Thank you for providing the Scottish Environment Protection Agency (SEPA) with the opportunity to provide written evidence to the Economy, Energy and Tourism Committee. This response relates specifically to: reducing energy demand and emissions; measures for assessing the energy performance and energy efficiency of existing non-domestic buildings; renewable energy – electricity and the promotion of the use of heat from renewable sources; heat; interconnection and grid upgrades; transmission charges and fuel prices and fuel poverty.

SEPA will be responding separately to the Rural Affairs, Climate Change and Environment Committee, the Local Government and Generation Committee plus the Infrastructure and Capital Investment Committee regarding the areas which these Committees will be focusing on.

In our response, which is attached as Annex 1, we provide some broad comments on RPP2 overall (we have made these points to all four committees scrutinising RPP2) and then more specific comments relating to the detailed policies and proposals in the areas being scrutinised by the committee.

Generally, we welcome publication of the second RPP and recognise its importance in providing a roadmap for implementing the ambitious climate change targets. We are, however, concerned that there is more that needs to be done in order to make the RPP fit for the purpose of delivering world leading climate legislation. There is a need in our view, for a step change in the ambition of RPP2, particularly in the light of the first annual target having being missed. We also believe that there needs to be greater resilience built into RPP2 to ensure that if some policy areas do not deliver to their full capacity that there is sufficient headroom to ensure that this does not prejudice meeting the challenging targets set. It may be worth remembering that Scotland has a 2050 target and many “no-regret” actions can be taken sooner that will contribute to the achievement of that more distant target.

In 2006 Stern\(^1\) suggested that climate change mitigation would cost 1% of Global GDP per year. More recently as a consequence of inaction he revised this to 2% per year. Currently the Scottish Government is spending around 0.3% of GVA*\(^2\).

There is a need in our view, therefore, for a step change in the ambition, resilience and monitoring of the RPP in order to make it a fully credible plan for implementing actions that achieve the targets.

Specifically to the remit of this committee, we consider that RPP2 urgently needs to consider the impact that new and emerging energy technologies may have on Scotland’s energy market and on deployment of renewable. Proposals for these types of developments are already emerging and we don’t fully understand their climate change implications, however decisions that we make on these proposals have the potential to lock us into a high carbon energy future for 30 years or more. The RPP2 needs quickly to be able to understand and plan for these developments and make adjustments as required. Without this, it may not prove to be sufficiently

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\(^1\) [http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/sternreview_index.htm](http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/sternreview_index.htm)

\(^2\) Source: Scottish Government Draft Budget 2013-14 Details of funding for climate change mitigation measures: SNAP (Scottish National Accounts Project). Note: GVA is GDP at basic prices.
resilient and progress towards climate change targets may well be compromised. We also offer views about the decarbonisation target, the need to make progress on developing heat networks, and on the need to protect carbon rich soils from inappropriately sited energy developments.

As a public body committed to openness and transparency, SEPA feels it is appropriate that this response be placed on the public record.
Appendix – Written Evidence from SEPA

1. Introduction and General view of RPP2

1.1 SEPA welcomes the publication of the draft second report on policies and proposals (RPP2) and the opportunity provided to us to submit our views on it as part of its 60 day scrutiny period. RPP2 is vitally important in helping to set Scotland on a path to meet the ambitious targets set in the Climate Change (Scotland) Act 2009.

1.2 We are, however, concerned that there is more that needs to be done in order to make the RPP fit for the purpose of delivering world leading climate legislation. There is a need, in our view, to (a) increase the scale of ambition, (b) enhance the resilience of RPP2 (c) provide more robust monitoring arrangements to help understand how policies and proposals are delivering in order to make it a credible plan for implementing actions that achieve the targets:

1.3 Scale of Ambition – RPP2 makes clear the scale of the challenge ahead and also makes it clear that the challenge is one to which the government is determined to rise. For the ambitious targets to be reached, however, a step change is needed and unless that step change is made early, then the scale of the challenge is likely only to increase. While many parts of RPP2 are welcome, we are concerned whether it will facilitate that fundamental shift of gear that is required. This involves beginning debate on some of the more uncomfortable decisions that will be required to meet the long term targets set and also setting out very clear, substantive, robust and deliverable policies. The section on transport, for example, appears to contain little new policy effort and much reliance is placed on reductions beyond 2020, whilst no mention is made of the potential impacts on the delivery of transport policies and proposals arising from the road-building programme that runs parallel to the RPP2 timescales.

