ofgem Promoting choice and value for all gas and electricity customers

Cutting the green customer confusion - next steps

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Target audience: This document will be of interest to suppliers, customers, certification service providers, environmental bodies and agencies, NGOs and other interested parties.

Overview:

In response to the global challenge of climate change, a number of suppliers are offering "green" tariffs to customers. A recent study by the National Consumers' Council concluded that there is considerable customer confusion and, as a result, a level of customer mistrust in tariffs that are being marketed as "green". We want to ensure that customers who want to take advantage of these tariffs can be confident about what they are buying.

Since June this year we have carried out a period of active stakeholder consultation on these issues. This document provides an update regarding the proposals that have emerged from that consultation process.

We would welcome further responses to this consultation and intend to publish a revised set of guidelines in February 2008.

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Context

Tackling climate change is now a global priority. At an EU level, Member States have committed to setting targets to reduce the overall level of greenhouse gas emissions and to increase the contribution of renewable energy by 2020. The energy sector has an important role to play in meeting these challenges as it accounts for approximately half[1] of all greenhouse gas emissions.

Ofgem's primary objective is to protect present and future customer interests through promoting competition where possible. We also have an important role in contributing to sustainable development as a result of our duties under Energy Act 2004. This is a key area for Ofgem not only from a customer protection perspective but also to improve the level of transparency and understanding of this part of the market. We believe that this will encourage future generation investment decisions to be made in response to customers' choices regarding for renewable or low carbon technologies.

Associated Documents

Guidelines on Green Supply Offerings, Consultation Document, December 2001
http://www.ofgem.gov.uk/Sustainability/Environmnt/Policy/Documents1/136-19dec01.pdf

Guidelines on Green Supply Offerings, April 2002
http://www.ofgem.gov.uk/Sustainability/Environmnt/Policy/Documents1/2183-31green_supply_offerings_guidelines.pdf

Revision of Guidelines on Green Supply Offerings, Consultation Document, March 2005
http://www.ofgem.gov.uk/Sustainability/Environmnt/Policy/Documents1/10367-10905.pdf

Developing Guidelines for Green Supply, Consultation Document, June 2007
http://www.ofgem.gov.uk/Sustainability/Environmnt/Policy/Documents1/Developing%20Guidelines%20on%20Green%20Supply.pdf

Materials from the series of workshops held in June - July and wrap-up workshops in September
http://www.ofgem.gov.uk/Sustainability/Environmnt/Policy/Pages/Policy.aspx

[1] See the Stern Review on the economics of climate change 2006, available from: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

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Summary

Background

In June this year we consulted on proposals to update our existing guidelines for energy suppliers offering "green" tariffs to domestic customers. This followed work by the National Consumer Council and energywatch which highlighted that the level of **customer confusion in respect of the "green" supply market** remains high with low levels of customer confidence regarding what they are actually getting when signing up for a "green" tariff.

Since June, we have run an active consultation programme including workshops involving suppliers, customers, non-governmental organisations and other interested stakeholders. The proposals that we formally consulted upon in June have evolved significantly through these workshops and we would like to thank everyone who took part for their contributions. The group did not reach a consensus on the guidelines and this consultation is intended to provide all stakeholders with a further opportunity to put forward their views on our updated proposals.

Updated Proposals

A key element of our proposals is to develop **separate guidelines** for **renewable and low carbon tariffs** that will apply to **both domestic and business customers**. This change reflects one of the main areas of differences in stakeholder views – i.e. the question of what is "green''? From the responses to the consultation and from the workshop discussions it was very apparent that there is not a "one size fits all" answer to this question. Some interested parties think that "green" means renewables only while others think that low carbon is more important and that other technologies such as nuclear should be included.

To cut the confusion and allow both domestic and business customers to make informed choices we think that **greater and more standard information transparency** is needed. To facilitate this, for both sets of guidelines we are proposing that greater information is provided as standard to customers when they are offered a green tariff. This will allow customers to compare simply the relative benefits of tariffs. Customers can also then signal to suppliers what is more important to them – renewable supplies or low carbon through the choices they make.

Energy suppliers that choose to sign up to the guidelines will be able to market tariffs as renewable or low carbon. We think there should be a "quality mark" associated with renewable energy tariffs to give customers confidence that their energy supply is being met from verified renewable sources. For low carbon, we are proposing to introduce a carbon intensity banding scheme similar to the A-F energy efficiency rating systems that are used for electrical appliances and new cars. This information will also be independently verified.

The proposals include an associated **certification scheme** that suppliers will develop and fund. This scheme will be operated by an **independent third party** who would **verify claims made by suppliers** in respect of their renewable or low carbon tariffs, using the guidelines as the minimum standards that must be met by suppliers when making these offers to customers. We will be asking suppliers to commit to develop the scheme and appoint the verification agent within six months of the publication of our final sets of guidelines in the New Year.

There is one key area of debate which remains unresolved and where there continues to be different views amongst stakeholders. The government already places a legal obligation on all energy suppliers to source a fixed proportion of their supplies from renewable sources (and the proportion increases each year). Suppliers also have a legal obligation to deliver annual energy efficiency savings by providing their customers with energy efficiency advice and products. Energy suppliers recover the costs of these obligations from all energy customers. These schemes mean that all customers are already making a contribution to renewables and energy efficiency measures. There is a concern that suppliers could mis-sell to "green customers" the renewable or energy efficiency measures that they are obliged to make and that are already being paid for by customers. The issue is how to make sure that customers who pay for green or low carbon tariffs can be certain that they are funding additional measures if that is what suppliers claim. In this document we put forward for consultation, five options to deal with "additionality".

Way Forward

We welcome the views of all interested parties on these updated proposals. Alongside this consultation we are also undertaking a series of **deliberative forums aimed at 'road testing' the proposals** and gauging domestic customer demand. This feedback combined will help determine the final form of the guidelines that we intend to issue in February 2008.

We are also seeking commitment from suppliers to take forward the development and implementation of the associated certification scheme from this point forward. We expect the scheme to be operating within six months following the publication of our final sets of updated guidelines from February.

1. Background

Chapter Summary: This chapter explains the consultation process that we have recently undergone together with interested parties and key industry stakeholders regarding our proposed revisions to the existing guidelines on 'green' supply. This chapter also outlines the structure of the document and sets out our intended way forward.

Background

1.1. In recognition of continuing customer confusion regarding 'green' supply tariffs, we published a consultation document in June this year containing initial proposals to revise the existing guidelines on 'green' supply and develop an associated independent third party certification scheme[2]. The key changes included within the initial proposals set out that the guidelines should:

- be voluntary with the aim of becoming self-regulating;
- extend to non-domestic as well as domestic customers;
- include tariffs sourced from non-renewable low carbon generation as well as renewables; and
- be accompanied by a certification scheme incorporating a 'star' rating system.

1.2. We adopted a programme of active stakeholder engagement during consultation to ensure that we fully understood the views of interested parties on the initial proposals. As part of this, we carried out a series of workshops over the summer and also organised bilateral meetings with interested stakeholders. Both the workshops and the bilateral meetings provided an opportunity for stakeholders to put forward their views regarding the proposals as well as facilitating an interactive stakeholder debate.

1.3. This process of active engagement, as well as our consideration of the formal responses received, has helped significantly to evolve the initial proposals to reflect better the views and concerns of interested parties. In view of these developments we thought that it was appropriate to issue a second consultation, containing our updated proposals, as well as the range of alternatives that have emerged from this process. To ensure that interested stakeholders were kept informed of our thinking

[2] In April 2002, the guidelines on 'green' supply were published following stakeholder consultation. The guidelines recognised that customers were confused about 'green' tariffs. A further consultation on proposed changes to the guidelines was undertaken in March 2005 in light of the evolution of the market for 'green' supply. For further background regarding the guidelines please see the June 2007 document.

in this regard, we held two further workshops in September to explain these changes and the reasons underpinning them. These sessions not only enabled us to inform stakeholders of the updated proposals but also seek feedback from them in this regard. We would welcome further views from interested stakeholders regarding these updated proposals, through formal responses to this consultation.

Structure and approach

1.4. This consultation document provides details of our updated proposals regarding the guidelines, as well as the associated certification scheme, following workshop discussions and a consideration of the consultation responses received.

1.5. Chapter 2 provides an overview of the key issues that were raised in responses to the consultation with respect to the proposals to revise the guidelines. Chapter 3 presents the alternative options put forward as part of workshop discussions and consultation responses. Chapter 4 provides details of our updated proposals and Chapter 5 outlines our intended way forward.

Way forward

1.6. We would welcome the views of interested parties regarding all aspects of this consultation document. Responses should be sent to es&smarkets@ofgem.gov.uk and be received no later than 9 January 2008. Details of how to respond can be found in Appendix 1.

1.7. Once the consultation process is complete, we intend to issue a revised set of guidelines in February 2008 with a view to getting parties signed up to them by March 2008. We would expect suppliers to be compliant with the guidelines within 3 months of them being published (i.e. by May 2008) and for suppliers to develop the associated certification scheme within 6 months of Ofgem issuing the guidelines (i.e. by August 2008). We are keen to hear the views of interested stakeholders with respect to the most appropriate way to progress the certification scheme.

