



The Scottish Parliament
Pàrlamaid na h-Alba

TRANSPORT, INFRASTRUCTURE AND CLIMATE CHANGE COMMITTEE

AGENDA

8th Meeting, 2009 (Session 3)

Tuesday 3 March 2009

The Committee will meet at 2.00 pm in Committee Room 4.

1. **Climate Change (Scotland) Bill:** The Committee will take evidence on the Bill at Stage 1 from—

Matthew Farrow, Head of Environment Group, CBI Scotland;

Brendan Dick, and Grant Hodges, Climate Change Business Delivery Group;

Jason Ormiston, Chief Executive, Scottish Renewables;

and then from—

Colin Galbraith, Director, Policy and Advice, and Clive Mitchell, Strategy and Communications Manager, Scottish Natural Heritage;

Dr Chris Spray, Director of Environmental Science, and David Gorman, Head of Environmental Strategy, SEPA;

Geoff Aitkenhead, Asset Management Director, and Mark Williams, Business Strategy and Climate Change Manager, Scottish Water.

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The papers for this meeting are as follows—

Agenda item 1

Briefing paper

TIC/S3/09/8/1 (P)

Written Submissions from CCBDG, SNH, SEPA, Scottish
Water and Scottish Renewables

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WRITTEN SUBMISSION FROM CLIMATE CHANGE BUSINESS DELIVERY GROUP

Written views to the Transport Infrastructure and Climate Change Committee

The CCBDG welcome the opportunity to give evidence to the Transport, Infrastructure and Climate Change Committee on the Scottish Climate Change Bill. We have previously set out principles we believe should guide thinking on climate change in Scotland. We have been consistent in promoting those principles and believe they are worth repeating here.

Action on Climate Change – strategic importance to Scotland

Scotland has an international reputation founded upon a perception of a clean and green environment. Scotland's attractiveness as a great place to visit, study, work and do business in part depends upon that image. Therefore it is of strategic importance to Scotland as a whole that efforts on climate change lead, rather than lag, world effort.

Carbon saved today is better than carbon saved tomorrow

Early reductions in carbon emissions are more important than reductions in years to come. The objective must be to ensure that the cumulative amount of carbon released into the atmosphere is as low as possible, as quickly as possible. In other words the greatest imperative must be on the tasks to be undertaken now to shift Scotland smoothly to a low carbon economy and society.

Consistency with the UK, EU and UN frameworks

Scottish businesses trade on a local, national, UK, European and global basis. Therefore it is important that the Scottish framework on climate change is consistent with UK, EU and UN frameworks. The greater international co-operation there is the better, and consistency between economies will ensure no new barriers to trade are erected.

Delivery

The powers of the Scottish Parliament, while substantial do not represent all the powers that can deliver carbon emission reductions. Therefore, to meet the aspiration of Scotland leading in the UK and Europe it follows that the powers that do lie in Scotland need to be used more effectively, more quickly and to a greater magnitude than anywhere else in Europe. We believe it is vital to ensure that this will be the case without putting Scottish business at a competitive disadvantage in the short term. In the long run we believe that making the right investments now, will put Scotland at a competitive advantage by becoming an advanced low carbon economy early, for example by making the most of the significant renewable resources we have on our doorstep.

Climate Change – priorities for action

1. First and foremost, the CCBDG believe the greatest role for government in Scotland is to help bring about a change in consumer behaviour in order to reduce overall demand for energy.
2. Beyond reducing overall demand for products and services that emit carbon, the three critical areas for reducing Scotland's carbon emissions are decarbonising electricity, heat and transport. Despite all its challenges and the progress yet to be made, delivering renewable electricity looks relatively positive compared to the challenge that must be met in **heat and transport**.
3. Decarbonising **energy for heating** is one area where there has been little progress. The potential carbon savings are great and there is a clear role for government to stimulate markets. The UK wide Renewable Heat Incentive will clearly provide a market intervention that should help the expansion of renewable heat. Nonetheless the CCBDG believe the Scottish Government must act to make sure heat in Scotland sees a dramatic revolution in the way it is generated. Government itself can take a lead in incorporating renewable heat and Combined Heat and Power systems into its own estate.

4. There remains a long way to go in delivering **low carbon road transport**. While we acknowledge that fiscal powers relating to VED and product standards lie with Westminster, there are international and UK examples where municipal and regional policy has stimulated a market for lower carbon combustion engine vehicles and electric vehicles. There is much the Scottish government could do, particularly in partnership with local authorities to move Scotland to the leading edge of low carbon road transport. For example procuring electric vehicles for public sector fleets which will stimulate both the infrastructure required and a market for electric vehicles in the UK.
5. Finally, we recognise the potential for conflict between Government priorities, particularly in terms of development and carbon emissions. The aim to deliver 35,000 new build houses a year is challenging in itself, and without absolute clarity and certainty in relation to policy it will be impossible to achieve. Planning policy, building standards, affordable housing policy and policy on future energy generation and consumption must become much better aligned. We believe that the incorporation of **zero carbon home** standards into new build social housing in advance of 2016 is an important lead the Scottish public sector can take now – particularly in this difficult economic climate.

Response to Call for Views

Q1 The Bill creates a statutory framework for greenhouse gas emissions reductions in Scotland by setting a 50% reduction target for 2030 and an 80% reduction target for 2050.

What are your views on the 2050 target and a 2030 interim target proposed in the Bill?

In principle, the CCBDG believe scientific evidence should determine the rate of emissions reduction. We support targets and a framework consistent and aligned with the scientific recommendation of what is required to ensure global average temperature does not increase by two degrees Centigrade, widely acknowledged as a dangerous tipping point resulting in drastic impacts across society, nature and the economy.

The CCBDG therefore support both the Government's minimum targets, although we recognise there may be a benefit in setting a 2020 target in law too.

Q2 The Bill requires that the Scottish Government sets annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050. It is proposed that these annual targets will be set in batches, the first being for the years 2010 to 2022 inclusive.

What are your views on the setting of targets in batches from 2010 to 2022?

We originally supported a carbon budgeting approach although we are content with this framework for grouping the targets into batches, provided they are aligned with UK and International targets.

Q3 The Bill provides that from the year 2020, the annual emissions targets must be set so that each is at least 3% lower than the target for the previous year. Prior to 2020, the Scottish Government has indicated that it intends to set annual targets which build towards delivering emissions reductions of at least 3% each year.

What are your views on this approach or any possible alternative approaches?

The difficulty of meeting a 3% annual target should not be underestimated. Our original preference was for a carbon budgeting approach and an alignment with the UK framework would have been simpler. However, the spirit of what is trying to be achieved is the same and we believe it is more important to 'just get on with it'.

Q.4 The Bill introduces the concept of a “net Scottish emissions account” as a point of reference against which the target for reducing greenhouse gases can be measured. It is defined as the net Scottish emissions plus or minus any carbon units credited to or debited from the account. Any units purchased may be used to offset Scottish emissions. Any carbon units generated in Scotland and sold to customers outside Scotland, count as emissions made in Scotland.

What are your views on the proposals in the Bill relating to the net Scottish emissions account, and should there be a limit on the number of carbon units which Scotland can purchase?

While trading has an important role to play in tackling global climate change and should not be artificially restricted, we strongly agree that the focus of this legislation must be to reduce Scottish Source Emissions. We note that the UK Climate Change Committee has recommended a set of figures up to 2020 that specifies domestic, traded and credit purchase. This amounts to a 34% cut predominantly through domestic emissions reduction, and 42% total through domestic emissions reduction and credit purchase. We would support the adoption of this model for the purposes of both consistency and effectiveness.

Q5 The Bill defines “Scottish emissions”, in relation to a greenhouse gas, as being emissions of that gas which are attributable to Scotland. The policy memorandum states that “Scottish emissions” are defined as being those greenhouse gases which are emitted in Scotland or which represent the Scottish share of emissions of gases from international aviation and international shipping.

What are your views on this definition of Scottish emissions?

We acknowledge the difficulty government has in defining the term ‘attributable’. We agree that greenhouse gases emitted from Scotland should be the spirit of this legislation, but we should not ignore the effect of Scottish demand on global emissions. For example, we may no longer manufacture most of the steel needed in the country, but we certainly import it and it is therefore an important factor in assessing pollution generated by the Scottish people. However, we also recognise the necessity for consistent measurement and we appreciate the difficulty in assessing the end to end carbon emissions associated with any given product. Ultimately, we hope that international agreements will ensure that the price of carbon is built into every stage of the production and distribution process.

Q6 The Scottish Government has indicated that initially it intends to seek independent, expert advice on climate change from the UK Committee on Climate Change. The Scottish Government states in the policy memorandum that if it determines that the UK Committee on Climate Change does not meet all the advice needed for Scotland, the Bill contains provisions which will allow the Scottish Government to establish a Scottish Committee on Climate Change or to designate an existing body to exercise these advisory functions.

What are your views on the Scottish Government’s approach to obtaining independent, expert advice on climate change?

The CCBDG agrees with this approach and believes the Climate Change Committee’s first report has made very instructive reading.

Q7 The Bill places duties on the Scottish Government requiring that it reports regularly to the Scottish Parliament on Scotland’s emissions and on the progress being made towards the emissions reduction targets set in the Bill. The Bill sets out details of these reporting requirements.

What are your views on these proposed reporting arrangements?

Once again, we agree with the arrangements for scrutiny. Given the extremely long term nature of these legislative targets, it is vital that government is held properly to account for early progress towards them. Parliament has an extremely important job to do in protecting the interests of future generations.

Q8 The Bill contains powers to allow the Scottish Government, by regulations, to impose duties on public bodies in relation to climate change, to issue guidance to those bodies relating to their climate change duties and to require that they report upon the discharge of those duties.

What are your views on this proposal?

The CCBDG believe it is right to impose duties on public bodies with regards climate change, and we recognise there is an argument to do so in primary, rather than secondary legislation. We believe this is particularly relevant to Scotland given the scale and influence of the public sector.

Local authorities and the private sector may benefit from the universal application of policy measures and setting expectations as early as possible. Many of the potential requirements on local authorities for example, could include: a duty to meet specific targets and a duty to consider climate change impacts through all public procurement and planning. The remits of SEPA and SNH might also include an obligation to deliver cuts in climate emissions.

We also recognise the role of the Scottish Government in guiding local authorities in particular to ensure some consistency of approach across Scotland.

Q9 The Bill places a duty on the Scottish Government to produce a report for Scotland, setting out its objectives in relation to adaptation to climate change, proposals and policies for meeting them and the timescales within which they will be introduced.

What are your views on this proposal?

We welcome this focus on adaptation, believing it has been somewhat overlooked until now.

Q10 Muirburn is the act of controlled burning of vegetation on open semi-natural habitats such as muir (Scottish word for moor) or moorland, and includes the burning of plants such as gorse, heather and grass. The Bill contains an enabling power to allow the Scottish Government to vary the permitted times during which muirburn may be made where they consider it necessary or expedient to do so in relation to climate change.

What are your views on this proposal?

No specific view.

Q11 The Bill will allow modification by order of the functions of the Forestry Commissioners to enable the Forestry Commission in Scotland to play a greater role in tackling climate change. The immediate intent of the Scottish Government is to take forward proposals relating to renewable energy development on the National Forest Estate and the release of capital from the National Forest Estate for woodland creation.

What are your views on this proposal?

Given that we believe all of Scotland's agencies and public bodies should play their part in delivering action on climate change it follows absolutely that the Forestry Commission can have a particularly special job to do. We support the Scottish Government's proposals.

Q12 The Bill requires the Scottish Government to produce an action plan setting out current and proposed measures to improve the energy efficiency of buildings in Scotland, as well as measures to encourage behavioural change.

What are your views on this proposal?

We believe the ultimate aim of energy efficiency must be to reduce energy demand but we are mindful of the complexities of affecting consumer behaviour.

Improving the energy efficiency of existing housing stock is paramount but the current rate of progress is insufficient to meet the carbon emission targets in this Bill. By 2050, only one third of housing stock will have been built between now and then. So two thirds of stock will be 'old' properties. The onus is on this current generation to bring about very significant change. To make that happen every tool at the disposal of the Scottish government (local tax incentives, business rates, planning changes, significant increase in grants for householders, etc) should be used to stimulate both the improved household energy efficiency and develop the potential for microgeneration.

