

# National Grid Electricity Transmission System Operator (SO) Incentives for 1 April 2010

Initial Proposals Consultation Report

Version 1.0

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## Executive Summary

National Grid Electricity Transmission (NGET) is the National Electricity Transmission System Operator (NETSO) for England, Scotland, Wales and Offshore, defined hereon in as National Grid for simplicity.

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.

National Grid is obligated under the terms of the 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.

The Balancing Services Incentive Scheme (BSIS) is designed to deliver financial benefits to the industry and consumers from reductions in the costs or minimising risk associated with operating the electricity transmission network. The current format of the BSIS has been in place since NETA implementation in 2001.

In leading on the development of Initial Proposals for implementation of an incentive scheme to be implemented from 1<sup>st</sup> April 2010, National Grid has published a number of consultations throughout the summer culminating in an Initial Proposals consultation published on 5<sup>th</sup> November 2009 with an addendum being published on the 15 December 2009 with a 2011/12 constraint cost forecast.

This Consultation Report summarises the industry responses to this Initial Proposals consultation and sets out our views on the issues raised. The report should be read in conjunction with our consultation document and industry responses. These can be found on our industry websites:

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

National Grid's Initial Proposals consultation closed on the 16<sup>th</sup> December 2009:

- We received 9 formal responses to our proposals,
- In addition to these formal responses we met with [3] parties on a bilateral basis;
- We received feedback and comments at the SO Incentives consultation held on 10 December 2009 workshop;
- We also presented a summary of our consultation document at the Electricity Operational Forum and the Small Suppliers Forum.

## Executive Summary

We would like to take this opportunity to thank all parties who took the time to engage in the process, either through providing comments at industry or bilateral meetings and/or via formal responses. We have developed the recommendations for SO Incentives described in this report based on the feedback received from parties during the process.

Ofgem is also considering the consultation responses, and the contents of this report, in order to inform the development of its Final Proposals for the Gas and Electricity System Operator Incentives from April 2008.

Ofgem's Final Proposals (and the required Statutory Licence amendment notices) are expected to be published in late February in order that the potential Licence amendments can be implemented ahead of 1<sup>st</sup> April 2008.

The main points arising from the consultation responses are summarised below:

### Forecast

- General agreement that the assumptions were reasonable
- Overall forecast seemed high when compared to 2009/10
- Concern with the increase in constraint costs

### Scheme design

- Support for a fully bundled incentive
- Limited support for a multi-year deal
- Development of parameters need further justification

The table below shows the updated forecast for incentive costs and the latest BSUoS forecast for 2010/11 and 2011/12.

Forecast	2010/11	2011/12
<b>Constraints</b>	£322m	£463m
<b>Remaining components</b>	£395m	£422m
<b>Central Incentive Forecast</b>	£717m	£885m
<b>Total BSUoS costs</b>	~£1053m	~£1248m
<b>BSUoS costs (£/MWh)</b>	~£1.62/MWh	~£1.92/MWh

The main reasons for the change in forecast are:

- Forecast model improvements and developments e.g. better reflecting the potential wind output behind constraints
- Lower forecast volumes for margin as a result of latest information, improved availability of balancing service providers and reduced requirement for reserve for wind
- Longer market length, based on consultation responses, removing the proposed offset
- Price changes reflecting recent operational performance, forward power price changes and contract prices
- Latest generation data

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## Section 1 Introduction

*This section provides an overview of the SO incentives development process*

### 1.1 Purpose of this Document

- 1 This document outlines the general themes from the responses to our Initial Proposals Consultation, provides an updated forecast for 2009/10 and the Final Proposal for a scheme option to be implemented on 1 April 2009.
- 2 The document is structured as follows:
  - Section 2 outlines the Initial Proposals responses on the forecast
  - Section 3 outlines the Initial Proposals responses on the scheme design
  - Section 4 outlines the general comments on the initial proposals
  - Section 5 provides an overview of the updated forecast
  - Section 6 has contact details

### 1.2 The Consultation Process

- 3 Via an open letter, published on 28 May 2009<sup>1</sup>, Ofgem has asked National Grid to lead on the development of initial proposals for the implementation of System Operator (SO) incentives commencing April 2010. The letter summarises Ofgem's views on the objectives, process and timetable for this year's consultation. National Grid's response to this letter can be found on the National Grid website<sup>2</sup>.
- 4 In this letter, Ofgem recognised the valuable contribution made by the industry in developing the incentive scheme implemented in April 2009 and go on to state that they are keen to further promote engagement from industry participants, end consumers and smaller suppliers in this year's process. In response, National Grid has presented at a number of industry meetings and arranged bilateral discussions with interested parties to highlight the issues for this year's consultation. A generic copy of the slides used at these meetings can be found on National Grid's website.<sup>3</sup>
- 5 The agreed timetable for the development of the BSIS commencing in April 2010 is as follows;

<sup>1</sup><http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Documents1/Open%20Letter%20final.pdf>

<sup>2</sup><http://www.nationalgrid.com/NR/rdonlyres/D68DE8C6-DB21-4513-B60E-98B3AE709305/35809/SOInitialProposalsTimetableNGOpenLetter.pdf>

<sup>3</sup><http://www.nationalgrid.com/uk/Electricity/soincentives/AnalystArea/>

Date	Action
June / July 2009	Initial Industry Consultation/Engagement
July/ August 2009	Publication of mini consultation documents
November 2009	Publication of Initial Proposals
10 <sup>th</sup> November 2009	BSIS Initial Proposals Workshop
November 2009	Ofgem to provide initial comments
December 2009	Initial Proposals consultation period closes
January 2010	Initial Proposals Consultation Report
February 2010	Ofgem consultation on Final Proposals
1 <sup>st</sup> April 2010	Scheme 'Go-Live'

- 6 National Grid has attempted to improve the consultation process based on comments received from the 2008/9 process. The level of information provided within the mini-consultations and the Initial Proposals consultation includes more detail on the assumptions used and the models used to determine the forecast.
- 7 The improvements were generally accepted by the industry as improving the process. There were a number of comments made on how the process and level of information can be improved in the future. Where possible, we will endeavour to take these into consideration when developing the process used in the future.

### 1.3 Report format

- 8 This report presents a summary of responses to our proposal for Electricity System Operator Incentives commencing April 2010:
- We received 9 formal responses to our proposals for Electricity SO Incentives.
  - In addition to these formal responses we met with 3 parties on a bilateral basis.
  - We received feedback and comments at the SO Incentives consultation workshop held on 10 December 2009.
  - We also presented a summary of our consultation document to the Electricity Interim Operational Forum on 2 December 2009 and the Energy Suppliers Forum, established by Cornwall Energy Associates, on 1 December 2009.
- 9 We would like to take this opportunity to thank all of those who offered comments on our proposals, through formal responses and comments at industry or bilateral meetings.
- 10 The remainder of this report:
- Summarises responses and comments to our Electricity SO Incentives proposals consultation;
  - Provides National Grid's view on the responses

- Provides an overview of the updated forecast for 2010/11 and 2011/12
- 11 Where possible, we have combined the consultation questions into similar themes. A number of respondents did not respond to all of the questions. Therefore, for certain questions, we may state that the majority of respondents where this statement is linked the majority of those that expressed a view.
  - 12 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.

## Section 2

### Responses to the forecast questions

*This section provides a high level summary of the industry's responses to the consultation questions focused on the forecast.*

#### 2.1 Forecast

13 Where possible within this section, the industry's responses to the consultation questions focused on the forecast, have been divided into 5 main parts.

- Forecast Drivers
- High level assumptions
- Volume assumptions
- Price assumptions
- Constraints

##### 2.1.1 Forecast Drivers

Question 1: Have all cost drivers for Energy, Reactive, Black Start and Transmission Losses been captured and correctly identified as being within or outside National Grid control?

Question 2: Have all the cost drivers for Constraints been captured and correctly identified as being within or outside National Grid control?

##### 2.1.1.1 Overview of Responses

14 Respondents stated that all cost drivers had been identified.

15 One respondent stated that the split of constraint costs caused as a result of TO outage plans, connection plans and the expected cost of system operation was required to provide a view on constraint costs.

##### 2.1.1.2 National Grid's View

16 National Grid will consider how best to separate outage costs into separate pots. There are a number of complications in doing so. For example, during a single outage of a piece of equipment, multiple pieces of work for different purposes are often completed to maximise the access to the system possible during that period. Additionally, outages of different equipment, potentially required for different purposes, are taken at times where they 'nest', resulting in a single constraint spend being for different purposes. It is thus difficult to state explicitly that a constraint

has been incurred solely for the purpose of new connection, asset replacement or other reasons.

- 17 National Grid will look at developing a methodology to identify these costs and then consider how best to publish this information.

## 2.2 High Level Assumptions

### 2.2.1 Net Imbalance Volume (NIV)

Question 3: Is historic market length a suitable proxy for future market length?

