Promoting choice and value for all gas and electricity customers

Reform of the Renewables Obligation 2006: Ofgem's response

Document Type: Response to Government Consultation

Ref: 11/07

Date of Publication: January 2007

Target Audience: Government departments, renewable generation developers, energy suppliers and generators, environmental groups, consumer representatives.

Overview:

We fully support the Government's aims of reducing carbon emissions and promoting renewable generation but we think there are cheaper and simpler ways of meeting these aims than the RO scheme which is forecast to cost business and domestic customers over £30bn. Rising wholesale prices and the start of the EU Emissions Trading Scheme have significantly improved the prospects for renewable generation. We think the Government should introduce a different form of support and have set out a possible replacement based on long term contracts offering renewable generators a fixed return so that the cost to customers falls if the wholesale price rises. We think this would deliver more carbon savings at lower costs to customers.

We administer the existing scheme and are concerned that the Government's proposed reforms will increase complexity and administration costs. We do not think we should be involved in setting renewable technology "bands" as this would conflict with our role of making sure the energy market remains competitive.

Contact name and details: John Costyn, Head of Environmental Policy, Ofgem

Tel: 020 7901 7166

Email: john.costyn@ofgem.gov.uk

Team: Environmental Policy

Table of Contents

Summary

Since the Renewables Obligation (RO) was originally proposed in 1999 and introduced in 2002 there have been major changes in the electricity market. Wholesale prices have increased substantially and expectations of future prices have also risen. This is partly because of rises in fossil fuel prices (particularly gas) but also because of the introduction of the EU Emissions Trading Scheme (EU ETS), which aims to tackle climate change and has introduced an element of carbon pricing into the wholesale price of electricity.

Rising wholesale prices have substantially improved the competitive position of various renewable generation technologies. The EU ETS has begun to provide some reward for renewable generators that have low or zero carbon emissions. As the EU ETS develops in subsequent phases the level of reward may increase substantially. These developments have caused a number of countries in Europe to look again at the policies and schemes they have in place to support renewable generation technologies. Ofgem therefore welcomes the Government's review of the RO.

When the RO was introduced, the Government set out a number of objectives including reducing carbon emissions and promoting technological development in renewables. To date, the performance of the scheme in meeting these objectives has been mixed. It has increased the share of electricity generated from renewable sources from 1.8 per cent to 4 per cent and saved between 3.5 and 9.5 MtC over four years. (Last year, this was equivalent to between 3 per cent and 7.5 per cent of carbon emissions from power generation). Most of this has been existing renewable technologies and there is little evidence so far that the RO is encouraging technological development.

The cost of the scheme to both business and domestic electricity customers has been very high – over £1.7 billion to date. We have previously criticised the scheme for offering poor value for money for customers as there are currently much cheaper ways of reducing carbon emissions from the electricity sector than the RO scheme. Delays in the planning process for new wind farms and the transmission lines needed to connect them are slowing the growth of renewables, particularly onshore wind. Since the cost to customers is fixed by the level of the obligation, these external constraints on the supply of renewable generation have increased the cost per tonne of carbon saved. This would not be the case under an alternative scheme where payments were only made once renewable electricity was actually being generated.

The existing RO scheme is forecast to cost customers £32bn over the life of the scheme. As part of the review, the Government is proposing to make a number of significant changes to the way the RO scheme operates. The proposals to increase the target in later years to maintain the headroom between actual renewable supplies and prevent a reduction in the ROC price if the target is exceeded could significantly increase the cost to customers. Despite these costs, the Government does not appear to have carried out a detailed impact assessment and analysis of whether its proposals are the cheapest and most effective way of reducing carbon emissions and promoting renewable generation.

EU law requires Member States to take appropriate and proportionate steps to support renewable energy. Such steps should not distort competition more than is necessary. For example, they ought not to lead to overcompensation of renewables producers or remove incentives to reduce renewable generation costs. We do not think the analysis in the consultation shows that the revised scheme meets these tests. We think that a more rigorous impact assessment is needed to avoid any risk of legal challenge.

Given our duties to protect customers' interests and to promote sustainable development, we have significant concerns about the Government's proposals. We think the Government should look at alternatives to the renewables obligation scheme in its current form that would deliver lower carbon emissions and more renewable energy at lower costs to the business and domestic customers who fund the RO. Other organisations, such as the National Audit Office, Carbon Trust, academics and the European Commission have all raised similar concerns.

Alternative forms of support could be based around auctions of long term renewable contracts providing a guaranteed level of support but linked to the wholesale price of electricity. Renewable generators would be paid the difference between an agreed price and the wholesale price. We think this sort of scheme would deliver the Government objectives of reducing carbon emissions and promoting renewable technologies at a much lower total cost to customers. By linking the level of support to wholesale prices, it would reduce the cost of providing support if wholesale prices rise as the EU ETS becomes established and more challenging emissions reduction targets are set. Other countries have successfully used these sorts of schemes. In moving away from the existing ROC scheme, the Government should also put in place measures to protect the investment of existing renewable generators.

We are also the administrator of the RO and have some concerns that the proposals will lead to a more complicated scheme that is more expensive to administer. We are concerned about the administrative implications of one proposal (ski slopes) as we do not think that this is workable. The banding proposal would also make it much more vulnerable to lobbying and capture by renewable interest groups.

