WRITTEN SUBMISSION FROM SCOTTISH ENVIRONMENT PROTECTION AGENCY

Introduction

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

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.

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.

Key messages

We need early action where possible and a Bill to support this.

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.

Parallel reporting on consumption emissions and communication activity on end user demand is needed to provide an overall picture of our climate change impacts.

We need to measure and monitor Scottish emissions closely- existing systems are unlikely to be sufficient to meet changing demands.

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.

We need to greatly improve our utilisation of waste heat and underpin renewable heat and waste heat policy with firm and supportive action.

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 report[1]. 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 Targets[2] 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.

[1] http://www.theccc.org.uk/reports/ Building a Low Carbon Economy – the UK's contribution to tackling climate change
[2] 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 response[3], 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.

[3] 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 responded[4] 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.

[4] 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 response[5] 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?

Xxxxxxxxxx no answer xxxxxxxxxxx

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 Scotland[6] (includes Scottish Action Plan on renewable heat) and SEPA's Thermal Treatment guidelines[7].

[5] 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

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

[7] 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 Ministers[8] 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 recyclate;
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.

[8] 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 response[9] 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.

[9] 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)[10] 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.

[10] 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.