

The National Grid logo, featuring the word "nationalgrid" in a lowercase, sans-serif font. The "n" is lowercase, while "ationalgrid" is lowercase. The background of the entire page is a photograph of two power line workers in high-visibility yellow and blue gear, working on a complex metal lattice tower structure against a clear blue sky. The workers are positioned at different heights on the tower, with one higher up and one lower down. The tower's structure is made of dark metal beams and cross-braces, with various insulators and cables visible. The overall scene is industrial and technical.

THE POWER OF ACTION

# Electricity SO Incentives Initial Proposals for 1st April 2011

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Consultation Report

UK Electricity Transmission  
December 2010



# Electricity SO Incentives: Initial Proposals for 1st April 2011 Consultation Report

## Issue 1 - National Grid, 31<sup>st</sup> December 2010

### Executive Summary

1. National Grid Electricity Transmission is the National Electricity Transmission System Operator (NETSO) for England, Scotland and Wales, defined hereon in as National Grid.
2. Under the Transmission Licence, National Grid is obliged to perform Balancing Services Activities (BSA), which are defined as the operation of the transmission system and the procurement and use of Balancing Services required for reliable operation of the transmission system.
3. National Grid is obligated under the terms of its Transmission Licence to balance the system in a safe, efficient, economic and co-ordinated manner. The application of financial incentives encourages National Grid to invest in systems and resources to ensure BSA costs and risks are economically and efficiently managed and that innovative ideas and procedures are developed to reduce costs in return for a share of any savings delivered.
4. BSIS is designed to deliver financial benefits to the industry and consumers via reductions in the costs or minimising risk associated with operating the electricity transmission network. The current BSIS incentive format has been in place since the implementation of the New Electricity Trading Arrangements (NETA) in 2001 and has covered a one year period.
5. Following the implementation of the SO incentive scheme for 2010/11, the approach to developing electricity SO incentives was reviewed (the SO Review) to determine whether the models and modelling approach used by National Grid were suitable for application to multi-year schemes. The SO Review was proposed by Ofgem following concerns regarding the current approach to the setting of the incentive and the suitability of National Grid's analysis and modelling for the development of a longer term scheme.
6. The SO Review comprises three phases. The first phase involved the review of National Grid's approach to modelling and the modelling tools employed to forecast system operator costs to determine their suitability for developing incentive schemes of greater than one year's duration. This was undertaken by Ofgem, with support from Frontier Economics (hereafter referred to as Frontier). The second phase involved National Grid acting on the recommendations from Phase 1 with regard to developments to its models, modelling approach and the design and governance structures of a multi-year incentive scheme. The third phase, currently underway, is being led by Ofgem, with support from Frontier, and involves the assessment of National Grid's proposed changes against the recommendations from Phase 1.
7. In developing proposals for the implementation of a two-year incentive from 1<sup>st</sup> April 2011, National Grid built upon the work done during Phase 2 of the SO Review, culminating in the publication of its Initial Proposals on 24<sup>th</sup> November 2010. An addendum to the Initial Proposals document, covering in more detail the modelling of constraints, was issued on 13<sup>th</sup> December 2010.
8. To support the publication of the Initial Proposals, we held a workshop in London on 8<sup>th</sup> December 2010. The aim of the workshop was to summarise the proposals and provide the opportunity to ask questions. Following publication of the constraints addendum on 13<sup>th</sup> December, a similar session was held after the Interim Operational Forum Live Meeting on 15<sup>th</sup> December.

9. National Grid's Initial Proposals consultation closed on 22<sup>nd</sup> December 2010. Recognising the tight timescales for commenting on the constraints addendum, National Grid indicated its willingness to accommodate late responses to that element of the Initial Proposals. Eight responses to the consultation were received, from a range of industry participants.
10. We would like to take this opportunity to thank all parties who took the time to engage in the process, either through asking questions and providing comments at industry meetings, or via formal consultation responses. This engagement is extremely valuable, particularly given the changes to the approach that are being proposed.
11. This Consultation Report summarises the industry responses to the Initial Proposals consultation and sets out National Grid's views on the issues raised. The report should be read in conjunction with the consultation documents and industry responses, available on our website:

<http://www.nationalgrid.com/uk/Electricity/soincentives/docs/>

12. Responses to the consultation will be considered by Ofgem, along with its conclusions following phase three of the SO Review, when developing Final Proposals for the electricity SO incentive scheme to be implemented from 1<sup>st</sup> April 2011. We understand it is Ofgem's intention to publish the Final Proposals consultation around the end of February 2011.
13. The main points arising from the consultation responses are as follows:

#### **The new approach to incentivisation**

- Ex-post treatment of certain model inputs is appropriate
- It is important to ensure appropriate incentives remain on National Grid in all areas of balancing costs

National Grid believes the proposed approach will place incentives on National Grid to deliver efficiencies regardless of whether model inputs are treated on an ex-ante or ex-post basis. The purpose of the ex-post treatment is to remove volatility in the determination of incentivised cost targets, so as to minimise the possibility of windfall profit or loss. The use of ex-post inputs does not remove the incentive to drive costs lower as National Grid will still be incentivised to beat the cost target.

#### **Modelling**

- Modelling balancing costs is complex
- Thorough examination of modelling approach by Ofgem, with support from Frontier, is critical to the success of the scheme and the protection of consumers' interests

National Grid has put considerable time and effort into the development of its energy and constraint modelling, and welcomes the rigorous review of those models by Ofgem, with support from Frontier, under phase 3 of the SO Review.

#### **Scheme Design and Governance**

- Recommendation of a 'transitional approach' to adopting the new incentivisation proposals, and questions regarding whether a two-year scheme is appropriate given the magnitude of the changes proposed
- A range of views regarding what would constitute appropriate incentive scheme parameters
- BSUoS forecast is important

National Grid believes that the drive to reduce the potential for windfall profit or loss under the incentive scheme doesn't necessarily de-risk its SO activities. It notes Ofgem's view, as expressed in its preliminary conclusions following phase 1 of the SO Review, that the reduced potential for windfall should reduce or eliminate the need for a target cost dead-band; and that this should allow the incentive on National

Grid to be increased through higher sharing factors, profit cap and loss floor. This, combined with the proposed longer-duration scheme, should encourage National Grid to pursue activities that deliver cost efficiencies over a longer-term.

**General comments**

- Consultation timescales have been challenging

National Grid recognises the challenging timescales associated with the SO Review in general and the Initial Proposals consultation in particular, and appreciates the ongoing involvement of the industry in the process.

