



Stop Climate Chaos Scotland
Response to Climate Change Bill Consultation
September 2017

Stop Climate Chaos Scotland (SCCS) is a civil society coalition campaigning for action on climate change. Members include environment and international development organisations, student unions 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 Agreement¹ and supporting climate justice around the world. We welcome the opportunity to respond to this consultation.

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¹ <http://www.stopclimatechaos.org/news/2017/06/06/joint-statement-paris-agreement>

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1. Do you agree that the 2050 target should be made more ambitious by increasing it to 90% greenhouse gas emission reduction from baseline levels? Yes No (please explain your answer)

- **No. The 2050 target should be made more ambitious, but the proposed 90% reduction by 2050 is not strong enough. The new Climate Change Bill should set a target for Scotland to reach zero greenhouse gas emissions by 2050 at the latest.**
- The Scottish Government committed to bringing in a new Climate Change Bill which would deliver the Paris Agreement goals of keeping the global temperature increase well below 2°C, and pursuing efforts to limit the temperature increase to 1.5°C. This involved a global aim of ‘balancing anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century’ (i.e. net zero global emissions by sometime between 2050 and 2100). However, the proposed targets don’t cut emissions far enough or fast enough to deliver our fair share of the Paris Agreement, given the need for a strong focus on equity, historical responsibility and the need to allow emissions space to developing countries.
- The ‘Carbon Law’ approach, devised by internationally recognised climate scientist Johan Rockström of the Stockholm Resilience Centre², proposes that in order to keep global warming to below 2°C we need to half emissions every decade and reach net zero by 2050.
- The CCC indicates a range of emissions reduction of 89-97% on 1990 levels by 2050 to align with 1.5 degree ambition³. While the CCC recommended the lower end of this spectrum (90%) based on current knowledge about feasibility, we recommend the higher end of the range based on climate science, international equity, climate justice and the opportunity to re-establish Scotland’s international leadership on climate change and the low carbon economy.
- The CCC advice shows a credible, technically feasible path based on existing knowledge and technologies to achieve 90% by 2050 based on its High Ambition Scenario and identified in its Fifth Carbon Budget advice to UK that ‘net zero may be possible with breakthrough reductions in hard-to-reduce sectors and if a range of further greenhouse gas removal technologies can be deployed.’
- However, Scotland should not be bound by the limits of technical scenarios today. There are over three decades to collaborate globally to achieve the technological and behavioural changes that will deliver net zero by 2050. Looking back thirty years from today, we could not have foreseen the digital revolution that has transformed many aspects of our lives. If we do not aim for net zero, then we will struggle to drive the innovation needed to deliver what science and equity demand.
- Other countries, states and regions have already set net zero targets, such as Sweden, Norway and Catalonia and Scotland will need to do the same to avoid falling out of the group of high ambition countries, with all the green industrial and wellbeing opportunities this offers. Scotland has the opportunity to remain truly world-leading by setting a net zero

² A roadmap for rapid decarbonisation, <http://science.sciencemag.org/content/355/6331/1269>

³ <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>

target almost entirely delivered through domestic effort, as some of these targets include significant flexibility mechanisms.

- The CCC also acknowledged that net zero may have to be reached sooner if significant CO₂ removals can't be achieved globally through, for instance, bioenergy CCS. The 89-97% recommended by the CCC is also consistent only with a 'return to 1.5 degree scenario' and warms beyond that initially. If we accelerate action and aim higher, then we have a better chance of limiting warming and reducing the impacts of this scenario on people, species and places.
- Irrespective of what long-term targets are set in the Bill, the Scottish Government must remain focussed on short and medium term policy delivery. This will enable targets in the 2020s and 2030s to be met and provide foundations for technologies to reach net zero.
- At an informal Scottish Government consultation in spring 2017, the message from stakeholders - from business, academia and NGO sectors - was in favour of a net zero target for Scotland.

2. Do you agree that the Climate Change Bill should contain provisions that allow for a net-zero greenhouse gas emission target to be set at a later date? Yes No (please explain your answer)

- No, as discussed in Q1 above, we believe the Climate Change Bill must set a net zero target immediately, rather than wait for a later date.