Question 4: Do you agree with the conclusions we have reached with respect to the observed changes in NIV since BETTA go-live? If not, why not?

Question 5: What do you believe is the impact of wind on market length at this time; how do you see this varying as wind penetration increases and what do you believe are the key drivers? What additional analysis could be carried out to determine the current and / or future impacts?

Question 6: Do you agree with our base case scenario for NIV? If not, which scenario should be used and why?

Question 7: Are there any other factors or scenarios that you believe should be considered in deriving a NIV forecast?

#### 2.2.1.1 Overview of Responses

- 18 There were mixed views on the development of a NIV forecast.
- 19 There were some concerns that using historical information to determine the future market length may not provide a good indication of future levels. Some of the reasons outlined were:
- Historic periods that have different market rules will have a different market length profile
  - Historic running regimes of plant may not reflect future running e.g. operation of late fitting FGD on generation running patterns in 2008 and the future operation of LCPD plant.
- 20 To more accurately determine future market length, the following points need to be considered:
- Need to consider known developments in the market that will have predictable influence
  - Increase in intermittent generation and the operation of new CCGT

- The effect of the recession on the demand and subsequent market length
- Need to consider system prices, renewable incentives and future generator outage (OC2) data
- Need to look at the influences of market fundamentals such as wholesale market prices and BM cashout prices on market length

- 21 The assumption that the market length will return to the average levels seen since BETTA go-live was not accepted by all market participants. One participant stated that the step change in market length seen in September 2008 had not been satisfactorily explained.
- 22 Generally, respondents believed that the increase in wind generation will have an impact on market length, with some suggesting that further analysis on the interaction of market length and imbalance prices is undertaken.
- 23 The majority of respondents (those who responded to the specific point) stated that the central NIV assumption seemed reasonable with one respondent stating that a different scenario should be used as the base case.

#### 2.2.1.2 National Grid's View

- 24 We agree that the efficient operation of the market will result in an efficient level of market length. We believe that market length is predominately driven by the accuracy of the market forecast demand levels and the risk, and subsequent contracting strategy, of the market. Analysis carried out on the relationship between NIV and market fundamentals has not shown a strong correlation. For example, the relationship between NIV and power price shows a weak correlation of only 20%. In addition, the impact of market developments, such as P217, are currently unknown and therefore we do not believe that we can accurately predict the change in market length and have not included any changes in our forecast.
- 25 Therefore, if the market risk and forecasting accuracy doesn't significantly change from one year to the next, using historic data is a reasonable methodology to determine future market length.
- 26 We do not believe that there will be a change in market length due to the commissioning of new CCGT generation as we believe that this new generation will be contracted in a similar way to current generation, resulting in market length remaining the same. We do agree that, going forward, further analysis is required to determine the impact of wind on market length. As the volume of wind increases in future years, we continue to investigate the impact this has on the market length as part of going business activity.

- 27 Finally, we will revise our NIV assumptions based on the recent winter experience of market operations. Recent experience reinforces our view that the market length seen in 2008/9 was a one off, most likely due to forecast uncertainty at the early part of the recession however, whilst the data shows the market shortening again there is no trend to suggest it will return to 2007/8 levels. The latter point is perhaps due to some ongoing forecast uncertainty or some impact of wind on market length. On the basis of the consultation responses, and the more recent information, we have revised our NIV forecast such that it is longer than that used in the Initial Proposals. The mean NIV will be 320MW long, which is equivalent to removing the second offset described in the Initial Proposals consultation as shown in the graph below. The green line shows the updated forecast and the pink line shows that used in the Initial Proposals.

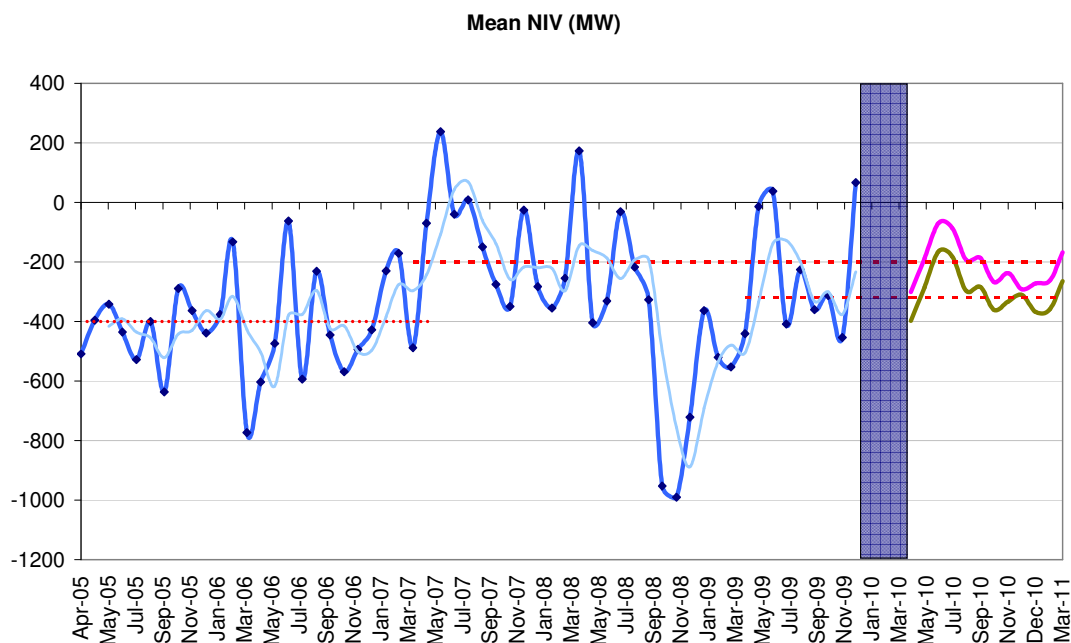


Figure 1: NIV outturn and forecast

## 2.2.2 Wholesale Power and Fuel Prices

Question 17: Do you agree that the Argus forward price values are an appropriate measure of wholesale prices over the forecast period? If not, please indicate why not.

Question 18: Do you agree that Bloomberg is a suitable source for Carbon prices and the Euro to Sterling conversion rates used within the forecast? If not please indicate why not.

Question 19: Do you agree with the assumptions made in producing a BM energy price forecast? If not, please indicate why not.

### 2.2.2.1 Overview of Responses

- 28 Generally respondents agreed with the principle of using the Argus forward power price within the forecast. A number of respondents made the following comments:
- Forward power prices are potentially volatile over time; therefore forward prices should be used as a starting point for developing a stable forward forecast based on forward modelling of the market fundamentals
  - Additional sources of power price data could be used, particularly for the forward, less liquid contracts to provide a basket of prices.
  - Forward prices should be updated in National Grid's reforecast and should be kept under review throughout the incentive scheme period.
- 29 Bloomberg was recognised as a suitable carbon price; one respondent noting that Point Carbon is a universally recognised provider of carbon prices.
- 30 The majority of respondents agreed with the methodology for developing BM energy prices. One respondent suggested that the relationship used to determine the BM prices was loose with another suggesting that with 2GW of new CCGT coming online, there could be an impact on BM prices, especially peaking plants, resulting in historical prices not being applicable.

### 2.2.2.2 National Grid's View

- 31 National Grid intends to use the latest forward power price in the final forecast in January. Thus all updated forecasts shared during the scheme will be based on latest price information.
- 32 Forward modelling of market fundamentals require, for example, knowledge of customer demand forecast, portfolio management strategy and risk appetite; which National Grid is not privy to. As such, valid assessment of power price is not possible. National Grid will continue to use a consistent single recognised source (Argus) when forecasting costs of system balancing, with adjustments such as NIA and RIA to limit the potential for windfall gain and losses that may occur due to changes in forecast power price.
- 33 Whilst we recognise there may be an impact of new CCGTs on the relationship between power price and BM price, based upon previous commissioning of new generation we believe this will be indistinguishable from the general background fluctuations. In addition, the impact on BM actions will also be marginal, with the new generation assumed to be running baseload. The effect of the additional generation should be reflected in the forward price curve as it changes the marginal

plant of the system and, as the forward price is used in the assumption thus already be included in the forecast.

## 2.3 Volume assumptions

### 2.3.1 Volume of generation

Question 8: Do you believe that installed wind capacity will increase as indicated? If not, please indicate how you believe the rate will change and why.

Question 9: Do you believe that nuclear generation will maintain its current level of availability?

#### 2.3.1.1 Overview of Responses

- 34 There were mixed responses on the level of new wind generation connecting in the future.
- 35 A number of respondents stated that National Grid was best placed to determine the level new generation and the level of nuclear generation, although further justification was required for the basis of the forecast volume.
- 36 One respondent stated that the 1200MW assumption for new wind connecting in 2010/11 in Scotland was unrealistically high, providing an alternative view based on National Grid's Condition 5 – Long Term Tariff Publication Information Paper.
- 37 Two respondents outlined the current availability of nuclear generation is potentially higher than the future due to the aging nature of the fleet. One respondent suggested that a sensitivity analysis of a change in availability should be carried out.

