

Summary: Intervention & Options

Department /Agency: DEFRA	Title: Impact Assessment of guidance on measurement and reporting on greenhouse gas emissions	
Stage: Post Consultation	Version: 2.3	Date: 3 September 2009
Related Publications:		

Available to view or download at:

<http://www.defra.gov.uk/corporate/consult/greenhouse-gas/index.htm>

Contact for enquiries: Sam Balch

Telephone: 0207 238 1524

What is the problem under consideration? Why is government intervention necessary?

UK business is responsible for nearly a third of total UK greenhouse gas (GHG) emissions. Tools are needed to help business reduce their emissions, and the DECC/ Defra guidance should help organisations to measure and report GHG emissions, and hence facilitate a reduction in their emissions.

There is a role for Government to provide simple, practical and definitive guidance for business and other organisations to follow when measuring and reporting their GHG emissions.

What are the policy objectives and the intended effects?

To encourage UK organisations to measure and report on the GHG emissions for which they are responsible. Intended effects:

- to reduce UK contributions to global GHG emissions through organisations' improved management of and reduction of GHG emissions, over and above existing Government schemes;
- to promote UK organisations' competitiveness through cost savings from better resource and energy use, improved green credentials in an environmentally aware market place, and a greater level and more consistency in how GHG emissions are measured and reported throughout the supply chain.

What policy options have been considered? Please justify any preferred option.

- 1) Publish guidance on how to measure and report GHG emissions
- 2) Mandate the reporting of GHG emissions

The preferred option is 1. The guidance is voluntary and we expect will meet the policy objectives. There is a need for evidence on the contribution that reporting makes to the UK achieving its climate change objectives before a decision is taken on the introduction of mandatory reporting.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? The policy will be reviewed by 1st December 2010 to establish the contribution that reporting may make to the UK's climate change objectives as required under the Climate Change Act 2008.

Ministerial Sign-off For final proposal/implementation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister:

..... Date:

Summary: Analysis & Evidence

Policy Option: 1	Description: Publish guidance on how to measure and report on emissions
-------------------------	--

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' This figure is calculated for both large and small companies who are reporting for the first time and for large and small companies who do already report but are adjusting how they report to align with the Defra guidelines.
	One-off (Transition)	Yrs	
	£ 0.24m	2	
	Average Annual Cost (excluding one-off)		
£ 8.3m	Total Cost (PV)		£ 17.1m
Other key non-monetised costs by 'main affected groups' This impact assessment stops modelling after two years when a decision will be required on whether to introduce mandatory reporting. The costs associated with voluntary reporting after this two year period have not been quantified.			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' Benefits are not monetised because of a lack of quantitative evidence. The benefits are expected to outweigh costs, as otherwise a company would not voluntarily take-up the guidance. Nevertheless, in absolute terms the overall benefit is expected to be small due to the cautious estimate for predicted level of take-up
	One-off	Yrs	
	£		
	Average Annual Benefit (excluding one-off)		
£	Total Benefit (PV)		£
Other key non-monetised benefits by 'main affected groups' Potential non-monetised savings from more efficient resource & energy use by UK businesses & improved carbon management & reduction in the level of GHG emissions for which UK business is responsible over & above that captured by existing government schemes. Benefits after 2 yrs modelling period not quantified.			

Key Assumptions/Sensitivities/Risks

Emission reductions referred to in this assessment are additional to those under existing mandatory reporting schemes (see para 8)

Price Base Year	Time Period Years	Net Benefit Range (NPV) £	NET BENEFIT (NPV Best estimate) £
-----------------	-------------------	-------------------------------------	---