To allow further engagement with the industry, National Grid intends to hold a BSUoS seminar in late January/early February 2011. It is expected that the seminar will present an opportunity to discuss BSUoS cost forecasts produced by National Grid’s updated models and modelling approach, using an agreed scheme ex-ante dataset and a range of potential ex-post input data. The seminar will also provide an opportunity to explore further how the routine BSUoS processes will operate under the proposed new approach to incentivisation, and for discussion regarding how National Grid’s reporting of incentive scheme performance might be developed.

14. The next steps in the process are as follows:

<b>Date</b>	<b>Action</b>
31 <sup>st</sup> December 2011	National Grid publishes Initial Proposals Consultation Report
Late Jan/early Feb 2011	National Grid holds BSUoS seminar
Late February 2011	Ofgem publishes Final Proposals document
March 2011	Final Proposals consultation closes
April 2011	Electricity SO incentive scheme implemented

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## 1. Introduction

### 1.1 Purpose of this document

15. This document summarises the responses to National Grid's consultation on its Initial Proposals for a two-year incentive scheme to be implemented on 1 April 2011.
16. The document is structured as follows:
  - Section 2 summarises responses to the specific questions asked in the Initial Proposals consultation regarding the new approach to incentivisation, the modelling of energy and constraint costs and the scheme design and governance arrangements
  - Section 3 summarises general comments received

### 1.2 The consultation process

17. During the process of setting an SO incentive scheme from 1<sup>st</sup> April 2010, National Grid and Ofgem sought to agree a longer term scheme. However, following concerns regarding National Grid's analysis and modelling work, Ofgem were only able to propose a scheme of the usual duration of one year.
18. Therefore following the 2010/11 BSIS scheme consultation process, Ofgem established an electricity SO incentive review<sup>1</sup> with a view to implementing a more effective SO incentive scheme for a period greater than one year. The premise being that such a scheme would, amongst other factors, incentivise National Grid to take a longer term view to SO costs, lead to greater cost transparency and reduce the ongoing administrative burden involved with the development of SO incentive schemes.
19. The SO Review was proposed by Ofgem following concerns regarding the current approach to the setting of the incentive and the suitability of National Grid's analysis and modelling for the development of a longer term scheme. National Grid therefore agreed to work with Ofgem to review the scheme forecast methodology via a licence condition<sup>2</sup>. The objectives of the review were to develop a methodology for a multi-year SO incentive scheme, to develop modelling tools to support the methodology and to develop a workable approach for application to an SO incentive scheme commencing 1<sup>st</sup> April 2011.
20. The SO review comprises three phases. The first phase involved the review of National Grid's approach to modelling and the modelling tools employed to forecast BSIS costs. This was undertaken by Ofgem, with support from Frontier.
21. Ofgem subsequently published its Preliminary Conclusions following Phase 1<sup>3</sup> in July 2010, based upon Frontier's findings<sup>4</sup>. In its Phase 1 Report, Ofgem concluded that an appropriate BSIS methodology should ensure that NGET's performance is measured by how efficiently it carried out its actions taking into account the actual external factors it faced. Further information on the phase 1 conclusions and the outputs from phase 2 are detailed below.
22. Following publication of Ofgem's Preliminary Conclusions following Phase 1 document, National Grid published a letter on 27 July 2010<sup>5</sup> setting out its broad agreement with Ofgem's proposals for a two year scheme and the SO review as a whole.

<sup>1</sup> The text can be found in the Final Proposals for the scheme commencing 1<sup>st</sup> April 2010:

[http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/SO%20Final%20Proposals%20Consultation%20Document\\_elec%20only.pdf](http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/SO%20Final%20Proposals%20Consultation%20Document_elec%20only.pdf)

<sup>2</sup> The licence condition text can be found here:

<http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Scan001.pdf>

<sup>3</sup> Ofgem's Phase 1 Preliminary Conclusions can be found at:

<http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Phase%201%20recomendations%20doc%204.pdf>

<sup>4</sup> Frontier's findings can be found within Ofgem's Phase 1 Preliminary Conclusions document:

<http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Frontier%20final%20report.pdf>

<sup>5</sup> The letter can be found at: <http://www.nationalgrid.com/NR/rdonlyres/86C9C1E9-A2EF-4637-B70A-88C8E5B85597/42402/BSISSORReviewNGETLetter27July2010.pdf>

23. In developing proposals for the implementation of a two-year incentive from 1<sup>st</sup> April 2011, National Grid built upon the work done during Phase 2 of the SO Review, culminating in the publication of its Initial Proposals on 24<sup>th</sup> November 2010. An addendum to the Initial Proposals document, covering in more detail the modelling of constraints, was issued on 13<sup>th</sup> December 2010. Phase 3 of the SO Review, currently ongoing, relates to the examination of National Grid's proposed methodology, including its models and modelling approach, to determine its appropriateness for application to an SO incentive scheme covering at least two years.
24. To support the publication of the Initial Proposals, we held a workshop at Elexon's offices in London on 8<sup>th</sup> December 2010. The aim of the workshop was to summarise the proposals and provide the opportunity to ask questions. Following publication of the constraints addendum on 13<sup>th</sup> December, a similar session was held after the Interim Operational Forum Live Meeting on 15<sup>th</sup> December.
25. The timetable for the development of the incentive scheme commencing 1<sup>st</sup> April 2011 is as follows:

Date	Action
24 <sup>th</sup> November 2010	National Grid publishes Initial Proposals
13 <sup>th</sup> December 2010	National Grid publishes Initial Proposals Addendum for Constraints model
22 <sup>nd</sup> December 2010	Initial Proposals consultation closes
31 <sup>st</sup> December 2011	National Grid publishes Initial Proposals Consultation Report
Late Jan/early Feb 2011	Phase 3 of the SO Review concludes
Late Jan/early Feb 2011	National Grid holds BSUoS seminar
Late February 2011	Ofgem publishes Final Proposals document
March 2011	Final Proposals consultation closes
April 2011	Electricity SO incentive scheme implemented

### 1.3 Report format

26. This report presents a summary of responses to our proposals for Electricity System Operator Incentives commencing 1<sup>st</sup> April 2011.
- Eight formal responses were received to our Initial Proposals consultation;
  - Feedback, questions and comments were received at the Initial Proposals consultation workshop held on 8<sup>th</sup> December 2010; and
  - Further debate was had regarding the Initial Proposals constraints addendum following the Electricity Interim Operational Forum on 15<sup>th</sup> December 2010.
27. We would like to take this opportunity to thank all of those who offered comments on our proposals, through formal responses and questions and comments at industry meetings.
28. The remainder of this report summarises responses to our Initial Proposals consultation and provides National Grid's view on the responses. For brevity, we have avoided repeating the detail of the consultation document and, as such, this report should be read in conjunction with the same.