2. Developing the guidelines

Chapter Summary This chapter provides an overview of the key issues raised in written responses to the consultation as well as those issues that were discussed at the series of workshops during the consultation period.

"Developing guidelines for 'green' supply" - feedback received

2.1. As discussed earlier, in June this year we consulted on proposals to revise the existing guidelines for 'green' supply and develop an associated independent certification scheme[3].

2.2. In addition to the feedback provided in workshops and bilateral meetings, Ofgem received 35 written responses to the consultation from a diverse cross-section of interested stakeholders. These included responses from suppliers, large customers, consumer bodies, Government departments, industry representation organisations and environmental interest groups[4]. We also received 34 responses from members of the public conveying messages from the Friends of the Earth website[5].

2.3. Over the course of the workshop sessions and in the written responses received, a diverse range of views have been expressed. Some aspects of the proposals received broad support and agreement (although not unanimous) across both workshop participants and respondents to the consultation, including:

- the need to revise the guidelines and general support of Ofgem's proposed role in this process;
- the importance of clear, understandable and transparent information to customers regarding 'green' tariffs;
- extension of the guidelines to non-domestic customers; and
- the need for some form of certification scheme with an associated identifiable quality mark (possibly including a measurable rating indicator).

[3] 'Developing Guidelines for Green Supply' - Ofgem, June 2007. See: www.ofgem.gov.uk.
[4] All of these responses, together with materials used and written summaries of feedback received at the workshop sessions, are available on Ofgem's website. See: www.ofgem.gov.uk.
[5] In addition 27 responses were also received from a wide variety of stakeholders in response to the parallel consultation being carried out by the Energy Savings Trust regarding a certification scheme for 'green' supply tariffs.

2.4. However, in respect to other aspects of the proposals, respondents held significantly different views. In particular there were a diverse range of views discussed regarding:

- the inclusion of low carbon tariffs (particularly those relating to nuclear generation);
- the inclusion of carbon offsetting/ environmental funds within the guidelines; and
- how the issue of additionality should be treated, and in particular whether the guidelines should set out clear requirements for additionality or simply require increased information provision to enable customers to make their own decisions regarding the relative benefits of a tariff.

3. Getting to grips with the detail

Chapter summary: This chapter provides an update regarding the proposed revisions to the guidelines, following consideration of the discussions that took place at the workshops and the views expressed in consultation responses, including Ofgem's perspectives on the range of proposals. It also provides further details regarding the way that we anticipate that the proposals for separate renewable and low carbon guidelines will work in practice. Views are invited from interested stakeholders in respect of all aspects of our updated proposals. A summary of the questions raised in this chapter is provided in Appendix 2.

3.1. This chapter outlines how the proposals have evolved over the period since the June consultation and how we envisage the guidelines working in practice. This covers the updated proposals to create separate guidelines for renewable and low carbon tariffs, complemented by greater provision of information for customers. This chapter covers the following issues in turn:

- the status of the guidelines;
- the scope of the guidelines; and
- the content of the guidelines.

3.2. We would welcome the views of interested stakeholders on all aspects of the updated proposals, including the discussion under the content of the guidelines regarding potential ways forward with respect to additionality including options developed by BE and Centrica.

Status of the guidelines

3.3. In the June 2007 document, we stated that our preferred approach was for the guidelines to be voluntary and, following consultation, remain of this view. We will be asking companies to 'sign up' to the guidelines as this will enable us to monitor the effectiveness of a voluntary scheme. In signing up to the guidelines we envisage that suppliers would also sign up to a linked certification scheme which will allow company claims regarding their renewable and low carbon tariffs to be independently assessed, consistent with the minimum requirements set out in the guidelines. Ofgem would provide information on its website on which companies have signed up to the guidelines.

3.4. We anticipate that maintaining the voluntary status of the guidelines will facilitate their evolution over time and, in this respect, enable them to be more easily amended in response to market developments and supplier innovation. We also think that under voluntary arrangements it will be easier for stakeholders to take ownership of the guidelines, allowing them to become self-regulatory over time.

3.5. Although the guidelines will be voluntary and we will not therefore have a formal enforcement role, we think that it would be appropriate, in instances where serious misuse of the guidelines was evident, to take action to address this. We also recognise that suppliers will still be bound by certain obligations resulting from the Advertising Standards and, as such, will have to ensure that statements made regarding their 'green' supply tariffs can be supported by relevant evidence.

3.6. While we do not intend for Ofgem to establish or run the certification scheme (discussed further in Chapter 4), we have given consideration to some of the issues associated with the development of such a scheme. We would like to see suppliers develop and sign up to a scheme whereby an independent certification administrator is appointed that would assess tariffs against the minimum standards set out in the guidelines. We would take a keen interest in the development of the scheme as well as reporting on compliance with the guidelines.

3.7. We welcome respondents' views on our proposals to keep the guidelines voluntary with companies signing up to comply both with the guidelines and an associated accreditation scheme.

Scope of the guidelines

3.8. In the June 2007 consultation, we proposed the extension of the guidelines to include non-domestic customers and non-renewable low carbon sources of generation.

Extension to supply to non-domestic customers

3.9. A number of non-domestic customers are already signed up to 'green' tariffs to demonstrate their corporate social responsibility. Other non-domestic customers have indicated that the lack of clarity in this area has been a deterrent to them signing up to such tariffs. We believe that extension of the guidelines to this part of the market will give those customers already party to such agreements greater clarity of the environmental benefits they are achieving, and provide other customers greater confidence and choice when deciding whether to sign up to them.

3.10. Although we recognise the different purchasing requirements and strategies undertaken by customers at the domestic and non-domestic levels, we currently do not consider that significant changes to the guidelines will be required to ensure that they are applicable to the requirements of both domestic and non-domestic customers. We would however welcome respondents' views on whether they consider further changes than those suggested in Appendix 3 will be required in this respect.

3.11. We note that while the extension of the guidelines to non-domestic customers will help them market their corporate social responsibility, their activities must also be consistent with the proposed Guidelines on greenhouse gas conversion factors for company reporting from the Department for Environment, Food and Rural Affairs

(Defra). Defra's current proposals include a requirement for retirement of Renewable Obligation Certificates (ROCs) within the Renewables Obligation (RO) in order to apply a zero conversion factor for renewable generation[6].

3.12. We do not propose that ROC retirement should be a prerequisite for certification of a renewable or low carbon tariff. The requirements of the Defra proposals therefore represent an additional action that must be taken by non-domestic customers. Further discussion on the issue of ROC retirement can be found later in this chapter and in Appendix 5[7]. We note that the implementation of Defra's guidelines has been postponed until our consultation is finalised. We do however welcome respondents' views on whether the guidelines, as currently drafted, are appropriate for this purpose. Please see Appendix 3 for a copy of the updated guidelines.

Inclusion of low carbon non renewable generation

3.13. A key proposal included in the June 2007 consultation document was the inclusion of non-renewable low carbon tariffs within the guidelines. This was included in light of the increasing public and Government policy interest in reducing carbon and greenhouse gas emissions. As highlighted in Chapter 2, a wide range of views were expressed at the workshops regarding this proposal. We consider that it is important that the environmental benefits achieved by all low carbon tariffs are recognised in the guidelines and that suppliers are able to compete effectively on the relative carbon intensities of their tariffs. We note that having guidelines that reflect the environmental benefits of both low carbon and renewable generation also mirrors the Government's 2020 commitments[8].

3.14. Some stakeholders were particularly concerned that the inclusion of low carbon tariffs within the scope of the guidelines may not be consistent with customers' understanding of the term 'green' and may cause further customer confusion with respect to these tariffs. To achieve greater clarity in this respect broad agreement was reached at the workshops that it would be appropriate to move away from the concept of 'green' supply guidelines and towards the development of separate guidelines for 'renewable' and 'low carbon' based tariffs. This would reduce customer confusion regarding what constitutes 'green' as well as providing transparency with respect to the source of generation.

[6] An overview of the operation of the RO is provided in Appendix 4 (contained within the supplementary appendices document).
[7] Appendix 5 is contained within a supplementary appendices document.
[8] The Energy White Paper set out targets to reduce carbon dioxide emissions by 60% in 2050 relative to 1990 levels with real progress by 2020. It also included the aspiration that, by 2020, 20 percent of the UK's electricity supply should be met by renewables. See: http://www.dti.gov.uk/energy/sources/renewables/policy/government/white-paper/page14962.html

3.15. We recognise that customer perspectives on the environmental impact of certain forms of generation will vary. To address this we think it is important that there is transparency on the fuel mix used to generate tariffs, to help customers make informed decisions on the most appropriate tariff for them. As such, to the extent that customers indicate a preference for tariffs that could be classified as very low carbon, this would send a signal to suppliers regarding investment decisions and the generation types that they should be considering for the medium to long term. This is likely to mean that future investment in generation is, to a greater extent, driven by customer preferences.

Content of the guidelines

3.16. In our June 2007 consultation we stated that there were three criteria to which all 'green' supply tariffs should conform, namely the principles of transparency, evidence of supply and additionality. The following section provides an overview of the updated proposals that have emerged from the workshop discussions with respect to each of these principles.

