

Net Zero, Energy and Transport Committee
10 September 2024
25th Meeting, 2024 (Session 6)

Climate Change (Emissions Reduction Targets) (Scotland) Bill

Introduction

1. The Climate Change (Emissions Reduction Targets) (Scotland) Bill was introduced on 5 September 2024.
 - [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Bill](#)
 - [Explanatory notes](#)
 - [Policy memorandum](#)
 - [Financial memorandum](#)
 - [Delegated powers memorandum](#)
 - [Legislative competence statements](#)
2. The Bill changes interim greenhouse gas emissions targets in the main climate change legislation in Scotland: [Climate Change \(Scotland\) Act 2009](#), introducing a new “carbon budgeting” process, as set out in detail below, and for reasons also set out below. It does not amend the ultimate target in the 2009 Act of achieving “net zero” in emissions in Scotland by 2045.
3. Following pre-legislative scrutiny of this Bill, which the Scottish Government wishes the Parliament to consider under an expedited timetable, the Committee is now taking evidence on the Bill at meetings in September.

The Climate Change (Scotland) Act 2009

4. The 2009 Act established a statutory framework of greenhouse gas emission reduction targets in Scotland, all measured from a 1990 baseline. These were—
 - at least 42% reduction by 2020; and
 - at least 80% reduction by 2050
5. The Act also required Scottish Ministers to set annual targets for reductions via secondary legislation at least 12 years in advance and to report on each target. It also required Ministers to publish a report setting out the policies and proposals (RPP) that would achieve those targets, including specific comment on the contribution of energy efficiency, energy generation, land use and transport.

Draft reports had to be laid in Parliament at least 60 days prior to publication of a final report. Reports were published in [2011](#), [2013](#) and [2018](#).

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

6. The [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](#) amended the 2009 Act, mainly by introducing more ambitious targets. Again, expressed as a reduction against a 1990 baseline, these were—
 - at least 56% reduction by 2020 (this was [subsequently changed to 48.5%](#));
 - at least 75% reduction by 2030;
 - at least 90% reduction by 2040; and
 - Net zero emissions by 2045.
7. It also introduced annual targets, expressed as equal reductions each year between the interim targets. Annual reporting on these remained a requirement.
8. RPPs were renamed Climate Change Plans (CCP). These now had to include statements on how the plans accounted for climate justice and just transition principles, and other details, with chapters specifically on—
 - energy supply;
 - transport (including international aviation and shipping);
 - business and industrial process;
 - residential and public (in relation to buildings in those sectors);
 - waste management;
 - land use, land use change and forestry; and
 - agriculture.
9. The 2019 Act gave the Parliament 120 not 60 days to consider a draft.

The next Climate Change Plan

10. Following the 2019 Act, an [update to the 2018 Climate Change Plan](#) was published. As it was an “update”, it did not set out all the detail required by the 2019 Act. The next full CCP was expected to be laid in draft by November 2023, in line with the SNP and Scottish Greens’ [Bute House agreement](#). However, in [November 2023](#), the Scottish Government announced a delay.
11. In delayed [2023 Report to the Scottish Parliament on progress towards Scotland’s emissions reductions targets](#) (delayed to March 2024 because of issues associated with non-publication of a draft CCP), the Climate Change Committee, the statutory advisor to governments in the UK, concluded that—
 - **“Scotland’s annual target was missed again.** Scottish emissions in 2021 increased by 2.4% from 2020 as the economy rebounded from the pandemic and were 49.2% below 1990 levels. Scotland missed its 2021 annual legal target. This is the eighth target in the past 12 years that has been missed.

- **The acceleration required in emissions reduction to meet the 2030 target is now beyond what is credible.** The recent rate of emissions reduction outside the electricity supply, aviation and shipping sectors needs to increase by a factor of nine in the nine years from 2021 to 2030, compared to the preceding nine years, if Scotland is to achieve its 2030 target of a 75% reduction compared to 1990 levels. This rate of reduction is nearly two times higher than that in the CCC’s ambitious pathway for Scotland, which we updated in 2022. Given the pace at which supply chains and investment would need to develop, this rate of reduction is not credible. However, the Scottish Government should build on its high ambition and implement policies that enable the 75% emissions reduction target to be achieved at the earliest date possible.”
- “Scotland is therefore lacking a comprehensive strategy that outlines the actions and policies required to achieve the 2030 target.”

New legislation

12. A [Ministerial Statement to Parliament on 18 April](#) followed the CCC’s 2023 Report. In it, the Scottish Government, accepted ‘the CCC’s recent rearticulation that this Parliament’s interim 2030 target is out of reach’ and announced forthcoming ‘expedited legislation’ for a revised timetable for achieving net zero by 2045, with a revised approach based on five-yearly carbon budgeting. A package of 19 [climate change policies](#) were also announced. In [evidence to the Committee on 28 May](#), the Scottish Government also clarified that the new Bill would push back the date for the next CCP, to align with the new approach.

