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National Grid Electricity Transmission System Operator Incentives from 1 April 2010

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Overview:

National Grid Electricity Transmission (NGET) is the System Operator (SO) for the electricity transmission system in Great Britain (GB). This document sets out our final proposals for an SO incentive scheme for NGET to apply from April 2010, including statutory licence modification consultations.

If NGET consents to our final proposals, and subject to responses to this consultation, the incentive scheme would be effective retrospectively from 1 April 2010. If NGET does not consent to the licence modifications, thereby not accepting our final proposals, we would have to decide whether to consult again on revised proposals, to refer the matter to the Competition Commission, or to rely on our existing powers for the purposes of regulating NGET.

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Context

These proposals form part of our work to regulate monopolies effectively. We consider that it is important for the electricity markets that the role of the system operator is correctly identified and that the system operator has the appropriate tools available to it to undertake this role. Any interventions in the market by the system operator can lead to costs being incurred, both directly by the system operator and more widely by the market as a whole. Since customers ultimately bear these costs it is important to keep them as low as possible. Based on our experience over the past years, we remain of the view that the best way to achieve the lowest costs to customers is to provide the system operator with commercial incentives whereby they share some of the gains (or losses) from cost reductions (or increases).

Associated Documents

- "National Grid Electricity Transmission System Operator (SO) Incentives for 1 April 2010: Initial Proposals Consultation Report", National Grid, January 2010.
- "National Grid Electricity Transmission System Operator (SO) Incentives for 1 April 2010: Initial Proposals Consultation Document", National Grid, November 2009.

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Summary

In this document we set out our final proposals for the electricity transmission System Operator scheme for National Grid Electricity Transmission (NGET) to apply from 1 April 2010. We consider that our final proposals represent a fair balance of risk and reward between NGET and its customers.

Ofgem's final electricity SO proposals

In May 2009 we published an Open Letter providing information on the objectives, process and timetable for the development of National Grid's SO incentives to be in place from April 2010. In that letter we set out our expectation for the development of multi year schemes. In its response National Grid noted its support for the objectives set out in our letter, including the development of two year schemes to apply from April 2010.

In November 2009, NGET published its Initial Proposals Consultation containing its initial forecasts for incentivised balancing costs in 2010/11 of £962m and for energy balancing costs for 2011/12. In December 2009, NGET published a subsequent document with its initial forecast for constraint costs for 2011/12. This gave a total initial forecast for incentivised balancing costs for 2011/12 of £1024m.

In its Initial Proposals Consultation, NGET proposed a number of different scheme options, including the separation of energy and constraints, the indexation of reactive power costs and possible automatic adjusters to the target.

Following discussions with Ofgem, consideration of respondents' views, the inclusion of updated information (including more recent data) and corrections to its forecasting models, NGET revised its 2010/11 forecast from £962m to £715m, then to £691m and then to £601m. NGET has also proposed an automatic adjuster which would adjust the target downwards should the volumes of two specific key variables change compared to that assumed by NGET in its forecast.

We accept that there are a number of factors which increase uncertainty around the level of balancing costs over the next two years. However, we have a number of on-going concerns with NGET's forecasting methodology including its models and modelling approach. In particular, we have concerns that NGET does not consider the market fundamentals affecting the key drivers of its costs and how these are likely to develop and influence its costs going forward. We consider that NGET's methodology relies too heavily on historic data, and in particular, the most recent actual costs. This can be seen by the way that NGET's forecast of costs for this year has reduced significantly in a matter of months and the considerable reduction in its forecast for 2010/11 as a result of the expensive period of balancing costs in late 2008 dropping out of its forecast.

Given the above, we consider that we are only in a position to propose a one year scheme for 2010/11. Further, we consider that our proposals for such a scheme should limit the changes to the parameters compared to the current year's scheme. The parameters of our final proposal are set out below.

Target	Deadband	Upside Sharing Factor	Downside sharing factor	Cap/Floor
£577.5m	£550m-£605m	15%	15%	±£15m

Despite the fact that on a number of occasions including in our May Open Letter Ofgem has advocated the setting of multi year schemes which we consider would have a number of benefits, we do not consider that NGET has put forward appropriate proposals for the development of multi year schemes.

We are therefore proposing a new licence condition which will require NGET to cooperate with the Authority in undertaking a review of the methodology for developing its forecast and multi year schemes, with a view to NGET developing an appropriate methodology to achieve such an end.

Next steps

Subject to responses to this consultation, if NGET consents to these final proposals the licence modifications would be applied retrospectively with effect from 1 April 2010. If NGET does not consent, we will have to decide whether to consult again on revised proposals, to refer the matter to the Competition Commission, or rely on direct regulation of NGET's SO costs based on our existing powers.

We plan to immediately commence the review of NGET's current methodology, including its models and modelling approach, such that we are in a position around the end of May to propose how amendments may be made such that multi year schemes for electricity SO incentive schemes can be developed.

1. Introduction

Chapter Summary

This chapter provides a short background on the process so far and the proposed way forward.

Question box

There are no specific questions in this chapter.

Background

1.1. National Grid Electricity Transmission (NGET), a subsidiary of National Grid plc (NG), is the system operator (SO) for the high voltage electricity transmission system in Great Britain (GB), with responsibility for making sure that electricity supply and demand stay in balance and the system remains within safe technical and operating limits.[1] The transmission licence of NGET requires it to act in an efficient, economic and co-ordinated manner in performing its role.

1.2. In addition to its licence requirement we also look to incentivise NGET financially to operate the electricity system in the most economic and efficient manner.

Process

1.3. In May 2009 we published an Open Letter[2] providing information on the objectives, process and timetable for the development of NG's SO incentive schemes to be in place from April 2010. In that letter we set out our view that continuing to develop what are predominantly annual incentive schemes is sub-optimal as such arrangements do not incentivise NG to take a longer term view of SO costs. We considered that a return to longer term incentives would be advantageous in terms of encouraging longer term actions, increasing information transparency and reducing administrative burden. In addition, a longer term scheme would be moving towards alignment with the transmission price controls from 1 April 2012. It was noted that there are potential benefits to be gained in respect of NGET and National Grid Gas (NGG) being able to make SO decisions based on compatible incentives provided by the Transmission Owner (TO) price controls.

[1] NGET is also the owner of the high voltage electricity transmission network in England and Wales, whilst in Scotland the transmission network is owned by Scottish and Southern Energy and Scottish Power.
[2] Available from the Ofgem website www.ofgem.gov.uk.

1.4. On 20 July 2009, NG published a response to our Open Letter, in which it noted its support for the further development of the incentive schemes in line with the objectives set out in our Open Letter.

1.5. Again this year NG has engaged in the process and consulted stakeholders early in the year. During the summer, NGET published a series of mini consultations in respect of Transmission Losses, Reactive Power and Black Start; Energy Related Components; and Constraints.

1.6. In September 2009, we wrote to NG welcoming the work undertaken by it to date in order that new schemes could be effective from 1 April 2010. However, in that letter we also detailed aspects of the consultation process that we considered needed to be improved. These aspects included the need for NG to provide clear information regarding the relevant and potential cost drivers associated with different system operation activities as well as other factors that could materially impact on the costs in the near future.

1.7. On 5 November 2009, NGET published its Initial Proposals Consultation with forecasts for energy and constraint costs for 2010/11 and energy costs only for 2011/12. However, it failed to publish a forecast for constraint costs for 2011/12. On 30 November 2009, we sent NGET an information request requiring it to provide to us and to publish such a constraint cost forecast.

1.8. NGET held a series of one-to-one meetings with interested parties and held a workshop on 10 November 2009. On 15 December, NGET published an addendum to its Initial Proposals Consultation which contained its forecast of constraint costs for 2011/12. NGET received nine formal responses to its proposals. NGET published its Initial Proposals Consultation Report on 15 January 2010, which provided its revised initial proposals (including revised forecasts of costs) following consideration of respondents' views.

