

# Department for Environment, Food and Rural Affairs

## Consultation on the draft Climate Change Bill

### Response proforma

Please use this proforma to answer the questions in the above document. The closing date for the submission of responses is **12 June 2007**.

Responses should be clearly marked in the subject field "**Consultation on draft Climate Change Bill**", and should be sent:

- by email to: [climatechangeconsultation@defra.gsi.gov.uk](mailto:climatechangeconsultation@defra.gsi.gov.uk)
- or by post to: Patrick Erwin / James Hardy, Climate Change Legislation Team, Area 4/F5, Ashdown House, 123 Victoria Street, London SW1E 6DE

The email address may also be used for general queries relating to this consultation. Please mark the subject field **Consultation on the draft Climate Change Bill**.

To help us analyse responses, please provide details of yourself or your organisation (\* if appropriate) below.

In line with Defra's policy of openness, at the end of the consultation period copies of the responses we receive may be made publicly available through the Defra Information Resource Centre, Lower Ground Floor, Ergon House, 17 Smith Square, London SW1P 3JR. The information they contain may also be published in a summary of responses.

If you do not consent to this, you must clearly request that your response be treated confidentially. Any confidentiality disclaimer generated by your IT system in e-mail responses will not be treated as such a request.

You should also be aware that there may be circumstances in which Defra will be required to communicate information to third parties on request, in order to comply with its obligations under the Freedom of Information Act 2000 and the Environmental Information Regulations.

Defra's confidentiality statement in full can be found at [www.defra.gov.uk/corporate/consult/climatechange-bill/letter.htm](http://www.defra.gov.uk/corporate/consult/climatechange-bill/letter.htm)

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Organisation Type	Please mark/give details as appropriate	
Non Governmental Organisation (NGO)	<input type="checkbox"/>	
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NB: on the form below, please leave the response box blank for any questions that you do not wish to answer. Any other comments can be recorded in the box at the end of this form. All boxes may be expanded as required.

## Targets and Budgets

### Setting statutory targets

1. Is the Government right to set unilaterally a long-term legal target for reducing CO<sub>2</sub> emissions through domestic and international action by 60% by 2050 and a further interim legal target for 2020 of 26-32%?

It is important to recognise that reducing global emissions of carbon dioxide by 60% by 2050 still commits the Earth to significant global warming for hundreds of years. This highlights the importance of an adaptation strategy alongside measures to reduce carbon emissions. The adaptation strategy should be given equal importance to reducing greenhouse gas emissions in the Climate Change Bill.

The RSC believes that Government is right to set unilaterally a long-term legal target for reducing CO<sub>2</sub> emissions through domestic and international action by at least 60% by 2050. However, the RSC is concerned that focusing purely on CO<sub>2</sub> and not on other greenhouse gases may limit the extent to which global warming can be tackled, particularly if the UK is to invest in international projects (see response to question 2).

The RSC is not convinced that setting an interim legal target of 26-32% is sensible. If an interim target is set then it should be a fixed target (perhaps 30%) and not a range as this is confusing and unnecessary. By setting an interim target the work of the Committee on Climate Change may be compromised. The RSC believes that the Committee should be free to advise Government on a pathway that will achieve the 2050 target without constraint. In fact an interim target could be counter-productive if the Committee on Climate Change were to believe that the optimal pathway would be one that delivered a reduction in CO<sub>2</sub> emissions greater 32% by 2020.

The RSC is also unclear as to the implications if the Government should fail to achieve 5-year, the interim 2020 or the final 2050 targets. The targets are consistently referred to as legal targets but what legal action can be taken if the targets are missed and how will this ensure that ultimately CO<sub>2</sub> emissions are reduced by 60% by 2050? This must be clearly spelled out in the final Climate Change Bill.

The RSC believes that the Government should retain the ability to adjust the long-term legal target in light of industrial and scientific advice (particularly that arising from the reports of the Intergovernmental Panel on Climate Change (IPCC)).

The RSC members have considerable expertise relating to energy technologies and climate change that will be valuable to Government and the Committee on Climate Change. The RSC is happy to open discussions on how best to transfer this knowledge.

2. Is the Government right to keep under review the question of moving to a broader system of greenhouse gas targets and budgets, and to maintain the focus at this stage on CO<sub>2</sub>?

