputs, applying for funding under the SO-IRM and submitting applications where it considers income adjusting events to have occurred. An annual review would therefore take place at the end of the 2014-15 scheme year and again at the end of the 2015-16 scheme year.

Stakeholder views

2.9. Stakeholders were supportive of our intention to extend the 2013/15 scheme for the 2015/17 period. However, they expressed some concerns with the parameters. Stakeholders then suggested that it was important to re-evaluate the BSIS parameters for the 2015/17 scheme. For example, one stakeholder expressed concern that the current incentive scheme did not place enough risk on NGET when operating the system. Another stakeholder also proposed lowering the sharing factor to 10% to increase the likelihood of NGET not hitting the cap or floor.

Proposal for 2015/17 scheme

2.10. We have analysed the appropriateness of the current incentive parameters under our current proposal for an incentive scheme for 2015-17, with the same format as the current scheme. We are proposing to retain the current parameters for the scheme, 25% sharing factors and $\pm£25$ million cap and floor, as we consider that these are still fit for purpose.

2.11. We considered whether the current sharing factor was appropriate. We noted that one stakeholder considered that the sharing factor should be reduced to 10%. We are aware that the current sharing factor of 25% is already significantly lower than the equivalent sharing factor for RIIO-T1 (46.89%). This creates higher value for any pound saved on the RIIO-T1 incentives against the SO incentives. This being the case, we do not believe that decreasing the value of SO actions against TO actions further is appropriate.

2.12. However, at this stage, we do not believe that making the sharing factors the same between RIIO-T1 and SO incentives is in the best interest of consumers. While we believe that savings to consumers should have equal value, regardless of whether

they come from smarter operations of the system or outperformance against RIIO-T1 incentives, we need to gain greater confidence that any increase in the sharing factor would not lead to the SO hitting the cap or floor more often. Nevertheless, we propose to include the sharing factor in our review of the incentive from 2017 onwards.

2.13. The cap and floor parameters are set to provide a balanced risk profile to protect both consumers and the SO. We do not believe that raising the cap and floor would be appropriate responses to any observed higher volatility as this would manage only the consequence and not the cause of any volatile performance.

2.14. However, as described in Chapter 3, we propose to focus our attention, with the SO, on the inputs and assumptions in these models to ensure that they set a robust target for the cost of operating the system.

2.15. We are also proposing in Chapter 4 to work with the SO to increase transparency on its actions. This should allow stakeholders to better understand the challenges the SO currently faces to operate the system.

Black Start

Background

2.16. Black Start is the ability of a generator to start up and provide electricity to the transmission system without an external power supply. Black Start power stations would assist in the restoration of electricity supply in the event that all or part of the transmission system becomes de-energised as a result of plant failure or other unexpected occurrences. NGET contracts for Black Start services, typically from generators.

2.17. Historically, we have set a cost target for Black Start, which is added to the overall BSIS target against which National Grid is incentivised. We incentivise those costs that can be forecasted by setting an upfront target at the start of the incentive scheme. We then provide an opportunity for NGET to apply for a mid-scheme update on those costs that are more volatile and difficult to predict. This protects both consumers and the SO from those factors that can result in large windfall gains or losses.

2.18. Under the mid-scheme update provisions of the 2013/15 scheme, NGET requested an increase of £14.9m to the Black Start target. Of the proposed £14.9 million increase to the target, £14m was for capital contributions in relation to the agreement of new contracts with Black Start providers and £0.9m was for warming costs. This represented an increase from the original target of £21.45m to £36.35m for the 2014-15 scheme year.

2.19. Ofgem decided to approve the proposed increase to the target of £14.9 million as we considered that this increase was reflective of the expected efficiently incurred costs for capital contributions and warming requirements in the 2014-15 scheme

year. Ofgem’s approval of the £14 million capital contributions was conditional on NGET providing clear evidence that it had agreed contracts in line with its proposals and within the period from 1 April 2014 to 31 March 2015.

2.20. Similar to other incentives, we would like to consider having longer-term incentive schemes for Black Start if appropriate. As part of our review ahead of 2017, we are proposing to evaluate whether this is possible.

June 2014 consultation

2.21. In line with our proposal to maintain the same BSIS parameters as in 2013-15 scheme, we also proposed in our June 2014 consultation to continue with similar arrangements for Black Start.

Stakeholder views

2.22. While stakeholders expressed concerns with some of the BSIS parameters, there were no concerns expressed over the proposed continuation of a target for Black Start.

Proposal for 2015/17 scheme

2.23. Given that we reviewed the need for adjustments to the Black Start incentive in March, we believe it is still fit for purpose for the 2015/17 period. Hence, we are proposing similar arrangements to those approved by the Authority in March.

2.24. We propose a target of £22.35 million for each of the next two years and similar opportunities for National Grid to reapply for a mid-scheme update for any new capital contribution, warming costs and new provider availability fees. The table below describes how we treat each cost component of Black Start.

Table 2: Summary of proposed Black Start scheme target

Cost area	Description	Treatment	2015/ 16 target	2016/ 17 target
Availability fees	Payments to providers for being available to provide a service	Ex-ante	£22.35 million	£22.35 million
Testing	Testing to ensure that the plant can provide a Black Start service if called upon	Ex-ante		
Capital contributions for contract re-negotiations	Contributions provided by the SO for existing providers to invest in refurbishments at contract re-negotiation stage	Ex-ante		

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Warming	Payments to providers to ensure they are available to provide a service when they would otherwise not be	Mid-scheme update		
New provider availability fees	Availability fees for new providers who are not currently providing a service but sign a contract to start providing a service within the scheme period	Mid-scheme update		
Capital contributions for new providers	Contributions provided by the SO to new providers who sign a new contract within scheme to invest in the required capital	Mid-scheme update		
Feasibility studies	Costs of feasibility studies to identify potential providers	Ex-post	NA	NA
Total cost target			£22.35 million	£22.35 million

3. Model transparency and governance

Chapter Summary

This chapter summarises the proposals we are putting forward on the models and governance structure around them.