## 2. Responses to Specific Questions

### 2.1 The New Approach to Incentivisation

29. Four respondents opted to provide responses to the specific questions posed in the Initial Proposals document with regard to the proposed new approach to incentivisation. This section summarises those responses to the specific questions and presents National Grid's views.

**Question 1:** To what extent do you think that the proposed approach to incentivisation, with the use of Ex-Post data for volatile, difficult to forecast parameters, will result in more appropriate incentivisation of National Grid's system operator activities?

**Question 2:** Do you agree with the criteria used by National Grid to assess the extent to which it can forecast or control BSIS drivers? Are there other criteria that you think National Grid should consider?

#### 2.1.1 Summary of responses

30. Most respondents to question 1 considered that the use of certain data on an ex-post basis is likely to reduce the potential for windfall profit or loss under the scheme. Respondents noted, however, that parameters should not necessarily be excluded from incentivisation simply because they are difficult to forecast.
31. One respondent to question 1 (and others who made more general comments) suggested that it would be necessary for National Grid to make its calculations/models available to the industry for them to be properly assessed. It was also noted that, whilst removing the potential for windfall profit or loss is a good thing, it is important that the potential for windfall profit or loss does not manifest itself in the relationships represented within the models.
32. Three respondents to question 2 considered that the criteria proposed by National Grid for assessing whether inputs should be treated as ex-ante or ex-post were reasonable, although they mentioned the importance of ensuring the methodology to be applied to this assessment is open, transparent and robust. Further, the respondents noted that the ex-post treatment of inputs should not remove the incentive on National Grid to ensure costs associated with those inputs are minimised.

#### 2.1.2 National Grid's view

33. As discussed later in section 2.5.3, National Grid agrees that the methodology to be applied to the assessment of whether to treat inputs on an ex-ante or ex-post basis needs to be open, transparent and robust. It is expected that the assessment contained within Appendix B to the Initial Proposals consultation will form the basis of this methodology, and that the modelling detail contained within Appendix A will also feature. It also notes the need for relationships represented within models to be appropriate – this is being assessed by Ofgem under phase 3 of the SO Review.
34. National Grid notes the concerns regarding the potential for the ex-post treatment of inputs to blunt the incentive on National Grid to develop its ability to forecast or manage those variables. As discussed later in section 3.3.2, National Grid does not believe that this will be the case.



**Question 3:** What are your views on National Grid's conclusions regarding the treatment of Generation Availability in BSIS models?

**Question 4:** What are your views on National Grid's conclusions regarding the treatment of Generation Running in BSIS models?

**Question 5:** What are your views on National Grid's conclusions regarding the treatment of Demand Volatility in BSIS models?

**Question 6:** What are your views on National Grid's conclusions regarding the treatment of Transmission Availability in BSIS models?

**Question 7:** What are your views on National Grid's conclusions regarding the treatment of Transmission Capability in BSIS models?

### 2.1.3 Summary of responses

35. With the exception of the specific topics highlighted below, there was a general agreement with the approach taken and conclusions drawn with regard to the treatment of inputs to BSIS models.

#### ***Planned and unplanned outages***

36. Most respondents stated that it was appropriate to treat planned generation and transmission outages on an ex-ante basis, so that National Grid is incentivised to manage them efficiently. One respondent noted that, in addition to OC2 outage data for generators, National Grid may wish to use other sources of information and consider the use of scenarios to formulate views on generator availability. Another suggested that the accuracy of OC2 data as a whole is somewhat variable, and recommended a further review of such reliability before assuming that it is suitable for ex-ante treatment.
37. The majority of respondents also stated that, as neither National Grid nor generators can forecast the incidence of unplanned generation or transmission outages, they should be treated on an ex-post basis. One respondent noted that National Grid must assume a certain level of plant trip when setting response and reserve levels and that it would be sensible to assess its performance against an efficient level of plant risk, rather than a full ex-post treatment as proposed.

#### ***Renewable generation running***

38. Two of the three respondents thought National Grid's proposed ex-post treatment of renewable generation running was reasonable, although they noted that there should remain an incentive on National Grid to develop its forecasting ability in this area.
39. One respondent thought that renewable generation running should be treated on an ex-ante basis, and that a strong incentive should be placed on National Grid to improve its wind forecasting capability. The respondent noted that Wind output predictability can increase at longer lead-times, degrading for days ahead of real-time and improving again at very short periods ahead of real-time.

#### ***BM pricing, wholesale power price mark-ups***

40. One respondent noted the willingness of National Grid to be incentivised on BM prices for energy cost components, but not for constraint management, and questioned whether this difference in treatment might provide scope for gaming within the incentive scheme.

### 2.1.4 National Grid's view

41. National Grid is keen to avoid the situation where modelled constraint costs include the effect of generation that is not actually available to influence a constraint, due to an unplanned outage.

- National Grid considers that this risk is best mitigated by accounting for unplanned outages on an ex-post basis.
42. National Grid (as noted in section 3.3.2) believes that the ex-post treatment of renewable generation output will not diminish its incentive to improve its ability to forecast renewable generation running. The ex-post treatment aims to ensure that the target cost allocated to constraint management is reasonable and does not provide the potential for windfall profit or loss through a forecast of renewable generation output at a reasonably detailed granularity, up to two years in advance, when determining target costs.
  43. It is worth noting that, with regard to the comments on the predictability of wind output provided by the respondent, the point at which the predictability increases is often the point at which constraint management trades are entered into. The ex-post treatment of renewable generation output does not remove the incentive to minimise the constraint cost arising from such output. In order to minimise the constraint cost, National Grid needs to forecast, as accurately as possible, the renewable output (at these timescales) to support efficient trading strategies for constraint management. The incentive to minimise cost remains unchanged whether the treatment of renewable generation output is ex-post or ex-ante however, the potential for windfall should reduce.
  44. With regard to the respondent's comments on BM pricing, it is indeed the case that, on a national level for the purposes of energy balancing, National Grid considers it appropriate to model the relationship between wholesale prices and BM prices on an ex-ante basis (it is this relationship that forms the basis for incentivisation by determining the target energy balancing cost that National Grid must better). However, for constraint management purposes, the localised nature of the actions required to resolve constraints, and the localised market that often appears as a result, makes it much more difficult to determine a suitable relationship between wholesale prices and BM prices on a 'per station' basis.
  45. The bundled nature of the proposed incentive should ensure that there would be no benefit in gaming the categorisation of instructions as either energy or constraint related. Whether or not an action was taken for constraint management purposes would be assessed under National Grid's system management actions flagging methodology<sup>6</sup>, as now.