What is the geographic coverage of the policy/option?	UK				
On what date will the policy be implemented?	Oct 2009				
Which organisation(s) will enforce the policy?	N/A				
What is the total annual cost of enforcement for these organisations?	£ N/A				
Does enforcement comply with Hampton principles?	Yes				
Will implementation go beyond minimum EU requirements?	No				
What is the value of the proposed offsetting measure per year?	£ N/A				
What is the value of changes in greenhouse gas emissions?	£ 0 - para 28				
Will the proposal have a significant impact on competition?	No				
Annual cost (£-£) per organisation (excluding one-off)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">Micro</td> <td style="width: 25%; text-align: center;">Small</td> <td style="width: 25%; text-align: center;">Medium</td> <td style="width: 25%; text-align: center;">Large</td> </tr> </table>	Micro	Small	Medium	Large
Micro	Small	Medium	Large		
Are any of these organisations exempt?	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">No</td> <td style="width: 25%; text-align: center;">No</td> <td style="width: 25%; text-align: center;">N/A</td> <td style="width: 25%; text-align: center;">N/A</td> </tr> </table>	No	No	N/A	N/A
No	No	N/A	N/A		

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)
Increase of £ 0.28m	Decrease of £	Net Impact £ 0.28m

Key: Annual costs and benefits: Constant Prices

[Use this space (with a recommended maximum of 30 pages) to set out the evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Ensure that the information is organised in such a way as to explain clearly the summary information on the preceding pages of this form.]

Background

1. The Climate Change Act (section 83) requires the publication of guidance no later than 1 October 2009 on the measurement or calculation of greenhouse gas (GHG) emissions to assist the reporting of such emissions. The objective is to encourage behaviour change, within any type of organisation, of every size, to manage and reduce the GHG emissions for which that organisation is responsible. It is widely accepted that what does not get measured does not get managed, and so measurement of emissions is an important first step for an organisation to reduce their GHG emissions.
2. Section 84 of the Climate Change Act requires a review to evaluate the contribution that reporting on GHG emissions is making to the achievement of the Government's climate change objectives and that the Secretary of State must lay a report before Parliament not later than 1 December 2010 setting out the conclusions of that review. And by 6 April 2012 the Secretary of State must make regulations on the reporting of GHG emissions under the Companies Act 2006, requiring the director's report of a company to contain such information as may be specified in the regulations about emissions of GHG from activities for which the company is responsible; or lay a report to Parliament explaining why this has not happened. Therefore there is provision in the Climate Change Act for the introduction of regulations in respect of mandatory reporting of GHG emissions for some businesses.
3. A large number of companies do already report their GHG emissions. Many larger, energy intensive companies report for legislative purposes under the EU ETS, and more will do so under the forthcoming Carbon Reduction Commitment which will capture large non-intensive energy users. In addition to meeting mandatory requirements, many companies do recognise that there are benefits from reporting (see Paragraph 8) and voluntarily report their emission to the Carbon Disclosure Project (an independent organisation which holds the largest corporate GHG emissions database in the world).
4. There are a number of existing international reporting protocols, such as World Business Council for Sustainable Development and the World Resources Institute's Greenhouse Gas Protocol; the International Standardisation Organisation ISO14064 parts 1-3; the US Climate Leaders Protocol; and the Carbon Disclosure Project (CDP), which organisations can use to help guide them when measuring and reporting their GHG emissions. These international protocols can be complex and voluminous.
5. In 2006, Defra published general high-level guidance for companies on how to report their environmental performance using a number of environmental Key Performance Indicators (KPIs). "*Environmental Key Performance Indicators – Reporting Guidelines for UK business*" explains to companies how they should report on a range of issues that are relevant to their environmental performance which includes guidance on reporting of GHG emissions. The guidance also covered a range of other environmental issues including resource use and emissions to water and land.
6. A series of workshops on the effectiveness of various existing guidelines and reporting protocols was held at the beginning of the year with a range of UK organisations and revealed general agreement that there was a need for concise guidance on how to report GHG emissions in a consistent and transparent manner. It is against this background, and the legal requirement of the Climate Change Act, that the DECC /

Defra guidance for organisations “How to measure and report your Greenhouse Gas Emissions” has been produced.

7. The draft “Guidance on how to measure and report on your greenhouse gas emissions” was published for consultation on 5 June 2009. During the consultation, specific information was sought on the costs and benefits of introducing the guidance. In the consultation period a series of regional workshops were held with a range of businesses, including SMEs, in order to encourage feedback on the guidance and information exchange. There were 132 written responses to the consultation, of which several organisations provided information to help inform the costs and benefits in this revised Impact Assessment.