Outline of the new Bill

13. The Bill establishes a carbon budget approach to target setting, with budgets set through secondary legislation using advice from the CCC. The proposed system will replace annual and interim targets and it will also make provision for a new Climate Change Plan (CCP) to be published that reflects the carbon budgets. The Bill does not alter the existing statutory target of net zero emissions by 2045.
14. Section 1 of the Bill defines a carbon budget. Staying within a carbon budget prescribed for any 5-year period is to be known as the “Scottish carbon budget target”. The Scottish Ministers must ensure this is met.
15. Section 2 makes various changes to the text of the 2009 Act but the most significant is to remove all current remaining targets in the Act (other than the final 2045 target) which are based on annual percentages. Other changes in section 2 include textual changes to the 2009 Act to ensure alignment of provisions with the new carbon budgeting process.
16. Section 3 requires the next CCP to be published “as soon as practicable after the first regulations setting a Scottish carbon budget come into force”.

17. Section 4 requires that the regulations to set carbon budgets should do so by inserting text into the Climate Change (Scotland) Act 2009 so that the target always appears on the face of the Act. It also requires advice to be sought on the budget-setting regulations.

Net Zero, Energy and Transport Committee consideration

18. The Net Zero, Energy and Transport Committee held a pre-legislative call for views on the known content of the Bill prior to the summer recess. This ran from 5 July to 16 August.

- [Responses to the Net Zero, Energy and Transport Committee's pre-legislative call for views on an approach to setting carbon budgets](#)

19. On 2 August, the Scottish Government published a [position paper](#) on the intended content of the Bill. The Convener then wrote to the Acting Cabinet Secretary for Net Zero and Energy on [23 August](#) seeking further information on the Bill. [She replied on 28 August](#).

Meeting 10 September 2024

20. At its meeting on 10 September, the Committee will hear from—

- Dr Emily Nurse of the Climate Change Committee;
- Professor Graeme Roy and Professor David Ulph of the Scottish Fiscal Commission;
- David Hawkey, of the Institute for Public Policy Research (IPPR) Scotland;

and the from

- Rt Hon Philip Dunne, former MP (2005-2024) and former Chair of the House of Commons Environmental Audit Committee (2020-24).

21. Written submissions from the Scottish Fiscal Commission and IPPR can be found at **Annexe A**.

Clerks to the Committee September 2024

Annexe A

Call for views on pre-legislative scrutiny – approach to setting emissions reduction targets

Submission from Scottish Fiscal Commission

Dear Convener

I am writing to respond to the Committee's consultation on proposed Scottish Government legislation on its approach to setting targets for carbon emission reduction.

The Commission's report *Fiscal Sustainability Perspectives: Climate Change* published in March 2024 analysed the implications for the Scottish public finances of meeting Scotland's statutory emissions target to reach net zero by 2045, adapting to climate change and handling the damage it will cause. Our report made a number of recommendations on improving the data and information provided by the Scottish Government relating to its plans on climate change. These recommendations were focussed on supporting planning and prioritisation to help manage the pressures on the Scottish Budget over the next 25 years.

The annex to this letter responds to the questions raised in the consultation. I have also published this letter on the Commission's own website.

I am happy to discuss any aspect of our response to the Committee's consultation and anything the Commission can do to aid the work of the Committee.

Yours sincerely

Professor Graeme Roy

Annex

Scottish Fiscal Commission response to Net Zero, Energy and Transport (NZET) Committee's call for views as part of pre-legislation scrutiny.

Part One – Carbon budgets

- 1. Do you agree or disagree with the proposed shift to 5-yearly carbon budgets (in place of current system of annual targets)?
Please set out any advantages or disadvantages of a 5 yearly carbon budget approach in Scotland?
Please set out any advantages or disadvantages of retaining the current annual target system?**

The Scottish Fiscal Commission's interest in climate change stems from the implications of the Scottish and UK Government's policies on the Scottish Government's fiscal sustainability. We do not take a view on the most appropriate method of monitoring emissions; however we note that consistency with the approach taken at the UK level may facilitate a clearer understanding of how the UK and Scottish targets and progress against those targets interact, and how UK Government policy decisions may affect progress against the Scottish targets and the funding available to the Scottish Government.

2. What are your views on the advantages and disadvantages of carbon budgets / targets being expressed as a percentage reduction or as absolute levels of emissions?

The Scottish Fiscal Commission has no view on this.

3. The Climate Change Committee (CCC) suggested that the Scottish Government should consider aligning the proposed 5 yearly carbon budgets with the periods that are used for UK carbon budgets (i.e. 2023-27, 2028 – 32, 2033-2037 and 2038-42). What are the advantages and disadvantages of alignment with UK carbon budget periods?

As in our answer to question one, we note that consistency with the approach taken at the UK level may make it easier to monitor and assess progress against the targets and the fiscal implications.

4. At the end of a carbon budget period, there can be a surplus or deficit of emissions reductions. What do you think the legislation should say about how future surplus or deficits in emission reductions are dealt with?

The Scottish Fiscal Commission has no view on what approach should be taken, but the legislation should be clear how future surpluses or deficits are dealt with, and if the Government is required to incorporate those surpluses or deficits into subsequent carbon budget periods then the associated Climate Change Plan should clearly set out the effects on its spending plans. In particular if deficits are incorporated into future carbon budget periods then the Government should set out policies for making up the deficit and detailed costings of these policies which explain how the cost will be split between the public and private sectors.