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<sup>6</sup> [http://www.nationalgrid.com/NR/rdonlyres/4945D234-247E-4C56-B0C4-B552A047C1E9/38314/SMAF\\_Review1.pdf](http://www.nationalgrid.com/NR/rdonlyres/4945D234-247E-4C56-B0C4-B552A047C1E9/38314/SMAF_Review1.pdf)

### 2.2 Modelling Energy Costs

46. Four respondents opted to provide responses to the specific questions posed in the Initial Proposals document with regard to the modelling of energy costs. This section summarises those responses to the specific questions and presents National Grid's views.

**Question 8:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for Energy Imbalance will act as an appropriate incentive to deliver cost efficiencies?

**Question 9:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for Margin will act as an appropriate incentive to deliver cost efficiencies?

**Question 10:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for Fast Reserve will act as an appropriate incentive to deliver cost efficiencies? Are there any areas where you think that improvements to the models could be made?

**Question 11:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for Frequency Response will act as an appropriate incentive to deliver cost efficiencies?

**Question 12:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for Footroom will act as an appropriate incentive to deliver cost efficiencies?

**Question 13:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for reactive power will act as an appropriate incentive to deliver cost efficiencies?

#### 2.2.1 Summary of responses

47. A number of respondents made the general comment that there was either insufficient time in the consultation period or insufficient detail regarding the models to allow them to make a detailed assessment of the proposals.

##### ***Energy imbalance model***

48. Two respondents stated that, based on the information available, the proposed approach to modelling energy imbalance costs appeared reasonable. The third referenced the potential for National Grid to improve its ability to forecast wind output and wholesale prices, noting that external providers of such forecasting services could be useful.
49. All respondents noted the importance of the initial regression analysis, with some noting the importance of ensuring such relationships remained suitable, for example by re-assessing them at the start of each incentive scheme. One noted that, by using regressions based on historic data, there was a risk that future changes would not necessarily be captured; hence more forward looking drivers should be used.

##### ***Margin model***

50. One respondent suggested that, by including a percentage of forecast wind output to be held as reserve as an ex-ante input, excessive volumes of reserve might be procured as a result as (a) there will be no incentive on National Grid to optimise or minimise the level of reserve held for this purpose once the percentage has been set; and (b) there may be double-counting of the overall reserve requirement if individual requirements are determined in isolation.

##### ***Other energy models***

51. Comments from respondents on the remainder of the energy models focused on the need to ensure ongoing incentives to deliver efficiencies and seek year-on-year improvements.

### 2.2.2 National Grid's view

52. National Grid notes respondents' comments regarding the consultation timescales, as discussed further in section 3.1.2.
53. National Grid agrees with respondents' views regarding the importance of ensuring the model structures adequately represent the relationships between cost drivers and costs; and that the incentive on National Grid to deliver efficiencies should persist for the duration of the scheme. National Grid has developed its models on the basis of Ofgem's recommendations following conclusion of phase 1 of the SO Review – whether the models meet these requirements is being assessed under phase 3 of the review by Ofgem, with support from Frontier, and the responses to this consultation are available to Ofgem for consideration as part of the process.
54. National Grid's 'reserve for wind' policy is derived from a holistic assessment of overall reserve requirements to cater for plant loss, demand forecast error and wind forecast error. These three parameters are combined to give a measure of the forecast errors that are required to be managed, and a reserve level is chosen to ensure that, in a given half hour, enough reserve is held to cater for forecast errors on all but one day per year (a 1 in 365 probability).
55. The margin model translates this approach into an ex-ante 'percentage for reserve for wind' input which, when combined with ex-post wind generation output values, provides a modelled volume of reserve for wind that must be considered when determining the overall volume of margin that should be required given the other ex-ante and ex-post volume inputs. Hence there should be no double-accounting of requirements. The ex-ante treatment of calculating reserve retains the incentive to review this policy with a view to minimising the holding of reserve. Being an element of the margin model, the level of the 'reserve for wind' parameter is subject to regulatory scrutiny and consideration as part of phase 3 of the SO Review.
56. National Grid notes the industry comments regarding the level of information provided with regard to the models. In its Initial Proposals consultation National Grid endeavoured to make as much information available as possible regarding the models and the determination of the relationships it believed they should contain (as outlined in the Initial Proposals Appendix<sup>7</sup>). Whilst National Grid considers it would have been premature to also publish the models themselves at that time, the potential for making further model information available is discussed later in section 3.2.2.

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<sup>7</sup> [http://www.nationalgrid.com/NR/rdonlyres/D691B37C-5AEA-41CC-9A4D-5D461B4D4131/44156/Initial\\_Proposals\\_Appendices\\_Final.pdf](http://www.nationalgrid.com/NR/rdonlyres/D691B37C-5AEA-41CC-9A4D-5D461B4D4131/44156/Initial_Proposals_Appendices_Final.pdf)



### 2.3 Modelling Constraint Costs

57. Four respondents opted to provide responses to the specific questions posed in the Initial Proposals document with regard to the modelling of constraint costs. This section summarises those responses to the specific questions and presents National Grid's views.

**Question 14:** To what extent do you consider that there exists the potential for windfall profit or loss under the scheme if a single snapshot of the generation outage plan were to be taken prior to scheme start (and used in the models for the duration of the scheme)?

**Question 15:** To what extent do you consider that a rolling Ex-Ante approach to modelling planned generation outages, as notified via Grid Code OC2 processes, is an appropriate mechanism to ensure the modelled outage plan remains representative (and suitable for incentivisation)? What other mechanisms could be considered?

**Question 16:** To what extent do you consider that there exists the potential for windfall profit or loss under the scheme if unplanned generator availability is not considered when calculating target costs for constraint management incentivisation?

**Question 17:** Do you agree that treating generation faults as an Ex-input to constraint models is an appropriate mechanism to ensure the modelled target cost remains representative (and suitable for incentivisation)?

**Question 18:** To what extent do you consider that there exists the potential for windfall profit or loss under the scheme if a single snapshot of the transmission outage plan were to be taken prior to scheme start (and used in the models for the duration of the scheme)?

