

## UK Committee on Climate Change Call for Evidence: Scottish Climate Change Bill

### Response from Stop Climate Chaos Scotland February 2017

The Scottish Government has committed to introducing a new Scottish Climate Change Bill. Recognising progress in Scotland and the Paris Agreement, this will include an ambitious new target of reducing emissions by more than 50% on a gross basis against 1990 levels by 2020. In early 2017 the Government plans to publish a new Climate Change Plan and a new Energy Strategy, which together will set out their low-carbon infrastructure priorities.

The Committee on Climate Change has been asked by the Scottish Government to provide advice on how the new Bill may look and is seeking evidence to help with that task.

Scotland's current Climate Change Act sets a long-term target to reduce emissions of greenhouse gases by at least 80% in 2050 relative to 1990, with an interim target to reduce emissions by 42% in 2020.[1] Secondary legislation has also set a series of annual emission reduction targets for 2010 to 2032.

Since the Act was passed, the Scottish Government has failed to meet annual targets for 2010 to 2013, but met the 2014 target by a wide margin with reductions of 45.8% since 1990 – outperforming the level of the 2020 interim target.[2]

The measure of Scottish emissions under the existing Act has been subject to considerable variability over this period, masking underlying progress in reducing emissions. This has been due to revisions to the Scottish greenhouse gas inventory and changes in the EU Emissions Trading System (EU ETS) that affect the Scottish share of emissions in some years, together with variations in annual temperatures. The changes in the emissions inventory reflect improvements in scientific understanding which led to changes in the methodology for estimating emissions. Such improvements are welcome but they have made the existing annual targets, which are set on an absolute basis, more difficult to achieve. The fact that targets in 2010 to 2013 have been missed is largely due to these revisions. **The deadline for responses is 12 noon on 1 February 2017.** For information about how to submit your response to this call for evidence, see: <https://www.theccc.org.uk/2016/12/14/call-for-evidence-scottish-climate-change-bill/>

## QUESTION PROFORMA

### QUESTIONS

#### a. Appropriate level of future emissions (“targets”)

A new Scottish Climate Change Act would likely be passed in 2019 and so there will not be much time for new policies to affect progress towards a 2020 target. There is scope for the new Act to include further interim targets between 2020 and 2050 (e.g. for 2030 and 2040).

In previous work for Scotland<sup>1</sup> we have developed a “High ambition” scenario for Scotland, through which it would be possible for Scotland to achieve a 47% reduction by 2020, on a net basis, outperforming the current 42% target.

On a gross basis our High Ambition scenario identifies a possible reduction of 57% in 2020 relative to 1990 emission levels (from emissions in 2014 that were 39.5% below 1990). This includes abatement from all sectors of the economy, with the largest abatement from the continuing decarbonisation of the power sector and increased abatement in transport.

The current 2050 target in Scotland, for a reduction of at least 80%, is based on a global path that keeps central (i.e. 50% likelihood) estimates of global temperature rise close to 2°C. The Paris Agreement contains a set of new long-term aims to limit warming, which are more ambitious than previous UN agreements. The Agreement aims to keep the global temperature rise to well below 2°C, pursuing efforts to limit it to 1.5°C. To achieve this, the Agreement aims to balance sources and sinks of greenhouse gases in the second half of the century (i.e. net zero global emissions by 2050-2100).

The CCC published a report on the implications for UK climate ambition on the 13<sup>th</sup> October.<sup>2</sup> This concluded that it is not appropriate to set new UK-wide emissions targets now, but agreed with the intention to set a new UK target in future that reflects the global aim of reaching net zero emissions. To be credible, such a target needs to be evidence-based, accompanied by strong policies to deliver existing nearer-term targets and a strategy to develop greenhouse gas removals. The five-yearly cycle of pledges and reviews created by the Paris Agreement provides regular opportunities to consider increasing ambition.

The Scottish context differs from that of the UK, both in terms of the existing legislation and in terms of the policy landscape. The different target mechanisms within the 2009 Scottish Act have proven to be more sensitive to inventory revisions, as set out above. Scottish Ministers have made statements regarding their

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<sup>1</sup> <https://www.theccc.org.uk/publication/scottish-emissions-targets-2028-2032-the-high-ambition-pathway-towards-a-low-carbon-economy/>

<sup>2</sup> <https://www.theccc.org.uk/publication/uk-action-following-paris/>

wish to remain at the forefront of global ambition,<sup>3</sup> and have committed to a new Bill in response to the Paris Agreement.