5. In early 2025, the Climate Change Committee (CCC) will advise the UK on the level of its Seventh Carbon Budget. This is the legal limit for UK net emissions of greenhouse gases over the years 2038 to 2042. The CCC have suggested that could be used as the basis for advice on appropriate levels for carbon budgets in Scotland. The Cabinet Secretary told the Committee that this 'might be the point at which we are able to have clarity on the targets, and I would want a plan to be produced very quickly thereafter'. Should the

Scottish Government wait for the planned advice on the UK's seventh carbon budget from the CCC, before setting their carbon budgets?

Should the Scottish Government propose multiple 5-year carbon budgets in 2025 up to the year 2042?

How soon after the Scottish Government has received advice from the CCC should it propose their carbon budgets?

What should the process of parliamentary scrutiny look like for the laying of carbon budgets and plans for meeting budgets?

The Scottish Fiscal Commission has no view on what approach should be taken, but we note that climate change and the required response to climate change through spending on mitigation, adaptation and damage pose significant risks to fiscal sustainability. As we respond on the Climate Change Plan questions below, there should be clear plans for policies to meet mitigation targets, the cost of each individual policy, and its effect on emissions. It should be clear how these costs are split between the Scottish Government, other parts of the public sector and the private sector where appropriate. The Scottish Government should be clear whether the Climate Change Plan will cover the same timeframe as the 5-year carbon budgets and how far in advance it will set out costed policies. For our assessment of fiscal sustainability it is important that the Scottish Government set out not only policies for the next 5-years but also the approach it plans to take to reach net zero by 2045.

We make the general point that the longer it takes to decide on the new targets, the longer it is likely to be before a new Climate Change Plan is produced, something which is important for understanding the interactions between the targets set, and the level of required public spending to meet those targets. Delays to the publication of the plan run the risk that an assessment of the policies included in the plan and associated costs is not as fully considered as would be desirable. It also increases the risk of delayed action which has potential implications for future spending on reaching net zero.

Our report in March 2024 drew on previous work by the OBR which illustrated scenarios of a late transition to net zero. The OBR demonstrated that the costs of these scenarios outweigh the costs of a balanced pathway to net zero. If efforts are made to mitigate emissions, but these are belated and therefore sudden, we could still see adverse macroeconomic consequences. The economy could be exposed to energy price shocks for longer and loss of profits if assets become obsolete.¹ It may also be harder to deliver the Scottish Parliament's commitment to a just transition. The OBR's Fiscal risks and sustainability report in 2023 showed how a late and disruptive transition would be more expensive than an early and smooth transition to net zero.²

¹ Bank of England (2018) Climate change and the macro-economy: a critical review, Bank of England Working Paper No.706

² OBR (2023) Fiscal risks and sustainability report – July 2023

The extent of macroeconomic risks from climate change will depend on how policies are managed. In its 2019 Fiscal risks report the OBR highlighted how well-signalled and orderly policies that allow time for the economy to adjust and for technological advances to reduce costs might pose little risk.³ In contrast, uncertainty around policy changes could mean a greater risk in terms of foregone economic growth.

Part Two – Climate Change Plan

6. Under the current statutory regime, the legal deadline for laying a draft of the Climate Change Plan (CCP) is November 2024. This Plan was due to apply to the period of 2025-2040. The Scottish Government intends to use the Bill to change the timing for the production of the CCP.

Do you have views on when and how the Scottish Government should publish their plans for meeting the proposed carbon budgets?

What period should the next Climate Change Plan cover?

Do you think the current requirements for Climate Change Plans within the existing legislation provide an effective regulatory framework?

Are there any other aspects of the current legal framework for the creation of Climate Change Plans that you think should be updated?

As set out in our 2024 Fiscal Sustainability Perspectives report and in our forthcoming Statement of Data Needs, the Climate Change Plan should set out planned policies to meet mitigation targets, the cost of each individual policy, and its effect on emissions. Where policies relate to taxation the revenue from each policy should be set out as well as the effect on emissions.⁴ This should be done in a way which allows the spending on those policies and programmes to be identified in the Scottish Budget and ideally tracked consistently over time. The Climate Change Plan should identify the cost for Scottish Government, other parts of the public sector and the private sector where appropriate. The Scottish Government should be clear what timescales are covered by the Climate Change Plan, ideally the plan should cover longer than the 5-year carbon budget period and present costed policies and proposals for reaching net zero by 2045.

We make similar recommendations for the Scottish National Adaptation Plan and both plans should cover the period to 2045. We note that any spending plans for beyond the current parliamentary term will be indicative and may change in the future. However, to support wider public scrutiny, these costs should still be set out broken down by policy and by affected sector. This would allow us to assess the consequences for fiscal sustainability as well as monitor the fiscal effects of changes to policy and of meeting any new targets or trajectories.