Rationale for government intervention

8. The government sees benefits in reporting of GHG emissions. Organisations which measure and report emissions information have stated that they have found benefits from doing so, such as, gaining a better understanding of their own environmental impacts and risks, cost savings and increased resource efficiency. The Government wants to encourage all organisations of all types and sizes to report their GHG emissions as this should help them reduce their emissions, which will aid achievement of the Government targets for UK reductions in emissions by 2050. There are already Government mandatory schemes - EU Emissions Trading Scheme (EU ETS) and the forthcoming Carbon Reduction Commitment (CRC) which are aimed at reducing emissions - but these are narrower in coverage of organisations and scope of emissions than the new Defra guidance.
9. The market mechanism has generated the development of guidance on GHG emission measuring and reporting but there is still **imperfect information** in what has been provided. Much of the current published guidance is complex and can act as a barrier to some, particularly smaller, organisations wanting to report; a number of different approaches can be used which limits comparison over time and across sectors; and often there is little steer on what additional information should be provided to support the published data.
10. The environmental guidance (Paragraph 5) is aimed at helping companies to report on a range of environmental issues and so lacks the detail now expected by most organisations when seeking to measure and report their emissions. The DECC / Defra guidance on measuring and reporting emissions will correct for the imperfect information within the more general environmental guidance, and elsewhere, so that GHG emissions data is measured and reported on a more consistent and transparent basis. The new DECC / Defra guidance also takes account of the fact that there is currently little guidance that is accessible for small, medium sized (SME) enterprises and so attempts have been made to take account of their needs and make the guidance relevant to them as well as larger businesses, and to generally make it user-friendly. Feedback from the consultation suggested that SMEs new to reporting would benefit from a separate user-guide and the intention is such a guide will be produced and published alongside the main guidance.
11. It is widely accepted that measurement of emissions is an important first step to the management and reduction of emissions. The guidance focuses on how companies should measure and report their emissions and, therefore, is an important tool which will help to facilitate what an organisation chooses to do next to manage and reduce its greenhouse gas emissions. A company is not required to report to Government the greenhouse gas emissions data which it has measured under this Guidance.

Policy Option:

To publish guidance on how to measure and report on greenhouse gas emissions

12. The voluntary guidance on how to measure and report on greenhouse gas emissions will be published by 1 October 2009. Further evidence on the costs and benefits of measuring and reporting of greenhouse gas emissions, including the impact of this guidance, will be used to inform the decision on whether to introduce regulations requiring mandatory reporting. A review will be undertaken, by December 2010, to evaluate the contribution that reporting on GHG emissions is making to the achievements of Government's climate change objectives.
13. Organisations which **choose** to measure and report their emissions will be encouraged to use the DECC/ Defra guidance, "How to measure and report your Greenhouse Gas Emissions".
14. Responses to the consultation welcomed the guidance and supported the approach taken, especially the fact that it was based on - the internationally-recognised reporting standard - the GHG Protocol, as this helps ensure consistency for those companies already reporting their GHG emissions or having to report in other jurisdictions. Organisations found that the guidance was comprehensive and provided a good level of detail. They were supportive of the approach which set out a recommended minimum that companies should report.
15. Feedback received during the consultation was that for SMEs, especially those SMEs completely new to reporting, a further stand-alone and simplified guide, specific to their needs, would be very helpful. This would provide more basic information on what they need to do to measure and report their greenhouse gases and would identify appropriate sources of help such as on-line reporting tools. This idea was tested at stakeholder workshops - held during the consultation period with the Institute of Environmental Management Assessment - and feedback received was positive. The intention is therefore to produce a shorter, less-detailed, SME version of the guidance.