1.9. On 30 November 2009, Ofgem published its initial views on NGET's and NGG's Initial Proposals Consultation.[3] In that letter, in terms of NGET's electricity initial proposals we:

- reiterated our preference to move away from an annual incentive scheme;
- set out that we are currently unconvinced that we should move away from a bundled scheme; and
- highlighted our concerns regarding the level of costs forecast by NGET.

[3] Available from the Ofgem website at www.ofgem.gov.uk.

1.10. We welcome the work undertaken by NGET in improving its consultation process and its regular reporting of its costs to Ofgem. However, as discussed in this document, we have a number of concerns regarding the analysis and modelling work undertaken by it.

1.11. We have scrutinised NGET's forecasts for its incentivised SO costs;[4] considered the responses to the mini consultations, the Initial Proposals Consultation[5] and the views expressed at the workshop along with NGET's Consultation Report. All of this information has helped us to develop our final proposals for the SO incentive schemes to apply to NGET's external costs from 1 April 2010, which are discussed in this document.[6] We remain concerned with how a multi year scheme may be developed in electricity, and therefore propose an alternative way forward for future years.

Way forward

1.12. Appendix Two of this document contains a statutory notice of our proposal to modify by agreement NGET's electricity transmission licence under section 11 of the Electricity Act 1989. This statutory modification notice propose to implement the proposals set out in this document (subject to responses to this consultation).

1.13. We welcome the views of interested parties on all aspects of our proposed modifications. Responses should be sent to gb.markets@ofgem.gov.uk, to be received no later than 12 April 2010. Further details of how to respond can be found in Appendix One.

1.14. The statutory notice under section 11 of the Electricity Act 1989 specifies a period of not less than 28 days during which interested parties can make representations or objections to the proposed licence modifications, and during which the Secretary of State may direct the Gas and Electricity Markets Authority (the Authority) not to make the proposed modifications. Following any such representations, objections or direction, the Authority may make such revisions to the proposed licence modifications as it considers appropriate and carry out a further statutory consultation on the new proposed licence modifications.

[4] This includes additional and updated information regarding NGET's forecasts of costs which it has provided us with.
[5] In this document, when we refer to consultation responses these could be in respect of the mini consultation and/or the Initial Proposals Consultation.
[6] NGET currently has an incentive scheme in place which relates to its internal SO costs, this scheme currently runs until March 2012. When it was set it was agreed that Operating Costs would continue to be subject to the same sharing factors used in the external incentive scheme. Therefore our proposed licence modifications include this proposal. The current incentive schemes for external costs, that are the subject of this consultation, expire on 31 March 2010.

1.15. NGET must consent to the proposed modifications to its licence before they can be implemented. If NGET does not consent to the proposed licence modifications Ofgem can refer the proposed SO incentive scheme modifications to the Competition Commission for final adjudication. Alternatively, we could allow the incentive schemes to fall away. If this occurs, NGET would simply pass through the actual costs of operating the system to parties using it. Ofgem would continue to monitor the performance of NGET as SO under the relevant licence conditions and could take enforcement action and impose financial penalties if NGET was not operating its system in an efficient, economic or co-ordinated manner, or was found to be in breach of other relevant licence conditions or other relevant statutory requirements.

1.16. If NGET consents to the proposed licence modifications, Ofgem intends, subject to any representations made during the consultation and any direction received from the Secretary of State, to direct the relevant modifications to NGET's transmission licence in line with the proposed licence modifications shortly after 12 April 2010. The new licence conditions would apply retrospectively from 1 April 2010. We consider that this would have no detrimental effects on the incentive scheme.

Way forward longer term

1.17. Whilst we consider that our proposals for 2010/11 represent a fair reflection of risk and reward between NGET and customers, we consider that considerable further work needs to be undertaken for future years and such that multi year schemes can be introduced.

1.18. We therefore intend, with the assistance of technical and economic consultants, to carry out a thorough review of NGET's methodology and work with NGET in the immediate future to establish an appropriate methodology for future years and to enable multi year electricity schemes to be established. To this end, we are proposing to introduce a licence condition on NGET to require it to support the work that we are proposing to undertake.

2. Electricity external costs incentive scheme from April 2010

Chapter Summary

This chapter outlines the forecasts provided to us by NGET on electricity external SO costs for 2010/11 and 2011/12 and NGET's initial proposals based on those forecasts, our views on those forecasts and our final proposals for an electricity external SO incentive scheme to apply from April 2010. This chapter also discusses our concerns regarding NGET's failure to put forward initial proposals for an appropriate two year incentive scheme and our proposals for future years, including taking forward the development of multi year schemes.

Question box

Question 1: Do you consider that the final proposals for the SO incentive scheme to apply to NGET's external SO costs represent a fair balance of risk and reward?

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

Question 3: Please provide your views on our proposed way forward regarding future years and the development of multi year schemes.

Background

2.1. Since the introduction of the New Electricity Trading Arrangements (NETA) in 2001 the electricity system operator incentive schemes that have been in place have taken the form of a single target on the Incentivised Balancing Cost (IBC) with sharing factors, a cap and a floor. The incentive schemes for each year along with outturn payments to/from NGET and baseload electricity prices are shown in table 2.1.

Table 2.1: Historical External SO Incentive Schemes[7,8]

£ m	Target	Sharing factors		Cap	Floor	Actual	Payment to/from NGET	Outturn Baseload Prices (£/MWh)
		Upside (%)	Downside (%)					
2001/02	382	40	12	46.3	-15.4	263.0	46.3	18
2002/03	367	60	50	60	-45	285.6	48.6	16
2003/04	340	50	50	40	-40	280.8	32.2	20
2004/05	320	40	40	40	-40	289.2	12.2	24
2005/06	378	40	20	40	-20	427.2	-4.0	42
2006/07	No scheme agreed					495.0	-	32
2007/08	430-445	20	20	10	10	451	-1.2	40
2008/09	530-545	25	25	15	15	827	-15	67
2009/10	571.43-601.43[9]	25	15	15	15	441[10]	15[11]	

2.2. In 2006/07 NGET and Ofgem did not agree on an IBC target.[12] As it is entitled to do under the terms of its licence, NGET did not consent to our proposed incentive scheme. Ofgem chose to exercise its power to monitor this aspect of NGET's activities, rather than refer the matter to the Competition Commission.

2.3. Under the current incentive scheme there is a 'deadband' between £571.43m and £601.43m above which NGET is exposed to 15% of any increase in balancing costs and below which NGET is exposed to 25% of any decrease in balancing costs, both up to a maximum of £15m.

NGET's consultation process

2.4. On 5 November 2009, NGET published its Initial Proposals Consultation for SO Incentive Schemes for 1 April 2010. In this document, NGET included a forecast of all costs for 2010/11 and a forecast of energy costs for 2011/12. On 11 December 2009, following a formal information request from the Authority, NGET published an addendum to its Initial Proposals Consultation which included a forecast of constraint costs for 2011/12. On 15 January 2010, NGET published its Initial Proposals Consultation Report, in which it included revised forecasts. Subsequently, NGET has

[7] Targets and actual IBC before 2005/06 have been recalculated to include net transmission losses.
[8] All data in money of the day.
[9] The target has been amended twice during the year (it was originally £600m-£630m), as a result of automatic adjusters put in place at the time the scheme was agreed.
[10] NGET's latest projected total costs for the year.
[11] Based on NGET's latest projected total costs for the year.
[12] Ofgem proposed two schemes, one with a target of £390m, the other with a target of £410m. NGET's IBC forecast at the time was £451m for 2006/07.

provided the Authority with additional and updated information regarding its forecasts of costs.

