

REPORT ON PROPOSALS AND POLICIES TO REDUCE GREENHOUSE GAS EMISSIONS FOLLOWING ANNUAL TARGETS FOR 2021 AND 2022 NOT BEING MET

Prepared under section 36 of the Climate Change
(Scotland) Act 2009

September 2024



Introduction

The Scottish Government's commitment to ending Scotland's contribution to global emissions as soon as possible, and by 2045 at the latest, is unwavering.

We are already halfway to our goal of becoming net zero by 2045. This is a significant milestone, and we can rightly be proud of the action undertaken to reduce emissions to this point.

Since 2019, we have launched the world's largest floating offshore wind leasing round, moved to ban some of the most problematic plastics, created four Low Emission Zones, deployed the most comprehensive network of public vehicle infrastructure in the UK outside of London, and designated 37% of our seas as Marine Protected Areas.

The Scottish Government has also extended free bus travel to under-22s and, in the last year, planted 75% of all new forests in the UK – more than the other UK nations combined. Last year also saw the highest amount of degraded peatland being restored in a single year, with over 10,000 hectares set on the path to recovery in 2023/24.

We are also leading from the front on the international stage, including by helping to break a 30-year impasse on funding for Loss and Damage, recognising that climate change cannot be addressed by domestic action alone.

However, from the very start we have known that meeting this goal would not be easy and this is especially true as we enter the second half of our journey to net zero, with some of the most difficult challenges still ahead of us.

In 2019, the Scottish Parliament set hugely ambitious emissions targets, on a cross party basis, to forge our journey to net zero. This ambition recognised that tackling climate change is the fight of our lifetime, with implications for generations to come. The Climate Change (Scotland) Act 2009 ("the 2009 Act"), as amended, established a framework of interim emission reduction targets lower than the baseline of 56% by

2020, 75% by 2030 and 90% by 2040. Alongside these, statutory annual targets were plotted in a straight line between the interim targets.

These targets were ambitious; the Climate Change Committee's (CCC's) view was that our 2030 target was likely to be beyond what was achievable given it went beyond the level they advised.

It was right to strive to go as far as possible in this period to help accelerate action, but regrettably, in March 2024, the CCC rearticulated that Parliament's interim 2030 target is out of reach. We recognise the CCC's position that, despite our decarbonisation progress, our near term targets are now considered undeliverable.

This comes after [Scottish Greenhouse Gas Statistics for 2021](#), laid in Parliament on 20 June 2023 under section 33 of the 2009 Act, noted the outcome of the 2021 annual emissions reduction target. Using the reporting basis for assessing progress to statutory targets, the Official [Scottish Greenhouse Gas Statistics for 2021](#) show that Scotland's emissions were 49.9% lower than the 1990 baseline. The statutory annual target for that year of a 51.2% reduction was therefore narrowly missed by 1.0 Megatonnes of CO₂ equivalent (MtCO₂e).

More recently, on 18 June 2024, the report for the 2022 annual emissions reduction target was laid in Parliament. The [Scottish Greenhouse Gas Emissions Statistics for 2022](#) showed that Scotland's emissions were 50.0% lower than the 1990 baseline for 2022. The statutory annual target for that year of a 53.8% reduction was therefore missed by 3.2 MtCO₂e.

Despite the disappointment in missing these annual targets, we recognise the importance of the news that Scotland is halfway to net zero.

Context

Section 36 of the Climate Change (Scotland) Act 2009 requires that whenever an annual emissions reduction target is not met, the Scottish Ministers must prepare a

report setting out proposals and policies to compensate in future years for the excess emissions.

The present report discharges this duty in relation to both the 2021 and 2022 missed targets, with 1.0 MtCO₂e excess for 2021 and 3.2 MtCO₂ excess for 2022, giving a combination of 4.2 MtCO₂e excess emissions to account for under section 36 of the Act.