1.4 Building Resilience – We are concerned whether there is enough “headroom” in the RPP so that if things do not go to plan then there may not be scope to meet the targets. This could arise from policies and proposals not delivering to the extent assumed, from the lack of an EU agreement to increase the target to 30% or where emissions increase due to unforeseen circumstances. We are already behind schedule due to the missed 2010 target, meaning that the policies and proposals set out must deliver to their full potential if we are to meet the targets set. Our own experience from internal target setting on greenhouse gas emission reductions is that it is very difficult to recover from a poor start and that later remedial actions to bring you back on track are often more dramatic. Accordingly, we feel that RPP2 needs to plan with more resilience in mind to face changing circumstances and emerging challenges such as the potential for large scale unconventional oil and gas exploitation, decisions on which have the potential to lock us into a higher carbon future through the life of RPP2.

1.5 Behavioural Change – SEPA agrees that behavioural change is key to delivery of the policies and proposals in RPP2 and we welcome the strategic approach
to behavioural change that will be set out in the forthcoming Low Carbon Scotland: Behaviours Framework. It is our view that it is essential that climate change is expressed as a national interest issue rather than a government issue, a sectoral issue or a policy issue if a step change in behaviour is to occur. For RPP2, we consider that behaviour change should find expression in all sections of the report and should not be stand alone as change is needed across all sectors of the economy and society. This requires collaborative working across the public and private sector that crosses party political boundaries, and requires extensive engagement with Scotland’s people about both the need for climate action and the benefits it will bring. RPP2 could also play a stronger role in enabling behavioural change through, for example, reconciliation and co-ordination of potentially conflicting policies and messages on climate change or through the identification and removal of perverse incentives that impact detrimentally on emissions.

1.6 Monitoring - There is a considerable reliance on assumptions about how the policies and proposals will perform. Without detailed monitoring of each of the specific policies and proposals however, it will be very difficult to tell whether these assumptions are accurate in the face of changing circumstances and whether revised assumptions and associated actions need to be identified. We believe therefore that there is scope to improve the use of more specific indicators, particularly leading indicators that let us know how we are progressing against a particular target beyond the overall monitoring of progress towards emissions reductions. Without this, it is difficult to understand risk and to understand which policy areas are working, and which could be accelerated, and which are not and therefore may need to change.

1.7 Delivering Multiple Benefits - RPP2 indicates that the costs of the policies and proposals is £1.6 billion and outweighs their direct benefits of £1.2 billion, but this completely ignores the wider benefits of climate actions and sends out the message that climate action is disproportionately costly and also risks these benefits not being given due regard in decision making. There are very many examples where concerted action would have multiple benefits not just for climate, but for improving the health and wellbeing of citizens, and making Scotland’s towns, cities and villages nicer places to live and work - yet these are not clearly articulated or costed. For example, taking actions to reduce emissions from transport can lead to a wide range of economic, social and environmental benefits, including improved urban air quality, less congestion and improved safety which in turn can lead to improvements in people’s health, promote more active lifestyles and can make our towns and cities nicer places to be and which attract economic investment. There is an opportunity for RPP2 to show the wider benefits of these actions to help to secure the behavioural change that is needed, and to show wider financial savings.

2. Energy Sector – General Points

2.1 This chapter is slightly confusing in that it does not cover all sources of energy and focuses on electricity generation. This results in a lack of clarity about some of the proposals and reduces the focus of the RPP2 with respect to this critical sector. While we welcome many of the proposals contained within this section, it is difficult to piece together the relevant policies and proposals from
across the energy sector and this has the potential to blunt the effectiveness of
the RPP2 in delivering the step change required from the energy sector.

2.2 This chapter makes little reference to electricity market reform and the
implications that this may have for the Scottish energy market. This will be a
key driver for investment in the energy market and will have clear implications
for the effectiveness of the RPP policies and proposals. A greater
understanding is needed of what impacts energy market reform will have on
Scotland’s emissions and of how the policies and programmes may have to
to change going forward. Without this, there is a great deal of uncertainty about
how effective RPP2 will be with regard to the energy sector.