Question box

Question 1: Do you agree with our proposal to maintain the existing framework for the validation, governance and development of the SO's BSIS target modelling and not to introduce any new formal incentives in this area?

Question 2: Do you agree with our intention to focus on the validation of the models' inputs and assumptions?

Question 3: Do you agree with the need for the SO to improve the transparency of the modelling? Do you have any particular thoughts about measures to help facilitate this?

Background

3.1. The BSIS target is formed by two models: a constraints model and an energy model. The outputs from these two models are combined with a Black Start cost target to form one overall scheme target designed to reflect the costs the SO should economically and efficiently incur.

3.2. The constraints model sets the target for constraints management costs. It is a linear optimisation model that derives NGET's optimal strategy to manage constraints in the balancing mechanism.⁵ It incorporates the nodes, transmission lines and generators in the system. It uses a mixture of ex-ante and ex-post assumptions to derive a target that represents NGET's business as usual approach to constraints management.

3.3. The energy model is an econometric-based model that uses the historic relationship between the volume of services and cost of balancing the system to derive a target for NGET's energy balancing actions.

3.4. Modelled targets for constraints and energy have been at the centre of SO incentives for the last 4 years. These predictive models were introduced because historic trend analysis alone was insufficient to determine potential future costs. These models have improved in accuracy and sophistication over the last four years. They enable us to assess (quantitatively and qualitatively) how NGET has driven lower costs on energy balancing and implemented a strategy to minimise constraints

⁵ You may find further information on the Constraints model on <http://www2.nationalgrid.com/UK/Industry-information/Electricity-system-operator-incentives/bsis/>

costs, particularly in the current scheme. We propose to improve transparency in how these models are used.

3.5. Recent market developments (such as increasing intermittent generation) have made identifying a scheme target increasingly complex. NGET introduced a number of improvements to the models prior to the beginning of the existing scheme. This gave us sufficient confidence that they could deliver robust targets and therefore effectively support a target setting approach for the 2013-15 scheme.

3.6. NGET owns these models and is responsible for ensuring they set a robust and appropriate target. NGET has a licence condition in place requiring it to make improvements to these models.⁶ Ofgem approves the methodologies that underpin the models. We also review model performance on an ongoing basis through our monitoring work. Our expertise on the models allows us to challenge the SO when appropriate and ensure that an appropriate target is set. We also approve the use of certain mechanisms that allow updates to the modelling at the mid-scheme period to ensure the model can adapt and remain robust.

June 2014 consultation

3.7. In our June consultation, we proposed to broadly retain the existing arrangements for the models and target setting methodologies. This included maintaining the existing model update mechanisms and extending the model development licence condition until 2017. However, we also signalled our intention to review the governance arrangements for the models to ensure that they supported robust targets that effectively incentivised NGET. We wanted to consider whether greater external input could reinforce industry confidence and understanding of the models.

3.8. For these reasons, we asked stakeholders whether the transparency of the modelling is sufficient and how it could be improved. We also wanted to hear views on the functionality of the models and how stakeholders would like to engage in the model development process.

Stakeholder views

3.9. A number of respondents to our consultation believed that the industry does not have a strong understanding of the modelling. They welcomed any initiatives that would increase transparency in this area. One respondent suggested more

⁶ Set out in Special Condition 4E and 4F of NGET's licence. Under this condition, NGET must have regard to the following points when developing the models: (a) developing forecasts of the target costs of the Balancing Services Activity with a forward projection of eight years; (b) ensuring the enduring models are suitable for forecasting the external costs of the Balancing Services Activity undertaken by the licensee and having regard to any changes in the role of the licensee in the conduct of the Balancing Services Activity; (c) developing enduring models which seek to attain optimum performance with regards to the carrying on of the Balancing Services Activity; and (d) enabling industry participants to have a greater understanding of the projected level of the future costs of the Balancing Services Activity.

frequent stakeholder events to discuss the models and potential improvements. There was also some support for greater stakeholder scrutiny of the modelling in general, with one respondent suggesting setting up an external panel to review the model and its inputs. However, another respondent felt that existing information was sufficient. They considered that Ofgem should provide the main check of the models.

3.10. There was also concern from some respondents about the robustness of the targets produced by the models, particularly given the variation seen between the targets and outturn performance over the last few years. A number of respondents highlighted a need for greater certainty about future balancing costs. Suggestions included greater narrative about the rationale for changes in the targets and for the costs incurred, lower use of ex-post inputs and a financial incentive on the accuracy of forecast costs. One respondent also noted their reservations about allowing NGET too much opportunity to adjust the modelling approach within the scheme.

Proposal for 2015/17 scheme

3.11. We propose to maintain the existing framework for the validation, governance and development of NGET's BSIS target modelling. We do not intend to introduce any new formal arrangements or incentives (e.g. new licence conditions). This is because we consider that the existing framework provides us with the appropriate mechanisms to ensure that NGET's modelling will produce robust and credible cost targets for 2015/17. At the same time, we believe that the current model development licence condition provides a good platform for the SO to further develop the modelling approach for future schemes and engage with stakeholders to increase modelling transparency.