#### 2.3.1.2 National Grid's View

- 38 Our Initial Proposals forecast used the TEC register to determine the level of new generation connecting; the proposed dates were updated with more detailed information inputted from our New Connection Agreements team. This volume will be updated in the January re-forecast with an update to the expected connection dates.
- 39 The volume of new generation due to connect used in the Initial Proposals forecast was based on the volume of generation on the TEC register as at September 2009. The volume of wind generation described in the Condition 5 – long term Tariff Publication was based on signed connection offers at end of October 2009.

- 40 We recognise industry concerns that the volume of new generation detailed within the TEC may not all connect as currently indicated. To ensure the volume of wind generation assumed is as accurate as possible and to increase confidence in this assumed volume we have updated our forecast with data taken from National Grid's 'Business As Usual' planning scenario that takes into account the TEC register with additional information from the Heren Report, the British Wind Energy Association and best view of connection dates from our Customer Account Managers.
- 41 The updated forecast will show a volume of wind to connect of 1338MW (822MW in Scotland, 516MW in England and Wales). This volume includes embedded wind generation where it is 'visible' to National Grid.
- 42 The footroom component of energy costs is most affected by nuclear availability. The Monte Carlo simulations carried out when developing the forecast include uncertainty around nuclear availability; the model uses a normal distribution with mean 7426MW (the 12 month average) and standard deviation of 1290MW (the standard deviation since BETTA Go-Live, allowing for a wider range of possibilities in the sensitivity analysis).
- 43 Preparation of the constraints forecast highlighted a number of cases where forecast costs are heavily dependant on the availability of specific nuclear generators. National Grid is of the view that a failure of specific units that would result in a step change in constraint costs would be best treated with an IAE or some form of adjustor.

### 2.3.2 Component Costs

Question 10: Do you agree with the assumptions made in producing a frequency response volume forecast? If not, please indicate why not.

Question 20: Do you agree with the assumptions made in producing a BM Response price forecast? If not, please indicate why not.

Question 11: Do you agree with the assumptions made in producing a fast reserve volume forecast? If not, please indicate why not.

Question 22: Do you agree with the assumptions made in producing a Fast Reserve price forecast? If not, please indicate why not.

#### 2.3.2.1 Overview of Responses

- 44 Generally, respondents believed that National Grid was best placed to develop the forecast volumes and agreed with the volume assumptions used in developing the response and fast reserve forecasts seemed reasonable. One respondent requested more information on the recent

improvements in response optimisation and how this would be maintained in the future.

- 45 The majority of respondents stated that the price assumptions for response and fast reserve seemed reasonable. The points raised were:
- Would like to see a forward looking forecast based on the key drivers for prices
  - Although assumptions look reasonable, there is a large range and volatility in response BM prices
  - Not clear why data from 2009 is excluded from the fast reserve analysis

### 2.3.2.2 National Grid's View

- 46 The volumes for response and fast reserve are based on a 12 month rolling averages. Using this time frame recognises the higher importance of more recent data and reflects possible trends. These volumes will be updated as part of the January re-forecast based on updated outturn data.
- 47 Volume and prices for response and fast reserve has been relatively stable since BETTA Go- Live. Whilst we are in discussions with potential new providers we do not expect this to result in significant volumes of new service provision during 2010/11/12. As such, the relationships derived based on historic data are considered to be appropriate for forecasting prices in 2010/11/12.
- 48 As prices are dependant on BM prices and thus on power price, the volatility in power price will feed into the prices paid for response and fast reserve.
- 49 2009/10 data was not specifically excluded from the forecast of prices or volumes; however, at the time of publishing our Initial Proposals forecast, the only data that was available was up to September 2009. The reforecast in January will be updated to capture outturn data up to and including December 2009.

### 2.3.3 Reactive

Question 12: Do you agree with the assumptions made in producing a reactive volume forecast? If not, please indicate why not.

#### 2.3.3.1 Overview of Responses

- 50 Respondents stated that the reactive volume assumptions seem reasonable.

- 51 One respondent requested more information on the recent improvements in reactive volume optimisation and how this would be maintained in the future.

### 2.3.3.2 National Grid's View

- 52 No changes to the volume assumptions used in developing the reactive forecast will be made. Updated power prices will be used to derive the monthly reactive default price.
- 53 The recent improvements seen in reactive volume optimisation are reflected in the forecast as this data is used in the historic data. The improvements in reactive power optimisation are the result of improved processes with these revised processes now being embedded in the control room.

### 2.3.4 Demand forecast

Question 13: Do you agree with the assumptions made in producing a demand forecast? If not, please indicate why not.

#### 2.3.4.1 Overview of Responses

- 54 Whilst the majority of respondents thought the demand forecast seemed reasonable, two respondents commented that the demand forecast seemed to be on the high side and believed that the economic recession would impact on demand levels for some time into the future and therefore the levels of demand were uncertain.
- 55 One respondent outlined the interaction of increasing wind generation and demand forecasting and suggested that this needs to be explicitly modelled.
- 56 Another respondent commented that the assumption that the England to France interconnector would be exporting to France at 2GW across the period was uncertain and that historical export levels rarely reached 2GW.

#### 2.3.4.2 National Grid's View

- 57 For the updated cost forecast, the demand forecast will be updated to capture the prolonged impact of the recession on demand specifically, no increase in demand will be assumed from 2009/10 levels. This recognises that some demand will not return following the recovery from the recession and the impact of an increased focus on individual energy usage.
- 58 The demand forecasting process includes data on the impact of wind on demand. Traditionally, wind speed was assumed to increase as higher

demands were observed associated with higher wind speeds. With the growth in embedded wind generation, this relationship has been modified with a decrease in demand being modelled against increasing wind speed. This change in modelling is currently performing very well.

- 59 Analysis of 'natural' flows on the IFA against power price show that if no action is taken by National Grid (e.g. to manage constraints), flows up to 2000MW would be observed. As National Grid undertake trades to manage interconnector flows, and so alter the overall flow, just considering real time flows does not capture the true market position.

### 2.3.5 Effect of Wind on Margin

Question 15: Do you believe that wind generation will displace conventional generation behind key boundaries? Do you believe that conventional generation behind constraint boundaries will stop running?

#### 2.3.5.1 Overview of Responses

- 60 There were a number of views expressed by the respondents on the displacement of conventional generation by wind. The main points raised were:
- There will be some displacement of conventional generation; however, the location may not be behind the constraint boundary but could be anywhere on the system
  - Wind generation will operate as 'must run' generation, with conventional generation being forced to run more marginally, especially behind constraint boundaries, with conventional generation behind constraint boundaries acting as balancing services providers to help the GBSO manage wind variability
  - Displacement of generation and the introduction of additional charges on their cost base (such as locational BSUoS) may result in early plant closure
  - Level of wind generation assumed is wholly incorrect and therefore National Grid will not be in a position to where they are forced to reduce wind generation

#### 2.3.5.2 National Grid's View

- 61 We have updated our volume of wind assumption within the updated forecast using our 'Business As Usual' planning scenario as detailed earlier. The levels have been updated since the initial forecast completed in September to 5605MW, with the volume of new generation outlined in section 2.3.1.2.
- 62 The volume of additional margin to be held for wind has been updated based on operational experience and as such, the increase in margin for the levels of wind forecast to connect in 2010/11 has been reduced, with

the volume of reserve required for wind over the summer now assumed to be 15% (reduced from 40%). This level of reduction was achieved by the continuous assessment of system security and the interaction of other market fundamentals with wind output. Going forward, National Grid will endeavour to keep reserve requirement for wind at such low levels, but system security continues to be our foremost priority.

### 2.3.6 Volume of Margin actions

Question 14: Do you agree that the relationship between the volume of margin actions and market length is an appropriate input to the model?

Question 16: Do you have any comments on the assumptions made in producing a margin volume forecast? Are there any other considerations that should be included in the margin volume assumption?

Question 23: Do you agree with the assumptions made in producing a Margin price forecast? If not, please indicate why not.