Transparency

3.17. The provision of clear, consistent and understandable information for customers, in respect of both renewable and low carbon tariffs, is one of the key objectives of updating the guidelines - a sentiment that was echoed by a number of stakeholders throughout the workshop process as well as in responses to our earlier consultation.

3.18. Information transparency has been a key principle that the guidelines have sought to achieve since they were first implemented in April 2002. However changing market conditions, including the introduction of the RO, as well as supplier innovation in the provision of renewable and low carbon tariffs have meant that the level of transparency has been reduced. As such, stakeholders have raised concerns regarding the extent to which it is possible to determine the benefits associated with certain tariffs as well as the ease of comparing competing tariffs within the market[9]. In an attempt to address this, energywatch recently produced a leaflet providing information, in a uniform way, regarding the tariffs that are currently available to customers. However, customer confusion remains and, consistent with our primary duty, we are keen to provide greater clarity for domestic and non-domestic customers regarding this area of the market in order to reduce customer mistrust in relation to renewable and low carbon tariffs. We consider that improving the information requirement provisions contained within the existing guidelines will provide a means through which this can be achieved.

[9] This concern was also echoed by the National Consumers' Council (NCC) in its recent study regarding renewable and low carbon tariffs. See: http://www.ncc.org.uk/nccpdf/poldocs/NCC144rr_reality_or_rhetoric.pdf

3.19. We are of the view that if customers can better understand what competing tariffs are actually offering, as well as understanding any additional environmental benefits that they may achieve, they will be able to reach more informed decisions on the basis of their personal environmental preferences and their willingness to pay for these benefits.

Format of information

3.20. Following customer feedback received through the workshop sessions, we consider that all suppliers should be required to provide the relevant tariff information in the same format for customers. While we recognise that some suppliers would prefer to have flexibility in the way they market information we consider that introducing greater consistency in the provision of information would help to ease existing customer confusion in this growing market.

3.21. We therefore propose to set out timescales in the guidelines, within which suppliers will need to develop joint proposals on the formatting of the relevant information which would then be considered by Ofgem.

3.22. There was also agreement across respondents that while this information should be available as standard from supplier websites, it should also be provided to customers prior to them committing to enter into contracts to ensure that they could take informed decisions regarding the relative benefits of each tariff at the point of sale[10].

3.23. At the workshops it was suggested that this information could be provided to customers in a 'layered approach'. This could, for example, take the form of setting out the rating/quality mark that has been assigned to the tariff along with information relating to the rating for other tariffs that the supplier also offers to customers. Information could be provided to link customers to a second layer of more detailed information relating to how the RO and Energy Efficiency Commitment (EEC) operate. The presentation of this information will clearly form part of the work required of suppliers in developing a format for information provision.

Information requirements on all offered supply tariffs

3.24. We propose that the renewable and low carbon supply guidelines should contain information requirements that relate to both the individual renewable and low carbon tariffs as well as all other tariffs that the same supplier makes available for customers.

[10] Further information regarding the information that suppliers should provide, in compliance with the guidelines, is outlined in Chapter 4.

3.25. For renewable tariffs, we propose that tariff specific information would include information regarding compliance with the guidelines (which may be indicated through a quality mark or rating); the percentage of renewable generation included within the fuel mix of the renewable tariff, as well as the renewable generation content included within other tariffs that the same suppliers makes available for customers. This information will be additional to the existing Fuel Mix Disclosure requirements for which suppliers already carry out annual reporting. We propose that any further information relating to additional environmental benefits that the supplier may choose to offer alongside its renewable tariffs could also be included as a voluntary measure[11].

3.26. For low carbon tariffs we propose that specific information would include information relating to the fuel mix of the low carbon tariff and banding based on the carbon intensity of the tariff, as well as the same information for other tariffs that the same supplier makes available for customers. This will enable customers to make informed choices regarding the overall carbon intensity of a supplier's portfolio and compare this across competing tariffs.

Customer environmental contributions

3.27. In light of workshop discussions, and consistent with feedback received from deliberative forums carried out as part of our Consumer First programme[12], we think that it would be appropriate to provide domestic and non-domestic customers with information regarding the amount that they are already contributing towards Government policy initiatives to support environmental benefits. Given that customers already finance the RO and the Energy Efficiency Commitment it would be appropriate that they are given information regarding these mandatory contributions in order that they can make an informed choice regarding their willingness to make further contributions towards environmental initiatives. In view of the difficulties associated with calculating these figures on an individual customer basis, we envisage that these figures would be calculated by individual suppliers on the basis of the average customer bill. Views are invited as to whether this information is likely to be useful for customers.

Evidence of supply

3.28. The workshops and consultation responses highlighted that there were wide-ranging views regarding the most appropriate information to demonstrate evidence of supply and therefore verify claims regarding the environmental benefits of tariffs being made by suppliers.

[11] We note this will depend on the outcome of the discussions on the requirements in respect of additionality, set out later in this chapter.
[12] See our Corporate Strategy and Plan 2007-12: http://www.ofgem.gov.uk/About%20us/CorpPlan/Documents1/19247_2007%20Corp%20Plan.pdf

3.29. Following consideration of this issue, we agree with the stakeholder suggestion that evidence of supply for both renewable and low carbon tariffs should follow the requirements relating to evidence of supply set out in the Fuel Mix Disclosure Obligations. This implies that renewable sourced generation should be supported by a guarantee of origin, and other forms of generation should be supported by the relevant generator declaration.

3.30. We consider that this should be complemented with the requirement that where suppliers have indicated the inclusion of particular renewable or low carbon technologies within the marketing of their tariff, suppliers must provide greater detail within the relevant categories to support their claims[13]. We think that the provision of information regarding the generation source of supply will allow customers to make a choice with respect to competing renewable and/or low carbon tariffs based on their preferences in this regard.

The use of REGOs

3.31. Ofgem issues Renewable Electricity Guarantees of Origin (REGOs) in GB. Each REGO represents one kilowatt hour (kWh) of electricity generated from renewable sources and specifies the energy source from which the electricity was produced, thereby enabling those selling renewable electricity to demonstrate its authenticity.

3.32. Equivalent Guarantees of Origin (GoOs) must be provided in Europe, on request, in accordance with EU Directive 2001/77/EC on the promotion of electricity from renewable energy sources in the internal energy market. The definition of 'renewable energy sources' and 'electricity produced from renewable energy sources' is defined within the Directive to increase transparency and facilitate trade[14].

3.33. Figure 1, below, outlines the potential advantages and disadvantages associated with using REGOs and equivalent European GoOs as the basis to measure electricity generation from renewable sources.

[13] As set out in paragraph 2.11 of the Guidelines for Fuel Mix Disclosure by suppliers in Great Britain, December 2005.

[14] 'Renewable energy sources' is defined as renewable non-fossil fuel energy sources (wind, solar, geothermal, wave, tidal, hydro-power, biomass, landfill gas, sewage treatment plant gas and biogases). 'Biomass' is defined as the biodegradable fraction of products, waste and residues from agriculture, forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.

Figure 1: The use of REGOs to measure the volume of electricity generation from renewable sources

Advantages	Disadvantages
▪ Consistent definition of renewables with that used in other EU Member States ▪ Consistent measure with existing Fuel Mix Disclosure requirements on suppliers ▪ Allows supply sourced from other EU Member States to be recognised ▪ Provides a wide definition of renewables including large scale hydro and capacity built before 1990 ▪ Uses data from the REGO register already maintained by Ofgem ▪ Further disaggregation of data is possible (e.g. offshore wind, biomass)	▪ Does not provide any measurement of generation additional to existing renewable policies

3.34. The range of renewable technologies that are eligible for REGOs / GoOs is wider than that in the RO and Climate Change Levy (CCL) exemption, as shown in Figure 2 below. The use of REGOs will avoid the more narrow definitions employed in these schemes, which in part have been established to ensure that some generating technologies do not receive funding twice.

Figure 2: The range of technologies eligible for ROCs, LECs and REGOs[15]

Technology	Renewables Obligation	Climate Change Levy Exemption	EU Renewables Directive – basis for REGOs
Large-scale hydro	✓ If commissioned after 01/04/02	×	✓
Small-scale hydro	✓ Up to 20MW capacity	✓ Up to 10MW capacity	✓
Waste	✓ Only biomass and waste gasified or liquefied using advanced conversion techniques	✓ As long as not more than 90% of energy content is derived from fossil fuel	✓ Only biodegradable fraction of industrial and municipal waste
Biomass	✓	✓	✓
Co-firing of biomass	✓ Within limits	✓	✓
Geothermal	✓	✓	✓
Wind	✓	✓	✓
Tidal and wave	✓	✓	✓
Landfill gas	✓	✓	✓
Sewage gas	✓	✓	✓
Energy crops	✓	✓	✓
Solar PV	✓	✓	✓
Coal mine methane	×	✓	×

3.35. Ofgem's role under the existing regulations includes issuing REGOs in response to properly made requests and establishing and maintaining a register of REGOs. The use of REGOs to support renewable tariffs will therefore ensure that those sold as renewable are based on verifiable evidence, and furthermore, should greater disclosure be required in the future, such as the specific renewable energy source used, this will be available.