Costs

16. The guidelines are voluntary and it would be expected that over time the benefits of reporting would outweigh the costs of reporting.
17. During the consultation period, information was sought on the costs and benefits of introducing the guidance. Several organisations of varying sizes responded which has helped to inform the revised costs and benefits detailed below.
18. The key costs from this policy option would be:
 - a. One-off costs – these costs relate to organisations familiarising themselves with the guidance document.
 - b. Annual costs – these costs relate to the administrative costs to an organisation of using the guidelines. These costs will include identifying which of its operations the organisation should include to measure its GHGs, identifying the activities undertaken by the organisation which release GHGs, collecting data from these activities, converting this data into GHG emissions and reporting the GHG emissions data in an appropriate format. Costs will vary depending on the experience of the company in reporting emissions; whether companies report under existing schemes; the size of the company; and the number of companies that take-up the new guidance. There will be a cost to using these guidelines, over and above the cost of reporting for existing mandatory schemes, i.e. EU ETS, and the CRC. The costs will also vary according to the scope of emissions which the company reports. As a minimum it is recommended that companies report their scope 1 (emissions from activities which the organisation owns or controls eg emissions from combustion in owned or controlled boilers, owned or controlled vehicles) and 2 emissions (emissions from consumption of purchased electricity, heat, steam or cooling) on a global basis. It is discretionary whether companies report scope 3 emissions (emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed

as scope 2 emissions. If companies choose to report scope 3 it is expected that this will increase their costs for measuring and reporting. It is important to note that companies which do report under existing mandatory schemes will be able to use the same data.

- c. The assumptions used in the cost calculation are based on responses received to the consultation. The consultation included a specific question on the impact assessment, "We welcome your comments on the attached impact assessment for this policy? Do you have any estimates for how long it would take you to follow the guidance? We welcome information on costs and benefits for both policy options." This has helped to inform the number of companies reporting, the hours for collecting data, calculating emissions and reporting the emissions information and the hourly rate. We have not relied solely on the consultation responses but have done an internal sense check on the responses. We have decided to go with a cautious estimate for the length of time it will take to measure and report (ie slightly higher than the average given in the responses) and for the estimated take up by companies.
- d. The responses received from the consultation indicate that as organisations become more experienced in data collection and, for example, have a standardised system in place for collecting and analysing the data, the time taken to measure and report GHG emissions falls over time.
- e. In respect of hourly rates we have reflected the views received in the consultation and the hourly rates provided in the Admin Burden template used by Defra's Coordination of Environment Regulation adjusted to present values.
- f. We have further taken into consideration the number of large companies likely to be captured by the forthcoming CRC 2010 which we would expect has encouraged more companies to report their emissions as they preparing for the reporting requirements of the mandatory cap and trade scheme.
- g. We have also assumed that the number of companies which take up the guidance will not all take up the guidance in the first year of publication.
- h. We have calculated the annual costs for a two year period – 2009/10 and 2010/11. The Impact Assessment stops modelling after two years because a decision on the introduction of mandatory reporting is required by 2012 and so a further impact assessment would be needed of the costs and benefits of this policy prior to the introduction of regulations. If reporting remains voluntary after 2012, the costs of voluntary reporting are likely to continue to steadily decline as emissions management is expected to increasingly become an integral part of business management. These further costs and benefits of voluntary reporting have not been quantified in this impact assessment.

19. **ONE-OFF COSTS**

2009/10				
	Hours	Hourly rate (£)	Number of companies	Cost (£)
Adjusting companies large -	2	30.00	2,000	120,000
Adjusting companies small -	2	17.85	3,000	107,100

Newly reporting companies - large	4	30.00	200	24,000
Newly reporting companies - small	2	17.85	3,000	107,100
Total				358,200

2010/11				
	Hours	Hourly rate (£)	Number of companies	Cost (£)
Newly reporting companies - large	4	30.00	200	24,000
Newly reporting companies - small	2	17.85	3,000	107,100
Total				131,100

Note: Adjusting companies in 2009/10 do not incur any costs in year 2010/11 as they are assumed to have made full adjustment in the first year.

The assumptions for the number of hours and number of hours are based on information provided by the Carbon Disclosure Project, responses received to the consultation and an internal sense check. For 2009/10 we have assumed that the introduction of the CRC from 1 April 2010 has encouraged more companies to report their emissions as they prepare for the reporting requirements of the mandatory cap and trade scheme. The assumptions for the hourly rates are based on the consultation responses, internal sense check and the hourly rates provided in the Admin Burden template used by Defra's Coordination of Environment Regulation adjusted to present values. The rate of £17.85 for small companies assumes that the owner of the business will be undertaking most of the work to measure and report greenhouse gas emissions.