³ OBR (2019) Fiscal risks report – July 2019

⁴ Scottish Fiscal Commission (2024) Fiscal Sustainability Perspectives: Climate Change

Knowing whether emissions reductions and adaptation objectives are likely to be met helps in the assessment of fiscal sustainability. Failure to meet emissions targets means further spending will be needed in the future to meet subsequent targets. Insufficient adaptation activity implies costs from damages and retrofitting in the future.

The Climate Change Committee (CCC) produce regular reports regarding Scotland's progress on mitigation and adaptation.⁵

Improved information from the Scottish Government on quantified mitigation and adaptation plans would allow the CCC and other experts to assess whether the plans are likely to achieve targets and to measure progress against those plans. These assessments by the CCC and other experts, together with more detail on policies and associated costs from the Scottish Government, could allow us to incorporate climate change spending in our future projections of the Scottish Government's fiscal position.

The Climate Change Plan and Scottish National Adaptation Plan should set out policies and spending and these need to be presented in such a way that it is possible to track progress both in terms of the level of spending and the extent to which they achieve reductions in emissions and have adapted infrastructure and the economy to the effects of climate change. We recommend that spend on mitigation and adaptation be identifiable in budget documentation and outturn so that spending plans can be linked to delivered spending. This would improve transparency and accountability and support our future work on fiscal sustainability.

The Scottish Government should also use both the Climate Change Plan and Scottish National Adaptation Plan to set out its plans for using tax measures to achieve its targets. Where the Scottish Government considers how to use tax measures to control emissions or encourage adaptation activity, the Scottish Government should be clear and quantify the likely effects on emissions and adaptation, the revenue gains and risks of achieving or not achieving these.

Part Three: Monitoring and reporting

7. The Scottish Government has confirmed that their annual reporting on progress towards targets will be retained. The CCC have however, suggested that if 5-yearly budgets are adopted in Scotland, CCC reporting may move from a system of annual Scottish 'Progress' reports to two dedicated reports on Scottish progress every 5 years.

What are your views on whether there should be changes to the existing Scottish Government monitoring and reporting framework?

What are your views on the potential changes to the level of Scottish reporting provided by the CCC?

⁵ Climate Change Committee Scotland Reports

There need to be improvements in monitoring the Scottish Government's spending on climate change and the extent to which it is meeting its targets. This is required to monitor progress and identify if policies are sufficient to meet the future targets.

8. A Bill, according to the Standing Orders of the Scottish Parliament, must “..be accompanied by a Financial Memorandum which sets out best estimates of the costs, savings, and changes to revenues to which the provisions of the Bill would give rise, and an indication of the margins of uncertainty in such estimates.” (Rule 9.3.2).

The 2045 target will not be amended. How much do you estimate it would cost to achieve that target?

Are current spending levels on policies to achieve this in line with what is required?

Budget

How can the Scottish Government use this year's Budget to ensure all portfolio areas are focused on achieving the 2045 target?

Has the inclusion of a Climate Change Assessment of the Budget improved outcomes and progress towards a target?

What are your views on the presentation of the Climate Change Assessment and are there any changes you would like to see to this?

The SFC published a report, Fiscal Sustainability Perspectives: Climate Change, in March 2024.⁶ The lack of published information from the SG on its climate change spending and planned spending meant we could not use costed climate change plans to assess the impact on fiscal sustainability. It also means that it is not possible to judge whether current spending levels are sufficient to achieve the climate change targets.

We used the Climate Change Committee's Sixth Carbon Budget to estimate the potential costs of mitigation. The balanced pathway scenario provides hypothetical emissions reductions for each sector each year and their required investment for the UK and Scotland. We applied assumptions as to whether sectors are devolved or reserved and assume a split of costs between the public and private sectors to estimate the level of investment required by the Scottish Government to reach net zero. These costs are consistent with Scotland reaching net zero by 2045 but did not reflect the target of a 75 per cent reduction by 2030.

Based on these assumptions we estimated the Scottish Government would need to spend an average of £1.1 billion pounds a year over the period 2020 to 2050 to reach net zero, around 18 per cent of its capital budget. These figures do not include the spending required on adaptation and damage from climate change.

The UK and Scottish Governments should articulate their plans on how to achieve net zero and what level of public spending will be required. Looking at these plans

⁶ Scottish Fiscal Commission (2024) Fiscal Sustainability Perspectives: Climate Change

together with how the economy and demographics will change, long-term spending and funding projections, and pressures on other public services such as health is needed to support planning and prioritisation and to assess fiscal sustainability.

The Climate Change Assessment published alongside the Scottish Budget should show whether spending on individual policies supports mitigation, adaptation or both. It is currently published alongside the Budget as introduced but should be updated with outturn spending amounts. It should be possible to identify from the Climate Change Assessment whether the costed policy commitments in the Climate Change Plan and Scottish National Adaptation Plan are being delivered, both during the budgetary period and once actual spending is known after the year has ended.

When publishing costs in the Climate Change Plan and the Scottish National Adaptation Plan, this work should be aligned with the classification of spending used for the Scottish Budget Climate Change Assessment. The classification of spending as supporting mitigation, adaptation or both needs to be done in a coherent manner. Work to improve the Scottish Budget Climate Change Assessment should be coordinated with climate change policies on mitigation and adaptation. This will ensure there is consistency across costs published in the policies and how this is tracked in budget spending.