The Climate Change (Scotland) Act 2009 allows for annual targets (i.e. those currently set for each year to 2032) and the interim target (for 2020) to be amended, within certain limits, via secondary legislation. By contrast, the long-term target for an emissions reduction of at least 80% by 2050 cannot be amended, and no further long-term targets can be added.

**Question 1:** To what extent is there scope to increase emission reductions now to meet a more ambitious 2020 target? (Please provide evidence where relevant.)

ANSWER:

SCCS recommends that future emissions setting and reporting is based on gross emissions and as such the current 42% target for 2020 is equivalent to 56% under gross emissions. Anything less ambitious than 56% would be an inadequate step on the way to later targets.

There is scope to increase emission reductions to meet a more ambitious 2020 target however with a new Climate Act and targets likely to come into force in 2018, after this there will be little time to achieve action to meet stronger targets. We will be keen to influence a new climate change plan (RPP4) once the new targets have been set.

**Question 2:** To what extent do you support further interim targets between 2020 and 2050 (e.g. for 2030 and 2040)?

ANSWER:

SCCS supports 2030 and 2040 interim targets as key milestones to focus attention and effort between 2020 and 2050. However, to avoid confusion we recommend that annual targets and interim targets are set on the same basis, e.g. both absolute, rather than a mixture. This difference in basis for setting annual and interim targets has in the past caused communication problems.

<sup>3</sup> For example, <http://news.gov.scot/speeches-and-briefings/first-minister-address-to-seanad>

**Question 3:** What are the opportunities to reduce emissions to 2050 that go beyond our High Ambition scenario, including opportunities for greenhouse gas removal? (Please provide evidence where relevant.)

ANSWER:

Between 1990 and 2014 Scotland has seen a wide range of emission reduction levels from its varied sectors of the economy<sup>4</sup>. For example the energy supply and waste sectors have done well with ghg reductions of 39% and 77%, respectively. Whereas, public sector buildings and transport have remained virtually static.

The Scottish Government's Climate Change Plan also shows a large disparity in what is expected of sectors in terms of ghg savings between 2017 and 2032. For example, the agriculture and transport sectors are not expected to find the same amount of savings as others. SCCS believes that this reflects a lack of transformatory policies for these sectors in the Climate Change Plan.

As an example, in these two sectors there is good scope to up the ambition from the UKCCC Higher Ambition scenario. SCCS believes that the following examples of policies can support emission reductions to 2050:

#### Transport

- Phasing out fossil fuel vehicles
- Lower speed limits
- Greater investment in active travel and in bus and rail infrastructure
- Workplace car park charging.

#### Agriculture

- Nitrogen budget for Scotland with targets to reduce nitrogen fertilizer.
- Agro-forestry targets
- Support for organic farming
- Payments to landowner for carbon sequestration and other ecosystem services

Peatland restoration has been included in the Climate Change Plan, with a target to restore 250,000ha by 2030. With a total of 600,000 hectares of peatland in Scotland damaged and emitting carbon there is a good opportunity past 2030 to continue or even increase the rate of restoration. Based on an average of 4.5t CO<sub>2</sub>e lost to the atmosphere per damaged hectare per year, restoring 600,000ha could prevent 2.7MtCO<sub>2</sub>e of emissions, permanently<sup>5</sup>. In addition, after 5-10 years the restored bog is likely to return to a state of sequestration, removing 1-2t CO<sub>2</sub>e per hectare per year from the atmosphere. This sequestration benefit, like tree planting could help Scotland to balance its emissions and contribute to a state of negative emissions.

<sup>4</sup> <http://www.gov.scot/Publications/2016/06/2307/329343>

<sup>5</sup> IUCN Peatland Programme figures

**Question 4:** Should the 2050 target be more ambitious than the existing level of ‘at least 80%’?

ANSWER:

SCCS believes that the 2050 target must be reset and be more ambitious than the existing level of ‘at least 80%’. The existing 2009 Act was designed to contribute to a global path aimed at keeping global average temperature to around 2°C. However, the Paris Agreement has committed parties to limit warming to “well below 2°C above pre-industrial levels” and to “pursue efforts to *limit the temperature increase to 1.5 °C above pre-industrial levels*”, that would ‘*Significantly reduce the risks and impacts of climate change*’. Therefore a new 2050 target must be more ambitious than an 80% reduction in order to reflect the ambition of the Paris Agreement.