3. a) Do you agree that the 2020 target should be for greenhouse gas emissions to be at least 56% lower than baseline levels? Yes No (please explain your answer)

- **Yes, we support a 2020 target of at least 56% lower than baseline levels.**
- The current target of 42% is equivalent to 56% under a gross emissions accounting methodology and anything less would be a retrograde step and a weakening of effort.

b) Do you agree that a target should be set for greenhouse gas emissions to be at least 66% lower than baseline levels by 2030? Yes No (please explain your answer)

- **No, the target for 2030 should be approximately 77% lower than 1990.** This is based on the renowned peer-reviewed analysis by Johan Rockström of the Stockholm Resilience Centre. Applying his 'Carbon Law' to Scotland, which proposes halving emissions every decade in order to reach net zero by 2050, we should reduce emissions by 77% by 2030, with a target for approximately 17.4MtCO₂e for 2030.
- The Paris Agreement requires increased action to deliver 1.5 degrees, but the proposed 66% does not require further ambition to 2030 above the current trajectory. This is clearly an inadequate response.
- Early action by 2030 is vital to contain overall cumulative emissions and to give us any chance to limiting warming to 1.5°C and it is technically and economically feasible to do more. The CCC recommendation to set a 66% target for 2030 is based on their high ambition scenario but they acknowledge that this scenario is 'is not an upper bound'⁴ of feasibility. Modelling by the Scottish Government for the Climate Change Plan shows that it is

⁴ <https://www.theccc.org.uk/wp-content/uploads/2016/03/Scottish-Emissions-Targets-2028-2032.pdf>

technically and economically feasible to go further than the CCC's scenario in some areas (e.g. heat) while opting to be less ambitious than the CCC scenario in the other areas (e.g. transport). If more ambitious emissions envelopes were pursued for both heat and transport, then we could credibly surpass 66% based on existing technologies.

- A 77% target is also in line with the Fair Shares approach, which requires industrialised countries with a greater responsibility for causing climate change to take a faster, more ambitious path than those countries which have recently industrialised. Fair Shares analysis suggests the UK should aim for reductions of 76% - 86% by 2030.

c) Do you agree that a target should be set for greenhouse gas emissions to be at least 78% lower than baseline levels by 2040? Yes No (please explain your answer)

- **No, the target for 2040 should be approximately 90%** based on the principles set out in Rockström's analysis, with a target for 7.9MtCO₂e for 2040.

4. Do you agree that annual emission reduction targets should be in the form of percentage reductions from baseline levels? Yes No (please explain your answer)

- **Yes, we agree that annual emissions reduction targets should be in the form of percentage reductions from baseline levels.** This is more easily communicable to the public and ensures consistency between annual and interim targets. A move to percentage-based targets also facilitates the inclusion of inventory changes and changes to the baseline level of greenhouse gases in 1990, based on improved science.
- However, there is a risk of losing the link to an overall global and Scottish domestic carbon budget, which is the ultimate determinant of warming, without fixed targets. Therefore, the Climate Change Bill must include a review mechanism which requires the CCC to assess whether the percentage-based targets are still in line with a 'fair and safe' cumulative emissions budget for Scotland, taking into account inventory changes, no less than every five years, and to advise changes to the percentage targets on that basis if not.
- The Climate Change Bill must ensure that the absolute figures are also included in annual reports, in order to track absolute progress and to allow for comparison with previous results.

5. Do you agree that annual targets should be set as a direct consequence of interim and 2050 targets? Yes No (please explain your answer)

- Yes. Annual targets should be set as a direct consequence of interim and 2050 targets, which we have advised should be 77% by 2030, 90% by 2040 and net zero by 2050. This should result in a curved trajectory over time and an emphasis on more valuable early action to reduce emissions.

6. Do you agree that all emission reduction targets should be set on the basis of actual emissions, removing the accounting adjustment for the EU ETS? Yes No (please explain your answer)

- **Yes, we support a change to setting targets on the basis of actual emissions.** It is a chance to provide a transparent account of annual progress on the ground and is more easily communicable to the public.
- This would overcome the challenge of setting targets and preparing policies years in advance of ETS allocation with imperfect knowledge about what Scotland's allocation will be. It would help to reduce the disconnect between Scotland's notional share of the ETS cap and actual emissions from Scotland's ETS sector, which has been significant in several years and will get more pronounced with the closure of Longannet and ongoing renewables deployment. This is becoming more pronounced as new elements are introduced such as 'backloading' allowances.
- Although the target should be measured on a gross basis, the accounting framework should still report on the ETS and other trading schemes in parallel. Essentially, this would invert the current situation where the target is set on a net basis but contextual information on gross emissions is also provided in annual reports.
- We support efforts to mitigate competitiveness risks to industry but the Scottish Government need to ensure that clear policies are put in place to drive industrial decarbonisation beyond merely the ETS cap itself. The latest Climate Change Plan did little for industry, relying on the ETS as the primary policy instrument.

7. a) What are your views on allowing the interim and 2050 emission reduction targets to be updated, with due regard to advice from the CCC, through secondary legislation?

- **We support allowing the interim and 2050 targets to be updated through secondary legislation.** However, it should only be possible to increase targets through secondary legislation. If targets are to be reduced, this should be done through primary legislation.
- Where secondary legislation is used, this should require the super affirmative procedure where the Scottish Parliament has the opportunity to comment on a draft before the final version is laid for scrutiny. The super affirmative procedure for this should include a requirement that Ministers consult the CCC for their advice.

b) What do you think are the most important criteria to be considered when setting or updating emission reduction targets?

