



Stop Climate Chaos Scotland

Written submission for the Environment, Climate Change and Land Reform Committee session with Cabinet Secretary on UKCCC advice on climate targets and framework.

8th May 2018

Stop Climate Chaos Scotland (SCCS) is a civil society coalition campaigning for action on climate change. Members include environment and international development organisations, student and trade unions, community groups and faith groups. We believe that the Scottish Government should take bold action to tackle climate change, with Scotland delivering our fair share of the Paris Agreement and supporting climate justice around the world.

Key Points

In relation to the UK CCC's advice of 20 December 2017¹, Stop Climate Chaos Scotland makes the following points:

- SCCS supports the fundamental principles of the approach proposed by the CCC for dealing with the effect of improvements in measurement science of emissions ('inventory changes') and how this currently impacts on annual targets.
- SCCS is calling for a net-zero target for 2050 at the latest, and a 77% target for 2030. These targets were supported by 19,000 responses to the Scottish Government's consultation on the Bill. They are based on Prof Johan Rockstroem's 'Climate Law', Scotland's moral responsibility to act in response to already rising global temperatures and the already occurring impacts on people and nature, and the expectation that stretching targets will help stimulate new social and technological innovation.
- A group of eminent climate scientists recently said that Scotland should set a net-zero target for 2050 in the forthcoming Bill, and welcomed Scotland's progress to date in cutting emissions.
- The CCC's advice on the appropriate level of target for 2050 is based heavily on feasibility assumptions that rely only on existing technology and on conservative assumptions about the deployment of social, economic and technological change.

Dealing with changes to Scotland's Greenhouse Gas Inventory

Annual improvements by scientists in the measurement of Scotland's climate change emissions (often referred to as 'inventory changes'), help us better understand where Scotland's emissions

¹ <https://www.theccc.org.uk/publication/letter-lord-deben-roseanna-cunningham-msp-advising-scottish-climate-target-framework/>

come from and how we can reduce them. However, each year measurements are refined for the most recent year and all previous years (including the baseline year), as the science evolves.

This has an effect on both current ways of reporting our climate change progress – both our fixed annual targets in any one year become more or less likely to be hit as a result of the changes; and also our % reduction against the baseline (as the baseline is annually updated) can vary between one inventory and another. This can lead to significant fluctuations between years. It is very difficult to track policy progress against a fluctuating baseline and annual targets that were set without the advance knowledge of the future inventory revisions.

In summary, whilst improved measurement of Scotland's emissions is obviously beneficial, it has often confused and complicated the picture when our annual target 'result' is announced each year in June.

Under the CCC's proposals, as we understand them, the idea would be to use a fixed inventory for a period of e.g. 5 years, to insulate the depiction of progress that annual targets and annual results should provide from being 'buffeted' back and forth on an annual basis by inventory changes. Under the new model, an updated inventory would be incorporated every 5 years or so, adjusting the pathway of annual targets to reflect the updated inventory, the 'headline targets' (e.g. 2050 target) as well as any other considerations agreed in the new Climate Bill – SCCS is keen that the 'cumulative budget' (i.e. Scotland's total emissions into the atmosphere over the long period), remains a criteria, because it is ultimately what matters in terms of climate change (although % targets have very important presentational benefit).

SCCS supports the fundamental principles of the approach proposed by the CCC for dealing with the effect 'inventory changes' and how this currently impacts on annual targets.

This occasional readjustment of targets needs to be properly insulated from political interference so that 'gaming' doesn't happen. **We are happy that the general methodology proposed by the CCC is sufficiently robust to avoid political interference.**

Assuming that the CCC's advice is taken forward by the Scottish Government, the detail of how this methodology is translated into mechanisms within the Climate Bill will clearly be important, and will therefore be something that SCCS will look closely at when we see the draft Bill. **When we see the draft Bill, some of the types of questions of detail that SCCS will be asking** the Government are:

Which targets will remain fixed in primary legislation? Is there a strong case for some targets being 'destination' targets, for example longer-term targets like the 2050 target, or a net-zero target if one is included in the Bill. In which case should these targets be fixed more securely than the intervening targets.

If a major change to the annual targets occurs as a result of the inventory adjustment, requiring deeper emission reductions, would the Government bring forward new policy to reflect that, and if so how.

Will the independent statistics bulletin continue to have all the different ways of reporting our emissions in it? If so, is this only about which is the 'annual target result' rather than about developing new statistical reporting?

Overall targets proposed by SCCS

Stop Climate Chaos Scotland has called for new targets to be set in the new Climate Change Bill²:

- A target for 2030 of 77%
- A target of net-zero greenhouse gas emissions by 2050 at the latest.

Over 19,000 responses to the Scottish Government's consultation on the Climate Change Bill, supported this view.

Recently, a group of illustrious scientists praised Scotland's progress on climate change and called for Scotland to set a new target of net-zero for 2050 at the latest, including Dr James Hansen formerly of NASA and now of Columbia University, Dr Emily Shuckburgh of the British Antarctic Survey and Cambridge University, and Professor Pete Smith from the University of Aberdeen and who is an IPCC contributor³.

At an event in Glasgow, Mary Robinson, who has championed climate justice around the world, called for Scotland, alongside all developed nations, to set a net zero target by 2050 at the latest as a matter of "climate justice" and "moral leadership".