#### 2.3.1 Summary of responses

58. Three respondents agreed that taking a single snapshot of generation and transmission outages prior to scheme start has the potential to drive windfall profit/loss under the scheme when such outages change, and that the suggestion put forward by National Grid that updating planned generation outages, as notified through OC2, on a rolling ex-ante basis, would be a way around this issue. One respondent suggested that National Grid did not present sufficient analysis on the issue to allow an informed comment to be made.
59. One respondent noted that, whilst the option to update OC2 data on a 'rolling ex-ante' basis might go some way to addressing the potential for windfall, its operation needs to be better explained, as it could be seen as another ex-post adjustment.
60. Respondents generally agreed that, whilst National Grid should use its best efforts to estimate unplanned generation outage rates when deriving BSUoS forecasts, the proposed ex-post treatment of unplanned generation outages was an appropriate way of managing the potential for windfall profit or loss when deriving target cost levels for constraint management.

#### 2.3.2 National Grid's view

61. National Grid accepts that the Initial Proposals consultation did not contain a detailed analysis of the way that previously-submitted OC2 generation outage data has changed over time. It notes however that section 5.1.3 of the Initial Proposals consultation highlights that further work to investigate how such processes might be made more efficient has been initiated within National Grid and will be discussed with the industry in due course.
62. National Grid's expectation regarding the operation of a potential 'rolling ex-ante' approach to updating OC2 data is that, in a similar manner to the first snapshot of outages for the duration of a two-year scheme being taken, further snapshots would be taken at regular intervals within the incentive period. Whilst the exact timeframe between snapshots would depend on analysis pursuant to the work outlined in section 5.1.3 of the Initial Proposals consultation, National Grid envisages an updated snapshot is likely to be required at least once for the second year of the

scheme prior to its commencement, such that a more up-to-date picture of the outage plan could be used in the modelling of constraint costs, i.e. the updated snapshot would represent a revised baseline which National Grid would remain incentivised to manage efficiently through to delivery.

**Question 19:** To what extent do you think that BM price submissions can reasonably be forecast?

**Question 20:** What are your views on the use of submitted BM prices Ex-Post as a means of determining target costs for constraint management?

**Question 21:** What are your views on the use of a 'pseudo BM price' to apply to contracted BM Units when calculating target constraint costs? To what extent do you agree that the options outlined in paragraph 355 might be suitable?

### 2.3.3 Summary of responses

63. Three respondents agreed that it is difficult to accurately model BM price submissions using a 'fundamentals' approach, suggesting instead that an ex-post approach might provide a better way forward. One respondent stated that the Initial Proposals consultation did not present sufficient analysis of the work already undertaken by National Grid to model BM prices ex-ante for it to be able to make an informed comment.
64. Two respondents suggested that in order for an ex-post approach to act as a suitable incentive it would be necessary to use some form of discount factor to ex-post BM prices, of a level that has been subject to sufficient regulatory scrutiny. Both suggested that the concept of a 'pseudo price' to represent BM price submissions on plant under contract for constraint management would likely be complex to administer for unspecified benefit.

### 2.3.4 National Grid's view

65. National Grid continues to believe that, for determining constraint management cost targets at a station/BMU/fuel type resolution, an ex-post approach with a suitable discount factor represents a more suitable mechanism than one which involves forecasting BM price submissions ex-ante. National Grid notes the views regarding the difficulty and likely complexity of an approach requiring the agreement of 'pseudo' BM prices.

**Question 22:** Do you agree that National Grid should be incentivised to beat historic constraint contracting performance?

**Question 23:** If yes, what in your view is the most appropriate way to achieve this in practice?

### 2.3.5 Summary of responses

66. All respondents agreed that, whilst it might not be possible or practical to deliver incremental improvement on an individual contract/requirement basis, National Grid should be incentivised to deliver ongoing incremental efficiency in constraint management activities and that a bundled incentive scheme structure should ensure that this incentive remains. One respondent suggested that the most appropriate way to achieve such incentivisation in practice is via use of a discount factor against ex-post BM prices, as discussed in section 2.3.2 above.

### 2.3.6 National Grid's view

67. National Grid is in general agreement with the comments received.

### 2.4 Responses to Initial Proposals Constraints Addendum

68. One respondent provided responses to the specific questions posed in the Initial Proposals constraints addendum. A number of respondents noted that the publication of the constraints addendum late in the consultation period made it difficult for a meaningful response to be provided. This section summarises the response to the specific questions and presents National Grid's views.

#### 2.4.1 Summary of responses

**Question CA1:** To what extent do you agree that the way in which ex-ante inputs to the unconstrained model have been derived, as set out in paragraphs 21 to 44 in the constraints addendum is appropriate?

69. The respondent considered the derivation in general to appear sensible. However, they considered the stated efficiency factors optimistic; also noting that Start Up costs may prove very difficult to quantify as perceptions and impacts of damage costs on decision making can rapidly change especially when a plant changes owner.

**Question CA2:** To what extent do you consider that the approach taken to calibration of the model provides a reasonable ongoing representation of generation output for the duration of the incentive scheme?

70. The respondent considered the described calibration process as a pragmatic solution to the problem, but noted that the process uses observable parameters and this does mean that the ability of the model to mimic the market without these calibrations is not clear. They also noted the need to track changes to the calibrations over time.
71. Further, they considered it necessary to be able to demonstrate a good fit to actual market outcomes via back casting over, for example, the last three to five years, predicting PNs on a fuel and technology type basis.

**Question CA3:** To what extent do you consider the proposed approach to modelling transmission network as a series of boundaries allows for a pragmatic representation of transmission capability for the purposes of incentivisation?

**Question CA4:** To what extent do you agree that the proposed approach to modelling generator effectiveness on boundaries will result in appropriate constraint volumes being determined?

72. The respondent noted that the proposed approach requires a number of assumptions and informed estimates to be made, and that this aspect of the proposed approach seems to be an area which is at risk of modelling inaccuracies.

**Question CA5:** To what extent do you consider that there exists the potential for windfall profit or loss under the scheme if an 'expert group' methodology is used to determine a year 2 outage plan as described above?

73. The respondent noted that the potential exists for the 'expert group' to make decisions which are not proved to be robust, which might then lead to windfall gains or losses. However, they also noted that using an alternative approach is unlikely to eradicate this potential. The respondent suggested they would welcome more detail regarding documentation of the decision making process and any scrutiny it might receive from Ofgem.