The 2021 target is the smallest margin by which an annual statutory emissions target has been missed since 2011, and while the 2022 margin is larger than in 2021, both years are influenced by external factors including a rebound from COVID-19 restrictions following the pandemic.

This was also seen in the UK Government statistics and, using comparable metrics, we can see Scotland has still made the largest emissions reduction in the UK. Between the 1990 baseline and 2022, Scottish emissions reduced by 50.1 per cent, while emissions in England fell by 49 per cent; followed by Wales at 36.5 and Northern Ireland at 25.9 per cent.

The variation in external factors, such as the pandemic, also highlights the value in moving to longer term carbon budgets, rather than yearly targets. Indeed, as the CCC point out, yearly targets are “highly vulnerable to year-to-year fluctuations in emissions” and multi-year budgets “provide a more reliable indicator of underlying progress”¹.

Nevertheless, missing these targets is undoubtedly disappointing, and the Scottish Government must continue to take forward the action required to reach net zero.

Since the Climate Change Plan update (CCPu), we have developed a number of policies and proposals. This report will set out additional policies and proposals to compensate for the combined excess emissions of 4.2 MtCO₂e from 2021 and 2022.

1. [Letter: Design and implement carbon budgets in Scotland](#), CCC.

Recent Progress

While this report will focus on setting out how the Scottish Government will compensate for the missed emissions targets, it will also demonstrate wider action and achievements that we continue to take forward. Our commitment to these actions is demonstrated by the fact that this year, despite exceptional budgetary pressures, we have committed £4.7 billion for activities that will positively impact delivery of our climate change goals.

In the past few months, a number of sectors have seen legislation recently complete their Parliamentary passage, which will help to drive forward climate progress.

Both the Circular Economy (Scotland) Act 2024 and the Agriculture and Rural Communities (Scotland) Act 2024 were passed unanimously by the Scottish Parliament in June 2024.

The Circular Economy (Scotland) Act 2024 establishes a legislative framework to support Scotland's transition to a zero waste and circular economy, significantly increase reuse and recycling rates, and modernise and improve waste and recycling services.

The Agriculture and Rural Communities (Scotland) Act 2024 provides the powers to deliver a future support framework that will enable farmers and crofters to meet more of our food needs sustainably, to farm and croft with nature, and will assist in efforts to meet our climate change targets.

In addition, we have recently consulted on proposals for a Heat in Buildings Bill. This included proposals around ending use of polluting heat in existing buildings by 2045. The New Build Heat Standard (NBHS), which came in force on 1 April 2024, represents a significant development in the transition to clean heat. The NBHS means that no new buildings, which are constructed under a building warrant applied for from 1 April 2024, will be built with polluting heating systems, like gas and oil boilers. Instead, these new buildings will be required to use clean heating systems,

like air and ground source heat pumps, which produce zero or negligible levels of greenhouse gas emissions at point of use. This ensures that new buildings are future-proofed with no need for owners to undertake retrofit works.

This action represents a significant, positive step towards achieving the Scottish Government's wider ambitions for net zero buildings. Since its implementation, we have received feedback on the emergency heating provision included within the Standard and the wider use of woodburning stoves. As a result, we are currently reviewing the Standard to consider the role of woodburning stoves and bioenergy. The Standard remains in force until the outcome of the review.

Policies and Proposals

In response to the CCC, we are furthering our ambition with additional policies and proposals which will contribute to delivery of net zero. On [18th April 2024 we announced an ambitious policy package](#), showing our readiness to expand climate action. The policy package contains 19 policy actions which are particularly concentrated around transport, land use and agriculture.

This package includes action to:

- Deliver approximately 24,000 additional electric vehicle charging points by 2030;
- Develop a new integrated ticketing system that people can use across all public transport;
- Continue implementation of the Agricultural Reform Programme, increasing conditions on payments over the next two years to better balance our commitments on food security, climate mitigation and biodiversity support;
- Publish our route map for 20% car km reduction by Autumn 2024, with a timeline for implementing demand management (this will include consideration of how local government action can further incentivise the switch to EVs in addition to reducing overall car km); and
- Consult on proposals to introduce a carbon land tax as part of considering fiscal and regulatory measures to incentivise peatland restoration,

afforestation and renewable energy generation.