As has been recommended by other organisations, if the Scottish Government used a net zero assessment on spending decisions and published the results in a clear and consistent format, that would improve scrutiny and transparency of spending decisions. In turn, this would support our work assessing the fiscal sustainability of mitigation activity. Similarly, assessing how spending decisions contribute to or go against adaptation objectives would help us assess the Scottish Government's fiscal sustainability and would provide greater transparency on the implications of spending decisions.

Call for views on pre-legislative scrutiny – approach to setting emissions reduction targets

Submission from IPPR

This document responds to the NZET committee’s consultation on the Scottish government’s approach to setting new climate change targets. The consultation asks about some relatively detailed aspects of how a new set of climate targets could be set.

We answer these questions at the end of the document, but the bulk of our response does not fit neatly into the framework of those questions. This is because the questions implicitly present the process of setting targets as distinct from agreeing a Climate Change Plan. The bulk of our response analyses this separation as critical to the failure of the last attempt to set climate targets, and presents an alternative. The prospect of a new climate change bill should be an opportunity to build a more robust approach to delivering tangible action on climate change, particularly as the first phase of decarbonising Scotland (closing fossil fuelled power stations) gives way to a much more challenging phase (taking emissions out of daily life). For the new targets to be credible, they must be embedded in a process in which decision makers explicitly consider the implications of emissions reduction for changes across Scottish society and its economy. We hope the committee finds the alternative approach we sketch useful and thought provoking.

Background

The Scottish government is preparing to set new climate targets, having admitted its previous target to reduce emissions 75 per cent by 2030 was “out of reach”. New legislation changing the way Scotland’s emissions targets work will be introduced to the Scottish Parliament, and MSPs will have to agree a new set of targets. This is an opportunity to correct the shortcomings of Scottish climate policy, namely the woolliness of the government’s climate change plans.

How should this be achieved. In short (spelled out in more detail below), the Scottish Parliament should consider the government’s climate change plan and proposed emission targets at the same time. MSPs (or a wider set of decision makers) should consider both Scotland’s contribution to the international effort against climate change and the pace and degree of change they are willing to countenance across Scottish society, and do so in explicit terms. That is, the target should not be set without considering in detail what meeting it will mean.

How a target turned out to be “out of reach”

The story of the now-abandoned target helps understand how the approach to setting targets can be made more effective.

In 2018, the Intergovernmental Panel on Climate Change (IPCC) concluded that limiting global warming to 1.5 degrees was still possible, but would require “deep emissions reductions” implying “rapid far-reaching and unprecedented changes in all aspects of society.” In particular, the world would need to reach net zero emissions by 2050. At the time, the UK and Scottish governments were both working toward an 80 per cent emissions reduction target for 2050 (against 1990 levels).

The IPCC’s stark warning prompted the Scottish government to declare a global climate emergency, and to increase the ambition of its climate change targets. As these are set in legislation, the Scottish Parliament would have to agree the new targets. Analysis of Scotland’s “fair share” of emissions reductions, taking into account historical contributions to climate change, argued for an 80 per cent target for 2030. Parliamentarians struck a compromise between this and the Scottish government’s initial proposal (a 66 per cent reduction), and settled on a 75 per cent by 2030, enshrined in the Climate Change (Scotland) Act 2019.

Strikingly absent from the process of setting the target was any detailed analysis of what meeting the 2030 target would mean for Scotland. What “rapid far-reaching and unprecedented changes in all aspects of society” had the parliament signed up to? What did it mean for buildings, for transport, for industry, etc.?

To answer these questions, the Scottish government turned to its in-house analytical teams, and specifically its emissions modelling system (known as the TIMES model). The government’s model is designed to optimise emissions reductions: feed in assumptions about costs, technology and the feasible pace of change, and the model spits out which changes in society’s complicated technical systems will deliver the emissions targets for the least cost. How should we balance things like insulating houses versus replacing petrol cars with EVs? The TIMES model is supposed to tell you the answer, calculating “sectoral envelopes” – mini emissions constraints for each sector which together would add up to the emissions targets.

However, instead of showing how the targets could best be met, the model... broke: The envelopes produced by the TIMES model [...] resulted in total emissions which exceeded the statutory targets during the period of the Plan (ie the TIMES model was unable to identify a set of sector pathways consistent with the statutory targets). (Scottish government 2019)

What to do? The Scottish government decided to nevertheless publish a set of sectoral envelopes that would still hit the targets. To do this it simply scaled down all envelopes in order to keep emissions within the target level. However, it wasn’t quite that simple. The government decided not to add extra emissions reductions to agriculture or industry.

Without getting any further into the weeds, the important point here is that through this seemingly neutral technocratic process, politicians and officials were arriving at quite consequential decisions as to the pace and character of change in Scotland. For example, emissions from agriculture (dominated by farmed animals) were to fall

just 21 per cent over the 2020s, while emissions from buildings would have to fall over three times as fast – 68 per cent over the decade.