If the government decides to proceed with the banding proposals, we think that an independent body needs to be appointed to perform the task of banding. Ofgem does not have the expertise to do this job, nor do we think that it would be appropriate for us to do it given our role in policing the energy market. As the regulator our credibility and independence in overseeing the market is critical, and could be compromised if we have to take decisions on which renewables technologies should receive more subsidy through the banding of ROCs. Similarly, we think that independent advice would be required for setting the level of the obligation on a headroom basis but again would not consider this an appropriate role for Ofgem.

Whatever the outcome of the review, we think that the Government should address the funding of the administration of the scheme. The Government must ensure that it provides an appropriate mechanism for funding the costs of administering the RO or an alternative scheme so that costs are recovered from those who benefit from the scheme. The administrative costs should be funded from the buy out fund (or a levy on suppliers if there is no buy out fund) rather than through the licence fees charged to network companies.

1. Introduction and context

Chapter Summary: The Renewables Obligation (RO) has increased renewable energy supply but this has been at a high cost to business and domestic consumers. Planning constraints have held back further development of renewables adding to the cost to customers per tonne of carbon saved. The Government should take this opportunity to reconsider the RO and the alternatives to it in the light of the introduction of the EU Emissions Trading Scheme and the expectations of higher future electricity prices.

Introduction

1.1. This document is Ofgem's response to the Government's consultation on long-term reform of the Renewables Obligation (RO). The Government proposes significant reforms, which have implications for Ofgem at two levels: as the regulator, it will affect how much electricity customers pay for the RO and the value for money they get; and as the administrator of the RO, it will affect the challenges we face in managing the scheme efficiently and the costs we need to recover from consumers for performing this function.[1]

1.2. We start in this chapter by setting out the context in which the RO has developed and our view of its effectiveness to date.[2] Chapter 2 then sets out our thinking on the case for fundamental reform of the support mechanism for renewables in the UK along with some ideas for alternative policy mechanisms to support renewables. Rather than proceed with the proposed reform package, we think that Government needs to consider what objectives it is seeking to achieve and what role if any the RO should play in that.

1.3. Finally, in chapter 3 we look at the specific issues that have been raised in the consultation document. If the government proceeds broadly along the lines of the proposals in the consultation, there are still many practical issues that must be addressed.

Context

1.4. Since the development of the proposals that put the RO in place, there have been major changes in electricity markets and the regulatory environment, including:

[1] Our administrative responsibilities include accrediting eligible renewable generators, issuing ROCs and monitoring suppliers' compliance with their obligations. In addition to Great Britain, Ofgem also administers the RO in Northern Ireland (NIRO) on behalf of the Northern Ireland Authority for Energy Regulation, by contract. The NIRO came into effect in 2005 and the secondary legislation which underpins it mirrors that in England & Wales and Scotland. We anticipate any changes made to the RO will also be made to the NIRO.

[2] We covered this extensively in our submission to the 2005 DTI RO review and summarise some of the key points on effectiveness that we made in that paper.

- increased competition in generation and supply;
- unified trading arrangements covering all of Great Britain have been established;
- climate change policy concerns have taken centre stage in the political debate and in energy policy;
- the EU ETS has been established;
- there have been significant increases in fossil fuel and wholesale electricity prices; and
- renewable technology has developed and costs have fallen for a number of renewable technologies.

1.5. The RO was set up with a view to providing a stable framework that provides investors with confidence in the regulatory rules that will underpin their long term investments. In framing the case for reform and setting out alternative support mechanisms we recognise the need to put in place arrangements to protect existing investment and the legitimate expectations of existing investors.

1.6. However, the proposals represent the most significant restructuring of the RO since its establishment. We think the government should use the opportunity to recognise how other market and regulatory developments have benefited renewable generators. In particular, government should recognise the role that the EU ETS is beginning to play and will play in the future in rewarding low (and no) carbon generators including renewables.

1.7. While the EU ETS is still in its early stages, there is a growing political consensus in Europe and an emerging one in other major emitting countries that emissions trading is the best way to reduce carbon emissions and tackle climate change. We fully support this.

1.8. The Government's Climate Change Programme published in 2006 stressed the need for international action and agreements, and the role of the EU ETS as the major climate change instrument for business and energy supply. The Government's Energy Review (April 2006) also emphasised the need to incorporate a value for carbon in all economic decisions and the Stern Review (October 2006) identified the establishment of a carbon price as an essential foundation for climate-change policy, and pointed to the advantages of a common global carbon price in tackling climate change at the lowest possible cost.

1.9. The establishment of the EU ETS means that the external cost of carbon is beginning to be factored into the electricity price. This will increasingly, over time, feed back into investment decisions for electricity generation. Renewable generators receive the benefit of higher prices that incorporate the cost of carbon but, as non- or low-emitting generators, avoid the cost of purchasing allowances (or the opportunity costs of using freely allocated allowances) that fossil-fuel generators face. The Commission has recently signalled a much tougher stance in setting national allocations in the second phase and is also proposing to widen the scheme to include other emitters such as airlines in phase three from 2012. As allowance prices, and hence electricity prices, rise with tightening caps across the EU in successive phases, renewable generation should become more competitive reducing

(or eliminating) the need for subsidy or support through mechanisms such as the Renewables Obligation.