Forecast costs

NGET's forecast of costs for 2009/10

2.5. NGET's current forecast for this year's IBC is approximately £441m[13] compared with the adjusted target of £571.43m-£601.43m. As such, it is expected that NGET will receive the maximum payment of £15m from the scheme.

2.6. NGET has suggested that the main changes in costs compared to its forecast at the time the scheme was agreed have been as a result of:

- Reductions:
  - a successful contracting strategy by NGET to reduce constraint costs;
  - NGET securing more efficient ancillary services contracts;
  - NGET optimising the dynamic calculation of reserve requirements, thereby taking better account of generators' positions resulting in a reduction in reserve requirements; and
  - high generation availability giving more low cost headroom[14] and cheaper marginal plant.
- Increases:
  - an increase in footroom[15] costs as a result of:
    - an increase in inflexible generation running at periods of low demand. This is a result of high nuclear availability and an increase in wind generation; and
    - low gas prices resulting in gas fired generators running overnight at minimum output rather than desynchronising overnight.

2.7. Although the electricity wholesale price has significantly reduced since the scheme was agreed in March 2009 and therefore NGET's costs of balancing the system have reduced, the Net Imbalance Adjustment (NIA)[16] has reduced the incentivised balancing costs to account for this.

[13] This forecast has changed significantly over the past few months. For example, in December 2009, NGET was forecasting an outturn cost for the current year of £543m.
[14] Generation operating in a manner that enables it to increase its output at low cost.
[15] The costs incurred in ensuring sufficient flexible generation is generating such that NGET can reduce output when there is an unexpected reduction in demand.
[16] This is an adjustment that is made to NGET's costs to take account of drivers (i.e. power price and market length) that are considered to be outside of its control.

NGET's forecast of costs for 2010/11

2.8. NGET published its initial forecast of costs of £962m for 2010/11 on 5 November 2009 and a revised forecast of £715m on 15 January 2010. NGET provided Ofgem with a further revised forecast of £691m on 9 February 2010 and a further forecast of £601m on 26 February 2010. The breakdown of the forecasts compared to the latest projected costs for the current year is shown in table 2.2. Table 2.2 also shows the breakdown of NGET's cost forecast included in its initial proposals at this time last year and the breakdown of the adjusted agreed scheme.[17,18]

Table 2.2: Breakdown of NGET's 2010/11 cost forecasts

Category (£m)	2009/10 Initial Forecast	2009/10 Adjusted Agreed Scheme	2009/10 Latest NGET view	2010/11 November 2009 Forecast	2010/11 January 2010 Forecast	2010/11 February (1) 2010 Forecast	2010/11 February (2) 2010 Forecast
Net Energy[19]	-417	-340	-246	-273	-251	-251	-267
Margin (Reserve)	499	364	260	440	354	333	292
Footroom	7	7	30	23	21	21	29
Reactive Power	83	56	43	46	44	44	46
Frequency Response	216	196	168	197	177	177	191
Other	42	44	45	53	48	48	48
Sub total ex. Constraints	**430**	**327**	**299**	**485**	**394**	**373**	**338**
Constraints	328	274	142	477	322	319	263
Cheviot	161	139	88	180	86	85	67
Scotland internal	81	70	19	110	122	121	86
England & Wales	86	50	36	187	114	114	110
Total inc. Constraints	**757**	**586**	**441**	**962**	**715**	**691**	**601**
BSIS (i.e. external BSUoS)	**1158**	**878**	**698**	**1262**	**951**	**927**	**883**

2.9. NGET considers that the following factors are the key drivers of the increases in its forecast of energy costs for 2010/11 compared to the current year's costs:

- reduction in market length;[20]

[17] The adjusted agreed scheme takes account of the adjustment that has been made to NGET's target to take account of the automatic adjusters.
[18] Figures in all tables may not sum as a result of rounding.
[19] Including NIA and Energy Imbalance costs.
[20] This means less "free" reserve available to NGET ("free" reserve is mainly a result of generators producing output greater than required).

- increases in power and fuel prices;
- increases in contract prices (particularly in relation to short term operating reserve (STOR));
- reduced availability of ancillary services from demand side providers; and
- increased volumes of wind generation (which directly affect reserve and footroom costs).

2.10. In terms of its constraint costs forecast, NGET considers the following are the key drivers of the increases compared to the current year's costs:

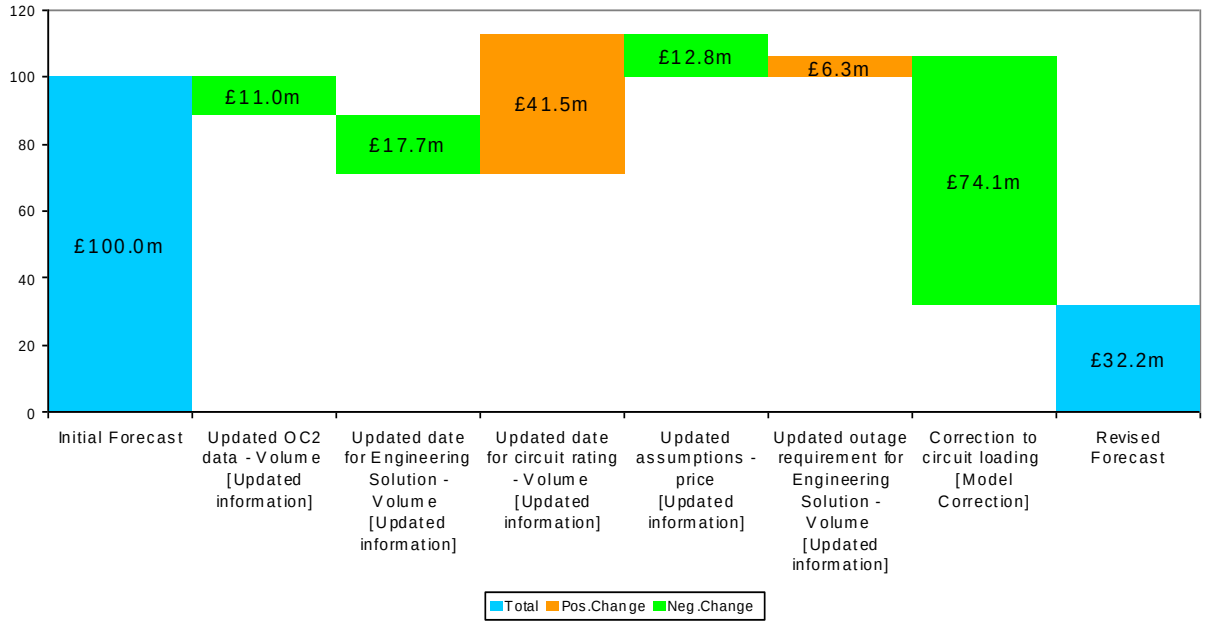
- significant infrastructure work being undertaken in the following areas:
    - Thames Estuary (required to connect new generation coming on in this area);
    - on circuits in the Midlands and North of England including the Grendon-Staythorpe circuit (required to connect new generation at Staythorpe and West Burton);
    - on the Cheviot boundary including in preparation for the construction of the Beauly–Denny overhead line; and
- additional generation being connected behind constraint boundaries. In particular, wind generation in Scotland.

2.11. The following factors are the main reasons provided by NGET for the reduction in its revised 2010/11 forecasts compared to its initial 2010/11 forecast:

- updated information, including the most recent market data in its modelling;
- model corrections and improvements; and
- taking into account responses to its consultations.