**Question CA6:** To what extent do you consider it possible to forecast BM price submissions ex-ante? Do you consider there to be alternative mechanisms to that considered by National Grid for determining BM Prices ex-ante?

74. The respondent referred to the response already given to questions 19 and 20 in the main Initial Proposals document.

**Question CA7:** To what extent do you consider that a 'discount factor' could be used in conjunction with Ex-Post BM pricing to deliver efficient incentivisation of constraint management activities?

75. The respondent considered it right that the prices National Grid should achieve for constraint management should aim to be at a discount against BM prices. However, they would welcome a greater understanding of how such a discount would be determined, for example if historic performance is to be used to inform this discount level we would expect this measure to be subject to sufficient scrutiny by Ofgem.

**Question CA8:** To what extent do you agree with the areas of constraint incentivisation outlined in section 3 of the constraints addendum? Are there other activities that you consider should be covered by constraint incentivisation?

76. The respondent agreed that National Grid's incentive for the management of constraint costs should ensure that both the volume and price of constraints should be incentivised.

**Question CA9:** To what extent do you think that National Grid's proposed approach to delivering a modelled target cost for constraints will act as an appropriate incentive to deliver cost efficiencies?

77. The respondent hoped that incentives on both the volume and price of constraints will be sufficient for National Grid to deliver efficiencies. However, they would expect any innovation in respect of maximising the use of the transmission system to be within National Grid's obligations under the relevant codes and security standards, and the development of new ancillary services to be sufficiently transparent to industry parties.

### 2.4.2 National Grid's view

78. National Grid acknowledges the late publication of the constraints addendum, which was due in part to the timescales associated with the procurement of the Plexos software and its ongoing implementation, and the consequential short period of time within which to respond.
79. National Grid thanks the respondent for their response to the constraints addendum, which will inform the ongoing development of the constraint modelling process. National Grid's proposed BSUoS workshop will provide a further opportunity for discussion around its modelling approach.



### 2.5 Scheme Design and Governance

80. Four respondents opted to provide responses to the specific questions posed in the Initial Proposals document with regard to scheme design and governance. In addition, a number of the more general responses made specific reference to what the proposed approach to incentivisation might mean for scheme parameters. This section summarises both sets of responses and presents National Grid's views.

**Question 24:** To what extent do you agree with National Grid's views on the need for a cost 'dead-band' under the proposed approach to incentivisation?

**Question 25:** To what extent do you agree with National Grid's views on the magnitude of the profit cap and loss floor under the proposed approach to incentivisation?

**Question 26:** To what extent do you agree with National Grid's views on the magnitude of sharing factors under the proposed approach to incentivisation? What do you consider to be an appropriate level of sharing factor?

#### 2.5.1 Summary of responses

81. Respondents were of the general view that the proposed scheme structure should reduce the need for a cost dead-band, though a number suggested that a dead-band is likely to still be required, either to reflect model error or the fact that the use of certain variables ex-post is unlikely to completely eliminate the potential for windfall profit or loss.
82. Opinions were divided regarding the potential to sharpen the incentive on National Grid through an increase in the profit cap/loss floor. Whilst one respondent supported National Grid's proposed levels for profit cap/loss floor (+/- £50m over two years), others did not, suggesting instead a transitional approach, utilising a lower cap/floor, should be adopted, given the uncertainty surrounding how the proposed scheme might operate.
83. Three respondents questioned how a lower-risk scheme could justify having a higher potential for profit. Some note that the rationale appears to be that a higher profit cap/loss floor increases the incentive on National Grid to reduce costs, but note that they cannot see how there is increased scope to cut costs if the scheme target costs are explicitly designed to be closer to the out-turn costs. One respondent considered that increasing the profit cap/loss floor to +/-£50m would provide increased scope for windfall gains, whilst doubting that any windfall losses would result under the proposed new approach.
84. Opinions were similarly divided regarding the potential to increase National Grid's share of the cost savings or additional expenditure associated with its actions. A number of respondents suggested a transitional approach to the setting of sharing factors be adopted until a greater understanding of the operation of the proposed new approach to incentivisation has been obtained. Two respondent suggested that sharing factors should be lower than those currently employed (+/-15%) - one citing the fact that the proposed approach 'demonstrably de-risks' the actions that the SO takes; the other stating that they were not convinced that it was necessary for the SO to share half of the benefits/costs.
85. Two respondents suggested that consideration should be given to placing more targeted incentives on specific areas of balancing costs, either on specific longer-term 'projects' to reduce balancing costs, or on the major elements that make up the overall SO incentive. It was suggested that such an approach would keep the SO focused on all cost elements over the life of the incentive, rather than one or two items which, if met, might dwarf over-spend in other areas.

#### 2.5.2 National Grid's view

86. National Grid agrees that there is a case to adopt a transitional approach to the setting of scheme parameters, and suggested such an approach for sharing factors in its Initial Proposals document. It continues to believe that the proposed approach should substantially reduce the

- need for a dead-band, making National Grid's exposure to either profit or loss under the scheme more immediate.
87. The difference of opinions regarding the exact level those sharing factors should take is noted, as is the view that little in the way of justification for the proposed level of 25% was presented in the Initial Proposals consultation document. Further discussions will take place with Ofgem regarding an appropriate level of sharing factor to be adopted for the incentive scheme commencing 1<sup>st</sup> April 2011.
  88. National Grid considers that there is an important distinction to be made between removing the potential for windfall profit or loss under a scheme and 'de-risking' the actions taken by the SO. On the assumption that the use of ex-post data in the determination of target incentivised costs does remove the potential for windfall profit or loss, it should in fact place a greater focus on whether or not National Grid's SO actions are efficient or not.
  89. Under the proposed approach, there should be less chance of windfall profits masking the effects of inefficient decisions and actions; similarly, there should be less chance of windfall losses removing the positive impact of efficient decisions and actions. Instead, the impact of actions taken to reduce incentivised costs should be more clearly visible.
  90. Accordingly, the proposed new approach should in fact make it more difficult for National Grid to achieve profit under the proposed new approach. However the increased duration of the scheme, coupled with a higher profit cap/loss floor, should encourage National Grid to pursue higher risk/greater reward strategies with the ultimate aim of lowering costs to customers. The assessment of the proposed new approach under phase 3 of the SO Review will consider the extent to which it removes the potential for windfall and allows for sharper incentivisation.
  91. National Grid notes the views that targeted incentives might provide a better focus on minimisation of balancing costs. In its conclusions<sup>8</sup> following phase 1 of the SO Review, Ofgem stated that they envisaged the proposed scheme to be a bundled scheme, incentivising National Grid on balancing costs as a whole. National Grid considers the placing of more targeted incentives on specific cost categories, as described in the responses, may require the 'unbundling' of the incentive. Given that a number of SO activities can affect several cost categories under the incentive scheme, unbundling categories within the incentive could affect National Grid's ability to take a broader view with regard to the impact of specific balancing actions and could, as noted by Frontier in their phase 1 report<sup>9</sup>, introduce perverse incentives. An alternative method to achieving more targeted incentives on specific cost categories would be to place additional incentives on top of the main incentive scheme. We intend to discuss this area further with the parties that commented on the need for more targeted incentives on specific cost categories.