1.10. Although there is inevitably some uncertainty about the future direction of the emissions trading scheme, we think it is important that any policy to provide support to renewable generation should be linked to the development of the scheme and be "future proof". This will avoid the need for further changes to the scheme and the impact this could have on investors' perception of the risks of investing in renewable generation. We have set out how we think this could be achieved in a relatively simple way in setting out an alternative support mechanisms to the current RO. This would lower the cost to customers of providing support to renewables if the EU ETS develops as we hope it will, but will also protect investors and customers if it does not.

1.11. As the EU ETS is relatively new and the over-allocation of allowances under the first phase has so far only provided a limited signal of the value of lower carbon forms of generation, we recognise that there may still be justification for some additional support for renewables. This support should be clearly targeted through appropriately designed instruments. This need may reflect the fact that the ETS allowance market is new and there are not yet clear long term signals to support investment; that the costs of some renewable technologies will only come down if they can be assisted in getting to the point of large scale deployment; or that there are other benefits besides reductions in greenhouse gas emissions that will be delivered by the deployment of renewable generation technologies. We also recognise that the Government has accepted domestic and European targets specifically for renewable generation. However, none of this implies that the RO is the cheapest and most effective way of meeting these objectives.

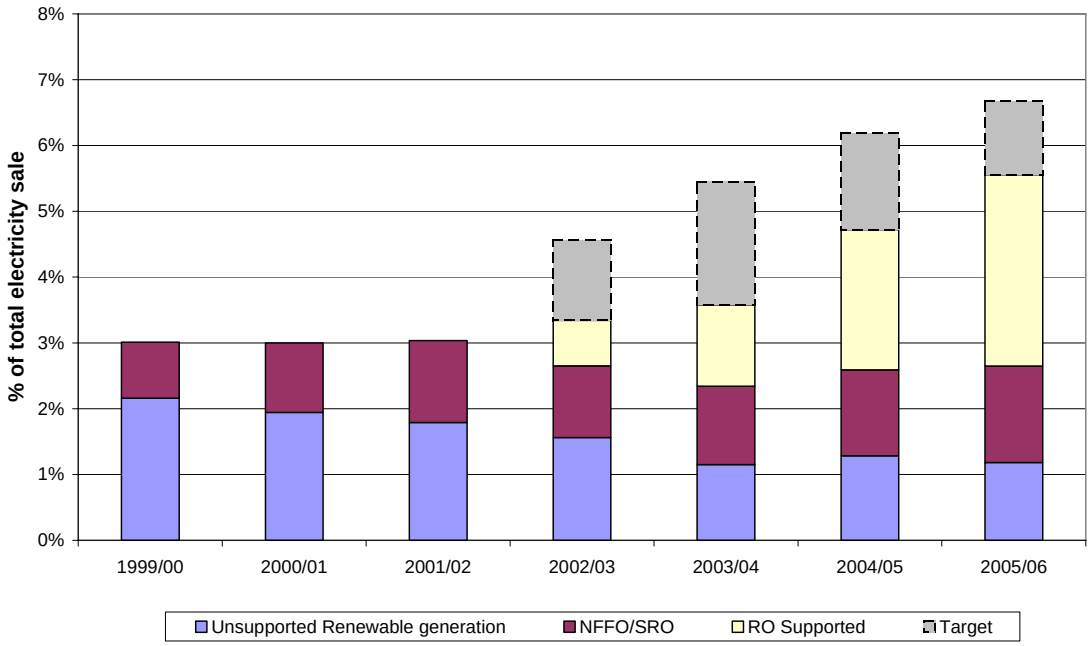
Assessment of effectiveness of RO to date

1.12. We have previously encouraged the Government to properly assess the effectiveness of the RO as a means of achieving the UK's long-term goals for carbon reduction. However, the current consultation does not include any detailed analysis or assessment. We note that the consultation document refers to analysis of alternative options undertaken as part of the Energy Review (paragraph 2.8). However, we are not aware if this work has been published so that it can be assessed and scrutinised.

1.13. Ofgem circulated a number of papers at the time of the 2005 review and these continue to provide useful information for assessing the current proposals[3]. We have updated some of our analysis in the light of an additional year's experience of the RO. The analysis focuses solely on an assessment of what the RO has achieved to date.

[3] Ofgem commissioned Cambridge Economic Policy Associates/Climate Change Capital (CEPA/CCC) to produce a report on the "Assessment of the benefits from large scale deployment of certain renewable technologies" (April 2005). The report is available from the Ofgem website.

Figure 1: Electricity from renewable generation as a proportion of sales



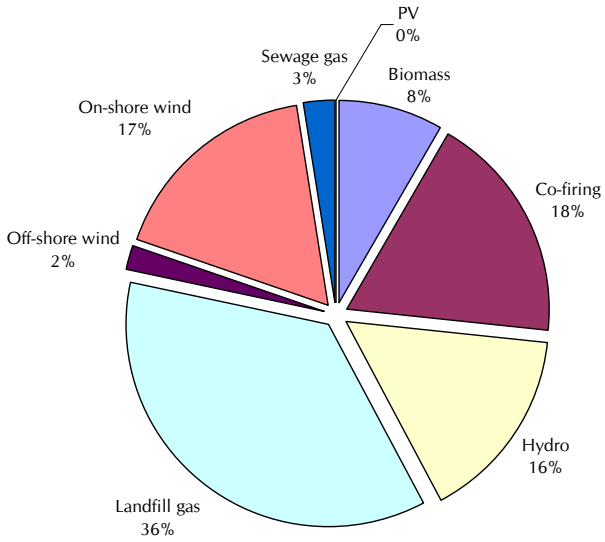
1.14. Figure 1 shows the output of renewable generators in each year since 1999/2000, and compares it with the RO target. It shows that the RO has supported an expansion of renewables capacity since its establishment in 2002/03. The gap between output and the target is similar throughout. In total, approximately 38 terawatt hours of generation have been supported by the RO in the first four years of the scheme (up to April 2006). As electricity prices have increased sharply since its introduction, it is possible at least some of this additional capacity may have come on line without so much support.