#### 2.3.6.1 Overview of Responses

- 63 Of those respondents who expressed a view, the majority stated that the volume and price assumptions for margin seemed reasonable. The main points raised were:
- Relationship between market length and volume of margin actions seemed weak and there seemed to be a wide range of potential margin volumes that could come from a particular market length, resulting in the potential for a wide range of error with the forecast
  - How the data used in determining the graph was derived is unknown and therefore it was difficult to discuss the validity of the analysis
  - One respondent had conducted similar analysis to derive margin prices and this resulted in both coal and gas prices being lower

#### 2.3.6.2 National Grid's View

- 64 The relationship between margin volumes and NIV is based on analysis of historical data. The specific actions taken to provide margin were used to determine the volumes of margin actions and the ½ hourly market length used for the NIV values. This relationship was then back tested to provide a level of confidence. The data used to derive the relationship (shown in figure 34 of Initial proposals consultation) is historic volumes of margin actions and NIV since BETTA Go-Live.
- 65 National Grid agrees that there are a potential wide range of potential margin volumes that could be derived from the graph. Using the average values derives the average volumes that are dependent on

market length. Due to the large number of settlement periods analysed, using the average should provide a reasonable estimate of the future volumes (as long as the volatility is not related to a change in some other variable, such as headroom, that has a different outturn in the future). We believe that the market fundamentals that influence margin volumes (other than market length) will be the same as historic levels. There are some exceptions, with a forecast increase in volumes procured in the BM due to a change in the volume of commercial balancing services.

- 66 National Grid welcomes the analysis carried out by a respondent to derive margin multipliers and thus prices. The analysis carried out was based on published accepted offer prices; however when forecasting costs of margin we only consider the accepted offer prices that were for margin actions. This difference in the set of offer prices used accounts for the difference in multipliers calculated. For instance, in the period between August 2008 and July 2009, National Grid accepted circa 2.3 TWh of offers from Coal-fired generation, with a total cashflow of circa £255m (thus an average accepted offer price of 110 £/MWh). In the same period, offers for margin actions totalled 1.3 TWh and a total cashflow of some £168m (thus an average accepted offer price of 132 £/MWh).
- 67 As the response also highlighted, the time period chosen impacts the resultant multipliers. The analysis carried out by National Grid for the forecast in the Initial Proposals was based on information available at the time of forecast. The calculated multipliers will be updated with outturn data once available with the forecast in January including outturn data up to and including December. Thus the forecast for margin multipliers for 2010/11 and 2011/12 will be based primarily on 2009/10 outturn data, capturing the lower costs observed in 2009/10 with respect to those seen in 2008/09.

## 2.4 Price assumptions

### 2.4.1 Price assumptions Overview

Question 24: Do you agree with the assumptions made in producing a Balancing Services price forecast? If not, please indicate why not.

#### 2.4.1.1 Overview of Responses

- 68 There was general agreement in the assumptions used to develop the balancing services price forecast were reasonable.
- 69 Two respondents did comment that it may be more appropriate to develop a forecast based on the future key drivers and their impact on prices.

#### 2.4.1.2 National Grid's View

- 70 We believe that using historic data is a suitable indicator of future prices. This is generally because the main drivers in changing costs are associated with changes to service providers. We have, where appropriate, used future availability of service providers within the forecast, with the corresponding changes in costs that occur.
- 71 National Grid is developing the contractual framework and liaising with new service providers. Where it is anticipated that these new service providers will be available in 2010/11 and / or 2011/12, we have included this assumption in the forecast.
- 72 The impact of market changes and the impact of new generation are as yet unknown. The impact of market changes, such as P217, may result in a change to market length. However, quantifying the anticipated change would require knowledge of the contracting strategy of market participants. We believe that it is prudent not to forecast such changes with so many unknowns. The impact in new generation on the market should already be reflected in the forward price and we do not believe that there will be an impact on market length with the generation being fully contracted.
- 73 In addition, we have seen a stabilisation in price trends since BETTA go-live, providing additional confidence in the forecast.

## 2.4.2 Price for Footroom

Question 21: Do you agree that a 12 month average of the prices for Footroom is a reasonable assumption? If not, please indicate why not.

### 2.4.2.1 Overview of Responses

- 74 There were mixed views from respondents on this. The respondents stated that:
- There is an interaction with footroom and FFR contracting strategy and this needs to be investigated to see what impacts there were
  - Insufficient information on the justification for using a 12 month average rather than a different average and that the forecast should be based on forward looking drivers if possible
  - New CCGT generation will have an impact on the prices
- 75 There was no consensus on the forecast prices that should be used.

### 2.4.2.2 National Grid's View

- 76 Footroom costs are heavily dependant on availability of inflexible generation. Use of data over the past 12 months aligns to the improved availability of inflexible generation observed over that period when

compared to historic availability. Using more recent history removes much of the influence of the high cost months experienced in 2008/09 that are believed to be higher than the average.

- 77 Recent contracting strategy has seen a number of commercial balancing service contracts being struck that will displace some downward regulation Balancing Mechanism costs in 2010/11. The mitigating effect of these contracts on the forecast downward regulation costs for 2010/11 has been included in the revised forecast. In addition to downward regulation, it should also be noted that such contracts for summer overnights have the effect of mitigating other costs, such as BM response optimisation and ancillary service response costs, and the overall displacement value is used in deciding whether or not a tender is economic.

### 2.4.3 Balancing Service contract costs

Question 25: Do you have a view on the future trend of STOR contract prices?

#### 2.4.3.1 Overview of Responses

- 78 The consensus from respondents was that STOR prices will rise in the short to medium term.
- 79 One respondent stated that they believed that the volume of wind capacity used in the forecast is wholly incorrect and that the increase in less flexible generation will result in the provision of STOR capability falling on fewer sources of more flexible generation leading to a reduced availability. These changes will result in contract prices will have to rise to cover increased costs and risks in providing STOR capability.

#### 2.4.3.2 National Grid's View

- 80 National Grid will continue to work with existing and potential providers to improve market participant and competition for provision of the service. As tender round 10 closes on 15<sup>th</sup> January we are not providing specific assumptions on where prices are expected to outturn as it could influence tender prices. The forecast will be reviewed in line with respondents' comments.

### 2.4.4 Energy forecast overview

Question 26: Do you have any further comments regarding this forecast or the assumptions made in its development?

#### 2.4.4.1 Overview of Responses

- 81 There were two comments received on this question. The responses were:
- The ranges derived from the assumptions and models indicate that an accurate and reliable forecast is difficult to produce.
  - More information is required on the derivation of the waterfalls outlining the movement of costs from current within year forecast to the 2010/11 forecast. In addition, more information on how the various component ranges are combined into an overall forecast would help improve the understanding of the forecast.

#### 2.4.4.2 National Grid's View

- 82 The number of variables and level of uncertainty in the forecast result in the range between central view (best view of volumes and prices) and the statistical mean. The scheme is designed to ensure that the deadband is contained around these points, limiting the potential for windfall gains or losses associated with the differences in forecast methodologies.
- 83 The overall forecast range is obtained by combining the three forecast ranges; one for all energy components, one for England and Wales constraints and the third for Scotland constraints. The overall forecast average is the sum of the three separate averages and the combined standard deviation is obtained by taking into account the three individual standard deviations and the historic correlation factors.

## 2.5 Constraints forecast Assumptions

### 2.5.1 Volume Assumptions:

Question 27: Do you have any comments on the background and assumptions made in constructing the constraints volume forecast?

#### 2.5.1.1 Overview of Responses

- 84 There were a number of comments on the assumptions made in determining the constraint volumes:
- Assumptions do not seem unreasonable but it is difficult to determine with the level of data provided
  - Would like to understand the mechanisms in place to limit windfall gains for changes in market fundamentals
  - Volume of wind used is wholly incorrect
  - National Grid should not be basing there volume forecast on historic levels and should be using a scheduling model
  - It is inappropriate to exclude contracting arrangements put in place in 2009/10 to manage constraint volumes

- National Grid do not appear to account for the cost benefits associated with efficient contracting, instead using forecasting BM bid/offer spreads, giving a worst case

85 Two respondents suggested that the assumptions used for the England to France interconnector may result in windfall gains if there is a change from the flow used in the forecast. Therefore, it may be appropriate to develop adjustments that remove the potential for windfall gains.

### 2.5.1.2 National Grid's View

86 The volume of any generation will have a significant impact on the volume of constraints. The volume of new generation, mainly wind, in the forecast has been updated as described earlier in section 2.3.1.2. Development of an adjustor that reduces the potential for windfall gains and losses due to changes in generation connection volumes would seem appropriate. Work is being undertaken to develop the details of such an adjustor, with the results of this work due by the end of January.

87 Development of a scheduling model requires information on both generation types and knowledge of portfolio strategy. Where merit orders have been developed for work on other analysis (such as Locational BSUoS), differences that had a significant impact on constraint volumes occurred. One party has offered to review the output of the forecast model against their own expectations of their plant which has been welcomed.

88 The contracted volumes in place for 2009/10 were excluded from modelling of expected generation output to develop a view of generation output, unpolluted by National Grid actions. The forecast assumes that constraints will be resolved through both BM and contracts using historic ratios.

89 Where contracts are forecast to be used to manage constraints, prices achieved historically were used in the Initial Proposals forecast. This price assumption will be updated in view of the responses.