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<http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Phase%201%20recomendations%20doc%204.pdf>

9

<http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Frontier%20final%20report.pdf>

**Question 27:** Do you agree that National Grid should be concerned about the potential for parties to influence its performance under the incentive scheme by using information that it makes available to the wider industry?

**Question 28:** Do you agree that the creation of an open, transparent statement describing National Grid's methodology for determining whether model inputs should be treated on an Ex-Ante or Ex-Post basis is appropriate?

**Question 29:** What are your expectations of National Grid when it comes to the production of an Incentivised Balancing Cost/BSUoS charge forecast?

**Question 30:** What are your views on the timing of such forecasts? For example, do you have processes that will be impacted by the timing of publication of an IBC/BSUoS forecast?

### 2.5.3 Summary of responses

92. None of the respondents thought that National Grid should be concerned that parties might try to influence its performance under the scheme by making use of information provided within an incentives methodology statement, due to the fact that there would be no competitive advantage in doing so. Respondents suggested that information release is a good thing that, in general, benefits the operation of the market.
93. Respondents thought that the creation of an open, transparent statement (with appropriate governance) containing information regarding the modelling of incentivised costs would be appropriate. One respondent expressed concern that the ex-ante and ex-post values, and the models themselves, will be non-transparent under the proposed methodology. They thought this unnecessary and would make SO costs unforecastable by anyone other than National Grid, which they considered to be a serious drawback of the scheme. Other respondents suggested that participants should have access to National Grid's models and data to allow them to forecast BSUoS charges.
94. With regard to BSUoS, there was a general consensus that publication of BSUoS forecasts would continue to be important, along with information regarding how the forecast changes as ex-post inputs are updated. One respondent noted that the current provision of regular BSUoS forecasts at National Grid's Operational Forum meetings should continue, noting that changes to this approach would impact participants own market forecasting processes. Another provided a comprehensive list of information they would welcome being published, noting that it preferred to receive regular, detailed information regarding BSUoS forecasts, even if the timing of such forecasts impacted its internal processes.
95. One respondent also noted that a BSUoS forecast would be required prior to the April contracting round, such that the potential need to factor in risk premiums into customer prices could be avoided. Another had a preference for a 15 month rolling forecast.

### 2.5.4 National Grid's view

96. National Grid notes the views regarding availability of models for own use and the importance placed on an accurate BSUoS forecast.
97. As previously mentioned, National Grid intends to run a BSUoS seminar early in the New Year to present its view of forecast BSUoS costs generated by its new BSIS models. National Grid expects to publish a range of possible costs, reflecting in particular the range of uncertainty associated with the model inputs that are proposed to be treated on an ex-post basis.
98. The BSUoS seminar will also provide an opportunity to explore further how the routine BSUoS processes will operate under the proposed new approach to incentivisation, and for discussion regarding how National Grid's reporting of incentive scheme performance might be developed. If the industry would find it useful, the seminar could also provide the opportunity to further discuss the detailed operation of National Grid's models and assumptions behind the range of forecast BSUoS costs.

99. Further communication regarding the arrangements for the BSUoS seminar will be issued in due course.

**Question 31:** Do you agree with the concept of (and need for) a Scheme Adjusting Event? If so, what sort of events do you consider it appropriate to adjust for?

**Question 32:** To what extent do you consider that the scheme needs to be able to cope with the 'known unknowns' listed in section 4.4.2? How might the impact of these events be managed?

### 2.5.5 Summary of responses

100. Respondents generally agreed that there were genuine reasons why a scheme adjusting event would be appropriate in specific circumstances, but that those circumstances should be restricted in scope so as to minimise uncertainty.
101. Respondents noted the potential for uncertainty associated with the 'known unknowns' presented in the Initial Proposals consultation; however it was considered that National Grid should be able to make a reasonable forecast of their impact, and that the inclusion of a scheme dead-band would go some way to managing their impact.

### 2.5.6 National Grid's view

102. National Grid considers that there are two potential means by which the impact of the stated 'known unknowns' could be managed – either by forming a view prior to the start of the scheme or by adjusting models/data as the relevant information becomes apparent, though in a manner agreed with Ofgem that ensures incentives to deliver efficiency remain. These options will be considered further by National Grid and discussed with Ofgem as part of the scheme agreement process.

**Question 33:** Do you consider that your systems will be impacted by the proposed change to scheme structure outlined in these Initial Proposals? If so, what information will you require (and in what timescales) in order to accommodate the change?

### 2.5.7 Summary of responses

103. Respondents did not consider the proposals to have any system impact.

### 2.5.8 National Grid's view

104. National Grid has tried to adopt a 'minimal change' approach regarding systems and interfaces with external parties. Hence the proposals, if implemented, should operate without change being required to participants' systems.

## 3. General Comments

A number of respondents opted to provide a range of general comments, either in addition to or instead of responses to the specific questions posed in the Initial Proposals documents. This section summarises those general comments and presents National Grid's views.

### 3.1 Consultation timescales

#### 3.1.1 Summary of responses

105. A number of respondents noted that the timescales associated with the development of the incentive scheme from 1<sup>st</sup> April 2011 were challenging and gave little time to rectify issues that might arise through the consultation process and the ongoing work under phase 3 of the SO Review. One respondent suggested maintaining the status quo, whilst others suggested applying the proposed new approach to incentivisation for one year only, thereby giving the opportunity to gain experience of its operation. One respondent suggested that, if the proposed new approach



were to be applied to a two-year scheme, it might be appropriate to undertake a review at the one-year stage.