1.15. External factors, most notably planning constraints, have limited the rate of development. The British Wind Energy Association estimates that 7.8GW of onshore wind and 3GW of offshore wind are currently in the planning system compared to around 2GW of existing capacity and around 2.2GW of onshore and 2GW of offshore projects that have received consents.[4]

1.16. Figure 2 illustrates which renewable technologies have been supported by the RO. Since 2002, the main beneficiaries of RO subsidy have been landfill gas and onshore wind, although in more recent years the proportion of ROCs awarded to offshore wind has increased. It should be noted that technologies where there is no significant expectation of technological development (landfill gas, hydro and co-firing) have accounted for 70 per cent of the ROCs issued, and the near market technology of onshore wind has accounted for a further 17 per cent.

[4] Reform of the Renewables Obligation (Preliminary Consultation) Joint response by BWEA and REA. January 2007.

Figure 2: RO supported generation by technology



1.17. Over the first four years of the RO, we estimate emissions of between 3.5 and 9.5 million tonnes of carbon (MtC) have been avoided. The range depends on assumptions concerning the fuel that it has displaced i.e. if the renewable generation has displaced coal generation, the attributable savings are greater than if it is gas generation that is avoided. Based on the average fuel mix of all generation in Great Britain the estimate is 4.5 MtC or 1.1 MtC per annum (compared to total UK carbon dioxide emissions of 153 MtC in 2005).

1.18. If the target has not been exceeded, the total cost to customers of the RO in any year (assuming 100 per cent pass through by suppliers and that transaction costs are negligible) is the buy-out price multiplied by the level of the obligation. On this basis the cost to consumers of carbon abatement through the RO is in the range of £184–481 per tonne of carbon (depending on assumptions about the fuel displaced) with a figure of £400/tC if the grid average is used.

1.19. This suggests that the cost to customers of achieving these carbon reductions has been very high relative to other policy measures. To set these numbers in context, the costs of carbon abatement of other policies in the UK Climate Change Programme are estimated at £66/tC for UK Emissions Trading Scheme, £18-£40/tC for the Climate Change Levy and for the Energy Efficiency Commitment the range is from negative (i.e. net benefit) to £60/tC[5]. Under the EU ETS, the equivalent volume

[5] National Audit Office. 2005. Department of Trade and Industry: Renewable energy. Report by the Comptroller and Auditor General HC 210 Session 2004-05

of carbon reduction could have been secured for between around £12/tC and £70/tC[6].

1.20. The subsidy generates returns for investors that are greatly in excess of the economic cost of generation it helps to finance. The analysis undertaken by Ofgem[7] to inform the 2005 review included an estimate of the deadweight subsidy received by RO generators in the first three years of the scheme of £740 million. However, these estimates were based on average wholesale price of £30/MWh and it was noted that the results are quite sensitive to the assumed wholesale price. At an average price of £45/MWh (close to the current wholesale price) all of the existing deployed technologies are economic without the need for any further support suggesting that nearly all of the RO subsidy is excess.

1.21. In summary, the following key points can be made about the RO to date.

- The RO has been successful in bringing on some new investment in renewables capacity; however this has not been sufficient to meet the targets set for the percentage of electricity supplied to come from renewables
- The achievements cost business and domestic consumers much more than other carbon abatement measures.
- The resulting investment in renewable capacity has been in a relatively limited range of lower cost technologies, some of which could be considered mature technologies that do not require support at current wholesale prices.
- Higher-cost less mature technologies have not been developed by the scheme yet.
- Other factors, such as delays in planning, have had a significant impact on the development of renewable energy.

1.22. Many of these conclusions have been independently drawn by a number of other commentators, for example the National Audit Office[8], the Carbon Trust[9] and the European Commission[10]. This has been implicitly recognised by the Government in its proposals, although as we discuss later in this paper, we do not think the new direction proposed for the policy is appropriate given all the considerations we have set out.

[6] This range broadly reflects the EU ETS allowance price range in the last year.
[7] Ofgem. 2005. Ofgem's response to the preliminary consultation on the 2005-06 review of the renewables obligation (June 2005)
[8] National Audit Office. 2005. Department of Trade and Industry: Renewable energy. Report by the Comptroller and Auditor General HC 210 Session 2004-05.
[9] Carbon Trust, 2006, Policy Frameworks for Renewables.
[10] Communication from the Commission, 07/12/2005: COM (2005) 627

2. A sustainable framework for support to renewables

Chapter Summary: As the Government is proposing major reform, it should make sure it puts in place a regime that delivers significant carbon reductions and is sustainable and offers value for money for customers. This should be based on a more rigorous assessment of a range of alternate mechanisms for supporting the development of renewables. We set out one possible alternative model based on long-term contracts for difference.