For example, measures could be developed to incentivise local authorities to deliver emission reductions and specific climate-friendly actions such as through procurement strategies, renewable energy development plans and energy efficiency initiatives. Business rates in respect of renewable energy developments such as wind farms could be payable directly to the local authority in which the wind farm is located for example. Permitted development rights could be incorporated in the bill to enable easier installation of low-carbon and renewable devices on buildings.

We also recognise that a 'street-by-street' area-based approach to energy efficiency measures may prove to be more effective and we are concerned that the current approach is inefficient, expensive and is less likely to complete the job efficiently and within the timescales required.

Finally, there is a role for government in ensuring that skills are enhanced in order to deliver the wholesale improvement of the energy efficiency of Scotland's existing homes.

Q13 The Bill confers powers on the Scottish Ministers to make regulations providing for the assessment of (a) the energy performance of non-domestic buildings; and (b) emissions of greenhouse gases produced or associated with such buildings. The provisions are enabling in nature and the Policy Memorandum provides further information on the Scottish Government's thinking in this area.

What are your views on this approach?

The CCBDG agree with this approach for non-domestic properties. However, we believe there is much more yet to be done for both domestic and non-domestic building standards not least by developing much greater clarity in the standards that are expected.

Q14 The Bill places a duty on the Scottish Government to take such steps as it consider appropriate to promote the use of heat from renewable sources. The Scottish Government has indicated this provision will enable it to introduce measures it deems appropriate to incentivise the production of heat from renewable sources.

What are your views on this proposal?

The CCBDG welcome the Scottish Government's nominal target of 11% renewable heat by 2020, although we note the UK government has an indicative target of 14%. Nevertheless, an 11% target represents a market expansion of over 1000% in just over ten years. This is very ambitious. We believe this is the area where the least has been achieved to date, but the area with the greatest potential to deliver significant reductions in carbon emissions.

We are not believers in government 'picking' technological winners but given the scale of the renewable heat target we believe that all sources of renewable heat need to 'remain on the table' and deployed where best suited. We do not believe at this stage it is appropriate to be backing one technology over another and believe there will be a role for all the main heat technologies in time, including ground, air and water source heat pumps, solar thermal, biomass and biogas.

Furthermore, we believe there is potential for renewable heat deployment in the industrial and commercial sectors and this should be given sufficient weight in policy development. The economies of scale are greater in industrial and commercial uses of heat and there may also be greater potential for closed loop waste to energy systems in these sectors. We also note that the carbon intensity of heating fuels is higher in these sectors, thus delivering better carbon savings per pound of investment in renewable alternatives.

Finally, we are strongly supportive of a market intervention at the UK level that would incentivise the generation of heat from renewable sources. Without a Renewable Heat Incentive, we do not believe the market will deliver a significant uptake of renewable heat technologies by 2020.

Q15 The Bill sets out measures aimed at improving waste and recycling. The Bill gives powers to the Scottish Government to make regulations in the following areas:

Waste prevention and management plans;

Waste data;

Deposit of recyclable waste;

Procurement of recycle;

Reduction of packaging;

Deposit and return schemes;

Charges for carrier bags.

What are your views on these proposals?

The CCBDG is broadly supportive of additional measures to improve waste management and recycling, provided that measures are proportionate.

We welcome the very real progress that has been made in recent years, and believe Scotland's dramatic increase in recycling rates over the past seven years is illustrative of what can be achieved by the right combination of a legislative framework and public resources. We are optimistic that further progress will be made in the next few years.

Q16 What are your views on the adequacy of the Scottish Government's consultation in advance of publishing the Bill?

Generally positive, there appears to have been significant effort deployed at engaging with stakeholders and the wider public.

Q17 Do you have any views on the Strategic Environmental Assessment which was carried out by the Scottish Government on the consultation proposals?

No specific comment at this stage.

Q18 Does the Bill raise any equalities issues you would wish to highlight?

No specific comment at this stage.

Q19 Do you have any comments on the impact of the Bill on sustainable development?

No additional comments.

Q20 Do you have any other comments on the Bill?

Above all else, the CCBDG is concerned about the potential for speedy delivery. It is fully committed to taking action on climate change, and member companies are investing hundreds of millions of pounds into low carbon technologies. We know first hand of the barriers, the complexities and the difficulties of moving to a low carbon business model.

We would use this opportunity to urge policy makers and government to pick up pace, focus harder on delivery and develop a greater sense of urgency - especially in the areas of renewable energy for heat, renewable energy for transport and renewable electricity.

The combination of measures to bring about energy demand reduction, incentives for renewable heat and renewable transport and further significant progress in waste management and renewable electricity mean it is perfectly possible for Scotland to meet its ambitious carbon reduction targets.

About the Climate Change Business Delivery Group

The Climate Change Business Delivery Group formed in early 2007. Representing a broad cross section of Scotland's corporate and business sectors, with 100,000 staff employed either directly or indirectly in Scotland, the membership is convinced that climate change threatens future prosperity in Scotland and every other part of the world.

The group understands how hard it is to grow business and ensure significant year on year reductions of greenhouse gas emissions. They are, however, deeply committed to making a difference both within our businesses and as individuals – and firmly believe that Scottish specific climate change laws can help achieve that.

Current membership:

Ian Marchant, Scottish & Southern Energy and Chairman
Gordon Dewar, BAA
Brendan Dick, BT Scotland
Mary Grant, First Scotrail
Fergus McConnell, Taylor Wimpey
Peter Lederer, Gleneagles Hotel
Ian MacKay, Royal Mail
Grant Hodges, PWC
Susan Rice, Lloyds TSB
Ken Ross, Elphinstone
Satty Singh, MS Namara
Mike Straughen, Wood Group
Michael Tracey, William Tracey Ltd
Andrew Murphy and Lesley Ballantyne, John Lewis

WRITTEN SUBMISSION FROM SCOTTISH NATURAL HERITAGE

SNH views climate change as the most serious threat over coming decades to Scotland's natural heritage. In addition to its environmental consequences, climate change is likely to have major social and economic implications for people in Scotland and elsewhere. SNH aims to understand the effects of climate change on the natural heritage, and to help deliver the contribution that the natural heritage can make in limiting it and adapting to it.

The impact of climate change on Scotland's natural heritage is likely to be profound, causing very significant changes to our ecosystems and landscapes within a timescale measured in decades. Current indications are that by the 2080s Scotland will be warmer, especially in summer, with snowless winters in some parts; winters may become wetter and summers generally drier. The range of many species and habitats may shift northwards, or up hillsides. However many species and habitats may simply be unable to keep pace with the rates of climatic change, and some species may become extinct.

The most obvious changes in Scotland may be to coastal, marine and freshwater ecosystems. As sea levels rise, saltmarsh and machair habitats will be lost where man-made defences or natural topography prevent them moving inland. In the seas around Scotland there have already been shifts in ranges in algal, plankton and fish abundance. Rivers may become more affected by low flows in summer and by flash floods in winter washing out spawning beds for salmon. Wetlands may dry out in summer allowing woody species to colonise or causing peat to erode with consequences for greenhouse gas emissions.

Flexibility is likely to be key to making sure that infrastructure and land use are resilient to future climate, weather patterns and weather events. The natural heritage has an important role to play by making sure that ecosystems retain sufficient integrity so that they continue to provide essential services, such as flood mitigation, productive land capacity and water supply.

SNH is currently developing a policy statement and action plan on Climate Change and the Natural Heritage. A summary of the draft policy statement is annexed, which describes the main expected impacts of climate change on the natural heritage.

SNH's key contributions in responding to climate change will be:

- helping to understand and publicise the effects and consequences of climate change for the natural heritage;
- advising on infrastructure and land management practices which help to mitigate climate change;
- guiding adaptation so that nature can, as far as possible, adapt to a changing climate and so that people can make best use of natural processes in preparing for climate change;
- promoting action by organisations and individuals by setting an example in the management of SNH's own operations, and through our wider environmental education work

Climate change should not only be considered 'a problem of the future'. Its effects are already beginning to be evident in Scotland. Documented effects¹ include;

- increasing average annual temperatures;
- increasing peak day temperatures (the 24-hour maximum);
- increasing length of the growing season;
- increasing sea surface temperatures;
- rising sea levels from thermal expansion of the oceans as well as melting glaciers and ice sheets;
- acidification of seas from increased carbon dioxide absorption.

We therefore strongly support the proposals for the Climate Change (Scotland) Bill.

¹ Barnett, CJ, Hossell J, Perry C, Proctor C and Hughes G (2006) A handbook of Climate Trends across Scotland. Scotland & Northern Ireland Forum for Environmental Research, SNIFFER project CCO3, 62pp. Available at <http://www.sniffer.org.uk/climatehandbook/> (accessed 5 June 2008) . See also Marine climate impacts Annual Report Card 2007-2008. MCCIP 2008.

Q1 The Bill creates a statutory framework for greenhouse gas emissions reductions in Scotland by setting a 50% reduction target for 2030 and an 80% reduction target for 2050.

What are your views on the 2050 target and a 2030 interim target proposed in the Bill?

We welcome the 2050 target. As discussed in the policy memorandum associated with the Bill, this is based on the desire to avoid dangerous climate change. However, 'avoiding dangerous climate change' is not mentioned in the Bill itself. In contrast, the UK Act (Section 6, 3a) requires that the advice that ministers receive on targets is to be based on developments since June 2000, the date of the Royal Commission on Environmental Pollution report *Energy – The Changing Climate*, which is referenced in the UK Act. We recommend a similar clause be included in the Scottish Bill, to provide a firm foundation if there should be any need to vary targets in future. The reference to 'avoiding dangerous climate change' need not be quantified, as understanding of the thresholds is likely to develop with scientific knowledge.

The target to reduce emissions by 50% in 2030 should be tightened. The overall effect of interim targets should be to achieve marked early reductions in emissions to follow an overall emission reduction pathway like the lower curve in Figure 1 (as discussed in the consultation paper on the proposed Bill during 2008). This approach is consistent with scientific advice that what is most important is the total change cumulative emissions over the period – represented by the area under the curve.

Faster early reduction will help avoid the need for major annual reductions in later years. The Bill proposals for an interim target of 50% in 2030 only amount broadly to achieving a linear pathway between now and 2050. We recommend that a further interim target for 2020 be introduced, set in the light of the recommendations of the UK Climate Change Committee. In our response to the consultation on the Bill we recommended reductions of at least 40% by 2020. If such a target were set, it would put Scotland on track to achieve a 2030 target of 55-60%.

It should be borne in mind that some of Scotland's emissions may be difficult or impossible to avoid, for example those arising from historical disturbance of peaty soils, including drainage, dehydration and erosion, for example by tree felling and draining certain peaty soils to plant forest. This legacy – arising from earlier land management decisions - could remain as a significant 'hard core' of emissions by 2050. Further work is required to establish in detail the nature and amount of such emissions. However, their existence means that emissions from other sectors will have to be reduced by much more than 80% in order to meet an 80% target overall.

An intended overall percentage reduction of only 3% in each of the final years of the period up to 2050 will require a much higher proportionate reduction in 'controllable' emissions.

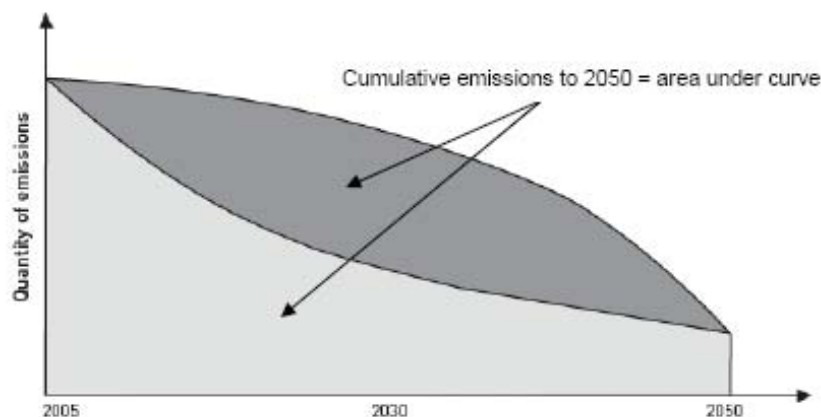


Figure 1. Illustration of the effect on total emissions over time of different emissions reduction trajectories²

² Source: Consultation proposals for a Scottish Climate Change Bill, Jan 2008, Fig 6

The targets should avoid relying on uncertain technological advances to secure rapid reductions later on. Where reliance is placed on technological advances (e.g. on carbon capture and storage, nuclear fusion, wave power, hydrogen economy), firm policy frameworks should be put in place, including regulatory controls and expected timescales, to make sure that such technologies are operational by specific dates.

