Summary: Intervention & Options

Department /Agency:	Title:	
DEFRA	Impact Assessment of guidance on measurement and reporting on greenhouse gas emissions	
Stage: Consultation	**Version:** 1.9	**Date:** 28 May 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 Defra guidance should help organisations to measure and report GHG emissions, and hence reduce 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 brand recognition 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

Cannot compare option 1 (numbers of organisations applying guidance is unknown) directly with option 2 (approximate number of companies captured by regulation would be known).

The preferred option is 1. The guidelines are voluntary and it would be expected that overtime the benefits of reporting would outweigh the costs of reporting (Para 14).

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 SELECT STAGE Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

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	
One-off (Transition) **Yrs**	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.
£	
Average Annual Cost (excluding one-off)	
£ 7,144,400	**Total Cost** (PV) **£ 7,144,400**

Other **key non-monetised costs** by 'main affected groups' Admin burden: Familarisation with guidance.

BENEFITS

ANNUAL BENEFITS	
One-off **Yrs**	Description and scale of **key monetised benefits** by 'main affected groups' Benefits have not been monetised because more evidence is required.
£	
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 and energy use by UK businesses and improved carbon management and reduction in the level of GHG emissions for which UK business is responsible over and above that captured by existing government schemes.

Key Assumptions/Sensitivities/Risks

Emission reductions referred to in this assessment are additional to those under existing mandatory reporting schemes (see para 7 & 27)

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?			Sept 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 24	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ Decrease of £ **Net Impact** **£** TBD

Key: **Annual costs and benefits: Constant Prices**

Summary: Analysis & Evidence

Policy Option: 2	Description: To introduce regulations making companies to measure and report their GHG

COSTS

ANNUAL COSTS	
One-off (Transition) **Yrs**	Description and scale of **key monetised costs** by 'main affected groups' Monetised cost not quantified more evidence required. Number of UK companies mandated to report needs to be determined.
£	
Average Annual Cost (excluding one-off)	
£	**Total Cost** (PV) **£**

Other **key non-monetised costs** by 'main affected groups' Cost of collecting data, calculating emissions & reporting. Time cost for first time reporters: for larger companies 60hrs; for smaller companies 40 hrs (source: CDP); Audit fees; Admin burden: Familarisation with guidance and for reporting in Annual Accounts.

BENEFITS

ANNUAL BENEFITS	
One-off **Yrs**	Description and scale of **key monetised benefits** by 'main affected groups' Benefits have not been monetised because more evidence is required.
£	
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 and energy use by UK businesses and improved carbon management and reduction in the level of GHG emissions for which UK business is responsible over and above that captured by existing government schemes.

Key Assumptions/Sensitivities/Risks Emission reductions referred to in this assessment are additional to those under existing mandatory reporting schemes (see para 7 & 27)

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?				To be consulted on
Which organisation(s) will enforce the policy?				To be consulted
What is the total annual cost of enforcement for these organisations?				£ Data sought
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 24
Will the proposal have a significant impact on competition?				No
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	Yes/No	Yes/No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ Decrease of £ **Net Impact** **£** TBD

Key: **Annual costs and benefits: Constant Prices** **(Net) Present Value**

[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 by 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 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 7) 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; 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 recent series of workshops, with a range of UK organisations, on the effectiveness of the various existing guidelines and reporting protocols, 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 Defra guidance for organisations "How to measure and report your Greenhouse Gas Emissions" has been produced.

Rationale for government intervention

7. 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 on measuring and reporting.

8. 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 information.

9. 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 report their emissions. The 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 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.

Policy Options

Option one: **To publish guidance on how to measure and report on greenhouse gas emissions**

10. Organisations which **choose** to measure and report their emissions would be encouraged to use new Defra guidance, "How to measure and report your Greenhouse Gas Emissions" which form the basis of this consultation. **This is the preferred option.**

11. Having consulted with stakeholders and interested parties, through a series of workshops, it was concluded that there is a need for more detail on GHG emissions measuring and reporting than is currently in the Defra general environmental guidance. These new, more specific emission guidelines will provide better direction to companies in how to measure and report GHG emissions and improve potential uptake by organisations, especially smaller organisations. It was also agreed at the workshops that the Defra guidelines on GHG reporting should be: fully comprehensive so there is not a need for organisations to have to go to different places to get additional information; include a recommended standard practice approach and an approach that what would qualify as best practice; provide more detailed guidance on particular technical issues; and be easy to follow. It was also agreed that the guidance should be based on widely used international reporting frameworks to ensure consistency for those companies already reporting their GHG emissions or having to report in other jurisdictions.

Option two: **To introduce regulations making it mandatory for companies to measure and report their GHG emissions**

12. Regulations could be introduced by April 2012 to make it mandatory for companies to measure and report their Greenhouse Gas Emissions. The requirement to use Companies Act powers to make reporting of greenhouse gas emissions mandatory are in section 85 of the Climate Change Act 2008. If the Secretary of State does not make reporting mandatory then a report must be laid before Parliament explaining why this has not happened. More evidence is needed on the costs and benefits of such a policy before any decision on making regulations to mandate measuring and reporting is made. It is expected that more evidence will become available following this consultation and the review in 2010, referred to under paragraph 2 above, which will seek to obtain specific evidence on the costs and benefits of reporting GHG emissions. The review should also provide evidence on whether there is an increase in reporting; if it has resulted in a reduction in the level of emissions a company reports; and if companies are reporting in a sufficient level of detail. We would welcome any information on any costs and benefits of GHG reporting from respondents to this consultation.