3.12. We continue to propose to focus on the models to ensure that they are robust, transparent and continually improved to meet future needs by:

- Focusing our attention on the validation of the inputs and assumptions that feed into the models.
- Extending the existing model development licence condition until 1 April 2017.
- Working with the SO to bring forward measures that increase the transparency of the modelling approach to stakeholders.

Model Validation and Development

3.13. As part of our review of the existing incentive arrangements we tested the models to review whether they are fit for purpose. We ran the models using only ex-post inputs and found that the output costs accurately tracked actual costs incurred. This has provided us with confidence that the models are capable of delivering robust targets for 2015/17. It also allows us to move our main focus to the verification of the inputs and assumptions that feed into the model.

3.14. We consider that the existing models, combined with a full and thorough assessment of all model inputs, will be able to deliver robust and credible targets that accurately capture the costs the SO should economically and efficiently incur. However, we believe it is still relevant for NGET to continue to develop the models so that they are suitable for future schemes. This is why we propose to extend the model development licence condition until 2017.

Model Transparency

3.15. We also believe that there is scope for greater modelling transparency as suggested by several respondents. Additional stakeholder scrutiny of the modelling approach may be valuable as it could help to address some of the concerns raised around the robustness of the target and the variability of forecast SO costs. An improved understanding of the modelling approach would also put stakeholders in a better position to contribute to model development. This input could be valuable for the design of future incentive arrangements and, for example, could help to improve certainty around the long-term forecasting of balancing costs.

3.16. We are not proposing, however to introduce external audit or expert panel oversight of the model. This is in part because we consider that further transparency measures could allow for this level of external scrutiny anyway, and in part because we believe the onus should be on us to retain expertise and carry out the main validation of the models.

3.17. We believe that NGET can be more proactive in understanding stakeholder needs and identifying areas where modelling transparency can be improved. This could involve, for example, arranging further stakeholder events, improving the narrative in the target setting methodologies and evaluating what aspects of the models could be published. NGET has already made progress in these areas, and we expect them to build on this during the existing scheme and the next scheme.

3.18. We do not consider that any new formal incentives are needed in this area for the next scheme. NGET has an obligation to engage with stakeholders under the model licence condition and we believe from our discussions that this is an area where NGET is keen to make significant progress. We will be working with NGET to develop a roadmap for improving model transparency.

Model Framework

3.19. We are not proposing to introduce any of the more fundamental changes to the modelling framework proposed by stakeholders (e.g. a financial incentive on the accuracy of forecast costs). Instead, we consider that extending the current framework until April 2017 provides an ideal opportunity to consider whether more fundamental changes to incentives in this area are necessary for enduring arrangements from April 2017 onwards.

4. SO Transparency

Chapter Summary

This chapter covers our proposals on increasing SO transparency to stakeholders. It describes how we would like to work with the SO to achieve that.

Question box

Question 1: Do you agree with our proposal not to introduce any new formal incentives on the SO to increase the transparency of its actions?

Question 2: Do you agree that in order to improve transparency, the SO should have a particular focus on improving the narrative contained alongside published information?

Background

4.1. NGET sits at the centre of the electricity wholesale market. It regularly engages with the full range of market participants and has access to large amounts of centrally collated information. It takes real time and forward looking decisions based on this engagement and information.

4.2. It is important that stakeholders have a good understanding of the contracting and utilisation decisions made by NGET, as this informs their own investment and operation strategies. Transparent decision making can in turn reduce system operation costs as clear signals are provided to the market, driving innovation, competition and efficiency.

4.3. Greater transparency should also allow market participants to hold NGET accountable for its actions. Greater understanding on SO actions can serve as a platform for stakeholders to provide input to NGET regarding improvements that they identify in terms of the SO's service procurement.

June 2014 consultation

4.4. In our June consultation we sought views from stakeholders on the extent to which greater transparency is needed. In particular, we were interested in areas where the current level of transparency is insufficient.

4.5. We consider that NGET should be proactive in engaging with stakeholders to understand their needs in this area. It should be willing to publish any non-commercially sensitive information that would be valuable to the market (and ultimately consumers) and ensure that any published information contains clear and accessible commentary. This in turn will help NGET to minimise the cost of balancing and build a strong electricity market.

4.6. Some stakeholders have previously suggested that they would benefit from greater transparency and understanding surrounding NGET's actions. Hence, we have considered whether licence requirements or additional incentives can support the drive for greater transparency.

Stakeholder views

4.7. Respondents to our consultation broadly welcomed initiatives to increase SO transparency. They raised a number of specific areas where they believed transparency could be improved. These ranged from areas where there could be greater commentary and narrative in existing publications (e.g. in NGET's Monthly Balancing Services Summary (MBSS) reports) to areas where more data could be provided (e.g. price and volume data for certain balancing services).

4.8. One respondent noted that commercial confidentiality could limit the release of certain information. However, they considered that the onus should be on the SO to release information unless there is a compelling reason not to, not the other way around. A couple of respondents highlighted that they thought there was a good level of SO transparency in some areas, such as market operational data.

Proposal for 2015/17 scheme

4.9. We continue to see improved transparency by NGET as SO as a priority area for improvements during the next incentive scheme period. We propose to work with NGET to encourage them to look for ways to deliver this increased transparency. In particular, we expect NGET to:

- Further engage with stakeholders to understand their needs (including the organisation of stakeholder events).
- Ensure a clear and accessible narrative is contained alongside published information.
- Publish any information that would ultimately help drive innovation, competition and efficiency in the market.⁷

4.10. We do not intend to propose a formal new incentive in this area (such as a licence requirement) given NGET's commitment to increasing transparency of its actions. They also have an interest in facilitating the development of a robust and transparent electricity market that allows for participants to balance their positions.