- **We do not support the proposal to remove the reference to a fair and safe cumulative emissions budget, which has a strong moral as well as scientific dimension. Climate science and equity must be the paramount factors in setting targets.**
- The Bill should not abandon reference to a cumulative emissions budget entirely. It must retain the principle that cumulative emissions are important and define a 'fair and safe' budget contribution in the Bill with a clearer focus on climate justice and historical responsibility (at present, 'fair and safe' only applies to 2010-2050 emissions), whilst acknowledging that no amount of warming is 'safe' for vulnerable communities, species and places. As outlined in Q4 above, even though targets should be set on percentage basis, the CCC should review whether they are still consistent with a fair and safe cumulative budget and advise on revisions to the targets if not.

- The Bill should draw a distinction between criteria which should be considered in setting overall targets (e.g. science, equity, fair and safe budget, international law) and criteria to be considered in the policy response through Climate Change Plans (e.g. technology, economic circumstances, fiscal circumstances, social circumstances, health and quality of life, environment etc).
- To better account for co-benefits, we think that the impact of health/quality of life should also be included in the criteria.
- The criteria should also include the principle of intergenerational equity – considering the impact on future generations.

8. a) What are your views on the frequency of future Climate Change Plans?

- **Every five years continues to be an appropriate timeframe** to reflect on policy effectiveness, economic cycles, demographic and technological change. Drawing on the example of the Community Empowerment Act which defines the National Performance Framework review process, this should take place every five years *at minimum*, more often if desired.

b) What are your views on the length of time that future Climate Change Plans should cover?

- **We believe that the sixteen year time horizon remains appropriate** but Climate Change Plans must avoid backloading effort to the later years and must avoid relying on speculative technical fixes which are not yet commercialised. In an effort to drive firmer policy making in the early years the Bill should introduce clear definitions of ‘policies,’ ‘proposals’ and ‘policy outcomes’.
- It would be also useful if each Climate Change Plan could show the pathway to the 2040 and 2050 targets in order to track overall progress.

c) What are your views on how development of future Climate Change Plans could be aligned with Paris Stocktake Processes?

- As Scotland’s targets will already be among the most ambitious in the world, and the Paris Stocktake process is likely in the initial phases to focus on ratcheting up targets for countries with lower ambition, **there is no need to wait for the Paris stocktake process in 2023** before developing a Climate Change Plan. However, the CCC should reflect on the Paris Stocktake process as appropriate in its advice to Government.
- Scotland should be constantly seeking international case studies and examples of policy action in shaping draft Climate Change Plans.
- We recommend that the CCC should produce a version of a draft Climate Change Plan for consideration by the Scottish Government, with clear policy options/recommendations. This would help to ensure the Scottish Government has access to examples of best practice and assist Ministers and officials in considering the feasibility, cost and political attractiveness of different options. The final plan should make clear why it has deviated from CCC advice where this has occurred, to enhance transparency.

d) How many days do you think the period for Parliamentary consideration of draft Climate Change Plans should be?

- **We support the extension of the period of Parliamentary scrutiny of the draft Climate Change Plan to 90 days at minimum** as this is a complex, cross-sectoral exercise requiring a significant degree of expertise across Committees.
- The Scottish Government should publish its final Climate Change Plan no later than 9 months following the publication of a draft Plan. It should also publish a report setting out how it has responded to each committee recommendation.

9. What are your views on the proposal that any shortfall against previous targets should be made up through subsequent Climate Change Plans?

- **We do not support the proposal** as there is potentially a long time lag between missing a target and the preparation of the next Climate Change Plan. If the Plan is to be a living document that does not allow rollover under-performance, then action must be taken to get back on track as soon as possible.
- The Scottish Government has never provided a section 36 report under the 2009 Climate Change (Scotland) Act for increased policy to make up for missed targets. This suggests if anything this requirement needs to be strengthened rather than weakened.
- We recommend that shortfalls against previous targets should be made up on an annual basis. The October statement to Parliament should be expanded, put on a statutory footing and should set out how any shortfalls will be made up in future years by the relevant Ministers.
- Future percentage targets may need to adjust every five years to make up for previous shortfalls.

We have outlined **further proposals for improving the Climate Change Plan process, and reporting on progress** in answer to Question 13, in the final two sections 'Improving and streamlining the reporting requirements' & 'Updating the legislative basis of the Climate Change Plan'.

10. What are your views on these initial considerations of the impacts of the Bill proposals on Scotland's people, both now and in future generations?

- We agree that it is hard to quantify indirect impacts of enhanced ambition on Scotland's people and future generations, but this assessment must be more complete as it provides a strong case for Scotland to be as ambitious as possible to improve quality of life for existing and future generations. As detailed below, some of the policies that should be included in the Bill will impact in the following ways:
- Aligning the financial budget and the Climate Change Bill – Scotland must ensure that it is investing wisely for the future and not encumbering young people and future generations with the burden of replacing aging, carbon intensive infrastructure or the legacy of under-funding important day to day climate mitigation. The Welsh Wellbeing of Future Generations Act may be instructive here. It clearly sets out duties on public bodies to take decisions factoring in the interests of future generations.