13. This is not the preferred option.

Costs

Option one:

14. The guidelines are voluntary and it would be expected that overtime the benefits of reporting would outweigh the costs of reporting. The key costs from this policy option would be:

    a. Administrative costs to business of using the revised guidelines. 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 CRC. These costs will vary depending on the experience of the company in reporting GHG emissions, the size of the company and the number of companies that take-up the new guidance:

Adjusting companies (companies that already report but are adjusting their approach to align to Defra guidance "How to measure and report your Greenhouse Gas Emissions"):

i. For a **large** company adjusting their approach to align to Defra's guidance the time taken to collect data, calculate and report will be approximately **45 hours.** This estimate is calculated based on information provided by the CDP and assumes that the company is experienced in reporting but requires additional time to adapt systems and processes. We estimate that approximately **2,000** large companies who previously reported may adopt the new guidance. We have assumed that the introduction of the CRC from 1 April 2010 has encouraged more companies to report their emissions as they preparing for the reporting requirements of the mandatory cap and trade scheme.

ii. If the 2008 median figure for gross hourly pay across all companies of £10.60 is used this will give a total cost of **£954,000** for adjusting large companies**.** This is calculated as follows:

time taken by adjusting large company * hourly wage * number of newly adopting large companies who adopt new guidance

= 45 hours * £10.60* 2,000 companies

iii. For a smaller company adjusting their approach to align to Defra's guidance, the time taken to collect data, calculate and report will be approximately 28 hours. This estimate is calculated based on information provided by the CDP and again assumes the company is experienced in

reporting but requires additional time to adapt systems and processes. We estimate that approximately 3,000 small companies who have previously reported may adopt the new guidance. This estimate is based on the number of SMEs that have requested support to calculate their carbon footprint (source: Global Action Plan).

iv. If the 2008 median figure for gross hourly pay across all companies of £10.60 is used this will give a total cost of **£890,400** for adjusting small companies**.** This is calculated as follows:

time taken by adjusting small company * hourly wage * number of newly adopting large companies who adopt new guidance

= 28 hours * £10.60* 3,000 companies

Newly adopting companies:

v. For a **large** company collecting and analysing climate change information for the **first time** takes approximately **60 hours.** This estimate was provided by the CDP and assumes that the company is providing a comprehensive level of information on both greenhouse gas emissions and other climate-related information relevant to their business. We estimate that approximately **500** large companies who have not previously reported may adopt the new guidance.

vi. If the 2008 median figure for gross hourly pay across all companies of £10.60 is used this will give a total annual cost of **£318,000** for newly adopting large companies**.** This is calculated as follows:

time taken by newly adopting large company * hourly wage * number of newly adopting large companies who adopt new guidance

= 60 hours * £10.60* 500 companies

vii. For a smaller company collecting and analysing climate change information for the first time it takes approximately **40 hours**. This estimate was also provided by the CDP and again assumes that the company is comprehensive in its approach. The number of hours is lower than a larger company because they will have a simpler organisational structure so data collection from activity sources within the organisation should be easier. We estimate that approximately **11,750** small companies who have not previously reported may adopt the new guidance. This estimate assumes that approximately 0.25% of SMEs in the UK (4,695,300 SMEs in total at the start of 2007 source: BERR) will take up the new guidelines and report their GHG emissions for the first time.

viii. If the 2008 median figure for gross hourly pay across all companies of £10.60 is used this will give a total annual cost of **£4,982,000** for newly adopting small companies**.** This is calculated as follows:

time taken by newly adopting small company * hourly wage * number of newly adopting large companies who adopt new guidance

= 40 hours * £10.60* 11,750 companies

ix. These figures for time taken in reporting are broadly borne out when speaking to organisations reporting to the CDP.

x. It can be expected that the figures for using the Defra guidance will be of a similar magnitude as reporting to CDP but will fall once organisations become more experienced in data collection and, for example, have a standardised system in place for collecting and analysing the data. We

encourage respondents to the consultation to provide estimates of the cost of following the guidance.

b. 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. We encourage respondents to this consultation to provide cost estimates.

c. There is also a further cost to businesses because there is an administrative burden for organisations as they familiarise themselves with the guidance. This will be a burden for organisations new to reporting, and organisations which do already report who may adjust the approach they use to measure and report to align with Defra's recommended approach. However, this burden is expected to be minimal because the guidance is voluntary and organisations have no obligation to read them; and the guidance is based on the GHG Protocol which forms the basis of most existing initiatives. From consultation at the stakeholder workshops Defra's recommended approach will be similar to the approach already used by many organisations.

d. This administrative burden cost has been included in the overall annual cost. We would expect a business to spend approximately 3-4 hours familiarising themselves with the guidance for the first time. We encourage respondents to the consultation to provide cost estimates in respect of admin burdens.