4.11. Our review of SO transparency in the existing incentive scheme found NGET publishes a large amount of information to the industry through its website. However, in several areas, there could be greater narrative and descriptions provided. This is why we are proposing to work with NGET to develop this area in particular. We would like to hear your views on this.

4.12. We also agree with stakeholders that the onus should be on NGET to publish any additional information that could be valuable to the market, as long as there are no legitimate concerns around commercial sensitivity. We expect NGET to review the suggestions raised by respondents to our June consultation and to consider what other information could be valuable to stakeholders going forwards.

4.13. NGET should be proactive in engaging with stakeholders to bring forward initiatives to improve transparency. We propose to monitor NGET's performance throughout the next scheme and for this to inform our more fundamental review of the incentive arrangements to be implemented from 1 April 2017 onwards.

5. Wind Generation Forecast

Chapter Summary

In this chapter we set out our initial proposals for changes to the wind generation forecasting incentive for 2015/17, considering performance over the 2013/15 scheme and stakeholder views highlighted in responses to our June consultation.

Question box

Question 1: Should we maintain the linear format to the incentive? If not, how should the incentive be structured?

Question 2: Do you agree with the proposed incentive targets? If not, how should these be set?

Question 3: Do you agree with the reallocation of the possible incentive revenue? How much do you value forecasting accuracy in winter compared to summer?

Background

5.1. The wind generation forecasting incentive is one of a number of additional incentives that were introduced for the 2013/15 scheme. It aims to encourage increased forecasting accuracy in response to requests by stakeholders, who value the certainty that this incentive aims to encourage, as more accurate wind forecasts allow for better informed decision making by stakeholders.

5.2. NGET is incentivised to provide an accurate day ahead forecast of wind generation no later than 17:00 on the day before the day to which the forecast relates. It is financially rewarded for a forecast error inside target and is penalised if its forecasting error exceeds this target. The maximum potential for profit or loss is theoretically $\pm\text{£}250,000$ in each calendar month, or $\pm\text{£}3\text{million/year}$.

5.3. The forecast errors for the 2013-15 incentive were based on the historical performance of NGET's forecasts over the 18 months prior to the scheme, with a discount factor applied. These were set as shown in Table 3.

Table 3: Summary of current scheme targets

Period	Target Forecast Error
1 April 2013 to 30 September 2013	4.75%
1 October 2013 to 31 March 2014	6.25%
1 April 2014 to 30 September 2014	4.5%
1 October 2014 to 31 March 2015	6%

5.4. The $\pm\text{£}250,000$ /month cap and floor provides a maximum and minimum revenue or cost. Within these boundaries, the revenues that NGET could have received over the 2013-15 scheme period are shown in Figure 2 below.

Electricity System Operator incentives 2015-17: Initial Proposals

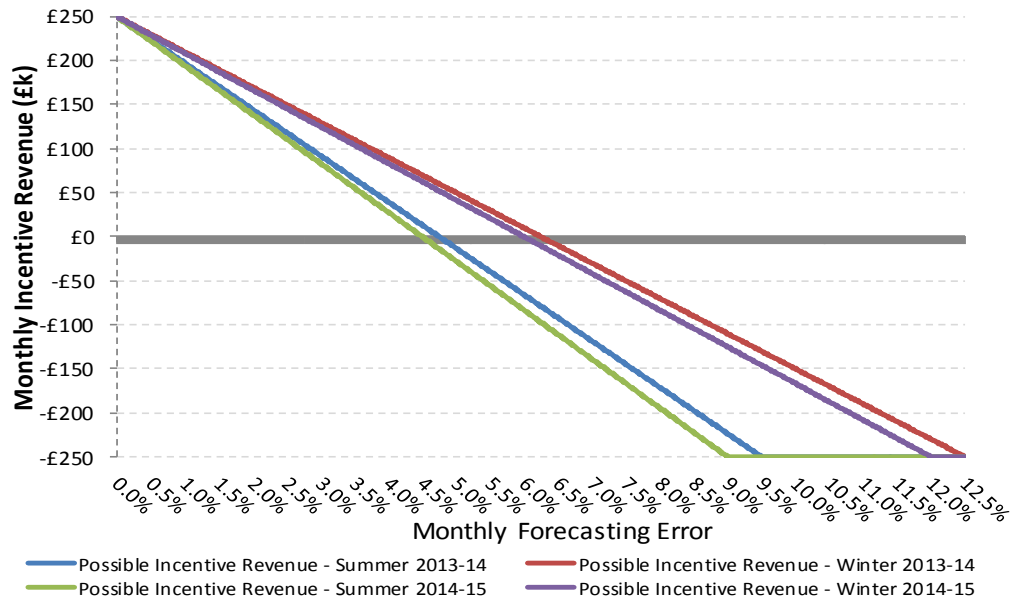


Figure 2: Current targets for wind generation forecast incentive scheme

5.5. The 2013-15 incentive has driven the improvements in forecasting that were intended and that stakeholders indicated that they valued. NGET performed strongly against the incentive in the first year of the scheme, receiving revenue of £401,111. They received 58% for the summer months and 42% for the winter.

5.6. The first five (summer) months of 2014-15 have seen a further improvement in forecasting errors reported by NGET. The average error reported for the first five months of 2014/15 is 3.33%, compared to 3.98% for the same period in the previous year. NGET has made £320,293 from the incentive in these first five months.