Otherwise there is a risk of lock-in to existing forms of high-carbon infrastructure. In particular we have recently commented that there should be a moratorium on new coal power plant until such time as a firm timescale can be set to implement carbon capture and storage requirements. We think that imposing a requirement for carbon capture readiness – meaning only that there is space on site and that general feasibility studies have been undertaken – is insufficient.

In contrast, there are many practical measures that can be taken now using existing technologies (such as energy management, combined heat and power, electric vehicles, and renewable energy development), and more effective use of measures to help change behaviour and lifestyles. Interim targets should reflect the availability in the short term of these many practical measures.

Finally, we note that Scotland could be a role model for the international community in delivering these challenging targets.

Q2 The Bill requires that the Scottish Government sets annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050. It is proposed that these annual targets will be set in batches, the first being for the years 2010 to 2022 inclusive

What are views on the setting of targets in batches from 2010 to 2022?

We support this approach provided the targets are compatible with the first three 5- yearly budgets recommended by the UK Climate Change Committee (2008-2012, 2013-2017 and 2018-2022). For the reasons set out above, we believe that the annual emissions reductions sought in this period should be higher than the annual emissions reductions sought in the last decade leading up to 2050.

Part 5 of the Bill is limited in scope, covering only selected aspects of forestry, energy efficiency and waste. To give effect to the targets or budgets we suggest that the Scottish Government produce a new Scottish Climate Change Programme, initially covering 2009-2022. The programme should cover all major sectors over which the Scottish Government has direct control, especially:

- Heat;
- Transport;
- Renewable electricity;
- Land use and land use change (including forestry and agriculture).

It should also cover areas that are important to achieving emission reductions in Scotland but are administered by the UK Government or the EU (e.g. emissions trading, product standards).

It would be helpful to develop 'energy hierarchies' for energy use in buildings and transport, similar to the well-established 'waste hierarchy'. These, for example, would give priority to demand management and avoiding energy use, followed by energy efficiency, renewable generation, low-carbon generation, through to higher emission generation as the least desirable. Emissions should be quantified on a life cycle basis. The less that is achieved at the top of the hierarchy, the more infrastructure may be needed to deliver solutions further down the hierarchy, with a likely consequence that there will be more conflicts with the natural heritage and other environmental factors.

Q3 The Bill provides that from the year 2020, the annual emissions targets must be set so that each is at least 3% lower than the target for the previous year. Prior to 2020, the Scottish Government has indicated that it intends to set annual targets which build towards delivering emissions reductions of at least 3% each year.

What are your views on this approach or any possible alternative approaches?

As discussed above, we favour emission reductions that lead to steeper reductions in the early years. We note that the provisions of the Scottish Bill are considerably less demanding over the period to 2020 than those of the UK Act which requires a minimum of 26% emissions reduction by 2020. We hope that the recommendations of the UK Climate Change Committee for 2020, for an 'interim target'³ of 34% and an 'intended target' of 42%, can be reflected in the final Bill.

Q4 The Bill introduces the concept of a “net Scottish emissions account” as a point of reference against which the target for reducing greenhouse gases can be measured. It is defined as the net Scottish emissions plus or minus any carbon units credited to or debited from the account. Any units purchased may be used to offset Scottish emissions. Any carbon units generated in Scotland and sold to customers outside Scotland, count as emissions made in Scotland

What are your views on the proposals in the Bill relating to the net Scottish emissions account, and should there be a limit on the number of carbon units which Scotland can purchase?

We agree with the principle that the Bill should ensure that action to reduce emissions is strongly weighted to domestic effort. We note that the UK Act contains a clause that limits the amount of carbon credits that can be purchased, and that the UK Climate Change Committee recommends limiting this to 10% for the 'interim target', so that 90% of the reductions are achieved through domestic effort or elsewhere in the EU.

Q5 The Bill defines “Scottish emissions”, in relation to a greenhouse gas, as being emissions of that gas which are attributable to Scotland. The policy memorandum states that “Scottish emissions” are defined as being those greenhouse gases which are emitted in Scotland or which represent the Scottish share of emissions of gases from international aviation and international shipping.

What are your views on this definition of Scottish emissions?

We agree with this definition, which is consistent with international reporting obligations. However, we recommend that the Bill also provides for reporting of emissions based on consumption of goods and services in Scotland. This issue was discussed in the consultation paper on the Bill. There is a risk that emissions associated with Scottish manufacturing might fall but only as a result of our importing similar goods from other countries, with the result that global emissions due to Scottish people might increase while Scotland satisfactorily meets its internal emissions targets. Scottish Government should keep itself well informed on such patterns of consumption so that mechanisms and policy measures can be designed to avoid this risk. Tracking emissions based on consumption is consistent with the adoption of ecological footprint as an indicator in the National Performance Framework, so most of the relevant data and information should be readily available.

Q6 The Scottish Government has indicated that initially it intends to seek independent, expert advice on climate change from the UK Committee on Climate Change. The Scottish Government states in the policy memorandum that if it determines that the UK Committee on Climate Change does not meet all the advice needed for Scotland, the Bill contains provisions which will allow the Scottish Government to establish a Scottish Committee on Climate Change or to designate an existing body to exercise these advisory functions.

What are your views on the Scottish Government’s approach to obtaining independent, expert advice on climate change?

³ The 'interim target' of a 34% reduction by 2020 assumes that the EU target to reduce emissions from the EU by 20% in 2020 remains in force. The UK CCC set a more ambitious 'intended target' of a 42% reduction by 2020 to apply if the EU adopts a 30% target for 2020, as they have stated depending on post-Kyoto international agreements.

We agree with the approach to rely on the UK Climate Change Committee until such time as there is a demonstrable need for a dedicated Scottish Committee or equivalent body. It may be important to make sure that the UK Committee is resourced so that it is able to present its advice so that it is directly relevant to Scotland (e.g. relevant legal, regulatory, policy and governance context). If there is a need to establish a Scottish Climate Change Committee, it should either be founded as an extension of the UK Committee, or required to work closely with the UK Committee, adding supplementary advice as needed. The composition of any such body should reflect understanding of the impacts of climate change on the natural heritage, and also social aspects of climate change, including both the social impacts of climate change and issues such as facilitating behaviour change.

Q7 The Bill places duties on the Scottish Government requiring that it reports regularly to the Scottish Parliament on Scotland's emissions and on the progress being made towards the emissions reduction targets set in the Bill. The Bill sets out details of these reporting requirements.

What are your views on these proposed reporting arrangements?

We agree with the proposals. Improvements are required in both the timing and content of the Scottish inventory of greenhouse gas emissions. There is currently a lag of approximately 2 years between production of the UK emissions accounts and disaggregated accounts for the devolved administrations. On the content, we have found major presentational differences in various inventories and reports, for example the treatment of emissions associated with land management and energy sectors, which makes it difficult to compare like with like. It is important that the inventories and reporting of emissions of greenhouse gases inform policy decisions in Scotland. We welcome the development of the Carbon Impact Assessment methodology by the Scottish Government, which should help to remove these discrepancies and achieve better alignment and reporting across economic sectors, relating financial spending and greenhouse gas emissions.

Q8 The Bill contains powers to allow the Scottish Government, by regulations, to impose duties on public bodies in relation to climate change, to issue guidance to those bodies relating to their climate change duties and to require that they report upon the discharge of those duties.

What are your views on this proposal?

We welcome these proposals and would be content with any reasonable duties imposed, that is, consistent with the degree of action required to reduce emissions, adapt to the impacts of climate change and making sure that ecosystems retain sufficient integrity so that they continue to provide essential services. As indicated in our opening remarks, we aim to lead by example.

Q9 The Bill places a duty on the Scottish Government to produce a report for Scotland, setting out its objectives in relation to adaptation to climate change, proposals and policies for meeting them and the timescales within which they will be introduced.

What are views on this proposal?

We strongly support this. As indicated in our introductory remarks and answer to Q1 climate change is already happening and we need to adapt to a changing climate in the future. This means making sure that infrastructure and long term decisions about land management and land use are resilient to future climate, weather patterns and weather events. The natural heritage has an important role to play by making sure that ecosystems retain sufficient integrity so that they continue to provide essential services, such as flood mitigation, productive land capacity and water supply. This requires that approaches to adaptation allow the natural heritage to adapt to changing climate so that it can continue to support the ecosystem functions that help society to adapt. Further details on our approach and recommendations on adapting to climate change may be found in our policy statement and Action Plan on Climate Change and Natural Heritage.

We welcome the Scottish Government's progress on developing a Climate Change Adaptation Framework and have assisted its development. We understand that after 2012 this will become the reporting and action framework required by the Bill following the first UK Climate Change Risk Assessment, expected in 2011 under the UK Act. We recommend that the Scottish Adaptation Framework should form part of the Scottish Climate Change Programme as suggested in our response to Question 2, so that the Climate Change Programme contains both mitigation and adaptation strategies.

We recommend that the timing of the requirement to report is tightened from "as soon as reasonably practicable" after the UK Risk Assessment to specify a number of months. We welcome the proposals for 5-yearly reporting: a good comprehensive report every 5 years is likely to be of more value than a less detailed but more frequent analysis. It is important that this process stimulates the action required and this aspect of the Bill may need to be subject to similar independent monitoring and scrutiny arrangements that prevail for emission reductions.

Q10 Muirburn is the act of controlled burning of vegetation on open semi-natural habitats such as muir (Scottish word for moor) or moorland, and includes the burning of plants such as gorse, heather and grass. The Bill contains an enabling power to allow the Scottish Government to vary the permitted times during which muirburn may be made where they consider it necessary or expedient to do so in relation to climate change.

What are views on this proposal?

We support this. Fire has been part of upland environments for many thousands of years. It occurs naturally as a result of lightning strikes and it is probably also one of the most useful, and oldest, land management tools. Each year, less than 5% of moorland is burnt for agricultural, nature conservation and sport interests to enable the provision of fresh food sources on rough grassland or managed moorland for livestock, game and wildlife, and the management of older vegetation, which can act as a source of fuel for wildfires. However, it is a powerful tool, which needs to be used with skill and understanding if it is not to do more harm than good. If not undertaken at an appropriate time, or according to good practice, muirburn can exacerbate erosion on some slopes and soils, damage peat-forming vegetation such as sphagnum mosses reducing the ability of the bog to sequester carbon, result in fire spreading to the underlying peat leading to severe erosion, cause displacement or death to wildlife, especially birds and reptiles and recolonisation rates. The Muirburn Code sets out the constraints to limit the potential damage to risk of damage to agricultural, forestry, game, biodiversity, landscape, and archaeological assets. Consequently, we recommend that there is a requirement for Ministers to consult with relevant authorities, including SNH, before varying the permitted times during which muirburn may be made. Consideration of changes to the dates of the muirburn season should not be in isolation, on the basis of one possible driver of change. In some cases it may be difficult to disentangle changes attributed to climate change from other factors including land management. Decisions would also need to take into account the extent to which restricting muirburn season would reduce the amount of muirburn undertaken. This may have detrimental impacts on some habitats, including Natura and Biodiversity Action Plan habitats that are maintained by rotational muirburn.

Q11 The Bill will allow modification by order of the functions of the Forestry Commissioners to enable the Forestry Commission in Scotland to play a greater role in tackling climate change. The immediate intent of the Scottish Government is to take forward proposals relating to renewable energy development on the National Forest Estate and the release of capital from the National Forest Estate for woodland creation.

What are your views on this proposal?

We support the work that FCS does, and in particular we welcome the way that forest management has developed into a multi-use, public-benefit process over the last 20 years. We strongly support multi-benefit forestry and would regard moves to single benefit forestry, even for carbon sequestration, as a potentially retrograde step. The development of joint ventures for renewable energy projects would be covered by existing safeguards in the planning process, and could be compatible with the delivery of multiple benefits. Some of the income from renewable partnerships could be earmarked to secure continued management of the national forest estate for multiple benefits. We would support this.