2.3 There is no real consideration in RPP2 of how emerging oil and unconventional
gas extraction technologies may impact on the Scottish energy market
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and how this in turn may impact on the scale and speed of, for example,
renewables deployment. There is a very clear and very urgent need to fully
understand and to plan for the carbon impacts of these new and emerging
technologies in order to make sure that they do not compromise delivery of the
climate change targets. Proposals for these types of developments are already
emerging and we don’t fully understand their climate change implications,
however decisions that we make on these proposals have the potential to lock
us into a high carbon energy future for 30 years or more. This in turn could
have significant impacts on the deployment of renewables. The RPP2 needs to
be flexible enough to respond to these developments and make adjustments as
required. Without this, the RPP may not in our view prove to be sufficiently
resilient and progress towards climate change targets may well be
compromised.

3. Decarbonisation

3.1 SEPA strongly welcomes the ambition to decarbonise Scotland’s energy
supply, though as noted above, we do not consider that this ambition is
necessarily as resilient as it needs to be given the potential scale and pace of
change in energy generation technologies and markets. We strongly agree that
the case for harnessing Scotland’s potential for renewable energy generation
from appropriately sited developments remains strong and we continue to
support the target to generate the equivalent of 100% of Scotland’s electricity
from renewables by 2020.

3.2 We strongly welcome the commitment to a new electricity decarbonisation
target of 50g CO2/kWh by 2030. The most recently reported carbon intensity of
the grid is 291g CO2/kWh in 2011 and this new target will, if realised, have the
effect of dramatically reducing the carbon intensity of electricity generation to
around one fifth of today’s levels. This is a significant development of the first
RPP and represents a considerable stretching of ambition that is missing from
other parts of the document.

3.3 It is unclear from RPP2 whether this target covers both construction and
operational aspects, or whether it is restricted to the operational emissions only.

3 For example: www.heraldsco.pdf.com/business/markets-economy/fracking-could-benefit-scottish-energy-sector.20209158
SEPA is of the view that both construction and operational emissions should be included, for example to ensure that emissions arising from disturbed peat (see point 5 below) are taken into account.

3.4 Currently, all large scale windfarm developments requiring consent under section 36 of the Electricity Act, and where loss or disturbance of peat could occur, require a formal carbon assessment\(^4\). SEPA validates these assessments and their findings are a material consideration for Ministers in determining such applications. Carbon assessment has provided valuable insights into the actual emissions associated with the development of wind farms on deep peat.

3.5 From our experience in validating these assessments, we feel that there is scope for onshore wind developments to considerably reduce emissions resulting from disturbance and drainage of peat through more appropriate siting that avoids carbon rich soils. Therefore we are of the view that a strong locational framework which directs development to non peatland sites would be very beneficial (see 5 below) and has the potential to make considerable carbon savings.

4. **Heat Networks**

4.1 SEPA welcomes the significant moves that have been made on producing a heat vision for Scotland which will guide policymaking.

4.2 We consider that it is the lack of infrastructure that is still the greatest barrier to switching to renewable heat in Scotland. The planning system has a key role to play in enabling the deployment of this infrastructure and also in ensuring that new residential and commercial developments are able to easily connect. In our recent response to the Scottish Government’s call for candidate National Developments for inclusion in the third National Planning Framework we advocated that there should be a national infrastructure development consisting of a series of strategic heat networks across Scotland, linking significant heat producers with heat users. In our view, NPF3 provides a unique opportunity to identify, through a national heat map, strategically significant “heat dense” areas where cost-effective heat networks can be developed. The networks would provide an effective contribution to meeting targets on renewable heat and climate change. National Development status would also provide the impetus needed to make the step change in infrastructure provision required.

4.3 Similarly, in our recent response to the Scottish Government’s consultation on priorities for its review of Scottish Planning Policy (SPP), we also highlighted the need for clear policy position and direction regarding the provision of Heat Networks. We argued that the SPP should focus on how new and existing heat networks should be established and the role played by new development, and development plans, in enabling this to take place. SPP should set out a clear policy position stating what the planning system is expected to deliver, and the requirements that should be placed on new developments.

4.4 The implementation of new building standards (2014) in respect of energy efficiency in the domestic and non-domestic sector is welcomed but we believe that there is also an opportunity to radically change the face of how Scotland is heated. The Expert Panel of District Heating noted that the provision of district heating increases markedly the flexibility to apply new innovative heat generation technologies. Consideration should therefore be given to all new developments above a certain size (for example 10+ houses) being required to be ‘district heating ready’. Thus houses heated using a central boiler (consuming any suitable fuel, including gas) can be readily converted should non-carbon heat become available. This will require a significant increase in financial support for district heating schemes.