2.1. The analysis of the existing operation of the RO by Ofgem and other commentators – and the Government's own analysis – suggest that there are major issues that need to be addressed if the scheme is to remain viable and justifiable as an appropriate use of electricity customers' money. Following on from the in-principle undertaking by the government at the time of the 2005 review to take steps to remove low cost renewables from the RO, the current proposals are an attempt to remove some of the excess subsidy and bring on a greater variety of renewable technology. However, we do not think that the proposals have been rigorously analysed and we advocate a more fundamental rethink before proceeding further.

2.2. Stability in the regulatory support frameworks is essential for investor confidence. However, the Government's proposals themselves represent a major restructuring of the RO with serious implications for existing developers and generators. We think it is important to maintain investor confidence and that the expectations of investors in existing projects should be protected. However, for new projects, the Government should take this opportunity to rethink the scheme from first principles.

2.3. The proposals represent a major departure from the original design of the scheme as a market-based, technology neutral scheme towards fixed, technologically-specific returns (quasi feed-in tariffs) for generators. It is proposed that this policy shift should take place through a series of technical changes to the existing scheme. There is little evidence that the Government has seriously considered if the RO itself is still the best available mechanism, given the alternatives, in the light of what Government is seeking to achieve.

2.4. Since banding will involve more prescriptive market intervention by Government, there may be a case to answer on to the extent to which the proposals are consistent with EU competition and State Aid rules. These rules allow mechanisms to be put in place that could distort competition but only where the intervention is proportionate and consistent with the achievement of defined public policy objectives. It is not clear that the proposed RO constitutes the most appropriate level of interference required in the competitive electricity generation market to meet the policy objectives.

2.5. The RO originally included objectives related to climate change, security of supply and industrial development. The current proposals appear focused on delivering the RO targets and bringing to market emerging, high cost technologies by

providing greater certainty for RO Certificate (ROC) prices. These objectives are contradictory. For example, a focus on meeting renewables output targets quickly would suggest more value would be gained from greater, not less focus, on lower cost technologies.

2.6. Trying to simultaneously achieve technological development and cost effective carbon abatement has resulted in higher costs to consumers, very high returns for some developers and a lack of any real progress in emerging technologies. The deeper problem which this reveals is a lack of clarity about which policies are supposed to deliver which objectives. The danger is that individual policies such as the RO are overloaded with multiple objectives and do not succeed in satisfactorily delivering on any of them, while business and electricity customers pay more without seeing the benefits of lower carbon emissions.

2.7. The regulatory impact assessment which accompanies the consultation document notes alternative policy options, including in section 11 the option of "the Government providing fixed-price, long-term contracts for the purchase of ROCS (and potentially electricity)". However, the alternatives put forward are only briefly described and rejected without any rigorous analysis of the costs and benefits of each option.

2.8. We would therefore like to see more rigorous testing of both the current proposals and credible alternatives. A full impact assessment of the proposals should be undertaken, including the development of real alternatives and an assessment of the impact of each different alternative on competition in the generation sector. This would help the Government identify the proposal that is the most appropriate and proportionate method for meeting objectives without unduly distorting competition. This would also reduce the risk of a successful legal challenge to the Government to any reforms.

2.9. The Government has stated that because of the need for primary legislation, there will be a relatively long lead time in the development of the revised RO. We therefore see no barrier to starting now with a full exploration of the alternatives to the existing scheme. Ofgem would be happy to work with and assist the Government on carrying out this assessment.

A possible alternative approach: contracts for difference

2.10. Ofgem is ready to work with Government on various alternatives to ensure that the chosen policy best fits the objective. One that may be worth exploring is a system based on long-term contracts for difference. This may offer a number of advantages over alternative models including:

- reduced cost to customers;
- greater certainty for investors;
- reduced regulatory risk and greater security for investors if wholesale price falls; and

- progressive movement towards a single carbon-price market, while still recognising the place for targeted renewables support.

2.11. While this approach could be customised to meet particular concerns, its key features would be as follows:

- Awarding long term contracts for the supply of renewable electricity following transparent, open auctions. This would involve calling for bids in successive rounds until a particular price or volume target is reached.

- Contracts would be firm and would include penalties for non-delivery and cover fixed time periods.

- Prospective developers would bid on the basis of a fixed price - with the subsidy paid to the renewable generator being made as the difference between the contract price and a published index of the wholesale electricity price. The generator would be responsible for connection, grid, balancing costs etc, and would factor these in when bidding its fixed price.

- A scheme administrator would make payments to generators holding contracts and would levy the funds to make these payments (and the costs of administering the scheme) to suppliers based on their market share (calculated in the same way as the current obligation and would be similar to all suppliers paying the buyout).

2.12. The proposed model has some similarities with the previous contract based schemes (the Non-Fossil Fuel Obligation (NFFO) and Scottish Renewables Obligation (SRO)). However this proposal differs in certain important respects:

- a central purchasing agency for renewable electricity is not required, and is therefore compatible with the competitive market;
- stronger obligations to deliver projects could be placed on developers to avoid the situation under the NFFO/SRO where many contracted projects were never completed.

2.13. A part of the package for introducing such a scheme would be to determine a level of grandfathered payments from the fund that could be made on the same basis (i.e. the difference between a fixed return and a wholesale price index) to generators currently receiving assistance under the RO. Similar arrangements could be made for NFFO/SRO supported generators i.e. converting from a gross price to a premium basis. However, this may be more problematic because it would involve renegotiating or breaking contracts.

2.14. This model could be applied on a technology-neutral basis in order to deliver the high volumes required to meet the targets at low cost. It would not necessarily only favour existing technologies as the contract structure would require developers to trade off the alternative advantages of different technologies (i.e. low deployment costs against planning delays and higher system costs).