3.36. Overall, we consider that the use of REGOs, or equivalent European GoOs, as evidence of supply for renewable generation provides a way in which to limit the information requirements and hence costs borne by suppliers, and ultimately consumers.

[15] Source: Consultation on Accreditation of Green Tariffs, Energy Saving trust June 2007

The use of LECs

3.37. Ofgem has given consideration to whether suppliers should also be required to produce Levy Exemption certificates (LECs) as proof of supply alongside the REGO/ GoO, where there are LECs attached to the specified generation source. Ofgem agrees with the wide range of stakeholders, including HMRC[16], who consider that the provision of LECs is important to avoid double counting. This is because LECs are awarded to some renewable generators and could potentially be sold to the non-domestic sector independently of the renewable electricity. A description of the CCL and associated LECs is provided in Appendix 4[17].

3.38. We therefore propose that where LECs are available for generation associated with a domestic supply tariff, these should be provided to avoid the risk of double counting.

3.39. We welcome respondents' views on our proposals that evidence of supply for both renewable and low carbon tariffs should be consistent with Fuel Mix Disclosure requirements, with REGOs, or equivalent European GoOs used to guarantee the renewable generation content of tariffs. We also welcome parties' views on whether LECs should also be provided by suppliers in respect of renewable or low carbon tariffs where these are available to avoid double counting.

Carbon banding information

3.40. We believe that if a supplier wishes to market their tariffs as low carbon, the carbon intensity of the tariff should be illustrated and available for customers to consider at the point of sale. The carbon intensity of the tariff would be reflected in the carbon banding the tariff is awarded. Overall, these bandings should be calculated using the carbon intensity of the generation sources backing the electricity sold within the tariff, and be supported by generator declarations similar to the Fuel Mix Disclosure obligations. Chapter 4 discusses the issue of carbon emission factors and setting the bands in more detail.

Additionality

3.41. In the June 2007 document, we set out that the guidelines should fulfil the dual purpose of reducing customer confusion regarding 'green' supply tariffs and providing customers with comfort that by contracting for such tariffs they could be sure they were contributing to *additional* environmental benefits. However, as outlined in Chapter 2, feedback through the workshop discussions and a wide range

[16] HMRC's response to our June Consultation is available on our website: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=229&refer=Sustainability/Environmnt/Policy

[17] Appendix 4 is contained within a supplementary appendices document.

of responses received has highlighted the difficulties associated with developing an appropriate and measurable definition of what constitutes additionality.

3.42. There are a range of Government initiatives in place at present to support the development of new renewable technologies and promote energy efficiency measures that place requirements on suppliers. These include the RO, EEC and the CCL. Given the existence of these support schemes, and the potential for the existing RO arrangements to change as a result of the introduction of ROC banding[18], it is very difficult to establish a set of guidelines which incorporate and demonstrate real additional benefits for customers without including the possibility of double counting the same renewable generation. Issues could occur in this respect given the following:

- there are difficulties in separating renewable generation sourced to comply with the suppliers' RO obligations, from other renewable generation which is additional to this. This means that suppliers could achieve further 'rewards' due to criteria in the guidelines giving credit for additionality, where they are simply complying with existing obligations;
- the customer may be misled if they anticipate that their renewable tariff is contributing to increased renewable generation when, in reality, they would simply be paying for renewable supply that would have been generated anyway as a result of the supplier complying with the RO; and
- the customer may have to pay double for the renewable generation; once as a result of the RO (the cost of which is built into the suppliers standard tariff) and again through the renewable tariff for which they contracted.

3.43. A range of potential measures of additionality have been debated in the workshops, including our original proposals for a star rating system based on different measures of 'greenness' and efficiency. We consider that any definition of additionality should be based around the core idea that it will be demonstrated where there are benefits to the environment beyond that required by existing legislation. In this regard, we think that if part of the revenues from selling a tariff are being used by a supplier to contribute to environmental benefits in excess of requirements under the RO, EEC and other pre-existing legal commitments, the associated product can be marketed as 'providing additionality'.

3.44. At the workshops however, mostly due to concerns regarding 'double counting' of the benefits of 'green' supply, a broad consensus could not be reached on a measurable definition that could be used in the guidelines to demonstrate and measure additionality. The following section provides an overview of the possible

[18] This follows BERR's consultation on this issue earlier this year. See: http://www.dti.gov.uk/consultations/page39586.html

options that were discussed at the wrap-up workshops that took place in late September. These proposals include:

- ROC retirement;
- a centrally administered 'green' fund;
- decentralised 'green' funds;
- an option to increase transparency - in which additionality is not specifically included in the guidelines; and
- a hybrid option.

3.45. Each of these options is discussed in turn below.

ROC retirement

3.46. This approach was proposed by Centrica and is premised on the idea that all tariffs should be certified according to a star rating system. The stars would be awarded to tariffs based on the extent to which they incorporate certain indicators of additionality and the rating achieved would be based on the demonstration of certain types of additionality. In this respect, the rating system would operate such that it would be possible to obtain:

- one star for tariffs that make a contribution to a renewable fund;
- two to three stars for tariffs including elements of carbon offsetting; and
- three to five stars for tariffs that demonstrate ROC retirement.

3.47. Centrica considers that the highest star ratings should be reserved for ROC retirement[19] as it believes that this activity will provide the strongest incentive to invest in renewable generation. Centrica suggests that this will create demand for renewables independent of the RO. In addition, Centrica states that as the number of available ROCs will be reduced this will effectively increase the price of remaining ROCs. This is because a greater number of suppliers will need to pay into the buyout fund and therefore those suppliers that submit ROCs will receive an increased recycled benefit. Centrica believes that these factors will create greater certainty for investors regarding the returns that it would be possible to achieve and would therefore facilitate greater investment in renewables.

[19] A description of the RO and the role of ROCs is provided in Appendix 4 (contained within the supplementary appendices document).

Ofgem's views on ROC retirement

3.48. It is easy to understand why, initially, people might think that ROC retirement is a good idea. If suppliers had an obligation to buy a certain amount of physical supply from renewable generators (which was) represented by certificates and there were no supply side constraints (like restrictions in planning), if you were to take certificates out of the market then the price would rise which would encourage new 'additional' investment. However, the ROC mechanism is not a physical obligation on suppliers. Instead it is a financial obligation where suppliers have a choice between buying ROCs or paying the buyout price. The financial nature of the RO means that there is not necessarily a direct link between retiring ROCs and new investment.

3.49. In addition to the financial nature of the RO, we also see very challenging supply side constraints affecting this sector at the moment. Onshore wind is facing considerable delays in the planning process. The planning system is also delaying new transmission investments which are needed to transmit renewable electricity from production to end customers. The supply side constraints could mean that the premiums paid to existing renewable generators increase, without any additional investment in the sector.

3.50. The combination of the non-physical nature of the RO and the supply side constraints mean that we have concerns that relying on the RO as a measure of additionality could increase the overall costs to customers of meeting the Government's targets for renewable energy without necessarily resulting in any additional renewable electricity. We discuss these issues further in Appendix 5[20].

3.51. We welcome the views of interested parties regarding the issues associated with ROC retirement and in respect of our analysis of the potential barriers to further renewable generation. We would also welcome any further analysis which suggests that the assumptions we have made as part of this assessment are misplaced.

3.52. The other measures Centrica suggested i.e. 'green' funds and carbon offsetting are discussed in the sections below.

A centrally administered 'green' fund

3.53. This approach was proposed by BE and builds on the existing concept of a 'green' fund. At present, a number of 'green' funds exist which operate to deliver further renewable generation to the electricity grid or bring forward other stated environmental benefits. However, there is a concern that some of the 'green' funds would operate at the same level of activity even if the contributions from customers were not received. As such, BE proposed the development of a centrally