In addition, action has continued across a range of areas to drive emissions reduction. One significant source of emissions are Fluorinated gases (F gases), these are powerful greenhouse gases – up to 20,000 times more powerful than CO₂ - which contribute to climate change. Hydrofluorocarbons (HFCs) are one type of F gas most widely used across our economy and within our homes. They are found in refrigeration, air conditioning and, for those who have made the transition, in heat pumps, among many other uses.

The Scottish Government works with the UK and Welsh Governments on F gas Regulations, with decisions made jointly between the three governments. The F gas Regulations reduce the amount of HFCs that can be placed on the GB market by 79% (based on 2015 levels) by 2030. The reduction in HFCs is primarily achieved through the implementation of a quota system, which limits the amount of F gases that can be used across GB. Any company intending to import or manufacture F gases must have a quota in place beforehand. The overall quota, and therefore the quota a company is allocated, reduces every three years in line with the overall phasedown policy target for 2030. Estimates of emissions reduction from these policies were not included in the CCPu.

This phasedown of the HFCs quota supports the reduction in F gas emissions. As demonstrated in a [comprehensive report on the effectiveness of the F gas Regulation in reducing F gas emissions across Great Britain between 2015 and 2021](#), which was published jointly by the three nations in 2022, the regulations have successfully reduced emissions by between 13.6-24.2 MtCO₂e, with the overall economic benefits estimated to be £1.8-£8.4 billion. Following the findings in the report, we are working with the UK and Welsh governments to develop further the F gas policy to ensure the Regulation continues to drive F gas emissions reductions. Subject to agreements between the three governments, proposals will be consulted prior to any legislative reform.

Another important tool in supporting emissions reduction is the UK Emissions Trading Scheme (UK ETS), which was established on 1 January 2021 by the

Scottish, UK and Welsh Governments and the Department of Agriculture, Environment and Rural Affairs in Northern Ireland (DAERA) after the UK's exit from the EU. Up until this point, the UK was part of the EU ETS.

The UK ETS is a carbon pricing instrument that covers both devolved and reserved issues. Given carbon pricing markets function better at scale, the four nations agreed to cooperate on a single UK market. Therefore, the UK ETS is jointly managed and developed by Ministers from the four governments – jointly referred to as the UK ETS Authority (the “Authority”). As part of the Authority, the Scottish Government continues to push for the UK ETS policies to be as aligned as possible with the EU ETS.

When the UK ETS was established, the Authority committed to increasing the climate ambition of the scheme and in 2022 the Authority published the Developing the UK ETS consultation², which covered a number of proposals to strengthen the UK ETS and align it with net zero targets.

In 2023, the Authority published a government response to the 2022 Developing the UK ETS consultation³, which revised the UK ETS cap for the remainder of phase 1, up to 2030, to align with net-zero targets. This revision means a new lower total cap of 937 million allowances over the period, compared to 1,366 million allowances, indicating 429 million fewer allowances over phase 1. This revision and reduction of the cap trajectory was referenced in the CCPu.

Updated Scottish Government industrial decarbonisation modelling suggests lower future emissions in the industry envelope than published in the original 2021 CCPu. This new modelling is in line with the historic approach taken by the CCC in its industrial modelling, using the Net Zero Industry Pathway (N-ZIP) model. In cumulative terms across the period 2025-32, we now expect industry emissions to be lower across the period, compared to what is published in the 2021 CCPu. These reductions are supported by existing policies, grants and schemes to allow greater

² [Developing the UK Emissions Trading Scheme \(UK ETS\) \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/consultations/developing-the-uk-emissions-trading-scheme-uk-ets)

³ [Developing the UK Emissions Trading Scheme: main government response \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/consultations/developing-the-uk-emissions-trading-scheme-main-government-response)

adoption of decarbonisation technologies, further supported by the new net zero UK ETS cap.