2.15. In addition, the principles could also be applied to other policy areas. For example, small (or micro) generators may be able to participate. Suppliers acting as aggregators could bid in projects for a number of small-scale installations. Alternatively measures could be put in place to make fixed payments to suppliers (or customers) for renewable micro-generation based on the average payment made under the long term contracts each year.

3. The Government's proposals

Chapter Summary: This chapter sets out our views on the specific reform proposals proposed by Government, focusing in particular on how they might impact Ofgem in its role as regulator and administrator of the RO.

3.1. As outlined in our response to the 2005 review of the RO, we consider that a number of features of the RO need re-evaluation in order to deliver on the scheme's objectives efficiently and effectively. We understand the rationale for the banding proposal, as it attempts to remove subsidies from lower cost technologies that do not require support (or require less support) at current prices. However, viewed as a package we do not think that the current proposals are the best way of achieving this.

3.2. While the reforms will retain the structure of a market-based mechanism (with the associated uncertainty over the implications of the changes for ROC prices, and the necessary compliance and administrative cost), the benefits of a scheme such as this (as opposed to a simple feed-in tariff, for example) are being lost. The RO will become increasingly complex to administer and subject to more detailed policy/administrative judgements, which threaten to undermine the incentives that the scheme should give to generators to be efficient and reduce costs. We comment on the detailed proposals in the rest of this chapter.

3.3. If the Government decides to proceed with these reforms, we think that there are a number of practical issues that need to be addressed.

Banding

3.4. This section refers to **Questions 1-3** concerning the concepts of banding and the alternative models.

3.5. The main objective of the banding proposal is to differentiate support between the lower cost technologies that are close to market from higher cost technologies, which may need greater levels of assistance before they can compete with conventional technologies. This approach addresses the major criticisms that has been made of the RO in its existing form i.e. that at the current ROC price, the RO over subsidises some technologies, but does not provide sufficient incentive for development and deployment of emerging technologies

3.6. While this may be a reasonable objective for reform of the RO, the banding proposal as presented does not provide a fundamental solution to these issues. The band would need to be set in advance with limited and asymmetrical information of actual future costs, and it is impossible to determine what the impact on investment might be. If the weighting for the bands is set at a level for each technology that delivers a return that is too high then an excessive number of projects may come forward and the cost to consumers, for the volume of generation delivered, will be high. On the other hand, if the bands are set too low then there will be little or no investment. It seems likely, therefore, that the banding approach is not the most

appropriate way of removing the over subsidy while supporting emerging technologies.

3.7. Even if a system can be put in place to design the scheme and set the weights correctly, (i.e. with perfect technological foresight), the result would be very similar to a purely administrative allocation. Individual developments would receive a fixed and predictable premium over wholesale prices for the duration of the scheme. The scheme would essentially become a fixed feed-in premium scheme, and would lose any incentive that exists through the existing market-based ROC mechanism to innovate or to minimise costs. Other schemes, such as fixed price contracts proposed in the previous chapter, would be administratively simpler and cheaper.

3.8. Ofgem, therefore, does not think that banding of the RO is the best available option for providing support to a range of technologies. Other possible policy approaches should be fully considered alongside the proposed reforms.

3.9. If the Government proceeds with banding, this will raise a number of new policy and administrative challenges. Developers, trade associations and lobbyists will have more incentive than ever before to focus on managing their regulatory relationships rather than their market and cost performance. They will focus more effort and resource on making a case that justifies their preferred solution getting the "right" classification. This game will become more complex the more bands there are and the more frequently they are under review.

3.10. The consultation document does not discuss which organisation may be responsible for setting the bands. Given the potential for the outcome to reflect the effectiveness of different parties' lobbying efforts, rather than the underlying economics, we think an independent body (at arms length from Government) needs to be appointed to perform the task of banding. Ofgem, however, would not want to take on this role. We do not think we have the expertise to do this job and think it would interfere and conflict with our role in policing competition in the generation market.

3.11. It is crucial in our role as regulator that we are seen as independent and impartial. If we are also responsible for determining the relative level of subsidy for different renewable generation technologies this would compromise our independence. Our current role as administrator requires us to apply a set of rules to ensure proper financial management. This is quite different to requiring us to make judgements about the rates of subsidy that different parties should receive. This separation between policy judgements and execution of predetermined financial rules is important and should be maintained.

Setting the bands

3.12. This section refers to **Questions 4-15**, which deal with the design of a banded RO and the practicality of implementation. Although we do not support the proposal for banding as set out in the consultation document, if the Government does wish to

pursue such an approach the following are offered as possible parameters for the setting of bands.

3.13. Banding will raise a number of new policy and administrative challenges. The consultation document seeks guidance on the setting of the bands and weightings. Resolving these issues will require judgements about cost structures and future changes to those costs. The developers also have much better information about the nature of those costs than those that will set the bands. For example some of the issues that are identified are:

- the number of bands;
- whether bands should be technologically specific;
- how finely technologies are to be classified into bands;
- the appropriate weighting for bands;
- how the weightings should change over time; and
- how to ensure that the bandings guarantee that targets are met more effectively.

3.14. These are all significant issues that have potentially substantial impacts on the rate of development of alternative technologies, and the returns which developers in each of those technologies will receive.