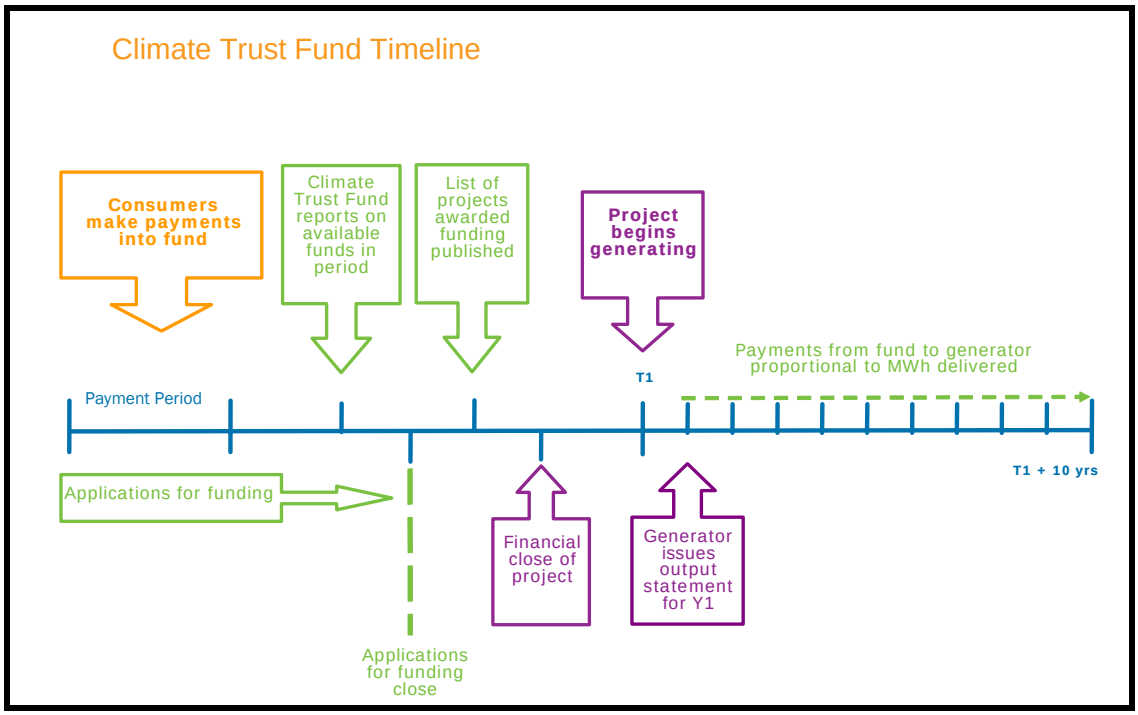
[20] Appendix 5 is contained within a supplementary appendices document.

administered 'green' fund to allow customers to clearly identify and select tariffs that contribute to the achievement of a tangible additional environmental benefit.

3.54. Under this approach, customers would be provided with the option of paying a given percentage of their electricity bill into a 'green' fund for a fixed period of time, normally a year. The money raised through this mechanism would then be put towards a given set of renewable or environmental projects selected by a board of trustees appointed to administer the fund. The board of trustees would judge the competing projects against a predefined set of criteria and would choose the tender that was most closely aligned with these requirements. The projects selected would benefit from the money raised via customer donations, in the corresponding year, and this would be used to finance the project over its life. This process would be repeated in the following year and the money contributed would be put towards another set of projects.

3.55. In this way, the financial support would be additional to that from other schemes and would contribute to the development of further renewable generation. The operation of the fund is highlighted in Figure 3 below.

Figure 3: Centralised fund timeline



Ofgem's views on the centrally administered fund

3.56. We recognise that the establishment of an administered fund to facilitate the deployment of additional renewable generation or to create further environmental

benefits is a positive and sensible way to demonstrate additionality. However, we are aware that such a centrally administered fund could have the effect of reducing the level of innovation as it removes competition between the management of funds, and projects supported. We are also keen that the administration and implementation costs to customers of such a scheme remain reasonable but, at present, we are unclear as to how much administration of such a scheme would cost.

3.57. Appendix 6[21] discusses the how such a fund might operate, including its potential associated costs, in more detail.

3.58. We would therefore welcome responses from any interested parties that are able to provide some information regarding the potential costs associated with administration of such a scheme. We would also welcome any further views that interested parties may have with respect to the concept of a centrally administered 'green' fund.

A decentralised 'green' fund

3.59. At one of the wrap up workshops held in late September a participant suggested that an alternative to the centrally administered fund would be for individual suppliers to operate their own independent 'green' funds. Such funds would essentially operate in the same way as the centrally administered schemes but would remove the need to have a board of trustees in place to govern the use of funds. Instead, decisions regarding the most appropriate projects in which to invest would be made by individual companies in line with their views and preferred projects.

Ofgem's views on decentralised funds

3.60. We are of the view that investment into a decentralised 'green' fund would be a positive way of demonstrating additionality as it would remove the need to establish a board of trustees and would therefore reduce the costs that would be incurred in administration of the scheme. Decentralised funds would also reduce the extent to which innovation may be stifled, which may occur under the centrally administered scheme. As such, under the decentralised fund, suppliers could compete and innovate on the basis of the schemes that they had elected to support, the fund management approach that they decide to take and on their interpretation of additionality. In this respect, customers may be offered choices with respect to additionality as suppliers could potentially seek to innovate in this area.

3.61. However, decentralised funds may lead to reduced transparency and increased customer uncertainty with respect to the stated benefits of the fund and whether these would actually be achieved. Clearly, there would be some scope for

[21] Appendix 6 is contained within a supplementary appendices document.

incorporating an audit process for such funds within the wider certification scheme associated with the guidelines but this would need to be weighed against the costs incurred. We note that some market participants already operate similar 'green' funds and therefore we are not clear whether benefits would result from prescribing the operation of such funds as a pre-condition of showing additionality. We therefore consider that it may be more appropriate to allow market participants to exercise their own discretion with respect to the range and type of funds that they offer, which may result in further innovation and facilitate competition.

3.62. We would welcome the views of interested parties on the use of decentralised funds and also in respect of our assessment of their effectiveness.

Improved transparency

3.63. We are keen to ensure that the interpretation of additionality under the guidelines is not restricted. As such, we think that suppliers should be able to innovate and product differentiate where they consider this to be appropriate and that this will facilitate further customer choice, allowing suppliers to compete on this basis. We therefore think it may be more appropriate to focus on ensuring that customers are able to better understand the range of available tariffs through increased transparency and quality of information provided to customers by suppliers, and that this could be provided for in the guidelines. In this respect, customers that are better informed will be able to more easily compare competing tariffs and make informed choices regarding their preferred tariff based on an understanding of their relative environmental merits.

3.64. We consider that the proposals developed throughout the workshop discussions to develop the low carbon and renewable tariff guidelines (discussed in Chapter 4) will significantly enhance transparency with respect to the environmental claims made by suppliers. In addition, we are proposing that there will be greater transparency in relation to the environmental contributions that customers are already making as part of their standard electricity bill information. Through the combination of these sources of increased information we think that customers will be empowered to take more proactive choices with respect to the tariff that they choose to purchase. We anticipate that enabling customers to make decisions based upon actual information will also indicate customer preference to suppliers and therefore signal to them where investment would be most appropriate given customer demand.

3.65. In this respect, the concept of additionality would effectively be absent from the guidelines under this option. However should suppliers be keen to demonstrate that they were engaged in activities that had some additional environmental benefit (beyond their existing legal obligations), they would be able to market this as an added extra in relation to the tariff - although this would have no bearing on the 'rating' or 'quality mark' given to that tariff.

Hybrid approach

3.66. There has been some suggestion throughout the consultation process that to ensure that customers do not pay a premium for tariffs that are essentially derived from the standard fuel mix, price discrimination should only be permitted where suppliers can demonstrate evidence of additionality. This is based on the concern that suppliers would otherwise be able to "slice and dice" their fuel mix to create tariffs that were largely constituted from low carbon or renewable sources, and which would therefore represent their portfolio in a positive environmental light. Under this proposal, suppliers would be able to develop tariffs across their portfolio as they wish, but would only be permitted to charge a premium for a particular tariff where they were able to demonstrate that the tariff offered some additional environmental benefit over and above their legal obligations.

Ofgem's views on the hybrid approach

3.67. To the extent that a supplier offers a renewable or low carbon tariff that also provides other added extras alongside its standard product (as long as it could be demonstrated and measured that these extras were additional to the suppliers' legal obligations), it would seem appropriate that the supplier could seek to charge a premium for that overall product. In the event that the additional benefits relate to energy efficiency measures, suppliers should be clear who will receive the benefits, and any premium added to the tariff should be reflective of the costs of achieving the efficiency measures and not the foregone energy revenues of the supplier. Therefore, as long as it could be demonstrated that the customer was getting something extra (i.e. that they would not otherwise be getting by purchasing the tariff), we consider this option would deliver benefits.

3.68. We would welcome the views of interested parties on this approach.

4. Updated Proposals

Chapter summary: This chapter provides a description of our updated proposals for renewable tariff guidelines and low carbon tariff guidelines. The proposed guidelines are set out in Appendix 3. A summary of the questions raised in this chapter is set out in Appendix 2.

4.1. This chapter sets out the proposals emerging from the workshop discussions, and also informed by consultation responses, for updating the existing guidelines into two separate sets of guidelines for renewable and low carbon tariffs. This section also outlines how the principles of additionality discussed in Chapter 3 would operate in these guidelines.

Renewable tariff guidelines

4.2. Renewable tariffs would be based on Guarantee of Origin backed renewable supply. Two alternative methods by which this could be achieved are set out below:

- **Alternative 1:** A requirement for 100% of electricity sold to be backed by Guarantees of Origin; and
- **Alternative 2:** A requirement for a stated percentage of electricity to be backed by Guarantees of Origin.

4.3. In the case of **Alternative 1**, we propose that the guidelines should consist of the following main requirements:

- renewable supply tariffs should be backed by renewable energy for 100% of the customer's electricity;
- the percentage of electricity from renewable sources is measured by the proportion of electricity sold that has the requisite proof of renewable origin as required by the Fuel Mix Disclosure Guidelines (i.e. has a REGO or equivalent European Guarantee of Origin);
- where the generation in source attracts a LEC, this should be retired if the supply is to domestic customers;
- only those tariffs that are 100% backed by REGOs or equivalent EU GoOs should be marketed as a 'renewable tariff';
- in order to offer a renewable tariff, all other tariffs offered by the supplier should be submitted for a renewable and low carbon rating.