2.12. For example, the latest forecast for constraint costs is £213m lower than the original one. Of the £213m, £88m results from model corrections. The latest forecast for energy costs are £147m lower than the original one. Of the £147m, £96m result from the updating of "rolling assumptions", i.e. NGET incorporating more recent data. We are concerned at the magnitude of these changes, particularly given the number of changes as a result of model corrections. As an example, figure 2.1 is NGET's illustration of the changes to its forecast for constraint costs that result from outages in the Thames Estuary area during 2010/11.

Figure 2.1: Changes to Thames Estuary constraint forecast[21]



NGET's forecast of costs for 2011/12

2.13. As outlined above, NGET did not include a forecast for constraint costs for 2011/12 in its initial proposals. NGET subsequently consulted on a constraints forecast for 2011/12 on 11 December, and published a reforecast for energy and constraint costs for 2011/12 in January 2010.

2.14. The breakdown of NGET's 2011/12 forecast compared to the latest projected costs for the current year and its latest forecast for 2010/11 is shown in table 2.3.

[21] Source: NGET

Table 2.3: Breakdown of NGET's 2011/12 cost forecasts

Category (£m)	2009/10 Latest NGET view	2010/11 NGET Latest Forecast	2011/12 NGET Initial Forecast	2011/12 NGET Revised Forecast
Net Energy	-246	-267	-309	-281
Margin (Reserve)	260	292	491	388
Footroom	30	29	24	25
Reactive Power	43	46	51	47
Frequency Response	168	191	212	188
Other	45	48	55	52
Sub total ex. Constraints	**299**	**338**	**525**	**419**
Constraints	142	263	499	463
Cheviot	88	67	145	
Scotland internal	19	86	221	358[22]
England & Wales	36	110	133	105
Total inc. Constraints	**441**	**601**	**1024**	**882**
BSIS (i.e. external BSUoS)	**698**	**883**	**1363**	**1146**

2.15. In order to obtain a forecast for energy costs for 2011/12, NGET mainly used the same set of assumptions as it used for its 2010/11 forecast, as it considered that no additional information was available for the second year that is not applicable to the first year. The only exceptions to this were:

- the assumptions based on external sources: power price (forward price curve from Argus, carbon and exchange rates from Bloomberg) and RPI (forecast from Expedia Business Strategy); and
- the inclusion of the expected connection of an additional 200MW of wind generation in every month.

2.16. In order to produce a constraints forecast for 2011/12, NGET used updated information on generation availability and running patterns and the prices of bids and offers. As a detailed outage programme was not available for 2011/12, indicative outages based on key system boundaries that are required to deliver capital schemes, such as new connections and asset replacement, were used.

[22] For 2011/12 NGET did not provide a breakdown between Cheviot and Scotland constraint costs in its reforecast.

2.17. The updated forecast for the energy components resulted from similar changes to that for the 2010/11 forecast. There were only limited changes to the constraints forecast, as there was no new information on outages and resultant constraint volumes, and the main corrections to NGET's models were made prior to the development of its original forecast for 2011/12.

Respondents' views on NGET's cost forecasts

2.18. NGET received nine responses to its Initial Proposals Consultation.[23] It also held an industry workshop on 10 November 2009. Whilst respondents generally considered that the key drivers of NGET's costs had been identified by NGET in its consultation, a number of concerns were raised that in deriving its forecast of future costs NGET had used historical information which may not provide a good indication of future levels of costs. Further concerns were raised that using forecasts heavily relying on historical data would increase inaccuracies for future years as compared to a more forward looking approach.

2.19. As a result of these general concerns, specific concerns were raised about how assumptions on, for example, the volume of new wind generation connecting to the system and the availability of nuclear generation impacted on NGET's forecast of costs.

2.20. Respondents considered that there was greater uncertainty in outturn costs with a two year incentive scheme including the possibility of a greater impact of unexpected events. However, it was considered that the development of more flexible scheme parameters and appropriate adjusters may improve the incentive performance.

Ofgem's views on NGET's cost forecasts

2.21. During the process to develop an Incentive Scheme from April 2010, we have raised our concerns with NGET that its forecasts are not sufficiently based on the relationship between cost drivers and the impact of those drivers on costs.

2.22. During the 2009/10 incentive year we have set up monthly monitoring sessions, in which NGET provides Ofgem with a series of reports that detail its year to date costs and discusses the drivers of these costs. These reports are discussed in monthly meetings between NGET and Ofgem. Our view is that whilst some progress is being made on NGET's (and Ofgem's) understanding of what is driving NGET's SO costs, there is still significant work to be done in this area, specifically with respect to

[23] From: RWE, First Hydro, E.on, Consumer Focus, BWEA, Centrica, EdF, Scottish Renewables and SSE. RWE and E.on provided additional, separate responses to NGET's 2011/12 constraints forecast consultation.

incorporating this basic understanding of drivers as key relationships in its methodology.

2.23. Since the summer, NGET has provided us with the models which it has developed in order to forecast its costs. Ofgem staff have discussed these models in detail with NGET in both person and via conference calls. Consideration by Ofgem of these models reinforced our concerns that NGET was not considering the wider drivers of its costs, but was far more focussed on historic data and resultant numbers.

2.24. Since receiving details of NGET's forecasts, we have undertaken significant analysis of NGET's assumptions and the effect they have on its forecasts. We have undertaken analysis of NGET's forecasts, including how the drivers of these costs may affect the actual level. This has included consideration of the effects of wind capacity, generation availability, continued lower levels of demand and how these impact in particular on NGET's forecast for energy imbalance, margin and footroom costs. We have also scrutinised NGET's views on why contract costs will increase.

2.25. Despite this significant amount of work, we still have major concerns regarding NGET's forecasts. These concerns are:

- NGET's models rely heavily on historical data and are not generally complemented by a forward looking approach. In particular, there still seems to be little understanding of the impact of the key drivers on its costs; and
- the sensitivity of NGET's forecast to the inclusion of updated information (including more recent data) and corrections to its forecasting models.

2.26. As with NGET's forecast last year, NGET has identified the key drivers of its costs (e.g. availability of generators). However, it has not considered how market fundamentals will impact on the key drivers of its costs and how this will affect its costs in the next two years (e.g. how the economic outlook will impact on generation availability and hence what this would mean for NGET's costs). It has also not considered sufficiently ways of managing such risk within the incentive scheme, for example by considering the use of adjusters for areas that are outside its control.

2.27. As discussed below, we still consider that NGET's revised forecasts are too high. Our level of concern regarding NGET's understanding of the drivers of its costs and, in particular, its reliance on the most recent actual data in its forecast means that we do not consider that we are in a position to propose a target for costs for each of the next two years.

2.28. We have therefore concentrated on developing a target for NGET's costs for 2010/11 using the information we have obtained during this process, but using a forecast of 2009/10 outturn costs as our starting point. We have then considered the various factors that are likely to influence whether NGET's costs increase or decrease from these levels.

Ofgem's view of a target for costs for 2010/11

2.29. NGET's latest forecast for outturn costs for the current year is £441m, which we consider may still be on the high side,[24] as we do not consider that NGET has fully taken account of the current market fundamentals.

2.30. We have analysed all the factual elements and analysis that NGET has put forward to us. However, there are a number of areas of uncertainty where we consider it has not provided sufficient justifications to underpin its proposed target for the 2010/11 scheme.

2.31. Given our concerns regarding the magnitude of NGET's cost forecasts and the basis of NGET's forecasts, our view on the target for 2010/11 is based on our assessment of potential changes compared to the outturn costs for 2009/10.

2.32. The areas that we have taken a view on are:

- the extent that the benign market conditions that NGET has faced this year are likely to diminish next year;
- the level of price increase (if any) in contracts that NGET signs for balancing services;
- the volume of wind generation that is likely to connect (this has a fundamental effect on the volume of constraints, particularly in Scotland) and the availability of generation more widely;
- the volume of expected exports across the IFA[25] in respect of the Thames Estuary outage period;
- the ability for NGET to sign similar contracts as it did for 2009/10 with the Scottish generators to limit the costs of constraints, particularly across the Cheviot boundary; and
- the extent that outages on the transmission network will cause significant volumes of constraints.