A 68 per cent reduction in emissions from buildings is very significant. Scottish government officials calculated it would take widespread deployment of energy efficiency, conversion to clean heat in all 170,000 homes using oil or LPG and over a million homes using gas (more than half the total) from little more than a standing start.

Delivering this target would have taken great effort, required widespread support and needed a robust and detailed plan in order to coordinate. This version of “rapid far-reaching and unprecedented changes” proved too much for the Scottish government to lead. As a prelude to dropping its economy-wide 2030 target, the Scottish government in December 2023 dropped the heat in buildings target just two years into its Heat and Buildings strategy.

Was it plausible that emissions from heating our buildings could be cut 68 per cent over a decade? Could Scotland have trained/retrained enough heating engineers and construction workers? Could the wider energy infrastructure – heat networks and electricity systems – have been put in place? Could enough households have been signed up to the change? Could Scotland have afforded it? Was the Scottish population sufficiently committed to ending Scotland’s contribution to global climate change that they would have gone along with these changes, this disruption, this pace?

Or to think about the targets in another way, did the economy-wide 75 per cent target inevitably mean the pace for buildings was so high? What other choices could have been made? How would the population have responded to a different balance, trading a slower pace on heat in buildings for, say, a reduction in the number of sheep and cows grown in Scotland (accompanied by changes in diets)? Could those changes have been deliverable in the 2020s?

These are not technical questions that can be answered by engineers. They are as much about what people in Scotland are willing to do to contribute to the global fight against climate change as they are about technical matters. Would Scottish society have embraced or rejected the changes needed to deliver a 75 per cent target? We do not know because the question has never been put. The opaque process outlined above offered no opportunity for people to participate in discussion of the alternatives available, ranging from loosening the climate targets to putting in the effort needed to hit time.

We do have some indications, however, that the population is ahead of politicians. We know that voters in Scotland want to see faster action on climate than the current pace of government policy, even if it means cost and personal inconvenience. Scotland’s Climate Assembly, a randomly selected group of over a hundred citizens, was brought together in 2020 to answer the question: how should Scotland tackle the climate emergency in an effective and fair way? They came up with a list of 16 goals and 81 recommendations, and called for “urgent cultural change [...] across

society – from governments, businesses, communities and individuals.” When the Scottish government all but ignored the assembly’s call, its members’ frustration was palpable: “Government needs to think less about what they can't do and instead demonstrate a positive attitude, thinking hard about how they can make things happen.”

But, it may be argued, people responding to opinion polls and even Scotland’s Climate Assembly are not in a position to consider fully the implications of an ambitious pace of emissions reductions. The Climate Assembly, for example, didn’t have access to information about costs and the implications of different choices for the public finances. This should not be seen as covert evidence that the population only accepts more ambitious action on climate change when ignorant of its costs. It is, instead, a failing of the democratic process in Scotland, and one of which another citizen’s panel (this time reviewing the Scottish government’s approach to climate change public engagement) was deeply critical: “There needs to be truth and honesty from the Scottish Government about the scale of the challenge, and a compelling vision of the better world we are all aiming for.”

An alternative approach to setting targets

Having demonstrated its legally binding targets were not so legally binding after all, the Scottish government has a job of work to do to rebuild credibility in its approach to tackling climate change.

A credible climate target must combine two dimensions: (1) ambition in Scotland’s offer to the rest of the world to play its part in the global fight against climate change and (2) commitment to taking the actions these targets imply. The key shortcoming of the now-abandoned 2030 target was that the target-setting process could not fulfil the second dimension, because parliament lacked the information needed to understand what it was signing up to. The actions were retrospectively constructed around the target, meaning decision makers who had signed up to the target had very little meaningful commitment to fulfilling the actions.

The process of setting the next targets should not make the same mistake. What follows is an outline sketch as to how this could be achieved. At heart, our recommendation is that the Scottish government, with support from the Climate Change Committee and other input as needed, create a flexible draft Climate Change Plan with various pathways spelled out across different sectors. This draft plan should be part of the target setting process, rather than being published after the targets have been set. Decision makers should debate explicitly the level of emissions reductions they want to see in Scotland at the same time as the suite of actions they would support to deliver those reductions. The outcome of this process will include climate change targets but, far more importantly, targets and trajectories for change across different sectors of Scottish society and its economy which decision makers have signed up to.

To do this, the process of emissions calculation should be split into two parts, each reflecting the opposing pressures on the budget-setting process.

1. The first is to consider Scotland's emissions reduction as a contribution to the global effort. This can be done in various ways, including indexing per-capita emissions to other countries, considering remaining global, European or UK carbon budgets, or including historic emissions in a judgement of what is "fair". The implications of each methodology should be set out, for example as annual emission levels. This will give decision makers a range of reference points.
2. The second part is to present bottom-up emissions projections across sectors of Scottish society and its economy, taking into account a range of different levels of decarbonisation effort. These could include: only actions where costs are outweighed by savings, actions that take a sector's emissions to zero by 2045, pathways that front-load emissions savings, etc. In constructing these pathways, analysts should not rule out options they consider to be beyond the bounds of social acceptability, but should be explicit and as detailed as possible as to the material consequences of different options: what would have to change in how (and how much) we travel, what degree of choice remains open to people versus being required to make changes, which production processes would have to change and which would have to end, etc. The process of generating options will build on the extensive analytic capacities already built up in readiness to produce the now-delayed Climate Change Plan.
3. The role of unproven, unscaled or speculative technologies, such as direct air carbon capture and storage, should be explicitly separated out. While decision makers may wish to consider these, they should also have available a set of sectoral pathways that do not rely on technological breakthroughs. Decision makers would have to reach their own judgement as to the extent to which they think credible emissions targets should depend on technologies at different levels of maturity.