The RSC believes that focusing only on CO<sub>2</sub> rather than all greenhouse gases will limit the extent to which global warming can be reduced. In their recent paper in Science Keith Shine and William Sturges concluded, “[that] about 40% of the heat trapped by anthropogenic greenhouse gases is due to gases other than carbon dioxide, primarily methane” (Science, 30 March 2007, Vol. 315. no. 5820, pp. 1804 - 1805). Even though the UK has made significant progress in reducing the emissions on greenhouse gases other than CO<sub>2</sub>, this is not the case elsewhere in the world and if the Climate Change Bill focuses solely on CO<sub>2</sub> then opportunities may be lost for funding effective international projects. Considering this, the RSC recommends that the Government consider implementing one of two options:

1. That the wording for the UK target in the Climate Change Bill be changed to “reduce carbon dioxide (or equivalent) emissions through domestic and international action by 60% by 2050”; or
2. That the Government set two legal targets – one for CO<sub>2</sub> and one for other key GHGs.

### **Carbon budgeting**

3. Should the UK move to a system of carbon management based upon statutory five-year carbon budgets set in secondary legislation?

The RSC believes that it is important that action to significantly reduce CO<sub>2</sub> emissions is taken as soon as possible. The RSC does not have a view on the mechanism through which CO<sub>2</sub> emissions are reduced. However, any such mechanism must:

- Be scrutinised fully so that it does not have unanticipated counter-productive effects;
- Be effective in delivering CO<sub>2</sub> emissions reductions;
- Give industry confidence to make long-term investment decisions; and
- Include measures to support research, development, demonstration and deployment of technology and also support the development and retention of skilled people.

4. Do you agree there should be at least three budget periods in statute at any one time?

See answer to question 3

## Reviewing targets and budgets

5. Do you agree there should be a power to review targets through secondary legislation, to ensure there is sufficient flexibility in the system?

The science of climate change is evolving rapidly and it is vital that flexibility remains to account for the latest developments. For example, if an authoritative body, such as the IPCC, concludes that there is a need for carbon emission reduction target of 60% to be amended then this should be possible within this proposed system.

It is important that there is explicit recognition of the need for periodic reviews of the UK's target in the light the global effort to address climate change. The UK accounts for around 2% of global GHGs; therefore if UK CO2 emission reductions are not matched by concerted global efforts then the UK economy will suffer and the world will continue to warm. To this end the RSC applauds the intention of the UK to continue to lead the argument for a global effort on climate change.

6. Are there any factors in addition to, or instead of, those already set out that should enable a review of targets and budgets?

## Counting overseas credits towards the budgets and targets

7. Do you agree that, in line with the analysis in the Stern Review and with the operation of the Kyoto Protocol and EU ETS, effort purchased by the UK from other countries should be eligible in contributing towards UK emissions reductions, within the limits set under international law?

The RSC believes that it is valid for the UK to invest in international projects (via schemes such as the Clean Development Mechanism, CDM) that will reduce global CO2 emissions and count this towards the domestic target. It is important that the UK invests in appropriate and sustainable international schemes that will demonstrably deliver GHG emission reductions in both the short- and long-term. It is absolutely critical that such schemes are policed to ensure that they are genuine and that the CO2 emission reductions are as budgeted.

## Banking

8. Do you agree it should be permissible to carry over any surplus in the budget? Are there any specific circumstances where you consider this provision should be withdrawn?

The RSC believes that the option to bank surplus emissions and to borrow emission rights from another period should exist. The Government should be asked to explain the necessity for both banking and borrowing between periods. The RSC recommends that banking and borrowing system should be managed by an organisation independent of Government (in a similar way to which interest rates are set by the Bank of England).

## **Borrowing**

9. Do you agree that limited borrowing between budget periods should be allowed?

See answer to question 8.

## **Compliance with carbon budgets and targets**

10. Is it right that the Government should have a legal duty to stay within the limits of its carbon budgets?

The RSC is unclear as to the implications if the Government should fail to achieve 5-year, the interim 2020 or the final 2050 targets. The targets are consistently referred to as legal targets but what legal action can be taken if the targets are missed and how will this ensure that ultimately CO<sub>2</sub> emissions are reduced by 60% by 2050? This must be clearly spelled out in the final Climate Change Bill (this remark was also made in question 1).