5.7. NGET has consistently outperformed the incentive, with performance above target on only three of the first 17 months of the scheme. The trend of continuous improvement over the course of the scheme shows the success of the incentive in encouraging improved performance that benefits the industry and consumers.

June 2014 consultation

5.8. Our July 2014 consultation asked for stakeholder views on the extent to which the forecasts are used, the value that they bring to stakeholders and where changes to the incentive would add benefit for the industry, and ultimately consumers. This was to inform our position as to whether we retain the incentive and the extent to which we expand or reduce its scope.

5.9. We also asked for stakeholder views on the merits of extending the incentive to other generation forecasts. This could include additional times at which NGET makes wind generation forecasts or extension to other forms of intermittent generation.

Stakeholder views

5.10. The nine respondents to the consultation highlighted the usefulness of wind forecasting and the importance of the incentive in encouraging accuracy improvements. They stressed that the incentive must remain proportionate and sufficiently challenging, perhaps by tightening the error bands if warranted.

5.11. Several stakeholders also expressed interest in seeing the incentive extended to other types of intermittent generation, such as photovoltaic.

Proposal for 2015/17 scheme

5.12. In light of the performance improvements shown in the scheme so far, as well as the comments received from stakeholders and the value that stakeholders place on forecasting accuracy, we are minded to maintain the same incentive format for the next two years. While we recognise the cases put forward for considering other formats, we recognise the value in maintaining a simple, linear incentive.

5.13. In order to maintain the challenge and proportionality of the incentive, there is a need to tighten the incentive targets. The strong performance shown so far in 2014/15 highlights this issue. It is important to continue the incentive in a way that adheres to the guiding principles of the incentive, where the incentive is designed to encourage continuous improvement and reward changes to lower the forecast error.

5.14. We propose to continue the 0.25% target error reduction imposed in the middle of the 2013-15 scheme, but also introduce a further one-off 1% reduction for the first year of the new scheme. The resulting error targets can be found in Table 4.

Table 4: Summary of proposed scheme targets

Scheme Year	Reduction	Target forecast error	
		1 April – 30 September	1 October – 31 March
2015/16	-1.25% from 2014/15	3.25%	4.75%
2016/17	-0.25% from 2015/16	3%	4.5%

5.15. This seeks to recognise the step change in performance in the first 5 months of 2014/15, as well as the strong performance in 2013/14, and realign the incentive such that revenue is only made when there are improvements in wind forecasting.

5.16. We are also proposing to change the allocation of the incentive pot to recognise the importance placed on forecasting accuracy in winter, when the system is generally tighter. We propose to allocate a total possible revenue of £200,000 per month between April and September and a total possible revenue of £300,000 per month between October and March. This would apply to both years of the scheme.

5.17. This reallocation is proposed to correct for an ambiguity brought about by the incentive design. The existing incentive rewards a percentage improvement in the

summer months by more than the equivalent percentage improvement in winter, by virtue of having a lower incentive target.

5.18. The monthly revenues that NGET could receive for 2015-17 under these proposals are shown in Figure 3. This reallocation of the incentive revenue now rewards a percentage improvement in the winter months by more than the equivalent percentage improvement in summer, albeit marginally. The reallocation has no impact on the cap or the floor.

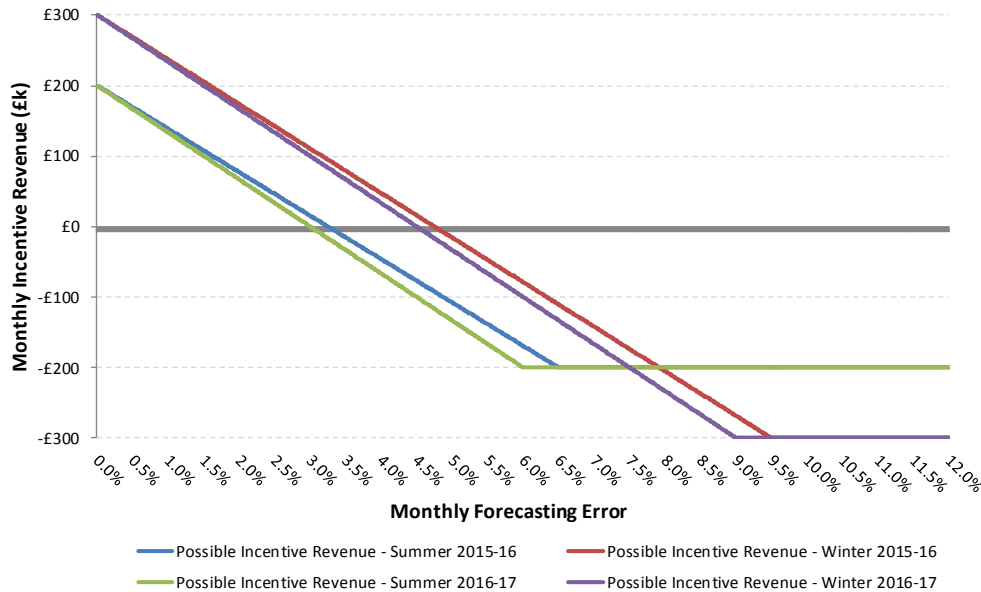


Figure 3: Proposed targets, caps and collar for period 2015/17

5.19. We are seeking views from stakeholders on the value they place on winter forecasting compared to summer and if this proposal adequately addresses the issue.

5.20. We are not proposing to introduce any new incentives to cover other types of generation at this time, though we recognise the interest that stakeholders have expressed in these types of incentives. We will continue to work with NGET to consider whether it is appropriate to introduce any new incentive on generation forecasts.