The outcomes associated with the proposals to lease-off some forest areas are less predictable. It is possible that management for the natural heritage could be perceived as being less important in areas leased off. The lease-off could lead to less income for the remaining areas of the national forest estate and therefore fewer resources to support management for natural heritage benefits in those areas. This could lead to a weakened and 'de-commercialised' FCS, less able to lead by example and influence the private sector to undertake positive management for the natural heritage.

Establishing some firm principles to guide any leasing arrangements could reduce the likelihood of such undesirable outcomes:

- In the details of the lease and the use of any income, specify that the income should be spent in producing a balanced range of public benefits, not just carbon sequestration. The range of benefits should reflect the priorities, needs and outcomes sought in the areas that are being leased out.
- Require that the lease should be subject to formal review, for example through forest plans, every 10 years or so. It is extremely difficult to set the details of a lease for a period of 75 years which will cover all future options. For example, 75 years ago the most important use of timber from forestry was for pit-props, and decisions at that time could not have foreseen the management required for recent conservation issues or some of the difficulties associated with that, such as capercaillie leks and deer fences. Therefore, the terms of lease should provide for flexibility to require changed management for changing circumstances.

Q12 TO 16 (energy efficiency, waste, adequacy of consultation)

No comment.

Q17 Do you have any views on the Strategic Environmental Assessment which was carried out by the Scottish Government on the consultation proposals?

We are satisfied with the SEA process conducted by the Scottish Government, and its responses to the comments made by the consultation authorities. Consideration of the Screening Report commenced during pre-consultation stages of the proposals, with a report published in August 2007 and a determination in September 2007. A Scoping Report was published in September 2007, and the Environmental Report accompanied the consultation paper on proposals to introduce a climate change bill in January 2008, with comments invited in April 2008. A revised Environmental Report was published on the Scottish Government website on 4 December 2008, with clear responses to all of the comments made by the consultation authorities and relevant changes to the Bill (as introduced). We consider that the SEA has been a constructive process, adding value to the policy development.

Q18 Does the Bill raise any equalities issues you would wish to highlight?

No comment.

Q19 Do you have any comments on the impact of the Bill on sustainable development?

Despite our strong concerns about climate change and its impacts on Scotland's natural heritage, we would be concerned if efforts to address it have the effect of narrowing down perspectives on sustainable development away from the broad suite of goals set out in the Scottish Sustainable Development Strategy and in Scottish Government's 2007 Spending Review, to become overly focused on the single issue of carbon reduction.

Sustainable development has many angles, which are captured very broadly within the five strategic objectives of Government. Measures to address climate change will have to be designed sensitively, and with supporting policies and programmes, if they are to avoid making achieving these five broad objectives more difficult. Higher energy prices without improvements in energy efficiency could lead to greater levels of fuel poverty. Some approaches to restricting car use could make remote communities more fragile. Higher energy costs could affect costs for business. The Stern Review and the UK Climate Change Committee both emphasise the need for integrated policy interventions to reduce the likelihood of adverse outcomes, and both emphasise the long-term costs of failing to make early reductions in emissions: these are issues to be considered and designed around, rather than barriers to taking action on climate change.

We believe the need is to think in terms of what a sustainable low-carbon society that is well adapted to our changing climate will be like in 2020 and 2050, and actively steer Scotland's development towards that vision. Decisions on major infrastructure will be crucial, as they may set a pattern for decades ahead. That is what is needed if the aspiration of Scottish Ministers is to be fulfilled that Scotland should be a leading nation in dealing with the issue of climate change.

Q20 Do you have any other comments on the Bill?

No comment.

DRAFT POLICY STATEMENT SUMMARY

There is now a scientific consensus that the planet is warming and that the degree of recent changes can be explained only by the effect of human activities. The impact on Scotland's natural heritage is likely to be profound, causing very significant changes to our ecosystems and landscapes within a timescale measured in decades. This statement sets out SNH's perspective on climate change and our role in responding to it.

SNH views climate change as the most serious threat over coming decades to Scotland's natural heritage. In addition to its environmental consequences, climate change is likely to have major social and economic implications for people in Scotland and elsewhere. SNH aims to understand the effects of climate change on the natural heritage, and to help deliver the contribution that the natural heritage can make in limiting it and adapting to it.

Increasing amounts of greenhouse gases in the atmosphere are leading to increasing global average air and surface temperatures, widespread melting of snow and ice, and rising sea levels. The climate is becoming more chaotic with more frequent and more extreme weather events, such as heat waves, heavy rainfall, drought, and high winds. The severity of these problems in particular places will depend on a variety of local factors. Current indications are that by the 2080s Scotland will be warmer, especially in summer, with snowless winters in some parts; winters may become wetter and summers generally drier. The range of many species and habitats may shift northwards, or up hillsides. However many species and habitats may simply be unable to keep pace with the rates of climatic change, and some species may become extinct.

There will always be a substantial amount of natural variability, giving rise to a wide range of weather events and weather patterns over months to years. Flexibility is likely to be key to making sure that infrastructure and land use are resilient to future climate and weather conditions. The natural heritage has an important role to play by making sure that ecosystems retain sufficient integrity so that they continue to provide essential services, such as flood mitigation, productive land capacity and water supply.

Our key contributions will be:

1) Helping to understand and publicise the effects and consequences of climate change for the natural heritage.

There are huge uncertainties over the likely effects of climate change on Scotland's natural heritage, or of how these changes can be influenced or managed. We aim to invest in research to improve that understanding, so as to enable our effort on adaptation to be well targeted.

2) Advising on infrastructure and land management practices which help to mitigate climate change.

We strongly support the need for major global reductions in greenhouse gas emissions in order to avoid a dangerous level of climate change – taken as a 2°C warming - beyond which there is potential for severe disruption of global ecosystems.

A wide range of measures is required, including energy efficiency, the use of renewable sources of energy, more sustainable modes of transport, and encouraging walking and cycling. In advising on such infrastructure, SNH will take into account its benefits in mitigating climate change and enabling adaptation to the impacts of climate change alongside the need to protect the natural heritage. We will advise on how Scotland's rich renewable energy resource can be harnessed with least impact on the natural heritage.

We will encourage land management which protects the carbon stored in peatlands and other organic soils. These soils represent a very significant carbon reservoir, which if released into the atmosphere would be equivalent to around 170 years of greenhouse gas emissions from Scotland at current rates. We will also support the creation of new woodland with a view to carbon storage where it does not conflict with natural heritage interests.

3) Guiding adaptation so that nature can, as far as possible, adapt to a changing climate and so that people can make best use of natural processes in preparing for climate change.

We will support action to help both society and nature adapt to the effects of climate change. Climate change places new importance on considering the interdependence between species, habitats, and associated natural processes, and the benefits or services that people receive from these. SNH seeks to maintain the resilience of ecosystems so that they continue to provide the services that support human life as well as biodiversity. Restoring natural processes in freshwater systems can help in abating flood risks, and managed coastal realignment can allow natural habitats to provide protection against sea-level rise. Reducing other pressures on ecosystems, e.g. from pollution or habitat attrition, and maintaining diversity, will help nature to be more resilient to climate change.

As the climate changes, many species will need to be able to disperse into new areas where the climate remains suitable – usually northwards or upwards. Improving the connectivity between habitats through ecological networks can help species disperse into new areas. Protected sites will remain important for biodiversity conservation because characteristics such as greater habitat diversity and natural processes will continue to favour high biodiversity. They will also provide source populations and colonising habitat for dispersing species. For species that are unable to disperse, but still have suitable habitat within Scotland, their survival may be assisted by translocations but these can be high risk and costly and are a last resort. We will take a risk-based approach to eradication of invasive non-native species, taking account of both potential benefits and costs of action. For a few species, the effects of climate change may simply result in no suitable climate space in the UK and consequently their extinction.

4) Promoting action by organisations and individuals by setting an example in the management of SNH's own operations, and through our wider environmental education work.

We will set an example in the management of our own operations. We aim to reduce our greenhouse gas emissions by at least 4% per year. We will work closely with Government and other public bodies to develop good practice and high standards in carbon reduction which can be applied elsewhere within the public sector. We will also review our operations to ensure that our offices, properties and visitor facilities on nature reserves are well prepared to withstand the effects and added risks associated with climate change. We apply sustainability criteria within our procurement processes, relating to energy and resource use, waste minimisation, recycling, and biodiversity impacts. We will encourage others to reduce their emissions too, and to take action to adapt to climate change, through our general environmental education work and by attaching conditions to the grants we give to other organisations.

These four roles will guide SNH's work in responding to climate change. Our Climate Change Action Plan sets out in some detail the actions we intend to take over the next five years.

WRITTEN SUBMISSION FROM SCOTTISH ENVIRONMENT PROTECTION AGENCY

1. Introduction

- 1.1 SEPA's main role is to protect the environment and human health. We do this by controlling activities that can cause harmful pollution and by monitoring the quality of Scotland's air, land and water working to enable those we regulate to comply with the legislation as well as delivering a number of services such as flood warning and environmental business advice
- 1.2 SEPA welcomes the Climate Change (Scotland) Bill and the strong framework it contains to address climate change in Scotland. SEPA feels that there are areas where further provisions are necessary to help Scotland achieve its targets. On balance, SEPA believes putting in place provisions for these measures now would further assist us on the pathway of reducing emissions towards the 80% target as well as protect Scotland's environment and communities.
- 1.3 Flooding and floods management is clearly a key issue, and a major part of SEPA's activity. However given the parallel development of the Floods Risk Management (Scotland) Bill, we have not commented further in this evidence.

2. Key messages

- 2.1 We need early action where possible and a Bill to support this.
- 2.2 To set a clear pathway for reductions of Scottish emissions and the move towards a low carbon economy, international credits must be a purely supplementary measure to firm domestic action.
- 2.3 Parallel reporting on consumption emissions and communication activity on end user demand is needed to provide an overall picture of our climate change impacts.
- 2.4 We need to measure and monitor Scottish emissions closely- existing systems are unlikely to be sufficient to meet changing demands.
- 2.5 We need statutory duties on local authorities, government departments and the wider public sector to consider the carbon impact of their decision making and procurement activities. We need provisions for regulators and planning authorities to take account of carbon impacts.
- 2.6 We need to greatly improve our utilisation of waste heat and underpin renewable heat and waste heat policy with firm and supportive action.
- 2.7 The Climate Change Bill should recognise the importance of Scotland's carbon rich soils, and the need for their effective management. Scotland is in a unique position with a large amount of carbon in peatlands that need to be protected and managed sustainably.

Response to Call for Views

Q1 The Bill creates a statutory framework for greenhouse gas emissions reductions in Scotland by setting a 50% reduction target for 2030 and an 80% reduction target for 2050.

What are your views on the 2050 target and a 2030 interim target proposed in the Bill?

SEPA welcomes the 2050 target of 80% emissions reduction and the setting of an interim target of 50% by 2030. SEPA feels that an interim target sends clear signals to business and will set us on the pathway to the 2050 targets.

There has been discussion since the Bill's publication on the need for an earlier target, possibly for 2020, in order to strengthen these signals. SEPA notes that Scotland will be part of the UK 2020 target of at least 26%. This target is achievable based on the UK Committee on Climate Change's recommendations set out in its recent report⁴. The report further recommends a 34% interim target (and 42% intended target if international agreement on a global treaty is reached) going beyond the commitment in the UK Climate Change Act of at least 26% in 2020. SEPA understands that the UK government, after having consulted with devolved administrations, will respond to the UK Committee's advice shortly.

Scottish Government's technical note on Climate Change Scotland Bill: Greenhouse Gas (GHG) Emissions, Annual Reduction and Targets⁵ notes that Scottish Ministers will be informed by the advice of the UK Committee on Climate Change before setting the levels of annual targets.

In addition to this, if Scotland reduces its share of emissions in line with the UK target and then continues on an annual 3% reduction to 2030, SEPA believes we would be well on the way to performing beyond the current interim target of 50%.

In summary, the picture on target setting continues to develop, and SEPA is not in a position to comment on the detailed trajectories at this stage, other than to re-iterate that a balance must be struck between early, sustained action, and economic and feasibility considerations.

Q2 The Bill requires that the Scottish Government sets annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050. It is proposed that these annual targets will be set in batches, the first being for the years 2010 to 2022 inclusive.

What are your views on the setting of targets in batches from 2010 to 2022?

SEPA supports the setting of targets in batches. Given the length of the first batch, it is important that not only are the targets credible but also crucial that they are as stretching as possible to avoid possible carbon lock in.