20. YEARLY COSTS

2009/10				
	Hours	Hourly rate (£)	Number of companies	Cost (£)
Adjusting companies - large	35	30.00	2,000	2,100,000
Adjusting companies - small	20	17.85	3,000	1,071,000
Newly reporting companies - large	210	30.00	200	1,260,000

Newly reporting companies - small	70	17.85	3,000	3,748,500
Total				8,179,500

2010/11				
	Hours	Hourly rate (£)	Number of companies	Cost (£)
Adjusting companies - large	158	30.00	200	948,000
Adjusting companies - small	53	17.85	3,000	2,838,150
Newly reporting companies - large	210	30.00	200	1,260,000
Newly reporting companies - small	70	17.85	3,000	3,748,500
Total				8,794,650

In 2010/11 the companies referred to as Adjusting companies are the Newly reporting companies in 2009/10.

The assumptions for the number of hours and number of hours are based on information provided by the Carbon Disclosure Project, responses received to the consultation and an internal sense check. The assumptions for the hourly rates are based on the consultation responses, internal sense check and the hourly rates provided in the Admin Burden template used by Defra's Coordination of Environment Regulation adjusted to present values. The rate of £17.85 for small companies assumes that the owner of the business will be undertaking most of the work to measure and report greenhouse gas emissions.

We have assumed that they become more familiar with the guidance and the process for measuring and reporting emissions and therefore more efficient at carrying it out.

ADMIN BURDEN

21. An administrative burden for organisations has also been calculated following the guidelines from the Admin Burden Template. This burden is associated with organisations familiarising themselves with the guidance. This will be a burden for organisations new to reporting, and organisations which do already report but who adjust the approach they use to align with DECC/ Defra's recommended approach. We have aimed to minimise this burden by providing clear and concise guidance, based on the GHG Protocol, in a user friendly format. Following the responses from the consultation we have produced a SME user guide to minimise admin burden for smaller entities.
22. We would expect a small business reporting for the first time to spend approximately 2 hours familiarising themselves with the guidance. This assumes that they use the

separate SME guide. A large organisation would spend approximately 4 hours familiarising themselves with the actual guidance document.

23. For those companies that already measure and report we would expect them to spend approximately 2 hours familiarising themselves with the guidance.

POTENTIAL OTHER COSTS

24. The guidance is voluntary, and furthermore is not a standard so organisations are not required to receive external assurance. However some organisations may choose to receive external assurance over the GHG emissions reported. Organisations spoken to state that the cost of assurance varies from £15,000 to £100,000 depending on the type of assurance received and the consultants used to do it. Feedback from the consultation suggests that this is at the top end of estimates.

Benefits

25. Potential uptake from newly adopting companies for using these guidelines is difficult to measure because it is voluntary. The highest estimate for potential uptake, additional to those companies already reporting under mandatory schemes is 4.7 million businesses (source: BIS). The total take-up of this guidance expected over the two years of appraisal is 11,400. This is 0.25% of the total 4.7 million businesses, and so as a result we would not expect the benefits associated with this take-up to be large in absolute terms. However the estimate used for take up is cautious and if a higher estimate had been used the benefits and the costs associated with using the guidance would be larger.
26. We hope at least an additional 200 large companies and 3,000 SMEs in 2009/10 and the same numbers in 2010/11 will choose to start reporting their GHG emissions because of the publication of this guidance.
27. The benefit of introducing guidance before possible mandatory reporting regulations are introduced is that it gives organisations time to prepare. They will have time to become familiar with the DECC/Defra Guidance, put in place processes and tools needed to collect data, and identify any problems in the data collected before it has to be reported externally.
28. It will also enable the recommended approach to be used as a pilot test before any possible introduction of mandatory reporting.
29. The key benefits from the measuring and reporting of GHG emissions are for the company doing the reporting: cost savings as companies identify opportunities to increase resource and energy efficiency will help generate improvement in competitive advantage; demonstrate leadership by setting ambitious targets, measuring, managing, reporting and reducing GHG emissions; and strengthen an organisation's green credentials in an increasingly environmentally conscious marketplace. The guidance will also generate long-term benefits from behaviour change as organisations develop GHG management and emission reduction programmes to help in reducing their exposure to climate change risk. These benefits will help UK businesses contribute to meeting UK national carbon budgets. In contributing to meeting the UK targets, businesses will also be contributing to the meeting of EU targets.
30. It is difficult to quantify the financial benefits. The responses from the consultation received on the benefits of reporting were very limited. Of note is a response from Damco, "*On the savings side we believe that, given our experience in optimizing transportation and distribution emissions, 10-15% cost reductions are usually achievable in the mid-term (1-3 years).*"
31. Respondents have stated that for some small businesses, costs may outweigh the benefits but the production of a user-friendly SME guide should help reduce costs for SMEs.