Over the past weeks, Stop Climate Chaos Scotland has been highlighting 100 people from every walk of life on every continent of the world, many of them already directly impacted by climate change, all of whom are calling on Scotland to "Give it 100%" and end our contribution to climate change by 2050 at the latest. More detail on the 100 Voices campaign here -

<http://www.stopclimatechaos.org/campaigns/100-voices>

SCCS's proposed targets are based on (amongst various things):

- Professor Johan Rockstroem's global [Carbon Law](#) concept, which combines two simple golden rules: **halving emissions every decade and achieving zero emissions by 2050**. Because of its simplicity it can be applied to different geographical or economic scales. The halving emissions every decade compares well with the type of technological deployment rates that have been achieved – most famously, 'Moore's law' which has held true for 50 years that computer processors would double in power every two years.
- Stop Climate Chaos Scotland's view that it is appropriate to set stretching targets that reflect the global realities of already changing temperatures, the increasing urgency that the science requires and the moral obligation that Scotland has to the planet, as a more economically developed country and one of the first exploiters of fossil fuels. During the progress of the first Climate Change Bill, **in 2008, the Scottish Government said that the 2050 target needs to be 'more ambitious than what current technologies can deliver in**

² SCCS's response to the Government's summer 2017 Climate Bill consultation is available here - https://consult.gov.scot/energy-and-climate-change-directorate/climate-change-bill/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=stop+climate+chaos&uuld=628265432

³ News coverage of the letter here http://www.heraldscotland.com/news/16144591.Climate_scientists_call_on_Scotland_to_cut_emissions_to_zero/

order to help provide an incentive to develop new technologies⁴. SCCS continues to believe that this is the case and that the CCC advice for the 2050 time frame placed too much emphasis on technical achievability using existing technology and on conservative estimates about social and economic change.

- Stop Climate Chaos Scotland is of the view that the Scottish Government did not put all the policies it could have done into the final Climate Change Plan and was insufficiently ambitious in certain sectoral envelopes, where increased emissions reductions could **help us meet more ambitious targets (certainly greater than 66%) for 2030**. There is further policy, that would help reduce emissions further and would help create a healthier, more prosperous Scotland, that the Scottish Government could be implementing now. For example, Stop Climate Chaos Scotland is calling for the Government to set an energy efficiency objective of supporting all Scotland's homes to reach at least an EPC C energy certificate standard by 2025, which would also address fuel poverty and cut fuel bills. SCCS is also calling for more action in agriculture, including using the new Climate Bill to create a nitrogen balance sheet for Scotland. SCCS is also calling for the existing requirement to link the annual Scottish Budget to our climate targets to be improved, and is developing more detailed proposals to go in the new Bill.
- We expect a forthcoming report from the IPCC on 1.5degrees, due to be published this Autumn, will challenge countries around the world to raise their ambition, and is likely to result in more countries setting net-zero objectives. In addition to those governments that already have made net-zero commitments, like Sweden, New Zealand, Catalonia, Bhutan, South Australia, **we want to see Scotland once again at the leading edge of global action**.

Overall targets proposed by the CCC

In their letter and advice of the 20 December 2017, the CCC reiterate their overall advice on targets for the Bill from March 2017, which the Scottish Government used as the basis of its consultation in Summer 2017 on increasing ambition to deliver on the Paris Agreement. Indeed, in the December 2017 note the CCC said that 'a 90% emissions reduction by 2050 would be more achievable than previously assessed'⁵ [i.e. than when assessed in March 2017] – showing that developing scenarios in relation to technical achievability over a 30 year-period is far from an exact science and those scenarios are adjusting all the time.

In their advice in March 2017, the CCC showed that Scotland needed to deliver greenhouse gas emission reductions of between 89 and 97% by 2050⁶, opting for the lower end of this range based on feasibility and assumptions around technology replacement rates. The CCC analysis is based on a

⁴ Page 48 <http://www.gov.scot/Resource/Doc/210419/0055642.pdf>

⁵ This quote is taken from the second page of the CCC's Annexe A <https://www.theccc.org.uk/wp-content/uploads/2018/01/CCC-Advice-on-Scottish-Target-Design-December-2017.pdf>

⁶ See Table 2.1 on page 28 of the CCC advice - <https://www.theccc.org.uk/wp-content/uploads/2017/03/Advice-to-Scottish-Government-on-Scottish-Climate-Change-Bill-Committee-on-Climate-Change-March-2017.pdf>

simple division of international effort (i.e. global equal per capita emissions, which does not make any allowance for differentiation for poorer countries that have contributed less to climate change). It is not directly clear for the scenario that the CCC have used what likelihood of keeping global average temperature below 1.5degrees is involved, but we believe it is in the range of a 50-66% likelihood, which would be in our view a risky approach. The CCC also use a 'return to 1.5degrees' scenario, which allows global average temperatures to overshoot the 1.5degree mark to a greater average temperature rise and then return to 1.5degrees later. However, there is a growing body of scientific evidence that many of the damaging impacts of higher temperature changes, particularly those to the natural environment and wildlife, and the resulting consequences for the lives of millions of people will be irreversible even if average temperatures then return and stabilise back to the +1.5degrees level⁷. The forthcoming IPCC report on 1.5 degrees, due this autumn, is likely to explore other pathways and scenarios for reaching the Paris goals on 1.5degrees, including scenarios that avoid overshoot; this will require greater urgency and earlier action from all nations.

SCCS has written to, and met with, the CCC regarding these concerns and are awaiting a formal written response.

Any queries regarding this evidence should be directed to the SCCS Campaigns Manager, Gail Wilson via gail@stopclimatechaosscotland.org or by calling 0131 243 2701

⁷ See for instance C F Schleussner et al Differential climate impacts for policy-relevant limits to global warming: the case of 1.5 °C and 2 °C Earth Syst. Dynam., 7, 327–351, 2016 www.earth-syst-dynam.net/7/327/2016/ doi:10.5194/esd-7-327-2016