In addition to aligning the cap with net zero targets, the response to the 2022 consultation also stated the Authority's intention to expand the scope of the UK ETS to other sectors of the economy. The Authority published a consultation in May 2024 to include CO₂ emissions from energy from waste and waste incineration from 2028. This would include a 2-year phasing-in period for the sector from 2026 during which emissions would be monitored, reported and verified, with no obligation to comply with the ETS until the sector's full inclusion in 2028. The ETS would work alongside other initiatives to decarbonise the waste sector by providing an incentive for industry to adopt decarbonisation technologies.

The Authority also published a consultation in May 2024 on how UK-based engineered greenhouse gas removal technologies, such as carbon capture and storage solutions, could be integrated into the UK ETS. The consultation is also looking into whether carbon stored by the creation of new UK woodland could be integrated into the scheme.

The Authority aims to publish in due course two additional consultations on:

- how to expand the UK ETS scheme into the domestic maritime sector from 2026. The UK ETS represents one part of a wider policy mix necessary to address barriers to maritime decarbonisation and could incentivise the adoption of low-carbon fuels, support the deployment of fuel-efficient technologies and introduce more efficient operating practices; and
- how the UK ETS would recognise non-pipeline transportation methods for moving captured CO₂ into geological storage, including by road, rail or shipping.

These changes to the UK ETS are expected to drive further emissions reductions across covered and new sectors, helping drive lower emissions in future years than recorded historically.

The action demonstrated in this report is just some of what the government is currently taking forward, but it is important to also highlight our Biodiversity Delivery Plan, Marine Protected Areas, Land Reform Bill, our Onshore Wind Sector Deal, Hydrogen Action Plan and Strategic Investment in Offshore Wind worth up to £500m over 5 years, all of which demonstrate the positive action this government is taking in climate progress. Taken together, it is the view of the Scottish Ministers that the proposals and policies set out in this report will compensate in future years for the combined excess emissions of 4.2 MtCO₂e from the 2021 and 2022 targets.

This Government and Parliament rightly have high ambitions, and it is beyond doubt that investing now in net zero is the right thing for our environment, our society and our economy.

Next Steps

Going forward, we must listen to the expert voices, such as the CCC, and the evidence they provide to chart a course to being net zero by 2045 at a pace and scale that is feasible and just. With emissions in Scotland already cut in half, we are well positioned to continue to lead on climate action that is fair, ambitious and capable of rising to the emergency before us.

We are introducing legislation to enable a carbon budget approach which will be set following independent advice from experts, including the CCC. Replacing linear annual targets with multi-year carbon budgets will better reflect the reality of how emissions change. The updated legislation will retain our legal commitment to net zero by 2045, alongside annual reporting on our climate progress.

The next Climate Change Plan will extend Scotland's emissions reduction planning pathway to 2040 and include estimates of the costs and benefits of the policies to achieve this. As work continues on the next Climate Change Plan, we will be looking at our economy and where we can reduce emissions in industry, construction and food production. We will also be looking towards the latest evidence regarding our lifestyles, for example how we heat our homes and how we travel, considering

measures that will reduce costs to consumers while also reducing emissions.

It is important to remember that emissions reduction is the key measure for our mitigation ambitions, but climate change objectives extend beyond this to include critical adaptation work, just transition and maximising the net zero economic benefits of our climate actions. This presents an opportunity for wider climate objectives to be considered more actively and creatively in future.

As we work through amending the current legislation and developing the next CCP, we must continue to work together. Action will continue to be driven by government, supported by Parliament, but it cannot happen without all of us – individuals, communities and businesses – taking steps as part of a national effort to tackle the climate emergency.



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