- Energy efficiency – putting in place a statutory target for all homes to be an EPC C over the next decade will significantly reduce fuel poverty which affects the health and mental wellbeing of vulnerable adults and children and can widen the educational attainment gap for poorer children⁵. It would also create up to 9,000 jobs a year spread across Scotland.⁶
- Implementing a Nitrogen Budget - measures implemented as a result of a Nitrogen Budget will reduce air pollution and odour, and water pollution, having positive health impacts and environmental impacts.
- Phase out of fossil fuel vehicles by 2030 – This will reduce air pollution, which results in around 2,500 premature deaths a year in Scotland and which disproportionately affects the development of children’s lungs. By encouraging active travel, phase out would also have wider health benefits including helping to tackle obesity. Putting in place the right infrastructure now for a low carbon future will help to future proof for a scenario where ownership models for vehicles are changing among younger generations (e.g. millennials owning fewer cars. It would also enhance social justice, as car ownership is disproportionately low in low-income households.
- The analysis should take into account the impacts of the Bill on people outside Scotland, particularly given the Scottish Government’s repeated commitment to climate justice. Climate change has repeatedly been identified as one of the biggest threats to development and the UN Sustainable Development Goal (SDG) 13 requires governments to take urgent action on climate change. Climate change has also been identified as a major global security threat, and tackling it is essential to maintaining global security.

11. What are your views on the opportunities and challenges that the Bill proposals could have for businesses?

- As the Business and Regulatory Impact Assessment (BRIA) identifies, there are clear opportunities and challenges for businesses as a result of the Bill. One of the significant features of the 2009 Act was the cross-party consensus it enjoyed, which has provided a clear and stable signal that Scotland is open for low carbon business. This has helped to create a conducive environment for investment, helping to reduce the cost of capital and the knock-on cost of the transition to consumers, and create over 58,500 jobs in the thriving low carbon economy in Scotland.
- The BRIA document indicates costs of just under 3% of GDP to deliver 90% emissions reduction by 2050. However, unlike the consultation document itself, it fails to contrast this against a ‘do nothing’ approach, which the Stern Review estimated could permanently reduce GDP by 11-20% taking into account the full socio-environmental impacts of climate change. This should feature in the economic case for an ambitious Bill.
- As outlined above, the true macroeconomic effects of climate policy are particularly contested and co-benefits notoriously hard to quantify. However, a report for WWF-UK on the economics of the Fourth Carbon Budget by Cambridge Econometrics and UCL showed positive macroeconomic effects from strong climate policy by 2032, including higher household incomes and lower energy bills, a 1.1% net GDP and net employment growth of

⁵ <https://beta.gov.scot/publications/scotland-without-fuel-poverty-fairer-scotland-four-steps-achieving-sustainable/documents/00508195.pdf?inline=true>

⁶ <http://existinghomesalliancescotland.co.uk/news/civic-alliance-calls-for-end-to-cold-homes-blighting-scotland/>

190,000, reduced primary oil imports of 30%, a net increase in UK Government revenue of £5.7bn and enhanced air quality, reduced NHS spending and other co-benefits⁷.

- Ambitious targets are therefore likely to have positive effects on the economy. This will be amplified if the Bill puts in place the specific policy measures prioritised above (aligning the financial budget with the climate act, energy efficiency, nitrogen budget and the phase out fossil fuel vehicles).
- It is possible to mitigate the industrial competitiveness impacts of the Bill (e.g. the shift to territorial emissions) on energy-intensive industries through incentives for greater policy effort for industry. We support proportionate support for affected industries and a just transition commission to enable strategic planning and support for affected workers.

12 a) What are your views on the evidence set out in the Environmental Report that has been used to inform the assessment process? (Please give details of additional relevant sources).

SCCS has no comment to make on this question.

b) What are your views on the predicted environmental effects as set out in the Environmental Report?

We agree that stronger climate targets will have positive effects on climatic factors and positive secondary effects on air quality, health and material assets. We agree that potential negative effects as a result of low carbon infrastructure should be avoided or reduced where possible through careful planning, reuse of existing assets and appropriate mitigation measures.

c) Are there any other environmental effects that have not been considered?

SCCS has no comment to make on this question.

d) Do you agree with the conclusions and recommendations set out in the Environmental Report?

Yes

e) Please provide any other comments you have on the Environmental Report

SCCS has no comment to make on this question.

13. Please use this space to tell us any other thoughts you have about the proposed Climate Change Bill not covered in your earlier answers.