Q3 The Bill provides that from the year 2020, the annual emissions targets must be set so that each is at least 3% lower than the target for the previous year. Prior to 2020, the Scottish Government has indicated that it intends to set annual targets which build towards delivering emissions reductions of at least 3% each year.

What are your views on this approach or any possible alternative approaches?

SEPA notes that there are lead-in times for policies enacted now, but also that there are available measures that could set us on a strong downwards trajectory pathway before 2020. We recognise 3% reduction in the first years may not be attainable, but we need to make sure we don't carry on "business as usual" up to 2020. SEPA is concerned that reductions that could be made prior to 2020 may not occur without strong action.

In line with this, we need to recognise the purpose of the Bill is to reduce the concentration of greenhouse gases in the atmosphere and that earlier action makes this battle a lot easier in the long term. The sooner we start moving towards a low carbon economy and implementing measures that are making a sizeable contribution to emission reductions, the easier it will be to achieve the 2030 and 2050 targets.

Scottish Government's technical note highlights a scenario up to 2020 that continues on the same pattern as we have done since 1990, rather than increasing the emissions reduction pathway. It is worth stating that such an approach, whilst not being proposed, approximates to only 1% annual reductions, and is completely inadequate.

⁴ <http://www.theccc.org.uk/reports/> Building a Low Carbon Economy – the UK's contribution to tackling climate change

⁵ <http://www.scottish.parliament.uk/s3/committees/ticc/inquiries/documents/ScottishClimateChangeBill-technicalnote.pdf> Scottish Government's technical note on Climate Change Scotland Bill: Greenhouse gas (GHG) Emissions, Annual Reduction and Targets

Emissions reductions since 1990 have not always been attributable to mitigation measures and so to continue on this same pathway could be considered “business as usual”. For example, the decline of the manufacturing industry in Scotland has seen a decrease in Scotland’s emissions but not necessarily global emissions.

Q.4 The Bill introduces the concept of a “net Scottish emissions account” as a point of reference against which the target for reducing greenhouse gases can be measured. It is defined as the net Scottish emissions plus or minus any carbon units credited to or debited from the account. Any units purchased may be used to offset Scottish emissions. Any carbon units generated in Scotland and sold to customers outside Scotland, count as emissions made in Scotland.

What are your views on the proposals in the Bill relating to the net Scottish emissions account, and should there be a limit on the number of carbon units which Scotland can purchase?

The net Scottish emissions account is an ideal concept to use as a point of reference against which the target for reducing greenhouse gases can be measured. SEPA welcomes the establishment of a carbon account for the tracking of carbon units and maintaining a database. SEPA has experience in this area as the body that enforces and administrates the EU Emissions Trading Scheme (EU ETS).

As detailed in SEPA’s Bill Consultation response⁶, SEPA believes that there should be limits on credits used by Scottish Government in meeting Scottish targets. SEPA recognises that it would be in contravention with the EU ETS to set a limit that applies to the traded sector before they have purchased international credits and therefore the limit should apply to the net Scottish emissions as a whole after the traded sector have been added to the Scottish emissions account.

International credits used for the net Scottish emissions account should be purely supplementary and applying limits is therefore a necessity. SEPA proposes a limit of one fifth of emissions reductions to ensure that efforts are focused in Scotland. This would strengthen the transition to a low carbon economy and energy efficiency measures and encourage investment in mitigation measures in Scotland.

Q5 The Bill defines “Scottish emissions”, in relation to a greenhouse gas, as being emissions of that gas which are attributable to Scotland. The policy memorandum states that “Scottish emissions” are defined as being those greenhouse gases which are emitted in Scotland or which represent the Scottish share of emissions of gases from international aviation and international shipping.

What are your views on this definition of Scottish emissions?

SEPA feels this is an accurate view of production emissions for the purpose of the target. However as Scotland’s influence goes far wider than the boundaries outlined as the definition of Scottish emissions, we would like to see provisions in the Bill for parallel reporting on consumption emissions. An end user inventory could illustrate the influence that Scotland’s domestic demand and imports has on international emissions. This could be made up of heat, electricity, transport, goods and services.

This would not only help with communication but also look at the influence that Scotland has on global emissions, for example, by looking at the impact of the steel we import has on emissions, the impact of the plastic goods we import and therefore provide at least an estimate of our influence on emissions globally. A key delivery challenge for this is to ensure the availability of acceptable data at an appropriate level from other countries.

⁶ <http://www.scotland.gov.uk/Resource/Doc/259367/0077144.pdf> SEPA’s response to the Consultation on proposals for a Scottish Climate Change Bill

Q6 The Scottish Government has indicated that initially it intends to seek independent, expert advice on climate change from the UK Committee on Climate Change. The Scottish Government states in the policy memorandum that if it determines that the UK Committee on Climate Change does not meet all the advice needed for Scotland, the Bill contains provisions which will allow the Scottish Government to establish a Scottish Committee on Climate Change or to designate an existing body to exercise these advisory functions.

What are your views on the Scottish Government's approach to obtaining independent, expert advice on climate change?

SEPA supports Scottish Government's approach to obtaining independent, expert, advice on climate change.

SEPA also believes that there may be merit in exploring the potential for a body to undertake a wide ranging review of the impact of regulations and policies on climate change policy. A 'Scottish Climate Change Regulatory Review Commission' could actively invite submissions from stakeholders to identify inadequate, contradictory or outdated provisions. Such approaches have been used across a wide range of policy areas and have the advantage of allowing a transparent, consultative and considered approach. SEPA has in mind the sorts of processes used for the Hampton, Macrory and Davidson reviews (better regulation), the Crerar review of scrutiny, and so on.

Q7 The Bill places duties on the Scottish Government requiring that it reports regularly to the Scottish Parliament on Scotland's emissions and on the progress being made towards the emissions reduction targets set in the Bill. The Bill sets out details of these reporting requirements.

What are your views on these proposed reporting arrangements?

Reporting is clearly a key element of the policy cycle, as good performance reporting drives better performance and more timely intervention where required.

Many of the reporting requirements that SEPA called for in its response to the consultation have been incorporated, however, climate change science with a particular focus on Scotland (for example emissions for peat systems), could also be reported.

In the original Bill consultation there were three levels of duties proposed: advisory, monitoring and reporting/evaluation. However, direct monitoring no longer appears to be addressed on the face of the Bill. SEPA is also concerned about the lack of integration between monitoring from local authorities, the Scottish Government, SEPA and other reporting agencies. It is not clear that current climate change monitoring and reporting frameworks do in fact provide the necessary framework within which policy consequences can be explored.

In SEPA's view, therefore, there is need to establish a more detailed, faster and more accurate picture of emissions of climate gases within Scotland in order to assist with planning, and meet increased demands for scrutiny. SEPA believes that this will need to involve both increased physical monitoring and assessment of some gases (e.g. nitrous oxides) and an increased capacity to assemble, verify and publish data.

This approach would also contribute to a more detailed understanding of the progress towards the targets and impacts of policies and other mitigation measures on greenhouse gas emissions. As a result this would lead to more robust and detailed reporting.

SEPA would be happy to respond further on the responsible body for this duty. In our response to the Bill consultation, SEPA put itself forward as the appropriate body for such a task. This was on the basis that, SEPA has carried out similar roles in measuring, assembling, verifying and publishing data, for example Waste Data, Scottish Pollutant Release Inventory (SPRI) and the EU ETS. However, clearly a debate is needed as to which body is best placed to carry out this task- from SEPA's perspective it is difficult to see an alternative body that could logically carry out the task.

SEPA recommends the inclusion of provisions in the Bill to improve the measuring and estimation of emissions, verification and publishing of data, and a power for Scottish Ministers to require other organisations to cooperate with the central measuring/monitoring body.

Q8 The Bill contains powers to allow the Scottish Government, by regulations, to impose duties on public bodies in relation to climate change, to issue guidance to those bodies relating to their climate change duties and to require that they report upon the discharge of those duties.

What are your views on this proposal?

Statutory Provisions

SEPA fully supports the proposals in Part 4 and feels that statutory duties on the public sector (including central government directorates) should be part of the way forward in tackling climate change in Scotland. In particular SEPA feels that the duty should be placed on public bodies now, as part of the Bill, with statutory guidance on the meaning of the duty to be developed in due course.

Not only should the public sector lead by example but also the extensive influence that the public sector has on emissions via its own decision making should be recognised. Analogous voluntary agreements in the private sector and voluntary commitment in the public sector have been shown to deliver little more than business as usual in many cases.

Taking account of the carbon impact

As recognised above the public sector and government have a huge influence through their decision making on carbon emissions in Scotland (often referred to as indirect emissions). We are very much at the beginning when it comes to taking account of the carbon impact of policy decisions but there are some good examples of where progress is being made in this area. As our knowledge and skills develop in this area, provisions in the Bill requiring public bodies to take account of carbon impact in their procurement, policy and regulatory decisions would set us firmly on the pathway for reducing emissions and setting up a low carbon infrastructure to which we can build upon.

In addition, SEPA considers that there might be merit within the limits of devolved powers in placing a duty on regulators (including possibly SEPA, SNH, HSE, FSA, Marine Scotland, local authority regulatory services, Audit Scotland, CAA, Water Industry Commission and OFGEM) to consider carbon impact as part of their statutory duties. With regard to SEPA's own regulatory functions, further provisions could be added to part 5, to amend the Environment Act 1995, to require SEPA to take account of climate change for all its regulatory decisions. Clear, consistent guidance on how to approach this would be needed and could be developed by the regulatory bodies in partnership with the Scottish Government.

Just as importantly, SEPA considers there should be specific duties on planning authorities and community planning partnerships to ensure that they consider greenhouse gas emissions in planning and policy decisions. The initial step in the majority of developments and redesigns is a planning application. Continually reducing emissions will be best achieved by adequately considering emissions at this stage. SEPA is already working with Scottish Government and the other responsible authorities under the requirements of Strategic Environmental Assessment (SEA) to improve the consideration of greenhouse gases at this stage in the process.

Q9 The Bill places a duty on the Scottish Government to produce a report for Scotland, setting out its objectives in relation to adaptation to climate change, proposals and policies for meeting them and the timescales within which they will be introduced.

What are your views on this proposal?

SEPA note that there could be more pieces of legislation in addition to permitted times for muirburn that may require amendments in order to allow for adaptation to climate change impacts. A provision in the Bill recognising that as we develop our understanding and knowledge of climate change impacts we may need to amend other legislation would be useful.

Also, provisions could be included to amend the Water Environment and Water Service (WEWS) Act so that it is a statutory requirement to consider and report on adaptation under the WEWS Act, e.g. Wetlands Strategy and River Basin Management Planning (RBMP) in terms of adaptation.

SEPA feels that the section on adaptation should make a specific reference to sustainable development so that social, economic and environmental factors are all considered.

Q10 Muirburn is the act of controlled burning of vegetation on open semi-natural habitats such as muir (Scottish word for moor) or moorland, and includes the burning of plants such as gorse, heather and grass. The Bill contains an enabling power to allow the Scottish Government to vary the permitted times during which muirburn may be made where they consider it necessary or expedient to do so in relation to climate change.

What are your views on this proposal?

SEPA has no specific comments to make on the muirburn proposals. However, as elaborated below, SEPA notes the vital importance of effective management of Scotland's soil carbon resource in mitigating climate change.

SEPA's view is that land management practices should aim for positive carbon impacts (or at least carbon neutral) and should aim to improve the resilience of Scottish soils in this respect.

Q11 The Bill will allow modification by order of the functions of the Forestry Commissioners to enable the Forestry Commission in Scotland to play a greater role in tackling climate change. The immediate intent of the Scottish Government is to take forward proposals relating to renewable energy development on the National Forest Estate and the release of capital from the National Forest Estate for woodland creation.

What are your views on this proposal?

SEPA responded⁷ to the separate consultation on forestry provisions in the Climate Change Scotland Bill and our key points on the consultation on forestry provisions were:

- It is important that the provisions ultimately lead to helping Scotland achieve its climate change targets through a net reduction in carbon emissions.
- Renewable energy developments and woodland creation cannot be successful in isolation. Scotland must integrate a variety of mechanisms including: minimising woodland removal, conserving forest carbon stocks by low impact silvicultural systems, identifying core networks/areas to maintain biodiversity, establish energy crops, woodland creation and environmental protection through processes.
- In considering the consultation, SEPA would have welcomed more detail on the proposals and possible implications. For example, the consultation mentions remedying weaknesses in existing forestry legislation – it would be useful to have these weaknesses fully laid out in the consultation.
- Without an overall quantified carbon assessment of the proposals, SEPA has found it difficult to judge the merits of the proposals, and therefore restricted its comments to identifying issues for clarification/resolution.
- With the underlying objective being to help achieve the emissions reduction target in the Scottish Climate Change Bill, we would encourage conditions on the lease so that operators are required to take account of carbon impact.