## **The Committee on Climate Change**

### **The need for an independent analytical organisation**

11. Do you agree that establishing an independent body will improve the institutional framework for managing carbon in the economy?

The RSC is convinced that there is a need for an independent Committee on Climate Change. The need for an independent advisory Committee is essential if the objectives of the Climate Change Bill are to be met. With the correct balance of expertise the Committee would be an appropriate body to advise Government on a pathway towards the 2050 target and to monitor progress en route. However, it is important that the Committee examine the economic, social, environmental, business and science, engineering and technological (SET) aspects before advising Government.

The RSC believes that it is absolutely critical that the Committee on Climate Change is totally independent of Government so that it can fulfil its role in an unbiased and scientific manner.

### **Functions of the Committee on Climate Change**

12. Do you agree that the Committee on Climate Change should have an advisory function regarding the pathway to 2050?

The RSC believes it is important that an independent body informs the Government on carbon budgets and the provisions within each budget. The RSC agrees that the budget should be met through both domestic measures and through investment in international schemes (for example, through the Clean Development Mechanism).

The RSC is unclear as to the definition of “the pathway to 2050”. The RSC defines such a pathway as a strategic, long-term approach that focuses on technology development and deployment, nurturing of the skills base and on the major societal changes that will be required. The scale of effort required has been eloquently spelled out in a paper by Steve Pacala and Robert Socolow entitled “Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies” [Science 305, 968 (2004)].

13. Do you agree with the proposal that the Committee on Climate Change should have a strongly analytical role?

The RSC agrees that an independent body, such as the Committee on Climate Change should have a strongly analytical role. In this role the Committee should examine the economic, social, environmental, business, science, engineering and technological aspects of existing and potential future policy measures so that advice to Government is evidence based.

### **Factors for the Committee on Climate Change to consider**

14. Are these the right factors for the Committee on Climate Change to take into account in assessing the emissions reduction pathway? Do you consider there are further factors that the Committee should take into account?

It is unclear from the Draft Climate Change Bill what powers the Committee on Climate Change will have should the Government fail to achieve the set targets (either statutory or 5-yearly targets). In particular the RSC is unclear on the following points:

- Will the Committee advise Government on which technologies to invest in?
- Will the Committee advise Government on which technologies to fund research into?
- Will the Committee advise Government on the availability of skilled people to realise the recommended pathways towards carbon targets (e.g. chemists, physicists, engineers, economists, social scientists, etc.).
- Will the Committee advise the Government on adaptation measures?

These decisions have potential impacts on the direction of UK research and technology. It is critical that such decisions are made on the basis of wide consultation.

## **Membership and composition**

15. Do you agree the Committee on Climate Change should be comprised of technical experts rather than representatives of stakeholder groups?

The RSC has significant concerns over the make up of the committee and in particular over the three identified expert positions of technology development, energy production and climate science. The RSC does not believe that individual experts in each of these fields can cover the vast range of developments that each of these fields represents. Of foremost concern is the possibility that the chosen expert may be biased towards a particular viewpoint or technology. This could have massive and detrimental knock-on effects if biased and ill-advised decisions were taken.

Key recommendation:

The RSC recommends the experts serving on the Committee each be advised by a shadow stakeholder group that will comprise experts covering the key aspects of the topic so that the Committee member can present balanced unbiased advice to the Committee on Climate Change. Members of the advisory group could comprise technical experts and representatives of stakeholder groups, such as learned and professional societies.

16. Are these the appropriate areas of expertise which should be considered? Do you consider there are further areas that should be considered or any areas that are less important?

The RSC is concerned that there is no specific position on the Committee for an expert in adaptation to climate change. This is an extremely important issue and deserves a dedicated position (and associated shadow advisory group as discussed in question 15 above).

Key recommendation:

The RSC recommends the Committee on Climate Change appoint an expert on climate change adaptation and an associated multi-disciplinary expert shadow stakeholder group to advise the Committee on Climate Change on global, national and local implications of climate change.

## Enabling powers

### Extending the suite of domestic trading schemes

17. Do you agree with the principle of taking enabling powers to introduce new trading schemes?

See answer to question 3.