106. One respondent suggested that the proposals lack sufficient consistency with the RIIO-T1 proposals for them to deliver the high-level objectives of a low carbon economy. They considered that a postponement of the implementation of a new approach to incentivisation would allow the interaction between SO incentivisation and the RIIO-T1 proposals to be considered in greater depth.
107. One respondent suggested that it is inefficient to rely on individual industry parties to provide a detailed examination of the analysis that has been carried out to set the scheme parameters, and that this task should instead rest with Ofgem. It was suggested instead that the role of industry parties in the consultation process should be to comment on the general approach that is being adopted and to cover issues such as the charges parties face and the information provision requirements associated with the scheme.

### **3.1.2 National Grid's view**

108. National Grid recognises the challenging timescales associated with the SO Review in general and the Initial Proposals consultation in particular, and appreciates the ongoing involvement of the industry in the process.
109. Significant development work has been undertaken as part of the SO Review, and the approach to that work has involved ongoing liaison with Ofgem and Frontier to ensure that, as far as possible, significant issues with the proposed approach have been resolved prior to consideration of the suitability of the proposals under phase 3 of the SO Review. To the extent that further issues arise, either as a result of the Initial Proposals consultation or through the ongoing phase 3 work, it is noted that these will need to be resolved prior to the issue of Final Proposals by Ofgem around the end of February 2011.
110. National Grid considers the SO Review process key to the ongoing success of SO incentivisation. It believes that the factors that drove the establishment of the SO Review, such as the difficulty in agreeing a forecast of incentivised balancing costs and the potential for windfall profit or loss inherent in the current approach to incentivisation, make it difficult to maintain the status quo.
111. The work undertaken through the SO Review has always been mindful of the fact that there are two years from 1<sup>st</sup> April 2011 before the provisions of RIIO-T1 come into force. The proposed new approach to incentivisation has been developed with this in mind and the two year period provides the opportunity to gain experience of the operation of the new approach whilst continuing to work on developments that would support even longer-term schemes, potentially lining up with RIIO-T1 timescales.
112. National Grid notes the potential benefits of a review after year one of a two-year scheme and will consider this point further.

## **3.2 Suitability of models**

### **3.2.1 Summary of responses**

113. Most respondents commented on the importance National Grid's models and modelling approach in the setting and ongoing operation of the proposed two-year incentive scheme. A number of respondents welcomed the developments to the energy and constraint models undertaken as part of the SO Review, whilst others were sceptical regarding their ability to effectively model costs for a multi-year incentive scheme, noting that it was difficult to make an informed view given that no model results were available within the Initial Proposals document.
114. Some respondents stated that they would like access to the underlying formulae of the models, or the models themselves, both to assess the suitability of the modelled relationships and to form their own view of incentivised costs under a range of scenarios.
115. One respondent noted that the modelling work demonstrated the difficulty in this approach to setting and managing incentives, noting that whilst the revised models might achieve more

accurate incentive targets, it is not clear whether they will be sufficiently accurate to support a two-year scheme.

### **3.2.2 National Grid's view**

116. National Grid notes the complexity of the proposed models and the difficulty in accurately representing the relationships between cost drivers and costs. The aim of National Grid's work in this area has been to improve on the existing approach to modelling costs such that, whilst not necessarily being 100% accurate, and recognising that to do so would introduce huge complexity, the performance of the models is at a level sufficient to support the implementation and ongoing management of a multi-year incentive scheme. Ofgem, with support from Frontier, will determine whether or not this has been achieved when their work under phase 3 of the SO Review concludes, and the consultation responses received will be available for consideration by Ofgem when developing their Final Proposals for the incentive scheme starting 1<sup>st</sup> April 2011.
117. In its Initial Proposals Appendices document, National Grid provided data and analysis to support the explanation of the models in section 3 of the main document, the setting of regression coefficients for the models and the results of the back-testing undertaken to assess the robustness of the models. The aim of the Appendix was to give a reasonable level of detail to allow an assessment of the performance of the models to be undertaken. National Grid will consider further the potential publication of its models and the extent to which they may need to be sanitised to remove confidential information.

## **3.3 Incentivisation of ex-post parameters**

### **3.3.1 Summary of responses**

118. A number of respondents expressed concern that, whilst the ex-post treatment of certain model inputs might reduce National Grid's exposure to volatility associated with those inputs, it might also blunt the incentive on National Grid to develop the capability to better predict or manage the effect of those inputs on its incentivised balancing costs.
119. The proposed ex-post treatment of renewable generation running was cited as an example of where this might be the case. Two respondents stated that the incentive should be there for National Grid to develop its ability to forecast ex-post inputs such as renewable generation output, with one suggesting that renewable generation output should be treated on an ex-ante basis rather than ex-post.

### **3.3.2 National Grid's view**

120. National Grid recognises the importance of maintaining the incentive to develop its ability to forecast those inputs that it considers should be treated on an ex-post basis in models and does not consider that the incentive to develop the capability to better forecast a particular input is removed by virtue of it being treated on an ex-post basis. The purpose of the ex-post treatment is to remove volatility in the determination of incentivised cost targets, so as to minimise the possibility of windfall profit or loss. The purpose is not to reduce or remove the incentive to drive costs lower than the modelled cost target through innovation.
121. Taking constraint management as an example, if the incentivised cost target allowance for constraints is determined using a modelled view of constrained volumes and using prices based on a discounted set of ex-post BM prices; National Grid would be incentivised to consider options in advance of the BM simply to avoid exceeding target constraint costs. If it was decided that a contract was an appropriate mechanism for managing a constraint, it would be necessary to take a view on conditions that are likely to exist at the time of the constraint, such that the volume requirements and price to be paid for the contract were appropriate.
122. For National Grid to be able to take a well-informed view of the likely conditions at the time of the constraint, it would need to be able to take a 'best view' of renewable generation output, along with likely fuel and wholesale prices, so that it can determine the most suitable course of action for managing the constraint. Hence, for those inputs it proposes to model on an ex-post basis, the need for National Grid to develop its ability to forecast them should remain, but the target costs against which its performance would be measured should present less scope for windfall.

### 4. Contact Details

123. If you would like to discuss any aspect of SO Incentives, please contact us via the contact details below:

#### On the web:

The dedicated web pages for this process are available at the following addresses:

Electricity SO Incentives: <http://www.nationalgrid.com/uk/Electricity/>

Gas SO Incentives: <http://www.nationalgrid.com/uk/gas/>

#### Contact us:

##### Gas

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124. To register your interest in receiving future communications on SO Incentives please email [soincentives@uk.ngrid.com](mailto:soincentives@uk.ngrid.com).