Option two:

15. The cost per company to comply with mandatory requirements will vary depending on the exact content of such guidance, that is, whether it is the same as the proposed voluntary guidance, and which companies fall within scope of the regulations. For an individual company within scope of the regulations, costs of mandatory reporting would be affected by how complicated a company's emissions are to measure; and what existing measurement and reporting of emissions the company was carrying out. We encourage respondents to the consultation to provide cost estimates.

16. It is possible that a mandatory scheme would include a size threshold so that smaller companies would be exempt from reporting. If a mandatory scheme is targeted at a smaller number of companies than the total number of UK companies outlined in paragraph 21 (below) it could have less impact than a voluntary one in reducing overall emissions. This is because with a voluntary scheme there is no size threshold and any company of any size may choose to report and so the potential uptake is larger. The CBI estimates that SMEs individually have only a small carbon impact, but collectively they account for 20 per cent of total GHG emissions. Therefore a mandatory scheme may fail to capture a significant proportion of the UK's GHG emissions. Further evidence is therefore needed before a recommendation for introducing a mandatory scheme is made.

17. There is already a requirement under section 417 of the Companies Act 2006 (the "business review") for directors of quoted companies[1], to report certain information, including on environmental issues, to the extent necessary for an understanding of the development, performance or position of the company's business. The business review requirements in section 417 only came into force on 1 October 2007 for financial years beginning on or after that date, so the Government is not yet able to assess their impact in respect of environmental reporting.

[1] A quoted company is defined in section 385 of the Companies Act 2006 as a company whose equity share capital is listed in the UK or in an EEA State, or admitted to trading on the New York Stock Exchange or NASDAQ.

18. There is a lack of information at the present time on which organisations should be within scope. This would also need to be the subject of public consultation. Depending on the coverage of any mandatory scheme the costs for UK business could be significant.

19. Other costs from this policy option would be:

    a. There is likely to be an additional cost involved for some companies of having to adapt systems and processes more quickly so that this information could be gathered to meet the regulatory requirements.

    b. If companies were mandated to report their emissions within their Annual Accounts, companies would incur an increase in their audit fees. The increase would depend upon where it was decided that the information should be reported.

20. There will also be an administrative burden cost. This will be higher than the cost under option 1. This is because companies required to report will have to familiarise themselves with the reporting guidelines. However, the extent of this burden will depend on whether the company is already using the guidelines to report voluntarily. An additional burden from this policy is that companies will be required to report their GHG emissions data along with their Annual Accounts. We encourage respondents to the consultation to provide cost estimates in respect of admin burdens.

Benefits of corporate reporting guidelines

Option one:

21. 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: BERR).

22. We hope at least an additional 500 large companies and 11,750 SMEs will choose to start reporting their GHG emissions because of the publication of this guidance. This will be significantly more than the number of companies which will be required to reporting under mandatory schemes. (DECC estimates that EU ETS captures 370 organisations; CRC will capture 5,000 organisations).

23. 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; improvement in competitive advantage; behaviour change as organisations develop GHG management and emission reduction programmes; reduction in exposure to climate change risk; demonstration of leadership by setting ambitious targets, measuring, managing, reporting and reducing GHG emissions; and improvement of brand recognition in an increasingly environmentally conscious marketplace.

24. 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 of the organisation 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**.

25. 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. A two tiered approach of standard practice (for organisations with limited or no experience of reporting) and best practice (for organisations more advanced in the reporting) should ensure that all organisations find the guidelines helpful and 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. 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.

d. 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.

26. 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.

27. These guidelines will also offer benefits over and above current Government policies. 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 CO_2, and there is no de minimis threshold for reporting companies - all types organisations, of all sizes can measure and report their GHG emissions.

Option two:

28. There would need to be a consultation to determine which companies should be required to report under mandatory reporting.

29. The main benefit of introducing regulations for mandatory reporting is to ensure a high level of disclosure of the GHG emissions from the largest UK companies which are also likely to be the UK's largest emitters. Although some companies do voluntarily report GHG emissions a significant number do not report adequate data on GHG emissions. As a consequence we may not have a full understanding of the UK's entire carbon footprint. Christian Aid (Coming Clean Revealing the UK's true carbon footprint) reported that there were 191.42 million tonnes of CO2 from direct emissions not reported according to DEFRA guidelines by 80 FTSE 100 companies. Christian Aid further states that if all direct and indirect emissions were accurately disclosed by the FTSE 100, the UK's contribution for global GHG emissions would increase from 2% to 15%. Again we would welcome respondents' views.

Conclusion

30. The preferred policy option is option 1: the publication of measuring and reporting guidelines for voluntary use. 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.

31. It is hoped that the public consultation on the draft guidance will help in providing more details on the costs and benefits of this policy. Further evidence is needed before a decision on introducing a mandatory scheme can be made.

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 but there are likely to be positive effects 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	*Results in Evidence Base?*	*Results annexed?*
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