2.33. We acknowledge that there are areas of uncertainty, in particular affecting constraints costs, which NGET has no control over. As there is a clear relationship between NGET's cost forecasts and two of these areas, we propose two downward automatic adjusters to take this into account.

2.34. Based on our views of potential changes in the mentioned areas, we currently consider that the target for an electricity SO incentive scheme for 2010/11 should be £577.5m as shown in table 2.4. Within this target we have included allowances for £53m of costs that would be subject to downward automatic adjusters, in respect of

[24] By up to £10m.
[25] The electricity interconnector to France.

the volume of new wind capacity being connected in Scotland and expected exports across the IFA during the outage on the Littlebrook – Tilbury 1 circuit (part of the Thames Estuary outage period).

2.35. We recognise that there remains an unusually high level of uncertainty regarding constraint costs in England and Wales that has not been captured by the adjuster in relation to the Littlebrook – Tilbury 1 circuit outage. These costs relate to possible constraints resulting from outages in the Midlands and North of England. NGET has not developed an appropriate adjuster in relation to this. Our target therefore includes £87.5m for England and Wales constraint costs, of which £23.5m is in respect of the risk to NGET of additional costs as a result of these outages.

2.36. However, the costs that NGET may incur to resolve these constraints in England and Wales may be higher or lower than the £23.5m included in our target. We would hope that for future years NGET's methodology will be developed to take account of such uncertainty. This is something we intend to consider for future years when reviewing NGET's methodology, as explained later in this document.

2.37. We would normally only expect NGET to raise Income Adjusting Events (IAE) in the event that there are unexpected and fundamental changes in wholesale energy markets. However, in this case, should a substantial increase or decrease in costs result from events outside of NGET's control in respect of these outages then it would be open to NGET (or any industry participant) to raise an IAE. The Authority would then consider any IAE in accordance with the process set out in NGET's transmission licence.

2.38. We propose that the current Net Imbalance Adjustment (NIA) Methodology (which was amended for this year) continues to be used for next year's incentive, although we consider this should be relooked at for further years in the context of the development of an appropriate methodology for multi year schemes. The target we are proposing is therefore based on the current NIA methodology.

Table 2.4: Ofgem's view of 2010/11 costs

2009/10 NGET's latest forecast of outturn	2010/11 Ofgem's target	2010/11 NGET's latest forecast
£441m	£577.5m	£601m

Scheme design

2.39. Further to Ofgem's May Open Letter, NGET's main aims of the incentive design for the development of a scheme from April 2010 were the consideration of the benefits of bundled/unbundled schemes, consideration of multi year schemes, and the introduction of appropriate adjustments.

Bundled/unbundled schemes

2.40. NGET undertook a mini consultation during the summer where it considered the benefits of unbundling the electricity SO incentive scheme. There was limited support from the respondents to that consultation for unbundling, the main concerns being the interaction of components and unbundling leading to more complex incentives. Despite the limited support, in its Initial Proposals Consultation NGET considered that it would be appropriate to unbundle constraint costs from the remainder of the scheme, as a result of the areas of uncertainty for constraints being considerably wider than that for the remaining cost components. NGET stated that bundling these two components into a single scheme and determining suitable incentive parameters would ultimately lead to a scheme that does not accurately reflect the relative risk profiles of the set of costs but rather a compromise between them, which may in turn lead to windfall gains or losses.

2.41. In addition to the potential for windfall gains and losses, NGET considered that there are a number of market developments that will drive constraint costs, the result of which are currently unknown. These were: CAP170,[26] locational BSUoS,[27] and P229.[28] NGET considered that these uncertainties in constraint cost outturns lend support to the unbundling of constraints into a separate incentive scheme with a suitable risk and reward profile.

Multi year schemes

2.42. NGET considered that the benefits of a multi year scheme outweigh the drawbacks and that a multi year scheme is beneficial in efficiently incentivising it on reducing balancing costs over the longer term. In addition, NGET considered a longer term scheme would provide some certainty to it on the longer term cost targets, enabling decisions to be made for investments with increased certainty, such as the consideration of investments in cost reduction tools or resources with a longer than one year payback.

2.43. However, NGET considered that there are difficulties with developing a forecast for constraints costs for a second year as a result of uncertainties regarding outage planning (for both generation and transmission) and other factors, which have a significant impact on constraint costs. NGET considered that at greater than one year ahead connection dates for new generation are uncertain. Therefore the placement of outages for new connections at greater than one year ahead would lead to an increase in changes to the outage plan, and thus the longer term constraint forecast.

[26] CUSC amendment proposal to introduce additional administered priced intertrip schemes.
[27] Charging methodology proposal to introduce BSUoS charges that would vary by location (as a result of reflecting constraint costs). It should be noted that on 1 March 2010 the Authority published its decision to veto this proposal.
[28] BSC modification proposal to introduce seasonal zonal transmission losses.

NGET also considered that interim connect and manage will change the new connection process, with new generation no longer having to wait until the wider system reinforcements are completed prior to them connecting to the transmission system.

2.44. Scottish Power Transmission Ltd (SPTL) and Scottish Hydro Electricity Transmission Ltd (SHETL) currently submit outage information to NGET in line with their obligations under the System Operator Transmission Owner Code (STC). To change the timescales for submission of a two year ahead outage plan would require changes to the STC which must be approved by all parties. Such a change has been discussed as part of the consultation that NGET undertook on Potential Enhanced Electricity Transmission Owner Incentives.[29] Whilst responses to that consultation were generally supportive, NGET considered that the process to amend the STC would mean that the necessary changes would not be implemented in time to develop a two year plan, given that NGET has yet to start such a process.[30]

2.45. Given the lack of outage information for 2011/12, in its Initial Proposals Consultation, NGET considered that there were a number of potential options that could be explored in order to develop a longer term forecast.[31] These were:

- roll over of constraint forecast costs;
- a six month scheme followed by an 18 month scheme and thereafter a two year scheme;
- an ex post incentive scheme;
- development of a methodology to determine the per unit constraint cost where NGET is incentivised to beat this per unit constraint cost; and
- a two year incentive with four seasonal constraint targets.

2.46. As discussed earlier, following our formal information request, NGET did consult on a forecast of constraint costs for 2011/12, as a result of which NGET considered that it was possible to put in place a two year scheme.

Scheme adjustments

2.47. There are a number of cost drivers that are partly or wholly outside of NGET's control. For these drivers, the development of suitable adjustment methodologies would reduce the likelihood of windfall gains and losses and also reduce the likelihood of income adjusting events. NGET proposed that the current NIA (which was amended for this year) continues to be used. This takes account of power price

[29] Available from the NGET website.
[30] It has been estimated that such a process would take six months, and we therefore note that this could have been achieved during the process of developing NGET's forecasts for 2010/11 and 2011/12.
[31] Prior to Ofgem requesting that NGET provide a second year forecast for constraint costs.

and market length. In addition, NGET proposed an indexation for reactive power prices, the main drivers of which (wholesale power price and RPI) are outside NGET's control.

2.48. In its mini consultations, NGET also proposed adjustments for constraints and transmission losses. However, in its Initial Proposals Consultation, NGET considered that the complexities of developing a robust adjustment methodology for the main drivers for constraints and transmission losses, and the potential improvement in accuracy of such a change, meant that it was not appropriate to develop such adjustments at this time.

2.49. That notwithstanding, in its Consultation Report NGET considered that it is possible to develop and implement a two year fully bundled scheme that would provide the correct incentives on it. NGET recognised the uncertainty surrounding its forecast for constraint costs in 2011/12, but considered that adjusters could be developed to help reduce the uncertainty in its forecast assumptions. However, at that time NGET provided little information as to how such adjusters would be calculated and how they would operate in practice.