6. Additional incentives

Chapter Summary

This chapter describes our proposal for the two remaining additional incentives, on Transmission Losses and the System Operation Innovation Roll-out Mechanism for the 2015/17 period. It also describes where we are with the discussion on a SO-TO financial mechanism.

Question box

Question 1: Do you agree with our proposal to retain the Transmission Losses incentive as a reputational incentive and continue with the existing licence conditions?

Question 2: Do you feel that the proposal to maintain the scheme as it is but make changes to the guidance document will improve the SO Innovation Roll-out mechanism?

Question 3: What is your opinion on allowing the SO to submit an SO-IRM application by 1st April 2015, at the earliest, with a commitment that the innovation must be fully implemented by 31st March 2017?

Question 4: Do you agree with our proposal to de-link discussions on the benefit of introducing SO-TO incentives?

Transmission Losses

Background

6.1. Currently, NGET as system operator is required to report on the amount and cost of electricity lost on the transmission system⁷. It is also required to publish information about how they take transmission losses into account when undertaking balancing services, both now and over the next ten years.

6.2. Prior to the 2013/15 scheme, there was a financial incentive placed on NGET concerning the levels of transmission losses on the system. However, in the development of 2013/15 scheme, we recognised that NGET only managed a small proportion of the total volume of energy (approximately 3% that it manages in the BM)⁸ and had limited influence on the levels of losses in some of the actions that it took in balancing the system. As a result, we considered a reputational incentive to

⁷ During the transmission of electricity, some energy is 'lost' from the transmission system, usually in the form of heat. This lost energy is known as transmission losses.

⁸ Approximately 60% of transmission losses are the result of the distance electricity travels from the point of generation to the point of demand. Approximately 40% of losses are associated with system assets (e.g. transformers).

be more appropriate and this was implemented in the 2013/15 scheme. This change also removed the possibility for NGET to make windfall losses/gains against this incentive.

6.3. We have reviewed the information that NGET publishes against the relevant licence conditions to assess how they are performing against this incentive. We have also reviewed stakeholder responses to our consultation in June to understand the aspects of the incentive that stakeholders found most useful and whether there was a need for more information to be published.

6.4. NGET has been performing well against this incentive, reporting on the total volume of losses in its Monthly Balancing Services Statement (MBSS) and reporting on the forward-looking aspect of the incentive through the Ten Year Statement (TYS). However, we believe there is the potential for NGET to provide more clarity on how transmission losses are taken into account when undertaking balancing activities.

June 2014 consultation

6.5. In our June 2014 consultation, we requested stakeholder views on the value they place on the reporting requirement and the extent to which the information / reports NGET publishes on transmission losses is considered or used. This, we said, would feed into our proposals for transmission losses alongside the information that NGET has been publishing under its licence condition as part of the 2015-17 scheme.

Stakeholder views

6.6. Respondents indicated that current reporting requirements are effective, although some stakeholders requested more information on how transmission losses are considered when undertaking balancing activities. These views informed our analysis and we are currently considering what additional information might be beneficial for stakeholders/consumers.

Proposal for 2015/17 scheme

6.7. We propose to continue this incentive as a reputational incentive, with the current licence conditions. However, we propose to engage with NGET on how they report on transmission losses, in particular:

- the reporting of costs associated to transmission losses.
- the reporting of how transmission losses are taken into account when undertaking balancing activities.
- what additional information NGET might be able to publish for the benefit of stakeholders/consumers.

System Operation Innovation Roll-Out Mechanism

Background

6.8. The SO Innovation Roll-out Mechanism (SO-IRM) was introduced as part of the Electricity SO incentive scheme (2013/15). The SO-IRM allows NGET to apply to Ofgem for up to £10m in funding to implement up to three innovative techniques which would provide benefits to consumers beyond the two-year incentive scheme. Ofgem will then consider whether the application meets certain requirements set out in NGET's licence⁹.

6.9. In the 2013/15 scheme NGET submitted two applications under the SO-IRM.

- 'Demand Turn Up Application' – To aggregate 10MW of demand turn up services in Scotland to reduce wind constraint costs with a request for funds of £712,500.
- 'Demand Side Frequency Response Application' – To aggregate 13MW of domestic storage heaters in London to provide frequency response services with a request for funds of £2,600,400.

6.10. Ofgem determined that neither application should be awarded funding. While both applications involved innovations with conceptual merit, the cases presented were insufficient. As a result, we were not satisfied that the approval of funding would result in long term benefits to consumers and determined that no funding should be awarded.

June 2014 consultation

6.11. In our June consultation, we outlined our initial position to extend the mechanism, making improvements to the application and review process where lessons have been identified. We did recognise though that the merits and parameters of the funding mechanism need to be continually assessed, ensuring that any mechanism works within the overall incentive framework to encourage NGET to innovate where it can demonstrate that this adds enduring benefit for consumers.

6.12. We sought stakeholder views on the SO-IRM scheme, asking whether they felt the scheme should be retained, whether it encourages innovation and their thoughts on the application process.

⁹ Set out in Special Condition 4J of NGET's licence. The SO Roll-out by the licensee of a Proven SO Innovation will allow the licensee to receive additional funding in respect of the relevant year but only where the Authority is satisfied that the SO Roll-out: will deliver low carbon or environmental benefits; will provide long term value for money for the consumer; will not result in the licensee receiving commercial benefits; and will not be used to fund innovation that NGET would have ordinarily implemented.