SCCS Headline priorities

Summary - A bold Climate Change Bill would create jobs, improve health and reduce poverty at home, whilst also ensuring Scotland plays its part in limiting climate change and helping the poorest people in the world cope with the effects of climate change.

In order for the new Climate Bill to match the ambition of the Paris Agreement, SCCS says it must:

⁷ http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_climate_economics_summary_a4_web.pdf

- **Set a target of zero greenhouse gas emissions by 2050 at the latest, and a reduction of 77% by 2030;**
- Ensure that future **finance budgets are consistent with our climate targets;**
- Commit to actions that cut emissions and deliver a cleaner, healthier, more prosperous Scotland by:
 - **Making all homes efficient and warm:** Ensure that all homes have at least Energy Performance Rating 'C' by 2025;
 - **Cleaner transport:** phase out the sale of new fossil fuel cars by 2030 to reduce emissions, clean up air pollution and improve the nation's health;
 - **Greener farming:** Set a nitrogen budget for Scotland by 2020.

These priorities are explained in more detail as follows:

Budget

- We recommend that the forthcoming Climate Change Bill does three things that help ensure that the Scottish Government's budget is pulling in the direction our climate change targets require it to.
 1. **Close the loophole** in Section 94 of the Climate Change (Scotland) Act 2009 so that the Scottish Government must publish accurate and transparent information about the complete long-term effect of each budget on Scotland's climate change emissions.
 2. **Align the Scottish Government's budget with its Climate Change Plan.** The Climate Bill should create new legislative duties to require the Scottish Government to align its budget and its Climate Change Plan.
 3. **Establish a low carbon infrastructure commission** with responsibilities for advising the Scottish Government of the major infrastructure projects that are needed for Scotland to achieve its zero carbon ambitions, and analysing the Scottish Government's capital budgets to ensure that they are aligned with meeting climate targets.
- These actions would have **wide-ranging benefits** across the Scottish economy from cleaner air and warmer homes, to new jobs and investment opportunities.
- There are **no significant additional costs** to the Scottish Government of publishing a more accurate analysis of the Scottish Budget or creating better alignment between the Budget and the Climate Change Plan.
- There would be some additional costs to Scottish Government of setting up an independent Low Carbon Infrastructure Commission. The UK National Infrastructure Commission does not yet publish its annual budget on its website, but says that on a long-term basis it expects to employ roughly 30 staff. A further comparison would be with the Scottish Fiscal Commission – the Scottish Fiscal Commission Bill anticipated a staff of 6 FTE, with total annual costs to Scottish Government of £850,000 per annum.
- The Environment, Climate Change and Land Reform Committee's Report on the Draft Climate Change Plan⁸, published in March 2017, said, 'The Committee considers the issue of climate change should be more firmly embedded in the draft budget and recommends the Scottish Government include detail of how this information will be included in future budgets in the final Climate Change Plan' (paragraph 553).

Transport – phase out fossil fuels

- Transport became the **single biggest source of emissions** in Scotland for the first time in 2017, accounting for well over a quarter of emissions⁹.
- And it's the sector that has **made least progress** in cutting emissions over the last three

⁸ <http://www.parliament.scot/parliamentarybusiness/CurrentCommittees/103917.aspx>

⁹ <http://www.gov.scot/Resource/0052/00520839.pdf>

decades, with emissions static at 1990 levels.

- Meanwhile our urban streets continue to be choked with traffic congestion and the polluted air we breathe contributes to up to 3,000 premature deaths¹⁰ annually in Scotland.
- Around the world, many countries are already setting ambitious but feasible targets to phase out the sale of new fossil fuel vehicles, from our close neighbours like Norway¹¹ who want all new cars and vans to be zero-carbon by 2025, to emerging economies like India who are aiming for a similar outcome for 2030.
- Scotland can and should continue to be a world leader on climate change. That's why **we strongly welcome the First Minister's bold commitment to phase out new petrol and diesel vehicles by 2032 in the recent Programme for Government**. We also welcome the commitments to **new LEZs in urban air pollution zones**, a **doubling of active travel funding** and the additional **£60m innovation funding** to support low carbon innovation, which will clearly support this overall target and mean that sustainable transport steps up a gear.
- To give greater force and cross-Parliament buy in to the target, we believe the commitment to phase out new petrol and diesel vehicles by 2032 should be put on a statutory basis in the forthcoming Climate Change Bill, together with a requirement to produce and implement a strategy to deliver it.
- **Further measures to support this** could include requiring public vehicle fleets to lead the way, financial incentives like workplace parking levies, non-financial incentives like preferential bus lane access for EVs, and changes to building regulations to require EV charging points in new build homes. Enhanced investment in walking and cycling and in public transport and greater emphasis on safe streets with more urban 20mph speed limits would also support this aim and manage demand, alongside fair green travel to work plans, negotiated with recognised trade unions, taking account of access to public transport, cost, shift work and essential car user posts.