⁷ http://www.sepa.org.uk/about_us/consultations/sepa_responses.aspx SEPA's response in January 2009 to the consultation on forestry provisions in the Scottish Climate Change Bill

Q12 The Bill requires the Scottish Government to produce an action plan setting out current and proposed measures to improve the energy efficiency of buildings in Scotland, as well as measures to encourage behavioural change.

What are your views on this proposal?

It appears that the Bill could be unintentionally weakening Energy Efficiency legislation. The Climate Change Bill repeals terminology in the Housing Act 2006 to improve energy efficiency whereas the Climate Change Bill looks to promote energy efficiency.

SEPA would also like to draw the committee's attention to SEPA's response⁸ to the Economy, Energy and Tourism Committee's call for evidence on determining and delivering Scotland's Energy future. SEPA noted that measures to address energy demand for existing building stock will need to be addressed. Also, we are still seeing major public developments (hospital and schools etc) basing decisions on building costs (now) rather than future costs of carbon, resulting in the wrong boiler type or heating system and inadequate energy efficiency standards. The cost of carbon must be incorporated into the design, planning and decision stage of building projects. SEPA would like to see the provisions in Section 48, 49 and 50 reflect this need.

Q13 The Bill confers powers on the Scottish Ministers to make regulations providing for the assessment of (a) the energy performance of non-domestic buildings; and (b) emissions of greenhouse gases produced or associated with such buildings. The provisions are enabling in nature and the Policy Memorandum provides further information on the Scottish Government's thinking in this area.

What are your views on this approach?

No comment.

Q14 The Bill places a duty on the Scottish Government to take such steps as it consider appropriate to promote the use of heat from renewable sources. The Scottish Government has indicated this provision will enable it to introduce measures it deems appropriate to incentivise the production of heat from renewable sources.

What are your views on this proposal?

Key messages:

- Promotion and support could extend to the promotion of waste heat from fossil fuels use (working with the UK Government where appropriate).
- There is need to go further than 'promote' and to explore opportunities for improved coordination between key actors, use of the planning system and application of best practice standards to underpin the direction of the draft framework for the development and deployment of renewables in Scotland⁹ (includes Scottish Action Plan on renewable heat) and SEPA's Thermal Treatment guidelines¹⁰.

⁸ <http://www.scottish.parliament.uk/s3/committees/eet/inquiries/energyFuture/68SEPA.pdf> SEPA's response to the Economy, Energy and Tourism committee's call for evidence (energy inquiry) on determining and delivering Scotland's energy future august 2008

⁹ <http://www.scotland.gov.uk/Publications/2008/11/05115324/0> Draft framework for the development and deployment of renewables in Scotland

¹⁰ http://www.sepa.org.uk/about_us/sepa_boards/the_agency_board/agendas_and_papers/10_february_2009.aspx SEPA's Thermal Treatment Guidelines approved by the Agency Board 10th February 2009. Papers for the meeting page 67 to 110.

Waste heat

SEPA welcomes the provisions that Scottish Ministers must take steps to promote the use of heat from renewable sources. Promotion and support could also be expanded to cover the use of waste heat produced by fossil fuel power stations and other industrial processes. SEPA also highlighted this issue in its response to the Economy, Energy and Tourism committee's call for evidence for determining and delivering Scotland's Energy Future. SEPA explained that Scotland requires a huge and sustained increase in its ability to utilise heat from renewable sources as well as waste heat from industry, power supply and thermal treatment.

Legislation to underpin waste heat and use of renewable heat policy

Scotland's Renewable Heat Strategy: Recommendations to Ministers¹¹ recognises that there are particular opportunities in Scotland because of the extent of areas off the gas grid, and the existence of clusters of potential heat demand and existing waste heat or potential renewable heat sources.

SEPA's Thermal Treatment of waste guidelines set out the approach that SEPA will take in planning responses to, and licensing of, waste treatment facilities. The thermal treatment guidelines note that the location of thermal treatment facilities needs to consider the future use of waste heat, as an integrated network of facilities will ensure energy from waste is recovered efficiently.

"SEPA recognises that Scotland does not yet have mature or extensive heat-use networks. However, there are immediate opportunities for reliable and extensive heat use by co-locating thermal treatment plants with existing energy and heat intensive industries, or near to public developments such as leisure complexes and shopping centres. Another alternative is to develop facilities in areas with the potential for the co-development of heat-using industries. Low grade heat could be a driver for the development of eco-industrial parks, with a focus on waste treatment, reprocessing and manufacturing using waste materials, renewable energy production and local food production."

Regulators, government and the renewables sector need to work more closely together to ensure the development and application of best practice industry standards and methods of working. Scottish Ministers and Planning Authorities (working with the UK Government where appropriate) have a central role in putting in place mechanisms to increase the use of waste heat and renewable heat sources. Scottish Ministers will need to interact with the Planning System to take steps to increase the use of heat from renewable sources and the utilisation of waste heat.

Q15 The Bill sets out measures aimed at improving waste and recycling. The Bill gives powers to the Scottish Government to make regulations in the following areas:
Waste prevention and management plans;

Waste data;
Deposit of recyclable waste;
Procurement of recycle;
Reduction of packaging;
Deposit and return schemes;
Charges for carrier bags.

What are your views on these proposals?

With reference to the objectives of the Climate Change Bill, SEPA believes that there must be concrete evidence that the waste provisions provide an overall carbon benefit. SEPA would therefore advocate that a full life cycle assessment and carbon impact assessment is carried out in detail before the implementation of each waste provision to ensure they contribute positively towards the overall 80% emissions reduction target.

¹¹ Scotland's Renewable Heat Strategy: Recommendations to Scottish Ministers. Renewable Heat Group (RHG) Report 2008
<https://www.scotland.gov.uk/Resource/Doc/215382/0057632.pdf>

SEPA gave oral evidence at the Rural Affairs and Environment Committee on 4th February and also submitted a consultation response¹² in October 2008 to the consultation paper on potential legislative measures to implement zero waste.

Further to this, Section 58 of the Climate Change Bill as could expand so that it covers products as well as packaging in deposit return schemes.

A simple but effective example of the benefits of a more flexible approach would be energy efficient light bulbs (one could list many other products that are potentially problematic from an environmental resource and carbon impact perspective e.g. mobile phones and batteries). Energy efficient light bulbs will hit the waste stream in their millions in a few years and therefore provisions for an incentive to the public could help recover their metal, glass and plastic content as well as keep their mercury content, albeit low, out of landfills and energy from waste systems.

SEPA suggest the following approach to widen this potentially useful instrument:

- Make the powers general to any products and inclusive of packaging.
- Ensure the powers can be used for full or partial refund schemes. This will enable either, a full refund on return approach, or a partial refund and part subsidy for recovery approach, which for some potentially hazardous household wastes may be necessary. This is not an uncommon approach to deposit refund schemes. Care would be necessary to ensure retailers cannot pocket part of the deposit. A central clearing house approach would avoid this.

There are clear opportunities to 'close the loop' in terms of ensuring that a waste material can be used as the input fuel or raw material for other processes, either within the same overall manufacturing process, or as a valuable raw material for another organisation. This can be achieved one of two routes: (1) within a tiered, proportionate regulatory system that reflects the risks associate with a particular waste or end-use, or, (2) where a case can be made to show that the use of waste materials is no worse than the non-waste equivalent for the environment and human health, as a new product or raw material.

Dealing specifically with the second route, SEPA is relatively unique within the UK as it has provided publicly available guidance on the definition of waste since 2006. Our sister agencies in other parts of the UK are working on their own guidance at the moment but have still not published anything. We supplemented SEPA guidance with specific guidance on the recovery of waste oils in 2007 and it is a piece of guidance around which we have had some success:

- A drilling waste management company recovers waste oil from offshore drilling mud so that is no longer a waste when it is sent for reuse offshore.
- Working with the Quarry Products Association, SEPA published guidance on the recovery and re-use of road planings as a non-waste. This has reduced the costs and bureaucracy for civil engineering contractors and aims to encourage an approach that 'closes the loop' on up to 500,000 tonnes of road planings per year.
- We reached a successful end-of-waste conclusion for a company manufacturing biodiesel from used cooking oil and animal rendering wastes. Smaller biodiesel manufacturers are likely to benefit from a change in legislation in 2006 (i.e. an exemption from the requirement to hold a waste treatment licence) to allow small scale manufacturing under certain conditions.
- We are currently working with the Scotch Whisky Association on a framework document which looks at the reuse of outputs from distilleries in a range of activities, including their use as fuels, animal feed and soil conditioner.
- We are working in partnership with the Civil Engineering Contractors Association to develop guidance on the end-of-waste for clean soils from Greenfield sites.
- We are working with Scottish Power and ScotAsh to consider end-of-waste cases for the uses of the various waste ash streams from coal burning power stations.
- Working with the Quarry Products Association to see whether we can, on the basis of an end-of-waste case, allow the use of recovered waste oils as fuel in roadstone coating plants without requiring compliance with the EU Waste Incineration Directive.

¹² http://www.sepa.org.uk/about_us/consultations/sepa_responses_200.aspx SEPA's response in October 2008 to the consultation paper on potential legislative measures to implement zero waste.

Q16 What are your views on the adequacy of the Scottish Government's consultation in advance of publishing the Bill?

The 12 week consultation period provided ample opportunity for SEPA to consider the proposals for a Scottish Climate Change Bill. SEPA organised several internal seminars to discuss the proposal and SEPA's response was also considered by the SEPA Board in April 2008.

Q17 Do you have any views on the Strategic Environmental Assessment which was carried out by the Scottish Government out on the consultation proposals?

In our response to the Strategic Environmental Assessment Environmental Report consultation, SEPA welcomed the undertaking of a Strategic Environmental Assessment on the Scottish Climate Change Bill consultation and considered it to be a very comprehensive document that covers the issues in considerable detail and, importantly, identifies a comprehensive range of SEA mitigation measures.

In its original comments, SEPA recommended that a simplified report was prepared to support the introduction of the Climate Change Scotland Bill to Parliament which clearly sets out the key findings and SEA mitigation measures. SEPA noted that this would help inform decision making on the Bill as it progresses through Parliament; such a note was published on 23rd December 2008.

Q18 Does the Bill raise any equalities issues you would wish to highlight?

No comment.

Q19 Do you have any comments on the impact of the Bill on sustainable development?

SEPA believes that, taken as a whole, the provisions and policies to meet the targets should make a strong contribution to sustainable development. The advisory mechanisms established via the UK Committee have, as part of their definition, a requirement to take account of economic, social and environmental issues.

However, the same does not appear to be the case for adaptation measures. Adaptation measures should consider the social and economic impacts as well as the environmental impacts and there may be a case to re-examine section 45 of the Bill.

Q20 Do you have any other comments on the Bill?

SEPA sees the Bill as setting the framework (Part 1 -3) but also facilitating the move towards the ambitious targets required. Part 4 tackles the huge amount of emissions influenced by the public sector and Part 5 could therefore possibly expand to include provisions for mitigation measures in other more carbon intensive sectors.

There are further key areas that Part 5 of the Climate Change Scotland Bill could address.

The transport and agricultural sectors make key contributions to emissions. To reduce emissions from vehicles, there is a need to promote sustainable transport and take into account the carbon impact of new transport infrastructure decisions.

In agriculture, this could particularly look at mitigation measures for methane and nitrous oxide and the need to protect carbon content of soils.

A paper published by National Grid in January 2009, The Potential for Renewable Gas in the UK, noted substantial opportunities from biogas. One of the two main biogas processes is anaerobic digestion. SEPA wishes to see a major drive to stimulate appropriate sectoral and on- farm anaerobic digestion utilising both farm wastes and other sources of waste biomass. This could provide a significant contribution to a decentralised micro-generation energy system as well as diversification for the agricultural sector.