2.50. NGET has subsequently provided Ofgem with additional information regarding how such adjusters may work in practice. However, NGET's proposals still required significant development before they could be considered as part of any incentive scheme.

Respondents' views on scheme design

2.51. In respect of the unbundling of constraints, the majority of respondents did not support this, as they had concerns regarding the ability to appropriately allocate costs. Of those that did support the unbundling of constraints they considered that NGET should be required to develop a transparent methodology for the allocation of the costs.

2.52. Whilst some respondents recognised the potential benefits of longer term incentive schemes, these were outweighed by concerns with the uncertainty in outturn costs with a two year scheme and the potential impact of unexpected events. In particular, respondents considered that it was difficult to forecast constraint costs two years ahead and therefore it would be difficult to implement a two year scheme that included constraint costs.[32] There was a view that the development of more flexible scheme parameters and appropriate adjusters may improve the incentive performance.

[32] Although respondents did welcome the increased transparency provided by the development of the forecast for constraint costs for 2011/12.

2.53. Regarding the scheme adjustments, the majority of respondents considered that the current NIA methodology should be retained, and that it was appropriate to introduce an indexation for reactive power prices.

Ofgem's views on scheme design

2.54. We question whether the setting of this type of scheme on an annual basis provides the greatest benefit to customers. On a number of occasions, Ofgem has advocated the setting of multi year schemes (as we are now returning to in gas) which we consider would have a number of benefits.[33] These include:

- **Longer term action:** longer term incentive schemes will incentivise NGET and NGG to consider actions that may have higher upfront costs which will be paid back over a longer period (e.g., investment in frequency response or reactive power technologies with longer pay back periods). It would also enable NGET and NGG to take a more strategic view of their operation of the electricity and gas systems over a longer period.
- **Information discovery:** a longer incentive period should lead to increased information discovery on costs which will enable the incentive schemes to become more targeted over time.
- **Administrative burden reduction:** over the longer term we would expect to see a reduction in resources required to develop and implement the SO incentive schemes across Ofgem, NG and interested parties.

2.55. In addition we consider that there are also potential benefits that could be gained in future in respect of NGET and NGG being able to make SO decisions based on compatible incentives provided by the Transmission Owner (TO) price controls. By the TO and SO incentives being developed along the same timeframe there could be a greater ability to ensure that the overall incentive package is correctly aligned.

2.56. In response to our May Open Letter, NG reiterated its support for moving to longer term schemes.

2.57. We consider that a multi year scheme would provide the best incentive on NGET. However, the information that we have received from NGET has not put us in a position to put forward such proposals. This view takes into account the concerns of respondents to NGET's consultations, in terms of the shortcomings of NGET's forecasts.

2.58. NGET has also proposed that we could unbundle constraints from the remainder of the scheme, however, we agree with respondents' concerns that this could provide perverse incentives to NGET as to how it allocates its costs.

[33] These benefits were reiterated in our May 2009 Open Letter.

2.59. We welcome the possibility of changes to the STC such that a two year outage plan can be developed. However, whilst we note that such a change to the STC could help facilitate a move to multi year schemes, we consider that there may be other improvements that should also be made.

2.60. We still consider that a multi year scheme can be developed in principle. However, we consider that a thorough review of NGET's methodology, including its approach to modelling is needed for a multi year scheme to be developed. Later in this chapter we outline our proposals on how to take this forward.

2.61. We also have some concerns regarding the current NIA methodology and consider that this should be relooked at in the context of developing a multi year scheme.

2.62. We recognise that the introduction of an indexation for reactive power prices may be appropriate. However, given our concerns regarding the overall development of a scheme, we consider that it is appropriate to limit the changes that are made to the scheme design for next year's incentive.

2.63. In the current year's scheme, an automatic adjuster mechanism was put in place that enabled the Authority to reduce the target in the event that there are material changes to NGET's assumptions regarding the provision of certain balancing services. As a result of the actual provision of these services this year, the Authority has directed that the target be reduced.

2.64. As discussed above, we consider that two of the main factors resulting in the uncertainty in the level of constraint costs in 2010/11 are:

- the volume of wind generation that is likely to connect which has a fundamental effect on the volume of constraints in Scotland; and
- the volume of expected exports across the IFA with reference to its impact on the volume of constraints during the Littlebrook – Tilbury 1 circuit outage (part of the Thames Estuary outage period).

2.65. We therefore consider that it is appropriate to use assumptions of high volumes of new wind capacity connecting in Scotland and of expected exports across the IFA during the Littlebrook – Tilbury 1 circuit outage in setting the target and to include an automatic downward adjuster to the target in the event that these volumes are lower than assumed.

2.66. We also note that NGET considers that there are a number of uncertainties in the level of constraint costs as a result of potential market developments. Our final proposal does not take account of such market developments being implemented. We note that under special condition AA5A of NGET's licence both NGET and industry participants are able to raise an IAE should an event or circumstance result in an increase or decrease in IBC by more than £2m.

Transmission losses

2.67. The current SO scheme includes an incentive on NGET to minimise transmission losses by combining a volume target with a reference price. The reference price is based on the forward price at the time the incentive was set plus an adjustment to replicate the shadow price of carbon. The reference price is multiplied by the difference between the actual and target volume of losses to calculate a total financial value of transmission losses.

NGET's proposals

2.68. In its mini consultation, NGET proposed two alternative incentive options for transmission losses: a zonal transmission losses forecast incentive[34] and a transmission losses procurement incentive.[35] Based on the responses it received, in its Initial Proposals Consultation, NGET did not propose to progress an alternative transmission losses incentive at this time.

2.69. NGET also considered improving the granularity of the calculation of the reference price. However, it saw little or no benefit in developing a more complex methodology and therefore did not propose any changes.

2.70. In its Consultation Report, NGET proposed 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.

2.71. NGET has subsequently provided Ofgem with its proposal for the setting of a target volume for transmission losses for 2010/11. In its proposal, NGET outlined that its latest view for the volume of transmission losses for the current year is just above 6.2TWh; however, it has yet to conclude as to the reasons why the outturn of losses is above the current year's target. Its forecast of losses for 2010/11 is 6.4TWh, however, it also notes that there is a divergence between its model forecast and actual losses.

2.72. As a result of the discrepancy between its model forecast compared to actual and the fact that the reasons for this year's actual increases are as yet not known, NGET proposes that the latest current year's view of 6.2TWh should be used, with the potential to revisit the number with the further publication of its findings in summer 2010. NGET considers that this is a pragmatic approach which assumes that

[34] This proposal considered if there was any value to the industry in the publication of zonal transmission losses forecast data.
[35] This proposal outlined the development of an incentive where NGET would procure all transmission losses on behalf of the industry. The incentive would be to decrease costs below an agreed target.

incremental losses caused by (predominantly wind) generation in the north, will be offset by the operation of both Langage and Marchwood power stations generating closer to demand centres.

Respondents' views

2.73. Respondents considered that transmission losses should remain part of the bundled scheme. The majority considered that there should be no change to the methodology for setting the reference price, with a change in the actual reference price at the start of year two being appropriate.

2.74. We note that market participants have not had the chance to comment on NGET's forecasts for transmission losses.

Ofgem's view

2.75. As noted above, in line with limiting the changes for our proposals for a one year scheme, we consider it appropriate to retain the current methodology for incentivising transmission losses.

2.76. We have considered NGET's proposal for increasing the target volume for losses. We have concerns regarding the potential increase in losses and also that NGET has failed to conclude the reasons for any increases. We also have concerns regarding the accuracy of NGET's model at forecasting the level of transmission losses; in this respect we note that NGET has only recently amended its model and therefore have further concerns that it is already showing major discrepancies.