Stakeholder Views

6.13. We received nine responses to the consultation of which five commented on the SO-IRM. There was general support for retention of the scheme, as it was said that it provided the opportunity to implement techniques that would otherwise be difficult to fund under the two-year incentive scheme. It was also felt by some that such a scheme does encourage NGET to act innovatively, although most respondents noted that no applications had been approved under the last scheme. Additionally, one respondent felt that the benefits of the scheme were not clear and that NGET should act innovatively as part of their existing licence conditions.

6.14. With regards to the application process, it was clear that there was potential to improve the process going forward. A number of improvements were identified including lengthening the time that NGET has to submit an application, providing greater clarity on the level of detail required in an application and the publishing of guidance documentation.

6.15. These views were considered as part of our evaluation of this scheme through undertaking a lessons learned project and informed the development of our proposals.

Proposal for 2015/17 scheme

6.16. Based on feedback received regarding the SO-IRM we believe that the scheme should be retained as it provides NGET with the opportunity to implement innovative methods and techniques that would be difficult to implement under the current incentive scheme. As such, we are proposing to continue the scheme under the current parameters with NGET able to apply for up to £10m on up to three projects.

6.17. In the 2013/15 BSIS, NGET could apply for funding by 31st March 2014 for funding innovation in the second year (2014/15) of the scheme. Feedback regarding this has suggested that we should consider extending this time frame for funding the innovation up to two years. This would result in NGET being able to apply for funding on or after 1st April 2015 for the 2015/17 period.

6.18. Based on feedback we feel that greater clarity should be given to NGET with regards to the terms of the scheme and the overall judgment criteria. To help ensure that a more robust case is presented we propose to improve the guidance document to provide greater clarity on the application requirements.

6.19. We are keen that the SO-IRM continues to provide a good platform for the roll-out of proven technology and to work with NGET and its partners to enhance benefits to consumers. At the same time, we expect that the learning from the first SO-IRM project allows both NGET and its partners to build on their engagement and submit applications that will meet our approval test for funding.

SO-TO financial mechanisms

Background

6.20. The SO-TO code¹⁰ (System Operator-Transmission Owner code) sets out the processes which should be followed by the SO and TOs to coordinate outages on the transmission system. NGET is able to propose changes to this code to ensure that it remains appropriate and fit for purpose. Under this code the TOs should submit outage proposals to the SO who then forms a year ahead outage plan. TOs must request changes to this outage plan where needed to accommodate infrastructure build programs or in response to unexpected events which require re-planning of the outage program.

June 2014 consultation

6.21. In our June consultation, we described how the SO-TO code and planning processes have been subjected to increasing stress due to the intensive network design and build programs taking place.

6.22. We mentioned how this increase in coordination required between the SO and TO led to the development of the Network Access Policy (NAP) alongside RIIO-T1.¹¹ We also mentioned that NAP parties suggested that financial mechanisms were needed to support the NAP and enable optimal whole system cost decision making to be achieved.

6.23. We noted that the development of financial mechanisms were somewhat de-linked from the incentive scheme itself and may not be straightforward to implement. There are also a number of potential designs some of which may interact more strongly with the TOs' regulatory framework under RIIO-T1. In June, we asked stakeholders for their views on the need for, and design of, financial mechanisms to support the planning and coordination of outages to ensure whole system cost efficiency.

Stakeholder views

6.24. Some stakeholders believed that the current mechanisms should be sufficient to address SO-TO interaction. One respondent expressed their view that this should already be the case, and that legal or regulatory barriers should be addressed ahead of the design of new incentives. Another respondent expressed concern that an incentive would reward TOs for fulfilling their licence obligations. It believed that

¹⁰ Section C, Part 2

¹¹ The NAP is designed to encourage engagement between the SO and TOs and provide a consistent framework for how outage planning is carried out by all parties involved in the process.

network companies should be held accountable through enforcement of licence conditions if they fail to manage outages in a way that minimises impacts on users and customers.

6.25. Renewable UK mentioned that there is already some discussions on increased coordination as part of the Integrated Transmission Planning Regulation project. It also noted the importance of ensuring that TOs do not receive additional incentives if those already covered under RIIO-T1.

6.26. National Grid also saw merit in the development of financial incentives to aid the TO in reducing operational costs.

Proposal for 2015/17 scheme

6.27. We are not proposing to introduce a financial incentive on SO-TO interaction at this time. We agree with stakeholders that the merits of introducing this incentive are still not clear, as well as the potential impact it can have on other incentives and projects.

6.28. We also note that our Integrated Transmission Planning Regulation project has just released its draft conclusions in which it proposes changes to how transmission infrastructure is planned and delivered.

6.29. We propose to continue evaluating the need for a financial mechanism between the SO and TOs and if appropriate consult in incorporating it during the current incentive scheme period or together with our reviewed incentives from 2017 onwards.

Appendices

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Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document

1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.3. Responses should be received by 25/11/2014 and should be sent to:

Leonardo Costa
System Operations
Wholesale Markets Performance, Ofgem, 9 Millbank, SW1P 3GE
020 3263 2764
soincentive@ofgem.gov.uk

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

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

1.6. Next steps: Having considered the responses to this consultation, Ofgem intends to issue final proposals for new incentives for 2015/17. Any questions on this document should, in the first instance, be directed to:

- Leonardo Costa
- System Operations
- Wholesale Markets Performance, Ofgem, 9 Millbank, SW1P 3GE
- 020 3263 2764
- soincentive@ofgem.gov.uk

CHAPTER: One

Question 1: Do you agree with the changes we are recommending for the SO incentives?