### 2.5.2 Price Assumptions

Question 28: Do you have any comments to make regarding the assumptions made in constructing the constraints price forecast?

#### 2.5.2.1 Overview of Responses

90 Some respondents stated that the price assumptions used in the constraint forecast seemed reasonable. A number of respondents suggested that additional information would be useful in helping to improve transparency and the understanding of the constraint forecast, such as:

- Volumes of bid and offer acceptances
- Methodology for determining replacement margin in terms of volume of headroom 'lost' and then its replacement

91 One respondent suggested that further work is required to consider the potential for wind farms to be more flexible and offer services into the balancing mechanism.

### 2.5.2.2 National Grid's View

92 The methodology used to separate costs of balancing components is detailed in appendix A of the third mini consultation published on 9 September 2009.

93 National Grid is continuing to work with wind generation to realise the potential for more engagement in provision of balancing services and market participation. However, we recognise that there are technical issues to be overcome in these generators providing us with such services.

## 2.6 Overall Forecast for 2010/11

Question 29: Do you agree with the methodology used to forecast the second year of a two year scheme for all components except constraints?

Question 30: Do you have any suggestions for other factors that should be taken in to consideration for the second year?

### 2.6.1 Overview of Responses

94 There were mixed responses to the question regarding the methodology used to determine the second year forecast, with the majority supporting the methodology used. Some respondents agreed with the methodology, although one respondent stated that as the forecast was predominantly backward looking, this would increase inaccuracies for future years as compared to a forward looking forecast.

95 One respondent stated that, for the following reasons, they did not agree with the methodology used:

- There are inherent flaws in the year ahead methodology
- If there are inherent cost benefits in introducing a two year scheme, then these should be included in the forecast. As the forecast costs are increasing, this implies that a two year scheme is neither economic or efficient and so should not be implemented
- It is not clear how the performance against the incentive in the second year be assessed
- There are a number of potential market changes that may impact on the system operation costs that have not been

included in the second year forecast. Therefore, forecasting the second year after decisions have been made with these changes would ensure these changes are correctly reflected in the costs.

- 96 Respondent's views reflected their concern with the uncertainty in outturn costs with a two year incentive and the impact of unexpected events. The development of more flexible scheme parameters and appropriate adjusters may improve the incentive performance.

#### **2.6.1.1 National Grid's View**

- 97 National Grid recognises that adjusters in addition to NIA and RIA would limit the potential for windfall gains and losses. Work to develop additional adjusters is underway; details will be shared with the industry as soon as available, and is expected by the end of January.
- 98 The forecast developed for 2010/11/12 is based on regulations and market rules that are currently in place. Pending the decision on critical modifications, such as CAP170 and Locational BSUoS, a review of the forecast will be provided.

## Section 3

### Responses to the scheme design questions

*This section provides a high level summary of the industry's responses to the consultation questions focused on the incentive scheme design.*

#### 3.1 Introduction

- 99 The main aims of the incentive design for the development of a scheme from April 2010 was the consideration of multi year schemes, the benefits of bundled / unbundled schemes and the introduction of appropriate adjustments.
- 100 In this section we outline the responses to the questions on the development of an incentive scheme that considers the potential for unbundled schemes, the development of appropriate adjustments and the implementation of a two year scheme.

#### 3.2 Unbundling Constraints

Question 31: Do you agree with the benefits outlined for the unbundling of constraints costs and the remaining balancing cost components into separate incentive schemes? What additional issues need to be considered?

##### 3.2.1 Overview of Responses

- 101 Of the respondents that expressed a view, 4 stated that they did not support unbundling with 2 supporting the separation of constraints into a separate incentive scheme. Of those respondents who supported unbundling, there was a requirement for National Grid to develop a transparent methodology for the allocation of costs.
- 102 One respondent stated that they did not agree with the development of a two year scheme.

##### 3.2.2 National Grid's View

- 103 National Grid believes that it is possible to develop a robust methodology that would consistently allocate costs into their relevant components.
- 104 However, National Grid also recognises the complexities and issues that such a methodology creates. Therefore, we believe that with the appropriate adjusters developed for constraints that limit the potential for windfall gains or losses, that a fully bundled scheme could be developed.

105 As this option is favoured by the industry, we will be proposing a fully bundled scheme is implemented from April 2010.

### 3.3 Proposal for Implementation of Multi Year Schemes

Question 32: Do you agree that there is a misalignment in internal and external SO incentives caused by different scheme durations?

#### 3.3.1 Overview of Responses

106 Respondents agreed that there was a misalignment between the internal and external incentive schemes. However, a number of respondents suggested that it was not clear as to the issues that this caused and whether this was material.

107 The main points raised by the respondents were:

- The aligning of incentives will not occur with the implementation of the price control extension recently announced by Ofgem
- Greater transparency of the internal incentive costs and the interaction with BSUoS would be beneficial
- Alignment of incentives would better placed at the next price control

#### 3.3.2 National Grid's View

108 National Grid believes that longer term incentives will allow for more streamlined internal approach to the development and justification of initiatives that offer longer term pay back. In addition, the introduction of longer term schemes offers reduced regulatory oversight and a reduction in the number of internal costs re-openers for such initiatives.

109 Better alignment of internal and external schemes will result in increased focus within National Grid on the development of initiatives that drive down costs over multiple years. Therefore, although the extension of the price control period may impact on the alignment of incentives, it does not remove the potential benefit of moving to a longer term deal.

110 National Grid agrees that at the next price control, consideration should be given to the make up, length and alignment of the internal and external System Operator incentives. However, we believe that a move to a two year scheme in April 2010, and assessment of the performance of such an incentive scheme, would provide valuable information on the ability to move to longer term incentives at that time.

111 National Grid is considering a number of initiatives on the publication of more information surrounding both incentives and BSUoS forecast costs. The publication of additional information on both internal and external information will be considered with other such initiatives.

### 3.4 Multi-Year Constraints Scheme

Question 33: What option could or should National Grid use to develop a 2 year constraint forecast?

#### 3.4.1 Overview of Responses

112 The majority of responses suggested that it would be difficult to accurately forecast two year ahead constraint costs and therefore it would be correspondingly difficult to implement a two year incentive that included constraint costs. One respondent suggested that a more granular incentive would be more appropriate, with four sixth month targets to limit windfall gains or losses.

113 A number of respondents suggested that increased transparency in the forecast constraint costs for 2011/12 is beneficial.

#### 3.4.2 National Grid's View

114 As indicated in our Initial Proposals Addendum outlining our 2011/12 constraints forecast, there are a number of uncertainties with the forecast. We believe that with appropriate adjustors on constraint costs, such as adjustments for the connection of new generation, there is reduced volatility in the outturn both the year ahead and the two year ahead constraint forecast.

### 3.5 Multi Year Scheme for the Remaining Cost Components

Question 34: Do you agree with the benefits outlined for the implementation of a two year incentive? What do you believe the additional benefits and / or drawbacks are of a multi-year scheme?

#### 3.5.1 Overview of Responses

115 Although a number of respondents agreed that there were benefits in the implementation of a multi-year incentive scheme, the majority stated that the benefits did not outweigh the drawbacks. The main drawback was the uncertainty of the forecast costs and the impact of any market changes on such cost.

116 One respondent proposed that the most appropriate time to consider multi-year incentives was at the same time as a price control.

#### 3.5.2 National Grid's View

117 National Grid believes that there are a number of benefits of the implementation of longer term schemes. There are also drawbacks with

such a development. Of the main drawbacks mentioned, the overriding concern from the industry was the forecast uncertainty.

- 118 Whilst National Grid agrees that there is increased uncertainty for the 2011/12 forecast, with the correct adjustors in place, this limits the potential for windfall gains and losses.
- 119 In addition, although there is the potential for market fundamentals to change the and hence influence costs for 2011/12, this can also be said for a year ahead forecast as this forecast is produced between 3 and 15 months ahead of actuals.
- 120 Although a longer term scheme has some increased probability of a change influencing costs and therefore resulting in an Income Adjusting Event, the increase in likelihood and therefore the impact on the industry has not be quantified.

### 3.6 Scheme Adjustments

#### 3.6.1 Reactive Power Adjustment

Question 35: Do you agree with the introduction of a Reactive Index Adjustment based on actual default reactive power prices? Do you agree with the form of this adjustment as presented here?

#### 3.6.2 Overview of Responses

- 121 Of those respondents that expressed a view, all agreed with the implementation of a reactive price adjustment. A number of respondents questioned how the specific adjustment methodology would work in practice and whether the calculation of RIA is correct.

#### 3.6.3 National Grid's View

- 122 National Grid agrees with the implementation of a reactive price adjuster. The details of how this would work will be developed over the next month.

### 3.7 Additional Adjustments

Question 36: Do you feel at this stage that there is a case for any additional adjustment terms to be introduced at this stage?