With these tools, decision makers would be tasked with agreeing a set of sectoral pathways. Each set of bottom-up options would be combined to show the economy-wide emissions level, which decision makers would consider in light of the various ways of calculating a "fair" contribution to global emissions reduction. This would require them to reach a compromise between the pace and scale of change they are willing to sign Scotland up to, and the degree of ambition they wish to see in Scotland's future emissions and contribution to global climate efforts.

This would be more laborious and likely time-consuming than previous processes of agreeing climate targets. Decision makers would need to understand how material change affects emissions across a range of diverse sectors, and to consider which changes they are willing to commit to. In this, they would inevitably need support from technical experts and a balance would be needed between excessive detail on the one hand, and inadequate presentation of the impacts of change on the other. While this process would be more difficult than past target-setting exercises, it has a number of advantages over asking decision makers to select from a set of black-boxed economy-wide emissions targets.

- The process outlined here would require decision makers to explicitly consider the consequences of their choices, and what the emissions targets would

mean for life in Scotland. This would underpin the credibility of the climate targets by showing that decision makers were prepared to will the means, not just the ends.

- The process will also be important for establishing the legitimacy of climate policy, particularly where this implies politically difficult choices. This is because those choices would have been made in the context of both the imperative to reduce emissions and the alternative ways those emissions could be reduced.
- The sectoral pathways agreed through this process should be treated as targets, and would be just as important as the economy-wide emissions target/budget. Sectoral targets for progress in implementing change are important for the accountability of climate policy and monitoring progress. Data on material changes (number of clean heat systems installed, numbers of flights taken, rates of tree planting) are usually much more timely than emissions data (which come with a two-year lag), and reveal the specific areas where progress is falling behind plans. The existing Climate Change Plan monitoring and reporting process is a first step in this direction, but it is not underpinned by explicitly agreed sectoral pathways making it difficult to place confidence in the Scottish government's own judgement as to whether progress is on track.
- While the process outlined above enhances the importance of sectoral plans, there would still be an important role for emissions reporting. Total emission reporting will continue to be important in demonstrating to the rest of the world that Scotland was keeping to its climate commitments, and in identifying if successfully implemented sectoral plans were nonetheless failing to deliver anticipated emissions (for example, because input assumptions about the effect of particular actions turned out to be wrong).
- An agreed set of sectoral pathways, treated as targets, will help to coordinate action, a fundamental requirement of successful climate policies which has hitherto been lacking. Households, industry, supply chains, local authorities, etc. need much clearer collective plans around which they can plan their own actions, and through which they can see how their contribution fits with the whole.

Consultation questions

Part One – Carbon budgets

1. Do you agree or disagree with the proposed shift to 5-yearly carbon budgets (in place of current system of annual targets)?

Please set out any advantages or disadvantages of a 5 yearly carbon budget approach in Scotland

Please set out any advantages or disadvantages of retaining the current annual target system

While both approaches have pros and cons, the more important issue to strengthen in Scottish climate change policy is sectoral targets for material and behavioural changes that will deliver the targets. These need to be set with a high level of clarity

and frequency (annual targets should be the default), so that parliament is able to scrutinise progress in specific areas rather than having to wait for two-year-lagged emissions statistics.

2. What are your views on the advantages and disadvantages of carbon budgets / targets being expressed as a percentage reduction or as absolute levels of emissions?

Again, there are advantages and disadvantages of both, arising from ongoing developments in the evidence and analytic base underpinning emissions inventories.

3. The Climate Change Committee (CCC) suggested that the Scottish Government should consider aligning the proposed 5 yearly carbon budgets with the periods that are used for UK carbon budgets (i.e. 2023-27, 2028 – 32, 2033-2037 and 2038-42). What are the advantages and disadvantages of alignment with UK carbon budget periods?

There is a risk that the carbon budgets become the primary means by which parliament and the government judge progress in decarbonisation. Aggregate emissions are too remote from the specific sector-level changes that need to be delivered for this to be effective.

4. At the end of a carbon budget period, there can be a surplus or deficit of emissions reductions. What do you think the legislation should say about how future surplus or deficits in emission reductions are dealt with?

Surpluses and deficits should be treated differently. We are not in the situation of decarbonising at a leisurely pace. As the IPCC set out, keeping temperature rises below 1.5 degrees requires an unprecedented effort. Scotland should aim to decarbonise as quickly as it can, and if it turns out that Scotland can decarbonise more quickly than the targets anticipate this should be taken as a benefit to the climate, not as a licence to relax efforts in later years. However, if emissions turn out to be higher than anticipated, particularly if this is the result of a failure of action in Scotland, additional efforts should be made to compensate. Otherwise Scotland's commitment to the rest of the world to limit its emissions will be meaningless.