4.4. In the case of **Alternative 2**, we propose that the guidelines should have the following requirements:

- only those tariffs for which the percentage of renewable energy in its fuel mix is equal to or higher than the stated percentage should be marketed as a "renewable tariff";

- suppliers should have the relevant proof of origin for the renewable energy in accordance with the Fuel Mix disclosure guidelines (i.e. REGOs or equivalent European Guarantee of Origins);

- tariffs that incorporate renewable generation may be eligible for certification under the low carbon supply guidelines and would be eligible to display a certification mark showing their renewables content where this was marked clearly for customers; e.g. a tariff backed by 30% REGO would achieve a 30% renewable certification;

- in order to offer a renewable tariff, all other tariffs offered by the supplier should be submitted for a renewable and low carbon rating.

Information on all supply tariffs

4.5. The provision of information to customers regarding the environmental benefits of their supply is relevant not only with respect to individual tariffs but also in relation to the overall fuel mix, including renewable content and carbon intensity of the supplier's portfolio from which they are purchasing their energy needs. In order that customers have confidence that suppliers are not 'slicing and dicing' their fuel mix to create tariffs that are largely constituted from renewable or low carbon sources, but their overall portfolio carries a much higher non-renewable content or carbon intensity, it is important that customers are aware of the renewable content and carbon banding of all of the supply tariffs on offer by that supplier.

4.6. We envisage that in order for a supplier to offer a renewable or low carbon tariff, the guidelines would require that customers receive information on the carbon rating and the renewables content for all retail products (i.e. not just those marketed as renewable or low carbon) offered by the supplier.

4.7. For any given retail product, the renewables content allocated to it, reflected in the quality mark rating, needs to be consistent with the renewables content used in the calculation of the carbon intensity of that tariff. In addition, customers will receive information regarding the source of their contracted fuel mix to make it clear how their tariff is comprised.

Additionality

4.8. Although under this proposal (discussed in Chapter 3 as the hybrid option), the guidelines will not incorporate details regarding additionality, these tariffs will provide a clear indication to customers of the equivalent volume of renewable generation that has been effectively removed from the market for sale to other customers. The removal of this generation from the market will, in turn, provide a signal of customer demand for renewable generation and indicate to the market the need for further

investment in renewable generation. In effect, we anticipate that this will help to make investment decisions increasingly customer driven. The renewable tariffs guidelines would set out the minimum requirements that need to be met before a quality mark/rating could be assigned under any associated certification scheme. We envisage that the certification provider would own the mark and be responsible for the allocation and auditing of the markings. For the purpose of clarity, this option would not preclude suppliers offering any added extras alongside their renewable tariffs, as discussed under the hybrid option described in Chapter 3.

4.9. Where suppliers are able to clearly demonstrate the additional environmental benefits associated with a renewable tariff a premium may be added to the price of the tariff in respect of these benefits. Where customers would not be making a contribution to benefits in excess of the existing requirements on the supplier no premium should be charged.

Low Carbon tariff guidelines

4.10. Based on the workshop discussions and responses received, a proposal has emerged for a rating system based on the carbon intensity (measured in gCO2/kWh) of the electricity sold within each tariff with the following key features:

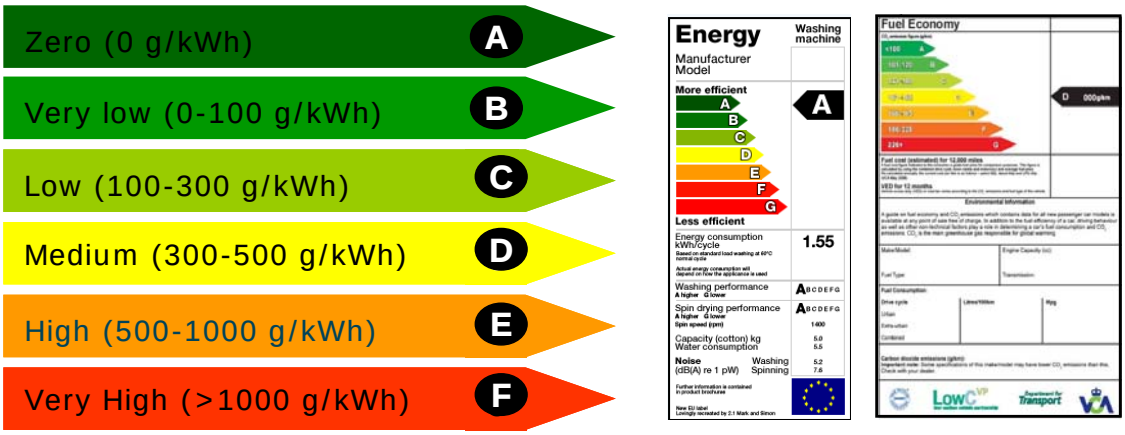
- each tariff is awarded a banding which indicates the carbon intensity of the generation technologies used to generate the electricity sold;
- the carbon intensity of the tariff is calculated as the average intensity of each generation technology used within it weighted by the proportion of electricity provided by that technology;
- suppliers should provide evidence of generation source for the fuel mix in line with the Fuel Mix Disclosure;
- the bands represent increasing carbon intensity and are set sufficiently widely to avoid contention over which band a particular technology should be assigned;
- there may be potential to review the banding on a periodic basis as new generating technologies come on line;
- where tariffs include renewable energy within their fuel mix, the supplier is free to publicise the percentage of renewable energy included within the fuel mix in any marketing material; and
- in order to offer a low carbon tariff, all other tariffs offered by the supplier should be submitted for a renewable and low carbon rating.

4.11. Guidelines for marketing the carbon intensity of a supply tariff will facilitate the creation of a scheme for low carbon tariffs. This will provide customers with clear and understandable information allowing them to compare and make choices regarding the carbon intensity or environmental benefits of particular tariffs. In order for customers to make the most informed supply choices we think that this

information should be made on the suppliers website, and in all marketing material provided at the point of sale, to ensure that customers can make choices regarding the environmental benefits of the tariff before they enter into a contract for it.

4.12. The proposed approach to 'band' the carbon intensity of each tariff, is therefore similar to that used for rating the efficiency of electrical appliances or fuel in cars. An illustrative range of how the bands could be set is shown alongside similar approaches for appliances in Figure 4 below[22].

Figure 4: An illustrative example of the carbon intensity banding



4.13. Actual carbon intensity levels will only be verifiable once the electricity has been sold. We believe that it will be important to ensure that each unit of electricity generated is allocated to one of the tariffs on offer, and that in total customers are not sold an amount of electricity from each tariff that exceeds that generated. This could be achieved by requiring that suppliers provide the certifying body, for audit purposes, information they may reasonably require to establish whether the publicised tariff ratings are correct.

Consistency with existing Fuel Mix Disclosure

4.14. We propose that the low carbon guidelines use data that is similar to that used to present carbon dioxide emissions in the Fuel Mix Disclosure requirements in respect of a supplier's total electricity sales[23].

[22] Further details regarding the bandings used for electrical appliances and cars can be found at: http://www.defra.gov.uk/environment/consumerprod/pdf/shoppers-guide.pdf

[23] This obligation is contained within suppliers' licence condition and was introduced by The Electricity (Fuel Mix Disclosure) Regulations 2005.

4.15. The Fuel Mix Disclosure information is presented retrospectively, and on an annual basis for the supplier as a whole. As such, the low carbon rating for a supplier's tariff would have to be presented to the customer as a retrospective representation of the fuel mix that they would likely receive from their tariff in the coming year and a commitment to deliver electricity with a carbon intensity that falls within the associated banding. In the event that the tariff was new to the market and therefore did not have an associated fuel mix from the previous Fuel Mix Disclosure period, it would be necessary to present customers with a prospective assessment of the likely fuel mix and associated banding. Consistent with the evidence of supply conditions, these claims would need to be validated by the information provided as part of the next Fuel Mix Disclosure period.

4.16. It is clear that Fuel Mix Disclosure obligations are imposed at a supplier level and therefore currently relate to the overall fuel mix of the supplier. As part of the low carbon guidelines, it would therefore be necessary for suppliers to determine the source of supply underpinning its low carbon tariffs and be able to demonstrate this through its Fuel Mix Disclosure obligations. This is discussed in more detail below.

4.17. The existing Fuel Mix Disclosure requirements use an element of aggregation to aid simplicity as well as to allow comparison between suppliers, although greater levels of detail may be included if a supplier wishes. The fuels included are:

- coal;
- natural gas;
- nuclear;
- renewable; and
- other[24].

4.18. The Fuel Mix Disclosure guidelines set out that where the required evidence of supply (either REGOs for renewables or generator declarations for other sources of generation) is not held, the electricity should be apportioned to each of the 5 categories above according to the percentages set out in the Fuel Mix Disclosure table published by the Department for Business, Enterprise and Regulatory Reform (BERR). We recognise that this leaves open the possibility that some unaccounted electricity may be attributed to nuclear and renewable generation and receive a lower carbon intensity than the actual source used to generate it. We welcome views on to what extent this is likely to be an issue and whether there are other appropriate measures to consider in this respect.