#### 3.7.1 Overview of Responses

- 123 Respondents were unanimous in agreeing that additional adjustment terms should not be implemented.

### 3.7.2 National Grid's View

- 124 As mentioned previously, to limit the potential for windfall gains and losses, the development of appropriate adjustments is very important. The introduction of the revised NIA methodology has proven successful in adjusting the scheme costs for changes in market length and power price (for those elements included in the adjustment such as BM reserve costs).
- 125 The development to reactive default price adjustor will remove the windfall gains and losses associated with changes in power price from those used in the forecast.
- 126 It may be appropriate to consider adjustments that limit the potential for windfall gains or losses for constraint costs. As mentioned in section 2.7.1, one respondent stated that it may be appropriate to develop an adjustment for volatility in flows on the French interconnector. National Grid will consider the development of such an adjustor, coupled with other than aim to limit the impact of changes in constraint forecast assumptions, such as volume of new generation connecting in an export constraint zone.

## 3.8 Constraints – Treatment of Fault Outages

Question 37: Do you believe that National Grid should include an allowance for fault outage costs within the constraint forecast? Do you agree with the level set?

### 3.8.1 Overview of Responses

- 127 Responses were generally mixed on how to deal with the costs incurred with fault outages.
- 128 Three respondents suggested making a provision within the forecast would be appropriate and that the average fault outage cost since BETTA go-live seemed reasonable.
- 129 Three respondents suggested that the current mechanism (i.e. using Income Adjusting Event methodology) should be used to adjustment the target for any costs incurred due to fault outages with one respondent stating that having an allowance would result in a less economic and efficient approach would be followed.
- 130 One respondent suggested that there should be a more appropriately targeted incentive that recognised the shared responsibility of the SO and TO.

### 3.8.2 National Grid's View

- 131 National Grid agrees that there is the potential to make windfall gains and losses from the inclusion of an allowance for fault outages dependent on things outside of its direct control. Therefore, we will not be including an allowance in the forecast for 2010/11 and 2011/12. If there is a sufficient fault outage that causes costs to increase, we will consider raising an IAE at that time.

### 3.9 Transmission Losses

Question 38: Do you agree that Transmission Losses should remain bundled with the other components of BSIS, excluding constraints?

Question 39: Do you agree that the Transmission Losses Reference Price should remain a fixed value for the duration of the scheme?

#### 3.9.1 Overview of Responses

- 132 Generally respondents agreed that transmission losses should be bundled with the all the other balancing services cost components, including constraints. One respondent outlined the interaction of the transmission losses incentive with the BSC modification P229 on locational losses.
- 133 One respondent proposed that further investigation of the procurement incentive should be undertaken.
- 134 The majority of respondents suggested that there should be no change in the methodology for calculating the transmission losses reference price. A number of respondents suggested that a more granular approach may be more appropriate, and with a two year scheme, a change in reference price prior to the start of year two would be appropriate.

#### 3.9.2 National Grid's View

- 135 National Grid will propose a fully bundled scheme that includes transmission losses in the same way as at present with an annual reference price, updated for April 2011 if applicable.

### 3.10 Scheme design

Question 40: Do you agree with the criteria used to develop the incentive scheme design? If not, what additional points should be considered?

#### 3.10.1 Overview of Responses

136 The majority of respondents agreed with the criteria used to develop the incentive scheme. One respondent suggested that the ease with which cost components can be unbundled should be added to the criteria.

### 3.10.2 National Grid's View

137 National Grid agrees with the addition to the criteria of the ease with which cost components can be unbundled.

## 3.11 Scheme design for Single Year Constraint Incentive Scheme

Question 41: For the unbundled constraints scheme, do you agree with the parameters used? If not, what parameters should be implemented? Please explain your rationale for any changes.

### 3.11.1 Overview of Responses

138 The majority of respondents did not agree with the unbundling of constraints and so did not comment on the parameters used.

139 Of those respondents that did express a view, the main points raised were:

- The sharing factors used in the constraints incentive should be used in a fully bundled scheme
- Further justification of the caps and collars are required
- Sharing factors should be symmetrical
- Sharing factors reflected the risk profile
- Parameters appear acceptable

### 3.11.2 National Grid's View

140 Due to the industry comments, National Grid is no longer proposing an unbundled scheme at this time. However, we continue to believe in the benefits of unbundled incentive schemes and will be considering how best to progress this for future schemes.

## 3.12 Scheme design for Multi Year Incentive for Remaining Balancing Cost Components

Question 42: Do you agree with the implementation of two single year incentive schemes for all balancing costs except constraints? Do you agree with the parameters used? If not, what parameters should be implemented? Please explain your rationale for any changes.

### 3.12.1 Overview of Responses

141 Respondents generally did not agree with the implementation of two single year incentives. One respondent stated that the process for

developing a one year incentive was fundamentally flawed and that how 'conflicts' between different incentive schemes (for the same year) are reconciled.

- 142 There were mixed responses on the parameters used. The main points raised by the respondents were:
- Further justification of the parameters needed
  - The higher sharing factor placed a strong incentive on National Grid to reduce costs
  - Combined incentive caps and collars should not exceed £15m

### 3.12.2 National Grid's View

- 143 National Grid notes the views on the implementation of two single year incentive schemes.
- 144 We believe that two single year incentives, with targets agreed for implementation in April 2010. A target for 2010/11 will be agreed using an updated forecast undertaken in January with a target for 2011/12 being agreed at the same time.
- 145 When considering the parameters for a fully bundled incentive for 2010/11 and 2011/12, the re-forecast range, the adjustors that are developed and proposed to be implemented and historic levels of incentive parameters will be considered.

### 3.13 Scheme design for Fully Bundled Single Year Incentive

Question 43: Do you agree with the parameters used for the one year fully bundled scheme? If not, what parameters should be implemented? Please explain your rationale for any changes.

#### 3.13.1 Overview of Responses

- 146 The general view from respondents was that more justification of the parameters used was required. The main points raised were:
- Target was too high
  - Should have lower sharing factors
  - Parameters should be based on the current scheme
  - A lower deadband should be adopted
  - Symmetrical sharing factors should be used
- 147 One respondent did not support the fully bundled scheme and supported the unbundling of constraints.

#### 3.13.2 National Grid's View

- 148 The development of scheme parameters is driven by the range of costs over which the incentive is applicable and the sharpness of the incentive. National Grid believes that the incentive to reduce costs should be as strong as possible whilst limiting the risks. Therefore, sharing factors that are as high as possible, reflecting the forecast range of costs should be implemented. With the sharing factors, set, the range over which the incentive is applicable will help determine the possible caps and collars. The increase in the sharing factors (when compared to 2009/10) and the caps and collars reflect the increased confidence in the forecast and the increased range over which National Grid is to be incentivised.
- 149 As mentioned earlier, when considering the parameters for a fully bundled incentive for 2010/11 and 2011/12, the re-forecast range, the adjusters that are developed and proposed to be implemented and historic levels of incentive parameters will be considered.
- 150 The forecast is generally based on historic data, using previous outturns to help determine future costs (this is mostly true, excluding constraints with the forecast partly based on future trends). When the forecast was developed for the Initial Proposals, historic data did not include any outturn data for the winter operation in 2009/10. The re-forecast in January will include the latest outturn data. Therefore the recent downturn in costs seen for 2009 will be reflected in the forecast for 2010/11 and 2011/12. The corresponding change in forecast and range will be reflected in the scheme design.

### 3.14 Scheme design for Fully Bundled Two Year Incentive

Question 44: Do you agree with the development of a two year fully bundled incentive? How should the constraint cost forecast for year two be included in the incentive target e.g. agreed post scheme or some form of constraint forecast developed pre-implementation?

Question 45: Do you agree with the scheme options presented here for implementation from April 2010 and what is your preferred option? If not, please provide an explanation as to why and any alternatives that you would like to see developed.

#### 3.14.1 Overview of Responses

- 151 There was limited support for a two year scheme and for an unbundled scheme with the majority of respondents supporting a fully bundled one year scheme. The main reason given for this view was that there was little confidence in the accuracy of the forecast for the second year for constraints and also for the remaining cost components.
- 152 One respondent agreed with the implementation of a fully bundled two year incentive scheme, with one respondent stating that they did not support unbundling.

153 One respondent stated that it would be perverse in the extreme to incentivise NGET for more than one year given the fundamental market changes that are occurring and that NGET should not be receiving an SO incentive scheme benefit from the granting of any new derogations.

### 3.14.2 National Grid's View

154 An incentive is generally implemented to influence and / or change behaviour, providing increased focus on meeting the specific incentive goal.

155 The implementation of a longer term incentive on National Grid would provide increased focus on the development and implementation of innovations that would deliver benefits over the longer term. With the current incentive, the focus is on delivering benefits in the short term, with reduced focus on longer term benefits.