5. Protecting Peatlands

5.1 We welcome in our evidence to the Rural Affairs, Climate Change and Environment Committee the proposals in RPP2 to restore significantly more areas of peatland in Scotland than present rates. We have also strongly welcomed the policy to include peatland restoration within Scottish emissions accounting.

5.2 It is, however, far easier – and cheaper - to protect pristine peatlands, and thereby ensure that their carbon remains locked up and that they continue to sequester more, than to try to re-capture the amount of carbon that is lost once the peatlands are disturbed or drained. Accordingly, we consider that there needs to be a greater focus on protecting peatlands. In our evidence to the Local Government and Regeneration Committee, we advocate that a stronger locational framework is needed that avoids development on carbon rich peatlands and that directs new development to the least sensitive sites.

5.3 Constructing windfarms, for example, on carbon rich peatlands not only arrests the ability of these areas to sequester carbon in the future, but also results in the carbon that is locked up in undisturbed wet peatlands being rapidly released when they are drained or disturbed. We consider therefore that a strong locational framework which directs development to non peatland sites would be beneficial. This would not only provide carbon savings, but will also make an important contribution to biodiversity targets, sustainable flood risk management, improving water quality and also in making our peatlands more resilient to further damage from the effects of climate change.

5.4 In our evidence to the Rural Affairs, Climate Change and Environment Committee, we also argue for a need to phase out extraction of peat for horticultural use.

6. Carbon Assessment for Energy Generation Proposals

6.1 We believe that there is scope to consider whether the impacts of energy generation proposals on greenhouse gas emissions should be routinely assessed and taken fully into account as part of the planning process and development consenting process. Presently, a formal carbon assessment is only undertaken for large windfarm developments requiring consent under section 36 of the Electricity Act and where loss or disturbance of peat could
occur\(^5\). SEPA validates these assessments and their findings are a material consideration for Ministers in determining such applications. Carbon assessment has provided valuable insights into the actual emissions associated with the development of wind farms on deep peat and, together with supporting best practice guidance, has helped to reduce the impact of such developments.

6.2 There is, however, no requirement for assessing the climate change impacts of any other methods of generating energy. Introducing such a requirement would help to ensure that the carbon impacts are fully considered as part of the consenting process and integrated into decision making transparently. It would also help decision-makers to better understand the greenhouse gas emissions associated with new and emerging technologies such as those for extracting unconventional gas, the climate impact of which is not clearly understood.

6.3 We note that one of the European Commission’s proposals to amend the EIA Directive\(^6\) includes a plan to compel projects requiring EIA to assess its impacts on greenhouse gas emissions. We would support this proposal as it would enable a clearer understanding of the greenhouse gas emissions associated with a development and ensure that this is formally considered in decision making.

### SEPA’s Actions on Climate Change

We have committed corporately to embed climate change into all that we do. These commitments are identified and delivered annually through our Annual Operating Plans and are supported by a Climate Change Plan (CCP) and by our new Corporate Plan which has climate change as one of its four key outcomes\(^7\).

Our five year CCP provides the framework for delivering on climate change actions across the business. Annual action plans set out the deliverables for each year. A new CCP is currently being prepared and is being designed to deliver actions to support SEPA’s climate change vision:

“We will do everything in our power to help Scotland address climate change to ensure Scotland’s environment, economy and communities flourish.”

Last year, we published our first report of actions to meet our responsibilities under the Public Bodies’ Duties\(^8\). We intend to report annually on our actions and progress from now on.

We have set a target to reduce our greenhouse gas emissions by 42% by 2020 from 2006 levels. By April 2012 we had reduced our emissions by 11.7% and by some 19% from their peak in 2007/8.

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\(^7\) SEPA Outcome 3 - “Scotland is preparing for a sustainable future and is taking steps to limit climate change”.

\(^8\) Part 4 of the Climate Change (Scotland) Act 2009 places duties on public bodies relating to climate change. The duties require that a public body must, in exercising its functions, act:

- in the way best calculated to contribute to delivery of the Act’s emissions reduction targets;
- in the way best calculated to deliver any statutory adaptation programme;
- in a way that it considers most sustainable.