Question 2: Do you agree with how we have reflected these changes on licence conditions?

CHAPTER: Two

Question 1: Do you agree with our proposal to maintain the BSIS incentives without alteration?

Question 2: Do you agree with our focus on making sure the modelling avoids the SO from hitting the cap or floor?

CHAPTER: Three

Question 1: Do you agree with our proposal to maintain the existing framework for the validation, governance and development of the SO's BSIS target modelling and not to introduce any new formal incentives in this area?

Question 2: Do you agree with our intention to focus on the validation of the models' inputs and assumptions?

Question 3: Do you agree with the need for the SO to improve the transparency of the modelling? Do you have any particular thoughts about measures to help facilitate this?

CHAPTER: Four

Question 1: Do you agree with our proposal not to introduce any new formal incentives on the SO to increase the transparency of its actions?

Question 2: Do you agree that in order to improve transparency, the SO should have a particular focus on improving the narrative contained alongside published information?

CHAPTER: Five

Question 1: Should we maintain the linear format to the incentive? If not, how should the incentive be structured?

Question 2: Do you agree with the proposed incentive targets? If not, how should these be set?

Question 3: Do you agree with the reallocation of the possible incentive revenue? How much do you value forecasting accuracy in winter compared to summer?

CHAPTER: Six

Question 1: Do you agree with our proposal to retain the Transmission Losses incentive as a reputational incentive and continue with the existing licence conditions?

Question 2: Do you feel that the proposal to maintain the scheme as it is but make changes to the guidance document will improve the SO-IRM?

Question 3: What is your opinion on allowing the SO to submit an SO-IRM application by 1st April 2015, at the earliest, with a commitment that the innovation must be fully implemented by 31st March 2017?

Question 4: Do you agree with our proposal to de-link discussions on the benefit of introducing SO-TO incentives?

Appendix 2 - Glossary

A

Ancillary Services

Mandatory, necessary or commercial services used by the electricity System Operator to manage the system and to meet their licence obligations.

The Authority/Ofgem/GEMA

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

B

Balancing Mechanism (BM)

The mechanism by which the electricity System Operator procures commercial services (Balancing Services) from generators and suppliers post gate closure, in accordance with the relevant provisions of the Balancing and Settlement Code (BSC) and the Grid Code.

Balancing Services

The services that the electricity System Operator needs to procure in order to balance the transmission system. Balancing services include ancillary services.

Balancing Services Incentive Scheme (BSIS)

A scheme that has been applied to the SO to incentivise efficient balancing of the transmission network.

Balancing Services Use of System charges (BSUoS)

The half-hourly charge levied by the electricity System Operator on users of the transmission system in order to recover the costs of operating the transmission system and procuring and utilising Balancing Services.

Black Start

If the electricity system experiences a full or partial shut down, isolated power stations that have Black Start capability (an auxiliary generating plant located on-site) are started individually and gradually connected to each other to form an interconnected system again.

C

Cap

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

Consumer

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

Constraints (also known as congestion)

A constraint occurs when the capacity of transmission assets is exceeded so that not all of the required generation can be transmitted to other parts of the network, or an area of demand cannot be supplied with all of the required generation.

D

Demand side response (DSR)

The reduction of customer energy usage at times of peak demand in order to help system reliability, to reflect market conditions and pricing, or to support infrastructure optimisation or deferral of additional infrastructure.

E

Ex-ante / Ex-post Inputs

Ex-ante inputs to National Grid's models are those whose values are set prior to the start of the scheme and are not updated as the scheme progresses (except under specific agreed circumstances). Ex-post inputs are collected on a monthly basis using outturn data. Ex-ante and ex-post data are combined with the agreed models to determine the level of costs against which National Grid should be incentivised.

Energy Imbalance

Energy imbalance costs are those incurred by National Grid to correct for differences between the generation supplied by the market and the demand on the system (see also Market Length).

F

Floor

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

Frequency Response

The electricity SO has a statutory obligation to maintain system frequency between +/- 1% of 50 hertz. The immediate second-by-second balancing to meet this requirement is provided by continuously modulating output through the procurement and utilization of mandatory and commercial frequency response.

I

Income adjusting event (IAE)

An unforeseen event has resulted in unexpected costs or savings of greater than a set limit, known as the materiality threshold.

Interconnector

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

L

Licence conditions (obligations)

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

N

National Grid Electricity Transmission (NGET)

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

O

Outputs

What the SO is expected to deliver.

P

Plexos

A modelling tool for power market analysis.

Price control

The control developed by the regulator to set targets and allowed revenues for network companies. The characteristics and mechanisms of this price control are developed by the regulator in the price control review period depending on network

company performance over the last control period and predicted expenditure in the next.

R

RIIO-T1

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

S

Sharing factors

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

Short Term Operating Reserve (STOR)

A service that provides additional active power from generation and/or demand reduction.

SO External costs

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

SO Internal costs

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

Stakeholder

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

System Operator (SO)

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

T

Transmission Losses

Electricity lost on the GB transmission system through the physical process of transporting electricity across the network. The treatment of transmission losses is set out in the BSC.

Transmission Owner (TO)

There are three separate high voltage electricity Transmission Owners in GB. National Grid Electricity Transmission (NGET) owns and maintains the high voltage electricity transmission system in England and Wales. Scottish Hydro-Electric Transmission Limited (SHETL) is the electricity transmission licensee in Northern Scotland and Scottish Power Transmission Limited (SPT) is the electricity transmission licensee in Southern Scotland.

Appendix 3 - Feedback Questionnaire

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

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

1.2. Please send your comments to:

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