Nitrogen budget

- **Agriculture accounts for 22.5% of total GHG emissions in Scotland**. Unlike other sectors, the two most significant greenhouse gases from farming are Nitrous Oxide (N₂O) and Methane (CH₄), with both have a much bigger impact on our climate than CO₂.
- Inefficient use of chemical fertiliser in Scottish agriculture creates excess N₂O and causes water pollution.
- **SCCS wants the forthcoming Climate Change Bill to introduce a Nitrogen Budget for Scotland by 2020 which aims to drive efficient use of all nitrogen sources, cut surpluses and pollution, and create a more circular economy** for biodegradable wastes like food waste. More efficient fertiliser use would also have **significant economic benefits for farmers**. Estimates in RPP2 put these benefits at £240m for the industry to 2027.
- The Rural Economy and Connectivity Committee in their response to the draft Climate Change Plan recommended that Scottish Government should develop a Nitrogen Budget for Scotland.
- **Denmark has had a nitrogen budget since 1990**, and this has helped to focus actions which have halved the nitrogen losses to the atmosphere and to water¹². There is an established UN methodology¹³ for this and Scotland hosts one of the leading global nitrogen research teams at the Centre for Ecology and Hydrology. **A 50% reduction, as achieved in Denmark, would reduce Scotland's emissions by 1.35MtCO₂e**.
- A Nitrogen Budget would also help to improve the efficiency of nitrogen use in other sectors

¹⁰ <https://www.holyrood.com/articles/news/air-pollution-scotland-%E2%80%9Cpublic-health-crisis%E2%80%9D-says-friends-earth>

¹¹ <https://www.wwf.org.uk/sites/default/files/2016-12/Norway%20-%20EVs%20.pdf>

¹² <https://phys.org/news/2015-09-danish-nitrogen-nutshell.html>

¹³ http://www.clrtap-tfrn.org/sites/clrtap-tfrn.org/files/documents/EPNB_new/ECE_EB.AIR_119_ENG.pdf

including fisheries, forestry, food and livestock feed production, local authorities, solid waste, wastewater, industry, energy production, and transport, bringing additional economic and environmental benefit.

Energy efficiency

- Poor energy efficiency is one of the biggest drivers of fuel poverty and contributes significantly to emissions from Scotland's homes. Investment in energy efficiency is one of the cheapest, greenest approaches to decarbonisation and is able to deliver multiple social and economic benefits.
- The Scottish Government has set out that Scotland's Energy Efficiency Programme (SEEP) will be the main vehicle for the delivery of the National Infrastructure Priority. The Climate Change Bill should put some key elements onto a statutory basis:
 - **Targets and milestones for the delivery of SEEP** including a milestone of supporting all existing homes to reach at least an Energy Performance Certificate rating of 'C' by 2025. A regular reporting cycle, perhaps linked to the wider annual climate change reporting cycle, should keep the Parliament updated with progress in delivery of this infrastructure priority.
 - **A new independent body responsible for the delivery of SEEP should be created.** The independent body would report to Ministers and Parliament and be charged with ensuring value for public sector investment. The independent public body could be disbanded on completion of the SEEP programme.
- **The NHS in Scotland would save between £48m – £80m a year if all homes were brought up to EPC C¹⁴.** The National Institute for Healthcare and Excellence (NICE) recommends that as a minimum, properties should be raised to an EPC band C and ideally to a band B to avoid the risk of death and ill health associated with living in a cold home¹⁵.
- Upgrading fuel poor homes to EPC C by 2025 would **save an estimated 1 MtCO₂ a year by 2025¹⁶**. This is double the rate of carbon savings anticipated from all RPP2 policies in the homes sector by 2027.
- The estimated cost of upgrading the housing stock to EPC band C or above are £7bn over 10 years, requiring a **funding increase of approximately £320m per year** on current funding levels¹⁷.
- A project of this scope could generate a **net increase in jobs of 8-9000 per year¹⁸**. It would also be a 'value for money' project – creating more jobs and benefits for the wider economy than a fiscally equivalent spending package¹⁹.

SCCS Additional priorities

In addition, we believe the following areas should be included in the Bill.

Climate Justice – a fair and safe cumulative emissions budget for Scotland

The Climate Change Bill should include clear definitions for, and mechanisms to achieve a 'fair and safe' budget for Scotland.