32. Case studies show that organisations that measure their GHG emissions do experience a reduction in carbon emissions, improve their resource and energy efficiency and save costs. However it is difficult to separate out the contribution that reporting alone has made to the performance as the organisation will usually have several initiatives ongoing to manage energy efficiency and reduce costs. The cost savings and emission reductions detailed below cannot be attributed to reporting alone but do provide an indication of the impact reporting can have when combined with emission reduction activities:

a. Devonport Management Ltd (Source: Carbon Trust)

Worked with the Carbon Trust to improve energy efficiency: investments made in monitoring and targeting improvements; and an energy awareness raising programme.

Benefits: 13% reduction in gas use; saving **3,800 tonnes of CO₂**; saving **£500,000**

b. Westbury Dairies (Source: Carbon Trust)

Working with the Carbon Trust to develop an energy management system based on targeting energy use and identifying where efficiencies could be made; and appointed an energy manager.

Estimated benefits: **16% reduction** in carbon emissions; **saving** more than **£400,000** a year

c. Yorkshire Water (Source: BiTC)

The company has developed an industry-leading system to calculate operational and embedded carbon, such as that from energy use, transport, supply chain activities which helps the company take climate impacts into account in its investment decisions.

Benefits: **£1.2million saved** in 2007 as a result of energy efficiency schemes; **7% reduction** in carbon emissions since 2004

d. Meadowhall (Source: BiTC)

Meadowhall's targets include a 10% reduction of electricity and gas consumption and increasing awareness of energy efficiency. Meadowhall works with electricity and gas suppliers and with cleaning, security and maintenance teams to monitor energy usage in the Centre.

Benefits: Between 2004 and 2005, energy efficiency initiatives led to a **745 tonne reduction** in overall CO₂ emissions. During 2005 alone saved **£80,944**.

33. The Defra guidance will provide further benefits to companies that do report because they will help to make the measuring and reporting process easier as:

a. The recommendations on the minimum to report should ensure that all organisations find the guidelines helpful and so take less time to prepare their GHG emissions report.

b. It provides explanations of technical concepts with more details on the practical application of these in technical annexes. There are also links to other tools needed to use to calculate their GHG emissions so that the document is self-contained.

c. The guidance includes real-life case studies to illustrate its practical application.

d. It encourages more consistency throughout the supply chain. Suppliers of organisations can follow the same approach as the company they supply when

measuring GHG emissions which will mean that it will be easier to collect and consolidate data giving an organisation a far greater understanding of their total GHG footprint.

- e. The transferable skills of the preparers of the GHG emissions data will increase as they will be familiar with using Defra's recommended approach and can use the same approach for different organisations.

34. These revised guidelines will provide further benefits to the users of emissions information by:

- a. Increasing the level of transparency and credibility of reported data because a recognised approach has been followed. The revised guidelines also set out what supporting narrative information organisations are encouraged to include when reporting. This again should increase the usability of the GHG data reported because there will be greater context around the numbers in respect of, for example, changes to the organisational structure that have occurred which could explain an unexpected increase in reported GHG emissions.
- b. Providing a greater level of consistency in how organisations calculate and measure their GHG emissions and in what they should report. This will facilitate greater comparison over time within, and between, organisations. Organisations will be able to, if they wish to do so, benchmark themselves more easily against other organisations.

35. The guidelines encourage UK organisations to measure and report on their global emissions, not just their UK-based emissions therefore giving a better picture of the emissions that the UK can influence. The guidelines recommend organisations report on the six Kyoto gases, not just CO₂, and there is no de minimis threshold for reporting companies - all types organisations, of all sizes can measure and report their GHG emissions.