### Benefits and structure of enabling powers

18. Do you consider that these powers are sufficient to introduce effective new policies via secondary legislation? If not, what changes would you make?

See answer to question 3.

The RSC wishes to stress that legislation must be fit for purpose and must be fully scrutinised so as to avoid unanticipated and detrimental effects.

## Reporting

### The need for regular, independent monitoring of the UK's progress

19. Do you agree that the Committee on Climate Change should be responsible for an independent annual report on the UK's progress towards its targets which would incorporate reporting on a completed budget period every five years?

The RSC agrees that the Committee on Climate should provide an independent annual report on the UK's progress towards its targets. The RSC also agrees that this report should be placed before Parliament so that it can be debated and so that Government can respond to issues arising. The RSC recognises that the proposed annual report offers a conduit through which Parliament and also other stakeholders (including the public) could be informed about developments in both the science of climate change and adaptation and in low-carbon technologies. The RSC believes that it would be valuable not only to report on targets but also to how knowledge is evolving and also to identify barriers to progression that require action.

The RSC is unclear as to whether the Committee on Climate Change is able to initiate a full review of Government policy should the annual review indicate substantial failings in progress towards targets.

The RSC agrees that the Committee on Climate Change should also report on the Governments 5-yearly compliance statement. An analysis of a 5-year period will give a better indication of how policy and measures are affecting CO2 emission trends.

## **Adaptation**

20. Is statutory reporting the best way to drive forward progress on adaptation while at the same time ensuring Government is able to develop flexible and appropriate measures reflecting developments in key policy areas?

As noted in question 1, even with global reduction in CO2 of 60% by 2050 the Earth will still warm appreciably with significant environmental and social impacts. The science of predicting the social, environmental and economic impacts of global warming is evolving rapidly but significant challenges remain before a clear picture of national and local consequences will be seen. In light of this, the RSC agrees that Government should develop flexible and appropriate measures reflecting developments in key policy areas.

In responding to question 15, the RSC recommended that the Committee on Climate Change additionally appoint an expert in climate change adaptation (with an associated advisory stakeholder group). This would enable the Committee on Climate Change to report annually on developments in the understanding of climate change impacts and the implications for UK policy.

The RSC agrees that the Government should undertake a quinquennial review of the risks posed by the impacts of climate change to the UK. This review should take into account the publication of the IPCC Assessment Reports, which are published approximately every six years.

The RSC recommends that Government ensure that adequate funding for research and training is available through the funding councils (and other appropriate bodies) to enable UK researchers can play a full role in understanding the global, national and local impacts of climate change.

## Other responses or comments

(Please use the following space for any other responses or comments)

The RSC believes that the target to reduce UK CO<sub>2</sub> emissions by 60% below 1990 baseline levels by 2050 can be achieved but requires immediate action towards the following key goals:

- A need for strong and joined-up national and international leadership and effective, appropriate policy that aims to massively reduce greenhouse gases (GHGs);
- A need for a strategic, long-term approach that focuses on funding for technology development and deployment, nurturing of the skills base, and on the major societal changes that will be required;
- A need for everyone to save energy through both lifestyle changes and minimising heat loss from buildings;
- A need to develop and adopt energy efficient products and processes that minimise energy use in both manufacture and consumption;
- A need to decarbonise transport by developing highly efficient biofuels from waste materials, lightweight construction materials, efficient hybrid and electric vehicles and improved battery technology. Further research into the potential of hydrogen as an energy vector is essential. There is a need to maximise the efficiency of conventional vehicles and fuels. The Government may be interested in an RSC report (to be published in November 2007) that will outline an achievable 2020 scenario for carbon emission reduction from the UK private vehicle fleet. The GHG emissions and wider environmental impacts of aviation must be radically changed either through reducing the global number of flights or through the development and adoption of technology that massively impacts greenhouse gas emissions;
- A need to harness renewable energy more efficiently including support for and a constant review of developments in solar energy, hydroelectric, geothermal, wind, tidal and heat pumps;
- A need to develop carbon capture and storage technology so that the vast coal reserves of the Earth can be exploited with minimal GHG emissions; and
- There is a need to invest in skilled people and research and development so that future sustainable energy technologies will be available. A full cradle to grave audit of all energy sources should be under continuous review and this must account for economic, social, environmental and technical aspects.