5. In early 2025, the Climate Change Committee (CCC) will advise the UK on the level of its Seventh Carbon Budget. This is the legal limit for UK net emissions of greenhouse gases over the years 2038 to 2042.

The CCC have suggested that could be used as the basis for advice on appropriate levels for carbon budgets in Scotland.

The Cabinet Secretary told the Committee that this 'might be the point at which we are able to have clarity on the targets, and I would want a plan to be produced very quickly thereafter'.

- **Should the Scottish Government wait for the planned advice on the UK's seventh carbon budget from the CCC, before setting their carbon budgets?**

- **Should the Scottish Government propose multiple 5-year carbon budgets in 2025 up to the year 2042?**
- **How soon after the Scottish Government has received advice from the CCC should it propose their carbon budgets?**
- **What should the process of parliamentary scrutiny look like for the laying of carbon budgets and plans for meeting budgets?**

The bulk of our paper above addresses the fourth bullet point.

In relation to question 1, the CCC's advice should inform the process, but it should not be taken as a black-box recommendation. The passage of the 2019 climate legislation demonstrated parliamentarians willingness to be more ambitious than the advice given by the CCC, even with this advice presented as the limit of what was credibly possible. The process outlined above would give decision makers the power to make informed choices as to whether they agree with the CCC's judgement of the plausible pace of change in Scotland, or would want change to happen more quickly.

Part Two – Climate Change Plan

6. Under the current statutory regime, the legal deadline for laying a draft of the Climate Change Plan (CCP) is November 2024. This Plan was due to apply to the period of 2025-2040. The Scottish Government intends to use the Bill to change the timing for the production of the CCP.

- **Do you have views on when and how the Scottish Government should publish their plans for meeting the proposed carbon budgets?**
- **What period should the next Climate Change Plan cover?**
- **Do you think the current requirements for Climate Change Plans within the existing legislation provide an effective regulatory framework?**
- **Are there any other aspects of the current legal framework for the creation of Climate Change Plans that you think should be updated?**

As set out above, the development of the Climate Change Plan should be integrated with the process of target setting. Even if this suggestion is rejected, the Climate Change Plan process should commit to a specific set of sectoral pathways, having first presented a range of options and justified the choices made. Ideally this process would be open and transparent, in order to build legitimacy around and widespread buy-in to the pace and scale of change implied across all aspects of Scottish life.

Part Three: Monitoring and reporting

7. The Scottish Government has confirmed that their annual reporting on progress towards targets will be retained. The CCC have however, suggested that if 5-yearly budgets are adopted in Scotland, CCC reporting may move from a system of annual Scottish 'Progress' reports to two dedicated reports on Scottish progress every 5 years.

- **What are your views on whether there should be changes to the existing Scottish Government monitoring and reporting framework?**

- **What are your views on the potential changes to the level of Scottish reporting provided by the CCC?**

The entire system of reporting and progress monitoring will be strengthened if Scottish government commit to setting specific targets for material and behavioural change in a timely manner.

8. A Bill, according to the Standing Orders of the Scottish Parliament, must “..be accompanied by a Financial Memorandum which sets out best estimates of the costs, savings, and changes to revenues to which the provisions of the Bill would give rise, and an indication of the margins of uncertainty in such estimates.” (Rule 9.3.2).

- **The 2045 target will not be amended. How much do you estimate it would cost to achieve that target?**
- **Are current spending levels on policies to achieve this in line with what is required?**

Questions of costs, incentives and distribution are critical to delivering a just transition. They should be explicitly embedded in the process of deliberating appropriate sectoral pathways and the resulting overarching set of emissions targets. In some sectors, such as clean heat, a relatively high degree of intervention (i.e. subsidies supported by progressive taxation) is likely to be needed to fairly share the costs of transition (see our report No Home Left Behind).

Current spending levels are clearly inadequate, given the glacial rate of emissions reduction in devolved areas such as transport, heat and agriculture. As set out by the Scottish Fiscal Commission, the lack of clarity on climate change spending is a clear fiscal risk.

The process of setting the new climate targets and developing a Climate Change Plan should also be used to open a much clearer and open conversation with the Scottish population about the financial dimensions of addressing climate change, the degree to which people are willing to take them on, and the extent to which they should be shared, particularly through taxation.

Budget

- **How can the Scottish Government use this year’s Budget to ensure all portfolio areas are focused on achieving the 2045 target?**
- **Has the inclusion of a Climate Change Assessment of the Budget improved outcomes and progress towards a target?**
- **What are your views on the presentation of the Climate Change Assessment and are there any changes you would like to see to this?**

To be effective, the Climate Change Assessment needs to set out not just whether spending contributes to reducing or increasing emissions, but whether the net effect

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is adequate to scale of delivery needed. The absence of concrete sectoral plans with explicit targets means this is not currently possible.