Conclusion

36. The main benefit from the publication of guidelines for voluntary corporate reporting should be an increase in the number of organisations choosing to report their GHG emissions, reductions in the level of emissions each organisation produces and an overall reduction in the emissions of UK business. There will be a cost when using these guidelines, especially for the first time, but as companies become more experienced this should lessen and should be offset by the benefits that can accrue to a company which measures, reports and reduces its emissions.

37. Further evidence is needed before a decision on introducing a mandatory scheme can be made.

38. It is expected that the review which will take place in 2009/2010 will provide more comprehensive information on the costs and benefits of measuring and reporting GHG emissions.

IMPACT TESTS

Competition Assessment.

The proposed guidance is voluntary and so there is no detrimental effect on competition.

Small Firms Impact Test

The proposed guidance is voluntary and so there is no detrimental effect on small firms. Small firms which follow the guidance will experience an initial cost which we have sought to minimise through the production of a SME guide. Over time we would expect costs to be outweighed by benefits from improved resource efficiency and reduced energy costs.

Legal Aid.

The proposed guidance is voluntary and so there are no legal implications.

Sustainable Development.

This should have a beneficial effect on sustainable development.

Carbon Impact Assessment.

The proposals should lead to a reduction in emissions of greenhouse gases, as organisations which follow the voluntary guidelines are encouraged to incorporate the measurement and reporting of emissions into a GHG emissions management programme.

Other environment.

This should have a beneficial effect on other environmental impacts such as exposure to flood risk, waste management and air quality as organisations are encouraged to consider broader climate change risks and opportunities.

Race Equality Impact Assessment.

The policy proposals do not have any race equality impacts.

Disability Equality Impact Assessment.

The policy proposals do not have any Disability Equality impacts.

Gender Equality Impact Assessment.

The policy proposals do not have any gender equality impacts.

Human Rights.

There are no human rights issues raised by these proposals.

Health Impact Assessment.

The policy proposals will not have an impact on health or health inequalities.

Rural Proofing.

The guidelines are voluntary and should not have a different or disproportionate impact in rural areas due to particular rural circumstances or needs.

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	Yes	No
Legal Aid	Yes	No
Sustainable Development	Yes	No
Carbon Assessment	Yes	No
Other Environment	Yes	No
Health Impact Assessment	Yes	No
Race Equality	Yes	No
Disability Equality	Yes	No
Gender Equality	Yes	No
Human Rights	Yes	No
Rural Proofing	Yes	No

Annexes

1) Westbury Dairies is the largest single-site dairy in the UK. In 2004 Westbury's annual energy bill was in excess of £2m and so the organisation contacted the Carbon Trust for advice on energy efficiency.

Westbury Dairies received an Energy Management Assessment from the Carbon Trust and developed an energy management system based on their recommendations. It has been estimated that if Westbury Dairies implement these recommendations, it could save more than £400,000 each year on its energy bill and reduce carbon emissions by almost a sixth.

Westbury Dairies is the largest single-site dairy in the UK, running 24 hours a day, seven days a week, with the capacity to process more than 2.5 million litres of milk per day. In 2004 Westbury's annual energy bill was in excess of £2m.

After an initial survey, Westbury Dairies received an Energy Management Assessment from the Carbon Trust and developed an energy management system based on their recommendations.

These recommendations included computer aided monitoring; targeting energy use and identifying where efficiencies could be made - such as heat recovery to thermal oil radiators (their largest sole energy consumer) - and utilising hot water more efficiently.

In addition, an energy manager has been appointed and a committee set up to identify and oversee further measures. A training programme is being planned to make sure all staff at Westbury Dairies get behind the initiative and were ready to implement the necessary changes.

It's been estimated that Westbury Dairies could save over £400,000 each year on their energy bill and reduce their carbon emissions by almost a sixth.

Allan Walker of Westbury continued: "I've been very impressed by the scale of energy saving opportunities. We are dedicating resource to review and implement the Carbon Trust's initial recommendations. I'd encourage any business faced with escalating energy cost to call the Carbon Trust."

Source: Carbon Trust

2) In three years working with the Carbon Trust, Devonport Management Ltd has reduced its gas use by 13 per cent, saving an estimated £500,000 per year. Major improvements have been in the efficiency of the steam system and in raising awareness on energy.