2.77. Given these concerns we consider that it is appropriate to keep the current year's target of 6TWh for 2010/11.

2.78. We have also considered a suitable reference price for losses. We note that NGET's reforecast contained forward prices equivalent to 39£/MWh for 2010/11 calculated on 4 January 2010. We have also calculated the baseload forward quarterly contract for 2010/11 on two recent occasions. On both 19 February and 25 February the calculated price was also 39£/MWh. We therefore consider that this is an appropriate reference price to use.

Scheme options

2.79. In its Initial Proposals Consultation, NGET put forward the following as its preferred scheme:

- single year unbundled constraints incentive scheme; and
- two year scheme for the remaining bundled cost components with current NIA methodology and reactive power default price adjustment.

2.80. The alternative schemes that NGET proposed are:

- single year fully bundled incentive scheme; and
- two year bundled scheme with the constraint cost forecast being included at a later date for year two.

2.81. NGET considered that the incentive ranges that it developed represented the forecast uncertainties as well as an assumption of potential cost reductions. NGET considered that the greater the uncertainties, the higher the risk that external factors outside of its control will influence costs. In addition, NGET considered it should be incentivised over the widest possible range of costs and that any scheme should provide it with a balanced risk/reward profile. Based on this,[36] NGET put forward the proposals shown in table 2.5. The middle three rows show the parameters for its preferred scheme and the bottom row shows the parameters for its alternative fully bundled one year scheme. For comparison, the current year's scheme is in the first row.

Table 2.5: NGET's scheme proposals

Scheme	Target	Upside sharing factor	Downside sharing factor	Cap & Floor	Deadband
2009/10 fully bundled	£586.43m	25%	15%	£15m	£571.43m-£601.43m
Constraints incentive for 2010/11	£485m	20%	15%	£10m	£465m-£505m
Balancing services (excluding constraints) incentive for 2010/11	£492m	50%	50%	£15m	£485m-£499m
Balancing services (excluding constraints) incentive for 2011/12	£533m	50%	50%	£15m	£525m-£541m
Fully bundled for 2010/11	£977m	30%	20%	£20m	£962m-£992m

[36] It should be noted that NGET has proposed the scheme targets based on its expected mean values of its costs, not on its central view which for energy costs are contained in the earlier tables.

2.82. In respect of the constraints incentive for 2010/11, NGET considered that the deadband and sharing factors that it proposed provide a wide range of costs in which NGET would be incentivised over whilst providing a suitably targeted incentive. NGET considered that the lower sharing factors and cap and floor compared to this year's scheme reflects the forecast range of costs being greater than this year's fully bundled scheme and the greater uncertainty over the forecast costs.

2.83. For the balancing services bundled schemes, NGET noted that the sharing factors are higher than those for the current year's scheme. NGET considered that this reflects its increased confidence in its forecasting methodology, the removal of the risks presented from constraints into a separate scheme, the ability of NIA to adjust the incentive for changes in power price and market length and the current forecast for 2009/10 being in line with its forecast expectations. NGET considered that the greater sharing factors (when compared to the incentive for 2009/10) would provide it with an increased incentive to manage costs.

2.84. In respect of the fully bundled scheme for 2010/11, the sharing factors and cap and floor are higher than those for the current year. NGET considered it appropriate that the sharing factors should be lower than for the balancing services unbundled scheme and the deadband higher as a result of the inclusion of constraint costs in the scheme which NGET considers increases the overall risk range and uncertainty with the forecast.

2.85. In respect of implementing a fully bundled two year incentive scheme, NGET considered the two year forecast for the balancing services components could be used to determine the majority of the bundled costs. The 2010/11 constraints forecast could be used for the first year target and (at that time) a yet to be developed constraints forecast for 2011/12 used to develop the target for the second year incentive. NGET considered that year 1 of the scheme would look the same as the scheme above with year 2 of the scheme having lower sharing factors as a result of the risk of constraint costs increasing.

2.86. In its Consultation Report, NGET did not propose revised scheme parameters to take into account its revised preferred view for a bundled scheme, nor its updated forecast of costs. It simply noted that when considering the parameters for a fully bundled scheme for 2010/11 and 2011/12, the reforecast range, the adjustors that are developed and proposed to be implemented and historic levels of incentive parameters will be considered.

Respondents' views on scheme options

2.87. Respondents considered that more justification of the scheme parameters was required. The main points raised were:

- the target was too high;
- sharing factors should be lower;
- parameters should be based on the current scheme;
- a lower deadband should be adopted; and

- symmetrical sharing factors should be used.

Ofgem's views on scheme options

2.88. As outlined above, in proposing a one year scheme to NGET, we consider that the minimum changes should be made to the current scheme, with the target being based on our assessment of potential changes compared to the outturn costs for 2009/10.

2.89. Given the uncertainty in developing such a scheme, our current view is that the framework of the scheme should remain similar to the current year's scheme. However, we recognise the views of respondents and consider that it is appropriate to have symmetrical sharing factors which should be low. We have therefore reduced the upside sharing factor. This will also mean that if outturn costs are significantly reduced again, as per this year, NGET remains incentivised for a longer period of the year.

Ofgem's final proposal

Target

2.90. As set out above, Ofgem considers that a forecast of £577.5m, with accompanying automatic adjusters, represents a reasonable view of anticipated IBC for 2010/11. Although this is an increase of £136.5m over NGET's latest forecast of outturn costs for the current year, this is lower than NGET's latest forecast of £601m for 2010/11. However, we do not consider that NGET has provided sufficient justification for the target for 2010/11 to be based upon its forecast, nor has it provided adequate automatic adjusters to take account of the difference.

2.91. We therefore propose that the scheme should use our forecast as a central target. However, as we believe there remains uncertainty regarding the costs, we are also proposing the inclusion of a deadband of ±£27.5m. The proposed target is therefore £550m to £605m. This deadband also means that NGET's latest forecast is within it, and therefore if NGET's forecast is accurate it will not lose money under this incentive scheme proposal.

2.92. As with last year's scheme, we propose that the licence condition will give power to the Authority to reduce (but not increase) the target in response to material changes which have been agreed between the Authority and NGET prior to the commencement of the incentive period. The level of the adjustment will also be pre-agreed.

Sharing factors

2.93. We have looked at the options put forward by NGET regarding sharing factors and have also considered the views of respondents regarding their preference for

lower and equal sharing factors. We consider that it is important to ensure that NGET remains incentivised over a wide range of costs (particularly given the uncertainties around NGET's forecasting methodology), and therefore consider it appropriate that both the upside and downside sharing factors should be 15%.

Cap/floor

2.94. As discussed, given the uncertainty regarding the setting of this incentive scheme, we consider it appropriate to retain the cap/floor at ±£15m.

Final proposal

2.95. Our final proposal, based on our view of costs for 2010/11, is summarised in table 2.6. This does not take account of any market developments that may be implemented. We note that under special condition AA5A of NGET's licence both NGET and industry participants are able to raise an IAE should an event or circumstance result in an increase or decrease in IBC by more than £2m.

Table 2.6: Ofgem's Final Proposal

	Target	Deadband	Upside Sharing Factor	Downside sharing factor	Cap/Floor
Ofgem's Final Proposal	£577.5m	£550m-£605m	15%	15%	£15m

Transmission losses

2.96. We propose that the target volume for transmission losses should remain unchanged from the current year's at 6.0TWh with a deadband between 5.8 – 6.2TWh.