- The Paris Climate Agreement recognises that nations have common but differentiated responsibility and respective capabilities (CDRRC) to tackle climate change. In practice, this

¹⁴ Consumer Futures Scotland (2014) Economic impact of improving the energy efficiency of fuel poor households in Scotland

¹⁵ <http://www.nice.org.uk/guidance/ng6/resources/excess-winter-deaths-and-morbidity-and-the-health-risks-associated-with-cold-homes-51043484869>

¹⁶ CCC (2016) Scottish Climate Targets 2028 – 2032; analysis by WWF Scotland

¹⁷ Existing Homes Alliance (2016) Realising the potential of Scotland's Energy Efficiency Programme

¹⁸ Verco (2014) Building the Future

¹⁹ https://www.e3g.org/docs/Frontier_Economics_-_Energy_Efficiency,_an_Infrastructure_Priority.pdf

means that historically high polluters and wealthier economies like Scotland will have to contribute more to the efforts to mitigate climate change. To ensure that this Bill furthers Scotland's aims in relation to global climate justice, the following actions should be taken:

- In the 'Emission reduction targets' section in the Bill, add a requirement for Scottish Ministers to ensure Scottish emissions account is in line with a cumulative 'fair and safe' global emissions budget;
- Define 'fair' as Scotland's share of the global emissions budget that is in line with the principle of common but differentiated responsibilities and respective capabilities (CDRRC) ;
- Define 'safe' as a budget that will limit global warming to 1.5 degrees;
- Require Scottish Ministers to request the advisory body (UK CCC) to review every five years (in line with UNFCCC process) new evidence that may affect the Scottish share of a 'fair and safe global emissions budget';
- Require Scottish Ministers to consider reviewing annual targets, interim targets and the 2050 at set periods (for example every five years), if new evidence has substantially altered the Scottish share of a 'fair and safe global emissions budget'. The Scottish Ministers should only be able to review targets upwards.

Intergenerational equity

- The Climate Change Bill should ensure that representatives from all levels of government consider the impact of their decisions on future generations.
- It should do this by:
 - **Establishing a Future Generations Commissioner**, or guardian, who is granted the powers to effectively scrutinise the development of policies from across all sectors of Scottish Government on behalf of future generations;
 - Removing discounting methods from the modelling of climate policy to **give equal weight to future generations**;
 - **Provide for greater youth representation** in the development of climate policy, for example, by a youth representative to participate in the legislative scrutiny of the development of new bills and acts.

Organic farming target

- The Scottish Government should set an ambitious target in the Climate Change Bill for the percentage of the best agricultural land (Region 1) in Scotland under organic management. We advocate 5% by 2020 and 20% by 2030.
- We need ambitious organic targets to reverse the decline in agricultural land under organic management in Scotland, following the example of European countries such as Ireland, France and Germany. Organic farming can help to mitigate climate change, while also delivering wider public benefits. It's important to take both supply and demand side measures to support the organic sector in Scotland.

Peatland protection

- Scottish peatlands store huge reserves of carbon and any damage to the fragile peaty soil

releases this to the atmosphere. Despite this, 0.5million tonnes of peat were extracted from 14 sites in 2014²⁰, often for use in horticulture, and permissions exist for extraction at many more sites.

- In its draft Climate Change Plan the Scottish Government committed to restoration of 21,000ha of peatland per year from 2018. This is very welcome, but must be accompanied by action on peat extraction to prevent the release of carbon from peatlands and to protect a fragile habitat.
- **The Climate Change Bill should introduce a ‘sunset clause’ for all existing peat extraction consents, setting a time for all to be re-activated or they permanently expire.**

Just Transition

- A Just Transition to a low carbon future is defined as:
 - Ensuring that workers whose jobs change or come to an end because of the transition to a low carbon economy do not bear a disproportionate cost of the transition;
 - Protection of the communities economically dependent on fossil fuel production or use;
 - Fairness regarding the costs of the transition – any tax or price burden should fall to the largest extent on those who can most easily pay.
- **We strongly welcome the First Minister’s bold commitment to establishing a Just Transition Commission** as announced in the recent Programme for Government. To give greater force and cross-Parliament buy in, we believe the establishment of a Just Transition Commission should be put on a statutory basis in the forthcoming Climate Change Bill.
- We recommend that the Commission be established with a team drawn from trade unions, environmental organisations, industry and commerce, enterprise, the community sector and civic society, the Commission would be advisory to the Scottish Government. It would have powers to prepare and advocate proposals and to work with local authorities, enterprise agencies and industry.

Consumption reporting

- By buying goods produced or processed overseas, Scotland requires other countries to emit climate-changing gases on our behalf. Scottish Government figures show that **while our emissions from production (‘territorial emissions’) have been falling, emissions caused by buying things from overseas (‘consumption emissions’) are rising.**
- The new Climate Change Bill should address consumption emissions in two ways:
 - Be amended to require Ministers **to measure and report annually on Scotland’s consumption-based emissions.**
 - Include **targets for reducing consumption emissions** and plans to reduce consumption emissions should be incorporated into the policy making process.

Housing standards for new builds

- Our homes account for 13% of Scotland’s greenhouse gas emissions. As well as making our existing homes much more energy efficient, the Climate Change Bill offers an opportunity for Scotland to **take bold action on new builds to create zero carbon homes.**
- By strengthening building standards for new homes now, we can avoid the costs of retrofitting these homes in the future.