Devonport Management Ltd (DML) offers a complete range of design, build and support solution across both the defence and commercial marine sectors, working on everything from major warship design to refitting super-yachts. The company is the largest private sector employer in Devon and Cornwall, with 4,800 staff and operates the largest marine support complex in Western Europe.

In three years working with the Carbon Trust, DML focussed its efforts on improving efficiency in their compressed air and steam system, where 60-80 per cent of heat generated in summer was being lost through distribution.

The company has made major investments in monitoring and targeting and steam trap improvements. It also implemented a partial summer shutdown to enable major repairs tackling steam leaks and replacing damaged sections of pipes. At the same time, an energy awareness raising programme with partners and clients has helped further reduce energy use and publicise DML's efforts to a wider audience.

So far, these efforts have led to a 13 per cent reduction in gas use, saving 3,800 tonnes of carbon dioxide and £500,000. With more projects to be completed, these figures could double.

Paul Treble, DML energy manager, says, "The Carbon Trust has provided invaluable assistance in raising the profile of energy consumption at our site. The standard of the consultancy support is very high and they have encouraged us to think outside the box."

Source: Carbon Trust

3) Yorkshire Water, one of the ten largest water companies in the world, is keenly aware that it is on the front line in facing the threats posed by climate change, such as flooding and water scarcity. To mitigate these impacts and safeguard its future success, the company is improving the energy efficiency of its assets and generating energy from a variety of renewable sources.

Within the cost-benefit analysis tool that Yorkshire Water uses to prioritise capital projects, the company has developed an industry-leading system to calculate operational and embedded carbon, such as that from energy use, sludge management, transport, construction and supply chain activities. Using the 'shadow price of carbon', this helps the company take climate impacts into account in its investment decisions.

In one such project, Yorkshire Water worked with Laing O'Rourke, one of its contract partners, to reduce the climate impact of one of its largest capital schemes by considering the carbon costs of potential materials and transport. This allowed project leaders to make decisions that greatly reduced the overall footprint of the project, including sourcing concrete from a local supplier and building a more conveniently located gate to minimise travel costs and emissions.

To avoid volatile energy prices, Yorkshire Water has begun generating its own renewable energy. To date, the company has installed seven wind turbines, three hydroelectric turbines and 18 combined heat and power (CHP) plants across its sites.

Impact

- Onsite renewable energy generation worth over £1million in 2007
- £1.2million saved in 2007 as a result of energy efficiency schemes
- 7% reduction in carbon emissions since 2004

Source: BiTC

4) In 1992, Meadowhall became the first shopping centre to establish its own Green Action Plan. The environmental team has been consulting, engaging and communicating with stakeholders on environmental initiatives ever since.

The Centre's energy efficiency initiatives have top-level support and clear leadership roles, contribute to business objectives and are part of the risk management system. Targets include 10% reduction of electricity and gas consumption and increasing awareness of energy efficiency.

Meadowhall works with electricity and gas suppliers and with cleaning, security and maintenance teams to monitor energy usage in the Centre. Its business management system service provider has implemented time and temperature controls at Meadowhall's request. The Centre's Procurement Team now purchases 15-20% more efficient hydrocarbon cooling units, as well as air handling units with full recirculation capability and 91% efficiency. To be proactive about upcoming legislation and conduct independent audits, Meadowhall has partnered with external experts such as Carbon Trust and the Edinburgh Centre for Carbon Management.

Impact

- Between 2004 and 2005, Meadowhall's energy efficiency initiatives reduced electricity consumption by over 11% and gas consumption by 35%, while increasing public awareness of energy efficiency. This reduction of 2,081,271 KWh equates to a 745 tonne reduction in overall CO2 emissions (assuming non-green supply), with the impact further reduced through use of electricity from 100% renewable sources since October 2004.
- During 2005 alone, these initiatives saved the Centre £80,944 by reducing the amount of energy used. Had consumption remained constant, electricity costs would have been £72,530 higher and gas costs £8,414 higher. These savings enable Meadowhall to offer a competitive service charge, benefiting the business and retailers.

Source: BiTC