3.15. In order to improve cost effectiveness of the scheme, banding down (ie, awarding low-cost technologies less than one ROC per MWh of output) is as important as banding up. Without banding down, the excess subsidy question is not addressed. However, banding down may be particularly difficult to achieve given the strong incentive developers will have to lobby for the highest number of ROCs per unit of output possible.

3.16. The weighting for the bands should be set in a way that delivers a return that is close to best available estimate of the financial value of the projects at the present time, while taking into account issues such as recognising the risk profile. The weightings should also have a defined profile of reduced future subsidy to reflect expectations of technological development, and to bring on early investment. Project developers are likely to have much better information about project costs than the band setting body and developers stand to benefit from overstating their expected costs and understating expected cost reductions from technological development.

3.17. It should be made explicit that the resulting subsidy covers total project costs and incorporates costs such as the cost of connection, network charges, balancing charges etc, on the same basis as conventional generators. This will ensure that development can internalise the impacts of locational and technological decisions, and reduce the basis for special pleading (e.g. for exemption from locational charges, special grants for connecting offshore wind etc).

Grandfathering

3.18. This section deals with **Questions 16-19** on grandfathering of rights for existing generators.

3.19. The freezing of entitlements at 1 ROC per MWh as proposed does not provide certainty over future financial returns. The future value of the ROCs granted to a particular generator are affected not only by the weightings which that particular generator receives, but also by the weightings that are applied to new entrants and the rate of development of renewable capacity. As such, the value of the grandfathered support cannot be guaranteed in advance.

3.20. Ofgem supports the inclusion of measures to ensure appropriate returns for operators of existing generating stations that receive support under the RO. While it is important to protect legitimate expectations, it may also be appropriate to recognise that other factors may have increased returns to existing projects. For example, recent increases in power prices (including as a result of the introduction of the EU ETS) have provided an additional benefit and existing projects may benefit from higher ROC prices as a result of planning delays and hence restricted renewables capacity. Taking these effects into account would help to remove deadweight loss from the system and reduce the cost to customers.

3.21. We recognise that it is more difficult to design an appropriate compensation scheme if future policy is a significant departure from the existing scheme. However, subject to the caveats above, it should be possible to evaluate the expected returns for an investor at the time the RO was established and incorporate a compensation mechanism into an alternative scheme.

Transitional arrangements

3.22. This section deals with **Questions 20-21** dealing with measures to ensure that uncertainty in the scheme does not lead to delays in developing projects, especially for technologies that may expect higher returns under new arrangements.

3.23. This uncertainty is unavoidable to some extent and should be minimised by taking decisions as soon as possible. It would also be minimised by the Government sending clear signals that decisions will not be revisited in the short term as a result of lobbying by interest groups.

Measures to support the ROC price

Increase in targets beyond 2015

3.24. This section refers to **Questions 22-23** in the consultation document on increasing the level of the RO target after 2015 towards 20 per cent.

3.25. In our 2005 submission on the RO Review, Ofgem advised against extending the target beyond the current level for the following reasons;

- a further increase was not necessary to provide incentives for new developments of the lower cost renewable technologies;
- the support which would be provided under an extension may not be justified as renewable costs come down and the EU-ETS continues to impact electricity prices;
- any decision to increase the level would add to the deadweight currently in the scheme;
- the barriers to more rapid expansion do not necessarily relate to the level of the target, but to other issues such as planning delays[11]; and
- there is no formal domestic target or European obligation target for 20 per cent renewables by 2020 (although the Government's aspiration in this regard is acknowledged).

3.26. We think that all of these factors are still valid and therefore we do not consider that an increase in the target beyond 2015 is justified.

3.27. The current proposal to extend the targets on a headroom basis seems to be less focused on the level of the targets themselves and more on providing longer term certainty for developers of renewable generation. The impact of the proposal, especially when considered in conjunction with the ski-slope proposal, would be to maintain the value of ROCs at a stable level.

3.28. We do not consider that a stable ROC price in itself is an appropriate objective for the renewables obligation, especially in the context of the concerns about the cost of the programme and the observed over-subsidy of lower cost technologies. Furthermore, it is not a stable and predictable ROC price that delivers investor certainty, but stable and predicable total returns. The ROC value is a premium that is received above the return that generators receive from selling their output in the competitive market. A fixed ROC price does not deliver certain returns to developers if the underlying wholesale prices are fluctuating.

3.29. If wholesale electricity prices rise, as might be expected with an increasing carbon price incorporated into wholesale prices through the EU ETS and rising fossil fuel prices, renewable generators will receive excessive returns (as their costs decline with technological development). Conversely if wholesale electricity prices were to fall, generators may experience financial difficulties.

3.30. If the objective is to provide greater certainty for investors, Ofgem considers that measures should focus not on ROC prices but on total returns. This would mean establishing a mechanism (possibly through the buyout price) of adjusting returns to ensure stability in the context of fluctuating wholesale prices, which now include a component reflecting EU-ETS allowance prices.

[11] As noted in chapter 1, the BWEA suggests that applications in the planning system for wind development are roughly double the capacity that has already been built or consented

3.31. The consultation makes clear that headroom will ensure that the obligation level remains at least 1 per cent higher than the anticipated level of renewable generation. It is not clear the circumstances under which it will be set at a level that is more than 1 per cent. We would welcome some clarity on this.