156 Therefore, quantifying the potential benefits of specific initiatives that would be progressed if a longer term incentive were implemented is not possible at this stage as these initiatives have not been developed. However, we strongly believe that if such a long term incentive were introduced, with the change in focus such an incentive would provide, would result in a number of initiatives being developed and implemented.

157 Although we believe that there are benefits in unbundling components with differing risk ranges and key drivers, we agree that a fully bundled scheme is simpler to manage and removes any issues with the allocation of costs.

### 3.15 Impact on Industry

Question 46: What impacts will a change in incentive scheme structure and consequential changes to the BSUoS data have on your IS systems?

Question 47: If your systems will be impacted by a change to scheme structure what information will you require and in what timescales in order to accommodate the change?

#### 3.15.1 Overview of Responses

158 Generally respondents suggested that if the current billing arrangements were maintained then there would be no change to their systems. However, if there was a change in the format of data, more information was required as soon as possible to assess the potential impact.

#### 3.15.2 National Grid's View

- 159 The potential change was associated with the unbundling of the incentive and the impact this may have on data requirements and the subsequent knock on to IS systems.
- 160 Currently National Grid is not considering the potential of unbundling the cost components. Therefore, no impact on IS systems is expected.

### 3.16 Summary

Question 48: Do you have any comments regarding the information provided within this consultation?

Question 49: Do you have any comments regarding this consultation process? What improvements would you like to see in future years?

#### 3.16.1 Overview of Responses

- 161 The respondents commented on the openness and transparency of the process, with a number of significant improvements and suggested that it was a good template for future years.
- 162 A number of respondents commented on the level of information, with some suggesting that the level of detail was welcome, and other suggesting that there was not enough information provided.
- 163 The main points raised by the respondents were:
- More detail on the models and assumptions to help better understand the SO cost forecast
  - Further transparency of the internal and external costs would be welcome
  - More within year information (suggested monthly updates)
  - Concern about the level of information provided and the volume of consultation questions
  - Consideration needs to be given on how to improve the current issue of regulatory burden caused by the development of the SO incentive scheme and the impact on industry resources
  - A process where Ofgem are directly involved in challenging the forecasts so as to avoid duplicated effort across the industry would be welcomed
  - Information on the potential changes to IS systems requires more defined technical data
  - If NGET and Ofgem rely on this flawed consultation process to decide and implemented a two year incentive regime, then it would be a travesty and call into question the whole approach to the SO incentive consultation process

### 3.16.2 National Grid's View

164 National Grid welcomes the views of the industry on the current process. We have focused on improving this year's process and will use the feedback received to develop the future incentive consultation process.

### 3.17 2011/12 constraints forecast addendum

Question A: Do you agree with the:

- development of a two year incentive that includes constraint costs?
- the proposed constraint adjusters be developed?
- the development of a fully bundled incentive scheme?

#### 3.17.1 Overview of Responses

165 There was some concern from respondents on the volume of information provided and the limited amount of time given to provide responses.

166 There were a number of respondents who stated that the increased transparency of costs of constraints in 2010/11 was welcome.

167 However, there was concern expressed regarding the accuracy of the 2011/12 forecast and the increased likelihood of income adjusting events being raised with a two year incentive that included constraints if a two year incentive was implemented.

168 One respondent suggested that it was necessary to develop appropriate adjusters, although the development of a price adjuster was effectively a re-forecast of constraint costs. Two respondents stated that due to the lack of detail, it was not possible to comment on specific adjusters.

169 One respondent stated that National Grid needs to correctly identify the elements of constraint costs under its control as the SO.

#### 3.17.2 National Grid's View

170 National Grid agrees with the concerns regarding the timing of the addendum to the Initial Proposals consultation. The development of a constraint forecast for 2011/12 was thought to be important to give to the industry as soon as possible to help with the responses to the Initial Proposals. However, the forecast methodology resulted in a forecast only being provided late into the Initial Proposals consultation.

171 National Grid agrees that the forecast for constraints for 2011/12 is relatively uncertain. However, the development of appropriate adjusters would help in reducing some of the uncertainty in forecast assumptions.

172 Therefore, National Grid believes that it is possible to develop and implement two year fully bundled incentive that provides the correct incentives to drive down costs.

## Section 4 General Comments

*This section provides a summary of the comments received from the industry that were not directly related to the consultation questions.*

### 4 General Industry Comments

173 There were a number of general comments made within the consultation responses that were not associated with the consultation questions.

174 This section aims to summarise the responses received.

#### 4.1 Consultation information and process

175 There were a number of comments on the quality of information included within the consultation and the process followed.

176 A number of respondents commented on the extent and quality of the information provided within the consultation. One respondent stated that they were disappointed with the limited amount and quality of explanatory information provided to justify the assumptions used and believe that there is considerable room for improvement in the quality and transparency of information provided.

177 One of the criticisms of the forecast was the reliance on historic data to perform the forecast, and not based on future cost drivers.

##### 4.1.1 National Grid View

178 Generally, where National Grid believes that historic outturns are a good indication of future costs, historic outturns are used to develop the forecast.

179 Where we believe that there is a change in cost drivers and a subsequent change in forecast costs, the impact of this change is included in the forecast. For example, the increase in wind energy is forecast to drive costs up as there is an increase in volumes. How to determine the cost of the increase in reserve required is based on historic data.

180 Although a number of respondents commented on the potential inaccuracy of the second year forecast, no specific information on the likelihood of the increase was provided.

181 Within the consultation, National Grid identified the main cost drivers, with these being generally agreed by respondents. National Grid does

not believe that there are any changes in these drivers in the near future that indicate the use of historic data is not a reasonable assumption for future costs (excluding those included in the forecast, such as system capacity, wind energy, demand, etc.).

## 4.2 Incentive Development

- 182 There was general concern with the development of a multi-year unbundled scheme.
- 183 One respondent suggested that the incentive should not only be about the management of overall costs but also about a decrease in their volatility, providing more stable and predictable costs for consumers.
- 184 In addition, it was stated that it was important that the scheme is designed to ensure that the caps and collars are not reached too early in the incentive period.
- 185 With regards to the costs of constraints, one participant outlined the importance of incentives on the SO that facilitate the right balance between system balancing costs and undertaking system reinforcements and stated that this was to-date lacking within the incentive scheme. Another respondent commented on the current incentive arrangements on both the SO and TO to ensure that there is an efficient level of constraints needs to be reviewed.
- 186 There were two respondents who commented on the process and level of information to be assessed by the industry. Both respondents suggested that it would be better for Ofgem (or external consultants) to assess the forecast rather than the industry.
- 187 With regards to longer term incentive, one respondent requested more information to allow them to assess the benefits in the implementation of a longer term scheme. The information requested was; what schemes have been implemented historically and not paid back within a year; what schemes were identified but were not pursued due to insufficient time for payback and those schemes identified for the future that would only be undertaken if the decision was made to go to move to a two year scheme.
- 188 One method identified of recovering the costs of schemes that would reduce costs over longer than one year would be to allow explicit revenue allowances to be allowed within BSIS where a business case is approved for investment.

### 4.2.1 National Grid's View

- 189 Currently National Grid is not incentivised to manage the volatility of BSUoS costs. Within the Transmission Licence, BSUoS costs are cost reflective. At the TCMF, a proposal has been raised that aims to reduce

the volatility of BSUoS payments. The value of developing an incentive on National Grid would need to be considered.

- 190 National Grid published a consultation in September 2009 considering the development of incentives on the SO and TO that would help better manage constraint costs. We will continue to consider the development of such incentives.
- 191 The implementation of longer term schemes will result in increased focus within National Grid on the development of initiatives that drive down costs over multiple years. There are no specific schemes that have been identified that will be initiated at the start of a multi-year incentive that have not already been, or are being implemented. The implementation of a multi-year scheme would be aimed at providing increased focus on the development of such initiatives, providing the incentive to develop and implement initiatives that would better manage costs over the longer term.
- 192 In addition, if a scheme is developed that does not pay back over one year, but does make economic sense to implement, we will currently seek to recover the increased spend, with appropriate adjustment to the internal incentive. However, such a process negates the benefits of an incentive, i.e. providing National Grid with the internal incentive to develop and implement initiatives that drive down cost without reference to Ofgem or the industry, providing the correct risk / reward for such decisions.

### **4.3 Transparency of Information**

- 193 A number of respondents commented on the benefits of improvements in the transparency of information. A number of improvements were suggested in the development of information for the future. Such information was:
- improved monthly reporting of information such as internal incentive performance, external performance and BSUoS
  - more information or publication of the forecast models used
  - more information on the assumptions used to develop the forecast

#### **4.3.1 National Grid's View**

- 194 Providing additional information will be considered and we will endeavour to provide the industry with as much information as possible. However, there are confidentiality issues with the publication of certain information and we need to ensure that this is not discoverable.