**Question 5:** Should there be a target for net-zero emissions for Scotland, and if so for when and on what basis?

ANSWER:

We recognise the need to set a target for net-zero emissions for Scotland. Without advice specific to Scotland on this matter or on contributing to the Aim of the Paris Agreement our recommendation is based on interpretation of CCC advice to the UK.

The UKCCC gave advice to the UK Government recommending a net-zero CO<sub>2</sub> target by the 2040s and net zero GHGs by 2060-80s<sup>6</sup>. The CCC also said that globally we have to achieve net-zero CO<sub>2</sub> 10-20yrs earlier than the aim for 2C. The Paris Agreement also incorporates a goal of emissions neutrality or “balance” between emissions sources and removals by “second half of this century, on the basis of equity...<sup>7</sup>. This implies that Scotland and other developed country parties will have to go significantly further than the ‘at least 80%’ goal by 2050, which was always envisaged as the minimum level of effort required under the 2009 Act.

Scotland has a ghg emissions target and not a CO<sub>2</sub> target, and in the absence of advice specific to Scotland, **SCCS recommends setting a net-zero target for ghg emissions by 2050.**

Scotland has the opportunity to remain as a world leader in ghg reduction targets and in meeting those

<sup>6</sup> <https://www.theccc.org.uk/publication/uk-action-following-paris/>

<sup>7</sup> <http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

targets. It has the opportunity to be one of the first countries to set an ambitious net-zero emissions target.

We believe that this level of ambition is consistent with the advice to the UK Government on UK targets. It reflects the increased ambition needed to meet an aim of 1.5C. However, SCCS may review and change this recommendation regarding the date at which to set a net-zero target when further advice is published, for example, the forthcoming 2018 IPCC report on 1.5 degrees and further UKCCC advice.

**Question 6:** If it is not currently appropriate to set a target for net-zero and/or to adopt a more ambitious 2050 target, should provision be made within the new Bill to do so at a later date?

ANSWER:

We believe our recommended net-zero target by 2050 should be included in the Bill.

**b. Duration and form of future carbon targets (one year or multi-year, absolute or percentage)**

Scottish targets for 2020 and 2050 are currently set as percentage reductions from a 1990 baseline. Annual targets have been set on an absolute (MtCO<sub>2</sub>e) basis.

Annual targets allow for continued assessment of progress and provide greater certainty as to the magnitude of emission reductions that need to be made at any given time. However the ability to meet them can be affected by annual fluctuations in emissions caused by weather or unforeseen factors, while the delay in greenhouse gas inventory data for Scotland means that progress against targets is assessed two years after the target year.

Multi-year targets, such as five-year budgets under the UK-wide Climate Change Act, provide greater smoothing of these annual fluctuations, while allowing for monitoring of progress towards longer-term emission reduction targets.

Targets on an absolute basis allow for assessment towards total cumulative emissions; however, revisions to the greenhouse gas inventory can make them harder or easier to meet without reflecting actual progress in reducing emissions. This can be more pronounced in Scotland, which as compared with the UK as a whole has a much higher share of emissions from agriculture and land use, in which most revisions occur.

Percentage reductions would be less affected by these revisions, but targets on a percentage basis are less strongly linked to the best scientific estimates of the absolute level of emissions, which are the fundamental driver of climate change.

When the current 2009 Act was set annual absolute targets and interim percentage targets aligned. However, subsequent revisions to the greenhouse gas inventory have 'shifted' the baseline and led to these targets diverging from each other, potentially creating confusion and a loss of transparency.

**Question 7:** Should Scottish targets be set on an annual basis or covering multiple years? If on an annual basis, what can be done to minimise the impact of confounding short-term factors (e.g. weather) on meeting them?

ANSWER:

SCCS wants to see a continuation of targets set in Scotland on an annual basis. Up till now this has kept the Government of the time to account year on year.

To minimise the impact of short-term factors Government should set policies designed to exceed the annual targets in order to give leeway for such factors as a cold winter. Another way to minimise the impact of short term factors on communicating progress is to adopt reporting based on an adjusted figure – see our answer to question 8 below.

**Question 8:** Should targets be set on percentage or absolute terms?

ANSWER:

SCCS recognises that targets set on absolute terms, properly reflects the quantity of emissions put into the atmosphere. However we recognise the advantage of targets set on a percentage basis. They are easier for the public to understand. Also, as science improves our knowledge of emissions from human activity it will lead to the need for inventory changes as it has in the past. The result of inventory changes in the past has led to an increase in the baseline year emissions and has made the achievement of absolute targets more difficult. This also makes communicating and reporting more difficult. We recognise that setting targets on a percentage basis facilitates the inclusion of inventory changes.