[24] Other fuels are defined within the Standard Condition 30A as "an energy source other than coal, natural gas, nuclear or renewable".

Figure 5: Advantages and disadvantages of using information provided under the Fuel Mix Disclosure obligation to demonstrate evidence of supply

Advantages	Disadvantages
▪ Consistent presentation of information ▪ The data used is auditable ▪ Data is already made available by suppliers	▪ Information collated at the supplier level rather than the tariff level ▪ Information is ex-post and cannot be confirmed ahead of purchase

Advantages

4.19. One advantage of extending this approach is that the consistency of information presented is retained, and that auditable data is used. The definition of renewable sources of energy is that in the European Renewables Directive, which is supported by the issue of REGOs and is consistent with the proposals for renewable tariffs in these guidelines. Suppliers are also already required to hold information to provide evidence of their overall fuel mix including declarations from generators of the amount of electricity bought or generated.

Disadvantages

4.20. The main disadvantage of the use of Fuel Mix Disclosure information is that it is intended to be provided at a supplier level rather than an individual tariff level. This is discussed in greater detail below.

Information on all supply tariffs

4.21. As described above, suppliers currently provide a single retrospective figure for carbon intensity which is specific to the fuel mix of their whole supply portfolio. The calculation of this figure is based on the use of standardised emission factors for each fuel type provided by BERR.

4.22. As discussed earlier, we consider that it is important for customers to have information available to them regarding the carbon intensity of supply tariffs at the point of sale. This will allow them to make informed decisions regarding their carbon preferences or in respect of the wider environmental attributes of available tariffs. We also anticipate that customers will gain comfort from knowing that the tariff into which they are choosing to enter is compliant with the guidelines as well as any associated certification scheme and that claims made by the supplier will therefore be audited by any certifying body that is appointed.

4.23. In the same way as for renewable tariffs, as discussed earlier, the provision of information to customers regarding the environmental benefits of their supply is relevant not only with respect to individual tariffs but also in relation to the overall fuel mix and carbon intensity of the supplier's portfolio from which they are

purchasing their energy needs. In order that customers have confidence that suppliers are not 'slicing and dicing' their fuel mix to create tariffs that are largely constituted from low carbon sources, but their overall portfolio carries a much higher carbon intensity, it is important that customers are aware of the carbon banding and fuel mix information for all of the supply tariffs on offer by that supplier.

4.24. We recognise that some customers may not wish to buy their electricity from suppliers that provide some of their electricity from specific energy sources. By having information available for all supply tariffs at the point of sale, this will enable customers to make an informed choice based on their carbon and fuel mix preferences. Although we recognise that any information provided to customers in this regard will, by definition, be an estimate of the electricity that will be supplied under the tariff, and an estimate of the carbon intensity of the fuel inputs likely to be used as part of that tariff, we think that this will increase customer confidence in its associated environmental benefits. This will be relevant to those who want to make supply choices that reflect their carbon preferences.

4.25. Overall, to the extent that greater customer demand for low carbon tariffs is evident, we envisage that this will provide an indication of customer preferences to suppliers. This will provide signals regarding customer demand in low carbon technologies and therefore assist in forward looking investment decisions in generation for the medium to long term.

Aggregation of generating technologies

4.26. The use of more detailed generation information to calculate the carbon intensity of a particular tariff will involve a trade-off between keeping the calculations simple and verifiable on the one hand, with the improved accuracy of the ratings on the other. For example, the use of tailored emissions factors that reflect the differences between each generating plant would reward the most carbon efficient by giving the electricity produced a lower carbon rating.

4.27. However, in order to reduce complexity of the guidelines, we believe that it is appropriate for them to use standard emission factors – ideally, that are independently developed and transparent in their calculation. By using sufficiently wide bands to categorise tariffs, the effect of relatively small differences such as those caused by plant operating efficiencies will be removed.

4.28. Similarly, our discussions with participants in workshops have focused on measures of carbon intensity at the point of generation instead of the lifecycle of the technology, as this is likely to remove the additional uncertainty associated with plant decommissioning, which in some cases is likely to be many years into the future. It will also maintain consistency with the Fuel Mix Disclosure requirements.

4.29. We believe that the level of detail provided in the existing Fuel Mix Disclosure requirements is a starting point from which to calculate a CO2 intensity figure for low carbon tariffs. The inclusion of more fuel types and specific technologies, especially as these develop over time, is likely to allow suppliers to achieve a lower overall

carbon rating and thereby enable customers to signal their demand for electricity from such technologies.

4.30. In this respect, one such technology that could play an increasing role in the future generation mix in GB is carbon capture and storage (CCS). Allowing a CCS plant to contribute to a lower carbon tariff banding than conventional fossil fuel fired stations would recognise the carbon benefits that plant is offering. Similarly, combined heat and power (CHP) schemes, which predominantly run on natural gas, provide much lower carbon emissions than gas fired power plants.

4.31. We would welcome the views of interested stakeholders regarding the proposal to standardise emission factors, to limit carbon emissions included within the scheme to those at the point of generation and the proposed treatment of new technologies, including the treatment of CCS.

Setting bands

4.32. We have undertaken an initial assessment of how the bands for carbon intensity could be set. These are set out below in Figure 6.

Figure 6: An illustrative example of how bands for carbon intensity could be set

Band	Carbon intensity (g/kWh)	Associated technologies
Band A	0	Renewables (excluding biomass), Nuclear
Band B	1-100	Carbon capture and storage
Band C	101-300	CHP
Band D	301-500	CCGT
Band E	501-1000	Coal, Oil
Band F	Greater than 1001	OCGT, Biomass

4.33. We note that in the case of energy labelling, banding levels have been set at an EU level by the European Commission. EU Directive 2006/66/EC for example sets out the efficiency requirements for refrigerators and freezers to receive an A+ or A++ rating. Alternatively, the UK Fuel Economy label has been developed voluntarily by car makers and includes banding of CO2 emissions alongside tax and running cost information. The banding directly reflects those used for Vehicle Excise Duty (VED) and is therefore set by Government.

4.34. We would welcome views on whether the illustrative bands are appropriate and whether they should be set by Ofgem or an independent party.

4.35. Following consultation with stakeholders, we have considered the way that the certification scheme for low carbon tariffs could be taken forward and think that it would be appropriate for the carbon intensity bands to be incorporated within the guidelines once these have been finalised. As such, the carbon intensity banding

would be intrinsically linked to the associated certification scheme via the guidelines. In the event that significant advances were made in the development of new technology or in improved efficiency for existing technologies, the bandings should be periodically reviewed to ensure that they remain relevant and appropriate.

4.36. In the illustrative banding, Band A is reserved for technologies with zero emissions. This would include renewables (excluding biomass[25]) and nuclear generation. Band B would include low carbon technologies, including plant fitted with carbon capture and storage (CCS) technology, as well as electricity generated from a combination of zero rated technologies and more carbon intensive technologies (where these supplies are aggregated for a tariff). Good quality CHP would qualify for Band C, a combined cycle gas turbine (CCGT) would qualify for Band D, while Bands E and F would be reserved for coal and peaking plant such as oil and open cycle gas turbines (OCGT). An illustration of some of the possible tariff bandings that could be achieved using different generating technologies is provided in Appendix 7.

4.37. We note that more granular information than that in the current Fuel Mix Disclosure requirements would be required to recognise individual technologies other than renewables and nuclear in Bands A, B and C, although tariffs composed of a mix of technologies such as wind and CCGT could still achieve these bandings.

4.38. We welcome views on whether CCS should be treated as a low carbon technology for these purposes or whether the carbon sequestered should be treated differently, as with our proposals for carbon offsetting below.

Offsetting

4.39. Carbon offsetting is a tool by which parties can seek to reduce the carbon impact of their actions by purchasing 'carbon credits' that represent carbon abatement measures to offset their actions (e.g. planting trees etc).

4.40. We note that within the emerging market for carbon offsets, there has been concern over the legitimacy of some schemes. To this end, we support Defra's proposals to develop a code of best practice for the provision of offsetting to UK customers[26], and propose that investment in schemes alongside the tariffs proposed in these guidelines are consistent with this.

[25] Data from the Intergovernmental Panel on Climate Change (IPCC) indicates that solid biofuels could have a carbon intensity as high as 1400gCO2/kWh. In contrast biomass fuels as defined in the EC's monitoring and reporting decision are assigned an emissions factor of zero.
[26] Defra's consultation on this code in January 2007 is now closed, and the code is currently being developed. See http://www.defra.gov.uk/environment/climatechange/uk/carbonoffset/codeofpractice.htm

4.41. There was a debate at the workshop sessions over how carbon offset activities should be treated to determine the carbon banding of a tariff. This highlighted a concern that customers should be fully aware whether the carbon rating of a particular tariff is derived from the generating fuel mix or whether it could be affected by carbon offsetting actions taken by the supplier. There was broad support to exclude the use of offsetting, which is reflected in our updated proposals.