²⁰ http://www.iucn-uk-peatlandprogramme.org/sites/www.iucn-uk-peatlandprogramme.org/files/Summary%20of%20ROMP%20review%20findings_EG.pdf

- The UK CCC has made clear that ‘the zero carbon homes standard should be implemented without further weakening²¹’.
- Strengthening building standards would provide an important opportunity to develop the skills and manufacturing of products for zero carbon homes – creating jobs and investment for Scottish businesses.
- Building standards have a good track record of driving forward improvements in the energy performance of Scotland’s housing stock. In recent years domestic building standards for 2010 have required 30% carbon emission savings compared with 2007, and doubling this to 60% in 2013.
- The Climate Change Bill must include a requirement for Ministers to conduct a review of building standards and amend them where necessary so that all of new homes are zero carbon immediately where feasible, acknowledging that construction lead-in times will require a degree of flexibility.

Energy targets

- A crucial part of decarbonising Scotland’s energy sector is the Scottish Government’s recent commitment to ensuring that the equivalent of **50% of Scotland’s heat, transport and electricity consumption is supplied from renewable sources by 2030**. Whilst this target is set out in the energy strategy, enshrining it in law would strengthen the commitment and require the Scottish Government to take measures to achieve it.
- To improve scrutiny, targets should be backed up by **mandatory reporting requirements**. Binding targets would encourage greater action, not just in accelerating deployment of well-sited renewables but in reducing consumption across electricity, heat and transport.
- Current policy could allow for new unabated fossil fuel-based thermal generation to be built in Scotland. **A formal grid intensity target**, particularly if applied to all new developments, would drive measures to address this policy gap and ensure that unabated fossil fuel-based electricity generation is not developed in Scotland.
- The electricity sector carbon intensity targets should ensure that **new energy development contributes to the climate change targets**, and support increased deployment of well-sited renewables.
- The Climate Change Bill should enshrine in law three key policies:
 - The equivalent of 50% of Scotland’s heat, transport and electricity consumption to be supplied from renewable sources by 2030.
 - Electricity sector carbon intensity to be less than 50gCO₂/kWh by 2020; and no greater than 0gCO₂/kWh by 2030.
 - And that the electricity sector carbon intensity target apply to all new electricity generation projects.

Improving and streamlining the reporting requirements

The Climate Change Bill should address the following reporting issues:

- The **statement on the outcome of the annual climate change target that Ministers have given annually in June should be given a legislative basis**, reflecting its importance as the main moment at which Scotland’s overall climate change progress is described. In this statement Ministers should describe whether the annual target has been achieved or not, report on emissions in each sector and whether they have reduced as anticipated, and carry on most of the functions that are currently described for the October statement.
- **Put the designation of ‘sectoral envelopes’** (i.e. the anticipated contribution to reducing emissions that each sector will make) **onto a legislative basis**. Ministers should be required

²¹ <https://www.theccc.org.uk/charts-data/ukemissions-by-sector/buildings/>

to include in each Climate Change Plan a sectoral envelope for each sector for each year, and emissions for each sector should be formally reported on to the Parliament annually by Ministers (in the June statement).

- **New annual sectoral reporting.** In order to spread responsibility across Scottish Government and to make the Climate Change Plan a living document, a new requirement for Ministers to provide four separate Ministerial statements across the Autumn should be created – one for each of:
 - Transport
 - Buildings (covering the ‘Residential’ and ‘Services’ sections of the Climate Change Plan)
 - Waste, Agriculture, and Land Use and Forestry (‘LULUCF’ in the Climate Change Plan)
 - Electricity and Industry

Each of these Ministerial statements should be required to include an explanation of why that sector is either performing as expected or not, an update on the relevant policy outcomes for that sector (the measures of progress used for that sector, such as numbers of trees planted or electric vehicles sold), and details of any new policy actions that will be taken as a result. In effect this would create requirements for the Scottish Government to publish an annual update of the monitoring framework for the Climate Change Plan, and to annually update the policy content of the Climate Change Plan.

Updating the legislative basis of the Climate Change Plan

The Climate Change Bill should introduce the following requirements concerned with the production of future Climate Change Plans:

- There should be a **new requirement of Ministers to seek the CCC’s advice before publishing a draft Climate Change Plan.** This ought to lead to the CCC providing more detailed policy advice, creating expert policy suggestions that help to bridge the gap in the current Climate Change Plan between the envisaged emission reductions and the inadequate policies to generate them.
- **Require the Climate Change Plan to include ‘policy outcomes’, as metrics by which the progress of each policy or group of policies will be measured.** In addition the new Climate Bill should define the terms ‘policy’, ‘policy outcome’ and ‘sectoral envelope’ in relation to the Climate Change Plan. While we are happy to support the proposed renaming (from Report on Policies and Proposals to Climate Change Plan), this would help safeguard the role of the Climate Change Plan as a detailed policy document, including clear governmental policy actions.