## Section 5 Reforecast

*This section provides a brief overview of the re-forecast costs and the updated BSUoS forecast.*

### 5 Summary

195 As outlined in the Initial Proposals document, we have updated the forecast costs for 2010/11 and 2011/12. This reforecast includes:

- Update to rolling assumption e.g. where assumption uses a rolling average, the assumption has been updated using the experience up to December 2009.
- Assumptions update based on responses to the consultation e.g. removing the market length offset when developing the NIV assumption
- Latest information e.g. including latest contract information
- Forecast model improvements and developments

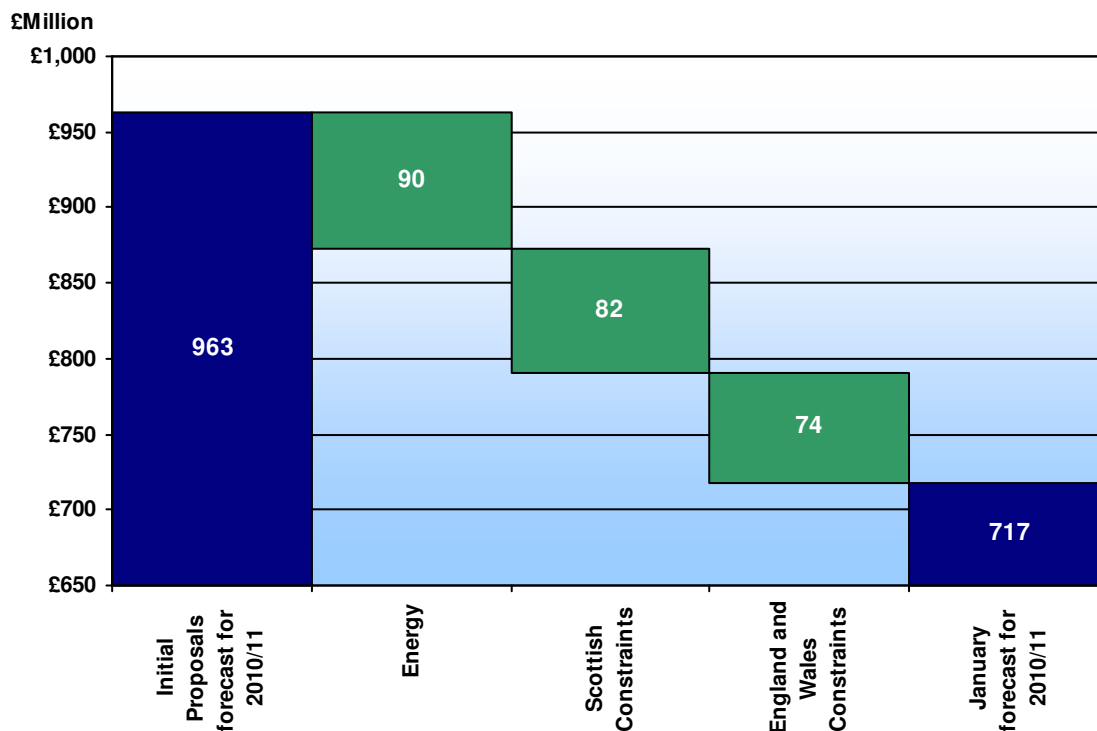


Figure 2: Change in Initial Proposals forecast to January 2010 re-forecast for 2010/11

196 As can be seen from figure 2, there is an overall reduction in forecast for 2010/11 of £246m.

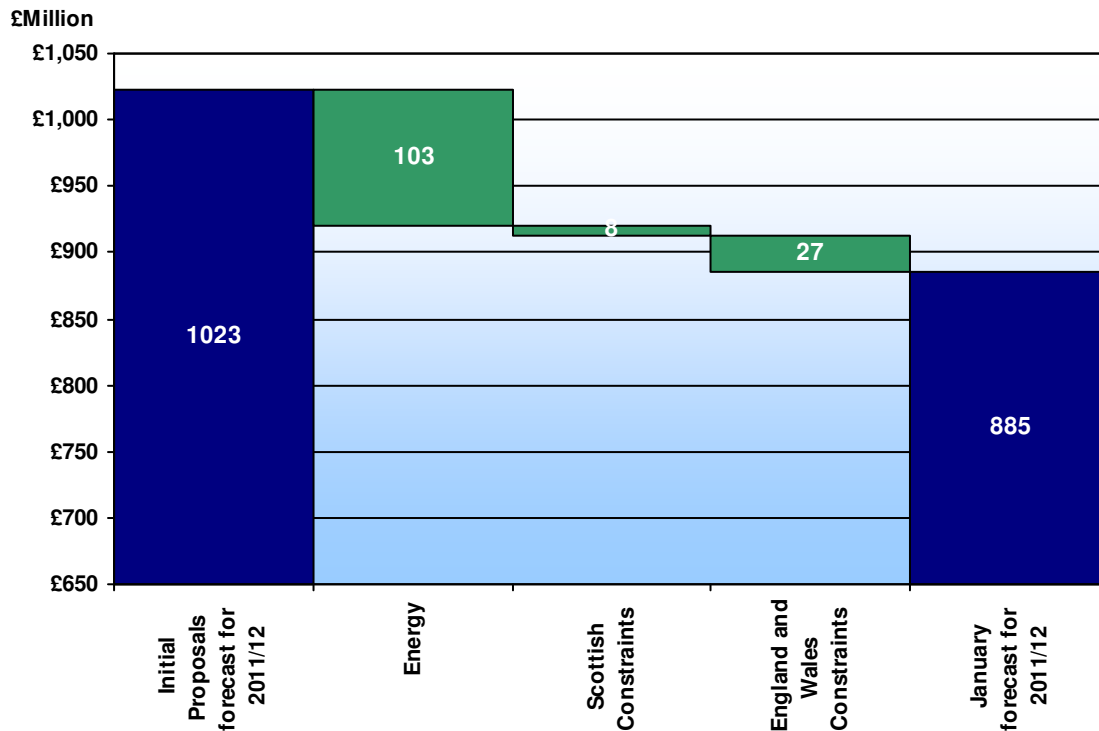


Figure 3: Change in Initial Proposals forecast to January 2010 re-forecast for 2011/12

197 As can be seen from figure 3, there is an overall reduction in forecast for 2010/11 of £138m.

### 5.1 2010/11 Reforecast

198 As can be seen in figure 2, the January reforecast for 2010/11 has dropped by £246m. There are a number of key assumption changes that have driven this forecast down. The main changes are:

- Forecast model improvements and developments e.g. better reflecting the potential wind output behind constraints
- Lower forecast volumes for margin as a result of latest information, improved availability of balancing service providers and reduced requirement for reserve for wind
- Longer market length, removing the proposed offset
- Price changes reflecting recent operational performance, forward power price changes and contract prices
- Latest generation data

### 5.2 2011/12 Reforecast

199 As can be seen in figure 3, the January reforecast for 2011/12 has dropped by £138m. There are a number of key assumption changes that have driven this forecast down. The main changes are:

- Forecast model improvements and developments
- Lower forecast volumes for margin
- Longer market length, removing the proposed offset

- Price changes reflecting recent operational performance, forward power price changes and contract prices
- Latest generation data

### 5.3 Scheme Design

- 200 The responses to our proposed scheme design provided a strong signal that generally industry does not support the unbundling of components costs into separate incentives.
- 201 Therefore, we are proposing to implement a fully bundled scheme for 2010/11.
- 202 In addition, there was limited support for the implementation of multi-year schemes. National Grid continues to believe that there is benefit in the implementation of multi-year schemes and support the implementation of such schemes.
- 203 The responses to the consultations, this updated forecast and the perceived accuracy of the longer term forecast, current year incentive performance and overall benefit in implementing longer term schemes will be used to help develop Ofgem's final proposals.

### 5.4 BSUoS Forecast

- 204 The table below shows the BSUoS forecast for 2010/11 and 2011/12.

Forecast	2010/11	2011/12
<b>Constraints</b>	£322m	£463m
<b>Remaining components</b>	£395m	£422m
<b>Central Incentive Forecast</b>	£717m	£885m
<b>Total BSUoS costs</b>	~£1053m	~£1248m
<b>BSUoS costs (£/MWh)</b>	~£1.62/MWh	~£1.92/MWh

Figure 4: BSUoS Forecast

## Section 6

### Contact details

*If you would like to discuss any issue on SO Incentives, please contact us via the contact details below.*

To register your interest in receiving future communications on this consultation process please email: [SOIncentives@uk.ngrid.com](mailto:SOIncentives@uk.ngrid.com)

#### **On the web:**

New 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/>

#### **Talk to us:**

##### **Gas**

John Perkins                      Tel: 01926 656337      [john.perkins@uk.ngrid.com](mailto:john.perkins@uk.ngrid.com)

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