3.32. If the Government pursues this policy, we would encourage it to seek independent expert advice on the anticipated level of renewable generation. However, for the same reasons as discussed above in relation to banding, we do not think it would be appropriate for Ofgem to provide this advice. We do not have the relevant expertise and it would conflict with our role of regulating the competitive energy markets.

3.33. This section refers to **paragraphs 3.14-3.16** in the consultation document. Ofgem recognises the attempt to reduce the impact on consumers in the longer term by removing the RPI escalation of the buyout price after 2015. However this is not likely to affect the outcome in any significant way. At current inflation, it would be likely to make very little difference to overall impacts over the period to which it applies. We note that the Government has not published any analysis to support its view that freezing the buy-out price would ensure that the costs of the scheme remain broadly similar to the existing design. We would suggest that the DTI publishes its analysis in this area.

Ski-slope proposals

3.34. This section refers to **Questions 24–30** in the consultation document on preventing ROC price crashes.

3.35. This proposal can be seen as part of a package to stabilise the long term value of ROCs and can be considered in conjunction with the headroom proposals. The general comments made above regarding the inappropriateness of attempting to fix ROC value also apply.

3.36. On the specific matter of the ski-slope mechanisms, Ofgem does not support measures to protect the value of ROCs in the event of the target being exceeded. The RO is a target-based instrument, and given the high cost to consumers of meeting the target relative to other methods of carbon abatement, we can see no justification for spending consumers' money in order to extend the target indefinitely.

3.37. The consultation document foresees that there may be particular problems leading to price crashes if targets are exceeded. However, it is unlikely that such events would occur without the markets being aware in advance and making the necessary adjustments. This is a basic feature of markets. If renewables were to become commercially viable without additional support, perhaps through a combination of falling technology costs and rising wholesale prices, then supply may exceed the target. However, in this case support through the ROC price would be unnecessary. Any mechanism to support the ROC price would just be a transfer from

customers to renewable generators and would lead to a return for the generator which is in excess of the economic cost.

3.38. We have serious concerns about the arrangements for administering the ski slopes mechanism. The consultation paper acknowledges the difficulties associated with both the Poyry and Eufinium solutions. We agree with this assessment. However, we also have concerns about the workability of the virtual payments model. It appears to be based on an assumption that all suppliers pay the correct amount of buy-out on time and this is not likely to be the case. We could not manage a single and simultaneous receipt and recycling of funds without the buy-out fund going overdrawn unless prompt and correct payments are made by all suppliers. Each year since 2002 some suppliers have made late payments and, where suppliers have gone into administration, they have not made correct payments. These suppliers have not met their obligation resulting in a shortfall in the buy-out fund.

3.39. While we have concerns about the workability of these proposals, if the Government chooses to pursue this policy, we would be happy to work with DTI to try to find a practical solution.

Co-firing

3.40. This section refers to **Questions 31–40** in the consultation document.

3.41. The issues around support for co-firing highlight the difficulty of dealing with individual technologies in the context of multiple objectives.

3.42. As noted in the consultation document, co-firing is one of the most economic technologies eligible for support under the RO. The estimated required support level is £11/MWh for the cheapest co-firing options, which is well below the current buy-out price of £33.24. As discussed in previous sections, setting a band appropriately to reflect the resource cost of co-firing is likely to be very difficult and would not quickly respond to any changes in the EU ETS allowance price.

3.43. In addition, co-firing has also been seen as a mechanism for promoting the development of energy crops in the UK. It is not clear to what extent this has happened since some generators have been importing biomass for co-firing purposes.

3.44. Co-firing is likely to be the easiest technology to mainstream into the EU ETS. If biomass is used as a substitute for coal, it receives an implied subsidy of almost one EU ETS allowance per megawatt-hour of output. If caps across the EU become tighter and allowance prices rise, then co-firing will become viable without any additional support from the renewables obligation. In this context, continuing to support co-firing through a separate mechanism would increase deadweight losses. A support scheme that can respond flexibly to the allowance price signal would avoid this.

Administration costs

3.45. This section refers to **Questions 41-42** on future funding of the administration of the RO.

3.46. Ofgem strongly supports the proposal to use some of the RO buy-out fund to meet the costs of administering the scheme, as we think it is important to ensure that those who benefit from the RO pay for the cost of its administration. Under the current arrangements, costs are recovered from network businesses through the licence fee procedure.

3.47. In addition to this, we are also experiencing significant increase in the volume of activity under the RO. It is increasingly challenging to continue to provide high levels of customer service in an environment where there is pressure to reduce administrative costs and where there are competing calls on Ofgem resources.

3.48. We wrote to you on 6 December and provided a paper that answered your consultation questions and set out more detail about how the proposal to use some of the buy-out fund might work. We would be happy for you to publish that paper along with our consultation response. In summary, we recognised the importance of allowing the renewable industry an opportunity to have an input into the level of RO costs and suggested that our corporate planning process already provides a mechanism for this. We also suggested that suppliers could be asked to make a payment if there was no, or insufficient, money in the buy-out fund.

Appendix 1 – 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.[12]

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[13].

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 consumers, present and future, 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[14]; and
- The interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.[15]

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:

[12] entitled "Gas Supply" and "Electricity Supply" respectively.
[13] 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.
[14] 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.
[15] The Authority may have regard to other descriptions of consumers.

- Promote efficiency and economy on the part of those licensed[16] 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;
- Contribute to the achievement of sustainable development; 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[17] 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.

[16] or persons authorised by exemptions to carry on any activity.
[17] Council Regulation (EC) 1/2003