Scotland's per capita water consumption is increasing in contrast to consumption patterns for other developed countries. Supporting measures to require and/or enable more effort to reduce water demand and improve water efficiency across all sectors would help reverse recent trends for increasing energy consumption associated with the supply of clean water and disposal of wastewater.

SEPA has initiated a discussion with Scottish Water concerning future energy use, recognising the importance of this issue to mitigating climate change. It is clear that existing regulatory needs and drivers will drive increased energy use in water and sewerage management in future, which are incompatible with climate change targets. It is SEPA's view that radical solutions will be needed in future to avoid this materialising.

The Climate Change Bill should recognise the importance of Scotland's carbon rich soils, and the need for their effective management. Scotland is in a unique position with a large amount of carbon in peatlands that needs to be protected and managed sustainably. Given the significance of carbon stores to Scotland's carbon budget (our present carbon "store" is estimated as equivalent 200 yrs of present emissions)¹³ it seems reasonable for Scotland to legislate to protect these stores.

Given the sheer scale of the potential greenhouse gas emissions from land, there seems to be a gap in the range of powers and duties on public bodies to ensure effective management and protection.

Scottish public bodies already have a duty to further the conservation of biodiversity under the Nature Conservation (Scotland) Act 2004 and this would seem to allow Scottish Government to require the sustainable management of peatland via further guidance.

There is an opportunity in the Climate Change Bill Part 5 to emphasise the importance of the carbon stores by including provisions that ensure public bodies consider carbon explicitly when carrying out their duties in protecting Scotland's soils.

Another way forward may be the inclusion of a duty on Scottish Ministers to issue a national carbon strategy for both peatlands and Scottish soils. The Bill could also include provisions for a statutory consultee in the planning process for soil carbon issues, and provision to enable a body to be given regulatory powers if necessary to ensure effective, sustainable management of soil/peatlands carbon.

¹³ Bradley *et al.* (2005) stated that Scotland's soils contain an estimated 2196 million tonnes of soil carbon, to a depth of 100 cm, compared to a total of 4566 million tonnes for the whole of the UK.

WRITTEN SUBMISSION FROM SCOTTISH WATER

Scottish Water Response to the Call for Views on the Climate Change (Scotland) Bill by the Scottish Parliament Transport, Infrastructure and Climate Change Committee**Introduction**

We welcome the opportunity to provide evidence to the Committee on the proposed Climate Change (Scotland) Bill. During 2008 Scottish Water issued a detailed response to the consultation on earlier proposals for this bill setting out some of the challenges for the water industry in addressing climate change.

We are pleased to see additions to the current bill that take account of the need for adaptation. We believe that it is useful and necessary for both adaptation and mitigation to be considered together within the bill. The Flooding Bill promotes multi-agency approaches and surface water management planning and is an example of the sort of partnership approach across wider aspects of climate change adaptation – the requirement to produce a programme must be seen in the context of partnership.

General Statement

We are fully supportive of the aims and ethos of the bill. We understand the scientific basis on which the targets are decided and also the moral responsibility for developed nations to demonstrate leadership on this issue. Our vision is that Scottish Water always demonstrates responsibility in delivering its duties.

The water industry is at the forefront of climate change. We depend on a healthy environment for reliable, good quality water to treat and supply to customers. Further, we act to protect the aquatic environment by treating and safely returning society's wastewaters without causing flooding or pollution. A changing climate challenges the provision of these services.

In respect of carbon it must be recognised that the water industry is an energy intense sector. The challenge of meeting public health and aquatic environmental quality imperatives has seen a step change in technology in recent years with the advent of tertiary wastewater treatments, membrane technologies and UV disinfection.

Rising Energy Demand

It is estimated that the £4bn we will invest between 2002 and 2010 to meet service, health and aquatic environmental imperatives will increase energy demand by 2.5% per annum. However, backtracking on quality is not an option. We need a good quality environment and we are a critical service supporting a healthy Scotland.

Legislators in Scotland and Europe collectively need to recognise that future quality enhancement must be balanced by holistic assessment of the net benefit or cost. Local enhancement must be considered in the context of the global impact from potential emissions increase.

There is a need for a full review of legislation written in a "pre-carbon" era to identify unintended carbon consequences from EU, UK and Scottish Law. Full carbon assessment should be demanded of all new legislation. Implementation of legislation must consider the wider impact and whether there are policy mechanisms etc by which carbon can be mitigated.

A Scottish Water Climate Change Strategy

Our strategy commits us to be proactive on behalf of customers, to seek to understand the impacts and secure service in a changing climate and to contribute appropriately to carbon mitigation by reducing our energy demand, becoming more efficient and generating renewable energy.

On adaptation we have taken steps to identify the work that will be required to properly assess the risk and respond appropriately. Our intention is that prior to physical investment we will work in partnership

with others to understand the service risk, the timeframe over which impacts may be felt, and the response necessary to secure service. This will ensure we commit expenditure as efficiently as possible.

On mitigation, Scottish Water is committed to carbon management and to the production of annual footprint reports of operational activities. Our current footprint is circa 470,000 tonnes CO₂ equivalents. We have been a leading influence on the development of carbon assessment tools in the water industry, in particular to examine emissions associated with investment planning.

We are presently exploring tools that will support the assessment of the “whole life” carbon impact associated with investment planning. This may help ensure that future decisions properly accommodate the need to report, manage and reduce carbon.

We generate up to 5% of our electricity demand from renewables (predominantly hydro), and have assessed our capacity to increase this as part of our mitigation measures. We are currently developing a ‘Carbon Attainment Plan’ that seeks to identify the contribution that each part of Scottish Water needs to make towards managing carbon – making carbon part of ‘business as usual’.

Specific Points

The 2050, and interim 2030 carbon targets

We recognise the scientific basis on which the 80% reduction is predicated, and agree that a trajectory to achieve 80% by 2050 requires a challenging interim target. To do otherwise risks back loading action on emissions reduction, increases the risk of failure to achieve the target and allows a greater net emissions over the period. For this reason, it is sensible and right to introduce an interim target that would allow all sectors to begin planning their carbon management approaches.

We believe that a genuine multi-agency approach is required to agree and secure the necessary actions and funding to deliver emissions reduction cost effectively across all sectors of the economy. To do this will require significantly increased focus on the carbon abatement costs across the economy in order that attention may be focussed on areas where there is greatest opportunity and efficiency.

Annual Targets and Carbon Budgeting

The setting of annual targets that are appropriately scoped and costed presents a significant challenge to Scottish Ministers. This builds on the issue raised above, namely that greater clarity is required on the ability of the Scottish economy to make emissions reductions that will both contribute meaningfully to the long term goals, and do so in a manner that is both cost effective and equitable.

During our earlier consultation response, we expressed the view that clear budget periods over 5 years, with sufficient lead time would be necessary, and that a degree of flexibility in balancing budgets is required. This is because our industry has extremely long lived assets, 8 year objective setting periods and 4 year regulatory investment plans. We need sufficient sight of budgets and the implications for Scottish Water in order to make appropriate plans. The ability to vary targets annually, along with the significant work required on cost effectiveness brings a degree of uncertainty to the process.

Annual targets offer a useful profile within a budget period, but we believe it is more important to produce longer term budgets that will cost-effectively drive the right opportunities and contribute to the overall trajectory of emission reduction.

Public Sector Duty

The public sector is a diverse range of organisations with differing carbon impacts and reduction opportunities. It is imperative that we consider (1) emissions associated with a public body in delivering its duties, and (2) emissions from third parties that are ‘caused’ by the public body – the public body’s unintended impact on carbon in the wider economy through policy, legislation, planning decisions etc.

With respect to the operational emissions of a public body, an appropriate duty would require organisations to report carbon performance regularly, and develop carbon management plans that demonstrate how carbon is being ‘mainstreamed’ throughout its operational practices. Such a plan may

be submitted for approval by the sponsor unit which would itself have a duty to mainstream carbon thinking across its remit. Periodic review of progress against the plan may then follow.

It is unrealistic to expect all public bodies to default to the same trajectory as the proposed targets. This is because each body will have a different mitigation capacity. The key focus must be on cost-effective reduction to ensure that tax and water charge payers get value for money for carbon abatement.

With respect to the carbon consequences of legislation, policy or decisions made by public bodies we believe there should be a duty to consider how, in the course of its activities, seemingly unrelated policies or decisions may drive unintended carbon consequences elsewhere in the economy.

Carbon management is interconnected with all parts of the economy and a multi-agency approach with government, regulators, authorities, NDPBs etc, to take account of the degree to which their decisions impact carbon emissions.

We believe that building the right carbon management tools to encompass whole life costing of carbon will allow us to see the most cost effective means by which carbon could be reduced. Added to which, proper evaluation of the capacity and cost efficiency of investment in renewables across public sector and cost efficiency will enable the identification of suitable carbon mitigation goals.

Adaptation

We are pleased to note the provisions for laying a programme for adaptation before Parliament. We believe that only through multi-agency partnerships particularly those associated with critical national infrastructure will we successfully integrate policy and action towards securing a well adapted Scotland. We are committed to continuing to work with Government and stakeholders toward achieving this.

Waste Management

Through our waste management facilities in our non-core business "Scottish Water Horizons" we have significant green waste composting and recycling capacity that we are looking to expand. We believe that there is scope to streamline the regulation surrounding such activities to promote sector expansion and the inclusion of carbon beneficial activities such as Combined Heat and Power units.

WRITTEN SUBMISSION FROM SCOTTISH RENEWABLES

Stage 1 Scrutiny of the Climate Change (Scotland) Bill

Scottish Renewables welcomes the opportunity to provide written evidence on the Stage 1 scrutiny of the proposed Climate Change (Scotland) Bill which is one of the most significant pieces of legislation ever considered by the Scottish Parliament. Scottish Renewables is Scotland's leading green energy trade body. We represent over 240 organisations involved in renewable energy in Scotland and include many environmental NGOs in our wider associate membership. Further information on our work and membership can be found on our website – www.scottishrenewables.com

Scottish Renewables believes that the harnessing of renewable energy sources in a sustainable manner provides a unique opportunity to not only tackle climate change but to provide economic benefits to Scotland. The setting of statutory targets to reduce emissions is vital if we are to send the right signals to industry and wider society that significant changes are required to establish a low carbon economy.

However the setting of statutory targets on their own will not deliver the kind of changes needed unless accompanied by strong action that can be scrutinised by the Scottish Parliament. This is why we are proposing a robust supporting framework to accompany the Bill which will involve aligning the consideration of the financial Budget Bill and the financial spending review to the delivery of climate targets.

If Scottish Renewables can be of any further assistance to the Committee, we will be happy to provide further written or oral evidence in support of our statements.

Q1 The Bill creates a statutory framework for greenhouse gas emissions reductions in Scotland by setting a 50% reduction target for 2030 and an 80% reduction target for 2050.

What are your views on the 2050 target and a 2030 interim target proposed in the Bill?

Interim point targets will be useful in providing milestones on the way to delivering the 2050 goal, but the primary focus should be on the delivery of the target for the individual carbon budget cycle. The Bill should allow for subordinate legislation to adjust the level and year of any interim targets including the 2050 target. However this provision should only be included if there is an accompanying statutory purpose of the Bill to contribute towards a stabilisation of global average temperature levels at no more than 2 degrees celsius beyond pre-industrial levels. This important aim was adopted by the EU in 1996 and has been repeatedly reaffirmed including at the 2007 G8 conference. It is important that the purpose of the target is explicit on the face of the Bill, allowing flexibility to revise approaches and targets to deliver Scotland's contribution to the global challenge in the decades ahead. Any proposed change in target levels should be supported by strong scientific consensus analysed and reported on through the UK Climate Change Committee and/or relevant Scottish body.

Q2 The Bill requires that the Scottish Government sets annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050. It is proposed that these annual targets will be set in batches, the first being for the years 2010 to 2022 inclusive.

What are your views on the setting of targets in batches from 2010 to 2022?

The setting of annual targets within batches over a 12 year period is feasible provided the targets are compatible with the first three 5-yearly budgets recommended by the UK Climate Change Committee. The danger in early batches failing to deliver, would result in disproportionate pressures to reduce carbon emissions in a shorter period of time.

The electoral cycle of the Scottish Parliament is likely to provide an ultimate form of scrutiny for governments but detailed scrutiny of the carbon budget must take place in parliament aligned with the carbon assessment of the spending review and annual Scottish Budget Bill.