4.42. Under this approach, the carbon offset element of the tariff could therefore be recognised within marketing materials as an added extra but would not contribute to the overall carbon rating of the tariff.

Additional benefits

4.43. Where suppliers are able to clearly demonstrate the benefits associated with different low carbon tariffs (including carbon offsetting as discussed above) a premium may be charged to reflect these benefits. Where customers do not receive additional benefits no premium should be charged with those tariffs marketed as low carbon.

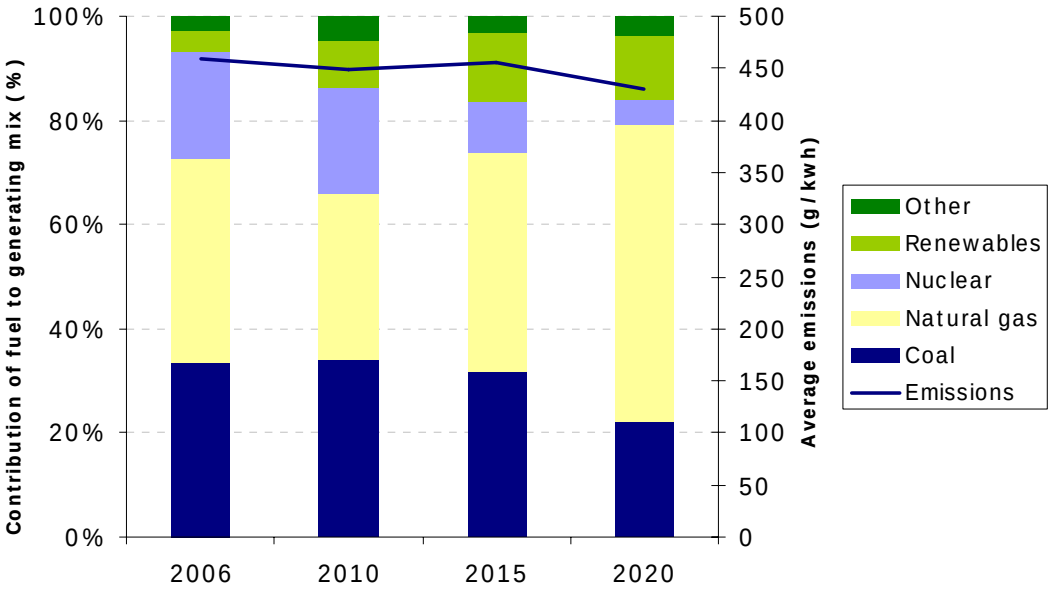
Changes over time

4.44. The Government is committed to reducing CO2 emissions into the future with national targets set for reductions of 20% relative to a 1990 baseline by 2010, and a further decrease to 60% by 2050. In order to reflect these changes, and to maintain clear signals of customer demand for low carbon electricity, we propose that the bands for rating carbon intensity should change over time to provide stronger signals to suppliers to invest in low carbon technologies.

4.45. In a manner consistent with our guidelines for setting the initial bands, we propose that guidelines determining whether or not future changes to the bands are required need to distinguish between individual generating technologies, and have consideration for the distribution of electricity generation between them. Equally, reviews should be carried out with regard to the need to ensure continued clarity and market confidence in the scheme.

4.46. Figure 7 below shows the projected change in the composition of electricity generation from the 2006 Energy Review. This shows an anticipated increase in the amount of gas fired generation, and retirement of a number of nuclear and coal plants. The net effect, based on BERR emission factors, is to reduce the average carbon intensity of electricity generation from around 460gCO2/kWh to 430gCO2/kWh between 2006 and 2020.

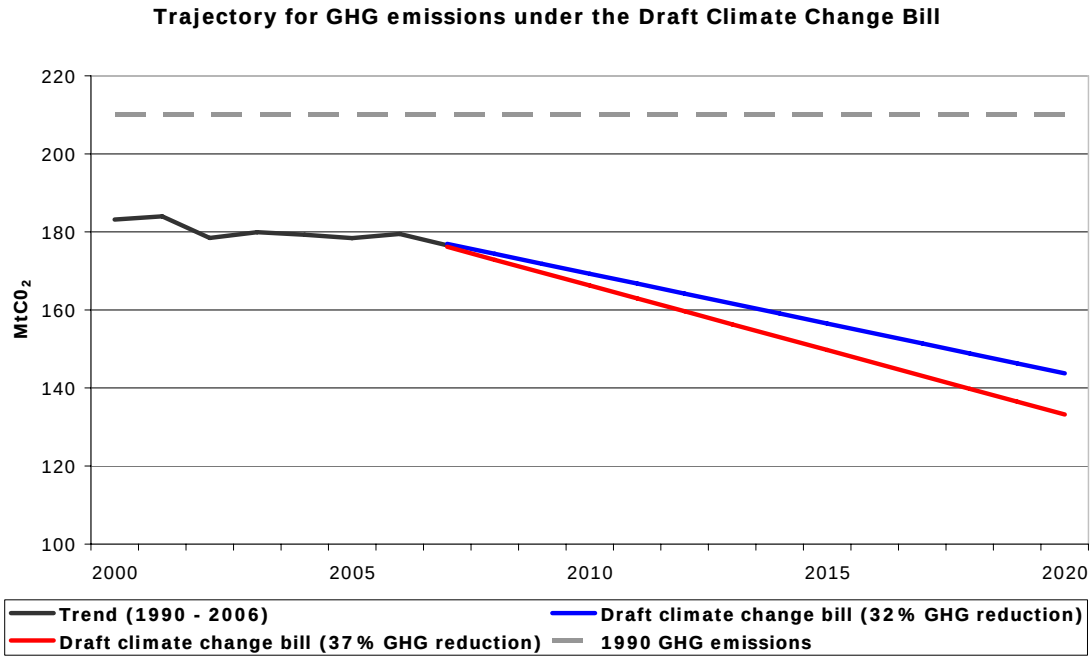
Figure 7: The impact of changing fuel mix on carbon emissions



4.47. In light of these projections and likely developments in low carbon technologies (including CCS) or greater deployment of good quality CHP, it may therefore be appropriate that future lower carbon intensity bands become narrower. As such, once the carbon intensity bandings have been defined, we consider that it would be appropriate for emissions levels permitted under each band to be reduced, reflecting improvements in carbon efficiency. For example, this may increase the rating of traditional gas fired CCGT. This would likely create a greater demand amongst suppliers for increasingly low carbon technologies to be developed in line with the Government trajectory for a reduction in carbon emissions consistent with the targets for a low carbon economy.

4.48. Figure 8 below shows the carbon trajectory that the UK needs to meet in line with the draft Climate Change Bill. The targets within the Bill suggest that the UK should achieve at least a 60 per cent reduction in CO2 emissions by 2050 and a 26-32 per cent reduction by 2020, against the 1990 baseline. To meet the targets would require a reduction in all GHG emissions in the order of 32-37% as outlined in Figure 8 below. We therefore consider it would be appropriate for the carbon bandings under the low carbon guidelines to be made more ambitious over time to facilitate the achievement of these targets.

Figure 8: Trajectory of GHG emissions under the draft Climate Change Bill



4.49. We anticipate that reviews of the continued appropriateness of the bands should take place on a periodic basis e.g. every 5 years according to clearly specified principles. We invite suppliers to have regard to this requirement in developing the independent certification scheme envisaged.

4.50. We would welcome the views of interested stakeholders regarding the proposals to amend the carbon intensity bands over time to reflect the increasing targets for carbon abatement. We would also welcome views regarding whether the 2020 targets are the most appropriate base to consider changes in the bandings against or whether 2050 targets may be more appropriate.

5. Next steps

Chapter summary: This chapter provides an outline of the next steps associated with updating the guidelines for 'green' supply.

5.1. We welcome the views of interested parties on the questions in Appendix 2 and more widely on the content of this consultation by **Wednesday 9 January 2008**.

5.2. In parallel with this consultation process, we are holding a series of deliberative forums with customers in London, Glasgow and in other centres across GB. These forums will provide an opportunity to road test proposals discussed in this consultation at a high level with domestic customers, enabling us to further gauge customer feedback on the issues associated with these guidelines.

5.3. Following the consideration of responses to the consultation and the results of the customer deliberative forums, we intend to issue the new sets of guidelines in **February 2008**.

Compliance with the guidelines

5.4. After the new sets of guidelines are published, suppliers will have one month to sign up to their content (i.e. **March 2008**). We intend to publish a list of suppliers that are signed up to the guidelines on our website. Those suppliers that do sign up to the guidelines will have until **May 2008** (three months from the release of the guidelines) to ensure that their tariffs are compliant with the content of the guidelines set out in Appendix 3.

5.5. Once the guidelines are in place, we expect suppliers, in consultation with stakeholders, to take forward development of an independent third party certification scheme, to be based on the minimum standards established in the updated guidelines. We expect suppliers to have this scheme in place by August 2008 i.e. six months following publication of the updated guidelines. The certification scheme will from that time onwards verify suppliers' claims in respect of the tariffs according to the minimum standards established by the new set of guidelines.

5.6. We welcome the views of respondents in respect to the development of this scheme.