2.97. We propose that the reference price for transmission losses should be 39£/MWh.

Setting an electricity incentive scheme

2.98. Some form of incentive mechanism (intended to create incentives to encourage efficient system operation) has applied to electricity SO costs since the 1990s (with the exception of 2006/07). The schemes have taken the form of an agreed target for NGET's SO costs with a profit/loss sharing mechanism between NGET and users of the network for any outturn costs below/above this target and a cap/floor to limit the payments to/from NGET.

2.99. Historically, the SO incentive mechanisms have appeared to be successful, both for customers and NGET. Prior to the implementation of BETTA, NGET's costs had

been relatively stable (although with a slight upward trend) and the incentive schemes created an environment which resulted in downward pressure on SO costs and corresponding payments, through the incentive mechanisms, to NGET.

2.100. In recent years, electricity SO costs have both generally risen and become increasingly volatile and more difficult to forecast. Nonetheless NGET does not appear to have significantly changed its approach to forecasting. Further, the detailed monitoring of NGET's costs that we have undertaken within this year has exposed significant concerns with NGET's within year forecasting capability.

2.101. As with last year, this year we requested NGET to improve its approach to modelling and scheme design to reflect the complexity of the forecasting exercise. In particular, we consistently asked it to consider the key drivers of its costs and how changes to these key drivers could affect its costs. Further, we requested NGET to consider where adjusters could be developed such that potential changes to the key drivers outside of its control could be accommodated within the scheme.[37]

2.102. The resulting differences in views as to forecast costs and the correct balance of risk and reward has meant that it has become increasingly difficult to reach agreement with NGET on proposals for a scheme. In 2006/07, Ofgem and NGET were unable to agree on a mechanism for the electricity SO incentive scheme and we chose not to refer the issue to the Competition Commission[38]. We were therefore left to just regulating NGET under its licence condition obligations to operate the system in an efficient and economic manner. In that year, the SO costs outturned at £44m higher than NGET's forecast (and over £100m higher than Ofgem's view of likely costs).

2.103. Given that we have only had one year's experience of not having a scheme in place in recent years it is not possible to draw reliable predictions as to what would happen to NGET's costs if no scheme is agreed for 2010/11. However, as set out above, during 2006/07 when there was no incentive scheme in place, NGET's outturn costs were 9% higher than it forecast. It is not possible to ascertain the extent to which this increase in costs resulted from external factors and the extent to which it was the result of the lack of an incentive on NGET to operate the system in the most efficient manner. The experience from 2006/07 does suggest that there is significant benefit to customers from having an incentive scheme in place.

[37] In 2008/09 NGET made the maximum payment of £15m under the scheme. Part of the reason for it reaching the floor of the scheme was the increase in wholesale power prices that occurred during the year, which resulted in increases in its costs. However, analysis has shown that if the Net Imbalance Adjuster (which takes account of power price changes) implemented in April 2009 had been in place during 2008/09, NGET would have received a small payment under the scheme.

[38] As the scheme is implemented via the licence referral to the Competition Commission is the only route open in the case of a dispute between Ofgem and NGET.

Proposed way forward longer term

2.104. As discussed earlier, we consider that the implementation of multi year schemes would have a number of benefits.

2.105. We therefore consider that if NGET accepts our final proposals we should immediately start working on a review that will put us in a position to implement a two year scheme from April 2011. This will entail Ofgem reviewing NGET's methodology, including its models and modelling approach, with a view to developing a new approach suitable for multi year schemes and validating NGET's implementation of our recommendation. As such we are proposing to include a new condition in NGET's licence setting this out.

2.106. As noted earlier in this document as part of the ongoing work, we consider it is appropriate that NGET should consider possible ways to better manage risks outside of its control (e.g. amendments to the STC, and/or other options), so that longer planning timeframes can be considered for constraint and energy costs.

Appendices

Index

Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.2. Responses should be received by 12 April 2010 and should be sent to gb.markets@ofgem.gov.uk for the attention of:

Ian Marlee
Partner, Trading Arrangements
Ofgem
9 Millbank
London
SW1P 3GE

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

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

1.5. Any questions on this document should, in the first instance, be directed to Giuseppina Squicciarini (020 7901 7366). Email giuseppina.squicciarini@ofgem.gov.uk.

CHAPTER: One

There are no specific questions in this chapter.

CHAPTER: Two

Question 1: Do you consider that the final proposals for the SO incentive scheme to apply to NGET's external SO costs represent a fair balance of risk and reward.

Question 2: Do you consider that the proposed licence modifications appropriately reflect the final proposals as described in this chapter?

Question 3: Please provide your views on our proposed way forward regarding future years and the development of multi year schemes.

Appendix 2 – Notice under Section 11 of the Electricity Act 1989

1.1. Please see separate document containing the notice.

Appendix 3 – The Authority's Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority ("the Authority"), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts.[39]

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly[40].

1.4. The Authority's principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of existing and future consumers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- the need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- the need to secure that all reasonable demands for electricity are met;
- the need to secure that licence holders are able to finance the activities which are the subject of obligations on them[41];
- the need to contribute to the achievement of sustainable development; and
- the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.[42]

[39] entitled "Gas Supply" and "Electricity Supply" respectively.
[40] However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.
[41] under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

- promote efficiency and economy on the part of those licensed[43] under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
- protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity; and
- secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- the effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation[44] and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

[42] The Authority may have regard to other descriptions of consumers.
[43] or persons authorised by exemptions to carry on any activity.
[44] Council Regulation (EC) 1/2003

Appendix 4 - Glossary

A

Ancillary Services

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

B

Balancing and Settlement Code (BSC)

Sets out the rules for governing the operation of the Balancing Mechanism and the Imbalance Settlement process and also sets out the relationships and responsibilities of all electricity market participants.

Balancing Mechanism (BM)

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

Balancing Services

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

Balancing Services Use of System charges (BSUoS)

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

Black Start

The ability to start a generating plant without external power supplies.

C

Cash out arrangements

The arrangements whereby generators and suppliers pay or are paid for imbalances (shortages and surpluses of power relative to their contracted commitments).

Connection and Use of System Code (CUSC)

Constitutes the contractual framework for connection to, and use of, National Grid's high voltage transmission system.

F

Fast Reserve

The fast provision of reliable power via increased generation or reduction in demand which can be provided within 2 minutes, at a delivery rate of less than or equal to 25MW/minute. The reserve needs to be sustainable for 15 minutes.

Fast Start

The ability of a genset to ramp from standstill to its maximum rated output within five minutes of initiating a low frequency relay, or within seven minutes of a manual instruction.

Frequency Response

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

I

Income Adjusting Event (IAE)

An event defined under the transporter or transmission licence that allows for an adjustment to be made to the relevant incentive scheme.

Intertrip

Allows for the automatic removal of a generating unit from the system usually as a result of a transmission system fault. Intertrips are required to strategically manage power flows on the system, and remove at short notice potentially vulnerable circuits.

O

Operating Margin (OM)

A requirement to ensure that the system security can be properly managed across Power Exchange and Balancing Mechanism time-scales, i.e. 'up to' and 'at real time'.

R

Reactive Power

Power generation creates background energy which absorbs or generates reactive energy as a result of the creation of magnetic and electric fields. Reactive power needs to be provided to assist in balancing the system and retaining its integrity.

S

Sharing factors

Describe the percentage of profit or loss which the System Operator will be subjected to if the relevant incentive performance measure falls below or exceeds the relevant incentive target.

Sliding Scale

Used to describe incentive schemes which involve profit (and loss) sharing around a fixed target cost.

System Average Price (SAP)

The price in pence per kWh calculated as the sum of all Market Transaction charges divided by the sum of the Trade Nomination Quantities for all transactions effected in respect of that day, subsequently adjusted to account for any bids which are to be excluded in association with resolving constraints.

System Operator (SO)

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

T

Transmission losses

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

Appendix 5 - Feedback Questionnaire

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

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

1.2. Please send your comments to:

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