Q3 The Bill provides that from the year 2020, the annual emissions targets must be set so that each is at least 3% lower than the target for the previous year. Prior to 2020, the Scottish

Government has indicated that it intends to set annual targets which build towards delivering emissions reductions of at least 3% each year.

What are your views on this approach or any possible alternative approaches?

The requirement to meet at least 3% annual carbon emissions in the period to 2020 appears to be questionable. There is insufficient explanation as to why the period up to 2020 is aspirational rather than mandatory in setting annualised carbon cuts. The perception is that annual carbon emission cuts of 3% is unlikely. If the Government does not have the confidence that annual cuts of 3% are achievable, then this should be identified and explained now, with a clear understanding that in certain future years the carbon emissions cuts will be considerably greater than 3%.

Q.4 The Bill introduces the concept of a “net Scottish emissions account” as a point of reference against which the target for reducing greenhouse gases can be measured. It is defined as the net Scottish emissions plus or minus any carbon units credited to or debited from the account. Any units purchased may be used to offset Scottish emissions. Any carbon units generated in Scotland and sold to customers outside Scotland, count as emissions made in Scotland.

What are your views on the proposals in the Bill relating to the net Scottish emissions account, and should there be a limit on the number of carbon units which Scotland can purchase?

International trading in carbon has a role to play in providing flexibility but could undermine the need to act now in Scotland to reduce emissions across all sectors and to capitalise on domestic renewable resources. There are issues regarding the credibility and regulation of international credits that need to be resolved before they can play a significant role. If they are to be used in the future a strict limit should be imposed and we would support a limit of at least 80-90% of carbon emission reductions being achieved through domestic effort or elsewhere in the EU.

Q5 The Bill defines “Scottish emissions”, in relation to a greenhouse gas, as being emissions of that gas which are attributable to Scotland. The policy memorandum states that “Scottish emissions” are defined as being those greenhouse gases which are emitted in Scotland or which represent the Scottish share of emissions of gases from international aviation and international shipping.

What are your views on this definition of Scottish emissions?

Scottish Renewables supports the inclusion of a Scottish share of international aviation and shipping. The reality that Scotland is part of an ‘island nations’ and dependent upon air and sea transportation for its people’s travel and exchange of goods cannot be under-estimated. However, there are issues surrounding, for example, the arrival of imports at a Scottish port or airport for onward delivery to a destination outside Scotland (or in the case of goods passing through say from Stranraer to the Cumbrian border) and whether there will be sufficiently robust systems to record the end user of a carbon commodity.

Q6 The Scottish Government has indicated that initially it intends to seek independent, expert advice on climate change from the UK Committee on Climate Change. The Scottish Government states in the policy memorandum that if it determines that the UK Committee on Climate Change does not meet all the advice needed for Scotland, the Bill contains provisions which will allow the Scottish Government to establish a Scottish Committee on Climate Change or to designate an existing body to exercise these advisory functions.

What are your views on the Scottish Government's approach to obtaining independent, expert advice on climate change?

There is a growing body of opinion that the UK Climate Change Committee may not have the resources and/or stretch to provide detailed advice on Scotland-only carbon emissions and the consequences of climate change. Scottish Renewables would support an independent Scottish body, which will work closely with the UK Climate Change Committee and other public bodies such as Audit Scotland, and may incorporate the role of the Sustainable Development Commission in Scotland. With increasing concerns about the need to secure carbon cuts in the first few years of the Bill's passing, a stronger focus on what is happening and what corrective action should be applied, is more likely to be forthcoming in a dedicated Scottish body.

Q7 The Bill places duties on the Scottish Government requiring that it reports regularly to the Scottish Parliament on Scotland's emissions and on the progress being made towards the emissions reduction targets set in the Bill. The Bill sets out details of these reporting requirements.

What are your views on these proposed reporting arrangements?

The recent experience of minority government in Scotland has resulted in a shift of the balance of power in favour of the Parliament over the governing executive. This is a welcome development and in the current climate suggests that parliamentary scrutiny of carbon emissions cuts would be robust.

However, there is no guarantee that the current political situation will continue any time into the future and there are concerns that majority government can lead to parliamentary committees being less able to openly question the performance of the governing parties.

With this in mind, Scottish Renewables supports the reporting duties as stated in the Bill, but believes that the carbon assessment of individual budget lines in the spending review needs to also be comprehensively undertaken to enable scrutiny from parliamentary committees. There needs to be a form of legislative commitment in the Bill to this approach otherwise a meaningful way of assessing how government spending is directly supporting the delivery of targets will be opaque.

Q8 The Bill contains powers to allow the Scottish Government, by regulations, to impose duties on public bodies in relation to climate change, to issue guidance to those bodies relating to their climate change duties and to require that they report upon the discharge of those duties.

What are your views on this proposal?

Approximately one-third of the Scottish Government's revenue is transferred to local government and a similar significant proportion funds the National Health Service in Scotland. The Local Government Concordat clearly shows that the Scottish Government has a strong belief that Scottish local authorities have their own responsibilities and priorities to decide upon. However, the difficulties in committing local authorities to delivering Scottish Government policies within the Single Outcome Agreement process, together with Community Planning arrangements having less binding obligations on a local authority area, would suggest that local government will require early direction on their key role in cutting carbon emissions. Whilst some local authorities have made clear and significant progress in both the delivery of policies and services with due cognisance to the impact of climate change, there are too many local authorities who appear to be dragging their feet with the complaint that they are insufficiently resourced to transform their services without additional government funding.

The Scottish Government and COSLA need to work together and urgently on changing this culture and if significant change has not come about within the next 3 years, early implementation of a duty on local authorities and/or other public bodies should be considered.

As much as this might appear as using a 'stick', there are 'carrot' incentives which the government could consider to encourage a more positive approach to combating climate change including incentives to reduce energy bills and establish locally owned or community owned Energy Service Companies.

Q9 The Bill places a duty on the Scottish Government to produce a report for Scotland, setting out its objectives in relation to adaptation to climate change, proposals and policies for meeting them and the timescales within which they will be introduced.

What are your views on this proposal?

Scottish Renewables broadly welcomes this approach and the experience of the past twelve months in consultation on such matters has been constructive.

Q10 Muirburn is the act of controlled burning of vegetation on open semi-natural habitats such as muir (Scottish word for moor) or moorland, and includes the burning of plants such as gorse, heather and grass. The Bill contains an enabling power to allow the Scottish Government to vary the permitted times during which muirburn may be made where they consider it necessary or expedient to do so in relation to climate change.

What are your views on this proposal?

Scottish Renewables does not have a view on this provision.

Q11 The Bill will allow modification by order of the functions of the Forestry Commissioners to enable the Forestry Commission in Scotland to play a greater role in tackling climate change. The immediate intent of the Scottish Government is to take forward proposals relating to renewable energy development on the National Forest Estate and the release of capital from the National Forest Estate for woodland creation.

What are your views on this proposal?

The Commission owns and manages a very large estate which is likely to include a significant number of sites suitable for generation of electricity from hydropower and wind. Whilst the Commission has in-house project development expertise it may prove commercially sensible to work in partnership with other players in the renewables industry to realise any potential, especially where it is desirable to promote rapid deployment.

However we believe that the energy generation by any such joint venture should be limited ‘to generate power from wind, hydro and micro power’ and that there is no suggestion that the Forestry Commission would form joint ventures to develop bioenergy projects of any scale. If bioenergy Joint Ventures were proposed, these may allow a situation to arise where Forestry Enterprise Services is effectively selling timber to itself. Real or perceived, serious market distortion in the wood fuel market may arise.

Q12 The Bill requires the Scottish Government to produce an action plan setting out current and proposed measures to improve the energy efficiency of buildings in Scotland, as well as measures to encourage behavioural change.

What are your views on this proposal?

Scottish Renewables is pleased to see that the issue of energy efficiency is included in the Bill, however, we are disappointed that an Energy Efficiency and Microgeneration Action Plan is long over-due. The action plan needs to set out what the current energy demand is and what it needs to be in order to reduce carbon emissions. Setting this out will clearly help industry and the general public to appreciate the scale of the challenge which we face.

Q13 The Bill confers powers on the Scottish Ministers to make regulations providing for the assessment of (a) the energy performance of non-domestic buildings; and (b) emissions of greenhouse gases produced or associated with such buildings. The provisions are enabling in nature and the Policy Memorandum provides further information on the Scottish Government’s thinking in this area.

What are your views on this approach?

Scottish Renewables would support moves incorporated into the Bill to require minimum energy efficiency standards to be met within the public and private sectors in Scotland. However, all avenues should be explored, such as using fiscal incentives to reward energy efficiency and/or microgeneration.

The Scottish Government should progress the extension of General Permitted Development rights for air source heat pumps and wind turbine technologies as a matter of urgency, as well as turn its attention towards solutions for tenemental properties.

Q14 The Bill places a duty on the Scottish Government to take such steps as it consider appropriate to promote the use of heat from renewable sources. The Scottish Government has indicated this provision will enable it to introduce measures it deems appropriate to incentivise the production of heat from renewable sources.

What are your views on this proposal?

In our response to the Scottish Government’s consultation on the draft Renewable Energy Framework, Scottish Renewables set out a rationale of action which would further the promotion and deployment of renewable energy in Scotland.

Whilst we welcome the attention paid to renewable heat in the Bill and the recognition of urgent action in this area there is perhaps a missed opportunity to consider electricity and transport as well. Determined action needs to take place on all three fronts and would be keen to see the Bill promote this with clear, measurable actions from the Scottish Government (see following paragraph for an example).

In terms of the specific wording of the Bill, it could be more detailed by specifying the role of heat in domestic and commercial/industrial sectors and expectations of how each sector will reduce its carbon emissions over a period of time and indicating the powers that Ministers may implement to assist in that transition.

Q15 The Bill sets out measures aimed at improving waste and recycling. The Bill gives powers to the Scottish Government to make regulations in the following areas:

Waste prevention and management plans;

Waste data;

Deposit of recyclable waste;

Procurement of recycle;

Reduction of packaging;

Deposit and return schemes;

Charges for carrier bags.

What are your views on these proposals?

Scottish Renewables is broadly supportive of these measures.

Q16 What are your views on the adequacy of the Scottish Government's consultation in advance of publishing the Bill?

Scottish Renewables welcomes the opportunity to put forward the views of its members on both proposed legislation and policy development on specific measures. The consultation process for the Bill has been constructive and encouraging.

Q17 Do you have any views on the Strategic Environmental Assessment which was carried out by the Scottish Government out on the consultation proposals?

No specific comment at this stage.

Q18 Does the Bill raise any equalities issues you would wish to highlight?

No specific comment at this stage.

Q19 Do you have any comments on the impact of the Bill on sustainable development?

The Bill should have a positive impact on sustainable development as it will reduce emissions and also provide impetus to investment in a low carbon economy.

Q20 Do you have any other comments on the Bill?

The Bill contains highly commendable aspirations as a piece of enabling legislation, however it is the detail of the implementing legislation that will be more important and we look forward to seeing this. The Bill's efficacy will be whether secondary legislation and government action will achieve the targets which are core of this legislation. There is considerable debate about what to do in the event that targets are not achieved. It is difficult to see how financial penalties against a government would be feasible, however, this legislation is not being enacted in isolation: international, European and UK obligations may come to bear on the performance of the devolved administration in Scotland.

Furthermore, the general purpose of the Bill should be to accelerate government action and delivery in the short term as well as the setting of targets for the long term. This means that areas such as carbon accounting of government action through the Scottish Budget, infrastructure planning, action on renewable energy and energy efficiency, building regulations and such like, are inter-related in making the Bill effective in practice. If the Bill is successful in truly facilitating the climate change proofing of Scottish public policy, then it will achieved far more than other initiatives aimed at mainstreaming core values and principles in Scottish life.

In the time since the Scottish Government was formed in 2007, amid a blaze of expectation for a Scottish Climate Change Bill and the subsequent 'sustainable' economic growth strategy, circumstances have changed. The UK Climate Change Act is now in place. Recession has hit most of the developed world and its implications for developing countries have barely featured on our horizon. The progress of the Climate Change (Scotland) Bill through its stages of parliamentary scrutiny may provide an opportunity to look again at how we approach 'sustainability' within our economic strategy. Even with the challenges of tackling climate change, Scotland has a strong competitive advantage to develop a low carbon economy, with economic benefits which are in balance with our natural environment and social concerns.