To facilitate and speed the inclusion of inventory changes at the earliest opportunity and to ease public understanding of annual reporting, we recognise two options in setting and reporting targets:

- Set on percentage terms
- Set on absolute terms but with reporting using an adjusted figure

Reporting using an adjusted figure which reports the underlying trend would need to be developed but the advantage would be to ease communication of the progress to meeting targets, removes variance from annual weather related changes, and remove changes based on inventory changes. Such a reporting system would show the impact of policy effort rather than these being obscured by an inventory change or for example by the effects of a cold winter.

However, **SCCS has not yet come to a collective view across the coalition about the best way forward on the basis for setting targets for the new Bill.** We cannot, therefore, at this time recommend either of the above options over the other. We will develop our thinking ahead of the draft Climate Bill being published by the Scottish Government.

**Question 9:** What else can be done to make targets resilient to future revisions to the emissions inventory?

ANSWER:

Our answer above shows that either percentage based targets or adjusted absolute targets can make targets resilient to inventory revisions.

### c. Future accounting framework

The Scottish Government has committed to moving to a gross emissions accounting framework (i.e. actual emission reductions from all sectors of the economy will count towards the targets), as opposed to the net basis used in the 2009 Act.<sup>1</sup> A move to a gross framework aims to increase transparency around progress to targets in Scotland.

A change to gross accounting framework raises issues of;

- Whether there remains a role for credit purchase in such an accounting framework. The existing Act allows for credit purchase as a means to meet targets, although it also places further targets for “domestic effort” alone. To date, the Scottish Government has not purchased any such credits.

Were it to do so, these would need to be procured through a programme that meets a required standard.

- How the role of emissions trading schemes (such as the EU ETS) should be reflected in such an accounting framework

Depending on the future relationship with the European Union, participation in the EU Emissions Trading System (EU ETS) may or may not continue.

**Question 10:** What is the role for credit purchase to supplement action to meet gross targets?

ANSWER:

Credit purchase has not been used in the past under the 2009 Act. We recommend that credit purchase is not allowed for in the new Act because we believe that all efforts should be taken to reduce emissions through domestic effort.

**Question 11:** How should the role of the EU ETS, or other trading schemes, be reflected in the emissions accounting framework used for reporting progress to targets?

ANSWER:

SCCS recommends that Scotland moves to reporting gross emissions, which does not adjust for the EU ETS. However, we recommend that in its reporting Government continues to give information on Scotland's share of ETS for purposes of comparison with other countries and Scotland's previous targets.

**Question 12:** Are there any competitiveness implications for current traded sector business (e.g. industry) to moving to gross targets in Scotland, and if so how could they be minimised?

ANSWER:

SCCS is not answering this question.

#### d. Criteria for setting future targets

The current Climate Change Act includes target setting criteria which must be taken into account prior to targets being legislated. These are:

- a. Scientific knowledge about climate change
- b. Technology relevant to climate change
- c. Economic circumstances, in particular the likely impact of targets on –
  - The Scottish economy
  - The competitiveness of particular sectors of the Scottish economy
  - Small and medium-sized enterprises
  - Jobs and employment opportunities
- d. Fiscal circumstances, in particular the likely impact of targets on taxation, public spending and public borrowing
- e. Social circumstances, in particular the likely impact of targets on those living in poorer or deprived communities
- f. The likely impact of targets on those living in remote rural and island communities
- g. Energy policy in particular the likely impact of the target on energy supplies, the renewable energy sector and the carbon and energy intensity of the Scottish economy
- h. Environmental considerations and, in particular, the likely impact of the targets on biodiversity
- i. European and international law and policy relating to climate change

**Question 13:** Are the current target setting criteria listed in the Act still appropriate? Are any missing?

ANSWER:

SCCS considers all the above criteria remain appropriate. We would, however, like to see the inclusion of a criteria assessing the impact on health. This is particularly important as a number of climate change policies can improve both physical and mental health, for example those promoting active travel, reducing fuel poverty and improving access to natural habitats.

SCCS also seeks that criteria for setting future targets examine effects both in Scotland and overseas, i.e. what are the health effects of Scotland's contribution to climate change for people overseas.